Prepared for: Tronox LLC Henderson, Nevada

# Revised Phase B Site Investigation Work Plan Text, Tables, and Figures

Tronox LLC Facility Henderson, Nevada

AECOM, Inc. December 2008 Document No.: 04020-023-430



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December 18, 2008

Shannon Harbour, P.E. Bureau of Corrective Actions Special Projects Branch 2030 East Flamingo Road, Suite 230 Las Vegas, NV 89119

Subject: Revised SAP Tables, Figures and Plates for the Phase B Source Area Investigation Work Plans for Areas I, II, III and IV, Tronox LLC Facility, Henderson, Nevada (Facility # H-000539)

Dear Ms. Harbour:

Please find enclosed revised soil and groundwater Sampling and Analysis Plan tables (Table II and Table III respectively) for the four Tronox LLC (Tronox) Phase B area Work Plans; the Phase B Source Area Investigation Work Plan Area I (Northern LOUs), the Phase B Source Area Investigation Work Plan Area I (Central LOUs), the Phase B Source Area Investigation Work Plan Area II (Central LOUs), the Phase B Source Area Investigation Work Plan Area II (Central LOUs), the Phase B Source Area Investigation Work Plan Area IV (Western and Southern LOUs). Supporting these Tables are enclosed Figures 1 to 4 which graphically present revisions and additions to the sampling locations for these four Work Plans.

In addition, a revised Plate A, encompassing all the Work Plan areas is enclosed. Plate A is a red-lined document displaying changes, while Plate A1 is a clean version of the same document.

If you have any comments or questions concerning this correspondence please contact me at (702) 651-2234. Thank you.

Sincerely

Smoorly

Susan M. Crowley, CEM 1428, exp 3-8-09

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Revised Phase B Work Plan for Areas I, II, III, and IV Text, Tables, and Figures Tronox LLC Facility Henderson, Nevada

#### Responsible CEM for this project

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and, to the best of my knowledge, comply with all applicable federal, state and local statutes, regulations and ordinances.

Muoven

Susan M. Crowley, CEM 1428 exp. date 3/8/09

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### Contents

| 1.0 Intro | duction   | 1-1              |
|-----------|---|------------------|
| 20 Ratio  | nale for SAP Modifications  | 2-1              |
| 2.0 1.0   | Incorporating NDEP Review Comments  |                  |
| 2.1       | Optimization/Efficiency Changes   |                  |
| 2.2       |   | Z <sup>-</sup> I |
| 3.0 Geop  | probe® Program  | 3-1              |
| 4.0 Revis | sion of Soil Sample Intervals   | 4-1              |
| 5.0 Ratic | nale for Organochlorine Pesticide Sampling Program  | 5-1              |
| 5.1       | Soil Sampling for OCPs  | 5-1              |
| 5.2       | Groundwater Sampling for OCPs   | 5-2              |
| 6.0 Ratic | nale for Organophosphorus Pesticides and Organic Acids Sampling Program                                 | 6-1              |
| 6.1       | Soil Sampling for OPPs and OAs  | 6-1              |
| 6.2       | Groundwater Sampling for OPPs and OAs   | 6-2              |
| 7.0 Ratic | onale for Polychlorinated Biphenyl Sampling Program   | 7-1              |
| 7.1       | Soil Sampling for PCBs  | 7-2              |
| 7.2       | Groundwater Sampling for PCBs   | 7-2              |
|           | fication to Area III Soil Boring Program Where Closure is Not Being Sought (Remova<br>Boring Locations) |                  |
| 9.0 Rem   | oval of Duplicate Entries on Area Sampling Tables   | 9-1              |
| 10.0 Data | a Validation  | 10-1             |
| 11.0 Ref  | erences   | 11-1             |

# ENSR AECOM

### **Contents (continued)**

#### **List of Tables**

Table A Sample-By-Sample Summary of Total Congener PCB Results in Soil

Table B Index to the Proposed Phase B Soil Boring Locations

Table C Index to Phase B Groundwater Well Locations

#### **List of Figures**

- Figure 1 Proposed Soil Boring Locations to be Sampled for Organochlorine Pesticides (OCPs)
- Figure 2 Proposed Soil Boring Locations to be Sampled for OPPs and Organic Acids
- Figure 3 Proposed Groundwater Locations to be Sampled for OCPs, OPPs, and Organic Acids
- Figure 4 Proposed Groundwater Locations to be Sampled for PCBs

#### **List of Plates**

- Plate A Phase B Sample Locations, LOUs, and NDEP Requests for Areas I, II, III, and IV
- Plate A1 Phase B Sample Locations and LOUs for Areas I, II, III, and IV

#### Appendix

- A Phase B Source Area Investigation Work Plans Submittal History and NDEP Response Chronology
- Area I Soil Sampling Table 2 color version showing changes and black/white field version;
   Groundwater Sampling Table 3 color version showing changes and black/white field version.
  - **Area II** Soil Sampling Table 2 color version showing changes and black/white field version; Groundwater Sampling Table 3 color version showing changes and black/white field version.
  - **Area III** Soil Sampling Table 2 color version showing changes and black/white field version; Groundwater Sampling Table 3 color version showing changes and black/white field version.
  - **Area IV** Soil Sampling Table 2 color version showing changes and black/white field version; Groundwater Sampling Table 3 color version showing changes and black/white field version.

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#### ACRONYMS AND ABBREVIATIONS

| bgs                | below ground surface                        |
|--------------------|---|
| CPA                | closed pond areas                           |
| CSM                | Conceptual Site Model                       |
| DDT                | Dichloro-diphenyl-trichloroethane           |
| DV                 | data validation                             |
| ECA                | Environmental Conditions Assessment         |
| EPA                | Environmental Protection Agency             |
| HHRA               | Human Health Risk Assessment                |
| LDC                | Laboratory Data Corporation                 |
| LOU                | Letter of Understanding                     |
| MnO <sub>2</sub>   | Manganese dioxide                           |
| NaCl               | Sodium chloride                             |
| NaClO <sub>3</sub> | Sodium chlorate                             |
| NaClO <sub>4</sub> | Sodium perchlorate                          |
| NDEP               | Nevada Division of Environmental Protection |
| OA                 | organic acids                               |
| OPP                | organochlorine pesticides                   |
| PCB                | polychlorinated biphenyls                   |
| QA/QC              | Quality Assurance/Quality Control           |
| Qal                | Quaternary alluvium                         |
| SAP                | Sampling and Analysis Plans                 |
| SCR                | Site-related chemicals                      |
| SOP                | Statement Operating Procedures              |



### **1.0 Introduction**

Tronox LLC (Tronox) has submitted four Area Sampling and Analysis Plans (SAPs) to the Nevada Division of Environmental Protection (NDEP) as part of the ongoing Phase B Site Investigation for the Tronox Henderson facility. This Environmental Conditions Assessment (ECA) work is being performed under terms of a 1996 Consent Agreement between NDEP and Tronox (then Kerr-McGee Chemical Corporation, NDEP 1996). NDEP has responded with comments on each Area SAP. After receiving conditional approval of the Area I SAP, Tronox initiated sampling in Area I in June 2008, but suspended work in July 2008 due to a combination of financial issues and a desire to ensure that changes being requested by NDEP in all four of the Area SAPs could be incorporated. Several conference calls have subsequently been held between NDEP and Tronox in an effort to identify the most efficient way to proceed with the Phase B work. This revised SAP submission incorporates our understanding of the combined comments and discussions for all four Area SAPs. We hope to receive timely approval of the modified SAPs presented here, to be followed by initiation of the proposed field work.

This response document is organized into five major parts. The first includes a review of the rationale for modifying the Phase B SAPs. A brief summary history of all NDEP correspondence related to the SAPs and copies of all NDEP comment letters and teleconference meeting minutes are attached in Appendix A (the comments are not separated by Areas since many of the teleconference discussions covered multiple Area plans). Parts two through five of this submission are tabbed sections for each Phase B Site Investigation Area, including revised soil and groundwater SAP Tables (Tables 2 and 3 for each Area). Two versions of each Table are included. The first highlights changes being made from the original submission by showing additions with a green background and deletions with a brown background, similar to a red-line strikeout format. The second version is a clean black and white copy of each Table showing only the proposed work, and specifying Quality Assurance/Quality Control (QA/QC) samples such as duplicates, etc. The sampling locations for the four Site Areas being investigated are all shown on **Plate A** including starting and final locations for those borings or wells which are being moved. At NDEP's request, Plate A1 is also included showing only the final locations for each boring/well. As requested, five copies of Plates A and A1 have been included in the volume submitted to Shannon Harbour, while all other copies of the document contain only one copy of **Plates A** and A1. In all SAP Tables being submitted, soil types are shown which include both fine- and coarsegrained facies of the Muddy Creek Formation. Tronox understands that NDEP is considering revising the soil nomenclature and may drop the coarse and fine grain Muddy Creek designations (personal communication from Brian Rakvica, December 8, 2008). Should the final NDEP guidance drop the coarse and fine grain designations, the designations will be revised in the final Phase B Report.

The goal of the overall Phase B Site Investigation is to identify the nature and extent of chemical constituents from 70 potential source areas on the Tronox Site. Results from conducting the four Area SAPs will be combined with data from site-wide soil gas sampling (completed earlier this year), data from the Phase A Site Investigation, and data from a forthcoming work plan for quantifying background concentrations in quaternary alluvium (Qal) groundwater to form the basis for development of a site Human Health Risk Assessment (HHRA). The HHRA is expected to be prepared in the latter half of 2009. As Tronox proposes to modify the HHRA Standard Operating Procedure (SOP) generated by BMI to incorporate commercial/industrial land use and a few other changes, NDEP requested that Tronox provide a red-line/strike out version of Tronox' proposed modifications to the BMI SOP. This SOP will be provided under separate cover.

### 2.0 Rationale for SAP Modifications

Tronox is proposing several adjustments to the previously submitted SAPs. The adjustments involve a combination of the following:

- Incorporating NDEP review comments into the SAPs, as modified by subsequent NDEP teleconference discussions;
- Modifying sample collection methods and vertical sampling frequency to improve efficiency in the field and to optimize the sampling design; and
- Limiting sampling in areas of the Site for which regulatory closure is not currently being requested (e.g., active production areas).

#### 2.1 Incorporating NDEP Review Comments

NDEP comments on the initial SAP submissions, as modified by telephone discussions, have been incorporated into the SAPs. As noted in the introduction, where corrections have been made, or wells/borings have been added, the changes are shown on the respective SAP Tables highlighted with a green background. Where deletions have been made from the original Table submissions, changes are shown with brown backgrounds.

Tronox has taken the NDEP comments for each Area SAP as the starting point for making the proposed revisions and has not gone back to individual LOU packages. In general, the columns titled "Location Description and Characterized Area Rationale for Investigation" or similar titles in the original SAP submissions have not been modified except to add estimated depths to groundwater for each boring/well. Tronox expects that this approach will facilitate the review process deferring extensive discussion of the individual LOUs to the full Phase B Site Investigation report.

#### 2.2 Optimization/Efficiency Changes

The full list of Tronox' proposed sampling plan adjustments is as follows:

- 1. Use a Geoprobe<sup>®</sup> to collect proposed soil samples at depths of 0-0.5 and 10 feet below ground surface (bgs).
- 2. Reduce the number of soil samples collected between 10 feet bgs and the capillary fringe.
- 3. Limit the number of soil samples to be analyzed for Organochlorine Pesticides (OCPs) by review of the Conceptual Site Model (CSM).
- 4. Limit the number of soil and groundwater samples to be analyzed for Organophosphorus Pesticides (OPPs) and organic acids (OAs) by review of the CSM.
- 5. Limit the number of congener and Aroclor PCB analyses by review of the CSM.
- 6. Limit sampling in the active production areas of Area III, where closure is not being requested.
- 7. Reduce possible confusion and review time by showing individual borings/wells only on the Table for the Area in which they are physically located.



8. Partially replace ENSR data validation (DV) efforts with DV services provided by Laboratory Data Corporation (LDC).

The following subsections describe in more detail the proposed SAP modifications related to each of the eight changes above.



### 3.0 Geoprobe® Program

Recent Tronox Geoprobe<sup>®</sup> experience in soil gas sampling demonstrated rapid set-up and penetration of alluvial soils. The soil gas investigation demonstrated that this equipment could reach the depth of 5 feet below ground surface (bgs) with relative ease and likely can reach at least 10 feet. In order to increase the sampling efficiency in the field, Tronox proposes to utilize Geoprobe<sup>®</sup> equipment to collect the soil samples from the 0.5 and 10-foot bgs intervals. As in the original work plans, Roto-sonic drill rigs will be utilized to collect deeper soil samples and in any locations where the Geoprobe<sup>®</sup> fails to reach the required sampling depth.

Based on recent experience, Tronox anticipates significant increases in sample collection rates using the Geoprobe<sup>®</sup> equipment.

A BMI SOP for Geoprobe<sup>®</sup> work has been approved by NDEP. The approved SOP will be used for implementation of this SAP.

### 4.0 Revision of Soil Sample Intervals

Tronox proposes to collect soil samples at the surface (0-0.5 feet) and 10 feet bgs to evaluate the direct contact risk pathway and determine whether site related chemicals are migrating downward toward groundwater. Soil samples will be collected from the capillary fringe (i.e., 2 feet above the water table) to evaluate whether constituents migrating with groundwater are being sorbed onto soils. However, rather than collecting soil samples at 10-foot intervals between 10 feet bgs and the capillary fringe, Tronox proposes to reduce the sampling frequency.

Tronox proposes to collect soil samples at the following depths:

- 0 feet (Asbestos analysis only collected within the top two inches bgs),
- 0.5 feet bgs,
- 10 feet bgs,
- the capillary fringe, and
- If the capillary fringe is 20 feet or more below the 10 foot sample an additional sample will be taken near the midpoint (see below). If the capillary fringe depth minus 10 feet exceeds 40 feet two additional samples will be collected making the maximum depth between each vertical sample no more than 20 feet.

The capillary fringe sampling depths shown on the SAP Tables were determined by using Tronox May 2008 groundwater data and surface elevations to develop site-wide groundwater elevations. These groundwater elevations were used to estimate the depth to the groundwater at proposed boring locations. The capillary fringe sample depth shown on the revised SAP Tables is located two feet above the estimated depth to groundwater. The actual depth to groundwater will be confirmed as soil sampling is performed.

For clarity, an example calculation of sample depths between the 10 foot bgs and capillary fringe depth is as follows:

If the elevation difference between the 10 foot bgs sample and the capillary fringe does not exceed 40 feet, take the difference between the 10 foot sample depth and the capillary fringe sample depth, divide it by two, and add this value to the 10 foot sample depth, then round to the nearest 5-foot interval.

- If the original sampling plan called for samples to be collected at 0.5, 10, 20, 30, 40, and 42 feet bgs,
  - The difference between 10 feet and 42 feet = 32 feet.
  - Divide 32 feet by two: 32/2= 16 feet
  - Add 16 feet to 10 feet: 16+10 = 26 feet
  - Round to nearest 5-foot interval: 25 feet bgs is the depth for an additional sample.
  - The SAP Table is then revised for this location to indicate that soil samples will be collected at 0.5, 10, 25, and 42 feet. The originally proposed sample depths of 20, 30, and 40 feet are highlighted with a brown background in the color SAP tables to indicate that they have been removed from the SAP. The sample at 25 feet bgs is shown with a green background indicating that it has been added, while the sample at 42 feet bgs is shown with a white background indicating that it was part of the original work plan.

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Tronox understands that this approach will reduce the total number of soil samples collected. Data for soils in the 0 to 10 foot bgs "direct contact" zone of the proposed HHRA will not be impacted by the change. Estimation of potential source quantities for leaching constituents from soils between 10 feet bgs and the capillary fringe will involve fewer samples and will require that Tronox use a "conservative" approach in preparing such estimates.



# 5.0 Rationale for Organochlorine Pesticide Sampling Program

#### 5.1 Soil Sampling for OCPs

There are a limited number of locations on Tronox property where organochlorine pesticides (OCPs) or liquid wastes potentially containing OCPs were produced, stored, conveyed, or potentially disposed. It is proposed that judgmental borings (i.e., boring numbers prefaced with "SA") will be drilled at specific locations and analyzed for OCPs in these areas of the Site. In addition, soils at selected locations along the western boundary of the Tronox Site will be analyzed since OCPs are present in off-site soil to the west of the Site as a result of historic OCP production by other BMI companies. Judgmental boring locations were selected to provide general areal coverage in the western portion of the Site. At those judgmental boring locations where OCPs (and potential related wastes) were not generated, stored, conveyed, or disposed of, OCP sampling is not proposed. All random grid samples will be analyzed for OCPs.

Other than the former Hardesty Chemical site (LOU 4), which may have produced Dichlorodiphenyl-trichloroethane (DDT) and its degradation products on the Tronox Site, Tronox knows of no other on-site pesticide production area. Locations at the Site where OCPs could have been released to the environment include:

- <u>LOU 4 (former Hardesty Chemical Co.) located north of Unit 2</u>. OCPs may be present at this location, as DDT may have been produced and stored here in the 1940s. Soil from borings in LOU 4 will be analyzed for OCPs.
- LOU 60 (Acid Drain System). Liquid effluent potentially containing DDT from LOU 4 could have been conveyed along LOU 60 pipelines. Soil from borings along specific segments of LOU 60 pipelines that carried effluent from off-site sources to the west will also be analyzed for OCPs. Borings located along the LOU 60 conveyance route, specifically from Unit 2 to LOU 1 (the former Trade Effluent Ponds) where effluent was discharged, will also be analyzed for OCPs.
- <u>LOU 1 (former Trade Effluent Ponds)</u>. In the 1940s, effluent from the Acid Drain System was discharged into the Trade Effluent Ponds. Soil from select judgmental borings within LOU 1 will be analyzed for OCPs.
- LOU 59 (Storm Sewer System). Surface water that potentially contained OCPs could have entered LOU 59 through storm-water run-off. Soil from borings along segments of LOU 59 that carried effluent from off-site sources west of the Site will be analyzed for OCPs. Additional borings located along the LOU 59 conveyance route specifically from Unit 2 to LOU 5 (Beta Ditch), which was (and still is) the receptor for discharges from LOU 59, will also be analyzed for OCPs.
- <u>LOU 5 (Beta Ditch)</u>. LOU 5 was the receptor for discharges from LOU 59. Moreover, effluent discharged into the segment of Beta Ditch west of the Site would have flowed eastward (via surface flow) along Beta Ditch and onto the Tronox property.

**Figure 1** shows the locations and proposed sampling depths for OCPs. In the areas where a hydrostatic head could have provided a potential transport mechanism for OCPs into the underlying soil column (marked by blue dots on **Figure 1**), samples collected from depths of 0.5-foot, 10 feet and the capillary fringe will be analyzed for OCPs. Where there is not a hydrostatic head driver (see red dots on **Figure 1**), samples from 0.5 foot and the capillary fringe will be analyzed for OCPs.

# ENSR AECOM

to evaluate whether wind-blown soils or OCPs migrating with groundwater are being sorbed onto soils. Samples will also be collected from the remaining boring depths (shown on the SAP Tables with the notation "Hold"). These samples will be held for later analysis if OCPs are detected in samples from that same boring which are being analyzed. Tronox understands that the hold time (14 days for extraction) for these "Hold" samples may be exceeded if the samples are subsequently analyzed after results from the first samples are reported; therefore, OCP analyses of the "Hold" samples may be coded (J-flagged) to indicate that values are estimated. Since these analyses will likely be utilized for developing a groundwater source term rather than a direct contact pathway, the J-flagged data should be usable.

As noted above, soils from all proposed random borings (i.e., boring numbers prefaced with "RSA") will be analyzed for OCPs for general site-wide coverage. For the random borings, soil samples collected from 0.5 foot and the capillary fringe will be analyzed for OCPs. Intermediate samples in these borings will be placed on "hold" pending OCP results from the 0.5 foot and capillary fringe samples for those same borings.

#### 5.2 Groundwater Sampling for OCPs

There are no proposed changes to the groundwater sampling program for OCPs that has been previously proposed in the Area work plans submitted to NDEP. All groundwater well samples in the Phase B Site Investigation will be analyzed for OCPs. **Table 3** for each Area and **Figure 3** show the proposed Phase B groundwater well locations to be sampled of OCPs.

## 6.0 Rationale for Organophosphorus Pesticides and Organic Acids Sampling Program

The Tronox Site is not known to have supported production of OPPs or OAs. The only pesticides thought to have been produced on site are associated with the former Hardesty Chemical site (LOU 4), where OCPs (e.g., DDT) may have been produced (though production records are not available for the operation). Possible migration of OPPs and OAs from sources off-site to the west of the Site prompted NDEP, in its July 21, 2008 letter, to request sampling for OPPs and OAs in soil borings and groundwater samples throughout the Tronox site. Tronox proposes to demonstrate from the CSM, that a reduced number of samples is adequate to characterize migration of OPPs and OAs onto the Site.

#### 6.1 Soil Sampling for OPPs and OAs

Tronox proposes to collect soil samples for OPP and OA analyses from areas along the western portion of the Site (Area I) and from specific locations in Areas II, III, and VI where LOU 5 (Beta Ditch), and segments of LOU 59 (Storm Sewer System) and LOU 60 (Acid Drain System) may have carried OPP and OA constituents onto Tronox property from off-site sources to the west. Two borings are also proposed in the former Hardesty Chemical LOU to confirm the absence of OPPs and OAs. The proposed boring locations are shown on **Figure 2**.

NDEP requested OPP and OA analyses in soil borings and groundwater samples in and downstream of LOU 5 (Beta Ditch), LOU 59 (Storm Drain System), and LOU 60 (Acid Drain System). These LOUs are discussed below:

- LOU 5 (Beta Ditch) Waste discharges being conveyed to the upper BMI ponds from the various BMI complex companies operating to the west of the Tronox Site flowed across the Site in the Beta Ditch. Some of these flows may have contained OPPs and OAs and therefore some infiltration of these contaminants into soils below the unlined Beta Ditch is possible. Tronox proposes to sample soils along the path of the Beta Ditch for OPPs and OAs.
- LOU 59 (Storm Sewer System) As shown on Figure 2, the gravity flow Storm Drain System picked up water from the area west of the Site and carried it north, then moved east to 6<sup>th</sup> Street and finally north to the Beta Ditch. Since the drain lines slope to the north, it is highly unlikely that effluent would flow in directions opposite the flow arrows shown on the Figure. Accordingly, Storm Drain locations east of 6<sup>th</sup> Street (between Units 1 and 2) are not likely to carry constituents from the west. Tronox proposes to sample soils below the LOU 59 pipeline segments that carried off-site process waste from the west.
- LOU 60 (Acid Drain System) The same argument presented above for LOU 59 applies to LOU 60 and similar sampling for OPPs and OAs is proposed. Entry of OPPs and OAs from west of the Site into the Acid Drain System would be limited to the line running from the southern end of the Site (Grid T-3) northward along 5<sup>th</sup> Street. That line then joins the other acid drain piping at Unit 1, running eastward along Avenue G towards 9<sup>th</sup> Street, then north to the conveyance leading to the former Trade Effluent Ponds.
- Based on information provided to Tronox by NDEP (Figure 2-2 of Revision 1.0 Conceptual Site Model, Former Montrose and Stauffer Facilities and Downgradient Areas to Las Vegas Wash, Henderson, Clark County, Nevada, Replacement Pages dated July 25, 2008), the only direct connections for the transfer of liquids potentially containing OPPs and OAs from the west are through the segment of LOU 60 that enters the Tronox Site at Grid O-2 and

through off-site flow from the west onto the Tronox portion of the Beta Ditch. Accordingly, Tronox proposes to sample for OPPs and OAs in the specified segment of LOU 60.

- LOU 1 (Former Trade Effluent Ponds) In the 1940s, effluent from the Acid Drain System
  was discharged into the Trade Effluent Ponds. If OPPs and OAs from sources to the west
  used the Acid Drain System to dispose of process waste then the possibility exists that
  LOU 1 may have been impacted. Tronox proposes to sample for OPPs and OAs at select
  borings within LOU
- Along Western Property Line Surface and capillary fringe sampling along the western edge of the Site in Areas I and IV will be conducted to assess migration of OPPs and OAs from the west.
- While the Hardesty Chemical operation (LOU 4) is not known to have produced OPPs or OAs, two borings in LOU 4 will be sampled for OPPs and OAs to confirm the CSM information.
- Additional locations outside of the areas discussed above will be analyzed for OPPs and OAs. These locations, shown on Figure 2, were selected based on wind rose patterns for the area and will provide general coverage across the Site to evaluate the potential transport of these constituents by wind and groundwater.

At locations marked with red dots on **Figure 2**, soil samples will be collected from depths of 0.5-foot bgs and the capillary fringe. These samples will be analyzed for OPPs and OAs to assess potential impacts related to wind-blown dust and to evaluate whether constituents migrating with groundwater are being sorbed onto soils. At locations marked with blue dots, soil samples from a depth of 10 feet bgs will also be analyzed for OPPs and OAs because at these locations, a hydrostatic head could have existed that provided a potential transport mechanism for OCPs into the underlying soil column.

#### 6.2 Groundwater Sampling for OPPs and OAs

OPPs and OAs produced from the various BMI complex companies operating west of the Tronox Site could potentially be carried beneath the Tronox Site via groundwater migration from the west to the north-northeast. Tronox proposes to sample groundwater for OPPs and OAs along the path of groundwater migration from the west and downgradient of the Beta Ditch. Groundwater in the alluvium along the west side of the Site is effectively separated from groundwater on the eastern portion of the Site, by a Muddy Creek "high". Where alluvial wells are not dry, Tronox proposes to sample groundwater in the alluvium along the western edge of the site. Groundwater in the upper portion of the Muddy Creek formation will also be sampled.

Groundwater samples for OPPs and OAs will be collected from monitoring well locations shown on **Figure 3**. The wells were selected to provide general coverage to evaluate potential migration of OPPs and OAs onto Tronox from off-site sources to the west.

AECOM



# 7.0 Rationale for Polychlorinated Biphenyl Sampling Program

Tronox has and continues to operate electrolytic cells on the Henderson Site. NDEP has questioned whether the Tronox electrolytic cells could generate poly-chlorinated biphenyl (PCB) compounds (in their congener form) and has requested that Tronox analyze soil samples for both Aroclor PCBs and congener PCBs using EPA analytical methods 8082 and 1668A, respectively.

Aroclor PCBs are typically associated with electric transformers; these types of transformers have been used at the Site and a spill of PCB-containing transformer oil has been reported. Tronox proposes to utilize EPA method 8082 for analyzing Aroclor PCBs in such areas.

Tronox maintains that the electrolytic cells utilized at the Site can not generate PCB congeners. Tronox proposes that the use of EPA analytical method 1668A be limited to samples from the west side of the Site, where NDEP indicates that PCB congeners generated off-site may be entering Tronox property.

Tronox and its predecessors have operated several types of electrolytic cells on the Site since the 1940s. These include:

- Sodium chlorate cells converting NaCl to NaClO3;
- Sodium perchlorate cells converting NaClO3 to NaClO4; and
- Manganese cells plating MnO2 from manganese sulfate solutions.

Currently, the manganese dioxide cells in Units 5 and 6 (LOU 44) are the only electrolytic cells in operation at the Site. They operate using a sulfate based anolyte and thus do not utilize chlorine needed to form PCBs.

While both the historic sodium chlorate and sodium perchlorate cells generated free chlorine (a degradation product of sodium hypochlorite, an intermediate compound in the electrolytic operation), neither process utilized organic compounds that could produce benzene ring structures which could then be chlorinated to PCBs. Moreover, PCB congeners typically form at temperatures ranging from 400 to 700 degrees Celsius. Tronox electrolytic production processes (both historic and current) operate at temperatures well below the boiling point of water. Thus, it is highly unlikely that Tronox's manufacturing processes would have yielded PCB congeners as byproducts.

Geosyntec Consultants' CSM indicates that the Montrose Chemical Company's closed pond areas (CPAs) have site-related chemicals (SRCs) such as chloroform, chlorobenzene, 1,2-dichlorobenzene, 1,4-dichlorobenzene and benzene that have affected both the soil and groundwater beneath and around the CPAs (Geosyntec, Sec 4.2.3). Montrose's SRCs are either organic hydrocarbons or chlorinated hydrocarbons, all of which are possible precursors to PCB byproduct synthesis. In the event that PCBs have been generated off-site through byproduct synthesis and not direct synthesis, EPA method 8082 for commercial mixtures of Aroclor PCBs is unlikely to be effective. EPA method 1668A for PCB congeners will be therefore be utilized at locations along the Tronox western boundary.



#### 7.1 Soil Sampling for PCBs

Based on the discussion above, the following areas will be sampled for PCBs:

- Soil borings along the western property boundary where possible PCB congeners generated off-site may enter Tronox property,
- LOU 5 Beta Ditch will be tested since off-site wastes flowed across the Tronox Site in the unlined ditch,
- LOU 27 PCB Storage Area,
- LOU 35 Former Truck Emptying/Dumping Area (PCBs were detected in Phase A samples),
- LOU 40 PCB Transformer Spill will be sampled for PCBs, and
- Per NDEP's request, soil borings located near the Western Area Power Association (WAPA) site.

Figure 4 shows the PCB soil sampling locations. Borings identified with a red dot on Figure 4 will be analyzed by Environmental Protection Agency (EPA) Method 8082 for Aroclors. Borings identified with a blue dot will be analyzed using both EPA Method 8082 and EPA Method 1668A for PCB congeners.

NDEP previously requested specific borings be sampled for PCBs. Some of these borings, however, have already been drilled as part of the Area I Phase B source area investigation and were found to contain negligible PCB concentrations (see **Table A**). Other NDEP proposed borings were found to be in areas associated with Tronox electrolytic cells not associated with PCBs (as discussed above). Since no significant concentrations of PCB congeners have been identified over a large area of the Site, Tronox proposes that the following borings requested by NDEP not be sampled for PCB Aroclors or congeners: SA35, SA70, SA175, SA155, SA158, SA62, SA145, SA61, SA144, SA71, RSAM8, RSAN7, SA151, SA208, SA34, SA177, SA68, and RSAT6.

As with OCP, OPP and OA sampling, Tronox proposes to sample at depths of 0.5 feet bgs and the capillary fringe at locations where a hydrostatic head is not likely to have facilitated downward migration of constituents through the soil column. At locations with a potential for hydraulic head such as the Beta Ditch, an additional sample at 10 feet bgs will be collected.

Soil samples in LOU 64 (former Koch Materials Company Area) and other locations marked with red diamonds on **Figure 4** were collected as part of the Area I Phase B investigation (June-July 2008). Those samples were analyzed for both Aroclors and PCB congeners (see **Table A**).

#### 7.2 Groundwater Sampling for PCBs

Groundwater samples will be analyzed for both Aroclor and congener PCBs at two locations (M-123 and M-125) associated with LOU 35 (former Truck Emptying/Dumping Area). (Aroclor PCBs were detected in soil and groundwater from LOU 35 during Phase A investigation). One location (M-123) has already been sampled as part of the Area I Phase B investigation.

To determine whether PCBs are moving onto the Tronox Site in groundwater from the west, samples from the following wells will be tested using both EPA methods 8082 and 1668A: M-7B, M-5A, M-127, M-125, M-123, TR-2, TR-4, and TR-6.

# 8.0 Modification to Area III Soil Boring Program Where Closure is Not Being Sought (Removal of Justified Boring Locations)

In the original Phase B Area III SAP submission, Tronox proposed both random (4-acre grid) and judgmental sampling of several LOUs not being proposed for closure due to ongoing plant operations. Tronox now proposes to simplify the Phase B sampling by limiting sampling in areas not proposed for closure to random samples only. In areas of the Site that will remain as active production areas for the foreseeable future (i.e., the Manganese Leach Plant Area, and Units 5 and 6), most judgmental boring locations have been removed from the Area III Soil SAP. The randomly-located borings in these areas will be drilled and these borings remain on **Table 2** (Soil Sampling and Analytical Plan) for Area III as discussed with NDEP (October 1, 2008).

The borings initially proposed in the Area III Work Plan that will not be drilled include the following: SA159, SA78, SA38, SA37, SA174, SA36, and SA177. Boring SA140, which is located in the Mn Leach Plant Area will be drilled since this borehole will be converted to monitoring well M-141.



### 9.0 Removal of Duplicate Entries on Area Sampling Tables

In the original Area SAPs submitted to NDEP, several borings and wells were listed in Sampling Tables for more than one Area. This was done because the wells/borings were organized according to their listings in the individual LOU Data Packages. For example, in some cases, a well may be downgradient of an LOU in Area II and the same well may be upgradient of an LOU in Area I. To simplify review of this submission, Tronox has removed the duplicate entries and shows the borings and groundwater wells only in the Area in which they are physically located. The color coded **Table 2** and **Table 3** for each Area identifies duplicate listings for borings/wells that have been removed by a brown background and an explanation in the Rationale column.

For Phase B investigation wells located outside of Area boundaries or off-site, the wells are shown on **Table 3** for the Area work plans indicated below:

- Wells located in the north, west, and east of Area I are listed in Table 3 of Area I.
- Wells located off-site and east of Area III are listed in Table 3 of Area III.
- Wells locate on Tronox Parcels F, G, and H area listed in Table 3 of Area IV.

To assist reviewers, should a question arise on which Area includes a specific well or boring, two tables have been provided. **Table B** and **Table C** show alphabetical lists of soil borings and groundwater wells, respectively, along with corresponding Site grid coordinates and the Area SAP in which the well/boring is located.



### **10.0 Data Validation**

To increase efficiencies in the data validation process, Tronox proposes to use Laboratory Data Corporation (LDC) to validate laboratory sample results. ENSR will coordinate the flow of data from the laboratories to LDC and will work with LDC to streamline the Tronox validation process.



## 11.0 References

Brian Rakvica, 2008, Personal communication via email, Lithologic Nomenclature, December 8, 2008.

NDEP, 1996, Consent Agreement dated August 1, 1996, between the State of Nevada, Department of Conservation and Natural Resources, Division of Environmental Protection and Kerr-McGee Chemical Corporation.



Tables

#### Table A. Sample-By-Sample Summary of Total Congener PCB Results in Soil PRELIMINARY UNVALIDATED DATA

Tronox Facility - Henderson, Nevada

|          |              |            |        | PCBs TEQ       | PCBs TEQ       | Total PCBs                 | Total PCBs                                      |
|----------|--------------|------------|--------|----------------|----------------|----------------------------|---|
| Grid     | Boring ID    | Sample ID  | Sample | Zero Detection | Full Detection | Zero Detection             | Full Detection Limit                            |
| Location | _ • <b>g</b> |            | Depth  | Limit (a)      | Limit (a)      | Limit (a)                  | (a)   |
|          |              |            |        | (ug/kg)        | (ug/kg)        | (mg/kg)                    | (mg/kg)   |
| N-2      | RSAN2        | RSAN2-0.5B | 0.5    | 4.35E-07       | 1.80E-04       | 1.54E-03                   | 1.89E-03  |
|          |              | RSAN2-10B  | 10     | 9.37E-07       | 9.23E-05       | 3.09E-03                   | 3.35E-03  |
|          |              | RSAN2-20B  | 20     | 9.86E-07       | 5.73E-05       | 2.17E-03                   | 2.26E-03  |
|          |              | RSAN2-30B  | 30     | 1.28E-06       | 1.93E-04       | 2.35E-03                   | 3.04E-03  |
|          |              | RSAN2-30BD | 30     | 9.44E-07       | 3.22E-04       | 2.54E-03                   | 3.38E-03  |
|          |              | RSAN2-35B  | 35     | 9.90E-07       | 2.03E-04       | 2.00E-03                   | 2.54E-03  |
| O-2      | RSAO2        | RSAO2-0.5B | 0.5    | 7.78E-06       | 2.85E-04       | 3.42E-03                   | 3.93E-03  |
|          |              | RSAO2-10B  | 10     | 1.00E-06       | 1.08E-04       | 1.59E-03                   | 2.15E-03  |
|          |              | RSAO2-20B  | 20     | 8.08E-07       | 2.61E-04       | 1.58E-03                   | 2.03E-03  |
|          |              | RSAO2-20BD | 20     | 9.09E-07       | 1.50E-04       | 1.60E-03                   | 2.07E-03  |
|          |              | RSAO2-30B  | 30     | 5.64E-07       | 4.75E-04       | 1.77E-03                   | 3.15E-03  |
|          |              | RSAO2-33B  | 33     | 2.09E-06       | 3.43E-04       | 5.33E-03                   | 6.23E-03  |
| O-4      | RSAO4        | RSAO4-0.5B | 0.5    | 6.15E-06       | 4.75E-04       | 1.68E-02                   | 1.70E-02  |
|          |              | RSAO4-10B  | 10     | 4.34E-06       | 2.02E-04       | 1.45E-02                   | 1.49E-02  |
|          |              | RSAO4-20B  | 20     | 5.16E-07       | 2.77E-04       | 1.88E-03                   | 2.86E-03  |
|          |              | RSAO4-30B  | 30     | 1.34E-06       | 4.03E-04       | 2.30E-03                   | 3.32E-03  |
|          |              | RSAO4-36B  | 36     | 1.57E-06       | 3.01E-04       | 2.51E-03                   | 2.82E-03  |
| O-3      | SA180        | SA180-0.5B | 0.5    | 2.22E-02       | 2.22E-02       | 5.73E-02                   | 5.75E-02  |
|          |              | SA180-10B  | 10     | 1.08E-06       | 1.67E-04       | 1.84E-03                   | 2.25E-03  |
|          |              | SA180-20B  | 20     | 1.13E-03       | 1.13E-03       | 1.79E-03                   | 1.90E-03  |
|          |              | SA180-30B  | 30     | 1.92E-02       | 1.92E-02       | 3.47E-03                   | 4.61E-03  |
| O-3      | SA48         | SA48-0.5B  | 0.5    | 1.75E-02       | 1.75E-02       | 2.36E-01                   | 2.36E-01  |
|          |              | SA48-10B   | 10     | 1.27E-05       | 2.13E-04       | 3.08E-03                   | 4.15E-03  |
|          |              | SA48-20B   | 20     | 7.61E-03       | 7.61E-03       | 4.65E-02                   | 5.01E-02  |
|          |              | SA48-30B   | 30     | 2.61E-06       | 3.98E-04       | 1.23E-03                   | 2.00E-03  |
|          |              | SA48-35B   | 35     | 6.56E-06       | 2.38E-04       | 2.28E-03                   | 2.57E-03  |
| O-3      | SA57         | SA57-0.5B  | 0.5    | 7.75E-03       | 7.75E-03       | 5.25E-02                   | 5.32E-02  |
|          |              | SA57-10B   | 10     | 7.98E-07       | 8.10E-05       | 1.42E-03                   | 1.55E-03  |
|          |              | SA57-20B   | 20     | 5.45E-04       | 5.45E-04       | 8.60E-04                   | 1.60E-03  |
|          |              | SA57-30B   | 30     | 2.34E-03       | 2.34E-03       | 1.74E-03                   | 3.11E-03  |
|          |              | Comparisor | Levels | 1 (b)          | 1 (b)          | TSCA (i<br>1/10 ind<br>2.9 | 0E+00<br>residential;<br>ustrial.) (c)<br>0E-01 |
|          |              |            |        |                |                | 1/10th Regi                | on 6 MSSL (d)                                   |

Notes:

MSSL - USEPA Region 6 Medium-Specific Screening Level. March 7, 2008.

PCB - Polychlorinated biphenyl.

TEQ - Toxic Equivalent. Calculated by first multiplying the congener concentration by the Toxic Equivalency Factor (TEF) (Van den Berg et al., 2006) and then summing the resulting values.

TSCA - Toxic Substances Control Act.

Van den Berg, et al. 2006. The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds. Toxicological Sciences 93(2): 223-241.

(a) Total PCB and PCB TEQs were calculated using two different methods for handling non-detected results:

- Results for congeners not detected above the laboratory detection limit were set equal to zero.

- Results for congeners not detected above the laboratory detection limit were set equal to the laboratory detection limit.

(b) USEPA, 1998. Approach for Addressing Dioxin in Soil at CERCLA and RCRA Sites. OSWER Directive 9200.4-26. April, 1998. Value for residential soils.

(c) TSCA. 40 CFR Part 761; 63 FR 35383-35474, June 29, 1998.

(d) MSSL. http://www.epa.gov/earth1r6/6pd/rcra\_c/pd-n/screen.htm.

#### Table B. Index to the Proposed Phase B Soil Boring Locations

Tronox Facility - Henderson, Nevada

| Boring No.   | Grid<br>Location       | Area      |
|--------------|------------------------|-----------|
| SA28         | U-5                    | IV        |
| SA29         | R-4                    | IV        |
| SA30         | R-6                    |           |
| SA31         | R-6                    |           |
| SA32         | R-6                    |           |
| SA33         | R-7                    |           |
| SA34         | R-8                    |           |
| SA35         | 0-2                    | 1         |
| SA36         | Q-7, Removed by Tronox |           |
| SA37         | Q-8, Removed by Tronox |           |
|              |                        | <br>      |
| SA38         | P-8, Removed by Tronox |           |
| SA39         | O-6                    | <br>      |
| SA40         | O-6                    | <u>  </u> |
| SA41         | O-5                    | <u>  </u> |
| SA42         | O-6                    | <u>  </u> |
| SA43         | O-6                    |           |
| SA44         | O-5                    | II        |
| SA45         | O-5                    | II        |
| SA46         | O-4                    |           |
| SA47         | O-4                    | I         |
| SA48         | O-3                    | I         |
| SA49         | N-7                    |           |
| SA50         | O-5                    | II        |
| SA51         | O-6                    |           |
| SA52         | O-7                    |           |
| SA53         | O-5                    |           |
| SA54         | O-4                    |           |
| SA55         | 0-4                    | 1         |
| SA56         | N-2                    |           |
| SA57         | 0-3                    |           |
| SA58         | N-5                    |           |
| SA59         | R-8                    |           |
| SA60         | N-6                    | <br>      |
| SA61         | N-8                    | <br>      |
| SA62         | M-8                    |           |
|              |                        |           |
| SA63<br>SA64 | M-7                    |           |
|              | M-6                    |           |
| SA65         | M-5                    | <u>  </u> |
| SA66         | M-3                    |           |
| SA67         | M-2                    |           |
| SA68         | R-8                    |           |
| SA69         | M-4                    | <u> </u>  |
| SA70         | M-5                    |           |
| SA71         | M-8                    | II        |
| SA72         | L-5                    | II        |
| SA73         | L-6                    |           |
| SA74         | L-5                    | I         |
| SA75         | L-7                    | I         |
| SA76         | K-6                    | I         |
| SA77         | S-8                    |           |

| Boring No. | Grid<br>Location       | Area |
|------------|------------------------|------|
| SA78       | P-8, Removed by Tronox | III  |
| SA79       | J-8, Removed by NDEP   | Ι    |
| SA82       | L-3                    | I    |
| SA84       | Q-4                    | IV   |
| SA85       | N-3                    | Ι    |
| SA86       | M-7                    | II   |
| SA87       | N-4                    | I    |
| SA88       | K-3                    | Ι    |
| SA92       | M-7                    | II   |
| SA94       | N-5                    | II   |
| SA100      | M-3                    | I    |
| SA101      | Q-4                    | IV   |
| SA102      | O-5                    | II   |
| SA103      | P-4                    | IV   |
| SA104      | M-5                    | II   |
| SA105      | N-6                    | II   |
| SA106      | O-5                    | II   |
| SA107      | N-7                    | II   |
| SA108      | O-8                    |      |
| SA109      | O-5                    |      |
| SA110      | R-3                    | IV   |
| SA111      | R-4                    | IV   |
| SA112      | R-7                    |      |
| SA113      | N-5                    |      |
| SA114      | O-5                    |      |
| SA115      | T-5                    | IV   |
| SA116      | T-5                    | IV   |
| SA117      | P-5                    |      |
| SA118      | T-6                    | IV   |
| SA119      | T-4                    | IV   |
| SA120      | Q-4                    | IV   |
| SA121      | Q-4                    | IV   |
| SA122      | S-7                    |      |
| SA123      | L-5                    |      |
| SA124      | Q-5                    | II   |
| SA125      | R-6                    |      |
| SA126      | Q-6                    |      |
| SA127      | J-6                    |      |
| SA128      | M-4                    | II   |
| SA129      | M-5                    | II   |
| SA130      | P-6                    | II   |
| SA131      | L-8                    | II   |
| SA132      | R-7                    | III  |
| SA133      | R-5                    | II   |
| SA134      | K-3                    | I    |
| SA135      | R-5                    | IV   |
| SA136      | Q-6                    |      |
| SA137      | 0-7                    | III  |
| SA138      | Q-4                    | IV   |
| SA139      | N-8                    | III  |

# Table B. Index to the Proposed Phase B Soil Boring LocationsTronox Facility - Henderson, Nevada

| Boring No. | Grid<br>Location       | Area |
|------------|------------------------|------|
| SA140      | P-7, Removed by Tronox |      |
| SA141      | 0-7                    |      |
| SA142      | O-8                    |      |
| SA143      | O-8                    |      |
| SA144      | M-8                    |      |
| SA145      | M-8                    |      |
| SA146      | U-4                    | IV   |
| SA147      | U-4                    | IV   |
| SA148      | Q-4                    | IV   |
| SA149      | 0-7                    | III  |
| SA150      | N-6                    |      |
| SA151      | N-6                    |      |
| SA152      | K-2                    |      |
| SA153      | 0-5                    |      |
| SA154      | N-7                    |      |
| SA155      | M-7                    |      |
| SA156      | Q-5                    | IV   |
| SA157      | N-7                    |      |
| SA158      | N-8                    |      |
| SA159      | P-8, Removed by Tronox |      |
| SA160      | N-8                    | III  |
| SA161      | R-6                    |      |
| SA165      | N-4                    |      |
| SA166      | 0-2                    |      |
| SA167      | L-5                    |      |
| SA169      | Q-3                    | IV   |
| SA170      | S-7                    |      |
| SA171      | O-8                    |      |
| SA172      | O-5                    |      |
| SA173      | L-5                    |      |
| SA174      | Q-8                    | III  |
| SA175      | M-6                    |      |
| SA176      | 0-3                    |      |
| SA177      | Q-8                    | III  |
| SA178      | 0-7                    |      |
| SA179      | L-5                    |      |
| SA180      | 0-3                    | I    |
| SA181      | O-3                    |      |
| SA182      | O-4                    | I    |
| SA183      | 0-4                    |      |
| SA185      | O-5                    |      |
| SA186      | 0-5                    |      |
| SA187      | O-5                    |      |
| SA188      | 0-5                    |      |
| SA189      | L-4                    |      |
| SA190      | R-4                    | IV   |
| SA191      | R-4                    | IV   |
| SA192      | R-3                    | IV   |
| SA193      | Q-3                    | IV   |
| SA196      | N-6                    |      |
| SA197      | M-6                    |      |
| SA198      | M-6                    |      |
| 0,1100     |                        |      |

| Boring No.     | Grid<br>Location | Area     |
|----------------|------------------|----------|
| SA200          | O-6              |          |
| SA201          | I-3              | I        |
| SA202          | J-3              | I        |
| SA203          | Q-4              | IV       |
| SA204          | Q-4              | IV       |
| SA205          | Q-5              | IV       |
| SA206          | J-3              |          |
| SA207          | O-3              | I        |
| SA208          | R-6              |          |
| SA209          | R-3              | IV       |
| SA210          | T-8              | IV       |
| SA211          | Q-3              | IV       |
| SA212          | Q-3              | IV       |
| SA213          | Q-4              | IV       |
| SA214          | Q-5              | IV       |
| RSAH3          | H-3              |          |
| RSAI2          | l-2              | 1        |
| RSAI3          | I-3              | 1        |
| RSAI4          | <u> </u>         | i        |
| RSAI5          | l-5              | 1        |
| RSAI7          | l-7              | I        |
| RSAJ2          | J-2              |          |
| RSAJ3          | J-3              | I        |
| RSAJ5          |                  |          |
| RSAJ6          | J-6              | 1        |
| RSAJ0<br>RSAJ7 |                  | 1        |
|                | J-7              | 1        |
| RSAJ8          | J-8              |          |
| RSAK2          | K-2              | 1        |
| RSAK3          | K-3              | 1        |
| RSAK4          | K-4<br>K-5       |          |
| RSAK5<br>RSAK6 |                  | 1        |
|                | K-6              | 1        |
| RSAK7          | K-7              | I        |
| RSAK8          | K-8              | 1        |
| RSAL2          | L-2              |          |
| RSAL3          | L-3              | 1        |
| RSAL4          | L-4              | <u> </u> |
| RSAL5          | L-5              |          |
| RSAL6          | L-6              | ll       |
| RSAL7          | L-7              | I        |
| RSAL8          | L-8              |          |
| RSAM2          | M-2              | I        |
| RSAM3          | M-3              | Ι        |
| RSAM4          | M-4              | Ι        |
| RSAM5          | M-5              | II       |
| RSAM6          | M-6              | II       |
| RSAM7          | M-7              |          |
| RSAM8          | M-8              |          |
| RSAN2          | N-2              | I        |
| RSAN3          | N-3              | I        |
| RSAR3          | R-3              | IV       |
| RSAR4          | R-4              | IV       |

# Table B. Index to the Proposed Phase B Soil Boring LocationsTronox Facility - Henderson, Nevada

| Boring No. | Grid<br>Location | Area |
|------------|------------------|------|
| RSAN4      | N-4              | l    |
| RSAN5      | N-5              | 11   |
| RSAN6      | N-6              | 11   |
| RSAN7      | N-7              | II   |
| RSAN8      | N-8              | III  |
| RSAO2      | O-2              | I    |
| RSAO3      | O-3              | I    |
| RSAO4      | O-4              | I    |
| RSAO5      | O-5              | 11   |
| RSAO6      | O-6              |      |
| RSAO7      | O-7              | III  |
| RSAO8      | O-8              | III  |
| RSAP5      | P-5              | IV   |
| RSAP6      | P-6              | III  |
| RSAP7      | P-7              | III  |
| RSAP8      | P-8              | III  |
| RSAQ3      | Q-3              | IV   |
| RSAQ4      | Q-4              | IV   |
| RSAQ5      | Q-5              | II   |
| RSAQ6      | Q-6              | II   |
| RSAQ7      | Q-7              | III  |
| RSAQ8      | Q-8              | III  |

| Boring No. | Grid<br>Location | Area |
|------------|------------------|------|
| RSAR5      | R-5              | IV   |
| RSAR6      | R-6              | II   |
| RSAR7      | R-7              | III  |
| RSAR8      | R-8              |      |
| RSAS3      | S-3              | IV   |
| RSAS4      | S-4              | IV   |
| RSAS5      | S-5              | IV   |
| RSAS6      | S-6              | IV   |
| RSAS7      | S-7              | IV   |
| RSAS8      | S-8              |      |
| RSAT3      | T-3              | IV   |
| RSAT4      | T-4              | IV   |
| RSAT5      | T-5              | IV   |
| RSAT6      | T-6              | IV   |
| RSAT7      | T-7              | IV   |
| RSAT8      | T-8              | IV   |
| RSAU4      | U-4              | IV   |
| RSAU5      | U-5              | IV   |
| RSAU6      | U-6              | IV   |
| RSAU7      | U-7              | IV   |

#### Table C. Index to Phase B Groundwater Well Locations

Tronox Facility - Henderson, Nevada

| Monitoring Well No. | Grid<br>Location | Area                             |
|---------------------|------------------|----------------------------------|
| AA-BW-02A           | J-2              | Montrose<br>(assoc. with Area I) |
| CLD1-R              | K-9              | Timet<br>(assoc. with Area I)    |
| CLD2-R              | L-9              | Timet<br>(assoc. with Area II)   |
| CLD3-R              | L-10             | Timet<br>(assoc. with Area I)    |
| CLD4-R              | N-9              | Timet<br>(assoc. with Area III)  |
| CLU1                | O-10             | Timet<br>(assoc. with Area III)  |
| H-11                | W-1              | Olin<br>(assoc. with Area IV)    |
| H-28A               | H-2              | Montrose<br>(assoc. with Area I) |
| H-38                | M-1              | Olin<br>(assoc. with Area I)     |
| H-48                | A-3              | Olin<br>(assoc. with Area I)     |
| H-49A               | B-3              | Olin<br>(assoc. with Area I)     |
| I-AR                | L-5              | II                               |
| I-B                 | L-5              | I                                |
| M-2A                | N-6              | II                               |
| M-5A                | K-2              |                                  |
| M-6A                | H-2              |                                  |
| M-7B                | H-3              | I                                |
| M-10                | T-7              | IV                               |
| M-11                | Q-7              | III                              |
| M-12A               | Q-6              | II                               |
| M-13                | Q-5              | II                               |
| M-14A               | L-4              |                                  |
| M-17A               | N-6              |                                  |
| M-19                | M-8              |                                  |
| M-21                | O-5              | 11                               |
| M-22A               | M-7              | II                               |
| M-23                | H-6              | Parcel D<br>(assoc. with Area I) |
| M-25                | L-6              | II                               |
| M-29                | R-8              |                                  |
| M-31A               | P-7              | III                              |
| M-33                | O-8              | III                              |
| M-34                | N-7              | II                               |
| M-35                | N-7              | III                              |
| M-38                | L-6              |                                  |
| M-39                | M-8              | I                                |

| Monitoring Well No. | Grid<br>Location | Area                             |
|---------------------|------------------|----------------------------------|
| M-44                | E-5              | Parcel B<br>(assoc. with Area I) |
| M-48                | H-8              | Parcel J<br>(assoc. with Area I) |
| M-50                | O-6              | 111                              |
| M-52                | P-7              | 111                              |
| M-55                | L-6              | I                                |
| M-57A               | L-4              | I                                |
| M-61                | L-8              | I                                |
| M-64                | L-6              | II                               |
| M-65                | L-6              | I                                |
| M-67                | L-8              | I                                |
| M-68                | L-8              | I                                |
| M-69                | K-5              | I                                |
| M-75                | N-5              | II                               |
| M-76                | N-5              | II                               |
| M-77                | P-8              | III                              |
| M-78                | L-6              | I                                |
| M-79                | K-5              |                                  |
| M-83                | K-6              | I                                |
| M-84                | K-6              |                                  |
| M-86                | K-7              |                                  |
| M-88                | K-8              |                                  |
| M-89                | M-6              |                                  |
| M-92                | Q-4              | IV                               |
| M-93                | P-4              | IV                               |
| M-94                | E-6              | Parcel I<br>(assoc. with Area I) |
| M-95                | E-6              | Parcel I<br>(assoc. with Area I) |
| M-96                | E-7              | Parcel I<br>(assoc. with Area I) |
| M-97                | P-5              | IV                               |
| M-98                | 1-4              |                                  |
| M-99                | I-5              |                                  |
| M-100               | I-6              |                                  |
| M-101               | I-7              |                                  |
| M-102               | J-8              |                                  |
| M-103               | V-7              | IV                               |
| M-110               | M-5              | II                               |

#### Table C. Index to Phase B Groundwater Well Locations

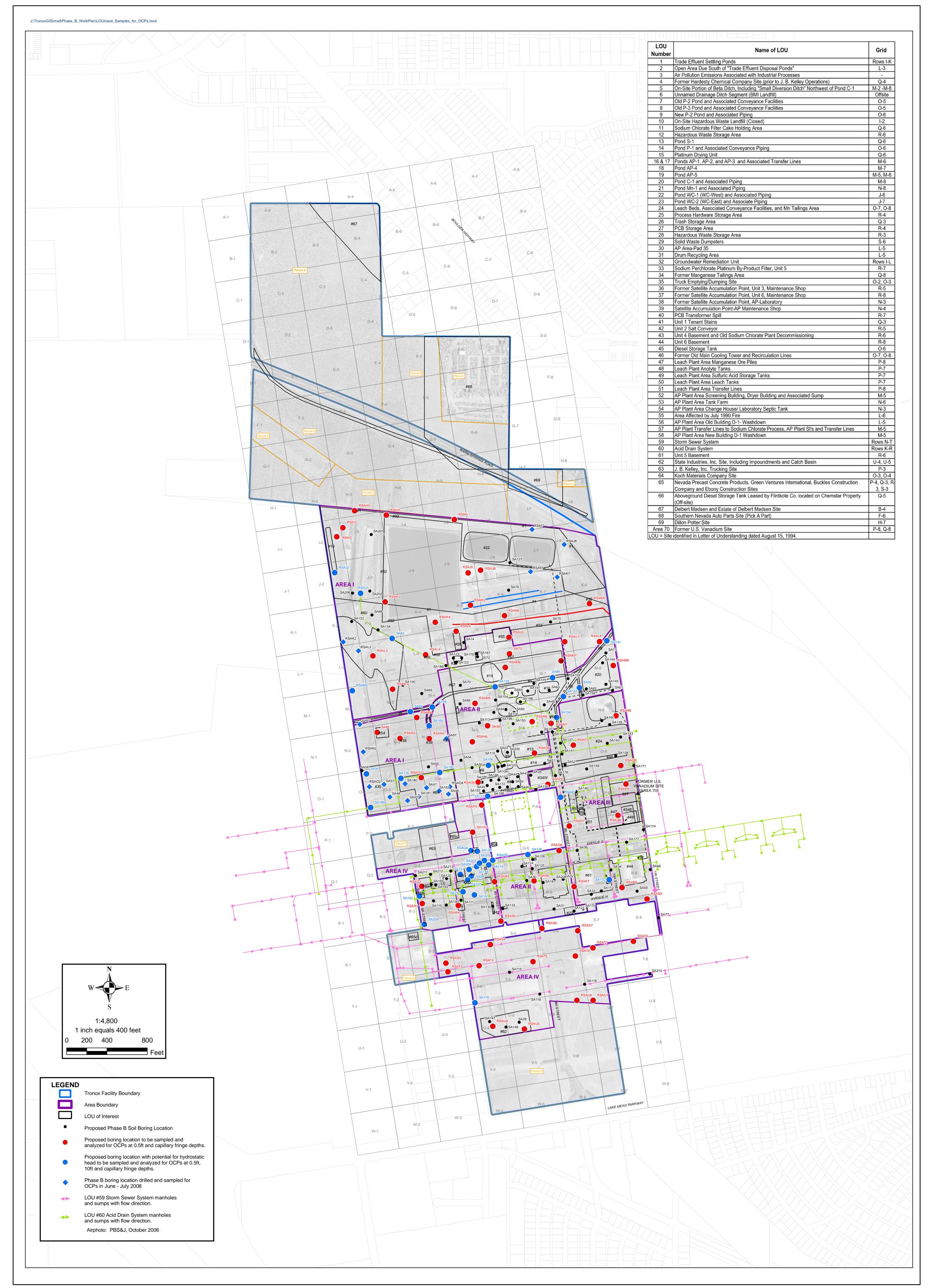
| Tronox Facility - | Henderson, | Nevada |
|-------------------|------------|--------|
|-------------------|------------|--------|

| Monitoring Well No. | Grid<br>Location | Area                              |
|---------------------|------------------|-----------------------------------|
| M-111A              | M-5              | II                                |
| M-117               | W-7              | Parcel H<br>(assoc. with Area IV) |
| M-118               | W-5              | Parcel H<br>(assoc. with Area IV) |
| M-120               | W-6              | Parcel H<br>(assoc. with Area IV) |
| M-121               | W-4              | Parcel H<br>(assoc. with Area IV) |
| M-122               | Q-8              | Ш                                 |
| M-123               | O-2              | I                                 |
| M-124               | O-4              | I                                 |
| M-125               | M-3              | I                                 |
| M-126               | L-3              | I                                 |
| M-127               | L-2              | I                                 |
| M-128               | O-4              | I                                 |
| M-129               | K-9              | Timet<br>(assoc. with Area I)     |
| M-130               | L-9              | Timet<br>(assoc. with Area I)     |
| M-137               | U-4              | IV                                |
| M-138               | U-5              | IV                                |
| M-139               | R-8              | Ш                                 |
| M-141               | P-7              | Ш                                 |
| M-142               | N-4              |                                   |
| M-143               | Q-4              | IV                                |
| M-140<br>M-144      | R-5              | IV                                |
| M-145               | R-8              |                                   |
| M-146               | R-5              |                                   |
| M-147               | N-8              |                                   |
| M-148               | O-8              | III                               |
| MC-3                | G-1              | Montrose<br>(assoc. with Area I)  |
| MC-32               | H-2              | Parcel C<br>(assoc. with Area I)  |

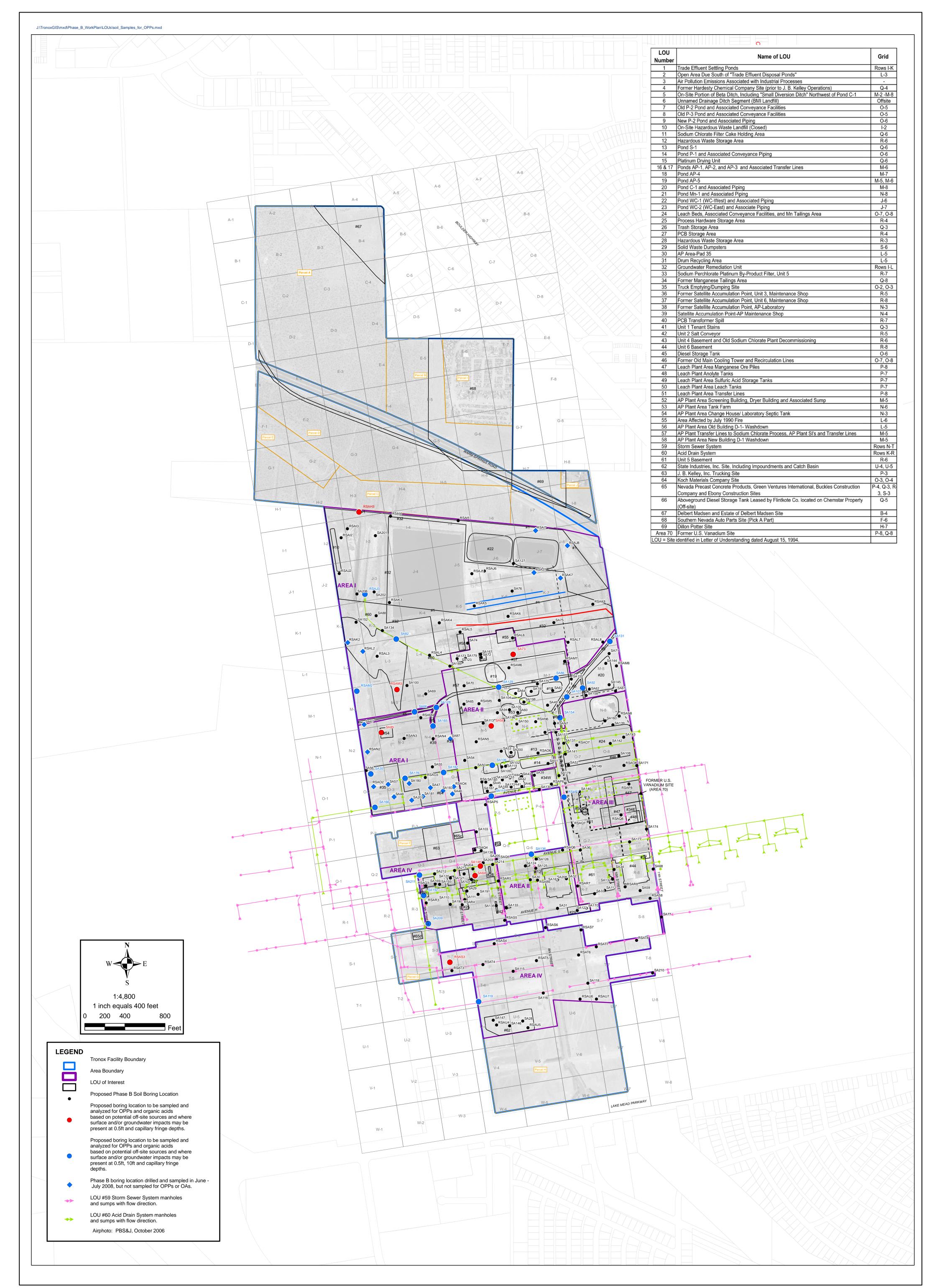
| Monitoring Well No. | Grid<br>Location | Area                              |
|---------------------|------------------|-----------------------------------|
| MC-45               | E-1              | Parcel D<br>(assoc. with Area I)  |
| MC-53               | F-2              | Parcel D<br>(assoc. with Area I)  |
| MC-55               | G-3              | Parcel D<br>(assoc. with Area I)  |
| MC-59               | H-3              | Parcel D<br>(assoc. with Area I)  |
| MC-62               | D-3              | Parcel A<br>(assoc. with Area I)  |
| MC-65               | E-3              | Parcel A<br>(assoc. with Area I)  |
| MC-66               | E-3              | Parcel A<br>(assoc. with Area I)  |
| MC-94               | G-2              | Parcel D<br>(assoc. with Area I)  |
| MC-97               | G-2              | Parcel E<br>(assoc. with Area I)  |
| MW-06R              | Q-9              | Timet<br>(assoc. with Area III)   |
| MW-16               | K-3              | I                                 |
| PC-37               | F-4              | Parcel B<br>(assoc. with Area I)  |
| PC-40               | A-5              | Parcel A<br>(assoc. with Area I)  |
| PC-72               | D-4              | Parcel B<br>(assoc. with Area I)  |
| TR-02               | K-2              | I                                 |
| TR-04               | M-2              | I                                 |
| TR-06               | P-2              | Parcel F<br>(assoc. with Area IV) |
| TR-08               | S-2              | Parcel G<br>(assoc. with Area IV) |
| TR-10               | U-4              | IV                                |



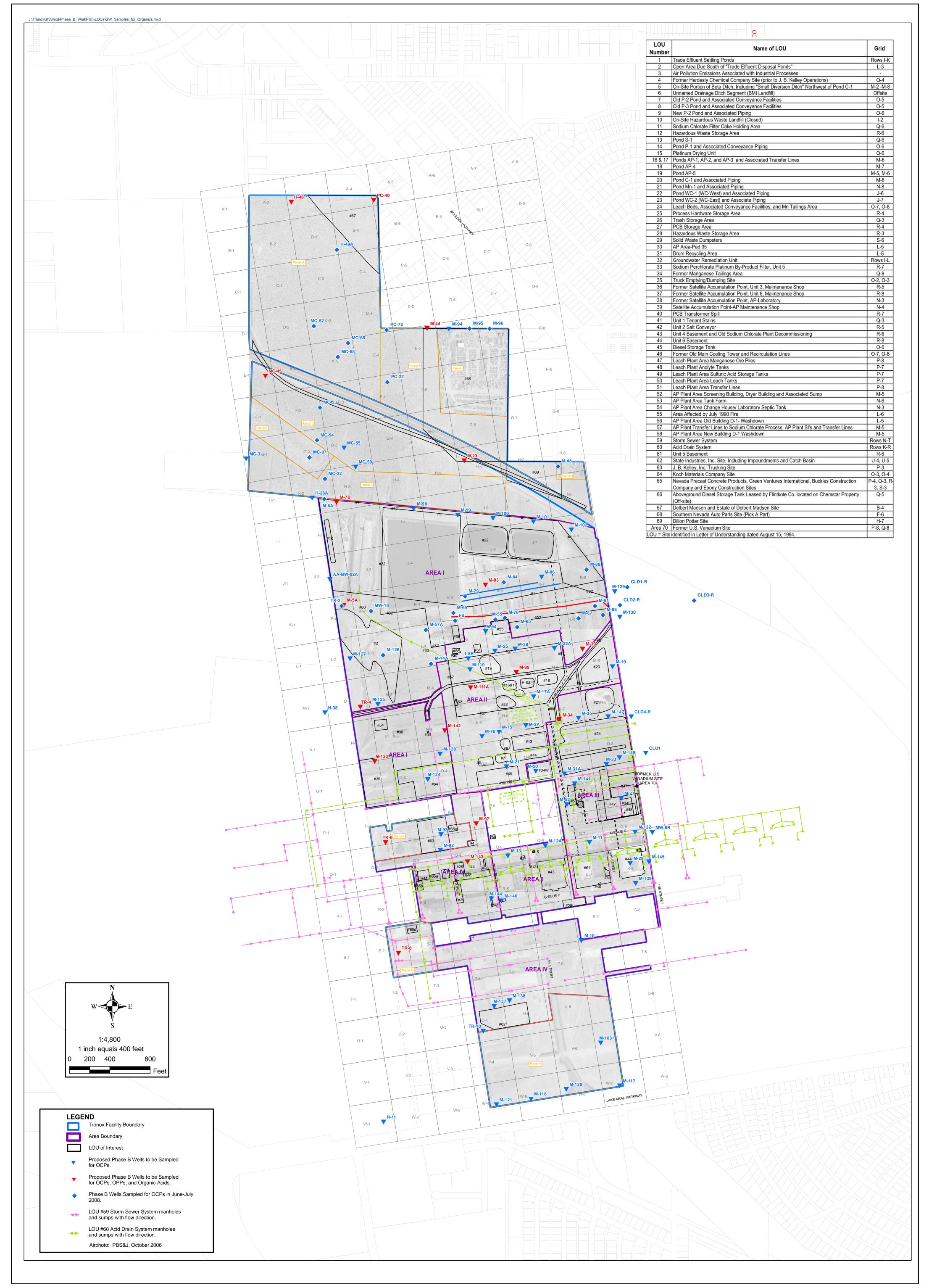
Figures



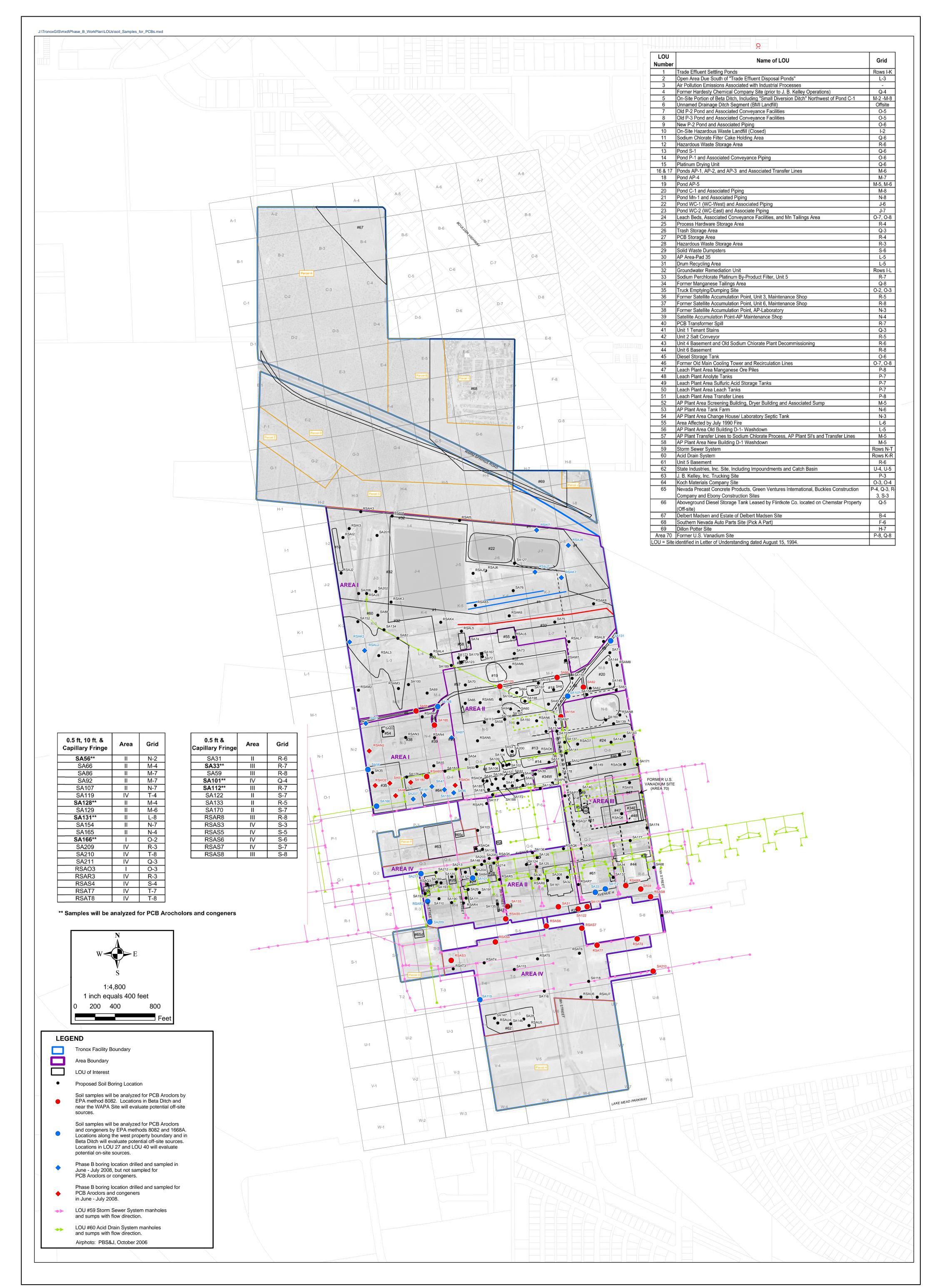
|     |          | ר ו   |                                      |          |                             |  |             | DESIGNED BY: |      | REVISIONS    |        |        |  |
|-----|----------|---|--------------------------------------|----------|-----------------------------|--|-------------|--------------|------|--------------|--------|--------|--|
| S   | <b>三</b> |   | PROPOSED SOIL BORING                 | LOCATIO  | ONS TO BE SAMPLED           | ENSR   | AFCOM       | T. McAdam    | NO.: | DESCRIPTION: | DATE:  | BY:    |  |
|     | GUF      |   | FOR ORGANOCHLORINE PESTICIDES (OCPs) |          |                             | LINSK  | DRAWN BY:   |              |      |              |        |        |  |
|     |          |   | Dhase D. Course Area Investigation   |          | ENSR CORPORATION            |  | M. Scop     |              |      |              | TDANAY |        |  |
|     |          | Phase B Source Area Investigation     Tronox Facility |                                      | sugation | 1220 AVENIDA ACASO          |  | CHECKED BY: |              |      |              |        | INUNUA |  |
| BER | BEF      |   | Henderson, Nevada                    |          | CAMARILLO, CALIFORNIA 93012 |  | C. Schnell  |              |      |              |        |        |  |
| ?   | <u>א</u> | SCALE: DATE: PROJECT NUMBER:                          | SCALE: DATE:                         |          | PROJECT NUMBER:             | PHONE: (805) 388-3775<br>FAX: (805) 388-3577 |             | APPROVED BY: |      |              |        |        |  |
|     |          |   | WEB: HTTP://WWW.ENSR.AECOM.COM       | M. Flack |                             |  |             |              |      |              |        |        |  |



| SHEET NUMBER: |   | !    |   |                 |                     |  |            | DESIGNED BY: REVISIONS |                      |  |              |       |        |         |
|---------------|---|------|---|-----------------|---------------------|--|------------|------------------------|----------------------|--|--------------|-------|--------|---------|
|               |   | FIG  | Phase B Source Area Investigation<br>Tronox Facility<br>Henderson, Nevada |                 |                     |  | ENSR AECOM |                        | T. McAdam NO.:       |  | DESCRIPTION: | DATE: | BY:    |         |
|               |   | URE  |   |                 |                     | ENSR CORPORATION   |            |                        | DRAWN BY:<br>M. Scop |  |              |       |        | TDOLLOV |
|               | N | NUN  |   |                 |                     | 1220 AVENIDA ACASO<br>CAMARILLO, CALIFORNIA 93012<br>PHONE: (805) 388-3775 |            | CHECKED BY:            |                      |  |              |       | IKUNUX |         |
|               |   | 1BER |   |                 |                     |  | C. Schnell |                        |                      |  |              | 1     |        |         |
|               |   |      | SCALE: DATE: PROJECT NUMBER:  | PROJECT NUMBER: | FAX: (805) 388-3577 |  |            | APPROVED BY:           | _                    |  |              |       |        |         |
|               |   |      | 1" = 400'   | 12/18/2008      | 04020-023-430       | WEB: HTTP://WWW.ENSR.A   | AECOM.COM  |                        | M. Flack             |  |              |       |        |         |



| SHEET NUMBER: |   | FIGUR     | PROPOSED GROUNI<br>SAMPLED FOR OCPs,                                      |  |                               | ENSR AE  | СОМ                                  | DESIGNED BY:<br>T. McAdam<br>DRAWN BY: | REVISIONS         NO.:       DESCRIPTION:       DATE:       BY:         Image: Second seco |  |        | BY: |  |
|---------------|---|-----------|---|--|-------------------------------|--|--------------------------------------|--|--|--|--------|-----|--|
|               | ယ | RE NUMBER | Phase B Source Area Investigation<br>Tronox Facility<br>Henderson, Nevada |  |                               | ENSR CORPORATION<br>1220 AVENIDA ACASO<br>CAMARILLO, CALIFORNIA 93012<br>PHONE: (805) 388-3775 | M. Scop<br>CHECKED BY:<br>C. Schnell |  |  |  | TRONOX |     |  |
|               |   |           | SCALE:         DAT           1" = 400'         12/18/2                    |  | PROJECT NUMBER: 04020-023-430 | FAX: (805) 388-3577<br>WEB: HTTP://WWW.ENSR.AECOM.COM  | M.COM                                | APPROVED BY:<br>C. Schnell             |  |  |        |     |  |

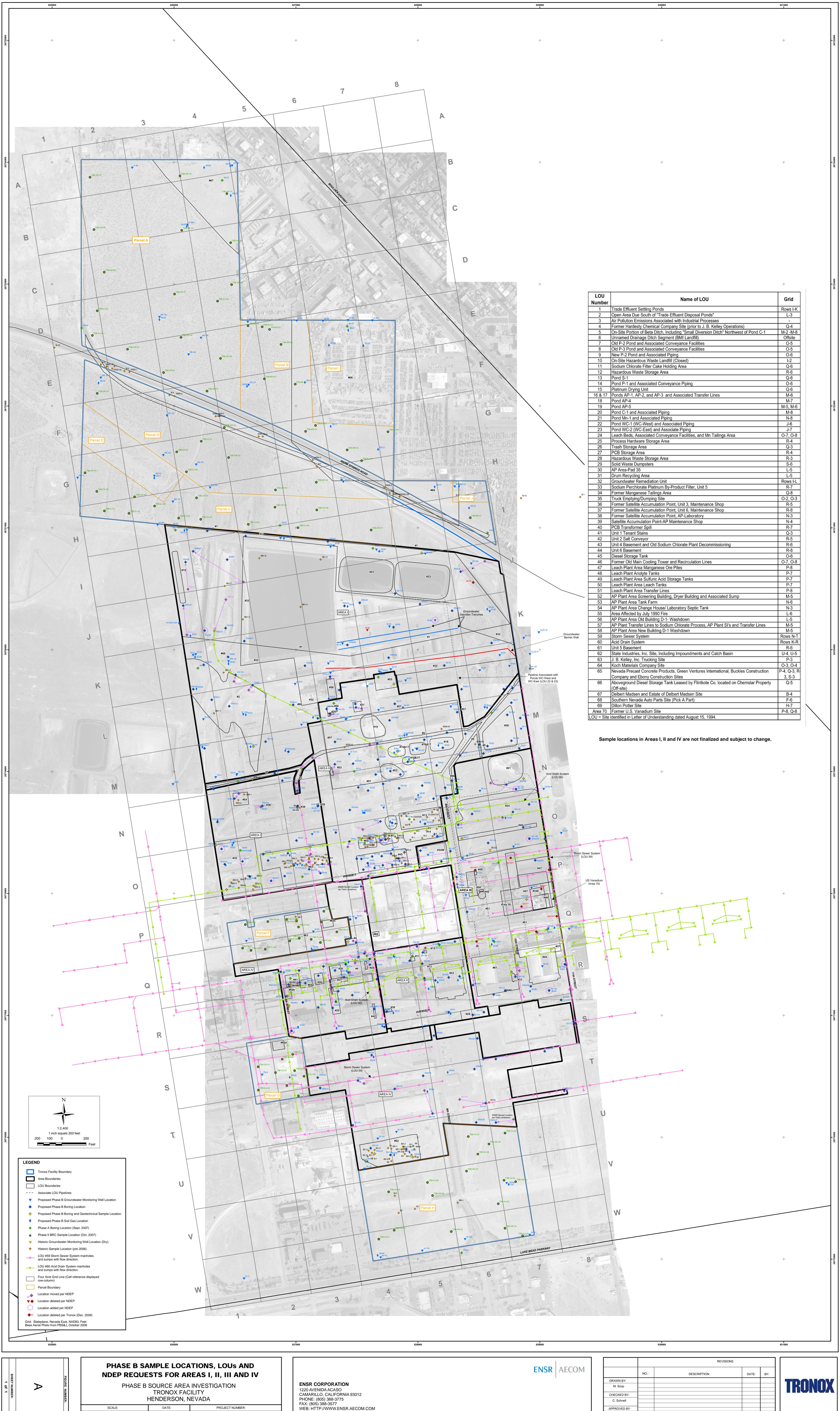


|               |   | ר     |   |       |                 |  | DESIGNED BY: |                             | REVISIONS                      |          |     |         |  |  |
|---------------|---|-------|---|-------|-----------------|--|--------------|-----------------------------|--------------------------------|----------|-----|---------|--|--|
| SHEET NUMBER: |   | -     | PROPOSED SOIL BORING LOCATIONS TO BE<br>SAMPLED FOR PCBs                  |       |                 | ENSR AECOM                                   | T. McAdam    | T. McAdam NO.: DESCRIPTION: |                                | DATE:    | BY: |         |  |  |
|               |   | GU    |   |       |                 |  | DRAWN BY:    |                             |                                |          |     |         |  |  |
|               |   |       | Phase B Source Area Investigation<br>Tronox Facility<br>Henderson, Nevada |       |                 | ENSR CORPORATION<br>1220 AVENIDA ACASO       | M. Scop      |                             |                                |          |     | TDALIAV |  |  |
|               | 4 |       |   |       |                 |  | CHECKED BY:  |                             |                                |          |     | ΙΠUΠUΛ  |  |  |
|               |   | 1BE   |   |       |                 | CAMARILLO, CALIFORNIA 93012                  | C. Schnell   | C. Schnell                  |                                |          |     |         |  |  |
|               |   | ?"  E | SCALE:  | DATE: | PROJECT NUMBER: | PHONE: (805) 388-3775<br>FAX: (805) 388-3577 | APPROVED BY: |                             |                                |          |     |         |  |  |
|               |   |       |   |       |                 | 1" = 400'                                    | 12/18/2008   | 04020-023-430               | WEB: HTTP://WWW.ENSR.AECOM.COM | M. Flack |     |         |  |  |



**Plates** 

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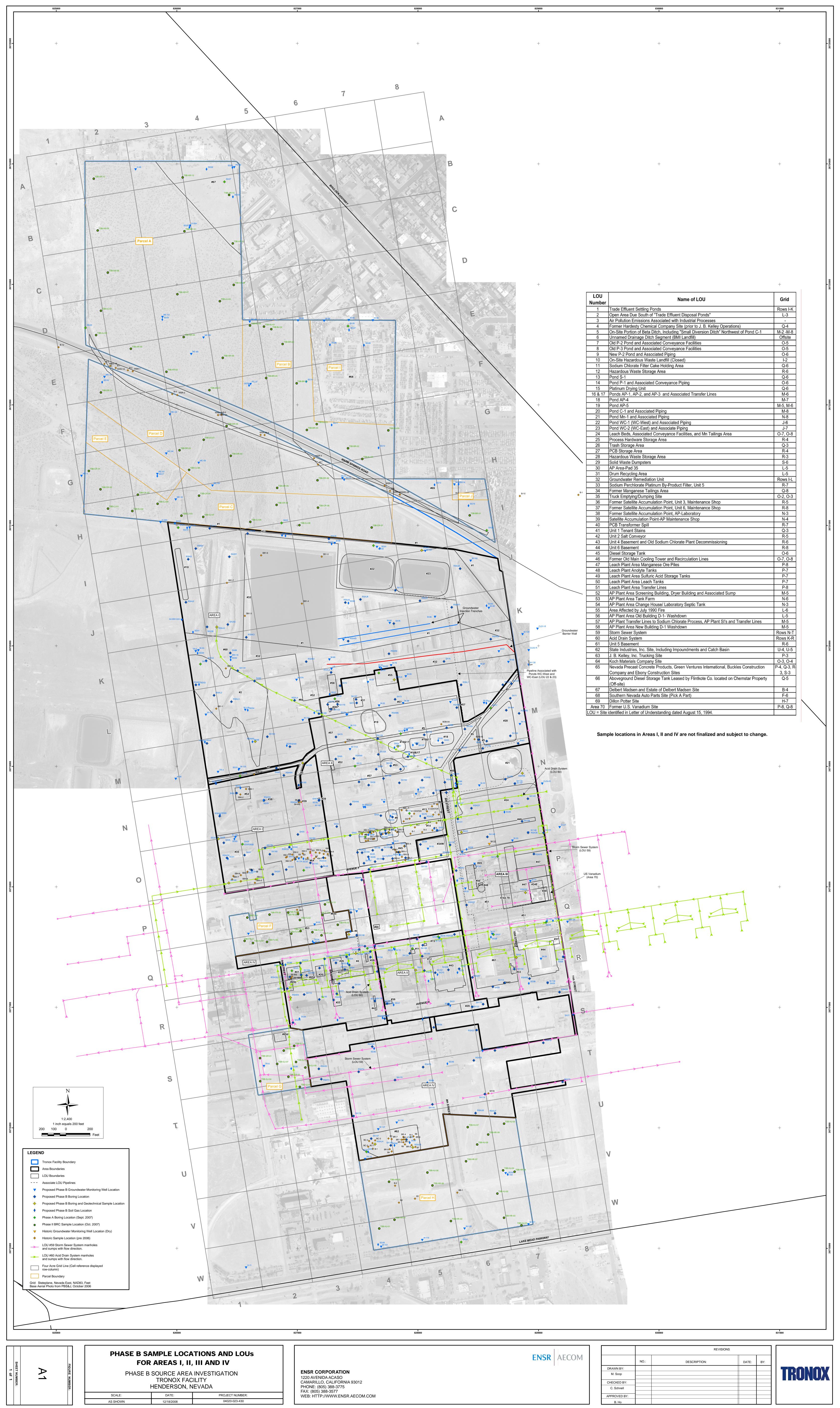
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Appendix A

Phase B Source Area Investigation Work Plans Submittal History and NDEP Response Chronology



### Appendix A

This Appendix provides a short summary of the four Phase B Site Investigation Area Work Plan submittals to NDEP, NDEP comments to those submittals and subsequent teleconferences between NDEP and Tronox. Following the summary, copies of full NDEP comment letters and teleconference minutes are attached.

To investigate the approximately 70 source areas and their potential affect on soil and groundwater conditions, the Tronox facility (Site) has been subdivided into four "Areas" (Area I, II, III, and IV; see **Plate A** of attached report). Work plans for each of the four Areas were submitted to NDEP between April and June 2008. NDEP reviewed and issued comments for each of the Work Plans, and a series of conference calls were held between NDEP and Tronox to discuss Tronox responses to the comments. For each of the Area work plans, NDEP provided conditional approval provided that NDEP's concerns were addressed prior to commencement of field activities.

| Date          | Event  | Document  | Author  |
|---------------|--|---|---|
| April 3, 2008 | Tronox submits Phase B<br>Area I Work Plan to NDEP.  | Phase B Source Area Investigation<br>Work Plan, Area I (Northern LOUs),<br>Tronox LLC Facility, Henderson,<br>Nevada  | Tronox  |
| May 6, 2008   | NDEP issues comments on<br>Area I Work Plan to Tronox.   | Nevada Division of Environmental<br>Protection (NDEP) Response to:<br>Phase B Source Area Investigation<br>Work Plan, Area I (Northern LOUs),<br>Tronox LLC Facility, Henderson,<br>Nevada                | NDEP  |
| May 8, 2008   | NDEP and Tronox meet via<br>conference call to discuss<br>Tronox responses to NDEP<br>comments on Area I Work<br>Plan. | Meeting Minutes Regarding Future<br>Phase B submittals and NDEP's<br>comments to the Phase B Source<br>Area Investigation Work Plan, Area I<br>(Northern LOUs), Tronox LLC Facility,<br>Henderson, Nevada | NDEP<br>(Meeting<br>minutes<br>are in-lieu<br>of Tronox<br>RTCs.) |
| May 16, 2008  | Tronox submits Phase B<br>Area IV Work Plan to NDEP.   | Phase B Source Area Investigation<br>Work Plan, Area IV (Western and<br>Southern LOUs), Tronox LLC Facility,<br>Henderson, Nevada   | Tronox  |

# ENSR AECOM

| Date          | Event  | Document   | Author  |
|---------------|--|--|---|
| May 30, 2008  | Tronox submits to NDEP the<br>following components of the<br>Area I Work Plan that have<br>been revised per requests<br>from NDEP (May 8, 2008):<br>Plate A<br>Table 2 (Soil SAP)<br>Table 3 (GW SAP)    | Additional Documents for Phase B<br>Area I Work Plan, Tronox LLC,<br>Henderson, Nevada   | Tronox.   |
| June 18, 2008 | NDEP issues comments on<br>Area IV Work Plan to Tronox.  | Nevada Division of Environmental<br>Protection (NDEP) Response to:<br>Phase B Source Area Investigation<br>Work Plan, Area IV (Western and<br>Southern LOUs), Tronox LLC Facility,<br>Henderson, Nevada  | NDEP  |
| June 23, 2008 | NDEP and Tronox meet via<br>conference call to discuss<br>future Phase B submittals<br>and Tronox responses to<br>NDEP comments on Area IV<br>Work Plan.   | Meeting Minutes Regarding Future<br>Phase B submittals and NDEP's<br>comments to the <i>Phase B Source</i><br><i>Area Investigation Work Plan, Area IV</i><br><i>(Western and Southern LOUs), Tronox</i><br><i>LLC Facility, Henderson, Nevada</i> | NDEP<br>(Meeting<br>minutes<br>are in-lieu<br>of Tronox<br>RTCs.) |
| June 27, 2008 | Tronox submits Phase B<br>Area II Work Plan to NDEP.   | Phase B Source Area Investigation<br>Work Plan, Area II (Central LOUs),<br>Tronox LLC Facility, Henderson,<br>Nevada   | Tronox  |
| June 27, 2008 | Tronox submits Phase B<br>Area III Work Plan to NDEP.  | Phase B Source Area Investigation<br>Work Plan, Area III (Eastern LOUs),<br>Tronox LLC Facility, Henderson,<br>Nevada  | Tronox  |
| July 11, 2008 | Tronox submits to NDEP the<br>following components of the<br>Area IV Work Plan that have<br>been revised per requests<br>from NDEP (June 23, 2008):<br>Plate A<br>Table 2 (Soil SAP)<br>Table 3 (GW SAP) | Revised Documents for Phase B Area<br>IV Work Plan, Tronox LLC,<br>Henderson, Nevada   | Tronox  |

# ENSR AECOM

| Date          | Event   | Document  | Author |
|---------------|---|---|--------|
| July 21, 2008 | <ul> <li>NDEP issues comments on<br/>Area II Work Plan to Tronox.</li> <li>NDEP requests the following:</li> <li>SVOCs, PCBs, TPH-<br/>ORO/DRO/GRO, OPPs,<br/>and cyanide be added to<br/>the sampling plan for<br/>select boring locations be<br/>moved,</li> <li>select boreholes should<br/>be converted to<br/>groundwater wells, and</li> <li>new soil borings should<br/>be added to select<br/>locations.</li> </ul>                           | Nevada Division of Environmental<br>Protection (NDEP) Response to:<br>Phase B Source Area Investigation<br>Work Plan Area II (Central LOUs).<br>Tronox LLC Facility, Henderson,<br>Nevada, Dated June 27, 2008  | NDEP   |
| July 21, 2008 | <ul> <li>NDEP issues comments on<br/>Area III Work Plan to Tronox.</li> <li>NDEP requests the following:</li> <li>SVOCs, PCBs, TPH-<br/>ORO/DRO/GRO, OPPs,<br/>and cyanide be added to<br/>the sampling plan for<br/>select borings,</li> <li>select boring locations be<br/>moved,</li> <li>select boreholes should<br/>be converted to<br/>groundwater wells, and</li> <li>new soil borings should<br/>be added to select<br/>locations.</li> </ul> | Nevada Division of Environmental<br>Protection (NDEP) Response to:<br>Phase B Source Area Investigation<br>Work Plan Area III (Eastern LOUs).<br>Tronox LLC Facility, Henderson,<br>Nevada, Dated June 27, 2008 | NDEP   |



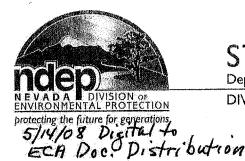
| Date            | Event   | Document  | Author  |
|-----------------|---|---|---|
| July 21, 2008   | NDEP issues general<br>comments that apply to the<br>Work Plans for Areas I, II, III,<br>and IV to Tronox.<br>NDEP requests that PCBs,<br>TPH-ORO/DRO, OPPs, and<br>cyanide be added to the<br>sampling plan for select<br>borings. | <ul> <li>Nevada Division of Environmental<br/>Protection (NDEP) Response to:</li> <li>Phase B Source Area<br/>Investigation Work Plan, Area I<br/>(Northern LOUs), Tronox LLC<br/>Facility, Henderson, Nevada,<br/>Dated April 3, 2008</li> <li>Phase B Source Area<br/>Investigation Work Plan Area IV<br/>(Western and Southern LOUs).<br/>Tronox LLC Facility, Henderson,<br/>Nevada, Dated May 16, 2008</li> <li>Phase B Source Area<br/>Investigation Work Plan Area II<br/>(Central LOUs). Tronox LLC<br/>Facility, Henderson, Nevada,<br/>Dated June 27, 2008</li> <li>Phase B Source Area<br/>Investigation Work Plan Area III<br/>(Eastern LOUs). Tronox LLC<br/>Facility, Henderson, Nevada,<br/>Dated June 27, 2008</li> <li>Phase B Source Area<br/>Investigation Work Plan Area III<br/>(Eastern LOUs). Tronox LLC<br/>Facility, Henderson, Nevada,<br/>Dated June 27, 2008</li> </ul> | NDEP  |
| August 11, 2008 | NDEP and Tronox meet via<br>conference call to discuss<br>Tronox responses to NDEP<br>comments issued on July 21,<br>2008.  | Meeting Minutes of Tronox's response<br>to comments to three NDEP letters<br>dated July 21, 2008: 1) Re: Phase B<br>SAPs Areas I through IV general soil<br>sampling comments; 2) Re: Phase B<br>Source Area Investigation Work Plan<br>(SAP) Area II, and 3) Re: Phase B<br>SAP Area III.  | NDEP<br>(Meeting<br>minutes<br>are in-lieu<br>of Tronox<br>RTCs.) |



| Date                 | Event   | Document   | Author |
|----------------------|---|--|--------|
| September 8,<br>2008 | NDEP and Tronox meet via<br>conference call to discuss<br>changes to Tronox<br>responses to NDEP<br>comments.<br>Topics discussed:  | Meeting Minutes on discussion of<br>changes to Tronox's Response to<br>Comments for the Phase B sampling.  | NDEP   |
|                      | <ul> <li>reducing the number of<br/>PCB congener analysis<br/>and organic acid<br/>analysis,</li> <li>use of Geoprobe<sup>®</sup> for<br/>drilling,</li> <li>increasing the interval<br/>between sample depths<br/>within each soil boring,</li> <li>reducing the number of<br/>proposed borings in the<br/>active production areas<br/>in Area III, and</li> <li>data validation.</li> </ul> |  |        |
| October 1, 2008      | NDEP and Tronox meet via<br>conference call to discuss<br>Tronox's proposed<br>justification for sampling<br>design optimization.   | Meeting Minutes on discussion of<br>Tronox's proposed justification for<br>sampling design optimization for the<br>Phase B Site Investigation for Areas I,<br>II, III, and IV. | NDEP   |

ENSR AECOM

## Copies of NDEP Area Work Plan Comments and Teleconference Minutes



STATE OF NEVADA

Department of Conservation & Natural Resources

Jim Gibbons, Governor Allen Biaggi, Director

DIVISION OF ENVIRONMENTAL PROTECTION

#### Leo M. Drozdoff, P.E., Administrator

MAY 1 2 2008

#### May 6, 2008

Susan Crowley Tronox LLC PO Box 55 Henderson, Nevada 89009

#### Re: Tronox LLC (TRX) NDEP Facility ID #H-000539

Nevada Division of Environmental Protection (NDEP) Response to: Phase B Source Area Investigation Work Plan, Area I (Northern LOUs), Tronox LLC Facility, Henderson, Nevada Dated April 3, 2008

Dear Ms. Crowley,

The NDEP has received and reviewed TRX's Phase B, Area I Sampling Analysis Plan (SAP) identified above and finds the document acceptable with the conditions and comments provided in Attachment A.

Errata sheets should be submitted based on the comments found in Appendix A. TRX should additionally provide an annotated response-to-comments (RTC) letter as part of the errata submittal. Alternately, in place of an RTC letter, TRX can discuss these comments with the NDEP in a meeting or via phone. Please advise the NDEP regarding the schedule for this submittal. Please note that it is NDEP's intent that TRX should be able to proceed with implementation of this SAP upon submittal of the erratum and RTC letter (or completion of meeting with NDEP in lieu of the RTC letter).

Please contact the undersigned with any questions at sharbour@ndep.nv.gov or (702) 486-2850 extension 240.

Sincerely,

Shannon Harbour, P.E.

Shaffion Harbour, P.E. Staff Engineer III Bureau of Corrective Actions Special Projects Branch NDEP-Las Vegas Office

SH:bar:sh

Attachments A and B



Jim Najima, NDEP, BCA, Carson City

CC:

Brian Rakvica, NDEP, BCA, Las Vegas

Keith Bailey, Environmental Answers LLC, 3229 Persiminon Creek Drive, Edmond, OK 73013 Sally Bilodeau, ENSR, 1220 Avenida Acaso, Camarillo, CA 93012-8727

Barry Conaty, Akin, Gump, Strauss, Hauer & Feid, L.L.P., 1333 New Hampshire Avenue, N.W., Washington, D.C. 20036

Brenda Pohlmann, City of Henderson, PO Box 95050, Henderson, NV 89009

Mitch Kaplan, U.S. Environmental Protection Agency, Region 9, mail code: WST-5, 75 Hawthorne Street, San Francisco, CA 94105-3901

Ebrahim Juma, DAQEM, PO Box 551741, Las Vegas, NV, 89155-1741

Ranajit Sahu, BRC, 311 North Story Place, Alhambra, CA 91801

Rick Kellogg, BRC, 875 West Warm Springs, Henderson, NV 89011

Mark Paris, Landwell, 875 West Warm Springs, Henderson, NV 89011

Craig Wilkinson, TIMET, PO Box 2128, Henderson, Nevada, 89009-7003

Kirk Stowers, Broadbent & Associates, 8 West Pacific Avenue, Henderson, Nevada 89015

George Crouse, Syngenta Crop Protection, Inc., 410 Swing Road, Greensboro, NC 27409

Nick Pogoncheff, PES Environmental, 1682 Novato Blvd., Suite100, Novato, CA 94947

Lee Erickson, Stauffer Management Company, P.O. Box 18890, Golden, CO 80402

Michael Bellotti, Olin Corporation, 3855 North Ocoee Street, Suite 200, Cleveland, TN 37312

Curt Richards, Olin Corporation, 3855 North Ococe Street, Suite 200, Cleveland, TN 37312

Paul Sundberg, Montrose Chemical Corporation, 3846 Estate Drive, Stockton, California 95209

Joe Kelly, Montrose Chemical Corporation of CA, 600 Ericksen Avenue NE, Suite 380, Bainbridge Island, WA 98110

Teri Copeland, 5737 Kanan Road #182, Agoura Hills CA 91301

Paul Hackenberry, Hackenberry Associates, LLC, 550 W. Plumb Lane B425, Reno, NV 89509

Paul Black, Neptune and Company, Inc., 8550 West 14th Street, Suite 100, Lakewood, CO 80215

#### Attachment A

- 1. General comment, it is the NDEP's understanding that the purpose of this work plan is to complete site characterization for Area I of the Site. It is the NDEP's understanding that the outputs of the implementation of this work plan will be: definition of decision units; definition of exposure areas; demonstration of the usability and adequacy of the data; completion of some degree of human health risk assessment; or collection of more data. If this is incorrect, please discuss with the NDEP. In future SAPs, please provide additional discussion on this issue.
- 2. General comment, TRX should note that the NDEP does not necessarily agree that the selected wells in the Appendix A LOU packets are representative of the up-gradient, cross-gradient, and/or down-gradient conditions at the corresponding LOU. It is noted, however, that the overall coverage of the groundwater sampling plan appears adequate.
- 3. General comment, TRX should clarify with the NDEP if a human health risk assessment (HHRA) work plan is going to be developed by TRX or if TRX is going to rely on the methodologies presented by others (e.g.: BRC's Section 9.0 of the approved *Closure Plan*). Please clarify this in all future SAPs in addition to providing clarification in the RTC for the Area I SAP.
- 4. General comment, TRX should clarify with the NDEP if the areas proposed for "continued use" are going to undergo a HHRA. If not, please explain what, if any, additional actions will be taken for these areas once site characterization is completed. Please clarify this in all future SAPs in addition to providing clarification in the RTC for the Area I SAP.
- 5. General comment, it is not clear that this SAP was developed with risk assessment as the output of the investigations. It is requested that future SAPs explicitly discuss this relationship and how the data that is being collected addresses the needs of a risk assessment. Please clarify this in all future SAPs in addition to providing clarification in the RTC for the Area I SAP.
- 6. Section 1.0, page 1-1, fourth paragraph, NDEP understands that deeper soils (greater than 10' bgs) may be investigated as part of the "Area" investigations for "Parcels" F, G, H and I. Please discuss this matter with the NDEP if this understanding is incorrect.
- Section 1.1, page 1-3, TRX states that the USEPA Region IX PRGs may be used for a "screening level risk assessment". Per the NDEP's guidance under separate cover, please do not use the USEPA Region IX PRGs as they are not current. Region VI MSSLs should be used instead.
- 8. Section 2.3.2, page 2-6, the NDEP has the following comments:
  - a. Regarding PCB analysis, please note the USEPA Method 1668 should be used for PCB congener analysis for any areas associated with trespass plumes from the west. Please advise the NDEP of any locations where this analysis will be completed, if applicable.
  - b. Regarding radionuclide analyses, please note, as discussed with TRX previously, it is expected that the radionuclide analyses will be consistent with the methods (and preparatory methods) used for the BRC/TIMET background data set.
- 9. Section 2.3.4.1, the NDEP has the following comments on proposed sample locations for SPLP analyses and physical analyses (Please provide errata sheets as necessary to address these comments in the Area I SAP. These comments should also be addressed in future SAP submittals.):

- a. TRX should add the following columns to the table at the bottom of page 2-7:
  - i. LOU Number
  - ii. Sample depth
  - iii. Expected soil type
  - iv. Analytes
  - v. Rationale
- b. TRX has proposed using EPA Method 1312, extraction fluid #2 (reagent water at pH  $5.00 \pm 0.05$ ). NDEP suggests that TRX additionally use EPA Method 1312, extraction method #3 (reagent water) for comparison by evaluating the following:
  - i. All soil wet chemistry for pH if wet chemistry was prepared with equivalent reagent grade water. (For worst case scenario, look for areas of known acid releases)
  - ii. All groundwater samples for pH.
- c. The minimum sampling depth for the SPLP samples should be located below the source maximum depth (e.g. pond or landfill invert depth). The maximum depth for the SPLP samples should not be greater than the capillary fringe depth. Any samples located within the capillary fringe would potentially be in some state of equilibrium between the soil and liquid phases and therefore not representative of leachability.
- d. NDEP suggests that TRX consider sampling different soil types for leachability.
- e. NDEP has noted that two of the proposed sample locations proposed for SPLP analyses are located within the influence of the recharge trenches and that TRX has not provided any rationale for these SPLP sampling locations. NDEP suggests that no more than one boring if any be located in this area pending on TRX rationale for the collection of these SPLP samples.
- f. The NDEP requests that the samples collected for geotechnical analysis be co-located with the samples collected for leaching characteristics. This will better facilitate any future fate and transport modeling.
- g. NDEP suggests that geotechnical and leaching samples be collected for each LOU.
- h. The NDEP requests that TRX discuss the anticipated future use of these samples with the NDEP prior to the collection of the SPLP samples.
- 10. Section 3, after a cursory review of this section, the NDEP has determined that this section should be excluded from this document. The topics discussed in this section are addressed in the Quality Assurance Project Plan (QAPP), which has been approved by the NDEP. TRX should remove Section 3 and reference the QAPP in future submittals. TRX should note that this Section was not reviewed by the NDEP and it is expected that the approved QAPP will dictate the project procedures.
- 11. Section 3.3.2, page 3-3, as discussed with TRX previously, filtering of groundwater samples is not acceptable. If TRX complies with the SOP for low flow sampling, filtering should not be an issue. Failure to comply with the SOP will result in rejection of the data by the NDEP. If the referenced SOP includes filtering of groundwater samples, the SOP needs to be revised and resubmitted.
- 12. Section 4, the NDEP suggests that this section removed and a meeting scheduled between TRX and NDEP after the receipt of the analytical data to discuss the statistical analyses that should be used to evaluate the collected data. In addition, the procedures for evaluating data adequacy and usability should be discussed with the NDEP.
- 13. Section 5.0, page 5-1, TRX states that a final report will be developed and recommendations for additional work will be made. It is suggested that TRX instead discuss the data with the

NDEP and propose additional work as an addendum to this work plan. This is consistent with USEPA's recommended approaches for expedited site characterization.

- 14. Table 1, please note that the adequacy of the reporting limits in this table have not been reviewed by the NDEP as it is TRX's responsibility to insure that appropriate data is collected.
- 15. Table 2, Soil Sampling and Analysis Plan (SAP), the NDEP has the following comments (Please revise and resubmit this table. These comments should be additionally addressed in future SAP submittals.):
  - a. General comment, in future SAPs, TRX should closely review column "LOU Number" against the "Location Description and Characterized Area Rationale" column and the text and tables of the LOU packets for consistency. NDEP has noted several discrepancies in these columns and the LOU packets.
  - b. General comment, in future SAPs, TRX should review the Appendix A LOU packets to check that all LOUs that are associated with a specific boring are discussed in the "Location Description and Characterized Area Rationale" column for the corresponding boring.
  - c. General comment, organochlorine pesticides (OCPs) should be sampled to depth in all borings that OCP sampling has been indicated by TRX and/or requested by NDEP. All of Area I is underlain by a plume of organic contaminants that (at least partially) originates to the west of the TRX Site. It is noted that areas within the TRX Site may have also contributed to this plume.
  - d. General comment, TRX should note that the appropriate sampling depth for asbestos is the top 2 inches of soil (as indicated in the SOP).
  - e. General comment, TRX should revise the table to note that all samples within the 0-1' bgs interval will be collected from 0-0.5' bgs unless the area is paved. If the area is paved it is expected that the sample will be collected from a representative depth beneath the pavement. Alternately, if an unpaved area is within a reasonable distance the sample could simply be moved to the unpaved area.
  - f. General comment, NDEP does not believe that LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit) needs to be separately characterized at this time as it is an active remediation area with no reported releases of untreated groundwater with detectable perchlorate or chromium concentrations. Additionally, all borings and groundwater monitoring wells proposed to characterize this LOU are associated with at least one other LOU.
  - g. SA66 and SA67, TRX has proposed this boring to evaluate LOU 5 Beta Ditch, which is in Area II. LOU 5 is in Area II; therefore, there is not an Appendix A LOU packet available for review at this time. Additionally, these two borings are located adjacent to the Area I/Area II boundary. TRX should suspend advancement of these borings for inclusion in the Area II SAP so that NDEP can review the rationale and information included in the Appendix A LOU 5 packet for appropriateness of the proposed analytes and locations of these borings. Alternately, TRX can proceed with the installation of these borings if TRX believes that the analytical suites are sufficiently broad as to address both Areas sufficiently; however, the NDEP suggests that TRX add SVOC analysis to SA 66 and TPH-DRO/ORO analysis to SA67 for consistency with the area.
  - h. RSAN2 is not associated with LOU 35 according to the Appendix A LOU 35 packet and Table 5.

- i. The following borings should be advanced to the water table to be consistent with other borings. (If this depth is not feasible, TRX should supply justification/rationale for the difference in boring depth.): RSAL5, SA152, SA176, and SA189.
- j. The following borings should include the corresponding analyses:
  - i. TPH-DRO/ORO: SA69, SA79, and SA82
  - ii. VOCs: SA79
  - iii. SVOCs: SA79 and SA82
  - iv. Organochlorine pesticides (OCPs): SA46, SA47, SA74, SA75, SA181, and SA183.
  - v. Asbestos: SA152
  - vi. PCBs: SA48, SA56, SA166, SA180
- 16. Table 3, Groundwater SAP, the NDEP has the following comments (Please revise and resubmit this table. These comments should be additionally addressed in future SAP submittals.):
  - a. General comment, TRX should note that if the well screen is not know or cannot be determined, then the data collected from the corresponding well may not be useable. TRX should verify the well screen interval as part of the implementation of the SAP.
  - b. General comment, TRX should note that the proposed wells should not be screened across the entire water bearing zone (WBZ). NDEP suggests that the proposed wells be able to discretely sample both the alluvial aquifer and transitional Muddy Creek zones. Significant differences have been observed from samples collected from these two strata. NDEP acknowledges that this guidance differs from previous guidance, however, additional data has been received by the NDEP which supports this change.
  - c. General comment, TRX should review the Appendix A LOU packets to check that all LOUs that are associated with a monitoring well are discussed in the "Rationale" column for the corresponding monitoring well.
  - d. M-123, PCBs should be added to the sampling plan for this well per the text in LOU 35 Appendix A packet.
- 17. Tables 6 and 7, please note that these tables have not been reviewed by the NDEP as it is TRX's responsibility to insure that appropriate data is collected. It is expected that these tables are consistent with the approved QAPP.
- 18. Figure 4, it is noted that wells that are designated as "dry" may be a function of the screened interval as deeper portions of the water table aquifer are likely saturated. For example, the transitional Muddy Creek formation or the upper portion of the Muddy Creek formation. This issue should be considered in future SAPs and reports.
- 19. Figure 5, Phase B Well Locations, TRX should update and resubmit this figure based on NDEP's comments.
- 20. Plate A, TRX should update and resubmit this plate based on NDEP's comments.
- 21. Appendix A, the NDEP has the following comments:
  - a. General comment, TRX should check the legends of Figure 1 in each of the LOU packets for inclusion of all symbols used on each figure. For example, the following symbols should be defined: bold yellow dashed line, bold grey dashed line, solid thin black line, etc. Please address this in future SAPs.
  - b. General comment, TRX should review the NDEP's comments for Figure 1 for each LOU and make appropriate changes to the Soil and Groundwater Sampling Plans (Table 2, Table 3, and Appendix A: Tables A and B). <u>NDEP has provided Attachment B to this letter</u>, which contains LOU maps with hand-noted revisions to illustrate NDEP's

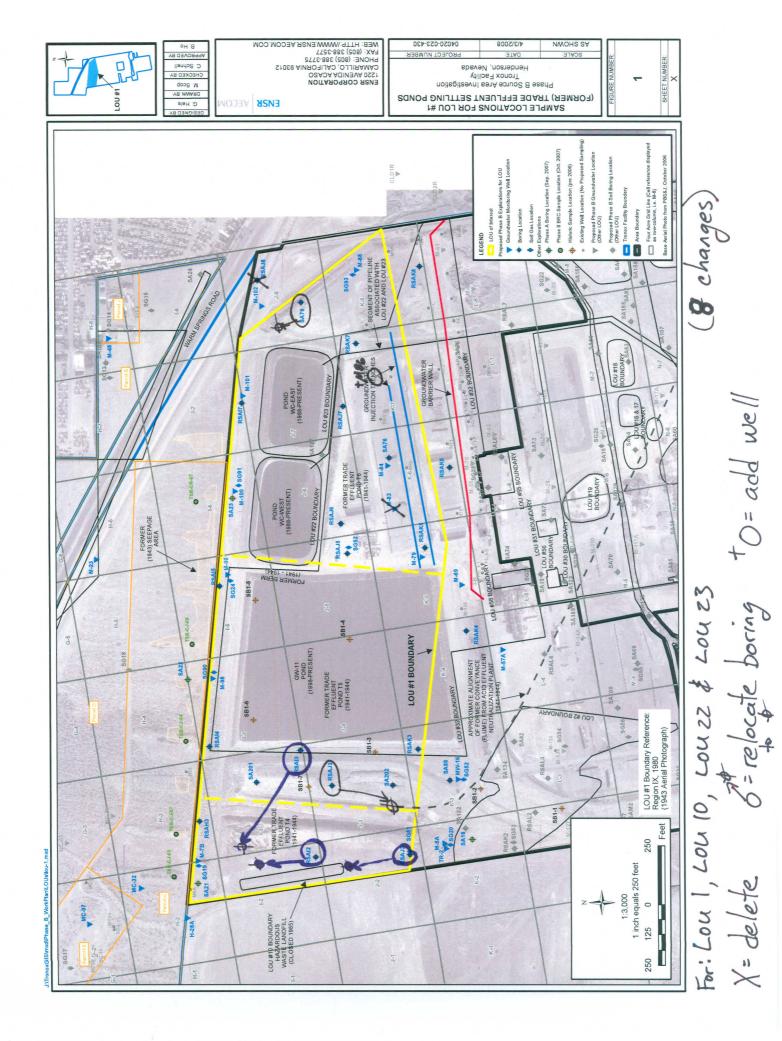
<u>comments.</u> If TRX concurs with these changes, Plate A should be revised to reflect these changes. It is not necessary to revise and resubmit each Figure in Appendix A.

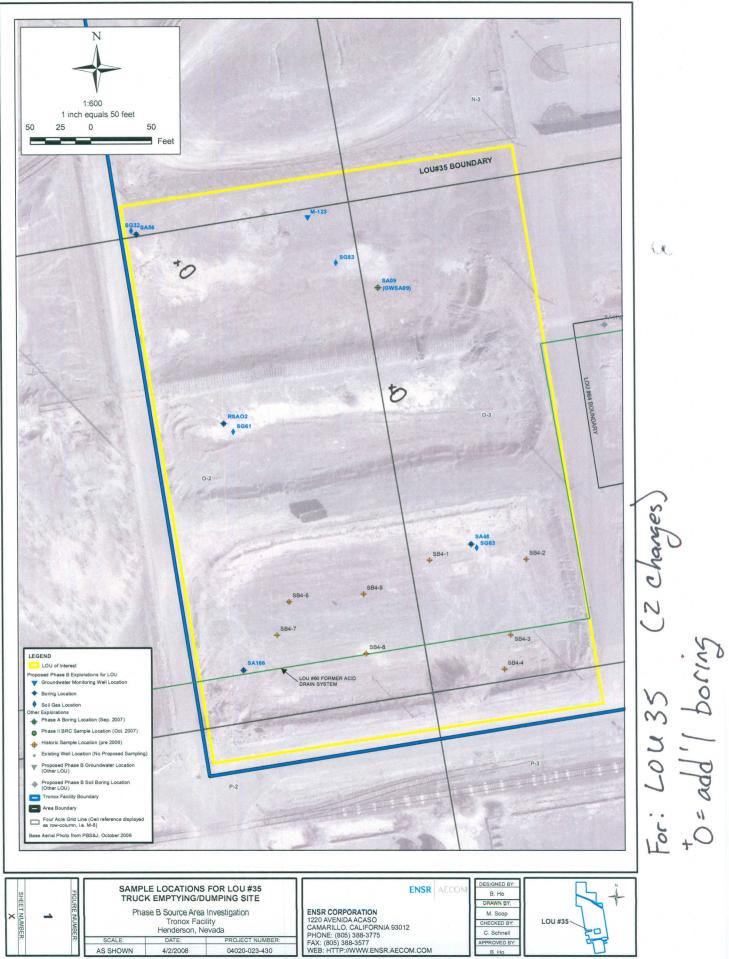
- c. General comment, NDEP has noted that the cation data from the Phase A Investigation were collected several months after the anion data. Please note that these data are not useable for cation/anion balance. Also, please contact the NDEP to explain this collection procedure as it is very atypical.
- d. LOU 1, (Former) Trade Effluent Settling Ponds, the NDEP has the following comments:
  - i. Table A, please see the above comments for Table 2 as applicable.
  - ii. Table B, please see the above comments for Table 3 as applicable.
  - iii. Figure 1, the NDEP has the following comments:
    - 1. General comment, LOU 60 should be noted.
    - 2. SA79 should be relocated within the white-stained area located approximately 100 feet west-northwest from the originally proposed location of SA79.
    - 3. RSAI2 should be relocated within the white-stained area adjacent to the east of LOU 10 located approximately 230 feet north of the originally proposed location of RSAI2. This boring should be relocated to better characterize LOU 10.
    - 4. RSAI3 should be relocated to just south of LOU 10 to better characterize LOU 10.
- e. LOU 2, Open Area South of the Trade Effluent Settling Ponds, the NDEP has the following comments:
  - i. Table A, please see the above comments for Table 2 as applicable.
  - ii. Figure 1, the NDEP has the following comments:
    - 1. SA134 should be added to this figure.
    - 2. SA15 marker should be added to this figure.
    - 3. M6A should be added to the groundwater sampling analysis plan for LOU 2.
- f. LOU 10, On-Site Hazardous Waste Landfill (Closed), the NDEP has the following comments:
  - i. Table A, please see the above comments for Table 2 as applicable.
  - ii. Figure 1, RSAI2 and RSAI3 should be relocated as discussed in the above LOU 1 comments.
- g. LOU 22 and LOU 23, Ponds WC-West and WC-East, respectively, the NDEP has the following comments:
  - i. Table A, please see the above comments for Table 2 as applicable.
  - ii. Figure 1, the NDEP has the following comments:
    - 1. SA79 should be relocated as discussed in the above LOU 1 comments.
    - 2. RSAJ8 may be removed from the sampling plan. The NDEP believes that this boring is located too far cross-gradient from LOU 23 for characterization of this LOU.
    - 3. M-84 should be replaced with well M-86 in the groundwater sampling plan.
- h. LOU 35, Truck Emptying/Dumping Site, the NDEP has the following comments:
  - i. Table A, please see the above comments for Table 2 as applicable.
  - ii. Figure 1, the NDEP has the following comments:
    - 1. An additional boring should be added in the large white-stained area near the northwest corner of LOU 35.
    - 2. An additional boring should be added in the large white-stained area south of SA09 near the western boundary of grid O-3.

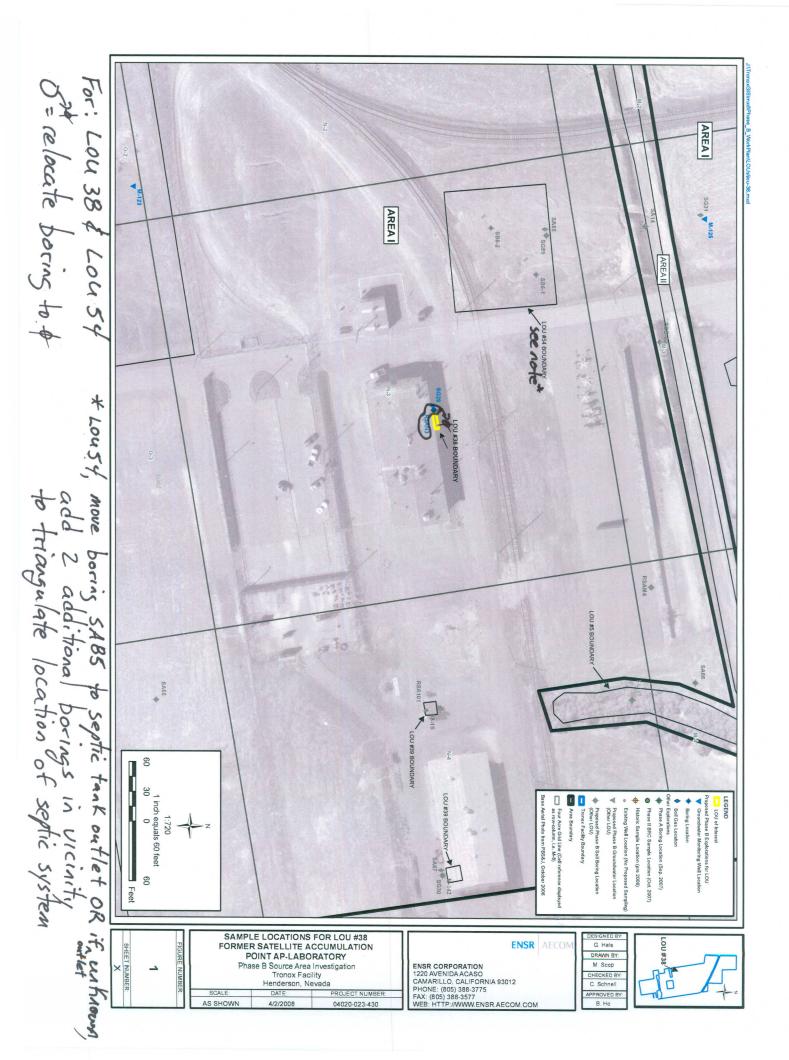
- 3. SA166 should be located as discussed in the following LOU 60 comments.i. LOU 38, Former Satellite Accumulation Point AP-Laboratory, the NDEP has the following comments:
  - i. Table A, please see the above comments for Table 2 as applicable.
  - ii. Figure 1, RSAN3 should be relocated adjacent to the northern boundary of LOU #38 in order to place the boring in the down-gradient side of the site based on topography unless TRX has information/additional rationale for locating the boring adjacent to the western boundary of this LOU.
- j. LOU 54, AP Plant Area Change House / Laboratory Septic Tank, the NDEP has the following comments:
  - i. Table A, please see the above comments for Table 2 as applicable.
  - ii. Figure 1, the NDEP has the following comments:
    - 1. TRX should indicate the location of the septic tank.
    - 2. SA85 should be located at the outlet for the septic tank.
    - 3. If the septic tank location is unknown, then TRX should advance three borings in this LOU to triangulate the approximate location of the septic tank.
- k. LOU 58, AP Plant Area New Building D-1, the NDEP has the following comments:
  - i. Table A, please see the above comments for Table 2 as applicable.
  - ii. Figure 1, TRX should review the location of RSAL5 and relocate it as necessary. The aerial photograph seems to indicate the presence of structures on the proposed location for this boring.
- 1. LOU 60, Former Acid Drain System Segment, the NDEP has the following comments:
  - i. Table A, please see the above comments for Table 2 as applicable.
  - ii. Figure 1, the NDEP has the following comments:
    - 1. Borings RSAL4, SA50, SA82, SA134, SA166, and SA182, SA189 should be located directly over the former acid drain by using a backhoe or other similar equipment to locate the drain. NDEP requests that TRX locate the borings over joints in the former acid drain system if discovered.
    - 2. RSAJ3 should be relocated to the outlet of the former acid drain system.
    - 3. An additional boring should be located to the west of the outlet of the acid drain system approximately the same distance as SA202 is from the outlet to the east.
- m. LOU 64, Koch Materials Company Site (Former Asphalt Batch Plant), the NDEP has the following comments:
  - i. Table A, please see above comments for Table 2 as applicable.
  - ii. Figure 1, the NDEP has the following comments:
    - 1. SA46 should be relocated approximately 75 ft west of the eastern boundary and 90 ft north of the southern boundary of LOU 64.
    - 2. SA50 and SA182 should be located as discussed in the above LOU 60 comments.
    - 3. RSAO4 should be moved to the approximate location of former boring TS, BG.
    - 4. An additional sample should be located within the disturbed approximately square area between LOU 64 and LOU 35 (located to the south of the "pan handle" of LOU 64).

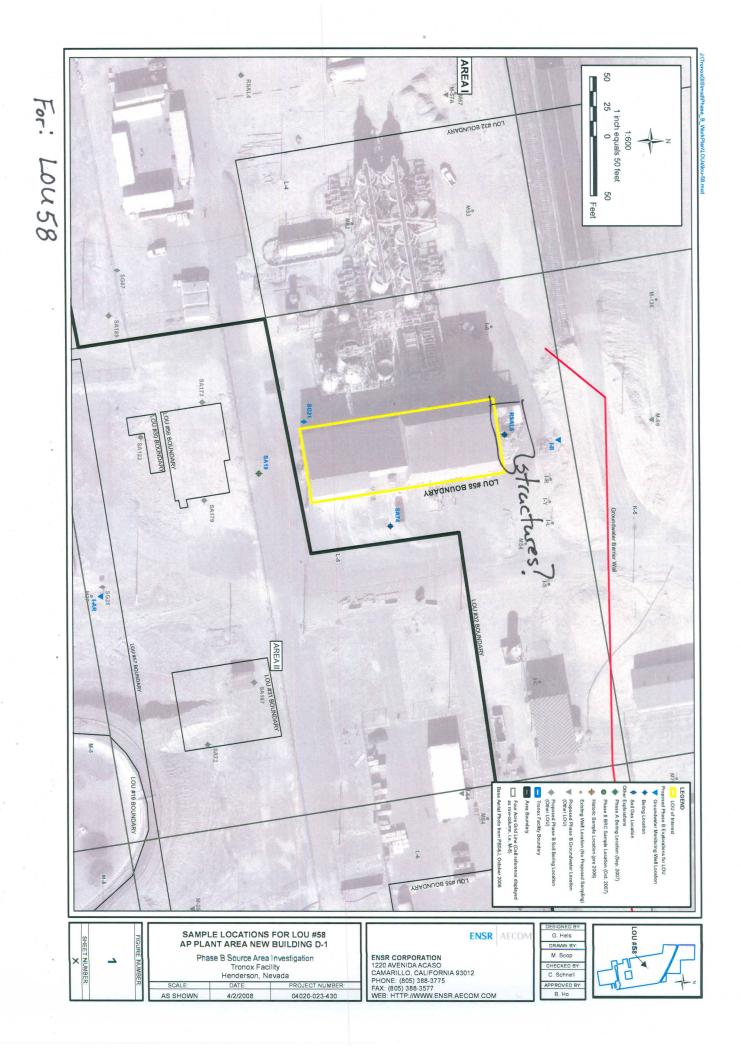
### Attachment B

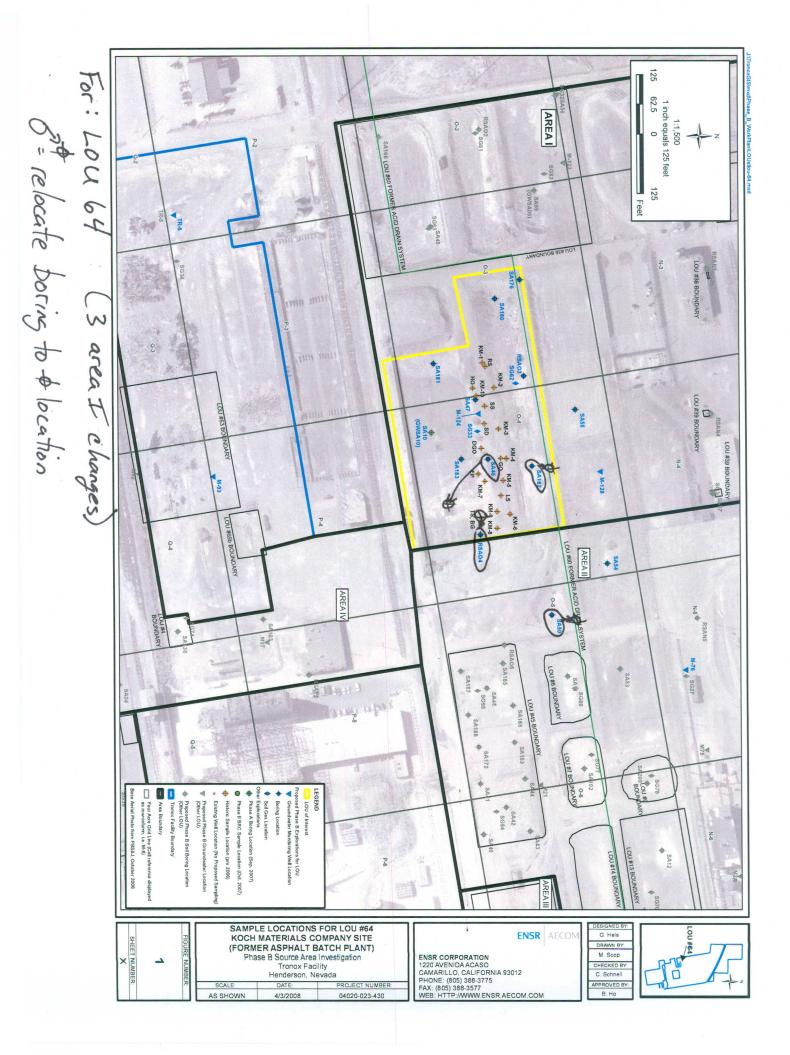
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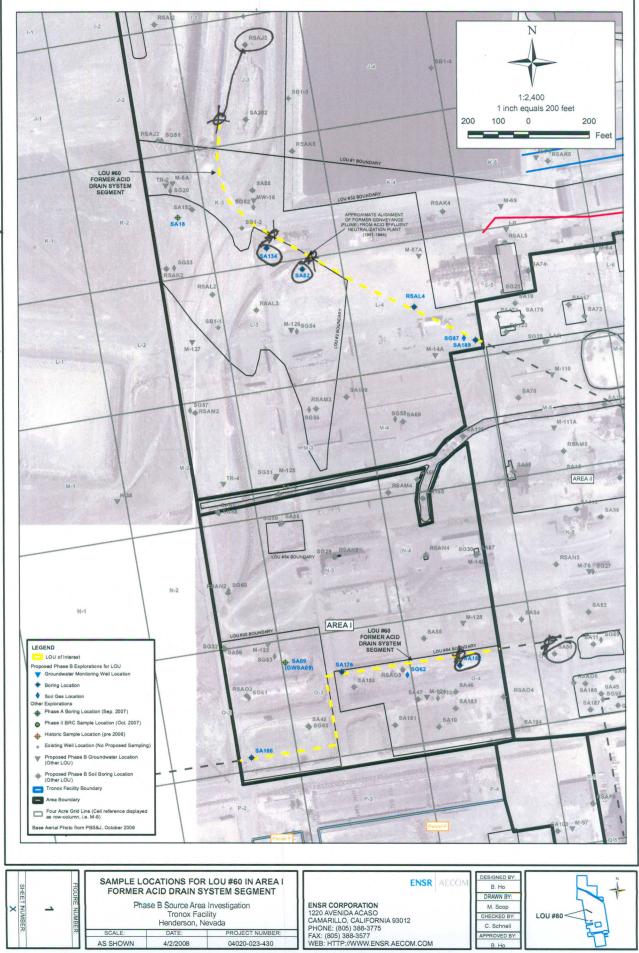












#### **Meeting Minutes**

| Project:       | Tronox (TRX)                                   |
|----------------|--|
| Location:      | Conference Call                                |
| Time and Date: | 1:30 PM, May 8, 2008                           |
| In Attendance: | NDEP – Brian Rakvica, Shannon Harbour          |
|                | Tronox –Susan Crowley                          |
|                | Environmental Answers – Keith Bailey (for TRX) |

#### CC: Jim Najima

- 1. The meeting was held to discuss future Phase B submittals and NDEP's comments to the *Phase B, Source Area Investigation Work Plan, Area I (Northern LOUs), Tronox LLC Facility, Henderson, Nevada* (Phase B Area I SAP).
- 2. The following are TRX's response to comments (RTCs) regarding NDEP's May 6, 2008 Response to the Phase B Area I SAP:
  - a. RTC 1, TRX will add requested text.
  - b. RTC 2, TRX acknowledges this comment.
  - c. RTC 3, TRX will clarify plans for preparing a Human Health Risk Assessment including whether the BRC closure plan approach will be used
  - d. RTC 4, TRX stated that broad suite analyses are proposed for currently operating LOUs to provide "baseline" conditions in these areas and if the current operations do not exacerbate contamination future closure would not require sampling for the full SRC list. TRX stated that if a chemical is not detected and is also not a part of the process, then TRX proposes not to conduct future investigations for this chemical.
  - e. RTC 5, TRX stated that they are planning a human health risk assessment (HHRA) and will add text to future Phase B SAPs.
  - f. RTC 6, TRX stated that deep borings will be advanced in Parcels F (3 borings), G (2 borings), and the small triangular section on the east side of C (1 boring). TRX is not planning any deep characterization in the other Parcels (A, B, C, D, and H).
  - g. RTC 7, TRX will use Region VI MSSLs per NDEP's guidance.
  - h. RTC 8.a, TRX stated that the sample Tables do not show PCB analyses, but TRX will check the text and revise as necessary. NDEP noted that text in Appendix A, LOU packets stated that PCB would be sampled in groundwater monitoring well M-123.
  - i. RTC 8.b, TRX stated that radium will be analyzed using alpha and beta spectrometry.
  - j. RTC 9.a, TRX will modify the table at the bottom of page 2-7 as requested.
  - k. RTC 9.b.i, TRX will run EPA Method 1312 using 2 preparation methods: 1) with reagent water and 2) with reagent water at pH  $5.00 \pm 0.05$ .
  - 1. RTC 9.b.ii, TRX stated that pH will be analyzed in the field. Laboratory pH will not meet hold times.
  - m. RTC 9.c, TRX acknowledges this comment.
  - n. RTC 9.d, TRX proposes to sample from the alluvium and Muddy Creek formation for the SPLP tests.
  - o. RTC 9.e, TRX will revise the sample locations.
  - p. RTC 9.f, TRX acknowledges this comment and will revise the sampling locations.
  - q. RTC 9.g, TRX does not agree with this comment. Leaching tests are designed to provide data on movement of SRCs through the alluvium and Muddy Creek soils. Data

from the tests can be used for multiple locations, making it unnecessary to perform a leach test at each LOU.

- r. RTC 9.h, TRX stated that the SPLP samples may be used for modeling in the HHRA.
- s. RTC 10, TRX acknowledges this comment and will remove Section 3.
- t. RTC 11, TRX will collect two samples from any sample with 10 NTU or greater. One sample will be field filtered the other will not. NDEP noted that this procedure should be consistent with the BRC SOPs.
- u. RTC 12, TRX acknowledges this comment and will schedule a meeting with NDEP to discuss the Phase B report once data are validated. NDEP will provide guidance at the meeting on use of appropriate statistical tests.
- v. RTC 13, TRX acknowledges this comment. If additional investigation work is required, an addendum to the work plan will be proposed.
- w. RTC 14, TRX acknowledges this comment.
- x. RTC 15.a, TRX acknowledges this comment and will modify text and/or tables as necessary.
- y. RTC 15.b, TRX will modify text and/or tables as necessary.
- z. RTC 15.c, TRX stated that OCPs will be sampled and analyzed in soils and at the capillary fringe. OCP samples will be collected at other proposed sampling depths but will be placed on hold pending the results of the surface and capillary fringe samples.
- aa. RTC 15.d, TRX acknowledges this comment.
- bb. RTC 15.e, TRX will add requested text.
- cc. RTC 15.f, TRX does not agree with this comment. However, TRX noted that this comment does not change anything substantive in the Phase B Area I SAP. Evaluation of LOU 32 could simplify future closure (see RTC 4 above).
- dd. RTC 15.g, TRX acknowledges this comment and will add the SVOC analysis in SA66 and TPH-DRO/ORO to SA67.
- ee. RTC 15.h, TRX acknowledges this comment and will modify the table as necessary.
- ff. RTC 15.i, TRX acknowledges this comment and will modify the table as necessary.
- gg. RTC 15.j, TRX acknowledges this comment and will modify the table as necessary.
- hh. RTC 16.a and b, TRX will modify the table to add a column for the soil type(s) expected across the screened interval of each groundwater monitoring well. If the screen interval crosses the AA/MCF interface, TRX will note which unit the sampled groundwater is expected to represent. For example, if the screened interval was 90% AA and 10 % MCF, TRX would note that the groundwater collected would be expected to represent AA conditions. NDEP clarified that it is interested in determining potential bias of the samples where the well screen covers more than one soil type.
- ii. RTC 16.c, TRX acknowledges this comment.
- jj. RTC 16.d, TRX will review (see RTC 8a).
- kk. RTC 17, TRX acknowledges this comment.
- II. RTC 18, TRX acknowledges this comment and will discuss in revised work plans (see RTC for comment 16.a and b).
- mm. RTC 19, TRX acknowledges this comment and will modify the figure as necessary.
- nn. RTC 20, TRX acknowledges this comment and will modify the plate as necessary. TRX noted and the NDEP agreed that if TRX updates Plate A of the Phase B Area I SAP, then the individual figures for the Appendix A LOU packets do not need to be revised.

- oo. RTC 21.a k, TRX acknowledges this comments and will modify the overall figure as necessary. Individual LOU figures in the Area I work plan will not be revised.
- pp. RTC 21.1, TRX stated that the former acid drain system is located at 10 20 fbgs in places and that excavation with a backhoe is very difficult due to collocated utilities. TRX believes that the former acid drain system is constructed of relatively short segments (approximately 5 to 6 ft lengths) and therefore sampling anywhere along the pipeline should be representative of possible worst case scenario conditions. TRX will check the length of the pipe segments, the construction material of the pipe, and the location of other utilities prior to the advancement of these borings.
- qq. RTC 21.m, TRX acknowledges this comment and will revise Plate A in lieu on any revisions to the LOU figures.
- 3. TRX stated that they will provide errata for the Phase B Area I SAP, as needed.
- 4. TRX stated that the Phase B, Area VI SAP was being revised per NDEP's comments and would be submitted by May 19, 2008.
- 5. TRX will consider consolidating Phase B, Areas II and III into one SAP that will be submitted in mid-June.
- 6. TRX stated that the soil gas field work has commenced.
- 7. TRX stated that the field work for the Phase B Area I SAP should commence after Memorial Day.



Susan Crowley Staff Environmental Specialist (702) 651-2234 Fax (405) 302-4607 susan.crowley@tronox.com

May 30, 2008

Ms. Shannon Harbour, P.E. Nevada Division of Environmental Protection 2030 East Flamingo Road, Suite 230 Las Vegas, Nevada 89119-0818

#### Subject: Additional Documents for Phase B Area I Work Plan Tronox LLC, Henderson, Nevada

Dear Ms. Harbour:

Enclosed is the revised Figure A requested for the Tronox LLC Henderson Facility Phase B Area I work plan. This figure is being provided in response to the May 8th conference call and your May 28, 2008 e-mail.

Revised Tables 2 and 3 will be send via e-mail on Monday, June 2. These tables will reflect the changes in sampling and analysis. Table 2 will include a list of the borings that will be sampled for leaching and geotechnical characteristics.

If you have any comments or questions concerning this correspondence, please contact me at your convenience (702) 651-2234.

Sincerely,

Sm howley

Susan Crowley Staff Environmental Specialist

Overnight Mail Attachment: as stated CC: See attached Distribution List

#### Tronox. Adding value beyond the product.

Tronox LLC • 8000 West Lake Mead Parkway, Henderson, Nevada 89015 • P.O. Box 55, Henderson, Nevada 89009

June 18, 2008

Re:

Susan Crowley Tronox LLC PO Box 55 Henderson, Nevada 89009

Tronox LLC (TRX)
NDEP Facility ID #H-000539
Nevada Division of Environmental Protection (NDEP) Response to:
Phase B Source Area Investigation Work Plan Area IV (Western and Southern LOUs).
Tronox LLC Facility, Henderson, Nevada
Dated May 16, 2008

Dear Ms. Crowley,

The NDEP has received and reviewed TRX's Phase B, Area IV Sampling Analysis Plan (SAP) identified above and finds the document acceptable with the conditions and comments provided in Attachment A.

Errata sheets should be submitted based on the comments found in Appendix A. TRX should additionally provide an annotated response-to-comments (RTC) letter as part of the errata submittal. Alternately, in place of an RTC letter, TRX can discuss these comments with the NDEP in a meeting or via phone. Please advise the NDEP regarding the schedule for this submittal. Please note that it is NDEP's intent that TRX should be able to proceed with implementation of this SAP upon submittal of the erratum and RTC letter (or completion of meeting with NDEP in lieu of the RTC letter).

Please contact the undersigned with any questions at sharbour@ndep.nv.gov or (702) 486-2850 extension 240.

Sincerely,

Shannon Harbour, P.E. Staff Engineer III Bureau of Corrective Actions Special Projects Branch NDEP-Las Vegas Office

SH:bar:sh

CC: Jim Najima, NDEP, BCA, Carson City

Brian Rakvica, NDEP, BCA, Las Vegas

Keith Bailey, Environmental Answers LLC, 3229 Persimmon Creek Drive, Edmond, OK 73013 Sally Bilodeau, ENSR, 1220 Avenida Acaso, Camarillo, CA 93012-8727

Barry Conaty, Akin, Gump, Strauss, Hauer & Feld, L.L.P., 1333 New Hampshire Avenue, N.W., Washington, D.C. 20036

Brenda Pohlmann, City of Henderson, PO Box 95050, Henderson, NV 89009

Mitch Kaplan, U.S. Environmental Protection Agency, Region 9, mail code: WST-5, 75 Hawthorne Street, San Francisco, CA 94105-3901

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George Crouse, Syngenta Crop Protection, Inc., 410 Swing Road, Greensboro, NC 27409

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Paul Sundberg, Montrose Chemical Corporation, 3846 Estate Drive, Stockton, California 95209

Joe Kelly, Montrose Chemical Corporation of CA, 600 Ericksen Avenue NE, Suite 380, Bainbridge Island, WA 98110

Teri Copeland, 5737 Kanan Road #182, Agoura Hills CA 91301

Paul Hackenberry, Hackenberry Associates, LLC, 550 W. Plumb Lane B425, Reno, NV 89509

Paul Black, Neptune and Company, Inc., 8550 West 14th Street, Suite 100, Lakewood, CO 80215

#### Attachment A

- 1. General comment, as stated in NDEP's comments to the Phase B Area I SAP, TRX should revise Table 2 to note that all samples within the 0-1 fbgs interval will be collected from 0-0.5 fbgs unless the area is paved. If the area is paved it is expected that the sample will be collected from a representative depth beneath the pavement. Alternately, if an unpaved area is within a reasonable distance the sample could simply be moved to the unpaved area. Table 2 should be revised accordingly. These changes should be reflected in the Table 2 errata pages for the Phase B Area IV SAP and any future Sampling Analysis Plans (SAPs) submitted to the NDEP.
- 2. General comment, for borings located above LOU 60, TRX should log the condition of the pipe, if possible, and collect a sample directly underneath the pipe. This sample may be substituted for the next proposed 10 foot interval in the Phase B SAPs, Table 2. (e.g. if the bottom of the Former Acid Drain System pipe was located at 8 fbgs, then the sample should be collected directly underneath the pipe and not at 10 fbgs). Please note that this comment additionally applies to the Phase B Area I SAP. Please add text and footnotes to future Phase B SAPs that contain sampling for LOU 60 to reflect this change.
- 3. Section 1.0, page 1-2, 2<sup>nd</sup> paragraph, "Acid Drawn System" should be "Acid Drain System". Please revise text accordingly.
- 4. Section 1.1, page 1-3, 3<sup>rd</sup> paragraph, final sentence, the term "statistical sample population" is not correct and should be revised to "a statistical sample of the population" or "a statistical sample". However, because these collections of samples include both random and judgmental samples, the term "statistical sample" is also not necessarily strictly accurate. Using the term "sample of the population" or just "sample" is probably best under the circumstances of these data.
- 5. Section 1.1, page 1-4, 3<sup>rd</sup> bullet, NDEP is unclear how "pathways not applicable in the HHRA" relates to "the evaluation of flux chamber measurements". Please clarify this statement.
- 6. Section 1.1, page 1-4, 1<sup>st</sup> paragraph, NDEP could not located description of human health risk assessment (HHRA) work plan in Section 3.0 as stated in this paragraph. TRX should acknowledge this statement for the Phase B Area IV SAP and provide the description in any future Phase B SAPs submitted to the NDEP. In addition, it is noted that the HHRA work plan should be developed as soon as possible.
- 7. Section 2.1, page 2-1, 3<sup>rd</sup> bullet, TRX should add the groundwater <u>direction</u> to this statement.
- 8. Section 2.2.1, page 2-3, 2<sup>nd</sup> paragraph, TRX states that "if current operations do not exacerbate contamination, future closure for the would not require sampling for the full SRC list (i.e. if a chemical is not detected in the Phase B Investigation and is not a part of the process associated with the LOU, it would not be analyzed for at the time of closure)." The NDEP does not necessarily concur with this statement at this time and will review this issue at the time of closure.
- 9. Section 2.2.1, page 2-4, 4<sup>th</sup> paragraph, TRX should include discussion on groundwater as a source of continuing soil contamination.
- 10. Section 2.3, page 2-5, 1<sup>st</sup> paragraph, TRX should note that groundwater samples will be collected from 18 wells under the Phase B Area IV SAP not 1 as is stated in the text.
- 11. Section 2.3, general comment, TRX should additionally discuss surface sampling for dioxin. Please see above general comment about sampling depths.

- 12. Section 2.3.1, page 2-5, 3<sup>rd</sup> paragraph the term "statistical sample population" is not correct as discussed above, please correct this issue throughout the document.
- 13. Section 2.3.2, page 2-6, the NDEP has the following comments:
  - a. General comment, TRX does not discuss cyanide analysis. Please add cyanide analysis to this section. Additionally, TRX should note that there is only toxicity data available for free cyanide. If only total cyanide analysis is conducted, then TRX will need to assume that the total cyanide concentration is equal to the free cyanide concentration in the HHRA.
  - b. 1<sup>st</sup> bullet, please note that PCB analyses should include Aroclor and congener analyses.
  - c. 5<sup>th</sup> bullet, it is the NDEP's understanding that TRX will not use gamma spectroscopy for any of the Phase B radionuclides analyses.
- 14. Section 2.3.3.1, page 2-7, the information presented herein does not need a separate section (Section 2.3.3) and should be incorporated into the preceding section.
- 15. Section 2.3.4.1, page 2-7, the third bullet (concerning TRX using the reagent water leaching method in addition to "extraction fluid #2") on the original page 2-7 has appears to have been removed. It may have been moved to page 2-8 but no errata page for 2-8 was submitted. TRX should acknowledge this omission for the Phase B Area IV SAP and include the omitted text in any SAPs submitted in the future.
- 16. Section 2.3.4.1, page 2-8, 1<sup>st</sup> paragraph, TRX states that "The leachate data derived from the reagent water and that from the pH 5.0 water will be compared to reflect variable wetting conditions at the site." This text should be revised to state that the leachate data will "...reflect variable pH conditions..."
- 17. Section 2.3.4.2, general comment, NDEP advises TRX to consider how the SPLP data will be used for risk assessment. Additionally, it is expected that TRX will determine whether any modeling will be conducted. Based on these considerations, TRX should evaluate the geotechnical / physical and chemical properties that are being collected to determine if the number of parameters and samples will provide sufficient data.
- 18. Section 2.3.4.2, page 2-8, TRX should collect the fraction of organic carbon ( $f_{oc}$ ) in addition to the listed parameters. TRX should acknowledge this omission for the Phase B Area IV SAP and include should this parameter in any future Phase B SAP submitted to the NDEP.
- 19. Tables, the NDEP has the following comments:
  - a. General comment, the NDEP requests that TRX prepare and present a table and corresponding figure that includes well construction details (e.g. casing diameter, age, materials of construction, screened interval, etc.) versus geology. This table may be submitted as an addendum/insert for the Phase B Areas II and III reports and is not necessary for the implementation of the Area IV SAP. This table should include all wells proposed for sampling in the Phase B Area SAPs.
  - b. Table 1, TRX should include a footnote referencing the approval date of the SRC list used for this table.
  - c. Table 2, the NDEP has the following comments (Please note that the following comments for Table 2 should be addressed by the submittal of errata pages for the Phase B Area IV SAP and incorporated in future Phase B SAPs submittals.):
    - i. General comment, the rationale for judgmental samples included in Table 2 of the Phase B Area IV and future Phase B SAPs should be more focused on how the boring will represent the LOU(s) indicated.

- ii. General comment, in the HHRA and/or future SAPs, TRX should identify whether judgmental borings should be indicative of worst case scenario conditions for a given LOU by using historic information/data, historic aerial photography, etc.
- iii. General comment, Geotechnical Tests column, the boring-depth sample numbers should be removed from Table 2, page 5 of 5. TRX should alternately indicate the depth of geotechnical sample collection at these borings in the main part of the table. Rational for the geotechnical samples can be included in the Location Description and Characterized Area Rationale column. Please note that the mark indicating a geotechnical sample should be footnoted if the sample is proposed as optional.
- iv. General comment, Rationale column, TRX should provide additional explanation on the choice of location for each boring in respect to each LOU (i.e. whether the boring represents worst case scenario for a LOU and how this was determined, etc.).
- v. The following borings should include the corresponding analyses:
  - 1. SVOCs: SA191
  - 2. Cyanide: all borings located in Area 4 west of column 6 (not inclusive) and all borings associated with LOU 60 downstream of the LOU 63 conveyance piping junction. Please additionally revise and resubmit Phase B Area I SAP, Table 2, as necessary.
  - 3. Radionuclides: SA115-20, SA115-30, and SA115-40
- d. Table 3, the NDEP has the following comments (Please note that the following comments for Table 3 should be addressed by the submittal of errata pages for the Phase B Area IV SAP and incorporated in future Phase B SAPs submittals.):
  - i. General comment, TRX should note that the NDEP does not necessarily agree that the selected wells are representative of the up-gradient, down-gradient and/or crossgradient conditions as stated in the Appendix A LOU packets. The NDEP does note that the overall coverage of the groundwater sampling plan appears adequate.
  - ii. General comment, TRX should note the water bearing zone of each of the proposed wells in this table.
  - iii. General comment, please clarify whether the wells designated as "upgradient" are to be included in the Alluvial Aquifer Background SAP. If TRX is intending that these wells be a part of the Alluvial Aquifer Background SAP, then TRX should remove these wells from the Phase B Area IV SAP.
- e. Table 6, TRX should note that this table was not reviewed in detail by the NDEP as it is NDEP's assumption that this table is consistent with the approved QAPP.
- f. Table 7, TRX should note that this table was not reviewed in detail by the NDEP as it is NDEP's assumption that this table is consistent with the approved QAPP.
- 20. Figure 4, the NDEP has the following comments (Please note that the following comments for Figure 4 should be addressed by the submittal of errata pages for the Phase B Area IV SAP and incorporated in future Phase B SAPs submittals.):
  - a. TRX should clarify which water bearing zone is being represented and review the well construction details to determine that all wells used for this figure are in the targeted water bearing zone.
  - b. TRX should use groundwater elevation data from additional wells across the site to more accurately and precisely determine the groundwater direction and gradient. If additional wells are used for this figure, then TRX should include them on the map.
  - c. TRX should illustrate the groundwater direction on this figure.

- 21. Plate A (Please note that the following comments for Plate A should be addressed by the submittal of errata pages for the Phase B Area IV SAP and incorporated in future Phase B SAPs submittals.):
  - a. Add the location of LOU 66.
  - b. Update this plate to include the following comments to the Appendix A LOU packets that affect boring placement.
  - c. Indicate visually which borings will additionally include geotechnical sample collection.
- 22. Appendix A, the NDEP has the following comments:
  - a. General comment: TRX should indicate in future LOU packages as to whether any proposed or historic borings/samples represent the worst case scenario conditions for the given LOU and how the location(s) for the worst case scenario conditions was/were determined.
  - b. General comment, TRX should include discussion on the background radionuclide data in the LOU packages, as appropriate.
  - c. General comment, TRX should reference the appropriate ASTDR value for dioxin/furans.
  - d. General comment, the NDEP has noted many examples of non-consistent units within the LOU package data tables. TRX should review and revise all data table for the LOU packages for consistent units within each table for future Phase B SAPs submittals.
  - e. General comment, the NDEP has noted several examples of TRX referencing EPA Region VI MSSLs and Region IX PRGs in the LOU data packages. TRX should review and revise all LOU data tables to contain only EPA Region VI MSSLs until otherwise directed by the NDEP.
  - f. General comment, the NDEP has noted that TRX has not included the DAF 1 and DAF 20 values in the LOU data packages as necessary. TRX should review and revise as necessary for future submittals.
  - g. LOU 4 (Hardesty Chemical Company Site), LOU 26 (Trash Storage Area), LOU 27 (PCB Storage Area), and LOU 28 (Hazardous Waste Storage Area), the NDEP has the following comments:
    - i. LOU 26, TRX should check using old aerial photography, etc. that the location for SA120 represents the worst case scenario for this LOU. Additional rationale as to the confidence that the location of SA120 represents the worst case scenario sampling should be included in the errata for Table 2.
    - ii. LOU 27, wipe and chip samples should be additionally collected in LOU 27 and analyzed for PCBs. TRX should provide a SOP and Work Plan for the collection of the wipe and chip samples. The SOP and Work Plan may be included as errata to the Phase B Area VI SAP or submitted under separate cover. These additions should be indicated in the errata for Plate A and Table 2.
    - iii. Table A: See above comments for Table 2 as applicable
    - iv. Figure 1, the NDEP has the following comments (The following changes should be included in the revised Plate A.):
      - 1. SA84 should be relocated over the LOU 60 (Acid Drain System).
      - 2. SA138 should be relocated to the approximate location of the termination of the above ground pipeline.
      - 3. SA191 may be moved into LOU 28; otherwise, TRX should place an additional boring in LOU 28 either between the two ASTs or just north of the northernmost AST in the northwest corner of LOU 28.

- h. LOU 41, LOU 65a, LOU 65b, LOU 65c, and LOU 65d, SA169 should be relocated to the east directly above the Lou 60 (Acid Drain System).
- i. LOU 59 (Storm Drain System Segment), the NDEP has the following comments:
  - i. General comment, the borings associated with this LOU should be located immediately adjacent to the storm drain system whenever possible.
  - ii. SA116 should be relocated southwest to the western southernmost segment of LOU 59.
  - iii. SA118 should be relocated southeast to the approximate location of historic sample location M116 on the eastern southernmost segment of LOU 59.
  - iv. An additional boring should be located adjacent to TRX's eastern property boundary on the eastern southernmost segment of LOU 59.
  - v. An additional boring should be located adjacent to LOU 59 where it re-enters TRX property across the western property boundary (near SG44).
- j. LOU 60 (Former Acid Drain System), the NDEP has the following comments:
  - i. General comment, the borings associated with this LOU should be located directly above the former acid drain system whenever possible.
  - ii. General comment, TRX should identify the construction material of this LOU.
  - iii. An additional boring should be located over LOU 60 where the acid drain system reenters TRX property across the western property boundary (near SG88).
  - iv. Three additional borings should be located one at each junction on the northernmost segment of LOU 60 in Area IV (north of Unit Buildings 1 and 2).
- k. LOU 62 (State Industries, Inc. Site), the NDEP has the following comments:
  - Description, 5<sup>th</sup> bullet, 2<sup>nd</sup> sub-bullet, TRX should identify the location of Building T Please submit an errata sheet for this revision.
  - ii. Figure A, please submit a revised figure that indicates the location of the following:
    - 1. Buildings T-4, T-5, and T-8,
    - 2. Conveyance piping to/from the former ponds
    - 3. Conveyance piping to the Former Acid Drain System
    - 4. Sanitary sewer that received the LOU 62 discharge overflow from the Former Acid Drain System
  - iii. Please note that additional sampling may be necessary based on the submittal of the above information.
- 1. LOU 66 (Flintkote Company Lease, Former Aboveground Diesel Tank), please provide additional discussion on the rationale that TRX does not have to sample this LOU. NDEP does not concur at this time.



Susan Crowley Staff Environmental Specialist (702) 651-2234 Fax (405) 302-4607 susan.crowley@tronox.com

July 11, 2008

Ms. Shannon Harbour, P.E. Nevada Division of Environmental Protection 2030 East Flamingo Road, Suite 230 Las Vegas, Nevada 89119-0818

# Subject: Revised Documents for Phase B Area IV Work Plan Tronox LLC, Henderson, Nevada

Dear Ms. Harbour:

Enclosed is the revised Plate A Table 2 and Table 3 requested for the Tronox LLC Henderson Facility Phase B Area IV work plan. These revisions are being provided in response to the June 18, 2008 NDEP comments to the Area IV Work Plan and the June 23, 2008 NDEP conference call.

These tables reflect the changes in sampling and analysis requested.

If you have any comments or questions concerning this correspondence, please contact me at your convenience (702) 651-2234.

Sincerely,

Sm howley

Susan Crowley Staff Environmental Specialist

Overnight Mail Attachment: CC:

Distribution list Area 4 WP.xls as stated See attached Distribution List

### Tronox. Adding value beyond the product.

Tronox LLC • 8000 West Lake Mead Parkway, Henderson, Nevada 89015 • P.O. Box 55, Henderson, Nevada 89009

July 21, 2008

Susan Crowley Tronox LLC PO Box 55 Henderson, Nevada 89009

Re: Tronox LLC (TRX) NDEP Facility ID #H-000539 Nevada Division of Environmental Protection (NDEP) Response to: Phase B Source Area Investigation Work Plan Area II (Central LOUs). Tronox LLC Facility, Henderson, Nevada Dated June 27, 2008

Dear Ms. Crowley,

The NDEP has received and reviewed TRX's Phase B, Area III Sampling Analysis Plan (SAP) identified above and finds the document acceptable with the conditions and comments provided in Attachment A.

Errata sheets should be submitted based on the comments found in Appendix A. TRX should additionally provide an annotated response-to-comments (RTC) letter as part of the errata submittal. Alternately, in place of an RTC letter, TRX can discuss these comments with the NDEP in a meeting or via phone. Please advise the NDEP regarding the schedule for this submittal. Please note that it is NDEP's intent that TRX should be able to proceed with implementation of this SAP upon submittal of the errata and RTC letter (or completion of meeting with NDEP in lieu of the RTC letter).

Please contact the undersigned with any questions at sharbour@ndep.nv.gov or (702) 486-2850 extension 240.

Sincerely,

Shannon Harbour, P.E. Staff Engineer III Bureau of Corrective Actions Special Projects Branch NDEP-Las Vegas Office

SH:bar:sh

CC: Jim Najima, NDEP, BCA, Carson City Brian Rakvica, NDEP, BCA, Las Vegas Keith Bailey, Environmental Answers LLC, 3229 Persimmon Creek Drive, Edmond, OK 73013 Sally Bilodeau, ENSR, 1220 Avenida Acaso, Camarillo, CA 93012-8727 Barry Conaty, Akin, Gump, Strauss, Hauer & Feld, L.L.P., 1333 New Hampshire Avenue, N.W., Washington, D.C. 20036 Brenda Pohlmann, City of Henderson, PO Box 95050, Henderson, NV 89009 Mitch Kaplan, U.S. Environmental Protection Agency, Region 9, mail code: WST-5, 75 Hawthorne Street, San Francisco, CA 94105-3901 Ebrahim Juma, DAQEM, PO Box 551741, Las Vegas, NV, 89155-1741 Ranajit Sahu, BRC, 311 North Story Place, Alhambra, CA 91801 Rick Kellogg, BRC, 875 West Warm Springs, Henderson, NV 89011 Mark Paris, Landwell, 875 West Warm Springs, Henderson, NV 89011 Craig Wilkinson, TIMET, PO Box 2128, Henderson, Nevada, 89009-7003 Kirk Stowers, Broadbent & Associates, 8 West Pacific Avenue, Henderson, Nevada 89015 George Crouse, Syngenta Crop Protection, Inc., 410 Swing Road, Greensboro, NC 27409 Nick Pogoncheff, PES Environmental, 1682 Novato Blvd., Suite100, Novato, CA 94947 Lee Erickson, Stauffer Management Company, P.O. Box 18890, Golden, CO 80402 Michael Bellotti, Olin Corporation, 3855 North Ocoee Street, Suite 200, Cleveland, TN 37312 Curt Richards, Olin Corporation, 3855 North Ocoee Street, Suite 200, Cleveland, TN 37312 Paul Sundberg, Montrose Chemical Corporation, 3846 Estate Drive, Stockton, California 95209 Joe Kelly, Montrose Chemical Corporation of CA, 600 Ericksen Avenue NE, Suite 380, Bainbridge Island, WA 98110

Teri Copeland, 5737 Kanan Road #182, Agoura Hills CA 91301

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Paul Hackenberry, Hackenberry Associates, LLC, 550 W. Plumb Lane B425, Reno, NV 89509

Paul Black, Neptune and Company, Inc., 8550 West 14th Street, Suite 100, Lakewood, CO 80215

# Attachment A

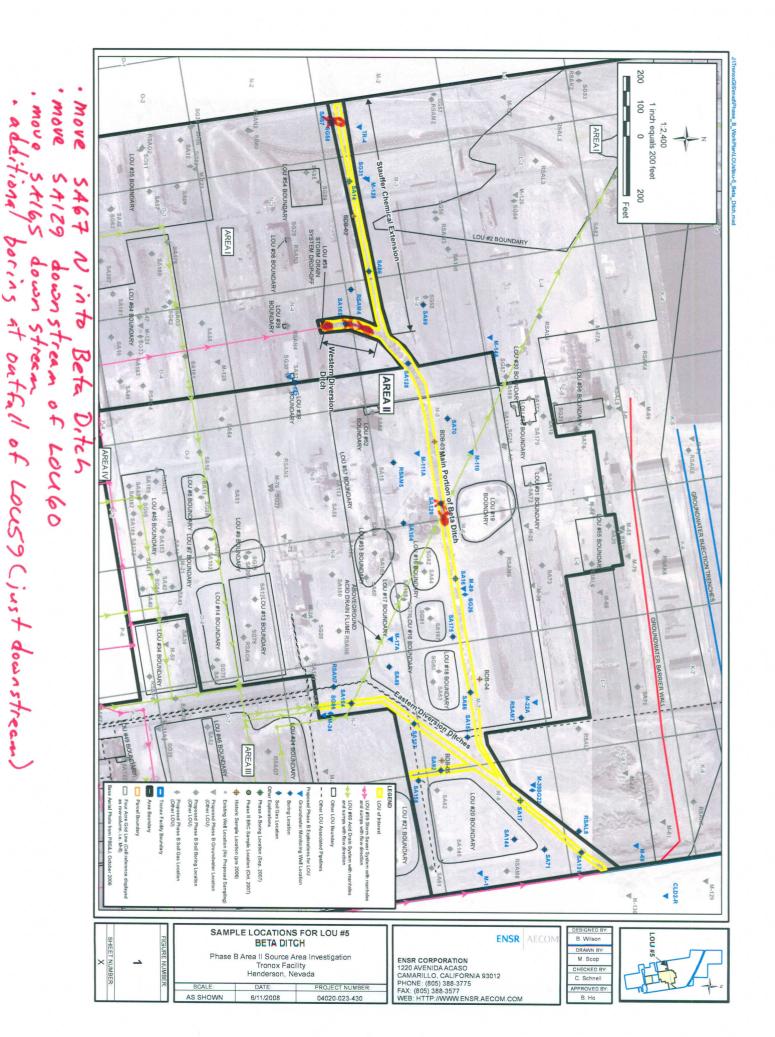
- 1. General comment, NDEP has noted numerous typographic errors and cross-referencing errors in the text, tables, and figures of this document but will not list these in this response letter. TRX should review documents in greater detail and revise as necessary prior to submittal.
- 2. General comment, some site-wide changes to the sampling plan have been requested under separate cover. Please refer to separate letter dated July 21, 2008.
- 3. General comment, NDEP noted numerous errors in the Medium Specific Screening Levels (MSSLs), Maximum Contaminant Levels (MCLs), etc. listed in the tables of the main text and Appendix A LOU packages and notes the following (TRX should note that the following is not an exhaustive list):
  - a. TRX should review these values in greater detail and revise as necessary prior to the submittal of future documents.
  - b. The non-cancer endpoint MSSL for arsenic is used instead of the cancer endpoint MSSL.
  - c. TRX did not include the MSSL for titanium.
  - d. TRX did not include the MSSL for thallium.
  - e. TRX should use the values listed for the outdoor worker as these are more stringent. Indoor workers will be addressed using the indoor air pathway.
  - f. TRX should list the more stringent of the cancer versus non-cancer endpoint MSSLs for each contaminant.
- 4. Section 1.0, page 1-2, as noted previously, it is the NDEP's expectation that TRX will meet with the NDEP to discuss the format of the final Phase B Source Area Investigation Report prior to submittal.
- 5. Section 1.1, page 1-3, 4<sup>th</sup> paragraph, as noted previously, it is the NDEP's expectation that TRX will meet with the NDEP to discuss data usability prior to the submittal of the final Phase B Source Area Investigation Report.
- 6. Section 1.2, page 1-5, TRX lists the Phase A Investigation Results Report as a document of record. The NDEP did not approve this document but accepted the submittal of the Phase B SAPs in lieu of TRX submitting a revised Phase A Report. TRX should note that while the validated data presented in the Phase A Report was approved by the NDEP, the procedures/methodologies, recommendations, and conclusions in the Phase A Report were neither approved nor rejected by the NDEP.
- 7. Section 2.2.1, page 2-3, 2<sup>nd</sup> paragraph, TRX states that "If current operations do not exacerbate contamination, future closure may not require sampling for the full SRC list (i.e., if a chemical is not detected in the Phase B Investigation and is not a part of the process associated with the LOU, it may not be analyzed for at the time of closure)." The NDEP does not necessarily concur with this statement at this time and will review this issue at the time of closure.
- 8. Section 2.2.1, page 2-4, 3<sup>rd</sup> paragraph, TRX should include discussion on groundwater as a source of continuing soil contamination.
- 9. Section 2.3.2, page 2-6, 1<sup>st</sup> bullet, the NDEP has the following comments:
  - a. TRX should note that sampling for PCBs is necessary in several locations in Area II.
  - b. TRX should note that PCB analyses should include Aroclor and congener analyses.

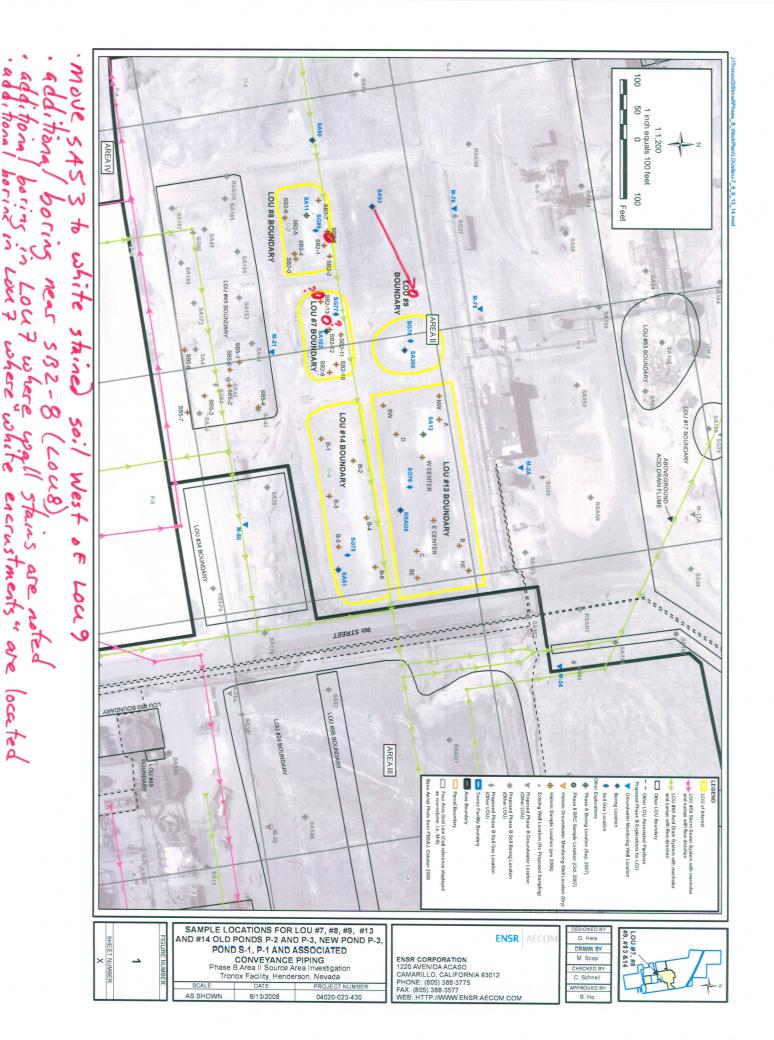
- c. NDEP has added PCBs and TPH DRO/ORO analysis to any borings located in the vicinity of Western Area Power Administration (WAPA) property. Please see Table 2 comments.
- Section 2.3.2, page 2-6, last bullet, TRX should note that cyanide sampling should be conducted at all sampling locations located west of column 6 of Plate A, not inclusive, per NDEP's comment in a June 18, 2008 response letter and TRX subsequent response to comments (RTCs) dated June 23, 2008.
- 11. Section 2.3.4.1, page 2-7, 1<sup>st</sup> paragraph, based on a review of Table 2, the Muddy Creek formation (MCf) does not seem to be represented in the proposed geotechnical sampling.
- 12. Tables, the NDEP has the following comments:
  - a. General comment, the List of Tables on page iii of the Contents and the actual Tables located in the Tables section are not consistent as follows:
    - i. Table 8 is not a List of Soil Screening Levels... but is the Summary of Well Completion Data.
    - ii. No Table 9 was located.
    - iii. All references in the text of the report to these two tables are erroneous.
  - b. Table 2, the NDEP has the following comments
    - i. TRX should submit errata pages for Table 2 that addresses the following comments for Table 2 and the comments for Appendix A as appropriate.
    - ii. TRX should add a column for PCB analysis.
    - iii. TRX should indicate in a footnote that platinum will be added to the analyses for boring SA126.
    - iv. The following borings should be advanced to the water table to be consistent with other borings. (If this depth is not feasible or practical, TRX should supply justification/rationale for the difference in boring depth.): SA122, SA151, SA155, SA167, SA170, SA173, SA179, and SA196.
    - v. The following borings should include the corresponding analyses:
      - 1. SVOCs: SA62, SA71, SA144, SA145, SA61, SA158, SA133, SA208, RSAS5, and SA31
      - 2. Cyanide, please see the following comments:
        - a. TRX should note that NDEP requested that "all borings located in Area 4 west of column 6 (not inclusive) and all borings associated with LOU 60 downstream of the LOU 63 conveyance piping junction" in the June 18, 2008 response letter to the Phase B Area IV SAP.
        - b. The following borings should include analysis for total cyanide: SA72, SA123, SA73, SA66, SA67, SA65, SA70, SA104, RSAM5, SA64, SA175, RSAM6, SA197, SA198, SA63, SA92, SA155, RSAM7, SA71, SA144, RSAM8, SA58, SA94, SA113, SA196, SA60, SA105, SA49, SA154, SA107, RSAN7, SA158, SA41, SA45, SA50, SA102, SA172, SA187, SA188, SA40, SA42, SA126, RSAQ6, SA30, SA32, SA125, SA161, and RSAR6
      - 3. PCBs: SA92, SA62, SA71, SA144, SA145, RSAM8, SA151, RSAN7, SA61, SA158, SA122, SA170, SA133, SA208, RSAS5, and SA31
      - 4. TPH DRO/ORO: SA70, SA104, SA64, SA175, SA198, SA155, SA71, SA49, SA107, SA122, SA170, and SA102

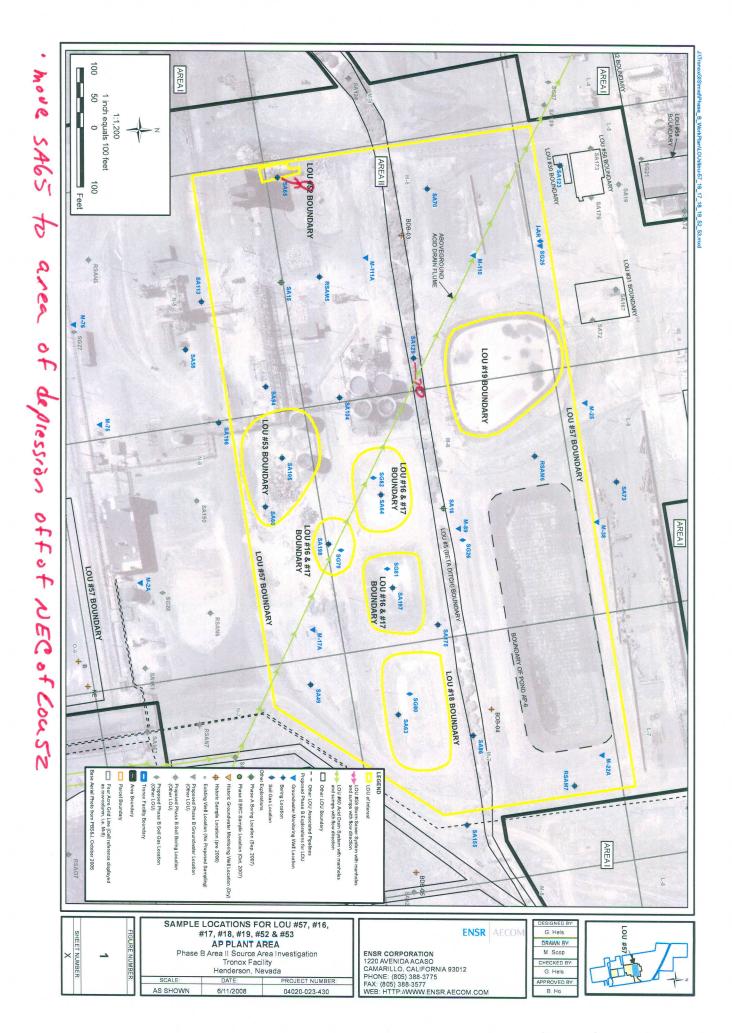
- TPH GRO: SA131, SA128, SA70, SA104, SA129, RSAM5, SA175, SA86, SA92, SA155, RSAM7, SA71, SA144, RSAM8, SA49, SA154, SA107, RSAN7, SA158, SA50, SA53, SA102, SA51, RSAO6, and SA200
- 6. 1,4 dioxane: SA133
- Organophosphorus Pesticides (OPPs): SASA131, SA66, SA67, SA128, SA70, SA104, SA129, SA175, SA86, SA92, SA155, SA71, SA165, SA49, SA154, SA107, RSAN7, SA158
- c. Table 3, the NDEP has the following comments:
  - i. General comment, TRX should note that the NDEP does not necessarily agree that the selected wells are representative of the up-gradient, down-gradient and/or cross-gradient conditions as stated in the Appendix A LOU packets. The NDEP does note that the overall coverage of the groundwater sampling plan appears adequate.
  - ii. TRX should add analysis for 1,4-dioxane for all wells associated with this area.
  - iii. TRX has noted that well information for well M-2A has not been located. TRX should note that any data collected from this well without the well information may not be usable.
- d. Table 6, TRX should note that this table was not reviewed in detail by the NDEP as it is NDEP's assumption that this table is consistent with the approved QAPP.
- e. Table 7, TRX should note that this table was not reviewed in detail by the NDEP as it is NDEP's assumption that this table is consistent with the approved QAPP.
- 13. Figure 4, NDEP noted that the wells used in this figure are not the same as those listed for the Phase B site-wide groundwater investigation. TRX should at a minimum use these wells in the creation of this figure.
- 14. Plate A, update this plate to include the following comments to the Appendix A LOU packets that affect boring placement. TRX should additionally submit four copies of a revised map that includes NDEP's requested revisions for Areas I, II, III, and IV. These copies will be places in each of the Phase B SAPs.
- 15. Appendix A, the NDEP has the following comments:
  - a. LOU 5 (Beta Ditch), the NDEP has the following comments (please see the corresponding attached figure as necessary):
    - i. TRX should note the depth of this LOU and whether this will affect the comparison of the data collected within the Beta Ditch with the data collected for the rest of the Site (elevation difference in compared samples).
    - ii. The table in this Section of the Appendix does not address any of the off-Site sources that were disposed of in the Beta Ditch. This is a global comment which applies to all of the applicable area-specific CSMs that are in Appendix A. NDEP considered this issue during the review of the document and requested additional sampling, as appropriate.
    - iii. PCBs analysis should be added to all samples collected for LOU 5. (Please see above comment for Table 2 for specific borings.)
    - iv. SA129 should be moved to a location just downstream of where LOU 60 (Acid Drain System) crossed over LOU 5.
    - v. SA67 should be moved north to the bottom of LOU 5.
    - vi. SA69 (Area I) should include all analytical suites for consistency with LOU 5.

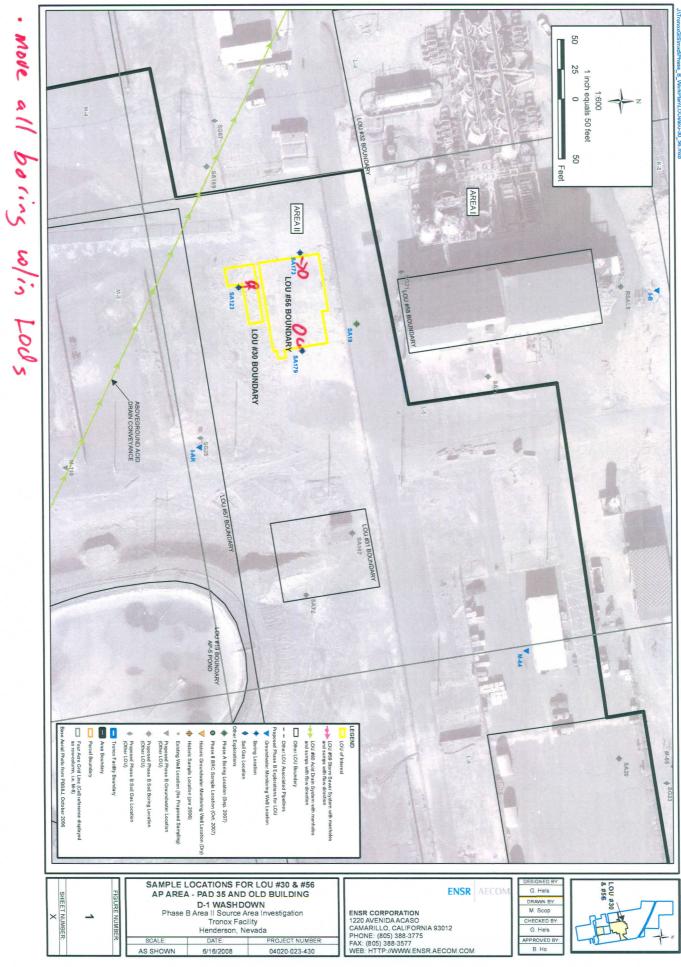
- vii. SA165 should be moved in the downstream direction to provide separation from the additional boring requested below. Please note that the sample should still be located well above the confluence of the Western Diversion Ditch and the main channel.
- viii. One additional boring should be located at the outfall of LOU 59 (Storm Drain System). The analyses for this boring should include, perchlorate, metals (Phase A List), Hexavalent Chromium, TPH ORO/DRO, TPH GRO, VOCs, Wet Chemistry, Total Cyanide, OCPs, OPPs, SVOCs, Radionuclides, Dioxins/Furans, PCBs, and Asbestos
- b. LOU 7, 8, 9, 13, and 14 (Old Ponds P-2 and P-3, New Pond P-3, Ponds S-1, P-1 and associated conveyance piping), the NDEP has the following comments (please see the corresponding attached figure as necessary):
  - i. TRX should check volume values reported. Volume calculation seems to be in error based on the small reported change in dimensions and the corresponding large increase in volume. If the volume is correct, please provide additional details (e.g.: was a large berm constructed?).
  - ii. SA53 should be moved to the soil stained area west of LOU 9.
  - iii. An additional boring should be located in LOU 8 near SB2-8.
  - iv. An additional boring should be located in LOU 7 in the vicinity of the observed wall stains.
  - v. An additional boring should be located in LOU 7 in the vicinity of the observed "white encrustments".
- c. LOU 16, 17, 18, 19, 52, and 57 (AP Plant Area), the NDEP has the following comments (please see the corresponding attached figure as necessary):
  - i. General comment, NDEP assumes that characterization of LOU 19, (AP-5 and AP-6) will occur after AP-5 has been decommissioned. NDEP will reserve commenting on these ponds until that time.
  - ii. LOU 57 piping (historic and current) should be indicated on this LOU figure. Please revise this figure for inclusion in the Phase B Investigation Report.
  - iii. SA65 should move to the area of depression observed off of the northeast corner of LOU 52.
- d. LOU 20 (Pond C-1 and Associated Piping in Area II:
  - i. TRX reports that electrolytic wastes are associated with this LOU. Please add the following analyses to the borings associated with this LOU: PCB and SVOCs.
  - ii. Please provide the materials of construction of the cathodes.
  - iii. SA154 should be located as close as possible to the associated piping for this LOU.
- e. LOU 29 (Solid Waste Dumpsters)
  - i. Please clarify whether SA122 is located on the concrete pad or in the gravel section between the pads.
  - ii. Due to the proximity of WAPA property, TRX should add the following analyses to the borings associated with this LOU: PCBs and TPH ORO/DRO.
- f. LOU 30 and 56 (AP Area Pad 35 and Old Building D-1 Washdown), the NDEP has the following comments (please see the corresponding attached figure as necessary):
  - i. SA173 should be moved east to be located within LOU 56.
  - ii. SA179 should be moved west to be located within LOU 56.
  - iii. SA123 should be moved to the north side of LOU 30.

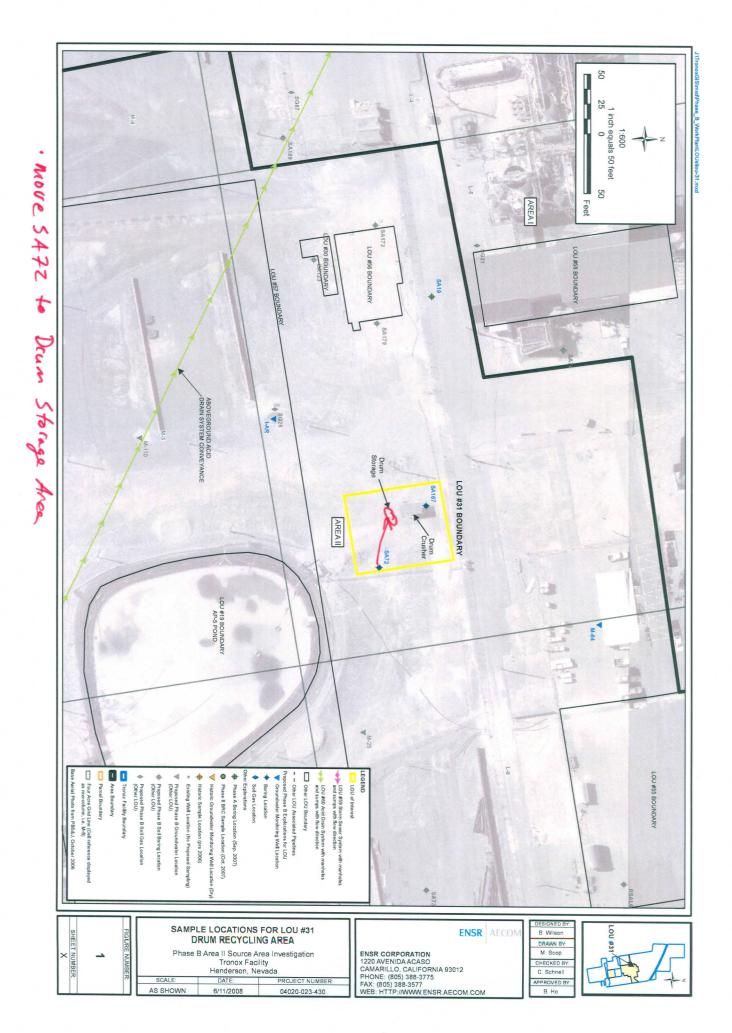
- g. LOU 31 (Drum Recycling Area), SA72 should be moved to a location in the former drum storage area. (Please see the corresponding attached figure as necessary.)
- h. LOU 36 (Former Satellite Accumulation Point, Unit 3, Maintenance Shop), TRX should add the following analyses to the borings associated with this LOU: PCBs, SVOCs, and 1,4 dioxane.
- i. LOU 43, 11, 12, and 15 (Unit 4 Basement and Old Chlorate Plant Decommissioning, Sodium Chlorate Filter Cake Holding Area, Hazardous Waste Storage Area and Platinum Drying Unit), the NDEP has the following comments (please see the corresponding attached figure as necessary):
  - i. TRX should include the data for boring SA05 instead of SA07 in the historic data tables.
  - ii. TRX reports that electrolytic wastes are associated with this LOU. Please add the following analyses to the borings associated with this LOU: PCB and SVOCs.
  - iii. TRX should indicate in a footnote that platinum will be added to the analyses for boring SA126.
  - iv. SA126 should be moved to the west of LOU 15.
  - v. SA124 should be moved into LOU 11. If this is not feasible, please explain.
  - vi. SA 125 should be moved into LOU 12. If this is not feasible, please explain.
- j. LOU 45 (Diesel Storage Tanks), SA188 should be moved north to a location above LOU 60. (Please see the corresponding attached figure as necessary.)
- k. LOU 55 (Area Affected by July 1990 Fire), RSAL6 should be moved to the soil adjacent to the pad in the direction of drainage.
- 1. LOU 59 (Storm Drain System Segment), the NDEP has the following comments (please see the corresponding attached figure as necessary):
  - i. General comment, the borings associated with this LOU should be located immediately adjacent to the storm drain system whenever possible.
  - ii. RSAQ5 should be moved north adjacent to LOU 59 in the vicinity of the southwest corner of ChemStar property.
  - iii. RSAR6 should be moved north adjacent to LOU 59 and over LOU 60.
  - iv. An additional boring should be located adjacent to LOU 59 at the 90 degree turn just south of ChemStar property.
  - v. An additional boring should be located adjacent to LOU 59 just north of ChemStar property, south of LOU 45 and over LOU 60.
  - vi. An additional boring should be located adjacent to LOU 59 just south of LOU 34 at the 90 degree turn just north of ChemStar property.
- m. LOU 60 (Former Acid Drain System), the NDEP has the following comments (please see the corresponding attached figure as necessary):
  - i. General comment, the borings associated with this LOU should be located directly above the former acid drain system whenever possible.
  - ii. General comment, for borings located above LOU 60, TRX should log the condition of the pipe, if possible, and collect a sample directly underneath the pipe. This sample may be substituted for the next proposed 10 foot interval in the Phase B SAPs, Table 2 (e.g. if the bottom of the Former Acid Drain System pipe was located at 8 fbgs, then the sample should be collected directly underneath the pipe and not at 10 fbgs). Please note that this comment additionally applies to the Phase B Area I and IV SAPs.

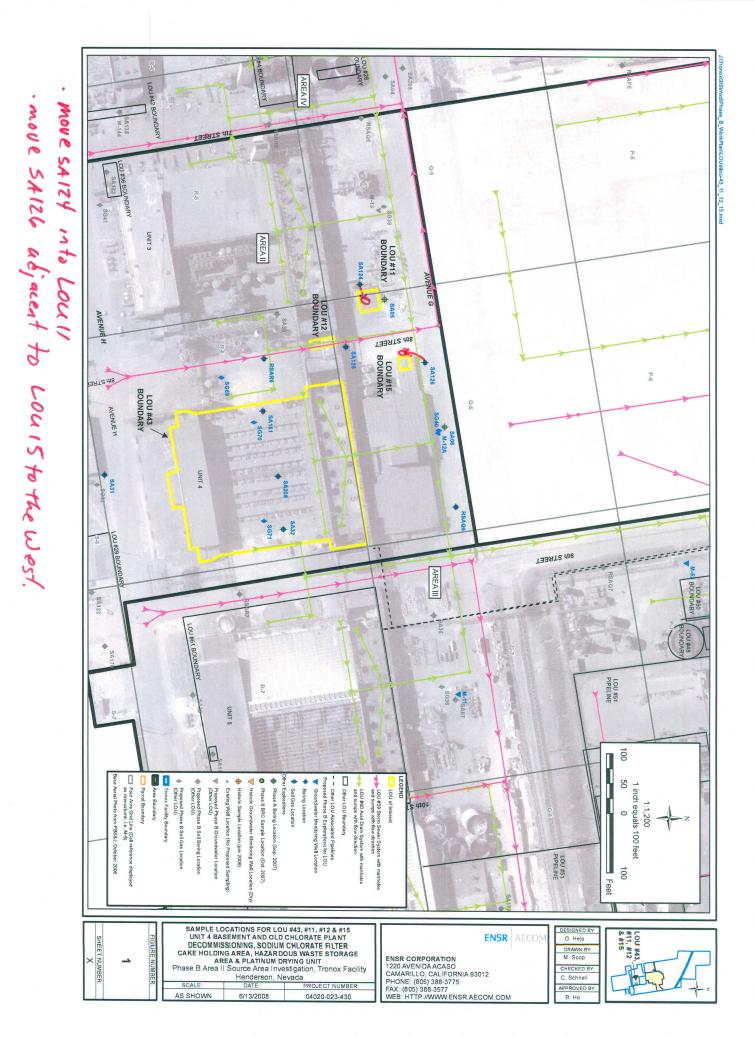


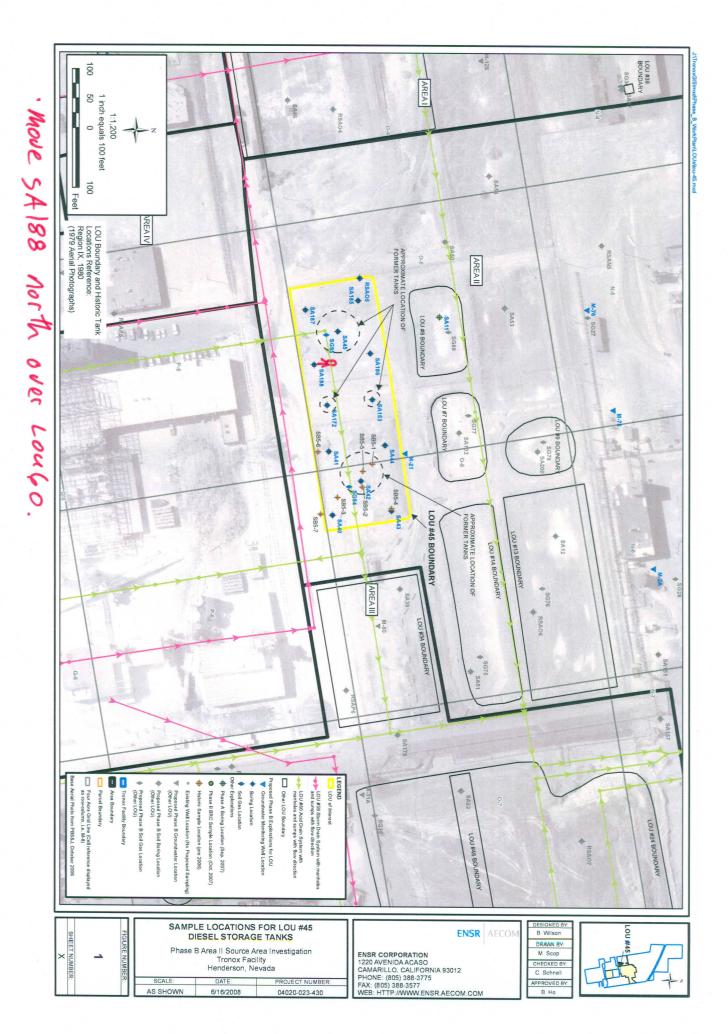




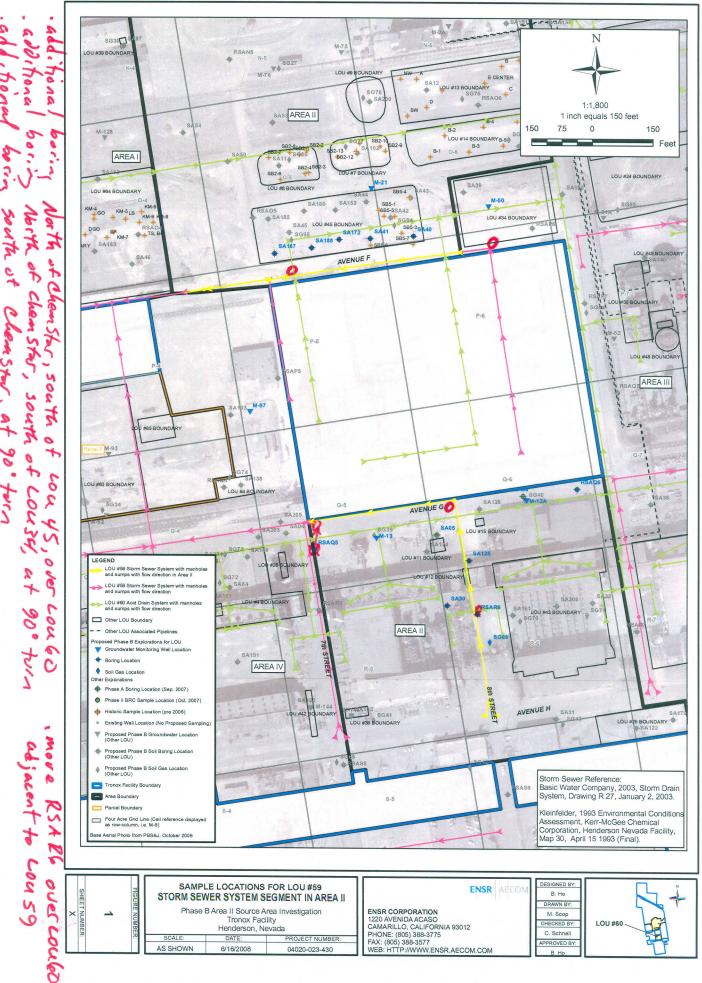












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July 21, 2008

Susan Crowley Tronox LLC PO Box 55 Henderson, Nevada 89009

Re: Tronox LLC (TRX) NDEP Facility ID #H-000539 Nevada Division of Environmental Protection (NDEP) Response to: Phase B Source Area Investigation Work Plan Area III (Eastern LOUs). Tronox LLC Facility, Henderson, Nevada Dated June 27, 2008

Dear Ms. Crowley,

The NDEP has received and reviewed TRX's Phase B Area III Sampling Analysis Plan (SAP) identified above and finds the document acceptable with the conditions and comments provided in Attachment A.

Errata sheets should be submitted based on the comments found in Appendix A as noted. TRX should additionally provide an annotated response-to-comments (RTC) letter as part of the errata submittal. Alternately, in place of an RTC letter, TRX can discuss these comments with the NDEP in a meeting or via phone. Please advise the NDEP regarding the schedule for this submittal. Please note that it is NDEP's intent that TRX should be able to proceed with implementation of this SAP upon submittal of the errata and RTC letter (or completion of meeting with NDEP in lieu of the RTC letter).

Please contact the undersigned with any questions at sharbour@ndep.nv.gov or (702) 486-2850 extension 240.

Sincerely,

Shannon Harbour, P.E. Staff Engineer III Bureau of Corrective Actions Special Projects Branch NDEP-Las Vegas Office

SH:bar:sh

CC: Jim Najima, NDEP, BCA, Carson City Brian Rakvica, NDEP, BCA, Las Vegas Keith Bailey, Environmental Answers LLC, 3229 Persimmon Creek Drive, Edmond, OK 73013 Sally Bilodeau, ENSR, 1220 Avenida Acaso, Camarillo, CA 93012-8727 Barry Conaty, Akin, Gump, Strauss, Hauer & Feld, L.L.P., 1333 New Hampshire Avenue, N.W., Washington, D.C. 20036 Brenda Pohlmann, City of Henderson, PO Box 95050, Henderson, NV 89009 Mitch Kaplan, U.S. Environmental Protection Agency, Region 9, mail code: WST-5, 75 Hawthorne Street, San Francisco, CA 94105-3901 Ebrahim Juma, DAQEM, PO Box 551741, Las Vegas, NV, 89155-1741 Ranajit Sahu, BRC, 311 North Story Place, Alhambra, CA 91801 Rick Kellogg, BRC, 875 West Warm Springs, Henderson, NV 89011 Mark Paris, Landwell, 875 West Warm Springs, Henderson, NV 89011 Craig Wilkinson, TIMET, PO Box 2128, Henderson, Nevada, 89009-7003 Kirk Stowers, Broadbent & Associates, 8 West Pacific Avenue, Henderson, Nevada 89015 George Crouse, Syngenta Crop Protection, Inc., 410 Swing Road, Greensboro, NC 27409 Nick Pogoncheff, PES Environmental, 1682 Novato Blvd., Suite100, Novato, CA 94947 Lee Erickson, Stauffer Management Company, P.O. Box 18890, Golden, CO 80402 Michael Bellotti, Olin Corporation, 3855 North Ocoee Street, Suite 200, Cleveland, TN 37312 Curt Richards, Olin Corporation, 3855 North Ocoee Street, Suite 200, Cleveland, TN 37312 Paul Sundberg, Montrose Chemical Corporation, 3846 Estate Drive, Stockton, California 95209 Joe Kelly, Montrose Chemical Corporation of CA, 600 Ericksen Avenue NE, Suite 380, Bainbridge Island, WA 98110

Teri Copeland, 5737 Kanan Road #182, Agoura Hills CA 91301

Paul Hackenberry, Hackenberry Associates, LLC, 550 W. Plumb Lane B425, Reno, NV 89509

Kelly Black, Neptune and Company, Inc., 8550 West 14th Street, Suite 100, Lakewood, CO 80215

## Attachment A

- 1. General comment, NDEP has noted numerous typographic errors and cross-referencing errors in the text, tables, and figures of this document but will not list these in this response letter. TRX should review documents in greater detail and revise as necessary prior to submittal.
- 2. General comment, some site-wide changes to the sampling plan have been requested under separate cover. Please refer to separate letter dated July 21, 2008.
- 3. General comment, NDEP noted numerous errors in the Medium Specific Screening Levels (MSSLs), Maximum Contaminant Levels (MCLs), etc. listed in the tables of the main text and Appendix A LOU packages and notes the following (TRX should note that the following is not an exhaustive list):
  - a. TRX should review these values in greater detail and revise as necessary prior to the submittal of future documents.
  - b. The non-cancer endpoint MSSL for arsenic is used instead of the cancer endpoint MSSL.
  - c. TRX did not include the MSSL for titanium.
  - d. TRX did not include the MSSL for thallium.
  - e. TRX should use the values listed for the outdoor worker as these are more stringent. Indoor workers will be addressed using the indoor air pathway.
  - f. TRX should list the more stringent of the cancer vs. non-cancer endpoint MSSLs for each contaminant.
- 4. Section 1.0, page 1-2, it is the NDEP's expectation that TRX will meet with the NDEP to discuss the format of the final Phase B Source Area Investigation Report prior to submittal.
- 5. Section 1.1, page 1-3, 3<sup>rd</sup> paragraph, it is the NDEP's expectation that TRX will meet with the NDEP to discuss data usability prior to the submittal of the final Phase B Source Area Investigation Report.
- 6. Section 1.2, page 1-5, TRX lists the Phase A Investigation Results Report as a document of record. TRX should note that the NDEP accepted the submittal of the Phase B SAPs in lieu of TRX submitting a revised Phase A Report. Additionally, while the validated data presented in the Phase A Report was approved by the NDEP, the procedures/methodologies, recommendations, and conclusions in the Phase A Report were neither approved nor rejected by the NDEP.
- 7. Section 2.2.1, page 2-3, 2<sup>nd</sup> paragraph, TRX states that "If current operations do not exacerbate contamination, future closure may not require sampling for the full SRC list (i.e., if a chemical is not detected in the Phase B Source Area Investigation and is not a part of the process associated with the LOU, it may not be analyzed for at the time of closure)." The NDEP does not necessarily concur with this statement at this time and will review this issue at the time of closure.
- 8. Section 2.2.1, page 2-4, 4<sup>th</sup> paragraph, TRX should include discussion on groundwater as a source of continuing soil contamination.
- Section 2.3.2, page 2-6, 1<sup>st</sup> bullet, NDEP has added PCBs and TPH DRO/ORO analysis to any borings located in the vicinity of Western Area Power Administration (WAPA) property. Please see comments below.
- 10. Tables, the NDEP has the following comments:
  - a. Table 2, the NDEP has the following comments

- i. TRX should submit errata pages for Table 2 that addresses the following comments for Table 2 and the comments for Appendix A as appropriate.
- ii. The analysis indicated for PCBs on the column header is incorrect. This should include Aroclor and congener analysis.
- iii. TRX should indicate in a footnote that platinum will be added to the analyses for boring SA132 and SA34.
- iv. The following borings should include the corresponding analyses:
  - 1. SVOCs: SA141, SA142, SA171, SA140, SA36, SA174, SA132, SA112, and SA34
  - 2. Cyanide:
    - a. TRX should note that NDEP requested that "all borings located in Area 4 west of column 6 (not inclusive) and all borings associated with LOU 60 downstream of the LOU 63 conveyance piping junction" in the June 18, 2008 response letter to the Phase B Area IV SAP.
    - b. NDEP acknowledges that TRX will analyze all samples collected in Area I for total cyanide.
  - 3. PCBs: SA177, RSAR8, SA34 and RSAS8
  - 4. TPH DRO/ORO: SA157, SA178, SA141, SA142, SA171, SA140, SA36, SA174, and SA177
  - 5. TPH GRO: SA36
  - 6. 1,4-dioxane: SA177, RSAR8, SA34
- b. Table 3, the NDEP has the following comments:
  - i. General comment, TRX should note that the NDEP does not necessarily agree that the selected wells are representative of the up-gradient, down-gradient and/or crossgradient conditions as stated in the Appendix A LOU packets. The NDEP does note that the overall coverage of the groundwater sampling plan appears adequate.
  - ii. TRX should add analysis for 1,4-dioxane for all wells associated with this area.
  - iii. As noted previously, for wells with unknown lithology TRX should note that the use of this data will be limited. NDEP requests that TRX either determine the lithology (e.g.: through a down-hole camera) or re-drill the wells.
- c. Table 4, LOU 20 Appendix A package and Table 4 are not consistent in regards to Goal of Closure.
- d. Table 6, TRX should note that this table was not reviewed in detail by the NDEP as it is NDEP's assumption that this table is consistent with the approved QAPP.
- e. Table 7, TRX should note that this table was not reviewed in detail by the NDEP as it is NDEP's assumption that this table is consistent with the approved QAPP.
- 11. Figure 4, NDEP noted that the wells used in this figure are not the same as those listed for the Phase B site-wide groundwater investigation. TRX should at a minimum use these wells in the creation of this figure.
- 12. Plate A, update this plate to include the following comments to the Appendix A LOU packets that affect boring placement.
- 13. Appendix A, the NDEP has the following comments:

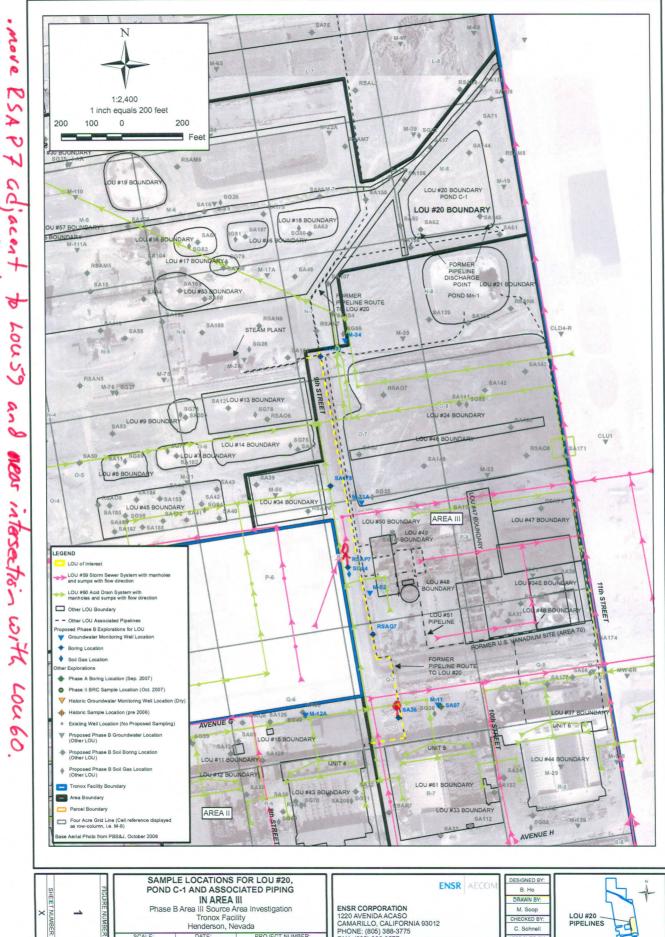
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- a. LOU 20 (Pond C-1 and Associated Piping in Area III), the NDEP has the following comments (please see the corresponding attached figure as necessary):
  - i. RSAP7 should be moved north adjacent to LOU 59 just past where LOU 59 crosses LOU 60.

- ii. SA36 should be moved north adjacent to LOU 20 piping and over LOU 60.
- iii. Significant inconsistencies have been noted between Table A, the text of the areaspecific CSM, and the main body of the report. For example, based upon the text, all judgmental samples should include TPH analysis. Table A does not show this, please note that this analysis should be added. Table A includes dioxin/furan analysis, however, this is not described in the text. No change to the table is necessary. SVOC analysis proposed on the Table is also not consistent with the text. SVOC analysis should be added to location SA36. These comments are compiled into the NDEP's comments listed above for Table 2, however, they are included herein as an example.
- iv. LOU 24 and 46 (Mn Tailings Area and Old Main Cooling Tower), the NDEP has the following comments (please see the corresponding attached figure as necessary):
- v. TRX should clarify if the starting point (i.e. surface) for sample collection located over the Mn tailings pile is at the soil-tailings interface.
- vi. SA139 should be moved to a point just north of the Mn tailings pile approximately halfway between wells M-35 and CLD4-R. Additionally, a groundwater monitoring well should be installed at this location.
- vii. An additional boring should be located within the surface flow area indicated on Figure A of the LOU.
- b. LOU 34E, 47, 48, 49, 50, 51, and Area 70 (Operational Manganese Leach Plant and Former US Vanadium Site)
  - i. General comment, TRX should note that the tailings status as non-hazardous waste is not pertinent to Site characterization. This is a comment that applies to other statements within the subject document and will not be repeated for each instance.
  - ii. TRX notes that the ore is  $\frac{1}{2}$ " to 1" in diameter. It is likely that there is a percentage of "fines" within the ore and this should be acknowledged.
  - iii. RSAO8 should be converted to an additional groundwater monitoring well.
  - iv. An additional boring should be located in the northern portion of LOU 47 (Historical) over LOU 60.
- c. LOU 44 and 37 (Unit 6 Basement and Former Satellite Accumulation Point, Unit 6 Maintenance Shop)
  - i. TRX should note that characterization under the Unit buildings is not precluded due to continued operations. Angled or directional borings may be used to characterize under the active portions of the buildings.
  - ii. TRX should provide additional information of the cathode wash and storage areas adjacent to LOU 44.
  - iii. TRX should add the following analyses to the borings associated with this LOU: PCBs and 1,4-dioxane.
  - iv. M-122, M-145, and M-139: samples should be collected during boring advancement.
- d. LOU 59 (Storm Drain System Segment), the NDEP has the following comments (please see the corresponding attached figure as necessary):
  - i. General comment, the borings associated with this LOU should be located immediately adjacent to the storm drain system whenever possible.
  - ii. The table in this Section of the Appendix does not address any of the off-Site sources that were disposed of in the Beta Ditch. This is a global comment which applies to all of the applicable area-specific CSMs that are in Appendix A. NDEP considered this

- iii. TRX should add the following analyses to the borings associated with this LOU because of the potential Stauffer discharges into this LOU: organophosphate pesticides (OPP) and organic acids. TRX should note that this should apply to all samples within this LOU (including in other Areas, if possible).
- iv. TRX should add PCB analysis to any boring located near the WAPA property.
- v. An additional boring should be located on the slim portion of the Site near the junction with the southernmost leg of LOU 59 from TIMIET.
- vi. An additional boring should be located adjacent to LOU 47 to the east near the junction with the LOU leg within the operation Mn leach plant.
- vii. An additional boring should be located adjacent to LOU 59 just north of ChemStar property and south of LOU 34W.
- e. LOU 60 (Former Acid Drain System), the NDEP has the following comments (please see the corresponding attached figure as necessary):
  - i. General comment, the borings associated with this LOU should be located directly above the former Acid Drain system whenever possible.
  - ii. General comment, for borings located above LOU 60, TRX should log the condition of the pipe, if possible, and collect a sample directly underneath the pipe. This sample may be substituted for the next proposed 10 foot interval in the Phase B SAPs, Table 2 (e.g. if the bottom of the Former Acid Drain System pipe was located at 8 fbgs, then the sample should be collected directly underneath the pipe and not at 10 fbgs). Please note that this comment additionally applies to the Phase B Area I and IV SAPs.
  - TRX should add the following analyses to the borings associated with this LOU because of the potential Stauffer discharges into this LOU: OPP and organic acids.
     TRX should note that this should apply to all samples, all areas (if possible) for this LOU.
  - iv. SA141 should be moved west to the area where two legs of LOU 60 run parallel north of the East Diversion Ditch (west of the Mn tailings pile).
  - v. SA34 should be moved north adjacent to LOU 59 and over LOU 60.

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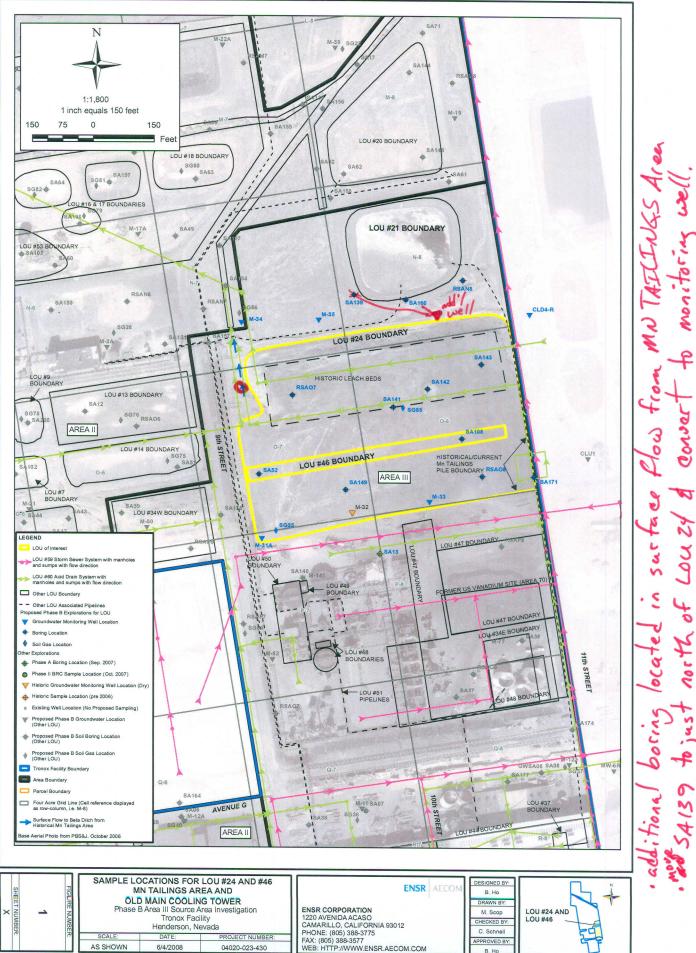
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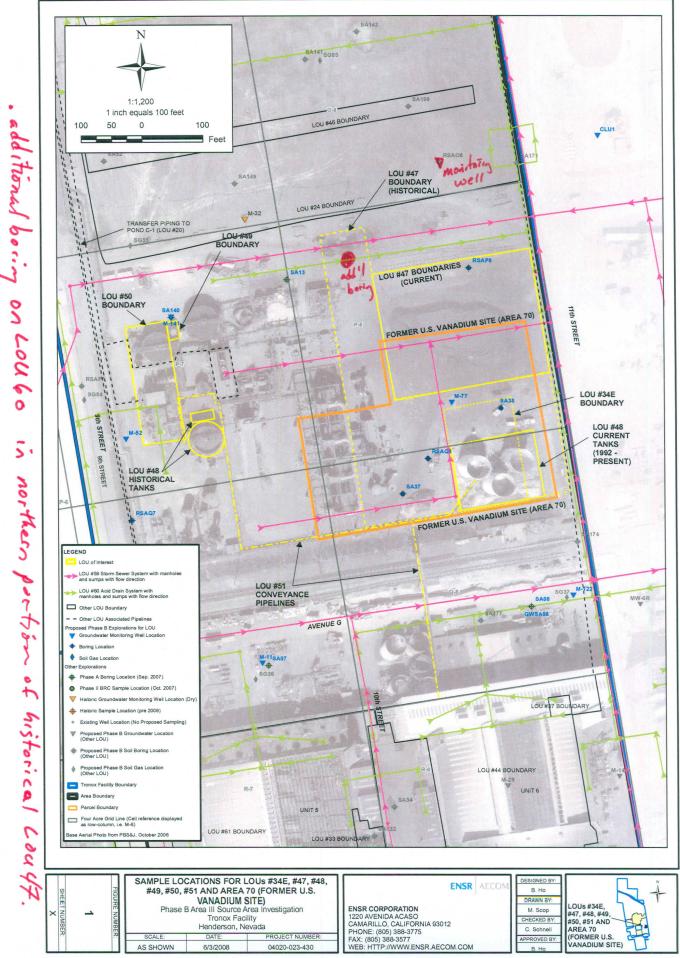
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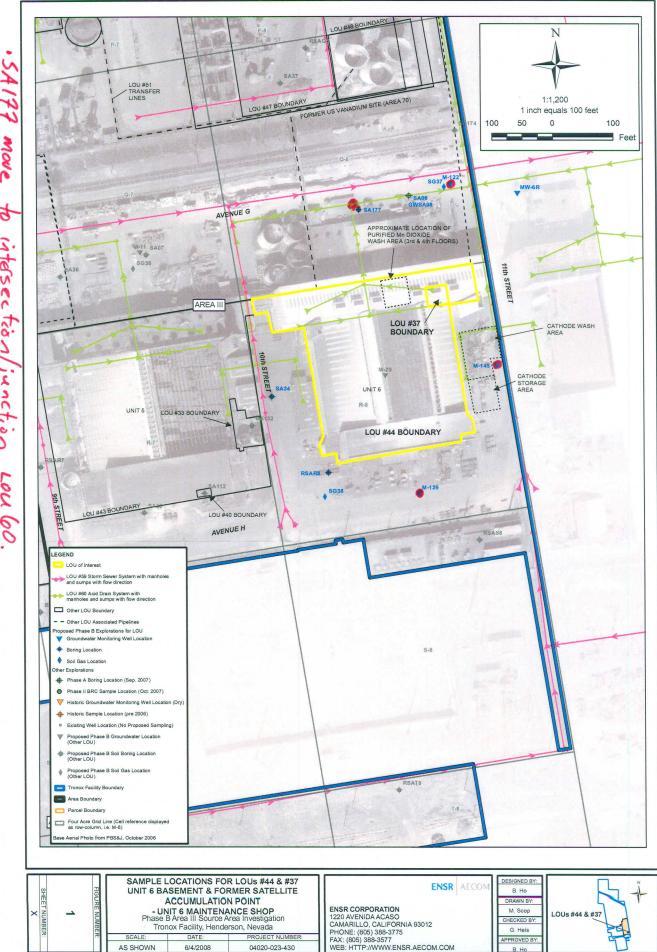
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move 5436 north to be over Lou 60.



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Add borings (collect samples for M-122, M-145 & M-139

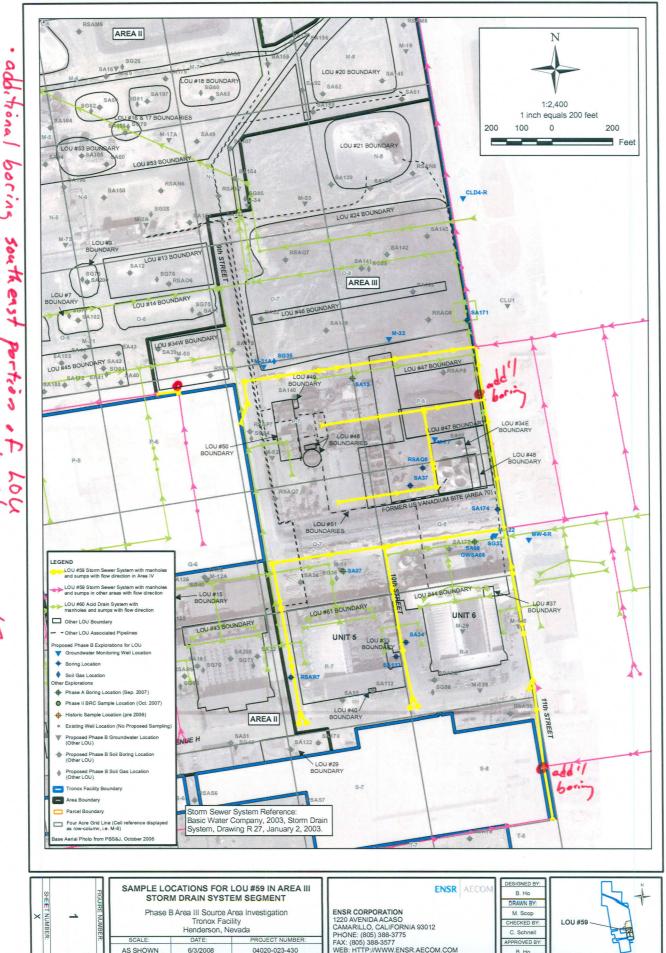
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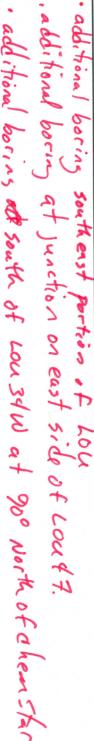
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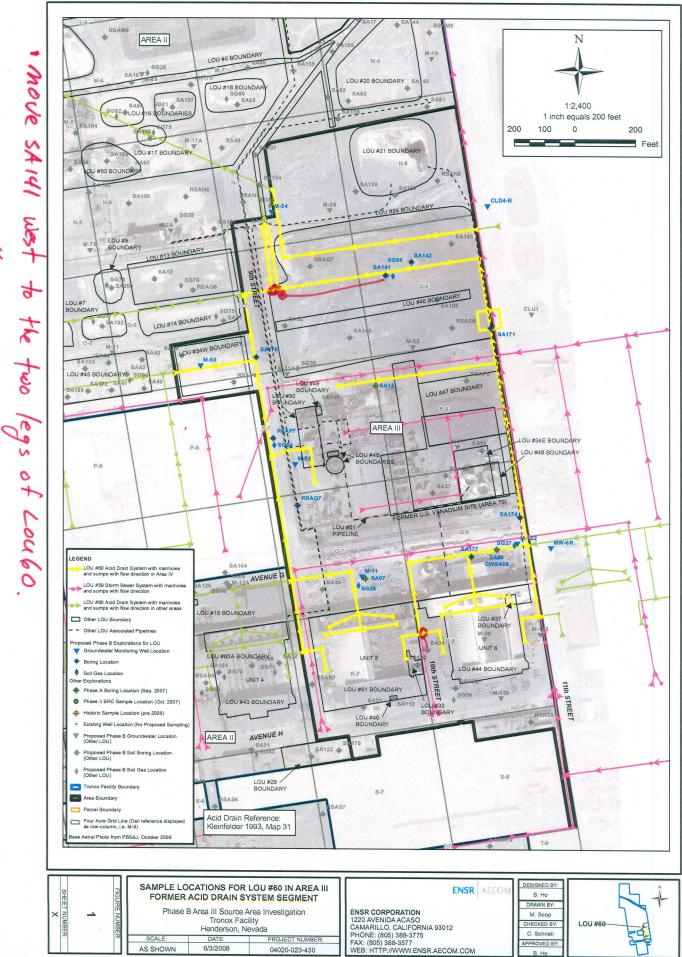
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move 5434 with over Lou 60.

July 21, 2008

Susan Crowley Tronox LLC PO Box 55 Henderson, Nevada 89009

### Re: Tronox LLC (TRX) NDEP Facility ID #H-000539 Nevada Division of Environmental Protection (NDEP) Response to:

Phase B Source Area Investigation Work Plan, Area I (Northern LOUs), Tronox LLC Facility, Henderson, Nevada Dated April 3, 2008

Phase B Source Area Investigation Work Plan Area IV (Western and Southern LOUs). Tronox LLC Facility, Henderson, Nevada Dated May 16, 2008

Phase B Source Area Investigation Work Plan Area II (Central LOUs). Tronox LLC Facility, Henderson, Nevada Dated June 27, 2008

Phase B Source Area Investigation Work Plan Area III (Eastern LOUs). Tronox LLC Facility, Henderson, Nevada

Dated June 27, 2008

Dear Ms. Crowley,

The NDEP has completed review of four of four Phase B Source Area Sampling Analysis Plans (SAPs). The following are general comments regarding the soil sampling analyses.

- NDEP has added PCBs and TPH DRO/ORO analysis to any borings located in the vicinity of Western Area Power Administration (WAPA) property. For the Phase B SAPs these borings include: SA177, RSAR8, SA34, RSAS8, SA208, RSAS5, SA31, RSAS3, RSAS4, RSAS5, RSAS6, RSAS7, RSAT6, RSAT7, and RSAT8. Please note that PCBs will be sampled at other locations as indicated in the SAPs and the subsequent NDEP response letters to each of the SAPs.
- NDEP has added organophosphorus pesticides (OPP) and organic acid analyses to all borings associated with the sections of LOU 5, LOU 59, and LOU 60 downstream of the western property boundary. For the Phase B SAPs these borings include: SASA131, SA66, SA67,

SA128, SA70, SA104, SA129, SA175, SA86, SA92, SA155, SA71, SA165, SA49, SA154, SA107, RSAN7, SA158, RSAN4, SA55, SA182, SA183, SA176, SA50, SA198, SA64, SA189, RSAL4, SA82, SA134, RSAJ3, SA 192SA126, RSAQ6, RSAP7, SA178, all additional borings for LOU 60 in Area III, all additional borings on LOU 60 for Area VI.

• NDEP has added cyanide to the all of the borings north of Row V and west of Column 6 (not inclusive) of Plate A. Please note that other locations will be sampled for cyanide as indicated in the SAPs and the subsequent NDEP response letters.

TRX should additionally submit four copies of a revised Plate A that addresses the NDEP's comments from the Area I, II, III, and IV response letters. These revised plates will be placed in each of the Phase B Source Area SAPs. Please contact the undersigned with any questions at sharbour@ndep.nv.gov or (702) 486-2850 extension 240.

Sincerely,

Shannon Harbour, P.E. Staff Engineer III Bureau of Corrective Actions Special Projects Branch NDEP-Las Vegas Office

### SH:bar:sh

Jim Najima, NDEP, BCA, Carson City CC: Brian Rakvica, NDEP, BCA, Las Vegas Keith Bailey, Environmental Answers LLC, 3229 Persimmon Creek Drive, Edmond, OK 73013 Sally Bilodeau, ENSR, 1220 Avenida Acaso, Camarillo, CA 93012-8727 Barry Conaty, Akin, Gump, Strauss, Hauer & Feld, L.L.P., 1333 New Hampshire Avenue, N.W., Washington, D.C. 20036 Brenda Pohlmann, City of Henderson, PO Box 95050, Henderson, NV 89009 Mitch Kaplan, U.S. Environmental Protection Agency, Region 9, mail code: WST-5, 75 Hawthorne Street, San Francisco, CA 94105-3901 Ebrahim Juma, DAQEM, PO Box 551741, Las Vegas, NV, 89155-1741 Ranajit Sahu, BRC, 311 North Story Place, Alhambra, CA 91801 Rick Kellogg, BRC, 875 West Warm Springs, Henderson, NV 89011 Mark Paris, Landwell, 875 West Warm Springs, Henderson, NV 89011 Craig Wilkinson, TIMET, PO Box 2128, Henderson, Nevada, 89009-7003 Kirk Stowers, Broadbent & Associates, 8 West Pacific Avenue, Henderson, Nevada 89015 George Crouse, Syngenta Crop Protection, Inc., 410 Swing Road, Greensboro, NC 27409 Nick Pogoncheff, PES Environmental, 1682 Novato Blvd., Suite100, Novato, CA 94947 Lee Erickson, Stauffer Management Company, P.O. Box 18890, Golden, CO 80402 Michael Bellotti, Olin Corporation, 3855 North Ocoee Street, Suite 200, Cleveland, TN 37312 Curt Richards, Olin Corporation, 3855 North Ocoee Street, Suite 200, Cleveland, TN 37312 Paul Sundberg, Montrose Chemical Corporation, 3846 Estate Drive, Stockton, California 95209 Joe Kelly, Montrose Chemical Corporation of CA, 600 Ericksen Avenue NE, Suite 380, Bainbridge Island, WA 98110 Teri Copeland, 5737 Kanan Road #182, Agoura Hills CA 91301 Paul Hackenberry, Hackenberry Associates, LLC, 550 W. Plumb Lane B425, Reno, NV 89509 Kelly Black, Neptune and Company, Inc., 8550 West 14th Street, Suite 100, Lakewood, CO 80215

## **Meeting Minutes**

| Project:       | Tronox (TRX)   |
|----------------|--|
| Location:      | Conference Call                                      |
| Time and Date: | 9:00 AM Monday, August 11, 2008                      |
| In Attendance: | NDEP – Brian Rakvica, Shannon Harbour                |
|                | Tronox –Susan Crowley                                |
|                | Environmental Answers – Keith Bailey (for TRX)       |
|                | ENSR –Brian Ho, Carmen Schnell, Mike Flack (for TRX) |

## CC: Jim Najima

- 1. The meeting was held to discuss TRX's response to comments (RTCs) to three NDEP letters dated July 21, 2008 1) Re: Phase B SAPs Areas I through IV general soil sampling comments 2) Re: Phase B Source Area Investigation Work Plan (SAP) Area II, and 3) Re: Phase B SAP Area III.
- 2. The following are TRX's RTC to NDEP's July 21, 2008 letter Re: Phase B SAPs Areas I through IV general soil sampling comments:
  - a. RTC 1<sup>st</sup> bullet, TRX acknowledges this comment and will revise Table 2 and Plate A in the Revised Phase B SAPs submittal accordingly.
  - b. RTC  $2^{nd}$  bullet, TRX and NDEP had the following discussion:
    - i. TRX noted that borings SA183 and SA67 in Area I have already been drilled and sampled prior to the receipt of NDEP's comments for additional analyses (for OPPs and organic acids). NDEP acknowledged this and stated that TRX did not have to re-drill and re-sample these borings for the requested analytes.
    - TRX inquired whether the four organic acids (4-Chlorobenzene sulfonic acid; Benzenesulfonic acid; O,O-Diethylphosphorodithioic acid; and O,O-Dimethylphosphorodithioic acid) that are listed in BRC's QAPP were sufficient for the TRX site. NDEP indicated that TRX should also test for phthalic acid in addition to the four analytes. TRX stated concern over the costs of the additionally requested analytes (OPP and organic acid analyses).
    - iii. NDEP inquired as to how this data gap could be addressed if sampling is not conducted.
    - iv. NDEP stated that the organic acids have been detected in the groundwater near TRX's western property boundary.
    - v. NDEP stated that these chemicals are relatively non-toxic based on toxicological data; however, the concentrations observed to the west of TRX were of concern.
    - vi. NDEP stated that TRX could present an argument against sampling for these compounds based on the relative toxicological criteria, expected concentration based on Stauffer/Montrose data and Conceptual Site Model.
    - vii. TRX stated that will look into this topic and may propose alternative sampling, such as sampling for an indicator compound, etc., with the Revised Phase B SAP submittal.
- 3. The following are TRX's RTC to NDEP's July 21, 2008 letter Re: Phase B SAP Area II:
  - a. RTC 1, TRX acknowledges this comment.
  - b. RTC 2, TRX acknowledges this comment.
  - c. RTC 3.a-f, TRX acknowledges these comments and will address in the Phase B Report.

FINAL

- d. RTC 4, TRX stated that this comment was addressed in the text of the Phase B SAP Area II. NDEP acknowledged.
- e. RTC 5, TRX stated that this comment was addressed in the text of the Phase B SAP Area II. NDEP acknowledged.
- f. RTC 6, TRX acknowledges this comment.
- g. RTC 7, TRX acknowledges this comment.
- h. RTC 8, TRX acknowledges this comment and will address in the Phase B Report.
- i. RTC 9, a-c, TRX acknowledges these comments and will modify the SAP as requested in subsequent NDEP comments.
- j. RTC 10, TRX acknowledges this comment.
- k. RTC 11, TRX stated that geotechnical samples of the Muddy Creek formation will be collected.
- 1. RTC 12.a.i-iii, TRX acknowledges these comments and will address in the Phase B Report.
- m. RTC 12.b.i, TRX acknowledges this comment.
- n. RTC 12.b.ii-iii, TRX acknowledges these comments and will address in the Revised Phase B SAP submittal.
- o. RTC 12.b.iv, TRX acknowledges this comment.
- p. RTC 12.b.v.1, TRX acknowledges this comment and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
- q. RTC 12.b.v.2.a-b, TRX acknowledges these comments and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
- r. RTC 12.b.v.3-7, TRX acknowledges these comments and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
- s. RTC 12.c.i, TRX acknowledges this comment.
- t. RTC 12.c.ii, TRX stated that 1,4-dioxane is included in the SVOC analyses.
- u. RTC 12.c.iii, TRX stated that they will continue to look for the well log for M-2A. If the well log cannot be found, TRX stated that they would likely extrapolate geologic formation data from nearby M-2 and use down-well camera technology to determine well completion information.
- v. RTC 12.d-e, TRX acknowledges this comment.
- w. RTC 13, TRX stated that the groundwater elevation map (Figure 4) was provided for general elevation and gradient purposes. TRX will be providing a comprehensive groundwater elevation map in the Annual Monitoring Report that is scheduled to be submitted to the NDEP on August 28, 2008 that should address this comment.
- x. RTC 14, TRX acknowledges this comment.
- y. RTC 15.a.i, TRX stated that they will include text of the Phase B Report that discusses the depth of the beta ditch. Also, TRX stated that the ground surface elevation for each boring will be provided in the Phase B Report.
- z. RTC 15.a.ii, TRX acknowledges this comment and will address in the Revised Phase B SAP submittal.
- aa. RTC 15.a.iii, TRX acknowledges this comment and clarified that both Aroclor and congener analyses were to be used.
- bb. RTC 15.a.iv-vi, TRX acknowledges these comments and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
- cc. RTC 15.a.vii, SA165 will be moved closer to the LOU 59 outfall.

- dd. RTC 15.a.viii, TRX will not add an additional boring as requested, but will accomplish the goal of the comment (see comment 3.cc above); also SA128 will be moved to the confluence of the Western Diversion Ditch and the main Beta Ditch channel.
- ee. RTC 15.b.i, TRX acknowledges this comment and will address in the Phase B Report.
- ff. RTC 15.b.ii-iii, TRX acknowledges these comments.
- gg. RTC 15.b.iv-v, TRX acknowledges these comments and will address in the Revised Phase B SAP submittal.
- hh. RTC 15.c.i, TRX acknowledges this comment and stated that Pond AP-5 is tentatively scheduled for decommissioning in spring 2009. TRX is considering converting AP-6 to an active pond. TRX will be contacting NDEP-BWPC about AP-6, if pond needed.
- ii. RTC 15.c.ii, TRX acknowledges this comment and will address in the Phase B Report.
- jj. RTC 15.c.iii, TRX acknowledges this comment and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
- kk. RTC 15.d.i, TRX stated that the manganese dioxide production process utilizes sulfuric acid rather than chloride and should not generate PCBs. TRX will address this comment more fully in the Revised Phase B SAP submittal.
- 11. RTC 15.d.ii, TRX indicated that the cathodes are constructed of copper.
- mm. RTC 15.d.iii, TRX acknowledges this comment and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
- nn. RTC 15.e.i, TRX will relocate SA122 to the gravel section between the concrete pads.
- oo. RTC 15.e.ii, TRX acknowledges this comment and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
- pp. RTC 15.f.i-ii, NDEP concurred with TRX's rationale to not move SA173 and SA179 (as requested in NDEP's comments) because the concrete pad for this LOU (LOU 56 – Old D-1 Washdown Building) is still in place. TRX indicated that these borings are located in likely drainage areas from the concrete pad.
- qq. RTC 15.f.iii, TRX acknowledges this comment and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
- rr. RTC 15.g, TRX acknowledges this comment and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly. TRX indicated that there are numerous above-ground pipelines in the vicinity of this area (Pond AP-5) and that they would try to accommodate NDEP by moving the boring location without damaging the pipelines, but that options are limited.
- ss. RTC 15.h, TRX acknowledges this comment and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly. TRX noted that 1,4-dioxane is included in the SVOC analysis.
- tt. RTC 15.i.i, TRX acknowledges this comment and will address in the Phase B Report.
- uu. RTC 15.i.ii-iii, TRX acknowledges these comments and will address in the Revised Phase B SAP submittal. As with comment kk above, the electrolytic process involves sulfate chemistry and should not generate PCBs.
- vv. RTC 15.i.iv, TRX acknowledges this comment and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
- ww. RTC 15.i.v, TRX will not move SA124 as this boring is currently proposed to be located in the drainage for the concrete pad of LOU 11.
- xx. RTC 15.i.vi, TRX will not move SA125 as it is not feasible because of overhead power transmission lines.

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- yy. RTC 15.j-k, TRX acknowledges these comments and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
- zz. RTC 15.1.i, TRX acknowledges this comment.
- aaa. RTC 15.1.ii-iii, TRX acknowledges these comments and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
- bbb. RTC 15.I.iv-v, TRX acknowledges these comments and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly. TRX indicated that the additional borings requested by NDEP along Avenue F (north of ChemStar) to evaluate segments of the storm sewer and acid drain systems may not be on TRX property this area along Avenue F may belong to ChemStar. TRX will search property records and county assessor parcel maps to ascertain ownership of this land.
- ccc. RTC 15.1.vi, TRX acknowledges this comment and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
- ddd. RTC 15.m.i-ii, TRX acknowledges these comments.
- 4. The following are TRX's RTC to NDEP's July 21, 2008 letter Re: Phase B SAP Area III:
  - a. RTC 1, TRX acknowledges this comment.
  - b. RTC 2, TRX acknowledges this comment.
  - c. RTC 3.a-f, TRX acknowledges these comments and will address in the Phase B Report.
  - d. RTC 4, TRX stated that this comment was addressed in the text of the Phase B SAP Area II. NDEP acknowledged.
  - e. RTC 5, TRX stated that this comment was addressed in the text of the Phase B SAP Area II. NDEP acknowledged.
  - f. RTC 6, TRX acknowledges this comment.
  - g. RTC 7, TRX acknowledges this comment.
  - h. RTC 8, TRX acknowledges this comment and will address in the Phase B Report.
  - i. RTC 9, TRX acknowledges this comment and will address in the Revised Phase B SAP submittal.
  - j. RTC 10.a.i, TRX acknowledges this comment.
  - k. RTC 10.a.ii-iii, TRX acknowledges these comments and will address in the Revised Phase B SAP submittal.
  - 1. RTC 10.a.iv.1, TRX acknowledges this comment and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
  - m. RTC 10.a.iv.2.a-b, TRX acknowledges these comments and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
  - n. RTC 10.a.iv.3-6, TRX acknowledges these comments and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
  - o. RTC 10.b.i, TRX acknowledges this comment.
  - p. RTC 10.b.ii, TRX stated that 1,4-dioxane is included in the SVOC analyses.
  - q. RTC 10.b.iii, TRX stated that they will continue to look for the well logs. If the well logs cannot be found, TRX stated that they would likely extrapolate geologic formation data from nearby wells and use down-well camera technology to determine well completion information.
  - r. RTC 10.c, TRX acknowledges this comment and will address in the Revised Phase B SAP submittal.
  - s. RTC 10.d-e, TRX acknowledges these comments.

- t. RTC 11, TRX stated that the groundwater elevation map (Figure 4) was provided for general elevation and gradient purposes. TRX will be providing a comprehensive groundwater elevation map in the Annual Monitoring Report that is scheduled to be submitted to the NDEP on August 28, 2008 that should address this comment.
- u. RTC 12, TRX acknowledges this comment.
- v. RTC 13a.i-ii, TRX acknowledges these comments and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
- w. RTC 13.a.iii, TRX acknowledges this comment.
- x. RTC 13.a.iv-vii, NDEP did not label RTC 13.a.v-vii properly as they are sub-comments to RTC 13.a.iv. However, TRX acknowledges these comments and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
- y. RTC 13.b.i, TRX acknowledges this comment.
- z. RTC 13.b.ii, TRX acknowledges that there may be fines in the ore introduced during transportation, etc. but that the percent fines has not been measured.
- aa. RTC 13.b.iii, TRX acknowledges this comment and will revise Table 3 and Plate A in the Revised Phase B SAP submittal accordingly.
- bb. RTC 13.b.iv, NDEP indicated that the rationale for adding a soil boring at this location was to gather data for airborne emissions (wind-blown dust). NDEP concurred with TRX to collect a surface soil sample at the NDEP-requested location instead of drilling a soil boring. TRX will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
- cc. RTC 13.c.i, TRX acknowledges this comment but will not characterize this area at this time because of potential risk to underground utilities and current operations.
- dd. RTC 13.c.ii, TRX indicated that the cathode wash utilizes a hexametaphosphate-based cleaning agent. TRX acknowledges they will provide additional information including description of the waste material (e.g., sludge), how the material is characterized for waste disposal, and where the waste material is disposed.
- ee. RTC 13.c.iii TRX acknowledges this comment and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly. TRX noted that 1,4-dioxane is included in analyte list for SVOCs.
- ff. RTC 13.c.iv, TRX had the following responses to the NDEP request to collect soil samples during the boring advancement for the following proposed wells:
  - i. Well M-122: TRX will not collect soil samples during the advancement of M-122 since the monitoring well will be located adjacent to Phase A soil boring SA08, from which soil samples have already been collected and analyzed.
  - ii. Wells M-145 and M-139: TRX agreed to collect soil samples during the advancement of M-145 and M-139. TRX will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
- gg. RTC 13.d.i-ii, TRX acknowledges these comments.
- hh. RTC 13.d.iii, TRX acknowledges this comment and will address in the Revised Phase B SAP submittal.
- ii. RTC 13.d.iv-v, TRX acknowledges these comments and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
- jj. RTC 13.d.vi-vii, TRX acknowledges these comments and will address in the Revised Phase B SAP submittal.
- kk. RTC 13.e.i-ii, TRX acknowledges these comments.

FINAL

- 11. RTC 13.e.iii-iv, TRX acknowledges these comments and will address in the Revised Phase B SAP submittal.
- mm. RTC 13.e.v, TRX acknowledges this comment and will revise Table 2 and Plate A in the Revised Phase B SAP submittal accordingly.
- 5. TRX stated that the LOU packages will be revised as necessary and will be appended to the Phase B Report in an electronic format.
- 6. TRX stated that the Revised Phase B SAP errata pages will be submitted by September 15, 2008.
- 7. TRX stated that drilling will continue to be suspended until after NDEP approval of the errata. TRX noted that upon receipt of NDEP's approval that drilling would be scheduled, which may result in further delay depending upon the drillers schedule.

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#### Meeting Minutes

| Tronox (TRX)   |
|--|
| Conference Call  |
| 11:00 AM, Monday, September 08, 2008   |
| NDEP – Brian Rakvica, Shannon Harbour  |
| Tronox – Susan Crowley   |
| Environmental Answers – Keith Bailey (for TRX)<br>ENSR –Brian Ho, Mike Flack (for TRX) |
|  |

CC: Jim Najima, Paul Hackenberry, Teri Copeland, Kelly Black

- 1. The meeting was held to discuss changes to TRX's Response to Comments for the Phase B sampling. TRX stated that the current financial situation of TRX did not allow for the additional sampling requested by NDEP and agreed to by TRX. TRX wanted to discuss options to reduce costs of the Phase B Investigation to the previously budgeted \$6.2 million.
- 2. The following were the topics TRX brought up as potential cost savings and the subsequent discussions.
  - a. PCB Analysis (Congener Method 1668)
    - i. TRX stated that the cost for the PCB congener analysis is approximately \$970 per sample.
    - ii. TRX stated that the Phase A Source Area Investigation (Phase A Investigation) did not detect PCBs.
    - iii. NDEP stated that the Phase A Investigation only analyzed for Aroclor and not congeners. NDEP stated that these two methods do not exhibit comparable results.
    - iv. NDEP stated that TRX should base any justification for sample elimination on the CSM.
      - 1) For example, PCB sampling on the west side of the facility was driven by the presence of a PCB source to the west; thereby, potentially providing justification for the elimination of PCB analysis to the east.
      - 2) Additionally, TRX could explain how their electrolytic process does not generate PCBs; thereby, potentially justifying the elimination of PCB analysis for the samples associated with that process.
    - v. TRX suggested that only 10% of all of the PCB analyses to the western portion of the facility by Method 1668 (Congener) and that 100% would be Method 8082 (Aroclor).
    - vi. TRX also suggested just sampling the capillary fringe based on a transport justification.
    - vii. NDEP stated that TRX needed to provide justification using a CSM perspective (process knowledge, pathway (capillary fringe, Beta Ditch, etc.)).
  - b. Organic Acid Analysis
    - i. TRX stated that the cost for the organic analysis was approximately \$400 to \$450 per sample.
    - ii. TRX stated that organic acids were not on the SRC list for the TRX facility.
    - iii. NDEP stated that the elimination of organic acids could be handled similarly as the elimination of the PCB congener analysis.
  - c. Organochorine Pesticides (OCPs) / Organophosphorus Pesticides (OPP)

- i. TRX stated that they will use the same logic as the PCBs on the western portion of the TRX facility to potentially eliminate these analyses.
- ii. TRX stated that they understand that the Hardesty issue (what chemicals were produced at this site) will need to be addressed.
- iii. TRX would like to eliminate OCP and OPP analyses from Areas II and III.
- iv. NDEP suggested limiting depth based on pathway (surface for wind-blown deposition and capillary fringe for groundwater).
- d. Geoprobe
  - i. TRX stated that they could realize significant savings if Geoprobe technology was used to collect the 0 and 10 foot samples.
  - ii. TRX will check into whether there is an existing Standard Operating Procedure (SOP) for Geoprobe sampling; otherwise, TRX will develop and submit a SOP. NDEP stated that BRC and TIMET do not have a Geoprobe SOP.
- e. Data Validation Summary Reports (DVSRs)
  - i. TRX stated as an FYI to NDEP that ENSR will no longer conduct the entire data validation.
  - ii. TRX will switch to LDC for data validation, with ENSR reviewing the information.
  - iii. NDEP noted that the other BMI facilities are using LDC for data validation.
  - iv. TRX will make sure that the EDDs from Colombia Laboratories are compatible with LDC's database.
- f. Reduction of number of samples collected per borehole
  - i. TRX noted that the Phase B SAPs have all proposed sampling from the surface to the capillary fringe in 10 foot increments.
  - ii. TRX suggested that instead of 10 foot increments that sampling at the following depths below ground surface be considered: 0 (surface), 10', 25', 40' or capillary fringe.
  - iii. TRX stated that this would eliminate about 20% of the soil samples.
  - iv. NDEP stated that TRX has the potential risk of additional sampling if elevated concentrations of contaminants are found.
  - v. TRX acknowledged this and stated that they would conduct additional sampling as necessary for risk assessment.
- g. Area III Manganese Production Area Sampling
  - i. TRX stated that in the Phase B SAP for Area III, they stated that if sampling was conducted in the active Mn Production Area that TRX would not have to conduct additional sampling for analytes not associated with the process after production ceased.
  - ii. NDEP stated in their response letter to the Phase B SAP for Area III that additional sampling may be necessary in the future.
  - iii. TRX stated that if re-sampling may be necessary in the future, it may be better to minimize the sampling to be conducted now.
  - iv. TRX suggested that the random samples still be collected but that the judgmental samples should be eliminated.
  - v. TRX stated that surface sampling for asbestos and dioxin would be conducted for assessment of worker safety.
  - vi. TRX stated that all proposed and requested monitoring wells in this area would still be installed to allow site-wide groundwater assessment.

- vii. NDEP stated that quantification of source to groundwater pathway for this area would not be achieved.
- viii. NDEP stated that elimination of samples in this area was a possibility with proper justification since TRX is not currently requesting closure for the active production areas.
- 3. TRX stated that a request for an extension of the submittal date of September 15, 2008 for the Phase B revised text, tables, and plates and response to comments will be submitted to the NDEP. ACTION ITEM.

#### **Meeting Minutes**

| Project:<br>Location: | Tronox (TRX)<br>Conference Call                      |
|-----------------------|--|
| Time and Date:        | 1:30 PM, Wednesday, October 01, 2008                 |
| In Attendance:        | NDEP – Brian Rakvica, Shannon Harbour                |
|                       | Neptune – Kelly Black (for NDEP)                     |
|                       | Hackenberry Assoc. – Paul Hackenberry (for NDEP)     |
|                       | Teri Copeland (for NDEP)                             |
|                       | Tronox – Susan Crowley                               |
|                       | Environmental Answers – Keith Bailey (for TRX)       |
|                       | ENSR –Brian Ho, Carmen Schnell, Mike Flack (for TRX) |
|                       |  |

#### CC: Jim Najima

- 1. The meeting was held to discuss TRX's proposed justification for sampling design optimization for the Phase B Site Investigation including Areas I, II, III, and IV.
- 2. TRX submitted the following for use on this call (TRX stated that updated versions of these items will be included in the Revised Approach to Phase B Site Investigation (Revised Approach):
  - a. Draft Table 2, Soil Sampling and Analytical Plan for Area I
  - b. Figure 1, Soil Boring Locations Sampled for OCPs, OPPs, and Organic Acids (proposed)
  - c. Figure 2, Soil Boring Locations Sampled for PCBs (proposed)
  - d. Figure 3, Proposed Groundwater Sample Locations for OPPs, OCPs and Organic Acids
  - e. Justification section of the Revised Approach document.
- 3. NDEP stated that the submitted figures and tables contained inconsistencies. TRX should review the final document for consistency prior to submittal.
- 4. NDEP stated that the objective of the justification should emphasize optimization of the sampling design for the systematic sampling plan. Financial objectives should be not be emphasized or even mentioned in the justification section in the Revised Approach document.
- Geoprobe<sup>TM</sup> sampling, the following points were discussed for this issue:
   a. TRX stated that the use of Geoprobe<sup>TM</sup> for boring advancement during the Soil Gas Investigation was successful to 5 feet below ground surface (fbgs).
  - b. TRX believes that Geoprobe<sup>TM</sup> advancement for the collection of the 0-0.5 fbgs and the 10 fbgs samples could be achieved more rapidly than by sonic drilling.
    c. TRX will submit a Standard Operating Procedure (SOP) for Geoprobe<sup>TM</sup> advancement
  - and sample collection with the Phase B SAP Errata for NDEP approval.
  - d. TRX stated that sonic drilling will be used for deeper sample collection and for any locations where the Geoprobe<sup>TM</sup> is not able to accomplish the required sampling.
    e. TRX stated that Geoprobe<sup>TM</sup> advancement might be conducted in conjunction with
  - asbestos or other sampling to minimize mobilization.
- 6. Data Validation, TRX will use LDC and ENSR for data validation for future submittals.
- 7. Organic Acids, the following points were discussed for this issue:
  - TRX stated that the modifications requested for analysis of the organic acids are based on a. source location and transport mechanisms.
  - b. TRX stated that organic acids are not a site-related chemical for TRX.

- c. TRX proposed to limit the analysis for organic acids to the western portion of the TRX facility and along the Beta Ditch based on the source.
- d. NDEP stated that TRX should include discussion on the source(s) of the organic acids in the justification section in the Revised Approach document.
- 8. PCBs and Attachment A, the following points were discussed for this issue:
  - a. TRX proposed to perform Arochlor analyses (method 8082) for all soil samples shown on the draft figure submitted for NDEP discussion and referred to NDEP comments that off-site sources of PCBs are from the southwest of the TRX facility as a potential source of PCB congeners. TRX suggested that congener analysis should be limited accordingly.
  - b. NDEP stated that TRX should discuss these sources in the justification section of the Revised Approach document. The discussion should include whether Aroclor and/or congener analysis should be conducted including justification.
  - c. NDEP had previously asked if PCBs are generated in TRX electrolytic processes. TRX responded that it knows of no mechanism for PCB formation in the TRX electrolytic processes. NDEP stated that TRX should use process knowledge, such as temperature, of the chlorate and perchlorate electrolytic process to explain how or if PCB formation is possible.
  - d. NDEP stated that the description of the  $MnO_2$  generation process should be revised so that it is clear that there is no chlorine present for the paraffin wax to come in contact with to enable PCB production.
  - e. NDEP will provide additional guidance on PCB formation to TRX. ACTION ITEM.
  - f. NDEP stated that TRX should discuss PCB source areas in the justification.
  - g. TRX stated that boring SA67 (where the Beta Ditch enters the TRX site), has already been advanced and sampled for both Aroclor and congener analyses.
  - h. TRX inquired whether WAPA was analyzing for both Aroclors and congeners.
  - i. NDEP stated that WAPA was only analyzing for Aroclors; however, TPH is the driver for remediation in that even if the Aroclor concentrations are low, TPH is still greater than the 100 ppm action level.
  - j. TRX stated that the rationale for only analyzing three of ten sample points in the Beta Ditch for both Aroclors and congeners is that TRX is looking to measure the PCBs entering the TRX facility from the west via the Beta Ditch, from the stormwater entering the Beta Ditch from the TRX facility, and leaving the TRX facility via the Beta Ditch.
  - k. NDEP suggested that TRX investigate the hold times for the congener analysis and if feasible, collect samples for the congener analysis. These samples could be held pending the results of the Aroclor analysis. The congener analysis could then be run based on examination of the Aroclor results.
- 9. Pesticides and Attachment B, the following points were discussed for this issue:
  - a. NDEP indicated that the Phase B Source Area Work Plans stated that random samples were to be sampled for broad suite analysis for site-wide comparison, including OCPs. This contradicts TRX's proposal to eliminate analyses in many of the random samples.
  - b. TRX stated that all random samples will be sampled for the broad suite analyses listed in the LOU packages.
  - c. TRX stated that it will revise the pesticide sampling figure and generate one figure for proposed OCP sampling locations and a second figure for OPPs and Organic Acids sampling locations.

FINAL

- d. NDEP inquired on the status of the analytical for the borings that were competed and sampled as indicated on the submitted table.
- e. TRX stated that the analytical results had been received.
- f. NDEP suggested that TRX review the data for additional support for the elimination of sampling locations for pesticides.
- 10. Reduction of number of samples collected between 10 fbgs and the capillary fringe, the following points were discussed for this issue:
  - a. NDEP stated that if the number of sampling depths is limited, TRX should be prepared to make conservative interpolation and assumptions for the leaching model.
  - b. NDEP also stated that if additional information is needed in areas of elevated concentrations, TRX may need to resample the area at other depths. TRX stated that this was understood.
- 11. Limit sampling in Area III production areas, the following points were discussed for this issue:
  - a. TRX stated that the random samples proposed in the Area III production areas will still be collected.
  - b. TRX stated that the Revised Approach document will request that the judgmental samples be removed from the Area III production areas where closure is not currently being requested. TRX stated that these potential source areas will be addressed after production has ceased.
- 12. Conclusion, the NDEP advised that TRX focus on the objective of optimization of the sampling design.
- 13. Attachment B, NDEP stated that TRX should investigate the location of the Acid Drain System relative the Montrose and Stauffer plants in order to support the statements about the Acid Drain location in relation to the former plant locations. NDEP will provide a figure of the locations of these plants and associated piping to TRX. ACTION ITEM.
- 14. Revised Approach Submittal, the following comments were discussed for this topic:
  - a. TRX stated that the Revised Approach document will be submitted to the NDEP on October 13, 2008.
  - b. TRX stated that the Revised Approach document will contain the justification section and a section for each of the four areas proposing modifications to the approved Phase B Source Area Work Plans, which will include the following:
    - i. Color Table with modifications to the sampling plan highlighted.
    - ii. Final Table for field use, will include the requested modifications but will not be annotated.
    - iii. Annotated maps detailing the modifications requested. A map will be generated for the following analytes: PCB, OCP, and OPP/OA.
    - iv. Final maps for field use, will include requested modifications but will not be annotated.
    - v. Justification section
    - vi. Any other requested errata pages.
  - c. NDEP requested that TRX add the justification for any changes to each boring to the Rationale column of the color annotated table. TRX agreed.
  - d. NDEP requested that the annotated maps also designate which wells TRX has requested to have the represented analysis eliminated

- 15. TRX indicated that drilling has not yet been scheduled pending approval of the work plan revisions.
- 16. NDEP indicated that review of the Revised Approach document may take about a month. A response could be issued by mid-November. NDEP additionally stated that the length of the review would be based upon the quality of the submitted document.



Appendix B

Revised Table 2 and Table 3 for Areas I, II, III, and IV



Area I

|                  |                                |               |  | Laborator                                   | у:                         | CAS - K | elso, WA                           |                                |              |                                   |                           | CAS - Ro                           | ochester, NY                     | ,                             |                                    |                                   | CAS - I                           | louston                          | GEL<br>Charleston, SC            | STL-<br>Denver      | Alpha<br>Analytical                           | EMSL<br>Westmont, NJ                    | Rationale                             |   |
|------------------|--------------------------------|---------------|--|---|----------------------------|---------|------------------------------------|--------------------------------|--------------|-----------------------------------|---------------------------|------------------------------------|----------------------------------|-------------------------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|----------------------------------|---------------------|---|---|---------------------------------------|---|
| Grid<br>Location | LOU<br>Number                  | Boring<br>No. | Sample ID<br>Number, (note<br>"B" for Phase B) | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Perchlorate<br>(EPA 314.0) |         | Hex Cr <sup>4.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) |              | VOCs <sup>3.</sup><br>(EPA 8260B) | Wet<br>Chem <sup>5.</sup> | Total<br>Cyanide<br>(EPA<br>9012A) | Formal-<br>dehyde (EPA<br>8315A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>10.</sup><br>(EPA 8082) | PCBs <sup>10.</sup><br>(EPA 1668) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>8.</sup> | OPPs <sup>13.</sup> | Sparks, NV<br>Organic<br>Acids <sup>14.</sup> | Asbestos<br>11.<br>EPA/540/R-<br>97/028 | for removal<br>of samples<br>from SAP | Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient designations).                                      |
| I                |                                |               |  |   |                            | B       | orings are o                       | rganized by                    | grid locatio | on as shov                        | vn on Plate               |                                    | point is or                      | n the northv                  | vestern most                       | grid in Area                      | 1 (H-3) and                       | ending with                      | h the southe                     | eastern mo          | ost grid in A                                 |   |                                       |   |
| H-3              | 1, 10                          | RSAH3         | RSAH3-0.0                                      | 0.0   |                            |         |                                    |                                |              |                                   |                           |                                    |                                  |                               |                                    |                                   |                                   |                                  |                                  |                     |   | X                                       |                                       | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and as an   |
| H-3<br>H-3       | 1, 10<br>1, 10                 |               | RSAH3-0.5B<br>RSAH3-10B                        | 0.5   | X                          | X       | X                                  | X X                            |              | X<br>X                            | X                         | X                                  |                                  | X<br>Hold                     | X<br>X                             |                                   |                                   | X                                | X                                | X                   | X   |   | F,L<br>L                              | eastward step-out to LOU 10 (Former Onsite Hazardous Waste Landfill).<br>GW anticipated at ~34 feet bgs; MCfg ~129 feet bgs.                                      |
| H-3              | 1, 10                          |               | RSAH3-20B                                      | 20  | X                          | X       | X                                  | X                              |              | X                                 | X                         | Х                                  |                                  | Hold                          | X                                  |                                   |                                   |                                  | X                                |                     |   |   | B,D,L                                 |   |
| H-3<br>H-3       | 1, 10<br>1, 10                 |               | RSAH3-30B<br>RSAH3-32B                         | <u>30</u><br>32                             | R<br>X                     | X       | R<br>X                             | R<br>X                         |              | R<br>X                            | R<br>X                    | X                                  |                                  | Х                             | R<br>X                             |                                   |                                   |                                  | R<br>X                           | X                   | X   |   | B,D,F,L                               |   |
| I-2<br>I-2       | 1, 10<br>1, 10                 | RSAI2         | RSAI2-0.0<br>RSAI2-0.5B                        | 0.0   | x                          |         | X                                  | x                              |              | x                                 | x                         | x                                  |                                  | ×                             | X                                  |                                   |                                   | x                                | x                                |                     |   | X                                       |                                       | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and as an<br>eastward step-out to LOU 10 (Former Onsite Hazardous Waste Landfill).        |
| I-2<br>I-2       | 1, 10                          |               | RSAI2-10B                                      | 10  | X                          | X       | X                                  | X                              |              | X                                 | X                         | X                                  |                                  | Hold                          | X                                  |                                   |                                   | ^                                | X                                |                     |   |   | L                                     | GW anticipated at ~33 feet bgs; MCfg ~32 feet bgs.  |
| I-2<br>I-2       | 1, 10                          |               | RSAI2-20B<br>RSAI2-30B                         | 20  | X                          | X       | X                                  | X                              |              | X                                 | X                         | X                                  |                                  | Hold                          | X                                  |                                   |                                   |                                  | X                                |                     |   |   | B,D,L<br>B                            |   |
| I-2              | 1, 10                          |               | RSAI2-31B                                      | 31  | X                          | X       | X                                  | X                              |              | X                                 | X                         | Х                                  |                                  | Х                             | X                                  |                                   |                                   |                                  | X                                |                     |   |   | B,D,L                                 |   |
| I-3<br>I-3       | 1                              | RSAI3         | RSAI3-0.0<br>RSAI3-0.5B                        | 0.0   | X                          | X       | x                                  | x                              |              | x                                 | X                         | x                                  |                                  | Х                             | x                                  |                                   |                                   | x                                | X                                |                     |   | X                                       | L                                     | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and for<br>general site coverage  |
| I-3              | 1                              |               | RSAI3-10B                                      | 10  | Х                          | X       | Х                                  | X                              |              | X                                 | X                         | X                                  |                                  | Hold                          | Х                                  |                                   |                                   |                                  | X                                |                     |   |   | L                                     | GW anticipated at ~34 feet bgs; MCfg ~32 feet bgs.  |
| I-3<br>I-3       | 1                              |               | RSAI3-20B<br>RSAI3-25B                         | 20<br>25                                    | R                          | R       | X<br>R                             | X<br>R                         |              | X<br>R                            | R                         | X                                  |                                  | Hold                          | R                                  |                                   |                                   |                                  | R                                |                     |   |   | B,D,L<br>B                            |   |
| I-3              | 1                              | 0.1.001       | RSAI3-32B                                      | 32  | Х                          | Х       | Х                                  | Х                              |              | Х                                 | Х                         | Х                                  |                                  | Х                             | Х                                  |                                   |                                   |                                  | Х                                |                     |   | N N                                     | B,D,L                                 |   |
| I-3<br>I-3       | 1, 32<br>1, 32                 | SA201         | SA201-0.0<br>SA201-0.5B                        | 0.0<br>0.5                                  | x                          | x       | х                                  | х                              |              | х                                 | Х                         | Х                                  |                                  | R                             | X                                  |                                   |                                   | х                                | Х                                |                     |   | X                                       |                                       | Boring located on the north berm of the GW-11 Pond to evaluate LOU 32 (Chromium<br>and Perchlorate Groundwater Remediation Unit) and LOU 1 (former Trade Effluent |
| I-3<br>I-3       | 1, 32                          |               | SA201-10B<br>SA201-20B                         | 10<br>20                                    | X                          | X       | X                                  | X                              |              | X                                 | X                         | Х                                  |                                  | R                             | X                                  |                                   |                                   |                                  | X                                |                     |   |   | E,L<br>B                              | Settling Ponds) and for general site coverage.<br>GW anticipated at ~30 feet bgs; MCfg ~31 feet bgs.  |
| I-3              | 1, 32                          |               | SA201-25B                                      | 25  | R                          | R       | R                                  | R                              |              | R                                 | R                         |                                    |                                  |                               | R                                  |                                   |                                   |                                  | R                                |                     |   |   | В                                     | ow anticipated at ~30 reet bys, worg ~31 reet bys.  |
| I-3<br>I-4       | 1, 32<br>1, 32                 | RSAI4         | SA201-28B<br>RSAI4-0.0                         | 28<br>0.0                                   | Х                          | Х       | X                                  | Х                              |              | Х                                 | Х                         | X                                  |                                  |                               | Х                                  |                                   |                                   |                                  | X                                |                     |   | X                                       | B,E,L                                 | Boring located on the north berm of the GW-11 Pond to evaluate LOU 32 (Chromium   |
| 1-4              | 1, 32                          | NoAle         | RSAI4-0.5B                                     | 0.5   | X                          | X       | Х                                  | Х                              |              | Х                                 | Х                         | Х                                  |                                  | Х                             | Х                                  |                                   |                                   | Х                                | Х                                |                     |   | ~                                       | L                                     | and Perchlorate Groundwater Remediation Unit) and LOU 1 (former Trade   |
| I-4<br>I-4       | 1, 32<br>1, 32                 |               | RSAI4-10B<br>RSAI4-20B                         | 10 20                                       | X<br>X                     | X       | X                                  | X                              |              | X<br>X                            | X<br>X                    | X                                  |                                  | Hold<br>Hold                  | X                                  |                                   |                                   |                                  | X<br>X                           |                     |   |   | L<br>B,D,L                            | Effluent Settling Ponds) and for general Site coverage<br>GW anticipated at ~34 feet bgs; MCfg ~23 feet bgs.  |
| 1-4              | 1, 32                          |               | RSAI4-30B                                      | 30  | R                          | R       | R                                  | R                              |              | R                                 | R                         |                                    |                                  |                               | R                                  |                                   |                                   |                                  | R                                |                     |   |   | В                                     |   |
| I-4<br>I-5       | 1, 32<br>1, 32                 | RSAI5         | RSAI4-32B<br>RSAI5-0.0                         | 32  | Х                          | X       | Х                                  | Х                              |              | Х                                 | Х                         | Х                                  |                                  | Х                             | Х                                  |                                   |                                   |                                  | Х                                |                     |   | X                                       | B,D,L                                 | Boring located on the north berm of the GW-11 Pond to evaluate LOU 32 (Chromium   |
| I-5              | 1, 32                          |               | RSAI5-0.5B                                     | 0.5   | X                          | X       | Х                                  | Х                              |              | Х                                 | Х                         | Х                                  |                                  | Х                             | Х                                  |                                   |                                   | Х                                | Х                                |                     |   |   |                                       | and Perchlorate Groundwater Remediation Unit) and LOU 1 (former Trade Effluent  |
| I-5<br>I-5       | 1, 32                          |               | RSAI5-10B<br>RSAI5-20B                         | 10 20                                       | R                          | R       | X<br>R                             | X<br>R                         |              | X<br>R                            | R                         | X                                  |                                  | Hold                          | X<br>R                             |                                   |                                   |                                  | R                                |                     |   |   | L<br>B                                | Settling Ponds) and for general Site coverage.<br>GW anticipated at ~30 feet bgs; MCfg ~23 feet bgs.  |
| I-5              | 1, 32                          |               | RSAI5-28B                                      | 28<br>30                                    | X                          | X       | X                                  | X                              |              | X                                 | X                         | Х                                  |                                  | Х                             | X                                  |                                   |                                   |                                  | X                                |                     |   |   | B,D,L<br>B                            |   |
| I-5<br>I-7       | 1, 32<br>1, 22, 23, 32         | RSAI7         | RSAI5-30B<br>RSAI7-0.0                         | 0.0   | ĸ                          | ĸ       | ĸ                                  | ĸ                              |              | к                                 | ĸ                         |                                    |                                  |                               | ĸ                                  |                                   |                                   |                                  | ĸ                                |                     |   | X                                       | В                                     | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOUs 22  |
| -7<br> -7        | 1, 22, 23, 32<br>1, 22, 23, 32 |               | 8 RSAI7-0.5B                                   | 0.5   | X                          | X       | X<br>X                             | X<br>X                         |              | X<br>X                            | X<br>X                    | X                                  |                                  | X<br>Hold                     | X<br>X                             | NS<br>NS                          | NS<br>NS                          | Х                                | X                                |                     |   |   | K,L,P<br>K,L,P                        | & 23 (Ponds WC-West & WC-East), and LOU 32 (Chromium and Perchlorate<br>Groundwater Remediation Unit).  |
| I-7              | 1, 22, 23, 32                  |               | RSAI7-20B                                      | 20  | X                          | X       | Х                                  | X                              |              | X                                 | X                         | X                                  |                                  | Hold                          | X                                  | NS                                | NS                                |                                  | X                                |                     |   |   | K,L,P                                 | GW encountered at 33 feet bgs; MCfg ~23 feet bgs.   |
| I-7<br>J-2       | 1, 22, 23, 32<br>1, 10         | RSAJ2         | RSAI7-30B<br>RSAJ2-0.0                         | 30  | X                          | X       | Х                                  | Х                              |              | Х                                 | Х                         | Х                                  |                                  | Х                             | Х                                  | NS                                | NS                                |                                  | Х                                |                     |   | X                                       | K,L,P                                 | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 10   |
| J-2              | 1, 10                          |               | RSAJ2-0.5B                                     | 0.5   | X                          | X       | Х                                  | X                              |              | X                                 | Х                         | X                                  |                                  | Х                             | Х                                  |                                   |                                   | Х                                | Х                                |                     |   |   | L                                     | (Former Onsite Hazardous Landfill) and to investigate potential offsite VOC sources.  |
| J-2<br>J-2       | 1, 10<br>1, 10                 |               | RSAJ2-10B<br>RSAJ2-20B                         | 10<br>20                                    | X                          | X       | X                                  | X                              |              | X<br>X                            | X<br>X                    | X<br>X                             |                                  | X<br>Hold                     | X                                  |                                   |                                   |                                  |                                  |                     |   |   | D,L<br>B,D,L                          | GW anticipated at ~35 feet bgs.   |
| J-2<br>J-2       | 1, 10<br>1, 10                 |               | RSAJ2-30B<br>RSAJ2-33B                         | <u>30</u><br>33                             | R                          | R       | R<br>X                             | R<br>X                         |              | R                                 | R<br>X                    | X                                  |                                  | x                             | R<br>X                             |                                   |                                   |                                  | R                                |                     |   |   | B<br>B,D,L                            |   |
| J-2<br>J-3       | 1, 10                          | RSAJ3         | RSAJ3-0.0                                      | 0.0   | ^                          | ^       | ^                                  | ^                              |              | ^                                 | ^                         | ^                                  |                                  | ^                             | ^                                  |                                   |                                   |                                  | ^                                |                     |   | Х                                       | D,D,L                                 | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and for   |
| J-3<br>J-3       | 1                              |               | RSAJ3-0.5B<br>RSAJ3-10B                        | 0.5   | X                          | X       | X                                  | X<br>X                         |              | X<br>X                            | X                         | X<br>X                             |                                  | X                             | X                                  |                                   |                                   | Х                                | X<br>X                           | X<br>X              | X   |   | F,L<br>D,F,L                          | general site coverage.<br>GW anticipated at ~35 feet bgs; MCfg ~31 feet bgs.  |
| J-3              | 1                              |               | RSAJ3-20B                                      | 20  | R                          | R       | R                                  | R                              |              | R                                 | R                         |                                    |                                  |                               | R                                  |                                   |                                   |                                  | R                                |                     |   |   | В                                     | ow anticipated at -55 reet bgs, worg -51 reet bgs.  |
| J-3<br>J-3       | 1                              |               | RSAJ3-29B<br>RSAJ3-30B                         | 29<br>30                                    | R                          | R       | R                                  | X<br>R                         |              | R                                 | R                         | X                                  |                                  | X                             | R                                  |                                   |                                   |                                  | R                                | X                   | X   |   | B,D,F,L<br>B                          |   |
| J-3              | 1, 32                          | SA202         | SA202-0.0                                      | 0.0   |                            |         | Y                                  |                                |              | V                                 |                           | ~                                  |                                  |                               |                                    | *******                           |                                   |                                  |                                  |                     |   | X                                       |                                       | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 32   |
| J-3<br>J-3       | 1, 32<br>1, 32                 |               | SA202-0.5B<br>SA202-10B                        | 0.5<br>10                                   | X X                        | X       | X                                  | X<br>X                         |              | X<br>X                            | ×<br>×                    | X<br>X                             |                                  | R                             | X                                  |                                   |                                   | X                                |                                  |                     |   |   |                                       | (Chromium and Perchlorate Groundwater Remediation Unit), and for general<br>Site coverage.  |
| J-3<br>J-3       | 1, 32<br>1, 32                 |               | SA202-20B<br>SA202-28B                         | 20<br>28                                    | R                          | R       | R<br>X                             | R<br>X                         |              | R<br>X                            | R<br>X                    | x                                  |                                  |                               | R<br>X                             |                                   |                                   |                                  | R<br>X                           |                     |   |   | B<br>B,E,L                            | GW anticipated at ~31 feet bgs.   |
| J-3              | 1, 32                          |               | SA202-30B                                      | 30  | R                          | R       | R                                  | R                              |              | R                                 | R                         | ^                                  |                                  |                               | R                                  |                                   |                                   |                                  | R                                |                     |   |   | А                                     |   |
| J-3<br>J-3       | 1,60<br>1,60                   | SA206         | SA206-0.0<br>SA206-0.5B                        | 0.0   | X                          | Y       | X                                  | X                              |              | x                                 | X                         | x                                  |                                  |                               | X                                  |                                   |                                   | x                                | X                                |                     |   | X                                       | G<br>G,L                              | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and LOU 60<br>(former Acid Drain System), and for general Site coverage.                  |
| J-3              | 1, 60                          |               | SA206-10B                                      | 10  | Х                          | x       | Х                                  | Х                              |              | X                                 | X                         | Х                                  |                                  |                               | Х                                  |                                   |                                   | ~                                | X                                |                     |   |   | G,L                                   | GW anticipated at ~30 feet bgs; MCfg ~28 feet bgs.  |
| J-3<br>J-3       | 1, 60<br>1, 60                 |               | SA206-25B<br>SA206-37B                         | 25<br>37                                    | X                          | X       | X                                  | X<br>X                         |              | X<br>X                            | X<br>X                    | X<br>X                             |                                  |                               | X<br>X                             |                                   |                                   |                                  | X                                |                     |   |   | B,G,L<br>B.G.L                        |   |
| J-5              | 1, 22, 32                      | RSAJ5         | RSAJ5-0.0                                      | 0.0   |                            |         |                                    |                                |              |                                   |                           |                                    |                                  |                               |                                    | ******                            |                                   |                                  |                                  |                     |   | X                                       | 1-1                                   | Boring located east of GW-11 Pond to evaluate LOU 32 (Chromium and Perchlorate  |
| J-5<br>J-5       | 1, 22, 32<br>1, 22, 32         |               | RSAJ5-0.5B<br>RSAJ5-10B                        | 0.5   | X                          | X       | X                                  | X<br>X                         |              | X<br>X                            | X<br>X                    | X<br>X                             |                                  | X<br>Hold                     | X                                  |                                   |                                   | X                                |                                  |                     |   |   |                                       | Groundwater Remediation Unit) and LOU 1 (former Trade Effluent Settling Ponds),<br>as an upgradient boring to evaluate LOU 22 (Pond WC-West and Associated        |
| J-5              | 1, 22, 32                      |               | RSAJ5-19B                                      | 19  | Х                          | X       | Х                                  | Х                              |              | X                                 | Х                         | X                                  |                                  | X                             | X                                  |                                   |                                   |                                  | Х                                |                     |   |   | B,D,L                                 | Piping), and for general Site coverage.   |
| J-5<br>J-5       | 1, 22, 32<br>1, 22, 32         |               | RSAJ5-20B<br>RSAJ5-25B                         | 20<br>25                                    | R                          | R       | R<br>R                             | R<br>R                         |              | R<br>R                            | R<br>R                    |                                    |                                  |                               | R<br>R                             |                                   |                                   |                                  | R                                |                     |   |   | B<br>A                                | GW anticipated at ~39 feet bgs; MCfg ~26 feet bgs.  |
| J-6<br>J-6       | 1, 22, 32<br>1, 22, 32         | RSAJ6         | RSAJ6-0.0<br>RSAJ6-0.5B                        | 0.0   | ~ ~ ~                      | ~       | ~                                  | x                              |              | ~                                 | v                         |                                    |                                  | ~                             | ~                                  |                                   |                                   | ~                                | ~                                |                     |   | Х                                       |                                       | Boring located east of GW-11 Pond to evaluate LOU 32 (Chromium and Perchlorate<br>Groundwater Remediation Unit) and LOU 1 (former Trade Effluent Settling Ponds), |
| J-6              | 1, 22, 32                      |               | RSAJ6-10B                                      | 10  | X                          | X       | X<br>X                             | X                              |              | X<br>X                            | X<br>X                    |                                    |                                  | X<br>Hold                     | X<br>X                             |                                   |                                   | X                                | X                                |                     |   |   |                                       | as an upgradient boring to evaluate LOU 22 (Pond WC-West and Associated   |
| J-6<br>J-6       | 1, 22, 32<br>1, 22, 32         |               | RSAJ6-19B<br>RSAJ6-20B                         | 19<br>20                                    | X                          | X       | X                                  | X                              |              | X                                 | X<br>R                    |                                    |                                  | Х                             | X                                  |                                   |                                   |                                  | X<br>R                           |                     |   |   |                                       | Piping), and for general Site coverage.<br>GW anticipated at ~21 feet bgs.  |
| J-6              | 1, 22, 32                      |               | RSAJ6-30B                                      | 30  | R                          | R       | R                                  | R                              |              | R                                 | R                         |                                    |                                  |                               | R                                  |                                   |                                   |                                  | R                                |                     |   |   | A                                     |   |
| J-6<br>J-6       | 22, 23                         | SA127         | SA127-0.0<br>SA127-0.5B                        | 0.0   | x                          | x       | x                                  | x                              |              | x                                 | x                         |                                    |                                  | R                             | x                                  |                                   |                                   | x                                | X                                |                     |   | X                                       | E                                     | Boring located to evaluate white crusty surface soil east of the pump house<br>between LOUs 22 and 23 (Ponds WC-West and WC-East).                                |
| J-6              | 22, 23                         |               | SA127-10B                                      | 10  | Х                          | Х       | Х                                  | Х                              |              | X                                 | X                         |                                    |                                  | R                             | Х                                  |                                   |                                   |                                  | Х                                |                     |   |   | E                                     | GW anticipated at ~21 feet bgs; MCfg ~26 feet bgs.  |
| J-6              | 22, 23                         |               | SA127-20B                                      | 20  | Х                          | Х       | Х                                  | Х                              |              | Х                                 | Х                         |                                    |                                  |                               | Х                                  |                                   | 1                                 |                                  | Х                                |                     |   |   | B,E                                   | ]   |

# Table 2 Soil Sampling and Analytical Plan for Area I Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 1 of 7

|                         |                                |               |                 |  | Laboratory                                  | :                          | CAS - M                            | (elso, WA                          |                                |                        |                                   |                           | CAS - R                            | Cochester, N                     | r                             |                                    |                                   | CAS -                             | Houston                          | GEL<br>Charleston, SC            | STL-<br>Denver      | Alpha<br>Analytical<br>Sparks, NV | EMSL<br>Westmont, NJ                    |                                    |
|-------------------------|--------------------------------|---------------|-----------------|--|---|----------------------------|------------------------------------|------------------------------------|--------------------------------|------------------------|-----------------------------------|---------------------------|------------------------------------|----------------------------------|-------------------------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|----------------------------------|---------------------|-----------------------------------|---|------------------------------------|
| Grid<br>Location        | LOU<br>Number                  | Boring<br>No. | Date<br>Sampled | Sample ID<br>Number, (note<br>"B" for Phase B) | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>4.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B) | VOCs <sup>3.</sup><br>(EPA 8260B) | Wet<br>Chem <sup>5.</sup> | Total<br>Cyanide<br>(EPA<br>9012A) | Formal-<br>dehyde (EPA<br>8315A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>10.</sup><br>(EPA 8082) | PCBs <sup>10.</sup><br>(EPA 1668) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>8.</sup> | OPPs <sup>13.</sup> | Organic<br>Acids <sup>14.</sup>   | Asbestos<br>11.<br>EPA/540/R-<br>97/028 | for remov<br>of sample<br>from SAF |
| J-6                     | 22, 23                         |               |                 | SA127-32B                                      | 32  | Х                          | Х                                  | Х                                  | X                              |                        | X                                 | X                         |                                    |                                  |                               | X                                  |                                   |                                   |                                  | Х                                |                     |                                   |   | B,E                                |
| J-7<br>J-7              | 1, 23, 32<br>1, 23, 32         | RSAJ7         | 8               | RSAJ7-0.0<br>RSAJ7-0.5B                        | 0.0<br>0.5                                  | X                          | х                                  | x                                  | Х                              |                        | х                                 | x                         | X                                  |                                  | х                             | Х                                  | NS                                | NS                                | Х                                | x                                |                     |                                   | X                                       | K,Z<br>K,M,P                       |
| J-7<br>J-7              | 1, 23, 32<br>1, 23, 32         |               | 2/9/0           | RSAJ7-10B<br>RSAJ7-20B                         | 10<br>20                                    | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                    | X<br>X                             |                                  | Hold<br>Hold                  | X                                  | NS<br>NS                          | NS<br>NS                          |                                  | X<br>X                           |                     |                                   |   | K,M,P<br>D,K,M,P                   |
| J-7                     | 1, 23, 32                      |               |                 | RSAJ7-30B                                      | 30  | Х                          | Х                                  | Х                                  | X                              |                        | Х                                 | Х                         | X                                  |                                  | X                             | X                                  | NS                                | NS                                |                                  | Х                                |                     |                                   |   | D,K,M,P                            |
| J-8<br>J-8              | 1, 32<br>1, 32                 | SA79          |                 | SA79-0.0<br>SA79-0.5                           | 0.0<br>0.5                                  | R                          | R<br>R                             | R<br>R                             |                                |                        | R                                 | R<br>R                    |                                    |                                  | R                             |                                    |                                   |                                   | R                                | R                                |                     |                                   | R                                       | Н                                  |
| J-8<br>J-8              | 1, 32<br>1, 32                 |               |                 | SA79-10<br>SA79-20                             | 10<br>20                                    | R<br>R                     | R<br>R                             | R<br>R                             |                                |                        | R                                 | R<br>R                    |                                    |                                  | R                             |                                    |                                   |                                   |                                  | R<br>R                           |                     |                                   |   |                                    |
| J-8                     | 1, 32                          |               |                 | SA79-25  | 25  | R                          | R                                  | R                                  |                                |                        | R                                 | R                         |                                    |                                  |                               |                                    |                                   |                                   |                                  | R                                |                     |                                   |   |                                    |
| J-8<br>J-8              | 1, 22, 23, 32<br>1, 22, 23, 32 | RSAJ8         |                 | RSAJ8-0.0<br>RSAJ8-0.5B                        | 0.0   | x                          | x                                  | x                                  | x                              |                        | x                                 | x                         |                                    |                                  | x                             | x                                  | NS                                | NS                                | x                                | x                                |                     |                                   | X                                       | K<br>K,P                           |
| J-8                     | 1, 22, 23, 32                  |               | 0/08            | RSAJ8-10B                                      | 10  | Х                          | Х                                  | Х                                  | Х                              |                        | X                                 | X                         |                                    |                                  | Hold                          | Х                                  | NS                                | NS                                |                                  | Х                                |                     |                                   |   | K,P                                |
| J-8<br>J-8              | 1, 22, 23, 32<br>1, 22, 23, 32 |               | 1/12            | RSAJ8-20B<br>RSAJ8-30B                         | 20<br>30                                    | X                          | X<br>X                             | X                                  | X<br>X                         |                        | X                                 | X<br>X                    |                                    |                                  | Hold<br>Hold                  | X                                  | NS<br>NS                          | NS<br>NS                          |                                  | X                                |                     |                                   |   | D,K,P<br>D,K,P                     |
| J-8<br>K-2              | 1, 22, 23, 32                  | SA152         |                 | RSAJ8-33B<br>SA152-0.0                         | 33<br>0.0                                   | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         |                                    |                                  | Х                             | Х                                  | NS                                | NS                                |                                  | Х                                |                     |                                   | X                                       | D,K,P                              |
| K-2                     | 2                              | 3A132         |                 | SA152-0.5B                                     | 0.5   | х                          | Х                                  | х                                  | Х                              |                        | х                                 | Х                         | X                                  |                                  | R                             | Х                                  |                                   |                                   | х                                | х                                |                     |                                   |   | E,L                                |
| K-2<br>K-2              | 2                              |               |                 | SA152-10B<br>SA152-20B                         | 10<br>20                                    | X                          | X<br>X                             | X                                  | X                              |                        | X                                 | X                         | X                                  |                                  | R                             | X                                  |                                   |                                   |                                  | X                                |                     |                                   |   | E,L<br>B,E,L                       |
| K-2                     | 2                              | DOAKO         |                 | SA152-34B                                      | 34  | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         | X                                  |                                  |                               | X                                  |                                   |                                   |                                  | X                                |                     |                                   |   | B,E,L                              |
| K-2<br>K-2              | 2                              | RSAK2         |                 | RSAK2-0.0<br>RSAK2-0.5B                        | 0.0 0.5                                     | х                          | х                                  | х                                  | Х                              |                        | х                                 | x                         | X                                  |                                  | х                             | Х                                  | NS                                | NS                                | Х                                | х                                |                     |                                   | X                                       | K<br>K,P                           |
| K-2<br>K-2              | 2 2                            |               | 1/08            | RSAK2-10B<br>RSAK2-20B                         | 10<br>20                                    | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                    | X<br>X                             |                                  | Hold<br>Hold                  | X                                  | NS<br>NS                          | NS<br>NS                          |                                  | X<br>X                           |                     |                                   |   | K,M,P<br>D,K,M,P                   |
| K-2                     | 2                              |               | -1/L            | RSAK2-25B                                      | 25  | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | Х                                  |                                  | Hold                          | X                                  | NS                                | NS                                |                                  | Х                                |                     |                                   |   | D,K,M,P                            |
| K-2<br>K-2              | 2                              |               |                 | RSAK2-30B<br>RSAK3-35B                         | 30<br>35                                    | X                          | X                                  | X                                  | X<br>X                         |                        | X                                 | X<br>X                    | X                                  |                                  | Hold<br>X                     | X                                  | NS<br>NS                          | NS<br>NS                          |                                  | X                                |                     |                                   |   | D,K,M,P<br>D,K,M,P                 |
| K-3                     | 1, 2, 32                       | SA88          |                 | SA88-0.0                                       | 0.0   |                            |                                    |                                    |                                |                        |                                   |                           |                                    |                                  |                               |                                    |                                   |                                   |                                  |                                  |                     |                                   | X                                       |                                    |
| K-3<br>K-3              | 1, 2, 32<br>1, 2, 32           |               |                 | SA88-0.5B<br>SA88-10B                          | 0.5<br>10                                   | X                          | X<br>X                             | X                                  | X<br>X                         |                        | X                                 | X<br>X                    | X<br>X                             |                                  | R<br>R                        | X                                  |                                   |                                   | X                                | X                                |                     |                                   |   | E,L<br>E,L                         |
| K-3<br>K-3              | 1, 2, 32<br>1, 2, 32           |               |                 | SA88-20B<br>SA88-30B                           | 20<br>30                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X                                 | X<br>R                    | Х                                  |                                  |                               | X                                  |                                   |                                   |                                  | X<br>R                           |                     |                                   |   | B,E,L<br>B                         |
| K-3                     | 1, 2, 32                       |               |                 | SA88-32B                                       | 32  | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         | Х                                  |                                  |                               | X                                  |                                   |                                   |                                  | X                                |                     |                                   |   | B,E,L                              |
| K-3<br>K-3              | 1, 32                          | RSAK3         |                 | RSAK3-0.0<br>RSAK3-0.5B                        | 0.0   | x                          | x                                  | x                                  | x                              |                        | x                                 | x                         | x                                  |                                  | x                             | x                                  |                                   |                                   | x                                | x                                |                     |                                   | X                                       |                                    |
| K-3                     | 1, 32                          |               |                 | RSAK3-10B                                      | 10  | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | Х                                  |                                  | Hold                          | Х                                  |                                   |                                   | ~~~~~                            | Х                                |                     |                                   |   |                                    |
| K-3<br>K-3              | 1, 32                          |               |                 | RSAK3-20B<br>RSAK3-30B                         | 20<br>30                                    | R                          | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    | X                                  |                                  | Hold                          | R                                  |                                   |                                   |                                  | X<br>R                           |                     |                                   |   | B,D<br>B                           |
| K-3<br>K-3              | 1, 32<br>2, 32, 60             | SA134         |                 | RSAK3-31B<br>SA134-0.0                         | 31<br>0.0                                   | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | X                                  |                                  | Х                             | X                                  |                                   |                                   |                                  | Х                                |                     |                                   | X                                       | B,D                                |
| K-3                     | 2, 32, 60                      | 3A134         |                 | SA134-0.5B                                     | 0.5   | х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | Х                                  |                                  | R                             | Х                                  |                                   |                                   | Х                                | Х                                |                     |                                   |   | E,L                                |
| K-3<br>K-3              | 2, 32, 60<br>2, 32, 60         |               |                 | SA134-10B<br>SA134-20B                         | 10<br>20                                    | X                          | X<br>X                             | X                                  | X                              |                        | X                                 | X<br>X                    | X                                  |                                  | R                             | X                                  |                                   |                                   |                                  | X                                |                     |                                   |   | E,L<br>B,E,L                       |
| K-3                     | 2, 32, 60                      |               |                 | SA134-30B                                      | 30<br>31                                    | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |                                    |                                  |                               | R                                  |                                   |                                   |                                  | R                                |                     |                                   |   | В                                  |
| K-3<br>K-4              | 2, 32, 60<br>1, 2, 32          | RSAK4         |                 | SA134-31B<br>RSAK4-0.0                         | 0.0   | Х                          | Х                                  | Х                                  | Х                              |                        | X                                 | Х                         | X                                  |                                  |                               | Х                                  |                                   |                                   |                                  | X                                |                     |                                   | Х                                       | B,E,L                              |
| K-4<br>K-4              | 1, 2, 32<br>1, 2, 32           |               |                 | RSAK4-0.5B<br>RSAK4-10B                        | 0.5<br>10                                   | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                    | X<br>X                             |                                  | X<br>Hold                     | X                                  |                                   |                                   | Х                                | X<br>X                           |                     |                                   |   | L                                  |
| K-4                     | 1, 2, 32                       |               |                 | RSAK4-20B                                      | 20  | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | X                                  |                                  | Hold                          | Х                                  |                                   |                                   |                                  | Х                                |                     |                                   |   | B,D,L                              |
| K-4<br>K-4              | 1, 2, 32<br>1, 2, 32           |               |                 | RSAK4-30B<br>RSAK4-31B                         | 30<br>31                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | X                                  |                                  | Х                             | R<br>X                             |                                   |                                   |                                  | R<br>X                           |                     |                                   |   | B,D,L                              |
| K-5<br>K-5              | 1, 32<br>1, 32                 | RSAK5         |                 | RSAK5-0.0<br>RSAK5-0.5B                        | 0.0<br>0.5                                  | x                          | x                                  | x                                  | x                              |                        | x                                 | X                         | X                                  |                                  | x                             | x                                  |                                   |                                   | x                                | x                                |                     |                                   | Х                                       |                                    |
| K-5                     | 1, 32                          |               |                 | RSAK5-10B                                      | 10  | Х                          | Х                                  | X                                  | Х                              |                        | X                                 | Х                         | X                                  |                                  | Hold                          | Х                                  |                                   |                                   | ^                                | Х                                |                     |                                   |   | L                                  |
| K-5<br>K-5              | 1, 32<br>1, 32                 |               |                 | RSAK5-20B<br>RSAK5-22B                         | 20<br>22                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | X                                  |                                  | х                             | R<br>X                             |                                   |                                   |                                  | R<br>X                           |                     | _                                 |   | B<br>B,D,L                         |
| K-5                     | 1, 32                          | 0470          |                 | RSAK5-30B                                      | 30  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |                                    |                                  |                               | R                                  |                                   |                                   |                                  | R                                |                     |                                   | × ×                                     | A                                  |
| K-6<br>K-6              | 1, 32<br>1, 32                 | SA76          |                 | SA76-0.0<br>SA76-0.5B                          | 0.0<br>0.5                                  | x                          | X                                  | X                                  | x                              |                        | X                                 | X                         |                                    |                                  | R                             | X                                  |                                   |                                   | x                                | x                                |                     |                                   | X                                       | E                                  |
| K-6<br>K-6              | 1, 32<br>1, 32                 |               |                 | SA76-10B<br>SA76-20B                           | 10<br>20                                    | X                          | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                    |                                    |                                  | R                             | X<br>X                             |                                   |                                   |                                  | X<br>X                           |                     |                                   |   | E<br>B,E                           |
| K-6                     | 1, 32                          |               |                 | SA76-25B                                       | 25  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |                                    |                                  |                               | R                                  |                                   |                                   |                                  | R                                |                     | -                                 |   | A                                  |
| K-6<br>K-6              | 1, 32                          | RSAK6         |                 | RSAK6-0.0<br>RSAK6-0.5B                        | 0.0   | x                          | x                                  | x                                  | x                              |                        | x                                 | x                         |                                    |                                  | x                             | x                                  |                                   |                                   | x                                | x                                |                     | ·                                 | X                                       | Z                                  |
| K-6                     | 1, 32                          |               |                 | RSAK6-10B                                      | 10  | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         |                                    |                                  | Hold                          | Х                                  |                                   |                                   |                                  | Х                                |                     |                                   |   |                                    |
| K-6<br>K-6              | 1, 32<br>1, 32                 |               |                 | RSAK6-20B<br>RSAK6-24B                         | 20<br>24                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    |                                    |                                  | х                             | R<br>X                             |                                   |                                   |                                  | R<br>X                           |                     |                                   |   | B,D                                |
| <mark>K-6</mark><br>K-7 | 1, 32<br>1, 22, 23, 32         | RSAK7         |                 | RSAK6-30B<br>RSAK7-0.0                         | 30<br>0.0                                   | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |                                    |                                  |                               | R                                  |                                   |                                   |                                  | R                                |                     |                                   | X                                       | A<br>K                             |
| K-7                     | 1, 22, 23, 32                  |               | /08             | RSAK7-0.5B                                     | 0.5   | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         | X                                  |                                  | x                             | X                                  | NS                                | NS                                | x                                | X                                |                     |                                   |   | K,M,P                              |
| K-7<br>K-7              | 1, 22, 23, 32<br>1, 22, 23, 32 |               | 7/10            | RSAK7-10B<br>RSAK7-24B                         | 10<br>24                                    | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         | X                                  |                                  | Hold<br>Hold                  | X                                  | NS<br>NS                          | NS<br>NS                          |                                  | X                                |                     |                                   | l                                       | K,M,P<br>D,K,M,P                   |
| K-7                     | 1, 22, 23, 32                  | DEALCO        |                 | RSAK7-27B                                      | 27  | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         | X                                  |                                  | X                             | X                                  | NS                                | NS                                |                                  | X                                |                     |                                   | V                                       | D,K,M,P                            |
| K-8<br>K-8              | 1, 32<br>1, 32                 | RSAK8         |                 | RSAK8-0.0<br>RSAK8-0.5B                        | 0.0<br>0.5                                  | x                          | x                                  | х                                  | x                              |                        | x                                 | х                         |                                    |                                  | Х                             | x                                  |                                   |                                   | x                                | x                                |                     |                                   | X                                       |                                    |
| K-8<br>K-8              | 1, 32<br>1, 32                 |               |                 | RSAK8-10B<br>RSAK8-20B                         | 10<br>20                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    |                                    |                                  | Hold<br>R                     | X<br>R                             |                                   |                                   |                                  | X<br>R                           |                     |                                   |   | В                                  |
| K-8                     | 1, 32                          |               |                 | RSAK8-27B                                      | 27  | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         |                                    |                                  | X                             | X                                  |                                   |                                   |                                  | X                                |                     | -                                 |   | В                                  |
| L-2<br>L-2              | 2                              | RSAL2         |                 | RSAL2-0.0<br>RSAL2-0.5B                        | 0.0<br>0.5                                  | x                          | x                                  | x                                  | x                              |                        | x                                 | x                         | x                                  |                                  | x                             | x                                  | NS                                | NS                                | x                                | x                                |                     |                                   | X                                       | K<br>K,M,P                         |
|                         |                                | •             |                 |  |   |                            |                                    |                                    |                                |                        |                                   |                           |                                    |                                  |                               |                                    |                                   |                                   |                                  |                                  |                     |                                   | -                                       |                                    |

# Table 2 Soil Sampling and Analytical Plan for Area I Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 2 of 7

| nale<br>loval<br>ples<br>SAP | Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient designations).   |
|------------------------------|--|
|                              | Device leasted east of CW/44 Devide surfluste LOUI 22 (Chromium and Devidents  |
| P<br>P<br>1,P                | Boring located east of GW-11 Pond to evaluate LOU 32 (Chromium and Perchlorate<br>Groundwater Remediation Unit) and LOU 1 (former Trade Effluent Settling Ponds),<br>as an upgradient boring to evaluate LOU 23 (Pond WC-East and Associated<br>Piping), and for general Site coverage.  |
| 1,P                          | GW encountered at 23 feet bgs; MCfg ~26 feet bgs.  |
|                              | SA-79 was removed at the request of NDEP.  |
|                              |  |
|                              |  |
| )<br>)                       | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOUs 22<br>& 23 (Ponds WC-West & WC-East), and LOU 32 (Chromium and Perchlorate<br>Groundwater Remediation Unit), and for general Site coverage.  |
| Ρ                            | GW encountered at 36 feet bgs; MCfg ~26 feet bgs.  |
| P                            |  |
| P                            |  |
| -                            | Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling<br>Ponds) as a step-out boring to SA18 as requested by NDEP in<br>comments to the Phase A report.   |
| L                            | GW anticipated at ~36 feet bgs; MCfg ~31 feet bgs.   |
| L                            | an anticipatos at too toot byo, morg to troot byo.   |
| -                            | Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling   |
| >                            | Ponds) and to evaluate potential offsite VOC source to the west.   |
| P                            | GW encountered at 40.5 feet bgs; MCfg ~30 feet bgs.  |
| 1,P                          | ow encountered at 40.5 reet bys, more -50 reet bys.  |
| 1,F<br>1,P                   |  |
| 1,P                          |  |
| 1,1<br>1,P                   |  |
| п,г                          | Boring located north (downgradient) of LOU 2 (Open Area South of Trade Effluent  |
|                              | Settling Ponds) and south (upgradient) of LOU 1 (former Trade Effluent Settling  |
| ·                            | Ponds), and LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit),  |
| L                            | and for general Site coverage.   |
| L                            |  |
|                              | GW anticipated at ~34 feet bgs; MCfg ~31 feet bgs.   |
| L                            | Boring located on the northern berm GW-11 Pond to evaluate LOU 1 (former Trade   |
|                              | Effluent Ponds) and LOU 32 (Chromium and Perchlorate Groundwater Remediation   |
|                              | Unit).   |
| )                            | GW anticipated at ~33 feet bgs; MCfg ~34 feet bgs.   |
|                              | Gw anticipated at ~55 leet bgs, NGIG ~54 leet bgs.   |
| )                            |  |
| ,                            | Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling   |
|                              | Ponds), LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit),  |
|                              | and LOU 60 (former Acid Drain System).   |
| L                            | GW anticipated at ~33 feet bgs; MCfg ~31 feet bgs.   |
| <u> </u>                     | ow anticipated at ~55 feet bgs, worg ~51 feet bgs.   |
| L                            |  |
| -                            | Boring located to evaluate LOU 32 (Chromium and Perchlorate Groundwater  |
|                              | Remediation Unit) and as an upgradient boring to LOU 1(former Trade Effluent   |
|                              | Settling Ponds) and LOU 2 (Open Area South of Trade Effluent Settling Ponds).  |
| L                            | GW anticipated at ~33 feet bgs; MCfg ~26 feet bgs.   |
|                              | ,  |
| L                            |  |
|                              | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and  |
|                              | LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit).  |
|                              | GW anticipated at ~24 feet bgs; MCfg ~26 feet bgs.   |
|                              |  |
| L                            |  |
|                              |  |
|                              | Boring located north of groundwater recharge trenches to evaluate LOU 1 (former  |
|                              | Trade Effluent Settling Ponds) and LOU 32 (Chromium and Perchlorate Groundwater  |
|                              | Remediation Unit).   |
|                              | GW anticipated at ~22 feet bgs; MCfg ~26 feet bgs.   |
|                              |  |
|                              | Boring located south of groundwater recharge trenches to evaluate LOU 1 (former  |
|                              | Trade Effluent Settling Ponds) and LOU 32 (Chromium and Perchlorate Groundwater  |
|                              | Remediation Unit).   |
|                              |  |
| )                            | GW anticipated at ~26 feet bgs; MCfg ~26 feet bgs.   |
|                              | Gvv anticipated at ~26 feet bgs; wichg ~26 feet bgs.   |
|                              |  |
|                              | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 32  |
| P                            | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 32<br>(Chromium and Perchlorate Groundwater Remediation Unit), and pipelines  |
| P                            | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 32<br>(Chromium and Perchlorate Groundwater Remediation Unit), and pipelines<br>associated with LOUs 22 and 23 (Ponds WC-West & WC-East).   |
| ,P<br>1,P                    | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 32<br>(Chromium and Perchlorate Groundwater Remediation Unit), and pipelines  |
| P                            | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 32<br>(Chromium and Perchlorate Groundwater Remediation Unit), and pipelines<br>associated with LOUs 22 and 23 (Ponds WC-West & WC-East).<br>GW encountered at ~32 feet bgs; MCfg ~26 feet bgs.   |
| ,P<br>1,P                    | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 32<br>(Chromium and Perchlorate Groundwater Remediation Unit), and pipelines<br>associated with LOUs 22 and 23 (Ponds WC-West & WC-East).<br>GW encountered at ~32 feet bgs; MCfg ~26 feet bgs.<br>Boring located to evaluate LOU 32 (Chromium and Perchlorate Groundwater Unit)  |
| ,P<br>1,P                    | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 32<br>(Chromium and Perchlorate Groundwater Remediation Unit), and pipelines<br>associated with LOUs 22 and 23 (Ponds WC-West & WC-East).<br>GW encountered at ~32 feet bgs; MCfg ~26 feet bgs.<br>Boring located to evaluate LOU 32 (Chromium and Perchlorate Groundwater Unit)<br>Remediation and as upgradient location to LOU 1 (former Trade Effluent Settling   |
| ,P<br>1,P                    | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 32<br>(Chromium and Perchlorate Groundwater Remediation Unit), and pipelines<br>associated with LOUs 22 and 23 (Ponds WC-West & WC-East).<br>GW encountered at ~32 feet bgs; MCfg ~26 feet bgs.<br>Boring located to evaluate LOU 32 (Chromium and Perchlorate Groundwater Unit)<br>Remediation and as upgradient location to LOU 1 (former Trade Effluent Settling<br>Ponds), and for general Site coverage.   |
| ,P<br>1,P                    | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 32<br>(Chromium and Perchlorate Groundwater Remediation Unit), and pipelines<br>associated with LOUs 22 and 23 (Ponds WC-West & WC-East).<br>GW encountered at ~32 feet bgs; MCfg ~26 feet bgs.<br>Boring located to evaluate LOU 32 (Chromium and Perchlorate Groundwater Unit)<br>Remediation and as upgradient location to LOU 1 (former Trade Effluent Settling   |
| ,P<br>1,P                    | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 32<br>(Chromium and Perchlorate Groundwater Remediation Unit), and pipelines<br>associated with LOUs 22 and 23 (Ponds WC-West & WC-East).<br>GW encountered at ~32 feet bgs; MCfg ~26 feet bgs.<br>Boring located to evaluate LOU 32 (Chromium and Perchlorate Groundwater Unit)<br>Remediation and as upgradient location to LOU 1 (former Trade Effluent Settling<br>Ponds), and for general Site coverage.<br>GW anticipated at ~28 feet bgs; MCfg ~26 feet bgs. |
| ,P<br>1,P                    | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 32<br>(Chromium and Perchlorate Groundwater Remediation Unit), and pipelines<br>associated with LOUs 22 and 23 (Ponds WC-West & WC-East).<br>GW encountered at ~32 feet bgs; MCfg ~26 feet bgs.<br>Boring located to evaluate LOU 32 (Chromium and Perchlorate Groundwater Unit)<br>Remediation and as upgradient location to LOU 1 (former Trade Effluent Settling<br>Ponds), and for general Site coverage.   |

|                  |                        |               |          |   | Laborator                                   | y:                         | CAS - K                            | (elso, WA                          | Total                          |                        |                                   |                           |   |  |                                    |                                   | CAS -                             | Houston                          | GEL<br>Charleston, SC            | STL-<br>Denver      | Alpha<br>Analytical<br>Sparks, NV | EMSL<br>Westmont, NJ          | J Rationale                           |   |
|------------------|------------------------|---------------|----------|---|---|----------------------------|------------------------------------|------------------------------------|--------------------------------|------------------------|-----------------------------------|---------------------------|---|--|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|----------------------------------|---------------------|-----------------------------------|-------------------------------|---------------------------------------|---|
| Grid<br>Location | LOU<br>Number          | Boring<br>No. |          | Sample ID<br>Number, (note<br>B" for Phase B) | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>4.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B) | VOCs <sup>3.</sup><br>(EPA 8260B) | Wet<br>Chem <sup>5.</sup> | Cyanide<br>(EPA                         | Formal-<br>dehyde (EPA<br>8315A) (8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>10.</sup><br>(EPA 8082) | PCBs <sup>10.</sup><br>(EPA 1668) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>8.</sup> | OPPs <sup>13.</sup> | Organic<br>Acids <sup>14.</sup>   | Asbestos<br>11.<br>EPA/540/R- | for removal<br>of samples<br>from SAP |   |
| L-2              | 2                      |               | 08       | RSAL2-10B                                     | 10  | X                          | X                                  | х                                  | X                              |                        | x                                 | X                         | 9012A)<br>X                             | Hold                                     | X                                  | NS                                | NS                                |                                  | х                                |                     |                                   | 97/028                        | K,M,P                                 | GW encountered at 44 feet bgs; MCfg ~30 feet bgs.   |
| L-2<br>L-2       | 2                      |               | 11/2     | RSAL2-20B<br>RSAL2-30B                        | 20<br>30                                    | X                          | X                                  | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                    | X                                       | Hold                                     | X                                  | NS<br>NS                          | NS<br>NS                          |                                  | X                                |                     |                                   |                               | D,K,M,P<br>D,K,M,P                    |   |
| L-2              | 2                      | -             |          | RSAL2-37B                                     | 37  | X                          | X                                  | X                                  | Х                              |                        | Х                                 | X                         | X                                       | X  | X                                  | NS                                | NS                                |                                  | X                                |                     |                                   |                               | D,K,M,P                               |   |
| L-2<br>L-3       | 2 2, 32, 60            | SA82          |          | RSAL2-40B<br>SA82-0.0                         | 40  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |   | R  | R                                  |                                   |                                   |                                  | R                                |                     |                                   | X                             |                                       | No sample was collected at this depth because groundwater was encountered here.<br>Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling   |
| L-3<br>L-3       | 2, 32, 60              |               |          | SA82-0.5B<br>SA82-10B                         | 0.5<br>10                                   | X                          | X<br>X                             | X<br>X                             | X                              |                        | X<br>X                            | X                         | X                                       | X  | X                                  |                                   |                                   | Х                                | X                                | X                   | X                                 |                               |                                       | Ponds), LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit),<br>and the pipelines associated with LOU 60 (Acid Drain System).                          |
| L-3<br>L-3       | 2, 32, 60              |               |          | SA82-10B<br>SA82-20B                          | 20  | R                          | R                                  | R                                  | ^                              |                        | R                                 | R                         | ^                                       | ^  | ^                                  |                                   |                                   |                                  | R                                | ^                   | ~                                 |                               | В                                     | GW anticipated at ~31 feet bgs; MCfg ~ 30 feet bgs.   |
| L-3              | 2, 32, 60<br>2, 32, 60 |               |          | SA82-29B<br>SA82-30B                          | 29  | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         | х                                       | X  | X                                  |                                   |                                   |                                  | X                                | х                   | х                                 |                               | B,E,F,I,O                             |   |
| L-3              | 2                      | RSAL3         |          | RSAL3-0.0                                     | 0.0   |                            |                                    |                                    | X                              |                        |                                   |                           |   |  | X                                  |                                   |                                   |                                  |                                  |                     |                                   | Х                             |                                       | Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling  |
| L-3<br>L-3       | 2                      | -             |          | RSAL3-0.5B<br>RSAL3-10B                       | 0.5   | X                          | X                                  | X<br>X                             | X                              |                        | X                                 | X<br>X                    | X                                       | X<br>Hold                                | X                                  |                                   |                                   | X                                | X                                |                     |                                   |                               | L                                     | Ponds).<br>GW anticipated at ~32 feet bgs; MCfg ~ 29 feet bgs.  |
| L-3<br>L-3       | 2                      |               |          | RSAL3-20B<br>RSAL3-30B                        | 20<br>30                                    | R                          | R<br>X                             | R<br>X                             | R                              |                        | R<br>X                            | R<br>X                    | X                                       | ×  | R                                  |                                   |                                   |                                  | R                                |                     |                                   |                               | B.L                                   |   |
| L-4              | 32, 60                 | SA189         |          | SA189-0.0                                     | 0.0   | ~ ~                        | ^                                  | ^                                  |                                |                        |                                   |                           | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | ^  |                                    |                                   |                                   |                                  | ^                                |                     |                                   | Х                             |                                       | Boring located to evaluate LOU 60 (Acid Drain System) pipeline/flume route and  |
| L-4<br>L-4       | 32, 60<br>32, 60       | _             |          | SA189-0.5B<br>SA189-10B                       | 0.5   | X X                        | X                                  | X                                  | X                              |                        | X                                 | X X                       | X                                       | R  | X                                  |                                   |                                   | Х                                | X                                |                     |                                   |                               | E,L<br>E,L                            | LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit).<br>GW anticipated at ~31 feet bgs; MCfg ~ 29 feet bgs.  |
| L-4              | 32, 60                 | -<br>         |          | SA189-29B                                     | 29  | X                          | X                                  | Х                                  | X                              |                        | Х                                 | X                         | X                                       |  | X                                  |                                   |                                   |                                  | Х                                |                     |                                   |                               | B,L,P                                 |   |
| L-4<br>L-4       | 2, 32, 60              | RSAL4         |          | RSAL4-0.0<br>RSAL4-0.5B                       | 0.0   | X                          | X                                  | x                                  | X                              |                        | X                                 | X                         | X                                       | x  | X                                  |                                   |                                   | X                                | x                                |                     |                                   | X                             | L,P                                   | Boring located to evaluate LOU 60 (Acid Drain System) pipeline/flume route and<br>as a step-out to LOU 32 (Chromium and Perchlorate Groundwater Remediation       |
| L-4<br>L-4       | 2, 32, 60<br>2, 32, 60 |               |          | RSAL4-10B<br>RSAL4-20B                        | 10<br>20                                    | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         | Х                                       | Hold                                     | X                                  |                                   |                                   |                                  | X                                |                     |                                   |                               | L,P                                   | Unit) and LOU 2 (Open Area South of Trade Effluent Settling Ponds).<br>GW anticipated at ~30 feet bgs; MCfg ~ 30 feet bgs.  |
| L-4              | 2, 32, 60              |               |          | RSAL4-25B                                     | 25  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |   |  | R                                  |                                   |                                   |                                  | R                                |                     |                                   |                               | B                                     | ow anucipated at ~30 reet bys, worg ~ 30 reet bys.  |
| L-4<br>L-5       | 2, 32, 60<br>32, 58    | SA74          |          | RSAL4-28B<br>SA74-0.0                         | 28<br>0.0                                   | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | Х                                       | X  | Х                                  |                                   |                                   |                                  | Х                                |                     |                                   | X                             | B,L,P                                 | Boring located adjacent to new D-1 building to evaluate LOU 58 (AP Plant Area   |
| L-5              | 32, 58                 |               |          | SA74-0.5B                                     | 0.5   | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         | X                                       |  | X                                  |                                   |                                   | Х                                | X                                |                     |                                   |                               | D,L                                   | New Building D-1 Washdown) and LOU 32 (Chromium and Perchlorate   |
| L-5<br>L-5       | 32, 58<br>32, 58       | -             |          | SA74-10B<br>SA74-20B                          | 10<br>20                                    | R                          | R                                  | R                                  | R                              |                        | X<br>R                            | R                         | X                                       |  | X<br>R                             |                                   |                                   |                                  | R                                |                     |                                   |                               | D,L<br>B                              | Groundwater Remediation Unit).<br>GW anticipated at ~31 feet bgs; MCfg ~ 26 feet bgs.   |
| L-5<br>L-5       | 32, 58<br>32, 58       | -             |          | SA74-25B<br>SA74-29B                          | 25<br>29                                    | R                          | R                                  | R                                  | R                              |                        | R                                 | R<br>X                    | X                                       |  | R                                  |                                   |                                   |                                  | R                                |                     |                                   |                               | B<br>B.D.L                            |   |
| L-5<br>L-5       | 32, 58                 | RSAL5         |          | RSAL5-0.0                                     | 0.0   | ^                          | ^                                  | ^                                  | ^                              |                        | ^                                 | ^                         | ^                                       |  | ^                                  |                                   |                                   |                                  | ^                                |                     |                                   | Х                             |                                       | Boring located to evaluate LOU 58 (AP Plant Area New Building D-1 Washdown)   |
| L-5<br>L-5       | 32, 58<br>32, 58       |               |          | RSAL5-0.5B<br>RSAL5-10B                       | 0.5   | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         | X                                       | X<br>Hold                                | X                                  |                                   |                                   | Х                                | X                                |                     |                                   |                               |                                       | and LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit).<br>GW anticipated at ~32 feet bgs; MCfg ~26 feet bgs.   |
| L-5              | 32, 58                 |               |          | RSAL5-20B                                     | 20  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         | ~                                       | TIOIQ                                    | R                                  |                                   |                                   |                                  | R                                |                     |                                   |                               | В                                     |   |
| L-5<br>L-5       | 32, 58<br>32, 58       | -             |          | RSAL5-25B<br>RSAL5-30B                        | 25<br>30                                    | R<br>X                     | R<br>X                             | R<br>X                             | R                              |                        | R<br>X                            | R<br>X                    | х                                       | X  | R<br>X                             |                                   |                                   | -                                | R<br>X                           |                     |                                   |                               | B,D,L                                 |   |
| L-7              | 22, 23                 | RSAL7         |          | RSAL7-0.0<br>RSAL7-0.5B                       | 0.0   |                            | v                                  |                                    |                                |                        | v                                 | v                         |   |  | - V                                |                                   |                                   | - V                              | v                                |                     |                                   | Х                             |                                       | Boring located to evaluate pipeline associated with LOUs 22 and 23 (Ponds   |
| L-7<br>L-7       | 22, 23<br>22, 23       |               |          | RSAL7-10B                                     | 10  | X                          | X                                  | X<br>X                             | X                              |                        | X<br>X                            | X<br>X                    |   | Hold                                     | X                                  |                                   |                                   | X                                | X                                |                     |                                   |                               |                                       | WC-West & WC-East), and for general Site coverage.<br>GW anticipated at ~29 feet bgs; MCfg ~33 feet bgs.  |
| L-7<br>L-7       | 22, 23<br>32           | SA75          |          | RSAL7-27B<br>SA75-0.0                         | 27<br>0.0                                   | X                          | Х                                  | Х                                  | X                              |                        | Х                                 | Х                         |   | Х  | X                                  |                                   |                                   |                                  | Х                                |                     |                                   | X                             | В                                     | Boring located to evaluate LOU 32 (Chromium and Perchlorate Groundwater   |
| L-7              | 32                     |               |          | SA75-0.5B                                     | 0.5   | Х                          | Х                                  | Х                                  | X                              |                        | Х                                 | Х                         |   | R  | Х                                  |                                   |                                   | Х                                | Х                                |                     |                                   |                               |                                       | Remediation Unit).  |
| L-7<br>L-7       | 32<br>32               |               |          | SA75-10B<br>SA75-20B                          | 10<br>20                                    | R                          | X<br>R                             | X<br>R                             | R                              |                        | X<br>R                            | R                         |   | R  | R                                  |                                   |                                   |                                  | R                                |                     |                                   |                               | E<br>B                                | GW anticipated at ~30 feet bgs; MCfg ~26 feet bgs.  |
| L-7<br>L-7       | 32<br>32               |               |          | SA75-24B<br>SA75-28B                          | 24<br>28                                    | R                          | R                                  | R                                  | R<br>X                         |                        | R                                 | R                         |   |  | R                                  |                                   |                                   |                                  | R                                |                     |                                   |                               | B.E                                   |   |
| L-8              | 5                      | RSAL8         |          | RSAL8-0.0                                     | 0.0   | ~                          | ~                                  | ~                                  |                                |                        | ~                                 | Λ                         |   |  | ~                                  |                                   |                                   |                                  | ~                                |                     |                                   | X                             |                                       | Boring located north of LOU 5(Beta Ditch) along Timet boundary as a downgradient  |
| L-8<br>L-8       | 5                      | -             |          | RSAL8-0.5B<br>RSAL8-10B                       | 0.5   | X X                        | X                                  | X                                  | X X                            |                        | X                                 | X X                       |   | X  | X X                                |                                   |                                   | X                                | X                                |                     |                                   |                               |                                       | boring to LOU 5 (Beta Ditch) and for general Site coverage.<br>GW anticipated at ~30 feet bgs; MCfg ~33 feet bgs.   |
| L-8              | 5                      |               |          | RSAL8-20B                                     | 20  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |   |  | R                                  |                                   |                                   |                                  | R                                |                     |                                   |                               | В                                     |   |
| L-8<br>L-8       | 5                      |               |          | RSAL8-28B<br>RSAL8-30B                        | 28<br>30                                    | R                          | R                                  | R                                  | R                              |                        | R                                 | X<br>R                    |   | X  | R                                  |                                   |                                   |                                  | R                                |                     |                                   |                               | B, D<br>A                             |   |
| M-2<br>M-2       | 2                      | RSAM2         |          | RSAM2-0.0<br>RSAM2-0.5B                       | 0.0   | x                          | x                                  | X                                  | X                              |                        | x                                 | X                         | x                                       | ×  | x                                  |                                   | _                                 | X                                | x                                | ×                   | X                                 | X                             |                                       | Boring located north of LOU 5 (Beta Ditch) along Olin (Pioneer) boundary to evaluate<br>potential VOC sources from the west, as a step-out boring for LOU 2 (Open |
| M-2              | 2                      |               |          | RSAM2-10B                                     | 10  | X                          | X                                  | Х                                  | Х                              |                        | X                                 | X                         | X                                       | X  | X                                  |                                   |                                   | ~                                | X                                | X                   | X                                 |                               | E, F                                  | Area South of Trade Effluent Settling Ponds), and for general Site coverage.  |
| M-2<br>M-2       | 2                      |               |          | RSAM2-20B<br>RSAM2-30B                        | 20<br>30                                    | R                          | X<br>R                             | X<br>R                             | R                              |                        | X<br>R                            | R                         | X                                       | Hold                                     | R                                  |                                   |                                   |                                  | R                                |                     |                                   |                               | E<br>B                                | GW anticipated at ~37 feet bgs; MCfg ~26 feet bgs.  |
| M-2<br>M-2       | 2<br>5                 | SA67          |          | RSAM2-35B<br>SA67-0.0                         | 35<br>0.0                                   | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | Х                                       | X  | Х                                  |                                   |                                   |                                  | Х                                | Х                   | Х                                 | X                             | E, F                                  | Boring located south of LOU 5 (Beta Ditch) and to evaluate potential VOC sources  |
| M-2              | 5                      | 3A07          |          | SA67-0.5B                                     | 0.5   | X                          | x                                  | х                                  |                                |                        | х                                 | Х                         | X                                       | X  | х                                  | NS                                | NS                                | х                                | х                                |                     |                                   | ^                             | K<br>K,P                              | from the west.  |
| M-2<br>M-2       | 5                      | -             | 7/08<br> | SA67-10B<br>SA67-20B                          | 10<br>20                                    | X X                        | X                                  | X                                  |                                |                        | X                                 | X X                       | X                                       | Hold                                     | X                                  | NS<br>NS                          | NS<br>NS                          |                                  | X                                |                     |                                   |                               | K<br>D.K                              | GW encountered at 38 feet bgs; MCfg ~26 feet bgs.   |
| M-2              | 5                      |               | 1        | SA67-25B                                      | 25  | X                          | Х                                  | Х                                  |                                |                        | Х                                 | Х                         | Х                                       | Hold                                     | X                                  | NS                                | NS                                |                                  | Х                                |                     |                                   |                               | D,K                                   |   |
| M-2<br>M-2       | 5<br>5                 | -             |          | SA67-30B<br>SA67-35B                          | 30<br>35                                    | X                          | X<br>X                             | X<br>X                             |                                |                        | X                                 | X<br>X                    | X<br>X                                  | Hold<br>X                                | X                                  | NS<br>NS                          | NS<br>NS                          |                                  | X                                |                     |                                   |                               | D,K<br>D,K,P                          |   |
| M-3<br>M-3       | 2                      | SA100         |          | SA100-0.0<br>SA100-0.5B                       | 0.0   | x                          | X                                  | x                                  | x                              |                        | X                                 | X                         | ×                                       | R  | x                                  |                                   |                                   | x                                | x                                |                     |                                   | X                             | E,L                                   | Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling<br>Ponds) and to evaluate potential VOC sources from the west.                       |
| M-3              | 2                      |               |          | SA100-10B                                     | 10  | Х                          | X                                  | Х                                  | Х                              |                        | Х                                 | Х                         | X                                       | R  | Х                                  |                                   |                                   |                                  | X                                |                     |                                   |                               | E,L                                   | GW anticipated at ~32 feet bgs; MCfg ~25 feet bgs.  |
| M-3<br>M-3       | 2                      | -             |          | SA100-20B<br>SA100-30B                        | 20<br>30                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | x                                       |  | R<br>X                             |                                   |                                   |                                  | R<br>X                           |                     |                                   |                               | B,E,L                                 |   |
| M-3              | 2                      | RSAM3         |          | RSAM3-0.0                                     | 0.0   |                            |                                    |                                    |                                |                        |                                   |                           |   |  |                                    |                                   |                                   |                                  |                                  |                     |                                   | X                             |                                       | Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling  |
| M-3<br>M-3       | 2                      |               |          | RSAM3-0.5B<br>RSAM3-10B                       | 0.5<br>10                                   | X                          | X                                  | X                                  | X                              |                        | X<br>X                            | X<br>X                    | X<br>X                                  | X<br>Hold                                | X<br>X                             |                                   |                                   | X                                | X                                | X                   | X                                 |                               |                                       | Ponds).<br>GW anticipated at ~32 feet bgs; MCfg ~25 feet bgs.   |
| M-3<br>M-3       | 2                      |               |          | RSAM3-20B<br>RSAM3-30B                        | 20<br>30                                    | R                          | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | X                                       | x  | R                                  |                                   |                                   |                                  | R<br>X                           | X                   | X                                 |                               | B.D.F.L                               |   |
| M-4              | 2                      | SA69          |          | SA69-0.0                                      | 0.0   |                            |                                    |                                    |                                |                        |                                   |                           |   |  |                                    |                                   |                                   |                                  |                                  | ^                   | ^                                 | X                             |                                       | Boring located north of LOU 5 (Beta Ditch) as a step-out to LOU 2 (Open Area  |
| M-4<br>M-4       | 2                      | -             |          | SA69-0.5B<br>SA69-10B                         | 0.5   | X                          | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                    | X<br>X                                  | R  | X                                  |                                   |                                   | X                                | X                                |                     |                                   |                               |                                       | South of Trade Effluent Settling Ponds) and to investigate for potential offsite VOC<br>sources from the west.  |
| M-4              | 2                      |               |          | SA69-20B                                      | 20  | R                          | R                                  | R                                  |                                |                        | R                                 | R                         | ~                                       |  | R                                  |                                   |                                   |                                  | R                                |                     |                                   |                               | В                                     | GW anticipated at ~31 feet bgs; MCfg ~24 feet bgs.  |
| M-4              | 2                      |               |          | SA69-29B                                      | 29  | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | X                         | Х                                       |  | Х                                  |                                   |                                   |                                  | Х                                |                     |                                   |                               | B,E,I,L                               | J   |

# Table 2 Soil Sampling and Analytical Plan for Area I Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 3 of 7

|                  |                  |               |  | Laboratory :                                | :                          | CAS - K                            | (elso, WA                          |                                |                        |                                   |                           | CAS - R                            | ochester, N                      | (                             |                                    |                                   | CAS - I                           | Houston                          | GEL<br>Charleston, SC            | STL-<br>Denver      | Alpha<br>Analytical<br>Sparks, NV | EMSL<br>Westmont, NJ                    | Rational                            |
|------------------|------------------|---------------|--|---|----------------------------|------------------------------------|------------------------------------|--------------------------------|------------------------|-----------------------------------|---------------------------|------------------------------------|----------------------------------|-------------------------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|----------------------------------|---------------------|-----------------------------------|---|-------------------------------------|
| Grid<br>Location | LOU<br>Number    | Boring<br>No. | Sample ID<br>Number, (note<br>"B" for Phase B) | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>4.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B) | VOCs <sup>3.</sup><br>(EPA 8260B) | Wet<br>Chem <sup>5.</sup> | Total<br>Cyanide<br>(EPA<br>9012A) | Formal-<br>dehyde (EPA<br>8315A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>10.</sup><br>(EPA 8082) | PCBs <sup>10.</sup><br>(EPA 1668) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>8.</sup> | OPPs <sup>13.</sup> | Organic<br>Acids <sup>14.</sup>   | Asbestos<br>11.<br>EPA/540/R-<br>97/028 | for remova<br>of sample<br>from SAF |
| M-4<br>M-4       | 2                | DOANA         | SA69-30B                                       | 30  | R                          | R                                  | R                                  |                                |                        | R                                 | R                         |                                    |                                  |                               | R                                  | k                                 |                                   |                                  | R                                |                     |                                   | V                                       | A                                   |
| M-4              | 2                | RSAM4         | RSAM4-0.0<br>RSAM4-0.5B                        | 0.0   | х                          | Х                                  | Х                                  | Х                              |                        | х                                 | Х                         | Х                                  |                                  | Х                             | Х                                  |                                   |                                   | X                                | Х                                |                     |                                   | X                                       | L                                   |
| M-4<br>M-4       | 2                |               | RSAM4-10B<br>RSAM4-20B                         | 10 20                                       | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    | Х                                  |                                  | Hold                          | X<br>R                             |                                   |                                   |                                  | X<br>R                           |                     |                                   |   | L                                   |
| M-4              | 2                |               | RSAM4-20B<br>RSAM4-30B                         | 30  | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         | X                                  |                                  | X                             | X                                  |                                   |                                   |                                  | X                                |                     |                                   |   | B,D,L                               |
| M-3<br>M-3       | 5<br>5           | SA66          | SA66-0.0<br>SA66-0.5B                          | 0.0   | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |                                    |                                  | R                             |                                    |                                   |                                   | R                                | R                                |                     |                                   | R                                       | H (Area II                          |
| M-3              | 5                |               | SA66-10B                                       | 10  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |                                    |                                  | R                             |                                    |                                   |                                   | K                                | R                                |                     |                                   |   |                                     |
| M-3<br>M-3       | 5<br>5           |               | SA66-20B<br>SA66-30B                           | 20<br>30                                    | R<br>R                     | R<br>R                             | R<br>R                             | R                              |                        | R<br>R                            | R<br>R                    |                                    |                                  |                               |                                    |                                   |                                   |                                  | R<br>R                           |                     |                                   |   |                                     |
| M-3              | 5                |               | SA66-35B                                       | 35  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |                                    |                                  |                               |                                    | *******                           |                                   |                                  | R                                |                     |                                   |   |                                     |
| N-2<br>N-2       | 35<br>35         | SA56          | SA56-0.0<br>SA56-0.5B                          | 0.0   | x                          | x                                  | x                                  | x                              | x                      | x                                 | х                         | x                                  |                                  | R                             | x                                  | x                                 | x                                 | x                                | x                                |                     |                                   | X                                       | C,E,L                               |
| N-2              | 35               |               | SA56-10B                                       | 10  | Х                          | Х                                  | Х                                  | Х                              | Х                      | Х                                 | Х                         | X                                  |                                  | R                             | Х                                  | ~                                 | ~                                 | ~                                | Х                                |                     |                                   |   | E,L                                 |
| N-2<br>N-2       | 35<br>35         |               | SA56-20B<br>SA56-25B                           | 20<br>25                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         | R<br>X                 | R<br>X                            | R<br>X                    | x                                  |                                  |                               | R<br>X                             |                                   |                                   |                                  | R<br>X                           |                     |                                   |   | B<br>B,E,L                          |
| N-2              | 35               |               | SA56-30B                                       | 30  | R                          | R                                  | R                                  | R                              | R                      | R                                 | R                         |                                    |                                  |                               | R                                  |                                   |                                   |                                  | R                                |                     |                                   |   | В                                   |
| N-2<br>N-2       | 35<br>35         |               | SA56-37B<br>SA56-40B                           | <u> </u>                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         | X<br>R                 | X<br>R                            | X<br>R                    | X                                  |                                  |                               | R                                  | X                                 | X                                 |                                  | X<br>R                           |                     |                                   |   | B,C,E,L<br>A                        |
| N-2              | n/a              | RSAN2         | RSAN2-0.0                                      | 0.0   |                            |                                    |                                    |                                |                        |                                   |                           |                                    |                                  |                               |                                    |                                   |                                   |                                  |                                  |                     |                                   | Х                                       | K                                   |
| N-2<br>N-2       | n/a<br>n/a       |               | RSAN2-0.5B<br>∞ RSAN2-10B                      | 0.5   | X<br>X                     | X                                  | X<br>X                             | X                              |                        | X                                 | X                         | X                                  |                                  | X<br>Hold                     | X                                  | X<br>X                            | X                                 | X                                | X                                |                     |                                   |   | C,K,M<br>C,K,M                      |
| N-2              | n/a              |               | RSAN2-25B                                      | 25  | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | X                         | Х                                  |                                  | Hold                          | Х                                  | Х                                 | Х                                 |                                  | Х                                |                     |                                   |   | C,D,K,M                             |
| N-2<br>N-2       | n/a<br>n/a       |               | RSAN2-30B<br>RSAN2-35B                         | 30<br>35                                    | X<br>X                     | X<br>X                             | X                                  | X                              |                        | X                                 | X<br>X                    | X                                  |                                  | Hold<br>X                     | X                                  | X<br>X                            | X                                 |                                  | X                                |                     |                                   |   | C,D,K,M<br>C,D,K,M                  |
| N-2              | n/a              | 0.1.0.7       | RSAN2-40B                                      | 40  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |                                    |                                  |                               | R                                  | R                                 | R                                 |                                  | R                                |                     |                                   |   |                                     |
| N-3<br>N-3       | 54<br>54         | SA85          | SA85-0.0<br>SA85-0.5B                          | 0.0   | x                          | X                                  | x                                  |                                |                        | x                                 | X                         | X                                  | x                                | X                             | x                                  |                                   |                                   | ×                                | X                                | x                   | x                                 | X                                       | F,L                                 |
| N-3              | 54               |               | SA85-10B                                       | 10  | X                          | X                                  | X                                  |                                |                        | X                                 | X                         | X                                  | X                                | Hold                          | X                                  |                                   |                                   |                                  | X                                |                     |                                   |   | L                                   |
| N-3<br>N-3       | 54<br>54         |               | SA85-20B<br>SA85-30B                           | 20<br>30                                    | X<br>R                     | X<br>R                             | X<br>R                             |                                |                        | X<br>R                            | X<br>R                    | Х                                  | R                                | Hold                          | R                                  |                                   |                                   |                                  | X<br>R                           |                     |                                   |   | D,L<br>B                            |
| N-3              | 54               |               | SA85-33B                                       | 33  | X                          | Х                                  | X                                  |                                |                        | X                                 | X                         | Х                                  | X                                | Х                             | Х                                  |                                   |                                   |                                  | X                                | Х                   | Х                                 |   | B,D,F,L                             |
| N-3<br>N-3       | 54<br>38         | RSAN3         | SA85-35B<br>RSAN3-0.0                          | 35<br>0.0                                   | R                          | R                                  | R                                  |                                |                        | R                                 | R                         |                                    | R                                |                               | R                                  |                                   |                                   |                                  | R                                |                     |                                   | X                                       | A                                   |
| N-3              | 38               |               | RSAN3-0.5B                                     | 0.5   | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         | X                                  | X                                | X                             | X                                  |                                   |                                   | Х                                | X                                |                     |                                   |   | L                                   |
| N-3<br>N-3       | 38<br>38         |               | RSAN3-10B<br>RSAN3-20B                         | 10<br>20                                    | X<br>X                     | X                                  | X<br>X                             | X                              |                        | X<br>X                            | X                         | X                                  | X                                | Hold<br>Hold                  | X                                  |                                   |                                   |                                  | X                                |                     |                                   |   | L<br>D,L                            |
| N-3<br>N-3       | 38<br>38         |               | RSAN3-30B<br>RSAN3-32B                         | 30<br>32                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | X                                  | R<br>X                           | X                             | R<br>X                             |                                   |                                   |                                  | R<br>X                           |                     |                                   |   | B<br>B,D,L                          |
| N-3              | 38               |               | RSAN3-40B                                      | 40  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         | ^                                  | R                                | ^                             | R                                  |                                   |                                   |                                  | R                                |                     |                                   |   | A                                   |
| N-4<br>N-4       | 39<br>39         | SA87          | SA87-0.0<br>SA87-0.5B                          | 0.0   | x                          | X                                  | X                                  | X                              |                        | x                                 | X                         | X                                  |                                  | Х                             |                                    | NS                                | NS                                | X                                | x                                |                     |                                   | Х                                       | K<br>D,K,L,P                        |
| N-4              | 39               |               | 8 SA87-0.5B<br>8 SA87-10B                      | 10  | Х                          | Х                                  | Х                                  | Х                              |                        | x                                 | X                         | X                                  |                                  | Hold                          |                                    | NS                                | NS                                | ^                                | Х                                |                     |                                   |   | D,K,L                               |
| N-4<br>N-4       | 39<br>39         |               | SA87-20B<br>SA87-25B                           | 20<br>25                                    | X<br>X                     | X                                  | X<br>X                             | X                              |                        | X<br>X                            | X<br>X                    | X                                  |                                  | Hold<br>Hold                  |                                    | NS<br>NS                          | NS<br>NS                          |                                  | X<br>X                           |                     |                                   |   | D,K,L<br>D,K,L                      |
| N-4              | 39               |               | SA87-30B                                       | 30  | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | X                                  |                                  | Х                             |                                    | NS                                | NŚ                                |                                  | Х                                |                     |                                   |   | D,K,L,P                             |
| N-4<br>N-4       | 39<br>39         | RSAN4         | SA87-40B<br>RSAN4-0.0                          | 40  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |                                    |                                  | R                             |                                    |                                   |                                   |                                  | R                                |                     |                                   | Х                                       | К                                   |
| N-4              | 39               |               | RSAN4-0.5B                                     | 0.5   | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | Х                                  |                                  | Х                             | Х                                  |                                   |                                   | Х                                | Х                                |                     |                                   |   | L                                   |
| N-4<br>N-4       | 39<br>39         |               | RSAN4-10B<br>RSAN4-20B                         | 10 20                                       | X<br>X                     | X<br>X                             | X                                  | X                              |                        | X                                 | X X                       | X                                  |                                  | Hold<br>Hold                  | X                                  |                                   |                                   |                                  | X                                |                     |                                   |   | L<br>D,L                            |
| N-4              | 39               |               | RSAN4-30B                                      | 30  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |                                    |                                  |                               | R                                  |                                   |                                   |                                  | R                                |                     |                                   |   | В                                   |
| N-4<br>N-4       | 39<br>39         |               | RSAN4-31B<br>RSAN4-40B                         | 31<br>40                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    | X                                  |                                  | X                             | R                                  |                                   |                                   |                                  | X<br>R                           |                     |                                   |   | B,D,L<br>A                          |
| 0-2              | 35               | RSAO2         | RSA02-0.0                                      | 0.0   | v                          | v                                  | v                                  |                                | v                      |                                   | ~~~~~                     |                                    |                                  | v                             | X                                  | ····· v                           |                                   |                                  | ····· v                          |                     |                                   | Х                                       | K                                   |
| 0-2<br>0-2       | 35<br>35         |               | RSAO2-0.5B<br>RSAO2-10B                        | 0.5   | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         | X                      | X<br>X                            | X                         | X<br>X                             |                                  | X<br>Hold                     | X                                  | X                                 | X                                 | X                                | X<br>X                           |                     |                                   |   | C,K,L<br>C,K,L                      |
| 0-2<br>0-2       | 35<br>35         |               | RSAO2-20B<br>► RSAO2-30B                       | 20<br>30                                    | X<br>X                     | X                                  | X<br>X                             | X<br>X                         | X<br>X                 | X<br>X                            | X<br>X                    | X<br>X                             |                                  | Hold<br>Hold                  | X<br>X                             | X<br>X                            | X<br>X                            |                                  | X<br>X                           |                     |                                   |   | C,D,K,L<br>C,D,K,L                  |
| 0-2              | 35               |               | RSAO2-33B                                      | 33  | X                          | X                                  | X                                  | X                              | X                      | X                                 | X                         | X                                  |                                  | X                             | X                                  | X                                 | X                                 |                                  | Х                                |                     |                                   |   | C,D,K,L<br>C,D,K,L                  |
| 0-2<br>0-2       | 35<br>n/a        | SA35          | RSAO2-40B<br>SA35-0.0                          | <u>40</u><br>0.0                            | R                          | R                                  | R                                  | R                              | R                      | R                                 | R                         |                                    |                                  | R                             | R                                  | R                                 | R                                 |                                  | R                                |                     |                                   | X                                       | K<br>G                              |
| O-2              | n/a              | 07.00         | SA35-0.5B                                      | 0.5   | Х                          | Х                                  | Х                                  | Х                              | Х                      | Х                                 | Х                         | Х                                  |                                  | Х                             | Х                                  |                                   |                                   | Х                                | Х                                | Х                   | Х                                 | <u> </u>                                | F,G,L                               |
| 0-2<br>0-2       | n/a<br>n/a       |               | SA35-10B<br>SA35-20B                           | 10 20                                       | X<br>X                     | X                                  | X                                  | X                              | X                      | X<br>X                            | X                         | X                                  |                                  | X<br>Hold                     | X                                  |                                   |                                   |                                  | X                                | Х                   | X                                 |   | F,G,L<br>B,F,G,L                    |
| O-2              | n/a              |               | SA35-32B                                       | 32  | X                          | X                                  | X                                  | X                              | X                      | X                                 | X                         | X                                  |                                  | X                             | X                                  |                                   |                                   |                                  | X                                | Х                   | Х                                 |   | B,F,G,L                             |
| 0-2<br>0-2       | 35, 60<br>35, 60 | SA166         | SA166-0.0<br>SA166-0.5B                        | 0.0   | x                          | х                                  | x                                  | x                              | х                      | x                                 | х                         | х                                  |                                  | х                             | x                                  | x                                 | x                                 | x                                | х                                | х                   | x                                 | X                                       | C,D,F,L                             |
| 0-2              | 35, 60           |               | SA166-10B                                      | 10  | Х                          | Х                                  | Х                                  | Х                              | Х                      | Х                                 | Х                         | Х                                  |                                  | Х                             | Х                                  |                                   | ~~~~                              |                                  | Х                                | X                   | X                                 |   | F,L                                 |
| 0-2<br>0-2       | 35, 60<br>35, 60 |               | SA166-20B<br>SA166-30B                         | 20<br>30                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         | X<br>R                 | X<br>R                            | R                         | X                                  |                                  | Hold                          | X<br>R                             |                                   |                                   |                                  | X<br>R                           |                     |                                   |   | D,L<br>B                            |
| O-2              | 35, 60           |               | SA166-31B                                      | 31  | Х                          | Х                                  | Х                                  | Х                              | Х                      | Х                                 | Х                         | Х                                  |                                  | Х                             | Х                                  | Х                                 | Х                                 |                                  | Х                                | Х                   | Х                                 |   | B,C,D,F,L                           |
| 0-2<br>0-3       | 35, 60<br>35     | SA48          | SA166-40B<br>SA48-0.0                          | 40  | R                          | R                                  | R                                  | R                              | R                      | R                                 | R                         |                                    |                                  |                               | R                                  |                                   |                                   |                                  | R                                |                     |                                   | Х                                       | A<br>K                              |
| O-3              | 35               | -             | SA48-0.5B                                      | 0.5   | X                          | X                                  | X                                  | X                              | X                      | X                                 | X                         | X                                  |                                  | Х                             | X                                  | X                                 | X                                 | X                                | Х                                |                     |                                   |   | C,K,L                               |
| 0-3<br>0-3       | 35<br>35         |               | SA48-10B<br>SA48-20B                           | 10<br>20                                    | X<br>X                     | X                                  | X<br>X                             | X                              | X                      | X<br>X                            | X<br>X                    | X                                  |                                  | Hold<br>Hold                  | X                                  | X<br>X                            | X                                 |                                  | X<br>X                           |                     |                                   |   | C,D,K,L<br>C,D,K,L                  |
| O-3              | 35               |               | SA48-30B                                       | 30  | Х                          | Х                                  | Х                                  | Х                              | Х                      | Х                                 | Х                         | Х                                  |                                  | Hold                          | Х                                  | Х                                 | Х                                 |                                  | Х                                |                     |                                   |   | C,D,K,L                             |
| O-3<br>O-3       | 35<br>35         |               | SA48-35B<br>SA48-37B                           | 35<br>37                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         | X<br>R                 | X<br>R                            | X<br>R                    | X                                  |                                  | X<br>R                        | X<br>R                             | X<br>R                            | X<br>R                            |                                  | X<br>R                           |                     |                                   |   | C,D,K,L<br>K                        |
|                  |                  | SA57          | SA57-0.0                                       | 0.0   |                            |                                    | 1                                  | -                              |                        |                                   |                           |                                    | -                                |                               |                                    |                                   |                                   | 1                                |                                  | 1                   | 1                                 | Х                                       | G,K                                 |

# Table 2 Soil Sampling and Analytical Plan for Area I Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 4 of 7

| nale<br>Ioval<br>ples<br>SAP | Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient designations).  |
|------------------------------|---|
|                              | Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling  |
|                              | Ponds) and for general Site coverage.   |
|                              | GW anticipated at ~32 feet bgs; MCfg ~24 feet bgs.  |
|                              |   |
| L                            | Boring located in LOU 5 (Beta Ditch) to evaluate the Beta Ditch and for general   |
| a II)                        | Site coverage.  |
|                              | GW anticipated at ~39 feet bgs; MCfg ~23 feet bgs.  |
|                              | Soil boring can be found in Area II   |
|                              | Soil sample for asbestos analysis was collected in June 2008.   |
|                              | Boring located along western Site boundary to evaluate LOU 35 (former Truck   |
| L                            | Emptying/Dumping Site) and potential offsite VOC sources from the west. PCBs  |
|                              | and TPH-G were detected in Phase A SA09.<br>GW anticipated at ~39 feet bgs; MCfg ~23 feet bgs.  |
| L                            |   |
|                              |   |
| I,L                          |   |
|                              | Boring located along western Site boundary north of LOU 35 (Truck Emptying  |
| М                            | /Dumping Site) to evaluate potential offsite VOC sources  |
| M<br>(,M                     | from the west, and for general Site coverage.<br>GW encountered at 41 feet bgs; MCfg ~22 feet bgs.  |
| ς,ινι<br>ζ,Μ                 | ישאי טווטטעווגטוטע מג דו וטטג שעט, וווטוע ייצב וטטג שעט.  |
| ι,Μ                          |   |
|                              | No soil sample was collected at this depth because groundwater was encountered here.<br>Boring located northwest of AP Lab building to evaluate LOU 54 (AP Plant Area |
|                              | Change House/Laboratory Septic Tank). Dilute formaldehyde titrant was used in   |
|                              | LOU 38 (Former Satellite Accumulation Point, AP Laboratory) and possibly  |
| -                            | discharged to LOU 54 .<br>GW anticipated at ~35 feet bgs; MCfg ~24 feet bgs.  |
| F,L                          |   |
|                              |   |
|                              | Boring located to evaluate LOU 38 (Former Satellite Accumulation Point, AP<br>Laboratory). Dilute formaldehyde titrant was used in the                                |
|                              | AP Laboratory.  |
|                              | GW anticipated at ~34 feet bgs; MCfg ~22 feet bgs.  |
| L                            |   |
|                              |   |
| .,P                          | Boring located at the southeast corner of the AP Maintenance Shop building to<br>evaluate LOU 39 (Satellite Accumulation Point, AP Maintenance Shop).                 |
| L                            | ······································  |
| L                            | GW encountered at 32 feet bgs; MCfg ~21 feet bgs.   |
| .,Р                          |   |
|                              | No soil sample was collected at this depth because groundwater was encountered here.  |
|                              | Boring located to evaluate former drum storage area in LOU 39 (Satellite<br>Accumulation Point, AP Maintenance Shop) and for general Site coverage.                   |
|                              | GW anticipated at ~33 feet bgs; MCfg ~21 feet bgs.  |
| -                            |   |
| ,L                           |   |
|                              |   |
| L                            | Boring located along western boundary of Site to evaluate LOU 35 (Truck<br>Emptying/Dumping Site) and potential offsite VOC sources from the west. PCBs               |
| L                            | and TPH-GRO were detected in Phase A soil boring SA09.  |
| (,L                          | GW encountered at 37.5 feet bgs; MCfg ~20 feet bgs.   |
| (,L<br>(,L                   |   |
|                              | No soil sample was collected at this depth because groundwater was encountered here.  |
| L                            | Boring located along western Site boundary to evaluate potential offsite VOC sources from the west PCBs and TEH-GRO were detected in Phase A soil boring SA09         |
| L                            | from the west. PCBs and TPH-GRO were detected in Phase A soil boring SA09.<br>GW anticipated at ~34 feet bgs; MCfg ~20 feet bgs.                                      |
| Ъ,L                          |   |
| э,L                          | Boring located along western Site boundary to evaluate LOU 35 (Truck Emptying/  |
| F,L                          | Dumping Site), LOU 60 (Acid Drain System), and potential offsite VOC sources  |
|                              | from the west.  |
| -<br>                        | GW anticipated at ~33 feet bgs; MCfg ~31 feet bgs.  |
| F,L                          |   |
|                              | Boring located along western Site boundary to evaluate LOU 35 (Truck Emptying/  |
| Ĺ                            | Dumping Site) and potential offsite VOC sources from the west. PCBs and TPH-GRO   |
| K,L                          | were detected in Phase A soil boring SA09.  |
| (,L<br>(,L                   | GW encountered at 39.5 feet bgs; MCfg ~29 feet bgs.   |
| ς,Ε<br>ζ,Ε                   |   |
| (                            | No soil sample was collected at this depth because groundwater was encountered here.  |
| <b>`</b>                     | Boring added along western Site boundary to evaluate LOU 35 (Truck Emptying/  |

|                   |                  |               |                                    | Laboratory :                   | :                          | CAS - K    | (elso, WA            |                 |                        |                    |                    | CAS - Re         | ochester, NY           |                    |             |                     | CAS - H             | louston                          | GEL<br>Charleston, SC            | STL-<br>Denver      | Alpha<br>Analytical                           | EMSL<br>Westmont, NJ | Rationale                             |   |  |  |  |  |  |  |  |
|-------------------|------------------|---------------|------------------------------------|--------------------------------|----------------------------|------------|----------------------|-----------------|------------------------|--------------------|--------------------|------------------|------------------------|--------------------|-------------|---------------------|---------------------|----------------------------------|----------------------------------|---------------------|---|----------------------|---------------------------------------|---|--|--|--|--|--|--|--|
| Grid<br>Location  | LOU<br>Number    | Boring<br>No. | 명 Sample ID                        | Sample<br>Depths <sup>1.</sup> | Perchlorate<br>(EPA 314.0) |            | Hex Cr <sup>4.</sup> | TPH-<br>DRO/ORO | TPH-GRO<br>(EPA 8015B) | VOCs <sup>3.</sup> | Wet                | Total<br>Cyanide | Formal-<br>dehyde (EPA | OCPs <sup>6.</sup> | SVOCs 7.    | PCBs <sup>10.</sup> | PCBs <sup>10.</sup> | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>8.</sup> | OPPs <sup>13.</sup> | Sparks, NV<br>Organic<br>Acids <sup>14.</sup> | Asbestos             | for removal<br>of samples<br>from SAP | Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient designations).                                      |  |  |  |  |  |  |  |
|                   |                  | NO.           | ៉ី 🖉 "B" for Phase B)              | (ft, bgs)                      |                            | (EPA 6020) | (EPA 7199)           | (EPA 8015B)     |                        | . ,                | Chem <sup>5.</sup> | (EPA<br>9012A)   | 8315A)                 | (8081A)            | (EPA 8270C) | (EPA 8082)          | (EPA 1668)          |                                  |                                  |                     | Acids   | EPA/540/R-<br>97/028 | 0.0.01/1                              |   |  |  |  |  |  |  |  |
| O-3<br>O-3        | 35<br>35         |               | SA57-0.5B<br>SA57-10B              | 0.5<br>10                      | X<br>X                     | X<br>X     | X<br>X               | X<br>X          | X<br>X                 | X<br>X             | X<br>X             | X<br>X           |                        | X<br>Hold          | X<br>X      | X<br>X              | X<br>X              | X                                | X<br>X                           |                     |   |                      | C,D,G,K,L                             | Dumping Site) and potential offsite VOC sources from the west. PCBs and TPH-GRO<br>were detected in Phase A soil boring SA09.                                     |  |  |  |  |  |  |  |
| O-3<br>O-3        | 35<br>35         |               | SA57-20B<br>SA57-30B               | 20<br>30                       | X                          | X<br>X     | X<br>X               | X               | X<br>X                 | X<br>X             | X                  | X                |                        | Hold<br>X          | X<br>X      | X                   | X<br>X              |                                  | X<br>X                           |                     |   |                      | C,D,G,K,L<br>C,D,G,K,L                | GW encountered at 32 feet bgs; MCfg ~21 feet bgs.   |  |  |  |  |  |  |  |
| O-3               | 35               | 0.1.100       | SA57-40B                           | 40                             | R                          | R          | R                    | R               | R                      | R                  | R                  | ~~~~             |                        | R                  | R           | R                   | R                   |                                  | R                                |                     |   | X                    | K                                     | No soil sample was collected at this depth because groundwater was encountered here.  |  |  |  |  |  |  |  |
| O-3<br>O-3        | 64<br>64         | SA180         | SA180-0.0<br>SA180-0.5B            | 0.0                            | x                          | x          | x                    | x               |                        | X                  | X                  | X                |                        | X                  | x           | X                   | x                   | X                                | x                                |                     |   | X                    | K<br>C,K,L                            | Boring located to evaluate soil stain in northern portion of LOU 64 (Koch<br>Materials Company Site).   |  |  |  |  |  |  |  |
| 0-3<br>0-3        | 64<br>64         |               | SA180-10B<br>SA180-20B             | 10<br>20                       | X                          | X          | X<br>X               | X<br>X          |                        | X<br>X             | X                  | X<br>X           |                        | Hold<br>Hold       | X<br>X      | X                   | X<br>X              |                                  | X<br>X                           |                     |   |                      | C,D,K,L<br>C,D,K,L                    | GW encountered at 34.5 feet bgs; MCfg ~22 feet bgs.   |  |  |  |  |  |  |  |
| 0-3               | 64               |               | Φ SA180-30B                        | 30                             | Х                          | X          | Х                    | X               |                        | Х                  | Х                  | X                |                        | Hold               | Х           | X                   | Х                   |                                  | X                                |                     |   |                      | C,D,K,L                               |   |  |  |  |  |  |  |  |
| 0-3<br>0-3        | 64<br>64         | SA181         | SA180-40B<br>SA181-0.0             | 40<br>0.0                      | R                          | ĸ          | R                    | R               |                        | R                  | R                  |                  |                        | ĸ                  | R           | R                   | R                   |                                  | ĸ                                |                     |   | X                    | K<br>K                                | No soil sample was collected at this depth because groundwater was encountered here.<br>Boring located to evaluate soil stain in northern portion of LOU 64 (Koch |  |  |  |  |  |  |  |
| 0-3<br>0-3        | <u>64</u><br>64  |               | SA181-0.5B<br>∞ SA181-10B          | 0.5                            | X<br>X                     | X<br>X     | X<br>X               | X               |                        | X<br>X             | X<br>X             | X<br>X           |                        | X<br>Hold          | X<br>X      | NS<br>NS            | NS<br>NS            | Х                                | X<br>X                           |                     |   |                      | D,K,L,P<br>D,K,L,P                    | Materials Company Site).<br>GW was encountered at 40 feet bgs; MCfg ~21 feet bgs.   |  |  |  |  |  |  |  |
| O-3               | 64               |               | SA181-20B                          | 20                             | Х                          | Х          | Х                    | Х               |                        | Х                  | Х                  | Х                |                        | Hold               | Х           | NS                  | NS                  |                                  | X                                |                     |   |                      | D,K,L,P                               |   |  |  |  |  |  |  |  |
| O-3<br>O-3        | 64<br>64         |               | SA181-30B<br>SA181-35B             | 30<br>35                       | X                          | X          | X                    | X               |                        | X                  | X<br>X             | X                |                        | Hold<br>X          | X           | NS<br>NS            | NS<br>NS            |                                  | X<br>X                           |                     | · · · · · · · · · · · · · · · · · · ·         |                      | D,K,L,P<br>D,K,L,P                    |   |  |  |  |  |  |  |  |
| 0-3<br>0-3        | 64<br>64         | RSAO3         | SA181-37B<br>RSA03-0.0             | <b>37</b><br>0.0               | R                          | R          | R                    | R               |                        | R                  | R                  |                  |                        | R                  | R           |                     |                     |                                  | R                                |                     |   | X                    | К                                     | No soil sample was collected at this depth because groundwater was encountered here.<br>Boring located to evaluate soil stain in northern portion of LOU 64 (Koch |  |  |  |  |  |  |  |
| 0-3               | 64               | KSA03         | RSA03-0.5B                         | 0.5                            | х                          | х          | Х                    | Х               |                        | Х                  | Х                  | х                |                        | Х                  | х           | Х                   |                     | Х                                | Х                                |                     |   |                      | C,L                                   | Materials Company Site).  |  |  |  |  |  |  |  |
| 0-3<br>0-3        | 64<br>64         |               | RSA03-10B<br>RSA03-20B             | 10<br>20                       | X                          | X          | X                    | X               |                        | X<br>X             | X<br>X             | X                |                        | Hold<br>Hold       | X<br>X      |                     |                     |                                  | X                                |                     |   |                      | L<br>D,L                              | GW anticipated at ~33 feet bgs; MCfg ~22 feet bgs.  |  |  |  |  |  |  |  |
| 0-3<br>0-3        | 64<br>64         |               | RSA03-30B<br>RSA03-31B             | 30<br>31                       | R<br>X                     | R<br>X     | R<br>X               | R<br>X          |                        | R<br>X             | R<br>X             | ×                |                        | X                  | R<br>X      | v                   |                     |                                  | R<br>X                           |                     |   |                      | B<br>B,C,D,L                          |   |  |  |  |  |  |  |  |
| 0-3               | 64               |               | RSA03-37B                          | 37                             | R                          | R          | R                    | R               |                        | R                  | R                  | ^                |                        | ^                  | R           | ^                   |                     |                                  | R                                |                     |   |                      | A A                                   |   |  |  |  |  |  |  |  |
| O-3<br>O-3        | 60, 64           | SA176         | SA176-0.0<br>SA176-0.5B            | 0.0                            | x                          | x          | x                    | x               |                        | X                  | X                  | ×                |                        | ×                  | X           |                     |                     | x                                | x                                | X                   | x   | X                    | F,L                                   | Boring located to evaluate LOU 60 (Acid Drain System) pipelines and LOU 64 (Koch<br>Materials Company Site).  |  |  |  |  |  |  |  |
| 0-3               | 60, 64           |               | SA176-10B                          | 10                             | X                          | X          | X                    | X               |                        | X                  | X                  | X                |                        | X                  | Х           |                     |                     |                                  | X                                | X                   | X   |                      | D,F,L                                 | Groundwater anticipated at 39 feet bgs; MCfg ~22 feet bgs.  |  |  |  |  |  |  |  |
| O-3<br>O-3        | 60,64<br>60, 64  |               | SA176-25B<br>SA176-37B             | 25<br>37                       | X                          | X          | X<br>X               | X               |                        | X                  | X                  | X                |                        | Hold<br>X          | X<br>X      |                     |                     |                                  | X<br>X                           | X                   | X   |                      | B,D,L<br>B,D,F,L                      |   |  |  |  |  |  |  |  |
| O-3<br>O-3        | n/a<br>n/a       | SA207         | SA207-0.0<br>SA207-0.5B            | 0.0                            | ×                          | ×          | ×                    | X               |                        | X                  | X                  | X                |                        | X                  | X           | NS                  | NS                  | X                                | X                                |                     |   | X                    | K<br>D,G,K,L,P                        | Boring located to evaluate area between LOU 35 (Truck Emptying/Dumping Site) and<br>LOU 64 (Koch Materials Company Site).   |  |  |  |  |  |  |  |
| O-3               | n/a              |               | 8 SA207-10B                        | 10                             | X                          | X          | X                    | Х               |                        | X                  | X                  | Х                |                        | Hold               | Х           | NS                  | NŚ                  |                                  | X                                |                     |   |                      | D,G,K,L,P                             |   |  |  |  |  |  |  |  |
| O-3<br>O-3        | n/a<br>n/a       |               | SA207-20B<br>SA207-30B             | 20<br>30                       | X                          | X          | X                    | X               |                        | X<br>X             | X<br>X             | X                |                        | Hold<br>Hold       | X           | NS<br>NS            | NS<br>NS            |                                  | X<br>X                           |                     |   |                      | D,G,K,L,P<br>D,G,K,L,P                |   |  |  |  |  |  |  |  |
| O-3<br>O-3        | n/a<br>n/a       |               | SA207-37B<br>SA207-42B             | 37<br>42                       | X                          | X          | X<br>R               | X               |                        | X                  | X                  | Х                |                        | X                  | X           | NS<br>R             | NS<br>R             |                                  | X                                |                     |   |                      | D,G,K,L,P<br>G,K                      | No soil sample was collected at this depth because groundwater was encountered here.  |  |  |  |  |  |  |  |
| 0-4               | 64               | SA46          | SA46-0.0                           | 0.0                            | ĸ                          | ĸ          | ĸ                    | ĸ               |                        | ĸ                  | ĸ                  |                  |                        | ĸ                  | ĸ           | ĸ                   | ĸ                   |                                  | ĸ                                |                     |   | Х                    | К                                     | Boring located to evaluate LOU 64 (Koch Materials Company Site) OCPs added to   |  |  |  |  |  |  |  |
| 0-4<br>0-4        | 64<br>64         |               | SA46-0.5B<br>∞ SA46-10B            | 0.5                            | X                          | X          | X                    | X               |                        | X                  | X<br>X             | X                |                        | X<br>Hold          | X<br>X      | NS<br>NS            | NS<br>NS            | X                                | X                                |                     |   |                      | D,K,L,P<br>D,K,L,P                    | SA46 at the request of NDEP in comments to the Phase A report.<br>GW encountered at 35.5 feet bgs; MCfg ~23 feet bgs.   |  |  |  |  |  |  |  |
| O-4               | 64               |               | SA46-20B                           | 20                             | Х                          | Х          | Х                    | Х               |                        | Х                  | Х                  | X                |                        | Hold               | Х           | NS                  | NS                  |                                  | Х                                |                     |   |                      | D,K,L,P                               |   |  |  |  |  |  |  |  |
| 0-4<br>0-4        | 64<br>64         |               | SA46-30B<br>SA46-31B               | 30<br>31                       | X                          | X          | X                    | X               |                        | X<br>X             | X<br>X             | X<br>X           |                        | Hold<br>X          | X           | NS<br>NS            | NS<br>NS            |                                  | X<br>X                           |                     |   |                      | D,K,L,P<br>D,K,L,P                    |   |  |  |  |  |  |  |  |
| <u>0-4</u><br>0-4 | 64<br>64         | SA47          | SA46-35B<br>SA47-0.0               | 35<br>0.0                      | R                          | R          | R                    | R               |                        | R                  | R                  |                  |                        | R                  | R           | R                   | R                   |                                  | R                                |                     |   | X                    | к<br>к                                | No soil sample was collected at this depth because groundwater was encountered here.<br>Boring located to evaluate LOU 64 (Koch Materials Company Site).          |  |  |  |  |  |  |  |
| O-4               | 64               | 0/11          | SA47-0.5B                          | 0.5                            | X                          | X          | х                    | X               |                        | Х                  | Х                  | X                |                        | Х                  | Х           | NS                  | NS                  | х                                | Х                                |                     |   | ~                    | D,K,L,P                               | GW encountered at 40 feet bgs; MCfg ~20 feet bgs.   |  |  |  |  |  |  |  |
| 0-4<br>0-4        | <u>64</u><br>64  |               | SA47-10B<br>SA47-20B               | 10 20                          | X                          | X          | X                    | X               |                        | X<br>X             | X X                | X                |                        | Hold<br>Hold       | X<br>X      | NS<br>NS            | NS<br>NS            |                                  | X<br>X                           |                     |   |                      | D,K,L,P<br>D,K,L,P                    |   |  |  |  |  |  |  |  |
| 0-4<br>0-4        | 64<br>64         |               | SA47-30B<br>SA47-33B               | 30<br>33                       | X<br>X                     | X<br>X     | X<br>X               | X<br>X          |                        | X<br>X             | X<br>X             | X<br>X           |                        | Hold               | X<br>X      | NS<br>NS            | NS<br>NS            |                                  | X<br>X                           |                     |   |                      | D,K,L,P<br>D,K,L,P                    |   |  |  |  |  |  |  |  |
| O-4               | 64               |               | SA47-35B                           | 35                             | R                          | R          | R                    | R               |                        | R                  | R                  | ^                |                        | R                  | R           | R                   | R                   |                                  | R                                |                     |   |                      | K                                     | No soil sample was collected at this depth because groundwater was encountered here.  |  |  |  |  |  |  |  |
| 0-4<br>0-4        | <u>64</u><br>64  | SA55          | SA55-0.0<br>SA55-0.5B              | 0.0                            | x                          | x          | x                    | x               |                        | X                  | X                  | x                |                        | R                  |             |                     |                     | x                                | x                                |                     |   | X                    | E,L                                   | Located as a downgradient boring to LOU 64 (Koch Materials Company Site) as a<br>step-out to LOU 35 (Truck Emptying/Dumping Site) to investigate for VOCs from    |  |  |  |  |  |  |  |
| 0-4<br>0-4        | 64<br>64         |               | SA55-10B                           | 10 20                          | X                          | X          | X                    | X               |                        | X                  | X                  | X                |                        | R                  | X           |                     |                     |                                  | X                                |                     |   |                      | E,L<br>B                              | potential offsite sources to the west, and for general Site coverage.   |  |  |  |  |  |  |  |
| 0-4               | 64               |               | SA55-20B<br>SA55-25B               | 20                             | X                          | X          | X                    | X               |                        | X                  | X                  | Х                |                        |                    | X           |                     |                     |                                  | к<br>Х                           |                     |   |                      | B,E,L                                 | GW anticipated at ~37 feet bgs; MCfg ~23 feet bgs.  |  |  |  |  |  |  |  |
| 0-4<br>0-4        | 64<br>64         |               | SA55-30B<br>SA55-35B               | 30<br>35                       | R<br>X                     | R<br>X     | R<br>X               | R<br>X          |                        | R<br>X             | R<br>X             | x                |                        |                    | R<br>X      |                     |                     |                                  | R<br>X                           |                     |   |                      | B<br>B,E,L                            |   |  |  |  |  |  |  |  |
| 0-4               | 64               | RSAO4         | RSA04-0.0                          | 0.0                            |                            |            |                      |                 |                        |                    |                    |                  |                        |                    |             | V                   |                     |                                  |                                  |                     |   | Х                    | K                                     | Boring located to evaluate LOU 64 (Koch Materials Company Site).<br>GW encountered at 41 feet bqs: MCfq -23 feet bqs.   |  |  |  |  |  |  |  |
| 0-4<br>0-4        | 64<br>64         |               | RSA04-0.5B<br>RSA04-10B            | 0.5<br>10                      | X<br>X                     | X<br>X     | X                    | X<br>X          |                        | X                  | X                  | X<br>X           |                        | X<br>Hold          | X<br>X      | X X                 | X<br>X              | X                                | X<br>X                           |                     |   |                      | C,K,L                                 | us vv encountered at 41 feet bgs; Mutg ~23 feet bgs.  |  |  |  |  |  |  |  |
| 0-4<br>0-4        | 64<br>64         |               | RSA04-20B<br>RSA04-30B             | 20<br>30                       | X<br>X                     | X<br>X     | X<br>X               | X<br>X          |                        | X<br>X             | X<br>X             | X<br>X           |                        | Hold<br>Hold       | X<br>X      | X                   | X<br>X              |                                  | X<br>X                           |                     |   |                      | C,D,K,L<br>C,D,K,L                    |   |  |  |  |  |  |  |  |
| 0-4               | 64               |               | RSA04-36B                          | 36                             | X                          | X          | X                    | X               |                        | X                  | X                  | X                |                        | X                  | X           | X                   | X                   |                                  | X                                |                     |   |                      | C,D,K,L                               |   |  |  |  |  |  |  |  |
| 0-4<br>0-4        | 60, 64<br>60, 64 | SA182         | SA182-0.0<br>SA182-0.5B            | 0.0                            | x                          | x          | x                    | x               |                        | x                  | X                  | x                |                        | X                  | x           |                     |                     | x                                | х                                | X                   | x   | X                    | F,L                                   | Boring located to evaluate soil stain in northern portion of LOU 64 (Koch Materials<br>Company Site) and LOU 60 (Acid Drain System).                              |  |  |  |  |  |  |  |
| 0-4<br>0-4        | 60, 64<br>60, 64 |               | SA182-10B<br>SA182-20B             | 10 20                          | X                          | X          | X                    | X               |                        | X                  | X                  | X                |                        | X                  | X           |                     |                     |                                  | X                                | X                   | X   |                      |                                       | GW anticipated at ~40 feet bgs; MCfg ~23 feet bgs.  |  |  |  |  |  |  |  |
| O-4               | 60, 64           |               | SA182-25B                          | 25                             | X                          | X          | X                    | Х               |                        | X                  | Х                  | X                |                        | Hold               | Х           |                     |                     |                                  | X                                |                     |   |                      | B,D,L                                 |   |  |  |  |  |  |  |  |
| 0-4<br>0-4        | 60, 64<br>60, 64 |               | SA182-30B<br>SA182-37B             | 30<br>37                       | R                          | R          | R                    | R               |                        | R                  | R                  |                  |                        |                    | R           |                     |                     |                                  | R                                |                     |   |                      | B                                     |   |  |  |  |  |  |  |  |
| 0-4               | 60, 64           | 84400         | SA182-38B                          | 38                             | X                          | X          | X                    | X               |                        | X                  | X                  | X                |                        | Х                  | X           |                     |                     |                                  | Х                                | Х                   | X   | v                    | B,D,F,L                               | ing legated to surfluste spillateig in parthers partice of LOUIS4 (Keek Materials   |  |  |  |  |  |  |  |
| 0-4<br>0-4        | 64<br>64         | SA183         | SA183-0.0<br>SA183-0.5B            | 0.0<br>0.5                     | x                          | x          | x                    | x               |                        | x                  | x                  | X                |                        | Х                  | x           | NS                  | NS                  | x                                | х                                |                     |   | X                    |                                       | ing located to evaluate soil stain in northern portion of LOU 64 (Koch Materials<br>npany Site).  |  |  |  |  |  |  |  |
| 0-4<br>0-4        | 64<br>64         |               | SA183-10B<br>SA183-20B             | 10<br>20                       | X<br>X                     | X<br>X     | X<br>X               | X<br>X          |                        | X<br>X             | X<br>X             | X<br>X           |                        | Hold<br>Hold       | X<br>X      | NS<br>NS            | NS<br>NS            |                                  | X<br>X                           |                     |   |                      | D,K,L,P<br>D,K,L,P                    | GW encountered at ~37.5 feet bgs; MCfg ~20 feet bgs.  |  |  |  |  |  |  |  |
| O-4               | 64               |               | SA183-30B                          | 30                             | Х                          | Х          | Х                    | Х               |                        | Х                  | Х                  | Х                |                        | Hold               | Х           | NS                  | NS                  |                                  | Х                                |                     |   |                      | D,K,L,P                               |   |  |  |  |  |  |  |  |
| 0-4<br>0-4        | 64<br>64         |               | SA183-33B<br>SA183-37B             | 33<br>37                       | X<br>R                     | X<br>R     | X<br>R               | X<br>R          |                        | X<br>R             | X<br>R             | X<br>NS          |                        | X<br>NS            | X<br>NS     | NS                  | NS                  |                                  | X<br>NS                          |                     |   |                      | D,K,L,P<br>K                          | No soil sample was collected at this depth because groundwater was encountered here.  |  |  |  |  |  |  |  |
| Total #:          | Borings:         |               |                                    |                                | 253                        | 253        | 253                  | 243             | 26                     | 253                | 253                | 223              | 8                      | 201                | 248         | 34                  | 32                  | 65                               | 253                              | 27                  | 27  | 65                   | 0                                     |   |  |  |  |  |  |  |  |
| Synthetic P       | ecipitate Lea    | ching Proc    | edure (SPLP) Samples <sup>11</sup> |                                | _                          |            |                      |                 |                        |                    |                    |                  |                        |                    |             |                     |                     |                                  |                                  |                     |   |                      |                                       |   |  |  |  |  |  |  |  |

# Table 2 Soil Sampling and Analytical Plan for Area I Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 5 of 7

|                       |               |                                   |  | Laboratory                                  | :                          | CAS - K                            | lelso, WA                          |                                |                        |                                   |                           | CAS - R                            | ochester, NY                     | ,                             |                                    |                                   | CAS - I                           | Houston                          | GEL<br>Charleston, SC            | STL-<br>Denver      | Alpha<br>Analytical<br>Sparks, NV | EMSL<br>Westmont, NJ                    | J Rationale                          |
|-----------------------|---------------|-----------------------------------|--|---|----------------------------|------------------------------------|------------------------------------|--------------------------------|------------------------|-----------------------------------|---------------------------|------------------------------------|----------------------------------|-------------------------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|----------------------------------|---------------------|-----------------------------------|---|--------------------------------------|
| Grid<br>Location      | LOU<br>Number | Boring<br>Date<br>No.             | Sample ID<br>Number, (note<br>"B" for Phase B) | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>4.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B) | VOCs <sup>3.</sup><br>(EPA 8260B) | Wet<br>Chem <sup>5.</sup> | Total<br>Cyanide<br>(EPA<br>9012A) | Formal-<br>dehyde (EPA<br>8315A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>10.</sup><br>(EPA 8082) | PCBs <sup>10.</sup><br>(EPA 1668) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>8.</sup> | OPPs <sup>13.</sup> | Organic<br>Acids <sup>14.</sup>   | Asbestos<br>11.<br>EPA/540/R-<br>97/028 | for remova<br>of samples<br>from SAP |
| Grid<br>Location      | LOU<br>Number | Phase B<br>Boring<br>No.          | Sample ID<br>Number                            | Sample<br>Depths<br>(ft, bgs)               | Perchlorate<br>(EPA 314.0) | Metals<br>(EPA 6020)               | Hex Cr<br>(EPA 7199)               | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B) | VOCs<br>(EPA 8260B)               | Wet<br>Chemistry          | Total<br>Cyanide<br>(EPA<br>9012A) | Formaldehy<br>de (EPA<br>8315A)  | OCPs<br>(8081A)               | SVOCs<br>(EPA 8270C)               | PCBs<br>(EPA 8082)                | PCBs<br>(EPA 1668)                | Dioxins/<br>Furans               | Radio-<br>nuclides               | OPPs                | Organic<br>Acids                  | Asbestos<br>EPA/540/R-<br>97/028        | Geo-<br>technical<br>Testing         |
| J-3                   | 1, 32         | RSAJ3                             | RSAJ3-10B                                      | 10  | х                          | х                                  | х                                  | х                              |                        | х                                 | х                         | Х                                  |                                  | х                             | х                                  |                                   |                                   |                                  | х                                | х                   | х                                 |   | х                                    |
| J-3                   | 1, 32         | RSAJ3                             | RSAJ3-DDB                                      | DD* = depth (ft)                            | х                          | х                                  | х                                  | х                              |                        | x                                 | х                         | х                                  |                                  | х                             | х                                  |                                   |                                   |                                  | х                                | х                   | х                                 |   | х                                    |
| I-7                   | 22, 23        | RSAI7                             | RSAI7-10B                                      | 10  | x                          | х                                  | x                                  | х                              |                        | x                                 | x                         | х                                  |                                  | Х                             | x                                  |                                   |                                   |                                  | x                                |                     |                                   |   | x                                    |
| I-7                   | 22, 23        | RSAI7                             | RSAI7-DDB                                      | 30  | x                          | х                                  | х                                  | х                              |                        | х                                 | х                         | х                                  |                                  | х                             | х                                  | х                                 | х                                 |                                  | х                                |                     |                                   |   | х                                    |
| M-3                   | 2             | RSAM3                             | RSAM3-10B                                      | 10  | х                          | х                                  | х                                  | х                              |                        | х                                 | х                         | х                                  |                                  | Hold                          | х                                  |                                   |                                   |                                  | х                                |                     |                                   |   | х                                    |
| M-3                   | 2             | RSAM3                             | RSAM3-30B                                      | 30  | x                          | х                                  | х                                  | х                              |                        | x                                 | х                         | x                                  |                                  | х                             | x                                  |                                   |                                   |                                  | x                                | x                   | x                                 |   | x                                    |
| N-2                   | 35            | SA56                              | SA56-10B                                       | 10  | х                          | х                                  | х                                  | Х                              | х                      | х                                 | х                         | х                                  |                                  |                               | ×                                  |                                   | -                                 |                                  | х                                |                     |                                   |   | х                                    |
| N-2                   | 35            | SA56                              | SA56-30B                                       | 37  | x                          | x                                  | x                                  | x                              | x                      | x                                 | x                         | x                                  |                                  |                               | x                                  | x                                 | x                                 |                                  | x                                |                     |                                   |   | x                                    |
| 0-2                   | 35, 60        | SA166                             | SA166-10B                                      | 10  | x                          | х                                  | х                                  | х                              | х                      | х                                 | х                         | х                                  |                                  | х                             | x                                  |                                   |                                   |                                  | х                                | х                   | х                                 |   | x                                    |
| 0-2                   | 35, 60        | SA166                             | SA166-35B                                      | 31  | x                          | х                                  | x                                  | x                              | x                      | x                                 | x                         | x                                  |                                  | х                             | x                                  | x                                 | x                                 |                                  | x                                | x                   | x                                 |   | x                                    |
| O-4                   | 64            | SA182                             | SA182-10B                                      | 10  | x                          | x                                  | x                                  | x                              |                        | ×                                 | х                         | x                                  |                                  | х                             | x                                  |                                   |                                   |                                  | x                                | x                   | x                                 |   | x                                    |
| O-4                   | 64            | SA182                             | SA182-30B                                      | 38  | x                          | x                                  | x                                  | х                              |                        | x                                 | x                         | x                                  |                                  | х                             | x                                  |                                   |                                   |                                  | x                                | x                   | x                                 |   | x                                    |
| Fi                    | eld Samples:  |                                   | •  |   | 265                        | 265                                | 265                                | 255                            | 30                     | 265                               | 265                       | 235                                | 8                                | 116                           | 260                                | 34                                | 32                                | 65                               | 265                              | 27                  | 27                                | 65                                      | 12                                   |
|                       |               | QA/QC Sample<br>Field Duplicate   |  |   | 27                         | 27                                 | 27                                 | 26                             | 3                      | 27                                | 27                        | 24                                 | 1                                | 12                            | 26                                 | 4                                 | 4                                 | 7                                | 27                               | 3                   | 3                                 | 0                                       | 0                                    |
|                       |               | Field Blanks<br>Equipment Rins    | ate Blanks                                     |   | 1                          | 1                                  | 1                                  | 1                              | 1                      | 1                                 | 1                         | 1                                  | 1                                | 1                             | 1                                  | 1                                 | 1                                 | 1                                | 1                                | 1                   | 1                                 | 0                                       | 0                                    |
|                       |               | Trip Blank Sam<br>Matrix Spike (5 |  |   | 0<br>14                    | 0<br>14                            | 0<br>14                            | 0<br>14                        | 0 2                    | 10<br>14                          | 0<br>14                   | 0<br>14                            | 0                                | 0<br>6                        | 0 14                               | 0 2                               | 0                                 | 0 4                              | 0<br>14                          | 0                   | 0 2                               | 0                                       | 0                                    |
| Total Sa              | ample Count:  | Matrix Spike Du                   | olicate (5%)                                   |   | 14<br>322                  | 14<br>322                          | 14<br>322                          | 14<br>311                      | 2<br>39                | 14<br>332                         | 14<br>322                 | 14<br>289                          | 0                                | 6<br>142                      | 14<br><b>316</b>                   | 2<br>44                           | 2<br>42                           | 4<br>82                          | 14<br>322                        | 2<br>36             | 2<br>36                           | 0<br>65                                 | 0                                    |
| NOTES:<br>n/a         |               | Not applicable                    | - boring is not as                             | sociated with a                             | specific LOLL              | but is locate                      | ed to evaluat                      | e soil for dei                 | neral area-v           | vide covera                       | ine                       | •                                  | •<br>•                           |                               | •                                  | •                                 |                                   | •                                | •<br>                            | •                   | •                                 | •                                       | -                                    |
| X                     |               | Sample will be                    | collected and an                               | alyzed.                                     |                            |                                    |                                    | o oon for goi                  |                        |                                   | .90.                      |                                    |                                  |                               |                                    |                                   |                                   |                                  |                                  |                     |                                   |   |                                      |
| Х                     |               |                                   | cates no sample o<br>bestos analysis w         |   |                            | pling progra                       | am.                                |                                |                        |                                   |                           |                                    |                                  |                               |                                    |                                   |                                   |                                  |                                  |                     |                                   |   |                                      |
| DD*                   |               | Sample depth                      | to be determined                               | in the field whe                            | re DD = sam                | ple depth (ft                      | t).                                |                                |                        |                                   |                           |                                    |                                  |                               |                                    |                                   |                                   |                                  |                                  |                     |                                   |   |                                      |
| TPH-GRO<br>TPH-DRO/OF |               |                                   | m hydrocarbons -<br>m hydrocarbons -           | •   | •                          | Range Orga                         | nics.                              |                                |                        |                                   |                           |                                    |                                  |                               |                                    |                                   |                                   |                                  |                                  |                     |                                   |   |                                      |
| SPLP                  |               |                                   | s will be analyzed                             | by EPA method                               | 1312 using                 | two prepara                        | tion methods                       | s: 1) with ext                 | raction fluid          | l #2 (reager                      | nt water at p⊦            | 1 5.00±0.05)                       | , and 2) with                    | n extraction m                | nethod #3 (re                      | agent water);                     | per NDEP.                         |                                  |                                  |                     |                                   |   |                                      |
| NS<br>1.              |               | Not sampled.<br>The 0.5 ft bgs    | sample will be co                              | llected from the                            | 0.0 to 0.5 ft l            | ogs interval.                      | unless the a                       | rea is paved                   | d. If area is          | paved, san                        | nples will be             | collected at                       | 0.5 feet belo                    | ow or from a r                | epresentativ                       | e depth bene                      | ath the pave                      | ement. Alter                     | nately, if an u                  | unpaved ar          | ea is within a                    | a reasonable                            | e distance,                          |
| 2.<br>3.              |               | Metals analys                     | es includes Alumin<br>OC analysis will b       | num, Antimony,                              | Arsenic, Bar               | ium, Berylliu                      | um, Boron, C                       | admium, Ch                     | romium, Co             | balt, Copp                        | er, Iron, Lead            | l, Magnesiur                       |                                  |                               |                                    |                                   |                                   |                                  |                                  |                     |                                   |   |                                      |
| 4.<br>5.              |               | Hexavalent Ch                     | nromium<br>parameters inclu                    | de: alkalinity (tr                          | tal CO H                   |                                    | onia bromide                       | o chlorata c                   | bloride cor            | ductivity n                       | itrate nitrite            | perchlorate                        | nH nhosni                        | nate (total) su               | ulfate surfact                     | ante (MRAe)                       | TDS Total                         | Organic Ca                       | rbon and TS                      | S                   |                                   |   |                                      |
| 6.                    |               |                                   | e Pesticides (inclu                            |   |                            |                                    | onia, bronnue                      | , chiorate, c                  | monue, cor             | iddetivity, fi                    | niale, finite,            | perciniorate                       | , pri, priospi                   |                               | inate, sunaci                      |                                   | , 100, 100                        | Organic Ca                       | iboli, and 10                    |                     |                                   |   |                                      |
| 7.                    |               | Semi-volatile (                   | Organic Compoun                                | ds  |                            |                                    |                                    | ium and Da                     | dium 226 r             | luo Dodiu                         | m 228 by bot              | o ocupting (                       |                                  |                               |                                    |                                   |                                   |                                  |                                  |                     |                                   |   |                                      |
| 8.<br>9.              |               | Dioxins/furans                    | consists of alpha<br>will be analyzed l        | by EPA Method                               | 8290 for all s             | samples. So                        | creening repo                      | orts will be pr                | rovided for §          | 90% of the                        | samples and               | full data pa                       | ckages for 1                     |                               |                                    |                                   |                                   |                                  |                                  |                     |                                   |   |                                      |
| 10.<br>11.            |               |                                   | d biphenyls - Sarr<br>or asbestos analy        |   |                            |                                    |                                    |                                | 8A. Concre             | te surfaces                       | at these loca             | ations will als                    | so include cl                    | hip and/or wip                | be samples p                       | er EPA Regio                      | on 1 SOP fo                       | r Sampling (                     | Concrete in th                   | ne Field (19        | 997).                             |   |                                      |
| 12.                   |               | Geotechnical                      | Tests consist of: I                            | moisture conten                             |                            |                                    |                                    |                                | 22 and C11             | 7-04), Soil                       | Dry Bulk Der              | sity (ASTM                         | D-2937), Gi                      | ain Density (                 | ASTM D-854                         | , Soil-Water I                    | Filled Porosi                     | ty (ASTM D-                      | -2216); Vertic                   | al Hydraul          | ic Conductiv                      | ity (ASTM D                             | -5084/USE                            |
| 13.<br>14.            |               |                                   | norous Pesticides<br>analysis includes t       |   | alytes: 4-Chlo             | orbenzene s                        | ulfonic acid:                      | Benzenesul                     | fonic acid: (          | D,O-Diethvl                       | phosphorodit              | hioic acid: C                      | 0,0-Dimethy                      | lphosphorod                   | thioic acid: a                     | nd Phthalic a                     | icid.                             |                                  |                                  |                     |                                   |   |                                      |
|                       |               | 2. 3                              | ,  |   | ,                          | ono o                              |                                    | 220.100001                     |                        | _,ouiyi                           |                           |                                    | , <u> </u>                       | 1                             |                                    |                                   |                                   |                                  |                                  |                     |                                   |   |                                      |

# Table 2 Soil Sampling and Analytical Plan for Area I Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 6 of 7

| ale<br>oval<br>ples<br>SAP | Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient designations).  |
|----------------------------|---|
| ical<br>ng                 | Location Description and Characterized Area Rationale   |
|                            | Soil sample collected from the outlet of LOU 60 (Acid Drain System) to evaluate leaching potential of Site-   |
|                            | related analytes from Alluvium (Qal) soils. Expected soil type: Sand.<br>Optional sample- only to be collected if soil type is different than at 10 ft bgs. no sample will be collected<br>within the capillary fringe Contact between Qal & MCfg1 is approximately 38 feet bgs. Groundwater is   |
|                            | expected to occur at approximately 31 ft bgs. Expected soil type: Silt.<br>Soil sample collected from the northern portion of of LOU 1 (former Trade Effluent Settling Ponds), LOUs 2<br>& 23 (Ponds WC-West & WC-East), and LOU 32 (Chromium and Perchlorate Groundwater Remediation<br>Unit) to evaluate leaching potential of Site-related analytes from Alluvium (QaI) soils. Expected soil type:   |
|                            | Gravelly Sand.<br>Optional sample- only to be collected if soil type is different than at 10 ft bgs. <b>no sample will be collected</b><br>within the capillary fringe Contact between Qal & MCfg1 is approximately 27 feet bgs. Groundwater<br>encountered at 33 ft bgs. Expected soil type: Silt.   |
|                            | Soil sample collected below LOU 2 (Open Area South of Trade Effluent Settling Ponds) to evaluate leachin<br>potential of Site-related analytes. Expected soil type: Sand.<br>Soil sample collected from below the northern part of LOU 2 (Open Area South of Trade Effluent Settling<br>Ponds) to evaluate leaching potential of Site-related analytes from Muddy Creek Formation - First Fine-<br>Grained Facies (MCfg1) soils. Contact between Qal and MCfg1 is approximately 26 feet bgs. Groundwater<br>anticipated to be at approximately 32 feet bgs. No soil sample will be collected within capillary fringe.<br>Expected soil type: Sit. |
|                            | Soil sample collected from beneath the northwest portion of LOU 35 (Truck Emptying/Dumping Site) to<br>evaluate leaching potential of Site-related analytes. Expected soil type: Gravelly Sand.   |
|                            | Soil sample collected from below beneath the northwest portion of LOU 35 (Truck Emptying/Dumping Site)<br>evaluate leaching potential of Site-related analytes from Muddy Creek Formation - First Fine-Grained Facie<br>(MCfg1) soils. Contact between Qal and MCfg1 is approximately 20 feet bgs. Groundwater anticipated to b<br>at approximately 39 feet bgs. No soil sample will be collected within capillary fringe. Expected soil type: S  |
|                            | Soil sample collected from beneath the northwest portion of LOU 35 (Truck Emptying/Dumping Site) and<br>LOU 60 (former Acid Drain System) to evaluate leaching potential of Site-related analytes. Expected soil<br>type: Sandy Gravel.   |
|                            | Soil sample collected from below beneath the northwest portion of LOU 35 (Truck Emptying/Dumping Site)<br>and LOU 60 (Acid Drain System) to evaluate leaching potential of Site-related analytes from Muddy Creek<br>Formation - First Fine-Grained Facies (MClg1) soils. Contact between Qal and MClg1 is approximately 32<br>feet bgs. Forundwater anticipated to be at approximately 33 feet bgs. No soil sample will be collected withi<br>capillary fringe. Expected soil type: Silt.  |
|                            | Soil sample collected from northeast portion of LOU 64 (Koch Materials Company Site) and LOU 60 (Acid<br>Drain System) to evaluate leaching potential of Site-related analytes. Expected soil type: Gravelly Sand.  |
|                            | Soil sample collected from below beneath the northeast portion of LOU 64 (Koch Materials Company Site)<br>and LOU 60 (Acid Drain System) to evaluate leaching potential of Site-related analytes from Muddy Creek<br>Formation - First Fine-Grained Facies (MCIg1) soils. Contact between Qal and MCIg1 is approximately 20<br>feet bgs. Groundwater anticipated to be at approximately 40 feet bgs. No soil sample will be collected withi<br>capillary fringe. Expected soil type: Sandy Sitt.  |
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|                            |   |
|                            |   |
|                            |   |
|                            |   |
|                            | he sample will be moved to the unpaved area.<br>gsten, Uranium, Vanadium, Zinc  |
|                            |   |
|                            |   |
| JSE                        | PA 9100).   |

|                  |               |               |                 |  | Laboratory                                  |                            | CAS - K                                  | elso, WA                           |                                |                        |             |                           | CAS - R                            | ochester, NY                     | (                             |                                    |                                   | CAS - I                           | Houston                          | GEL<br>Charleston, SC            | STL-<br>Denver      | Alpha<br>Analytical<br>Sparks, NV | EMSL<br>Westmont, NJ                    |                                    |
|------------------|---------------|---------------|-----------------|--|---|----------------------------|--|------------------------------------|--------------------------------|------------------------|-------------|---------------------------|------------------------------------|----------------------------------|-------------------------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|----------------------------------|---------------------|-----------------------------------|---|------------------------------------|
| Grid<br>Location | LOU<br>Number | Boring<br>No. | Date<br>Sampled | Sample ID<br>Number, (note<br>"B" for Phase B) | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Perchlorate<br>(EPA 314.0) | <b>Metals<sup>2.</sup></b><br>(EPA 6020) | Hex Cr <sup>4.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B) |             | Wet<br>Chem <sup>5.</sup> | Total<br>Cyanide<br>(EPA<br>9012A) | Formal-<br>dehyde (EPA<br>8315A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>10.</sup><br>(EPA 8082) | PCBs <sup>10.</sup><br>(EPA 1668) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>8.</sup> | OPPs <sup>13.</sup> | Organic<br>Acids <sup>14.</sup>   | Asbestos<br>11.<br>EPA/540/R-<br>97/028 | for remov<br>of sample<br>from SAF |
| 15.<br>X         | •             |               |                 | les are to be colle<br>indicates items th      |   |                            | naed from T                              | able 2 in the                      | June 2008                      | Area I Work            | Plan origin | ally reviewe              |                                    |                                  |                               |                                    |                                   |                                   | •                                |                                  |                     |                                   | •                                       |                                    |
| R                |               |               |                 | at soil sample, loc                            |   |                            |  |                                    |                                |                        |             |                           |                                    |                                  | eptember 8, 2                 | 2008)                              |                                   |                                   |                                  |                                  |                     |                                   |   |                                    |
| Rationale        | Codes         |               |                 |  |   |                            |  |                                    |                                |                        |             |                           |                                    |                                  |                               |                                    |                                   |                                   |                                  |                                  |                     |                                   |   |                                    |

The soil sample was removed from the sampling plan because the 2008 groundwater data indicates that the water table is likely above or at this depth. Α

- Tronox has chosen to increase the interval between sample depths as discussed with NDEP (October 1, 2008). Soil samples will be collected at the following depths: 0 to 2-inches (asbestos only), 0.5-ft, 10-ft, and the capillary fringe (2-ft above the water table). В Additional samples will be collected if the vertical distance between samples exceeds 20-ft (sample depth will be rounded-off to the closest 5-ft interval). Unless otherwise indicated, soil samples will not be collected at 20, 30 or 40-ft.
- С PCB Aroclor or Aroclor and congener analyses were added to the boring sampling plan per NDEP (May 6, 2008 or July 21, 2008)
- D OCP analysis was added to boring sampling plan per NDEP (May 6, 2008 or July 21, 2008)
- OCP analysis was removed from boring sampling plan per TRX errata submittal (December 19, 2008) Е
- F
- Organophosphorus Pesticides (OPP) and Organic Acids (OA) analyses were added per NDEP (July 21, 2008) Additional boring added per NDEP (May 6, 2008). Sampling plan for boring is consistent with represented LOU packages G
- Boring removed from sampling plan. н
- TPH-DRO/ORO and/or TPH-GRO added per NDEP (May 6,2008) Т
- PCB Aroclor or Aroclor and congener analyses were removed from boring sampling plan per TRX erratta submittal (December 19, 2008) J
- Boring already advanced and sampled ĸ
- Cyanide analysis added to boring sampling plan per NDEP (July 21, 2008) L
- М Cyanide analysis added by TRX
- Ν Depth extended to capillary fringe per NDEP (May 6, 2008)
- 0 SVOC analysis was added to boring sampling plan per NDEP (May 6, 2008)
- PCB analysis was not performed because the soil sample was not collected. PCB analyses was added to the boring sampling plan per NDEP (July 21, 2008), however, boring was drilled prior to July 21, 2008.

### Table 2 Soil Sampling and Analytical Plan for Area I

Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 7 of 7

Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient designations).

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|                   |            |                  |  |   | La                              | boratory       | CAS - Ke                   | elso, WA                           |                                    |                                |                                     |                                   | CAS - Ro                  | ochester, NY                       |                             |                               |                                    |                                   | CAS - H                           | louston                          | GEL<br>Charleston, SC            | STL-<br>Denver      | Alpha<br>Analytical<br>Sparks, NV | EMSL<br>Westmont, NJ                           | PTS<br>Santa Fe<br>Springs, CA | Γ            |
|-------------------|------------|------------------|--|---|---------------------------------|----------------|----------------------------|------------------------------------|------------------------------------|--------------------------------|-------------------------------------|-----------------------------------|---------------------------|------------------------------------|-----------------------------|-------------------------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|----------------------------------|---------------------|-----------------------------------|--|--------------------------------|--------------|
| Grid<br>Location  | Boring No. | Date<br>Sampled  | Sample ID<br>Number, (note "B"<br>for Phase B) | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Matrix<br>Spike/MS<br>Duplicate | SPLP<br>Sample | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>4.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B)              |                                   | Wet<br>Chem <sup>5.</sup> | Total<br>Cyanide<br>(EPA<br>9012A) | Formaldehyde<br>(EPA 8315A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>10.</sup><br>(EPA 8082) | PCBs <sup>10.</sup><br>(EPA 1668) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>8.</sup> | OPPs <sup>13.</sup> | Organic<br>Acids <sup>14.</sup>   | Asbestos <sup>11</sup><br>EPA/540/R-<br>97/028 | Geotechnical<br>Tests          |              |
|                   |            |                  |  | Number of co                                | ontainers p                     | er sample      | 1 - 4 c                    | oz jar                             | 1 - 4 c                            |                                | 1- 40 ml VOA<br>vial w/<br>methanol | 3 VOA vials<br>(TerraCore<br>Kit) |                           |                                    | 2 - 4 oz J                  |                               |                                    |                                   | 1 - 4 c                           |                                  | 1-250 ml jar<br>(plastic)        | 1-4 oz Jar          | 1-4 oz Jar                        | ≥1 kg<br>in plastic<br>baq                     | 2 brass tubes                  |              |
|                   |            |                  |  |   |                                 |                |                            |                                    | Borings a                          | re organized                   | d by grid loo                       | cation as sh                      | own on Plat               | e A - Starting                     | g point is on the           | e northwes                    | stern most                         | grid in Area                      | 1 (H-3) and e                     | ending with                      | the southea                      | stern mos           | t grid in Are                     | a I (O-4).                                     |                                |              |
| H-3<br>H-3        | RSAH3      |                  | RSAH3-0.0<br>RSAH3-0.5B                        | 0.0   |                                 |                | x                          | x                                  | x                                  | x                              |                                     | x                                 | x                         | x                                  |                             | x                             | x                                  |                                   |                                   | x                                | x                                | x                   | x                                 | X  |                                | Bc<br>ea     |
| H-3               |            |                  | RSAH3-0.5BD                                    | 0.5 (dup)                                   |                                 |                | X                          | X                                  | X                                  | X                              |                                     | х                                 | X                         | X                                  |                             | X                             | X                                  |                                   |                                   | X                                | Х                                | X                   | X                                 |  |                                | GV           |
| H-3               | -          |                  | RSAH3-10B                                      | 10  |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | Hold                          | X                                  |                                   |                                   |                                  | X                                |                     |                                   |  |                                |              |
| H-3<br>H-3        | -          |                  | RSAH3-20B<br>RSAH3-32B                         | 20<br>32                                    |                                 |                | X                          | X<br>X                             | X<br>X                             | X                              |                                     | X                                 | X                         | X                                  |                             | Hold<br>X                     | X                                  |                                   |                                   |                                  | X                                | x                   | х                                 |  |                                | 1            |
| I-2               | RSAI2      |                  | RSAI2-0.0                                      | 0.0   |                                 |                |                            |                                    |                                    |                                |                                     |                                   |                           |                                    |                             |                               |                                    |                                   |                                   |                                  |                                  |                     |                                   | X  |                                | Bo           |
| I-2<br>I-2        | -          |                  | RSAI2-0.5B<br>RSAI2-10B                        | 0.5   |                                 |                | X                          | X<br>X                             | X<br>X                             | X                              |                                     | X<br>X                            | X                         | X                                  |                             | X<br>Hold                     | X                                  |                                   |                                   | X                                | X                                |                     |                                   |  |                                | ea<br>G\     |
| I-2<br>I-2        | -          |                  | RSAI2-10B<br>RSAI2-10BD                        | 10 (dup)                                    |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | Hold                          | X                                  |                                   |                                   |                                  | X                                |                     |                                   |  |                                | Gv           |
| I-2               |            |                  | RSAI2-20B                                      | 20  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | х                                 | Х                         | Х                                  |                             | Hold                          | Х                                  |                                   |                                   |                                  | х                                |                     |                                   |  |                                |              |
| I-2<br>I-3        | RSAI3      |                  | RSAI2-31B<br>RSAI3-0.0                         | 31<br>0.0                                   |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Х                             | Х                                  |                                   |                                   |                                  | Х                                |                     |                                   | X  |                                | Во           |
| 1-3               | , KOAID    |                  | RSAI3-0.5B                                     | 0.5   |                                 |                | Х                          | X                                  | Х                                  | Х                              |                                     | Х                                 | X                         | X                                  |                             | X                             | Х                                  |                                   |                                   | X                                | Х                                |                     |                                   | ^  |                                | gе           |
| I-3               | -          |                  | RSAI3-10B                                      | 10  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | X                                 | X                         | X                                  |                             | Hold                          | Х                                  |                                   |                                   |                                  | Х                                |                     |                                   |  |                                | G١           |
| I-3<br>I-3        |            |                  | RSAI3-20B<br>RSAI3-32B                         | 20 32                                       |                                 |                | X<br>X                     | X                                  | X                                  | X<br>X                         |                                     | X<br>X                            | X                         | X                                  |                             | Hold<br>X                     | X                                  |                                   |                                   |                                  | X                                |                     |                                   |  |                                | ł            |
| 1-3               | SA201      | $\vdash$         | SA201-0.0                                      | 0.0   |                                 |                | ^                          | ~                                  | ^                                  | ^                              | <u> </u>                            | ^                                 | ^                         | ^                                  |                             | ^                             | ^                                  |                                   |                                   |                                  | ^                                |                     | 1                                 | X  |                                | Во           |
| I-3               |            |                  | SA201-0.5B                                     | 0.5   |                                 |                | X                          | X                                  | X                                  | Х                              |                                     | X                                 | X                         | X                                  |                             |                               | X                                  |                                   |                                   | Х                                | X                                |                     |                                   |  |                                | an           |
| I-3<br>I-3        | -          |                  | SA201-10B<br>SA201-28B                         | 10<br>28                                    |                                 |                | X                          | X<br>X                             | X<br>X                             | X                              |                                     | X<br>X                            | X<br>X                    | X<br>X                             |                             |                               | X                                  |                                   |                                   |                                  | X<br>X                           |                     |                                   |  |                                | Se<br>GV     |
| 1-3               | -          |                  | SA201-28BD                                     | 28 (dup)                                    |                                 |                | X                          | × X                                | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             |                               | x                                  |                                   |                                   |                                  | X                                |                     |                                   |  |                                | Gv           |
| 1-4               | RSAI4      |                  | RSAI4-0.0                                      | 0.0   |                                 |                |                            |                                    |                                    |                                |                                     |                                   |                           |                                    |                             |                               |                                    |                                   |                                   |                                  |                                  |                     |                                   | X  |                                | Во           |
| <u>l-4</u><br>l-4 | -          |                  | RSAI4-0.5B<br>RSAI4-10B                        | 0.5   |                                 |                | X                          | X<br>X                             | X<br>X                             | X                              |                                     | X                                 | X                         | X                                  |                             | X<br>Hold                     | X                                  |                                   |                                   | X                                | X                                |                     |                                   |  |                                | an<br>Eff    |
| 1-4               | -          |                  | RSAI4-10B                                      | 10  | х                               |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | Hold                          | X                                  |                                   |                                   |                                  | X                                |                     |                                   |  |                                | G۷           |
| 1-4               |            |                  | RSAI4-20B                                      | 20  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | X                                 | Х                         | Х                                  |                             | Hold                          | Х                                  |                                   |                                   |                                  | Х                                |                     |                                   |  |                                |              |
| I-4<br>I-5        | RSAI5      |                  | RSAI4-32B<br>RSAI5-0.0                         | 32  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Х                             | Х                                  |                                   |                                   |                                  | Х                                |                     |                                   | ×  |                                | Во           |
| I-5               | KSAID      |                  | RSAI5-0.0                                      | 0.0   |                                 |                | X                          | X                                  | X                                  | х                              |                                     | X                                 | x                         | X                                  |                             | X                             | X                                  |                                   |                                   | X                                | X                                |                     |                                   | X  |                                | an           |
| I-5               |            |                  | RSAI5-10B                                      | 10  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Hold                          | Х                                  |                                   |                                   |                                  | Х                                |                     |                                   |  |                                | Se           |
| I-5<br>I-5        | -          |                  | RSAI5-10BD<br>RSAI5-28B                        | 10 (dup)<br>28                              |                                 |                | X                          | X<br>X                             | X<br>X                             | X                              |                                     | X                                 | X                         | X                                  |                             | Hold<br>X                     | X                                  |                                   |                                   |                                  | X                                |                     |                                   |  |                                | G۷           |
| 1-5               | RSAI7      |                  | RSAI7-0.0                                      | 0.0   |                                 |                | ~                          | ~                                  | ~                                  | ~                              |                                     | ~                                 | ~                         | ^                                  |                             | X                             | ~                                  |                                   |                                   |                                  | ~                                |                     |                                   | X  |                                | Во           |
| I-7               | -          |                  | RSAI7-0.5B                                     | 0.5   |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Х                             | Х                                  | NS                                | NS                                | Х                                | Х                                |                     |                                   |  |                                | & 2          |
| <u>l-7</u><br>l-7 | ~          | 7/11/08          | RSAI7-10B<br>RSAI7-10B                         | 10 10                                       |                                 | х              | X                          | X<br>X                             | X<br>X                             | X<br>X                         |                                     | X<br>X                            | X                         | X                                  |                             | Hold<br>X                     | X                                  | NS<br>NS                          | NS<br>NS                          |                                  | X<br>X                           |                     |                                   | -  | x                              | Gr<br>SF     |
| I-7               | -          | 1/2              | RSAI7-20B                                      | 20  |                                 | ~              | X                          | X                                  | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | Hold                          | X                                  | NS                                | NS                                |                                  | X                                |                     |                                   |  |                                | GV           |
| I-7               |            |                  | RSAI7-30B                                      | 30  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Х                             | Х                                  | NS                                | NS                                |                                  | Х                                |                     |                                   |  |                                |              |
| I-7<br>J-2        | RSAJ2      |                  | RSAI7-30B<br>RSAJ2-0.0                         | 30<br>0.0                                   |                                 | Х              | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Х                             | Х                                  | NS                                | NS                                |                                  | Х                                |                     |                                   | X  |                                | SF<br>Bo     |
| J-2               | 110/102    |                  | RSAJ2-0.5B                                     | 0.5   |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Х                             | Х                                  |                                   |                                   | Х                                | Х                                |                     |                                   | <u> </u>                                       |                                | (Fo          |
| J-2               |            |                  | RSAJ2-10B                                      | 10  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Х                             | Х                                  |                                   |                                   |                                  | Х                                |                     |                                   |  |                                | G٧           |
| J-2<br>J-2        | -          |                  | RSAJ2-20B<br>RSAJ2-33B                         | 20  |                                 |                | X<br>X                     | X                                  | X                                  | X<br>X                         |                                     | X<br>X                            | X                         | X                                  |                             | Hold<br>X                     | X                                  |                                   |                                   |                                  | X<br>X                           |                     |                                   |  |                                |              |
| J-2               | -          |                  | RSAJ2-33BD                                     | 33 (dup)                                    |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | X                             | X                                  |                                   |                                   |                                  | X                                |                     |                                   |  |                                | 1            |
| J-3               | RSAJ3      |                  | RSAJ3-0.0                                      | 0.0   |                                 |                |                            |                                    |                                    |                                |                                     |                                   |                           |                                    |                             |                               |                                    |                                   |                                   |                                  |                                  |                     |                                   | Х  |                                | Bo           |
| J-3<br>J-3        |            |                  | RSAJ3-0.5B<br>RSAJ3-10B                        | 0.5   |                                 |                | X<br>X                     | X                                  | X                                  | X<br>X                         |                                     | X                                 | X                         | X                                  |                             | x<br>x                        | X                                  |                                   |                                   | Х                                | X                                | X                   | X                                 |  |                                | gei<br>GV    |
| J-3               | 1          |                  | RSAJ3-10B<br>RSAJ3-10B                         | 10  |                                 | х              | X                          | X                                  | X                                  | X                              | <u> </u>                            | X                                 | X                         | X                                  |                             | X                             | X                                  |                                   |                                   |                                  | X                                | x                   | X                                 |  |                                | SP           |
| J-3               |            |                  | RSAJ3-29B                                      | 29  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Х                             | X                                  |                                   |                                   |                                  | Х                                | X                   | Х                                 |  |                                |              |
| J-3<br>J-3        | SA202      | $\left  \right $ | RSAJ3-29DDB<br>SA202-0.0                       | 29<br>0.0                                   |                                 | Х              | Х                          | Х                                  | Х                                  | Х                              | <u> </u>                            | Х                                 | Х                         | Х                                  |                             | Х                             | Х                                  |                                   | ├                                 |                                  | Х                                | Х                   | Х                                 | X  |                                | SP<br>Bo     |
| J-3               | 07202      |                  | SA202-0.0<br>SA202-0.5B                        | 0.5   |                                 |                | х                          | x                                  | х                                  | х                              |                                     | x                                 | х                         | Х                                  |                             |                               | х                                  |                                   |                                   | Х                                | х                                |                     |                                   | ~  |                                | Б0<br>(Cl    |
| J-3               |            |                  | SA202-10B                                      | 10  |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             |                               | X                                  |                                   |                                   |                                  | X                                |                     |                                   |  |                                | Site         |
| J-3<br>J-3        | SA206      | $\vdash$         | SA202-28B<br>SA206-0.0                         | 28  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             |                               | Х                                  |                                   |                                   |                                  | Х                                |                     |                                   | X  |                                | GV<br>Bo     |
| J-3               | 0,200      |                  | SA206-0.5B                                     | 0.5   |                                 |                | х                          | Х                                  | Х                                  | х                              |                                     | х                                 | Х                         | Х                                  |                             |                               | х                                  |                                   |                                   | Х                                | х                                |                     |                                   |  |                                | (foi         |
| J-3               | -          |                  | SA206-10B                                      | 10  |                                 |                | Х                          | Х                                  | Х                                  | X                              |                                     | Х                                 | Х                         | Х                                  |                             |                               | Х                                  |                                   |                                   |                                  | Х                                |                     |                                   |  |                                | Ġ٧           |
| J-3<br>J-3        | -          |                  | SA206-25B<br>SA206-37B                         | 25<br>37                                    |                                 |                | X<br>X                     | X<br>X                             | X                                  | X                              |                                     | X<br>X                            | X                         | X                                  |                             |                               | X                                  |                                   |                                   |                                  | X<br>X                           |                     |                                   |  |                                | l            |
| J-3               | 1          |                  | SA206-37B<br>SA206-37B                         | 37  | x                               |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             |                               | X                                  |                                   |                                   |                                  | X                                |                     |                                   |  |                                | ł            |
| J-5               | RSAJ5      |                  | RSAJ5-0.0                                      | 0.0   |                                 |                |                            |                                    |                                    |                                |                                     |                                   |                           |                                    |                             |                               |                                    |                                   |                                   |                                  |                                  |                     |                                   | X  |                                | Bo           |
| J-5<br>J-5        | -          |                  | RSAJ5-0.5B<br>RSAJ5-10B                        | 0.5   |                                 |                | X<br>X                     | X<br>X                             | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | X<br>Hold                     | X                                  |                                   |                                   | Х                                | X<br>X                           |                     |                                   |  |                                | Gro<br>as    |
| J-5<br>J-5        |            |                  | RSAJ5-10B<br>RSAJ5-19B                         | 10  |                                 |                | × X                        | X                                  | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | X                             | X                                  |                                   |                                   |                                  | x                                |                     |                                   |  |                                | as<br>Pip    |
| J-5               |            |                  | RSAJ5-19BD                                     | 19 (dup)                                    |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | X                             | X                                  |                                   |                                   |                                  | X                                |                     |                                   |  |                                |              |
|                   | RSAJ6      |                  | RSAJ6-0.0<br>RSAJ6-0.5B                        | 0.0   |                                 |                | X                          | X                                  | X                                  | x                              |                                     | x                                 | x                         |                                    |                             | X                             | x                                  |                                   |                                   | x                                | x                                |                     |                                   | Х  |                                | Bo           |
| J-6               | -          |                  | RSAJ6-0.5B<br>RSAJ6-10B                        | 10  |                                 |                | X X                        | X                                  | X                                  | X                              |                                     | X                                 | X                         |                                    |                             | Hold                          | X                                  |                                   |                                   | ^                                | X                                |                     |                                   |  |                                | Gro<br>as    |
| J-6               | 1          |                  | RSAJ6-19B                                      | 19  |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X                         |                                    |                             | X                             | X                                  |                                   |                                   |                                  | X                                |                     |                                   |  |                                | Pip          |
| J-6<br>J-6        | SA127      |                  | SA127-0.0<br>SA127-0.5B                        | 0.0   |                                 |                | х                          | x                                  | х                                  | x                              |                                     | x                                 | x                         |                                    |                             |                               | x                                  |                                   |                                   | х                                | x                                |                     |                                   | X  |                                | Bo<br>bet    |
| J-6               | 1          |                  | SA127-0.5B<br>SA127-0.5B                       | 0.5   | х                               |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X                         |                                    |                             |                               | Х                                  |                                   |                                   | X                                | X                                |                     |                                   |  |                                | GW           |
| J-6               |            |                  | SA127-10B                                      | 10  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х                         |                                    |                             |                               | Х                                  |                                   |                                   |                                  | X                                |                     |                                   |  |                                | l            |
| J-6<br>J-6        | -          |                  | SA127-20B<br>SA127-32B                         | 20  |                                 |                | X                          | X<br>X                             | X<br>X                             | X                              |                                     | X                                 | X                         |                                    |                             |                               | X                                  |                                   |                                   |                                  | X                                |                     |                                   |  |                                | l            |
| J=0               | 1          |                  | UN 121-920                                     | 52  | 1                               |                | ^                          | ~                                  | ^                                  | ^                              | I                                   | · ^                               | ^                         | 1                                  |                             |                               | ^                                  |                                   | 1                                 |                                  | ^                                | 1                   | 1                                 | 1  |                                | <u>ـــــ</u> |

### Table 2 (Field Team Version)

Soil Sampling and Analytical Plan for Area I Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 1 of 5

| Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient designations).  |
|---|
|   |
| Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and as an<br>eastward step-out to LOU 10 (Former Onsite Hazardous Waste Landfill).<br>GW anticipated at ~34 feet bgs; MCfg ~129 feet bgs.   |
| Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and as an<br>eastward step-out to LOU 10 (Former Onsite Hazardous Waste Landfill).<br>GW anticipated at ~33 feet bgs; MCfg ~32 feet bgs.  |
| Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and for<br>general site coverage  |
| GW anticipated at ~34 feet bgs; MCfg ~32 feet bgs.<br>Boring located on the north berm of the GW-11 Pond to evaluate LOU 32 (Chromium   |
| and Perchlorate Groundwater Remediation Unit) and LOU 1 (former Trade Effluent<br>Settling Ponds) and for general site coverage.<br>GW anticipated at ~30 feet bgs; MCfg ~31 feet bgs.  |
| Boring located on the north berm of the GW-11 Pond to evaluate LOU 32 (Chromium<br>and Perchiorate Groundwater Remediation Unit) and LOU 1 (former Trade<br>Effluent Settling Ponds) and for general Site coverage<br>GW anticipated at ~34 feet bgs; MCfg ~23 feet bgs.  |
| Boring located on the north berm of the GW-11 Pond to evaluate LOU 32 (Chromium<br>and Perchlorate Groundwater Remediation Unit) and LOU 1 (former Trade Effluent<br>Settling Ponds) and for general Site coverage.<br>GW anticipated at ~30 feet bgs; MCfg ~23 feet bgs.   |
| Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOUs 22<br>& 23 (Ponds WC-West & WC-East), and LOU 32 (Chromium and Perchlorate<br>Groundwater Remediation Unit).<br>SPLP sample must be of Quaternary Alluvium (Qal) soils.<br>GW encountered at 33 feet bgs; MCfg ~23 feet bgs.  |
| SPLP sample must be of Muddy Creek soils & must be dry. If soil is not dry, don't collect sample.<br>Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 10<br>(Former Onsite Hazardous Landfill) and to investigate potential offsite VOC sources.<br>GW anticipated at ~35 feet bgs; MC/g ~31 feet bgs.  |
| Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and for   |
| general site coverage.<br>GW anticipated at -31 feet bgs.<br>SPLP sample must be of Quaternary Alluvium (Qal) soils.  |
| SPLP sample must be of Muddy Creek soils & must be dry. If soil is not dry, don't collect sample.<br>Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 32<br>(Chromium and Perchlorate Groundwater Remediation Unit), and for general<br>Site coverage.<br>GW anticipated at ~30 feet bgs; MCfg ~28 feet bgs.  |
| Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and LOU 60<br>(former Acid Drain System), and for general Site coverage.<br>GW anticipated at ~39 feet bgs; MCfg ~26 feet bgs.  |
| Boring located east of GW-11 Pond to evaluate LOU 32 (Chromium and Perchlorate<br>Groundwater Remediation Unit) and LOU 1 (former Trade Effluent Settling Ponds),<br>as an upgradient boring to evaluate LOU 22 (Pond WC-West and Associated<br>Piping), and for general Site coverage. GW anticipated at 21 feet bgs; MCfg ~26 feet bgs.   |
| Boring located east of GW-11 Pond to evaluate LOU 32 (Chromium and Perchlorate<br>Groundwater Remediation Unit) and LOU 1 (former Trade Effluent Settling Ponds),<br>as an upgradient boring to evaluate LOU 22 (Pond WC-West and Associated<br>Piping), and for general Site coverage. GW anticipated at ~21 feet bgs; MCfg ~26 feet bgs<br>Derive lower to the excitor works evaluate at the set of the set of the set. |
| Boring located to <b>evaluate white crusty surfac</b> soil east of the pump house<br>between LOUs 22 and 23 (Ponds WC-West and WC-East).<br>GW anticipated at ~34 feet bgs.   |

| Image         Image <th< th=""><th></th><th></th><th></th><th></th><th></th><th>Labor</th><th>ratory CAS</th><th>S - Kel</th><th>elso, WA</th><th></th><th></th><th></th><th></th><th>CAS - R</th><th>Rochester, NY</th><th></th><th></th><th></th><th></th><th>CAS - H</th><th>Houston</th><th>GEL<br/>Charleston, SC</th><th>STL-<br/>Denver</th><th>Alpha<br/>Analytical</th><th>EMSL</th><th>PTS<br/>Santa Fe</th><th></th></th<>  |     |                 |                  |           |        | Labor | ratory CAS | S - Kel       | elso, WA |       |         |                              |                           | CAS - R | Rochester, NY |        |      |   |            | CAS - H | Houston | GEL<br>Charleston, SC | STL-<br>Denver | Alpha<br>Analytical | EMSL             | PTS<br>Santa Fe            |  |
|--|-----|-----------------|------------------|-----------|--------|-------|------------|---------------|----------|-------|---------|------------------------------|---------------------------|---------|---------------|--------|------|---|------------|---------|---------|-----------------------|----------------|---------------------|------------------|----------------------------|--|
| Image: Problem in the second      |     | Boring No. Date | Number, (note "E |           | Spike/ | MS    |            |               |          |       | DRO/ORC | (EPA 8015B)                  |                           |         | Cyanide       |        |      |   |            |         | -       | Radio-                |                | Organic             | Asbestos         | <sup>11.</sup> Geotechnica |  |
| 1     Norm     Norm <t< th=""><th></th><th>ů</th><th>6 for Phase B)</th><th></th><th></th><th></th><th></th><th></th><th>. ,</th><th></th><th></th><th>)<br/>1- 40 ml VOA<br/>vial w/</th><th>3 VOA vials<br/>(TerraCore</th><th>Unem</th><th></th><th></th><th></th><th></th><th>(117/0002)</th><th></th><th></th><th>1-250 ml jar</th><th>1-4 oz Jar</th><th></th><th><u>&gt;</u>1 kg</th><th></th><th>s</th></t<>   |     | ů               | 6 for Phase B)   |           |        |       |            |               | . ,      |       |         | )<br>1- 40 ml VOA<br>vial w/ | 3 VOA vials<br>(TerraCore | Unem    |               |        |      |   | (117/0002) |         |         | 1-250 ml jar          | 1-4 oz Jar     |                     | <u>&gt;</u> 1 kg |                            | s  |
| No.     No. <th></th> <th>RSAJ7</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>methanor</th> <th>nuy</th> <th></th> <th>baq<br/>X</th> <th></th> <th>Boring located east of GW-11 Pond to evaluate LOU 32 (Chromium and Perchlorate</th>   |     | RSAJ7           |                  |           |        |       |            |               |          |       |         | methanor                     | nuy                       |         |               |        |      |   |            |         |         |                       |                |                     | baq<br>X         |                            | Boring located east of GW-11 Pond to evaluate LOU 32 (Chromium and Perchlorate   |
| 1     1 <td></td> <td>9/08</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>~~~~~</td> <td></td> <td></td> <td></td> <td>X<br/>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>   |     | 9/08            |                  |           |        |       |            |               |          | ~~~~~ |         |                              |                           | X<br>X  |               |        |      |   |            |         | X       |                       |                |                     |                  |                            |  |
| LA         Work         Souther state         <  | J-7 | 12              |                  |           |        |       |            |               |          |       |         |                              |                           | X       |               |        |      |   | NS         | NS      |         |                       |                |                     |                  |                            | Piping), and for general Site coverage.  |
| 1     1 <td>J-8</td> <td>RSAJ8</td> <td>RSAJ8-0.0</td> <td>0.0</td> <td></td> <td></td> <td>~</td> <td></td> <td>×</td> <td>^</td> <td>~</td> <td></td> <td></td> <td></td> <td>~</td> <td></td> <td>~</td> <td>~</td> <td></td> <td></td> <td></td> <td>~</td> <td></td> <td></td> <td>X</td> <td></td> <td>Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOUs 22</td>   | J-8 | RSAJ8           | RSAJ8-0.0        | 0.0       |        |       | ~          |               | ×        | ^     | ~       |                              |                           |         | ~             |        | ~    | ~ |            |         |         | ~                     |                |                     | X                |                            | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOUs 22 |
| Image: Product of the stand strain of the stand strain of the strain |     | . 80            |                  |           |        |       |            |               |          |       |         |                              |                           |         |               |        |      |   |            |         | X       |                       |                |                     |                  |                            |  |
| No.     No. </td <td>J-8</td> <td>7/10</td> <td>RSAJ8-20B</td> <td>20</td> <td></td> <td></td> <td>Х</td> <td></td> <td>Х</td> <td>X</td> <td>Х</td> <td></td> <td>Х</td> <td>X</td> <td></td> <td></td> <td>Hold</td> <td>Х</td> <td>NS</td> <td>NS</td> <td></td> <td>Х</td> <td></td> <td></td> <td></td> <td></td> <td></td>   | J-8 | 7/10            | RSAJ8-20B        | 20        |        |       | Х          |               | Х        | X     | Х       |                              | Х                         | X       |               |        | Hold | Х | NS         | NS      |         | Х                     |                |                     |                  |                            |  |
| Desc     No   |     |                 |                  |           |        |       |            |               |          |       |         |                              |                           |         |               |        |      |   |            |         |         |                       |                |                     |                  |                            | -  |
| PAC     PAC <td></td> <td>SA152</td> <td></td> <td></td> <td></td> <td></td> <td>Y</td> <td></td> <td>¥</td> <td>Y</td> <td>Y</td> <td></td> <td>Y</td> <td>Y</td> <td>×</td> <td></td> <td></td> <td>×</td> <td></td> <td></td> <td></td> <td>Y</td> <td></td> <td></td> <td>X</td> <td></td> <td></td>   |     | SA152           |                  |           |        |       | Y          |               | ¥        | Y     | Y       |                              | Y                         | Y       | ×             |        |      | × |            |         |         | Y                     |                |                     | X                |                            |  |
| A-1     V<   | K-2 |                 | SA152-0.5BD      | 0.5 (dup) |        |       | Х          |               | X        | Х     | Х       |                              | Х                         | Х       | X             |        |      | Х |            |         |         | X                     |                |                     |                  |                            | comments to the Phase A report.  |
| L-4         Model<br>  |     | -               |                  |           | -      |       |            |               |          |       |         | -                            |                           |         |               |        |      |   |            |         |         |                       |                |                     |                  |                            | GW anticipated at ~36 feet bgs; MCfg ~31 feet bgs.                               |
| No     <   | K-2 | DCAKO           |                  |           |        |       | Х          |               | Х        | Х     | Х       |                              | Х                         | Х       | Х             |        |      | Х |            |         |         | Х                     |                |                     | ×                |                            |  |
| Display         No. 1         No. 1         No. 1         No. 2         No.2 <t< td=""><td>K-2</td><td>NOANZ</td><td>RSAK2-0.5B</td><td>0.5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>х</td><td></td><td></td><td></td><td>^</td><td></td><td>Ponds) and to evaluate potential offsite VOC source to the west.</td></t<>   | K-2 | NOANZ           | RSAK2-0.5B       | 0.5       |        |       |            |               |          |       |         |                              |                           |         |               |        |      |   |            |         | х       |                       |                |                     | ^                |                            | Ponds) and to evaluate potential offsite VOC source to the west.                 |
| Desc         Particip         Particip         No.         No.        No.        No. <t< td=""><td></td><td>80,</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>GW encountered at 40.5 feet bgs; MCfg ~30 feet bgs.</td></t<>  |     | 80,             |                  |           |        |       |            |               |          |       |         |                              |                           |         |               |        |      |   |            |         |         |                       |                |                     |                  |                            | GW encountered at 40.5 feet bgs; MCfg ~30 feet bgs.                              |
|  | K-2 | 7/11.           | RSAK2-20BD       | 20 (dup)  |        |       | Х          |               | X        | Х     | Х       |                              | X                         | x       | X             | •      | Hold | Х | NS         | NS      |         | Х                     |                |                     |                  |                            | -  |
| EXA         BAR         BAR         BAR         BAR         BAR         C        C <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>~</td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td></th<>   |     |                 |                  |           |        |       |            |               |          | ~     |         |                              |                           | X       |               |        |      |   |            |         |         |                       |                |                     |                  |                            | -  |
| No.         State         S  |     | C A 00          |                  |           |        |       | Х          |               | Х        | Х     | Х       |                              | Х                         | Х       | Х             |        | Х    | Х | NS         | NS      |         | Х                     |                |                     | ×                |                            | Paring located parts (downgradiant) of LOU 2 (Open Area South of Trade Effluent  |
| KC         Model         Base of a                         | K-3 | SAGO            | SA88-0.5B        | 0.5       |        |       | х          |               | x        | х     | х       |                              | х                         | х       | X             |        |      |   |            |         | X       | х                     |                |                     | ^                |                            | Settling Ponds) and south (upgradient) of LOU 1 (former Trade Effluent Settling  |
| Hole         Hole         Hole         K   |     |                 |                  |           |        |       |            |               |          |       |         |                              |                           |         |               |        |      |   |            |         |         |                       |                |                     |                  |                            |  |
| King     Visite     Real     Gene     Constrained     Real     Constrained     Real     Constrained     Real     Constrained     Real     Constrained     Real  | K-3 |                 | SA88-32B         | 32        |        |       | X          |               |          | X     | X       |                              |                           |         |               |        |      |   |            |         |         | X                     |                |                     |                  |                            | GW anticipated at ~34 feet bgs; MCfg ~31 feet bgs.                               |
| KS     V     RSS     0     X     X     X     X     X     N   |     | RSAK3           |                  |           |        |       | x          |               | X        | x     | x       |                              | X                         | X       | X             |        | x    | x |            |         | X       | x                     |                |                     | X                |                            |  |
| K3         V-1         BSM338         31         V         X        X        X         X<  | K-3 |                 | RSAK3-10B        | 10        |        |       | Х          |               | Х        |       |         |                              | Х                         | *       |               | ······ |      | Х |            |         |         |                       |                |                     |                  |                            | Unit).   |
| K-3         Market B         65         X         X         X         X         X         X         X         X         X         Market B         Prob. 10.03 (Drama Act Impact B   |     |                 |                  |           |        |       |            |               |          |       |         |                              |                           |         |               |        |      |   |            |         |         |                       |                |                     |                  |                            | _GW anticipated at ~33 feet bgs; MCfg ~34 feet bgs.                              |
| K3     Value     R343-06     10     X  |     | SA134           |                  |           |        |       | Y          |               | Y        | Y     | Y       |                              | Y                         | Y       | Y             |        |      | × |            |         | Y       | Y                     |                |                     | X                |                            |  |
| K3         K3<   | K-3 |                 | SA134-10B        | 10        |        |       | Х          |               | Х        | X     | Х       |                              | Х                         | X       | X             |        |      | Х |            |         | ~       | X                     |                |                     |                  |                            | and LOU 60 (former Acid Drain System).   |
| K-1         R-1         R-1 <td></td> <td>-</td> <td></td> <td>******</td> <td></td> <td>GW anticipated at ~33 feet bgs; MCfg ~31 feet bgs.</td>   |     | -               |                  |           |        |       |            |               |          |       |         |                              |                           | ******  |               |        |      |   |            |         |         |                       |                |                     |                  |                            | GW anticipated at ~33 feet bgs; MCfg ~31 feet bgs.                               |
| K-4         V         R BAK-3.8         0.5         V         X        X <th< td=""><td>K-3</td><td>DOAKA</td><td></td><td>31 (dup)</td><td></td><td></td><td>Х</td><td></td><td></td><td>Х</td><td></td><td></td><td></td><td>Х</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td>Parise leasts the authority I OU 20 (Observices and Devolution) of Constraints</td></th<>  | K-3 | DOAKA           |                  | 31 (dup)  |        |       | Х          |               |          | Х     |         |                              |                           | Х       |               |        |      |   |            |         |         |                       |                |                     | X                |                            | Parise leasts the authority I OU 20 (Observices and Devolution) of Constraints   |
| K4         Value         R BAX4-100         10         X   | K-4 | KOAK4           | RSAK4-0.5B       |           |        |       | Х          |               | x        | х     | х       |                              |                           | х       | X             |        | x    |   |            |         | х       | x                     |                |                     | ^                |                            | Remediation Unit) and as an upgradient boring to LOU 1(former Trade Effluent     |
| K4         RsAk4208         20         V         X        X        X         X<  |     | -               |                  |           | _      |       |            |               |          |       |         | -                            |                           |         |               |        |      |   |            |         | X       |                       |                |                     |                  |                            |  |
| K-5         R5A         R5A <td>K-4</td> <td></td> <td>RSAK4-20B</td> <td>20</td> <td></td> <td></td> <td>Х</td> <td></td> <td>Х</td> <td>X</td> <td>Х</td> <td></td> <td>х</td> <td>X</td> <td>x</td> <td></td> <td>Hold</td> <td>Х</td> <td></td> <td></td> <td></td> <td>Х</td> <td></td> <td></td> <td></td> <td></td> <td></td>   | K-4 |                 | RSAK4-20B        | 20        |        |       | Х          |               | Х        | X     | Х       |                              | х                         | X       | x             |        | Hold | Х |            |         |         | Х                     |                |                     |                  |                            |  |
| K-5         K-5         K-5         K-5         K-5         K-7         K-7 <td></td> <td>RSAK5</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td>Х</td> <td></td> <td>Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and</td>   |     | RSAK5           |                  |           |        |       | X          |               | X        | X     | X       |                              | X                         | X       | X             |        | X    | X |            |         |         | X                     |                |                     | Х                |                            | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and      |
| K-5         R-8AK-528         22         X <t< td=""><td>K-5</td><td></td><td>RSAK5-0.5B</td><td>0.5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td>Х</td><td></td><td></td><td></td><td></td><td></td><td>LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit).</td></t<>   | K-5 |                 | RSAK5-0.5B       | 0.5       |        |       |            |               |          |       |         |                              |                           | -       |               |        |      |   |            |         | Х       |                       |                |                     |                  |                            | LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit).                  |
| K-6         SA76-00         0.0  | K-5 |                 | RSAK5-22B        | 22        |        |       | X          |               | X        | X     | X       |                              | X                         | X       | X             |        | Х    | Х |            |         |         |                       |                |                     |                  |                            |  |
| K-6         SA76-58         0.5         V         X        X        X         X  |     | SA76            |                  |           | Х      |       | X          | $\rightarrow$ | Х        | X     | X       |                              | Х                         | Х       | X             |        | Х    | Х |            |         |         | Х                     |                |                     | X                |                            | Boring located north of groundwater recharge trenches to evaluate LOU 1 (former  |
| K-6         SA76-108         10         X <th< td=""><td>K-6</td><td></td><td>SA76-0.5B</td><td>0.5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Trade Effluent Settling Ponds) and LOU 32 (Chromium and Perchlorate Groundwater</td></th<>   | K-6 |                 | SA76-0.5B        | 0.5       |        |       |            |               |          |       |         |                              |                           |         |               |        |      |   |            |         |         |                       |                |                     |                  |                            | Trade Effluent Settling Ponds) and LOU 32 (Chromium and Perchlorate Groundwater  |
| K-6         RSAK6         0.0 </td <td>K-6</td> <td>1</td> <td>SA76-10B</td> <td>10</td> <td></td> <td></td> <td>Х</td> <td></td> <td>Х</td> <td>Х</td> <td>X</td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td>^</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td>  | K-6 | 1               | SA76-10B         | 10        |        |       | Х          |               | Х        | Х     | X       |                              | X                         | X       |               |        |      | X |            |         | ^       | X                     |                |                     |                  |                            |  |
| K-6         K-7         K-7 <td></td> <td>RSAK6</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>_</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td>Х</td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td>Boring located south of groundwater recharge trenches to evaluate LOLL1 (former</td>  |     | RSAK6           |                  |           |        |       | X          | _             | X        | X     | X       |                              | Х                         | X       |               |        |      | X |            |         |         | X                     |                |                     | X                |                            | Boring located south of groundwater recharge trenches to evaluate LOLL1 (former  |
| K-6         RSAK6-24B         24         X <t< td=""><td>K-6</td><td></td><td>RSAK6-0.5B</td><td>0.5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Х</td><td></td><td></td><td></td><td></td><td></td><td>Trade Effluent Settling Ponds) and LOU 32 (Chromium and Perchlorate Groundwater</td></t<>  | K-6 |                 | RSAK6-0.5B       | 0.5       |        |       |            |               |          |       |         |                              |                           |         |               |        |      |   |            |         | Х       |                       |                |                     |                  |                            | Trade Effluent Settling Ponds) and LOU 32 (Chromium and Perchlorate Groundwater  |
| K-7         RSAK7-0.0         0.0         C        C <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>  |     |                 |                  |           |        |       |            |               |          |       |         |                              |                           |         |               |        |      |   |            |         |         |                       |                |                     |                  |                            |  |
| K-7         K-7 <td>K-7</td> <td>RSAK7</td> <td>RSAK7-0.0</td> <td>0.0</td> <td></td> <td>NC</td> <td>NC</td> <td>~</td> <td></td> <td></td> <td></td> <td>Х</td> <td></td> <td>Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 32</td>   | K-7 | RSAK7           | RSAK7-0.0        | 0.0       |        |       |            |               |          |       |         |                              |                           |         |               |        |      |   | NC         | NC      | ~       |                       |                |                     | Х                |                            | Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 32  |
| K-7         R         RAK7-24B         24         X <th< td=""><td>K-7</td><td>80/(</td><td>RSAK7-10B</td><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Hold</td><td>Х</td><td>NS</td><td>NS</td><td></td><td></td><td></td><td></td><td></td><td></td><td>associated with LOUs 22 and 23 (Ponds WC-West &amp; WC-East).</td></th<>   | K-7 | 80/(            | RSAK7-10B        | 10        |        |       |            |               |          |       |         |                              |                           |         |               |        | Hold | Х | NS         | NS      |         |                       |                |                     |                  |                            | associated with LOUs 22 and 23 (Ponds WC-West & WC-East).                        |
| K-7         K-7         RSAK7-27B         27         X         X         X         X         X         X         X         X         X         X         X         NS         NS         NS         X         X         X         X         X         X         X         X         X         X         X         X         NS         <  |     | 7/10            |                  |           |        |       |            |               |          |       |         |                              |                           |         |               |        |      |   |            |         |         |                       |                |                     |                  |                            | GW encountered at ~32 feet bgs; MCfg ~26 feet bgs.                               |
| K-8         RSAK8-05B         0.5         X         <  | K-7 |                 | RSAK7-27B        | 27        |        |       |            |               |          |       |         |                              |                           |         |               |        |      |   |            |         | ······  |                       |                |                     |                  |                            |  |
| K8         RSAK8-10B         10         X <th< td=""><td></td><td>RSAK8</td><td></td><td></td><td></td><td></td><td>x</td><td></td><td>X</td><td>x</td><td>x</td><td></td><td>x</td><td>x</td><td></td><td></td><td>x</td><td>x</td><td></td><td></td><td>x</td><td>x</td><td></td><td></td><td>X</td><td></td><td></td></th<>   |     | RSAK8           |                  |           |        |       | x          |               | X        | x     | x       |                              | x                         | x       |               |        | x    | x |            |         | x       | x                     |                |                     | X                |                            |  |
| K-8         RSAK8-27BD         27 (dup)         X  | K-8 |                 | RSAK8-10B        | 10        |        |       | Х          | ~~~~~         | X        | X     | Х       |                              | Х                         |         |               |        |      | Х |            |         |         | Х                     |                |                     |                  |                            | Ponds), and for general Site coverage.   |
|  | K-8 |                 | RSAK8-27BD       | 27 (dup)  |        |       |            |               |          |       |         |                              |                           |         |               |        |      |   |            |         |         |                       |                |                     |                  |                            |  |
|  |     | RSAL2           |                  |           |        |       | v          |               | x        | x     | y       |                              | ×                         | ×       | x             |        | ×    | x | NS         | NS      | ×       | x                     |                |                     | Х                |                            |  |
| L-2 w RSAL2-0.5B 0.5 X X X X X X X X X X X X X X X X X X X   | L-2 |                 | RSAL2-0.5B       | 0.5       | х      |       | X          |               | X        |       | X       |                              | X                         | ••••••  |               |        |      | X | NS         | NS      | X       | Х                     |                |                     |                  |                            |  |
| L-2     9     RSAL2-10B     10     X     X     X     X     X     X     NS     NS     X       L-2     10     10     X     X     X     X     X     NS     NS     X     X   |     | 41/0            |                  |           |        |       |            |               |          |       |         |                              |                           |         |               |        |      |   |            |         |         |                       |                |                     |                  |                            | -  |
| L-2 KSAL2-20BD 20 (dup) X X X X X X X X X X X X X X X X X X X  | L-2 |                 | RSAL2-20BD       | 20 (dup)  |        |       | Х          |               | Х        | Х     | Х       |                              | Х                         | X       | X             |        | Hold | Х | NS         | NS      |         | Х                     |                |                     |                  |                            |  |
| L-2     RSAL2-30B     30     X     X     X     X     X     X     X     X     N     NS     NS     X     X     I       L-2     RSAL2-37B     37     X     X     X     X     X     X     X     X     X     I     I  |     |                 |                  |           |        |       |            |               |          |       |         |                              |                           | ••••••  |               |        |      |   |            |         |         |                       |                |                     |                  |                            | -  |

# Table 2 (Field Team Version) Soil Sampling and Analytical Plan for Area I Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 2 of 5

|                   |              |                                    |                                | La                 | boratory       | CAS - Ke                   | elso, WA                           |                                    |                        |                         |                                   | CAS - Ro                                | chester, NY              |                             |                               |          |                                   | CAS - H                           | louston                          | GEL<br>Charleston, SC            | STL-<br>Denver      | Alpha<br>Analytical                           | EMSL<br>Westmont, NJ                  | PTS<br>Santa Fe                      |   |
|-------------------|--------------|------------------------------------|--------------------------------|--------------------|----------------|----------------------------|------------------------------------|------------------------------------|------------------------|-------------------------|-----------------------------------|---|--------------------------|-----------------------------|-------------------------------|----------|-----------------------------------|-----------------------------------|----------------------------------|----------------------------------|---------------------|---|---------------------------------------|--------------------------------------|---|
| Grid              | Boring No. 🖁 | Sample ID<br>Number, (note "B"     | Sample<br>Depths <sup>1.</sup> | Matrix<br>Spike/MS | SPLP<br>Sample | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>4.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO        | TPH-GRO<br>(EPA 8015B)  | VOCs <sup>3.</sup><br>(EPA 8260B) | Wet<br>Chem <sup>5.</sup>               | Total<br>Cyanide<br>(EPA | Formaldehyde<br>(EPA 8315A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs 7. | PCBs <sup>10.</sup><br>(EPA 8082) | PCBs <sup>10.</sup><br>(EPA 1668) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>8.</sup> | OPPs <sup>13.</sup> | Sparks, NV<br>Organic<br>Acids <sup>14.</sup> | Asbestos <sup>11.</sup><br>EPA/540/R- | Springs, CA<br>Geotechnical<br>Tests | Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient designations).  |
|                   |              | ທີ່ for Phase B)                   | (ft, bgs)<br>Number of c       | Duplicate          | •              | . ,                        | . ,                                | 1-4 c                              | (EPA 8015B)<br>oz. Jar | 1- 40 ml VOA<br>vial w/ | 3 VOA vials<br>(TerraCore         |   | 9012A)                   | 2 - 4 oz J                  | . ,                           | (,       | (,                                | 1 - 4 0                           |                                  | 1-250 ml jar<br>(plastic)        | 1-4 oz Jar          | 1-4 oz Jar                                    | 97/028<br><u>≥</u> 1 kg<br>in plastic | 2 brass tubes                        |   |
| L-3               | SA82         | SA82-0.0<br>SA82-0.5B              | 0.0                            |                    |                | x                          | ×                                  | ×                                  | x                      | methanol                | Kit)                              | X                                       | x                        |                             | x                             | x        |                                   |                                   | x                                | (,,                              | ~                   | x   | bag<br>X                              |                                      | Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling<br>Ponds), LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit),   |
| L-3<br>L-3<br>L-3 |              | SA82-0.5B<br>SA82-0.5B<br>SA82-10B | 0.5                            | X                  |                | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                 |                         | X<br>X                            | ×<br>X<br>X                             | X<br>X                   |                             | ×<br>X<br>X                   | X<br>X   |                                   |                                   | X                                | X<br>X                           | X<br>X<br>X         | X<br>X  | -                                     |                                      | Fonds), LOG 32 (Chromium and Percinotale Gromowaler Remediation Only),<br>and the pipelines associated with LOG (06 (Acid Drain System).<br>GW anticipated at ~31 feet bgs; MCfg ~ 30 feet bgs. |
| L-3<br>L-3        | RSAL3        | SA82-29B<br>RSAL3-0.0              | 29<br>0.0                      |                    |                | Х                          | Х                                  | Х                                  | Х                      |                         | Х                                 | Х                                       | Х                        |                             | Х                             | Х        |                                   |                                   |                                  | Х                                | Х                   | Х   | X                                     |                                      | Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling  |
| L-3               |              | RSAL3-0.5B<br>RSAL3-10B            | 0.5                            |                    |                | X<br>X                     | X<br>X                             | X                                  | X<br>X                 |                         | X<br>X                            | X                                       | X<br>X                   |                             | X<br>Hold                     | X<br>X   |                                   |                                   | х                                | X<br>X                           |                     |   |                                       |                                      | GW anticipated at ~32 feet bgs; MCfq ~ 29 feet bgs.   |
| L-3<br>L-3        | -            | RSAL3-30B                          | 30                             |                    |                | X                          | X                                  | X                                  | X                      |                         | X                                 | X                                       | X                        |                             | X                             | X        |                                   |                                   |                                  | X                                |                     |   |                                       |                                      |   |
| L-4<br>L-4        | SA189        | SA189-0.0<br>SA189-0.5B            | 0.0                            |                    |                | x                          | x                                  | X                                  | x                      |                         | x                                 | X                                       | x                        |                             |                               | x        |                                   |                                   | x                                | x                                |                     |   | X                                     |                                      | Boring located to evaluate LOU 60 (Acid Drain System) pipeline/flume route and<br>LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit).   |
| L-4<br>L-4        |              | SA189-10B<br>SA189-29B             | 10<br>29                       |                    |                | X<br>X                     | X                                  | X                                  | X                      |                         | X                                 | X                                       | X                        |                             |                               | X        |                                   |                                   |                                  | X                                |                     |   |                                       |                                      | GW anticipated at ~31 feet bgs; MCfg ~ 29 feet bgs.   |
| L-4<br>L-4        | RSAL4        | RSAL4-0.0<br>RSAL4-0.5B            | 0.0                            |                    |                | x                          | ×                                  | ×                                  | x                      |                         | x                                 | ×                                       | x                        |                             | X                             | X        |                                   |                                   | ×                                | x                                |                     |   | Х                                     |                                      | Boring located to evaluate LOU 60 (Acid Drain System) pipeline/flume route and<br>as a step-out to LOU 32 (Chromium and Perchlorate Groundwater Remediation                                     |
| L-4               | -            | RSAL4-0.5BD                        | 0.5 (dup)                      |                    |                | Х                          | X                                  | X                                  | Х                      |                         | X                                 | X                                       | Х                        |                             | Х                             | Х        |                                   |                                   | X                                | X                                |                     |   |                                       |                                      | Unit) and LOU 2 (Open Area South of Trade Effluent Settling Ponds).   |
| L-4<br>L-4        | _            | RSAL4-10B<br>RSAL4-28B             | 10<br>28                       |                    |                | X<br>X                     | X                                  | X                                  | X                      |                         | X                                 | X                                       | X                        |                             | Hold<br>X                     | X        |                                   |                                   |                                  | X                                |                     |   |                                       |                                      | GW anticipated at ~30 feet bgs; MCfg ~ 30 feet bgs.   |
| L-5<br>L-5        | SA74         | SA74-0.0<br>SA74-0.5B              | 0.0                            |                    |                | x                          | x                                  | x                                  | x                      |                         | x                                 | X                                       | x                        |                             | <b>-</b>                      | x        |                                   |                                   | x                                | x                                |                     |   | X                                     |                                      | Boring located adjacent to new D-1 building to evaluate LOU 58 (AP Plant Area<br>New Building D-1 Washdown) and LOU 32 (Chromium and Perchlorate  |
| L-5<br>L-5        | -            | SA74-0.5BD<br>SA74-10B             | 0.5 (dup)<br>10                |                    |                | X<br>X                     | X<br>X                             | X                                  | X<br>X                 |                         | X<br>X                            | X                                       | X<br>X                   |                             |                               | X        |                                   |                                   | Х                                | X<br>X                           |                     |   |                                       |                                      | Groundwater Remediation Unit).<br>GW anticipated at ~31 feet bgs; MCfg ~ 26 feet bgs.   |
| L-5               | -            | SA74-29B                           | 29                             |                    |                | X                          | X                                  | X                                  | X                      |                         | X                                 | X                                       | X                        |                             |                               | X        |                                   |                                   |                                  | X                                |                     |   |                                       |                                      |   |
| L-5<br>L-5        | RSAL5        | RSAL5-0.0<br>RSAL5-0.5B            | 0.0                            |                    |                | x                          | х                                  | Х                                  | х                      |                         | x                                 | х                                       | x                        |                             | х                             | х        |                                   |                                   | x                                | х                                |                     |   | X                                     |                                      | Boring located to evaluate LOU 58 (AP Plant Area New Building D-1 Washdown)<br>and LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit).  |
| L-5<br>L-5        | -            | RSAL5-0.5B<br>RSAL5-10B            | 0.5                            | X                  |                | X<br>X                     | X                                  | X<br>X                             | X<br>X                 |                         | X                                 | <u> </u>                                | X                        |                             | X<br>Hold                     | X        |                                   |                                   | X                                | X                                |                     |   |                                       |                                      | GW anticipated at ~32 feet bgs; MCfg ~26 feet bgs.  |
| L-5<br>L-7        | RSAL7        | RSAL5-30B<br>RSAL7-0.0             | 30<br>0.0                      |                    |                | Х                          | X                                  | Х                                  | Х                      |                         | Х                                 | Х                                       | X                        |                             | Х                             | Х        |                                   |                                   |                                  | Х                                |                     |   | X                                     |                                      | Boring located to evaluate pipeline associated with LOUs 22 and 23 (Ponds   |
| L-7               |              | RSAL7-0.5B                         | 0.5                            |                    |                | X                          | X                                  | X                                  | X                      |                         | X                                 | X                                       |                          |                             | X                             | X        |                                   |                                   | х                                | X                                |                     |   |                                       |                                      | WC-West & WC-East), and for general Site coverage.  |
| L-7<br>L-7        |              | RSAL7-10B<br>RSAL7-10B             | 10<br>10                       | х                  |                | X<br>X                     | X                                  | X                                  | X<br>X                 |                         | X<br>X                            | X                                       |                          |                             | Hold<br>Hold                  | X<br>X   |                                   |                                   |                                  | X<br>X                           |                     |   |                                       |                                      | GW anticipated at ~29 feet bgs; MCfg ~33 feet bgs.  |
| L-7<br>L-7        | SA75         | RSAL7-27B<br>SA75-0.0              | 27<br>0.0                      |                    |                | X                          | X                                  | Х                                  | Х                      |                         | X                                 | Х                                       |                          |                             | Х                             | Х        |                                   |                                   |                                  | X                                |                     |   | X                                     |                                      | Boring located to evaluate LOU 32 (Chromium and Perchlorate Groundwater   |
| L-7<br>L-7        |              | SA75-0.5B<br>SA75-10B              | 0.5<br>10                      |                    |                | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                 |                         | X<br>X                            | X                                       |                          |                             |                               | X<br>X   |                                   |                                   | Х                                | X<br>X                           |                     |   |                                       |                                      | Remediation Unit).<br>GW anticipated at ~30 feet bgs; MCfg ~26 feet bgs.  |
| L-7               | -            | SA75-28B                           | 28                             |                    |                | X                          | X                                  | X                                  | X                      |                         | X                                 | X                                       |                          |                             |                               | X        |                                   |                                   |                                  | X                                |                     |   |                                       |                                      |   |
| L-8<br>L-8        | RSAL8        | RSAL8-0.0<br>RSAL8-0.5B            | 0.0                            |                    |                | х                          | х                                  | Х                                  | х                      |                         | х                                 | х                                       |                          |                             | х                             | х        |                                   |                                   | х                                | х                                |                     |   | X                                     |                                      | Boring located north of LOU 5(Beta Ditch) along Timet boundary as a downgradient<br>boring to LOU 5 (Beta Ditch) and for general Site coverage.   |
| L-8<br>L-8        |              | RSAL8-0.5B<br>RSAL8-10B            | 0.5                            | X                  |                | X<br>X                     | X<br>X                             | X                                  | X<br>X                 |                         | X<br>X                            | X                                       |                          |                             | X<br>Hold                     | X        |                                   |                                   | Х                                | X<br>X                           |                     |   |                                       |                                      | GW anticipated at ~30 feet bgs; MCfg ~33 feet bgs.  |
| L-8<br>M-2        | RSAM2        | RSAL8-28B<br>RSAM2-0.0             | 28<br>0.0                      |                    |                | Х                          | X                                  | Х                                  | Х                      |                         | Х                                 | Х                                       |                          |                             | Х                             | Х        |                                   |                                   |                                  | Х                                |                     |   | X                                     |                                      | Boring located north of LOU 5 (Beta Ditch) along Olin (Pioneer) boundary to evaluate  |
| M-2               |              | RSAM2-0.5B                         | 0.5                            |                    |                | X                          | X                                  | X                                  | X                      |                         | X                                 | X                                       | X                        |                             | X                             | X        |                                   |                                   | Х                                | X                                | X                   | X   |                                       |                                      | potential VOC sources from the west, as a step-out boring for LOU 2 (Open   |
| M-2<br>M-2        | -            | RSAM2-10B<br>RSAM2-20B             | 10<br>20                       |                    |                | X<br>X                     | X<br>X                             | X                                  | X<br>X                 |                         | X<br>X                            | x                                       | X<br>X                   |                             | X<br>Hold                     | X<br>X   |                                   |                                   |                                  | X<br>X                           | Х                   | X   |                                       |                                      | Area South of Trade Effluent Settling Ponds), and for general Site coverage.<br>GW anticipated at ~37 feet bgs; MCfg ~26 feet bgs.  |
| M-2<br>M-2        | -            | RSAM2-20BD<br>RSAM2-35B            | 20 (dup)<br>35                 |                    |                | X<br>X                     | X<br>X                             | X                                  | X<br>X                 |                         | X<br>X                            | X<br>X                                  | X<br>X                   |                             | Hold<br>X                     | X<br>X   |                                   |                                   |                                  | X<br>X                           | х                   | х   |                                       |                                      |   |
| M-2<br>M-2        | SA67         | SA67-0.0<br>SA67-0.5B              | 0.0                            |                    |                | X                          | X                                  | x                                  |                        |                         | X                                 | ×                                       | X                        |                             | X                             | X        | NS                                | NS                                | x                                | X                                |                     |   | X                                     |                                      | Boring located south of LOU 5 (Beta Ditch) and to evaluate potential VOC sources<br>from the west.  |
| M-2               |              | SA67-10B                           | 10                             |                    |                | Х                          | X                                  | X                                  |                        |                         | Х                                 | X                                       | Х                        |                             | Hold                          | Х        | NS                                | NS                                | ~~~~                             | X                                |                     |   |                                       |                                      | GW encountered at 38 feet bgs; MCfg ~26 feet bgs.   |
| M-2<br>M-2        |              | SA67-25B                           | 25                             |                    |                | X<br>X                     | X                                  | X                                  |                        |                         | X<br>X                            | X<br>X                                  | X<br>X                   |                             | Hold                          | X<br>X   | NS<br>NS                          | NS<br>NS                          |                                  | X                                |                     |   |                                       |                                      |   |
| M-2<br>M-2        |              | SA67-30B<br>SA67-35B               | 30<br>35                       |                    |                | X                          | X<br>X                             | X X                                |                        | -                       | X                                 | X                                       | X                        |                             | Hold<br>X                     | X        | NS<br>NS                          | NS<br>NS                          |                                  | X                                | -                   |   |                                       |                                      |   |
| M-3<br>M-3        | SA100        | SA100-0.0<br>SA100-0.5B            | 0.0 0.5                        |                    |                | x                          | x                                  | x                                  | x                      |                         | x                                 | x                                       | x                        |                             |                               | X        |                                   |                                   | x                                | x                                |                     |   | X                                     |                                      | Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling<br>Ponds) and to evaluate potential VOC sources from the west.   |
| M-3<br>M-3        | -            | SA100-10B<br>SA100-30B             | 10<br>30                       |                    |                | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                 |                         | X<br>X                            | X                                       | X                        |                             |                               | X        |                                   |                                   |                                  | X<br>X                           |                     |   |                                       |                                      | GW anticipated at ~32 feet bgs; MCfg ~25 feet bgs.  |
| M-3               | RSAM3        | RSAM3-0.0                          | 0.0                            |                    |                |                            |                                    |                                    |                        |                         |                                   |   |                          |                             |                               |          |                                   |                                   |                                  |                                  |                     |   | X                                     |                                      | Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling  |
| M-3<br>M-3        |              | RSAM3-0.5B<br>RSAM3-10B            | 0.5                            |                    |                | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                 |                         | X<br>X                            | X<br>X                                  | X<br>X                   |                             | X<br>Hold                     | X<br>X   |                                   |                                   | X                                | X<br>X                           | X                   | X   |                                       |                                      | Ponds).<br>GW anticipated at ~32 feet bgs; MCfg ~25 feet bgs.   |
| M-3<br>M-3        | -            | RSAM3-10B<br>RSAM3-30B             | 10<br>30                       |                    | Х              | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                 |                         | X<br>X                            | X<br>X                                  | X<br>X                   |                             | Hold<br>X                     | X<br>X   |                                   |                                   |                                  | X<br>X                           | x                   | x   |                                       | X                                    | SPLP sample must be of Quaternary Alluvium (Qal) soils.   |
| M-3<br>M-4        |              | RSAM3-30B<br>SA69-0.0              | 30<br>0.0                      |                    | Х              | X                          | X                                  | X                                  | X                      |                         | X                                 | X                                       | X                        |                             | X                             | X        |                                   |                                   |                                  | X                                | X                   | X   | X                                     | X                                    | SPLP sample must be of Muddy Creek soils & must be dry. If soil is not dry, don't collect sample.<br>Boring located north of LOU 5 (Beta Ditch) as a step-out to LOU 2 (Open Area               |
| M-4               |              | SA69-0.5B<br>SA69-10B              | 0.5                            | 1                  |                | X                          | X                                  | X                                  | X                      |                         | X                                 | X                                       | X                        |                             |                               | X        |                                   |                                   | х                                | x                                |                     |   |                                       |                                      | South of Trade Effluent Settling Ponds) and to investigate for potential offsite VOC  |
| M-4<br>M-4        |              | SA69-29B                           | 10<br>29                       |                    |                | X<br>X                     | X<br>X                             | X                                  | X<br>X                 |                         | X<br>X                            | X<br>X                                  | X<br>X                   |                             |                               | X<br>X   |                                   |                                   |                                  | X<br>X                           |                     |   |                                       |                                      | sources from the west.<br>GW anticipated at ~31 feet bgs; MCfg ~24 feet bgs.  |
| M-4<br>M-4        | RSAM4        | RSAM4-0.0<br>RSAM4-0.5B            | 0.0                            |                    |                | x                          | x                                  | x                                  | x                      |                         | x                                 | x                                       | x                        |                             | Х                             | Х        |                                   |                                   | x                                | x                                |                     |   | X                                     |                                      | Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling<br>Ponds) and for general Site coverage.   |
| M-4<br>M-4        | -            | RSAM4-10B<br>RSAM4-30B             | 10<br>30                       |                    |                | X                          | X                                  | X                                  | X                      |                         | X                                 | X                                       | X                        |                             | Hold                          | X        |                                   |                                   |                                  | X                                |                     |   |                                       |                                      | GW anticipated at ~32 feet bgs; MCfg ~24 feet bgs.  |
| N-2               | SA56         | SA56-0.0                           | 0.0                            | -                  |                |                            |                                    |                                    |                        |                         |                                   | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |                          |                             | ~                             |          |                                   |                                   | V                                |                                  |                     |   | Х                                     |                                      | Boring located along western Site boundary to evaluate LOU 35 (former Truck   |
| N-2<br>N-2        |              | SA56-0.5B<br>SA56-10B              | 0.5                            |                    |                | X<br>X                     | X<br>X                             | X                                  | X<br>X                 | X<br>X                  | X<br>X                            | X<br>X                                  | X<br>X                   |                             |                               | X<br>X   | X                                 | х                                 | X                                | X<br>X                           |                     |   |                                       |                                      | Emptying/Dumping Site) and potential offsite VOC sources from the west. PCBs<br>and TPH-G were detected in Phase A SA09.  |
| N-2<br>N-2        |              | SA56-10B<br>SA56-25B               | 10<br>25                       |                    | Х              | X<br>X                     | X                                  | X<br>X                             | X<br>X                 | X<br>X                  | X<br>X                            | X<br>X                                  | X<br>X                   |                             |                               | X<br>X   |                                   |                                   |                                  | X<br>X                           |                     |   |                                       | X                                    | SPLP sample must be of Quaternary Alluvium (Qal) soils.<br>GW anticipated at ~39 feet bgs; MCfg ~23 feet bgs.   |
| N-2<br>N-2        | -            | SA56-37B<br>SA56-37B               | 37<br>37                       |                    | x              | X                          | X                                  | X                                  | X                      | X                       | X                                 | X                                       | X                        |                             |                               | X        | X<br>X                            | X<br>X                            |                                  | X                                |                     |   |                                       | ×                                    | SPLP sample must be of Muddy Creek soils & must be dry. If soil is not dry, don't collect sample.   |
| 11-2              |              | 3,00 375                           |                                | 1                  |                |                            | ~                                  | ~                                  |                        | . ^                     | ~                                 | ~                                       |                          |                             |                               |          |                                   | ~ ~                               |                                  |                                  | 1                   |   | 1                                     |                                      |   |

# Table 2 (Field Team Version) Soil Sampling and Analytical Plan for Area I Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 3 of 5

|                   |                       |                                       |                       | 1:                    | aboratory      | CAS-K       | elso, WA    |                                    |                        |                                     |                                   | CAS- Ro                   | ochester, NY              |                                       |                      |                        |  | CAS-                              | Houston                          | GEL                              | STL-                | Alpha                           | EMSL   | PTS<br>Santa Fe       |   |
|-------------------|-----------------------|---------------------------------------|-----------------------|-----------------------|----------------|-------------|-------------|------------------------------------|------------------------|-------------------------------------|-----------------------------------|---------------------------|---------------------------|---------------------------------------|----------------------|------------------------|--|-----------------------------------|----------------------------------|----------------------------------|---------------------|---------------------------------|--|-----------------------|---|
|                   |                       | रू Sample ID                          | Sample                | Matrix                | 1              |             | 1990, WA    |                                    | трн-                   |                                     |                                   |                           | Total                     |                                       |                      |                        |  |                                   |                                  | Charleston, SC                   | Denver              | Analytical<br>Sparks, NV        | Westmont, NJ                                   | Springs, CA           |   |
| Grid<br>Location  | Boring No. Boring No. | Number, (note "B<br>for Phase B)      |                       | Spike/MS<br>Duplicate | SPLP<br>Sample |             |             | Hex Cr <sup>4.</sup><br>(EPA 7199) | DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B)              | VOCs <sup>3.</sup><br>(EPA 8260B) | Wet<br>Chem <sup>5.</sup> | Cyanide<br>(EPA<br>9012A) | Formaldehyde<br>(EPA 8315A)           |                      | SVOCs 7.<br>(EPA 8270C | <ul> <li>PCBs<sup>10.</sup></li> <li>(EPA 8082)</li> </ul> | PCBs <sup>10.</sup><br>(EPA 1668) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>8.</sup> | OPPs <sup>13.</sup> | Organic<br>Acids <sup>14.</sup> | Asbestos <sup>11</sup><br>EPA/540/R-<br>97/028 | Geotechnical<br>Tests | Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient designations).  |
|                   |                       |                                       | Number of co          | ontainers p           | per samp       | le 1-4      | oz jar      | 1 - 4 c                            | oz. Jar                | 1- 40 ml VOA<br>vial w/<br>methanol | 3 VOA vials<br>(TerraCore<br>Kit) |                           |                           | 2 - 4 oz                              | Jars                 |                        |  | 1 - 4                             | oz Jar                           | 1-250 ml jar<br>(plastic)        | 1-4 oz Jar          | 1-4 oz Jar                      | ≥1 kg<br>in plastic<br>baq                     | 2 brass tubes         |   |
| N-2<br>N-2        | RSAN2                 | RSAN2-0.0<br>RSAN2-0.5B               | 0.0                   |                       |                | X           | X           | X                                  | X                      |                                     | X                                 | X                         | X                         |                                       | X                    | X                      | X  | X                                 | X                                | X                                |                     |                                 | Х  |                       | Boring located along western Site boundary north of LOU 35 (Truck Emptying<br>/Dumping Site) to evaluate potential offsite VOC sources  |
| N-2<br>N-2<br>N-2 |                       | RSAN2-10B<br>RSAN2-25B<br>RSAN2-30B   | 10<br>25<br>30        |                       |                | X<br>X<br>X | X<br>X<br>X | X<br>X<br>X                        | X<br>X<br>X            |                                     | X<br>X<br>X                       | X<br>X<br>X               | X<br>X<br>X               |                                       | Hold<br>Hold<br>Hold | X<br>X<br>X            | X<br>X<br>X  | X<br>X<br>X                       |                                  | X<br>X<br>X                      |                     |                                 |  |                       | from the west, and for general Site coverage.<br>GW encountered at 41 feet bgs; MCfg ~22 feet bgs.  |
| N-2<br>N-2        | -                     | RSAN2-30BD<br>RSAN2-35B               | 30 (dup)<br>35        |                       |                | X           | X           | X<br>X                             | X<br>X                 |                                     | X<br>X                            | X<br>X<br>X               | X<br>X<br>X               |                                       | Hold                 | X                      | X  | X                                 |                                  | X<br>X                           |                     |                                 |  |                       |   |
| N-3<br>N-3        | SA85                  | SA85-0.0<br>SA85-0.5B                 | 0.0                   |                       |                | х           | x           | Х                                  |                        |                                     | x                                 | х                         | x                         | x                                     | X                    | x                      |  |                                   | X                                | x                                | х                   | X                               | X  |                       | Boring located northwest of AP Lab building to evaluate LOU 54 (AP Plant Area<br>Change House/Laboratory Septic Tank). Dilute formaldehyde titrant was used in                      |
| N-3<br>N-3<br>N-3 | -                     | SA85-10B<br>SA85-10B<br>SA85-20B      | 10<br>10<br>20        | х                     |                | X<br>X<br>X | X<br>X<br>X | X<br>X<br>X                        |                        |                                     | X<br>X<br>X                       | X<br>X<br>X               | X<br>X<br>X               | X<br>X<br>X                           | Hold<br>Hold<br>Hold | X<br>X<br>X            |  |                                   |                                  | X<br>X<br>X                      |                     |                                 |  |                       | LOU 38 (Former Satellite Accumulation Point, AP Laboratory) and possibly<br>discharged to LOU 54.   |
| N-3<br>N-3        | RSAN3                 | SA85-20B<br>SA85-33B<br>RSAN3-0.0     | 33<br>0.0             |                       |                | X           | X           | X                                  |                        |                                     | X                                 | X                         | X                         | X                                     | X                    | X                      |  |                                   |                                  | X                                | Х                   | х                               | X  |                       | GW anticipated at ~35 feet bgs; MCfg ~24 feet bgs.<br>Boring located to evaluate LOU 38 (Former Satellite Accumulation Point, AP  |
| N-3<br>N-3        |                       | RSAN3-0.5B<br>RSAN3-10B               | 0.5                   |                       |                | X<br>X      | X<br>X      | X<br>X                             | X<br>X                 |                                     | X<br>X                            | X<br>X                    | X<br>X                    | X<br>X                                | X<br>Hold            | X<br>X                 |  |                                   | Х                                | X<br>X                           |                     |                                 |  |                       | Laboratory). Dilute formaldehyde titrant was used in the<br>AP Laboratory.  |
| N-3<br>N-3        |                       | RSAN3-20B<br>RSAN3-20BD               | 20<br>20 (dup)        |                       |                | X<br>X      | X           | X<br>X                             | X<br>X                 |                                     | X<br>X                            | X<br>X                    | X<br>X                    | X<br>X                                | Hold<br>Hold         | X<br>X                 |  |                                   |                                  | X<br>X                           |                     |                                 |  |                       | GW anticipated at ~34 feet bgs; MCfg ~22 feet bgs.  |
| N-3<br>N-4<br>N-4 | SA87                  | RSAN3-32B<br>SA87-0.0<br>SA87-0.5B    | 32<br>0.0<br>0.5      |                       |                | x<br>x      | X           | x                                  | x                      |                                     | x                                 | X                         | X                         | X                                     | X                    |                        | NS   | NS                                | x                                | X<br>X                           |                     |                                 | Х  |                       | Boring located at the southeast corner of the AP Maintenance Shop building to<br>evaluate LOU 39 (Satellite Accumulation Point, AP Maintenance Shop).                               |
| N-4<br>N-4        |                       | SA87-10B<br>SA87-10B                  | 10<br>10              | x                     |                | X           | X<br>X<br>X | X<br>X                             | X<br>X                 |                                     | X<br>X                            | X<br>X                    | X<br>X<br>X               | · · · · · · · · · · · · · · · · · · · | Hold                 |                        | NS<br>NS   | NS<br>NS                          |                                  | X<br>X                           |                     |                                 |  |                       |   |
| N-4<br>N-4        |                       | SA87-20B<br>SA87-25B                  | 20<br>25              |                       |                | X<br>X      | X<br>X      | X<br>X                             | X<br>X                 |                                     | X<br>X                            | X<br>X                    | X<br>X                    |                                       | Hold<br>Hold         |                        | NS<br>NS   | NS<br>NS                          |                                  | X<br>X                           |                     |                                 |  |                       | GW encountered at 32 feet bgs; MCfg ~21 feet bgs.   |
| N-4<br>N-4<br>N-4 | RSAN4                 | SA87-30B<br>RSAN4-0.0<br>RSAN4-0.5B   | 30<br>0.0<br>0.5      |                       |                | X           | x           | x                                  | x                      |                                     | x                                 | X                         | x                         |                                       | X                    | ×                      | NS   | NS                                | ×                                | x<br>x                           |                     |                                 | Х  |                       | Boring located to evaluate former drum storage area in LOU 39 (Satellite<br>Accumulation Point, AP Maintenance Shop) and for general Site coverage.                                 |
| N-4<br>N-4        | -                     | RSAN4-0.5B<br>RSAN4-10B<br>RSAN4-10BD | 10<br>10 (dup)        |                       |                | X           | X           | X<br>X                             | X                      |                                     | X<br>X                            | ×<br>×<br>×               | X                         |                                       | Hold                 | X                      |  |                                   |                                  | X                                |                     |                                 |  |                       | GW anticipated at ~33 feet bgs; MCfg ~21 feet bgs.  |
| N-4<br>N-4        | -                     | RSAN4-20B<br>RSAN4-31B                | 20<br>31              |                       |                | X           | X           | X                                  | X                      |                                     | X                                 | X<br>X                    | X                         |                                       | Hold                 | X                      |  |                                   |                                  | X                                |                     |                                 |  |                       |   |
| 0-2               | RSAO2                 | RSA02-0.0<br>RSA02-0.5B               | 0.0                   |                       |                | X           | X           | X                                  | X                      | X                                   | x                                 | X                         | X                         |                                       | X                    | X                      | X  | X                                 | X                                | X                                |                     |                                 | X  |                       | Boring located along western boundary of Site to evaluate LOU 35 (Truck<br>Emptying/Dumping Site) and potential offsite VOC sources from the west. PCBs                             |
| 0-2<br>0-2<br>0-2 |                       | RSAO2-10B<br>RSAO2-20B<br>RSAO2-20BD  | 10<br>20<br>20 (dup)  |                       |                | X<br>X<br>X | X<br>X<br>X | X<br>X<br>X                        | X<br>X<br>X            | X<br>X<br>X                         | X<br>X<br>X                       | X<br>X<br>X               | X<br>X<br>X               |                                       | Hold<br>Hold<br>Hold | X<br>X<br>X            | X<br>X<br>X  | X<br>X<br>X                       |                                  | X<br>X<br>X                      |                     |                                 |  |                       | and TPH-GRO were detected in Phase A soil boring SA09.<br>GW encountered at 37.5 feet bgs; MCfg ~20 feet bgs.   |
| 0-2<br>0-2        | -                     | RSA02-30B<br>RSA02-33B                | 30<br>33              |                       |                | X           | X           | X<br>X<br>X                        | X<br>X                 | X                                   | X<br>X<br>X                       | X                         | X                         |                                       | Hold                 | X                      | X  | X                                 |                                  | X                                |                     |                                 |  |                       |   |
| 0-2<br>0-2        | SA35                  | SA35-0.0<br>SA35-0.5B                 | 0.0<br>0.5            |                       |                | X           | X           | x                                  | x                      | x                                   | x                                 | х                         | X                         |                                       | x                    | x                      |  |                                   | X                                | X                                | x                   | x                               | X  |                       | Boring located along western Site boundary to evaluate potential offsite VOC sources<br>from the west. PCBs and TPH-GRO were detected in Phase A soil boring SA09.                  |
| 0-2<br>0-2<br>0-2 | -                     | SA35-10B<br>SA35-20B<br>SA35-32B      | 10<br>20<br>32        |                       |                | X<br>X<br>X | X<br>X<br>X | X<br>X<br>X                        | X<br>X<br>X            | X<br>X<br>X                         | X<br>X<br>X                       | X<br>X<br>X               | X<br>X<br>X               |                                       | X<br>Hold<br>X       | X<br>X<br>X            |  |                                   |                                  | X<br>X<br>X                      | X                   | X                               |  |                       | GW anticipated at ~34 feet bgs; MCfg ~20 feet bgs.  |
| 0-2<br>0-2<br>0-2 | -<br>SA166            | SA35-32B<br>SA35-32BD<br>SA166-0.0    | 32 (dup)<br>0.0       |                       |                | X           | X           | X                                  | X                      | X                                   | x                                 | X                         | X                         |                                       | X                    | X                      |  |                                   |                                  | X                                | X                   | X                               | X  |                       | Boring located along western Site boundary to evaluate LOU 35 (Truck Emptying/  |
| 0-2<br>0-2        |                       | SA166-0.5B<br>SA166-10B               | 0.5<br>10             |                       |                | X<br>X      | X<br>X      | X<br>X                             | X<br>X                 | X<br>X                              | X<br>X                            | X<br>X                    | X<br>X                    |                                       | X<br>X               | X<br>X                 | Х  | Х                                 | Х                                | X<br>X                           | X<br>X              | X<br>X                          |  |                       | Dumping Site), LOU 60 (Acid Drain System), and potential offsite VOC sources<br>from the west.  |
| 0-2               | _                     | SA166-10B<br>SA166-20B                | 10<br>20              |                       | X              | X           | X           | X<br>X                             | X<br>X                 | X                                   | X<br>X                            | X<br>X                    | X<br>X                    |                                       | X<br>Hold            | X                      | ~  |                                   |                                  | X<br>X                           | X                   | X                               |  | X                     | SPLP sample must be of Quaternary Alluvium (Qal) soils.<br>GW anticipated at ~33 feet bgs; MCfg ~31 feet bgs.   |
| 0-2<br>0-2<br>0-3 | SA48                  | SA166-31B<br>SA166-31B<br>SA48-0.0    | 31<br>31<br>0.0       |                       | х              | X           | X           | X<br>X                             | X<br>X                 | X                                   | X                                 | X<br>X                    | X                         |                                       | X                    | X                      | X  | X<br>X                            |                                  | X                                | X                   | X                               | X  | x                     | SPLP sample must be of Muddy Creek soils & must be dry. If soil is not dry, don't collect sample.<br>Boring located along western Site boundary to evaluate LOU 35 (Truck Emptying/ |
| 0-3<br>0-3        |                       | SA48-0.5B<br>SA48-10B                 | 0.5                   |                       |                | X           | X<br>X      | X<br>X                             | X<br>X                 | X<br>X                              | X<br>X                            | X<br>X                    | X<br>X                    |                                       | X<br>Hold            | X<br>X                 | X  | X<br>X                            | Х                                | X<br>X                           |                     |                                 | ~  |                       | Dumping Site and potential offsite VOC sources from the west. PCBs and TPH-GRO<br>were detected in Phase A soil boring SA09.  |
| 0-3<br>0-3        |                       | SA48-20B<br>SA48-30B                  | 20<br>30              |                       |                | X<br>X      | X<br>X      | X<br>X                             | X<br>X                 | X<br>X                              | X<br>X                            | X<br>X                    | X<br>X                    |                                       | Hold<br>Hold         | X<br>X                 | X<br>X   | X<br>X                            |                                  | X<br>X                           |                     |                                 |  |                       | GW encountered at 39.5 feet bgs; MCfg ~29 feet bgs.   |
| 0-3<br>0-3<br>0-3 | SA57                  | SA48-35B<br>SA57-0.0<br>SA57-0.5B     | 35<br>0.0<br>0.5      |                       |                | x           | X           | x                                  | X                      | X                                   | x                                 | X                         | x                         |                                       | X                    | x                      | X  | x                                 | x                                | x                                | · · · · ·           |                                 | х  |                       | Boring added along western Site boundary to evaluate LOU 35 (Truck Emptying/<br>Dumping Site) and potential offsite VOC sources from the west. PCBs and TPH-GRO                     |
| 0-3<br>0-3<br>0-3 |                       | SA57-0.5B<br>SA57-10B<br>SA57-10BD    | 0.5<br>10<br>10 (dup) | -                     |                | X           | X           | X<br>X<br>X                        | X<br>X<br>X            | X                                   | X<br>X<br>X                       | X<br>X<br>X               | X                         |                                       | Hold<br>Hold         | X<br>X<br>X            | X<br>X<br>X  | X<br>X<br>X                       | ^                                |                                  |                     |                                 |  |                       | Dumping Site) and potential onsite VOL sources from the west. POBs and TPH-GRO<br>were detected in Phase A soil boring SA09.<br>GW encountered at 32 feet bgs; MCIg ~21 feet bgs.   |
| 0-3<br>0-3        |                       | SA57-20B<br>SA57-30B                  | 20<br>30              |                       |                | X           | X<br>X<br>X | X<br>X<br>X                        | X<br>X<br>X            | X<br>X<br>X                         | X<br>X                            | X                         | X<br>X<br>X               |                                       | Hold                 | X                      |  | X<br>X                            |                                  |                                  |                     |                                 |  |                       |   |
| 0-3<br>0-3        | SA180                 | SA180-0.0<br>SA180-0.5B               | 0.0<br>0.5            |                       |                | x           | X           | x                                  | x                      |                                     | x                                 | х                         | x                         |                                       | x                    | x                      | х  | x                                 | x                                | X                                |                     |                                 | X  |                       | Boring located to evaluate soil stain in northern portion of LOU 64 (Koch<br>Materials Company Site).   |
| 0-3<br>0-3        |                       | SA180-0.5BD<br>SA180-10B              | 0.5 (dup)<br>10       |                       |                | X           | X           | X<br>X                             | X<br>X                 |                                     | X<br>X                            | X<br>X                    | X                         |                                       | X<br>Hold            | X                      | X  | X<br>X                            | X                                | X<br>X                           |                     |                                 |  |                       | GW encountered at 34.5 feet bgs; MCfg ~22 feet bgs.   |
| 0-3<br>0-3<br>0-3 | -                     | SA180-10B<br>SA180-20B<br>SA180-30B   | 10<br>20<br>30        | X                     |                | X<br>X<br>X | X<br>X<br>X | X<br>X<br>X                        | X<br>X<br>X            |                                     | X<br>X<br>X                       | X<br>X<br>X               | X<br>X<br>X               |                                       | Hold<br>Hold<br>Hold | X<br>X<br>X            | X<br>X<br>X  | X<br>X<br>X                       |                                  | X<br>X<br>X                      |                     |                                 |  |                       |   |
| 0-3<br>0-3        | SA181                 | SA180-30B<br>SA181-0.0<br>SA181-0.5B  | 0.0                   |                       |                | ×           | x           | x                                  | x                      | 1                                   | x                                 | X                         | x                         |                                       | X                    | x                      | NS   | NS                                | x                                | x                                |                     |                                 | Х  |                       | Boring located to evaluate soil stain in northern portion of LOU 64 (Koch<br>Materials Company Site).   |
| 0-3<br>0-3        |                       | SA181-10B<br>SA181-20B                | 10<br>20              |                       |                | X           | X<br>X      | X<br>X<br>X                        | X<br>X                 |                                     | X                                 | X<br>X<br>X               | X<br>X                    |                                       | Hold<br>Hold         | X<br>X                 | NS<br>NS   | NS<br>NS                          |                                  | X<br>X                           |                     |                                 |  |                       | GW was encountered at 40 feet bgs; MCfg ~21 feet bgs.   |
| 0-3<br>0-3        | -                     | SA181-30B<br>SA181-35B                | 30<br>35              |                       |                | X<br>X      | X<br>X      | X<br>X                             | X<br>X                 |                                     | X<br>X                            | X<br>X                    | X<br>X                    |                                       | Hold<br>X            | X<br>X                 | NS<br>NS   | NS<br>NS                          |                                  | X<br>X                           |                     |                                 |  |                       |   |
| 0-3<br>0-3<br>0-3 | RSAO3                 | RSA03-0.0<br>RSA03-0.5B<br>RSA03-10B  | 0.0<br>0.5<br>10      |                       |                | X           | X<br>X      | X                                  | X<br>X                 |                                     | X<br>X                            | X                         | X<br>X                    |                                       | X<br>Hold            | x                      | x  |                                   | x                                | X<br>X                           |                     |                                 | X  |                       | Boring located to evaluate soil stain in northern portion of LOU 64 (Koch<br>Materials Company Site).<br>6W anticinated at –33 feat bos: MCfn –22 feat bos                          |
| 0-3<br>0-3<br>0-3 | -                     | RSA03-10B<br>RSA03-20B<br>RSA03-20BD  | 20<br>20 (dup)        |                       |                | X           | X<br>X<br>X | X<br>X<br>X                        | X<br>X<br>X            |                                     | X<br>X<br>X                       | ×<br>×<br>×               | X<br>X<br>X               |                                       | Hold<br>Hold         | X<br>X<br>X            |  |                                   |                                  | X<br>X<br>X                      |                     |                                 |  |                       | GW anticipated at ~33 feet bgs; MCfg ~22 feet bgs.  |
| 0-3               | -                     | RSA03-31B                             | 31                    |                       |                | X           | X           | X                                  | X                      |                                     | X                                 | X                         | X                         |                                       | X                    | X                      | Х  |                                   |                                  | X                                |                     |                                 |  |                       | 1   |

# Table 2 (Field Team Version) Soil Sampling and Analytical Plan for Area I Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 4 of 5

|                  |            |                 |  |   | La                              | aboratory      | CAS - Ke                   | elso, WA                           |                                    |                                |                                     |                                   | CAS - Ro                  | ochester, NY                       |                             |                               |                                    |                                   | CAS - I                           | louston                                 | GEL<br>Charleston, SC            | STL-<br>Denver      | Alpha<br>Analytical<br>Sparks, NV | EMSL<br>Westmont, NJ                            | PTS<br>Santa Fe<br>Springs, CA | I |
|------------------|------------|-----------------|--|---|---------------------------------|----------------|----------------------------|------------------------------------|------------------------------------|--------------------------------|-------------------------------------|-----------------------------------|---------------------------|------------------------------------|-----------------------------|-------------------------------|------------------------------------|-----------------------------------|-----------------------------------|---|----------------------------------|---------------------|-----------------------------------|---|--------------------------------|---|
| Grid<br>Location | Boring No. | Date<br>Sampled | Sample ID<br>Number, (note "B"<br>for Phase B) | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Matrix<br>Spike/MS<br>Duplicate | SPLP<br>Sample | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>4.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B)              | VOCs <sup>3.</sup><br>(EPA 8260B) | Wet<br>Chem <sup>5.</sup> | Total<br>Cyanide<br>(EPA<br>9012A) | Formaldehyde<br>(EPA 8315A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>10.</sup><br>(EPA 8082) | PCBs <sup>10.</sup><br>(EPA 1668) | Dioxins/<br>Furans <sup>9.</sup>        | Radio-<br>nuclides <sup>8.</sup> | OPPs <sup>13.</sup> | Organic<br>Acids <sup>14.</sup>   | Asbestos <sup>11.</sup><br>EPA/540/R-<br>97/028 | Geotechnical<br>Tests          |   |
|                  |            |                 |  | Number of co                                | ontainers p                     | ber sample     | 1 - 4 c                    | oz jar                             | 1 - 4 c                            | oz. Jar                        | 1- 40 ml VOA<br>vial w/<br>methanol | 3 VOA vials<br>(TerraCore<br>Kit) |                           |                                    | 2 - 4 oz J                  | ars                           |                                    |                                   | 1 - 4                             | oz Jar                                  | 1-250 ml jar<br>(plastic)        | 1-4 oz Jar          | 1-4 oz Jar                        | <u>≥</u> 1 kg<br>in plastic<br>bag              | 2 brass tubes                  |   |
| 0-3              | SA176      |                 | SA176-0.0                                      | 0.0   |                                 |                |                            |                                    |                                    |                                |                                     |                                   |                           |                                    |                             |                               |                                    |                                   |                                   |   |                                  |                     |                                   | X   |                                | E |
| 0-3              |            |                 | SA176-0.5B                                     | 0.5   |                                 |                | X                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Х                             | Х                                  |                                   |                                   | Х                                       | X                                | Х                   | Х                                 |   |                                | Ν |
| 0-3              |            |                 | SA176-10B                                      | 10  |                                 |                | X                          | X                                  | X                                  | Х                              |                                     | X                                 | X                         | х                                  |                             | X                             | Х                                  |                                   |                                   |   | X                                | Х                   | Χ                                 |   |                                | 0 |
| 0-3              |            |                 | SA176-25B                                      | 25  |                                 |                | X                          | <u> </u>                           | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | Hold                          | X                                  |                                   |                                   |   | X                                | N N                 | V                                 |   |                                | - |
| 0-3<br>0-3       |            |                 | SA176-37BD<br>SA176-37B                        | 37 (dup)<br>37                              |                                 |                | X                          | <u> </u>                           | X                                  | X<br>X                         |                                     | X                                 | X                         | X                                  |                             | X                             | X                                  |                                   |                                   |   | X<br>X                           | X                   | <u> </u>                          |   |                                | ł |
| 0-3              | SA207      |                 | SA207-0.0                                      | 0.0   |                                 |                | ^                          | ^                                  | ^                                  | ^                              |                                     | ^                                 | ^                         | ^                                  |                             | ^                             | ^                                  |                                   |                                   |   | ^                                | ^                   | ^                                 | Х   | <sup>-</sup>                   | ŧ |
| 0-3              | 0,1201     |                 | SA207-0.5B                                     | 0.5   |                                 |                | Х                          | Х                                  | х                                  | х                              |                                     | х                                 | х                         | х                                  |                             | Х                             | х                                  | NS                                | NS                                | Х                                       | х                                |                     |                                   | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~         | <sup>1</sup>                   | ĺ |
| 0-3              |            | 8               | SA207-0.5B                                     | 0.5   | Х                               |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | X                             | X                                  | NS                                | NS                                | X                                       | X                                |                     |                                   |   |                                | C |
| 0-3              |            | 30/C            | SA207-10B                                      | 10  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Hold                          | Х                                  | NS                                | NS                                |   | Х                                |                     |                                   |   | *                              | 1 |
| 0-3              |            | 6/3(            | SA207-20B                                      | 20  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Hold                          | Х                                  | NS                                | NS                                |   | Х                                |                     |                                   |   | 1                              | I |
| O-3              |            |                 | SA207-30B                                      | 30  |                                 |                | Х                          | X                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Hold                          | Х                                  | NS                                | NS                                |   | Х                                |                     |                                   |   |                                |   |
| 0-3              |            |                 | SA207-37B                                      | 37  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Х                             | Х                                  | NS                                | NS                                |   | Х                                |                     |                                   |   |                                |   |
| 0-4              | SA46       |                 | SA46-0.0                                       | 0.0   |                                 |                |                            |                                    |                                    |                                |                                     |                                   |                           |                                    |                             |                               |                                    |                                   |                                   |   |                                  |                     |                                   | X   |                                | E |
| 0-4              |            |                 | SA46-0.5B                                      | 0.5   |                                 |                | X                          | X                                  | Х                                  | Х                              |                                     | X                                 | X                         | х                                  |                             | Х                             | X                                  | NS                                | NS                                | Х                                       | X                                |                     |                                   |   |                                | 5 |
| 0-4              |            | 08              | SA46-10B                                       | 10  |                                 |                | X                          | <u>X</u>                           | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | Hold                          | X                                  | NS                                | NS                                |   | X                                |                     |                                   |   |                                | 9 |
| 0-4              |            | 6/2             | SA46-20B                                       | 20  |                                 |                | <u>X</u>                   | <u> </u>                           | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | Hold                          | X                                  | NS                                | NS                                |   | X                                |                     |                                   |   |                                | - |
| 0-4<br>0-4       |            | 1.              | SA46-30B<br>SA46-30BD                          | 30<br>30 (dup)                              |                                 |                | X<br>X                     | X<br>X                             | X<br>X                             | X                              |                                     | X                                 | X                         | X                                  |                             | Hold<br>Hold                  | X                                  | NS<br>NS                          | NS<br>NS                          |   | X<br>X                           |                     |                                   |   |                                | - |
| 0-4              |            |                 | SA46-30BD<br>SA46-31B                          | 30 (dup)<br>31                              |                                 |                | × ×                        | X                                  | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | X                             | X                                  | NS                                | NS                                |   | X                                |                     |                                   |   | ļ!                             | - |
| 0-4              | SA47       |                 | SA40-31B<br>SA47-0.0                           | 0.0   |                                 |                | ^                          | ^                                  | ^                                  | ^                              |                                     | ^                                 | ^                         | ^                                  |                             | ~                             | ^                                  | N3                                | 113                               |   | ^                                |                     |                                   | Х   | <b> </b> '                     | Ē |
| 0-4              | 0/(4/      |                 | SA47-0.5B                                      | 0.5   |                                 |                | х                          | Х                                  | х                                  | Х                              |                                     | х                                 | x                         | X                                  |                             | Х                             | Х                                  | NS                                | NS                                | Х                                       | х                                |                     |                                   | ~   |                                | Ċ |
| 0-4              |            | 8               | SA47-10B                                       | 10  |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X                         | x                                  |                             | Hold                          | X                                  | NS                                | NS                                | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | x                                |                     |                                   |   | łł                             | ſ |
| 0-4              |            | 12              | SA47-20B                                       | 20  |                                 |                | Х                          | X                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Hold                          | Х                                  | NS                                | NS                                |   | Х                                |                     |                                   |   |                                | 1 |
| 0-4              |            | -               | SA47-30B                                       | 30  |                                 |                | Х                          | X                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Hold                          | Х                                  | NS                                | NS                                |   | Х                                |                     |                                   |   | 1                              | 1 |
| 0-4              |            |                 | SA47-33B                                       | 33  |                                 |                | Х                          | X                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Х                             | Х                                  | NS                                | NS                                |   | Х                                |                     |                                   |   |                                |   |
| 0-4              | SA55       |                 | SA55-0.0                                       | 0.0   |                                 |                |                            |                                    |                                    |                                |                                     |                                   |                           |                                    |                             |                               |                                    |                                   |                                   |   |                                  |                     |                                   | X   |                                | l |
| 0-4              |            |                 | SA55-0.5B                                      | 0.5   |                                 |                | X                          | X                                  | Х                                  | Х                              |                                     | Х                                 | X                         | X                                  |                             |                               | X                                  |                                   |                                   | Χ                                       | X                                |                     |                                   |   |                                | 5 |
| 0-4              |            |                 | SA55-10B                                       | 10  |                                 |                | X                          | <u>X</u>                           | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             |                               | X                                  |                                   |                                   |   | X                                |                     |                                   |   |                                | F |
| 0-4<br>0-4       |            |                 | SA55-25B<br>SA55-25B                           | 25  |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             |                               | X                                  |                                   |                                   |   | X                                |                     |                                   |   |                                |   |
| 0-4              |            |                 | SA55-25B<br>SA55-35B                           | 25<br>35                                    | Х                               |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             |                               | X                                  |                                   |                                   |   | X                                |                     |                                   |   | I                              |   |
| 0-4              | RSAO4      |                 | RSA04-0.0                                      | 0.0   |                                 |                | ^                          | ^                                  | ^                                  | ^                              | -                                   | ^                                 | ^                         | ^                                  |                             |                               | ^                                  |                                   |                                   |   | ^                                |                     |                                   | X   | ·/                             | t |
| 0-4              | K3A04      |                 | RSA04-0.5B                                     | 0.5   |                                 |                | x                          | X                                  | X                                  | X                              |                                     | х                                 | x                         | x                                  |                             | Х                             | X                                  | Х                                 | х                                 | х                                       | х                                |                     |                                   | ^   | <b>!</b> '                     | 1 |
| 0-4              |            | 8               | RSA04-0.3B                                     | 10  | -                               | 1              | X                          | X                                  | x                                  | X                              | +                                   | X                                 | x                         | X                                  |                             | Hold                          | X                                  | X                                 | X                                 | ^                                       | X                                |                     |                                   |   |                                | ſ |
| 0-4              |            | /6/             | RSA04-20B                                      | 20  |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | Hold                          | X                                  | X                                 | X                                 |   | X                                |                     |                                   |   | 1                              | 1 |
| 0-4              |            | -               | RSA04-30B                                      | 30  |                                 |                | Х                          | X                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Hold                          | Х                                  | Х                                 | х                                 |   | Х                                |                     |                                   |   |                                | I |
| 0-4              |            |                 | RSA04-36B                                      | 36  |                                 |                | Х                          | X                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Х                             | Х                                  | Х                                 | Х                                 |   | Х                                |                     |                                   |   |                                | L |
| 0-4              | SA182      |                 | SA182-0.0                                      | 0.0   |                                 |                |                            |                                    |                                    |                                |                                     |                                   |                           |                                    |                             |                               |                                    |                                   |                                   |   |                                  |                     |                                   | X   |                                | E |
| 0-4              |            | ļ               | SA182-0.5B                                     | 0.5   |                                 |                | X                          | <u>X</u>                           | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | X                             | X                                  |                                   |                                   | Х                                       | X                                | X                   | X                                 |   |                                | 9 |
| 0-4              |            |                 | SA182-10B                                      | 10  |                                 |                | <u>X</u>                   | <u> </u>                           | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | X                             | X                                  |                                   |                                   |   | X                                | X                   | <u> </u>                          |   |                                | 9 |
| 0-4              |            |                 | SA182-10B                                      | 10  |                                 | Х              | X                          | <u> </u>                           | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | X                             | X                                  |                                   |                                   |   | X                                | X                   | Х                                 |   | X                              | ľ |
| 0-4<br>0-4       |            |                 | SA182-25B<br>SA182-38B                         | 25<br>38                                    | -                               |                | X<br>X                     | X                                  | X<br>X                             | X                              |                                     | X                                 | X                         | X                                  |                             | Hold<br>X                     | X                                  |                                   |                                   |   | X<br>X                           | х                   | v                                 |   | ł'                             | ł |
| 0-4              |            |                 | SA182-38B<br>SA182-38B                         | 38  | -                               | x              | X                          | X                                  | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | X X                           | X                                  |                                   |                                   |   | X                                | X                   | X<br>X                            |   | x                              | 6 |
| 0-4              | SA183      | -               | SA182-38B<br>SA183-0.0                         | 0.0   | 1                               | ^              | ^                          | ^                                  | ^                                  | ^                              |                                     | ^                                 | ^                         | ^                                  |                             | ~                             | ^                                  |                                   |                                   |   | ^                                | ^                   | ^                                 | Х   |                                | ĥ |
| 0-4              | 5,1100     |                 | SA183-0.5B                                     | 0.5   |                                 |                | х                          | Х                                  | х                                  | Х                              | 1                                   | х                                 | x                         | х                                  |                             | Х                             | Х                                  | NS                                | NS                                | Х                                       | х                                |                     |                                   |   | f/                             | Ċ |
| 0-4              |            | 8               | SA183-10B                                      | 10  |                                 |                | X                          | X                                  | X                                  | X                              | 1                                   | X                                 | X                         | X                                  |                             | Hold                          | X                                  | NS                                | NS                                |   | X                                |                     |                                   | 1   | 1                              | l |
| 0-4              |            | 8/0             | SA183-10BD                                     | 10 (dup)                                    |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X                         | X                                  |                             | Hold                          | X                                  | NS                                | NS                                |   | X                                |                     |                                   |   | 1                              | 1 |
| 0-4              |            | 12              | SA183-20B                                      | 20  |                                 |                | Х                          | X                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | X                                  |                             | Hold                          | Х                                  | NS                                | NS                                |   | X                                |                     |                                   |   |                                | 1 |
| 0-4              |            |                 | SA183-30B                                      | 30  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | х                                  |                             | Hold                          | Х                                  | NS                                | NS                                |   | Х                                |                     |                                   |   |                                | ſ |
| 0-4              |            |                 | SA183-33B                                      | 33  |                                 |                | Х                          | X                                  | Х                                  | Х                              |                                     | Х                                 | Х                         | Х                                  |                             | Х                             | Х                                  | NS                                | NS                                |   | Х                                |                     |                                   |   |                                | L |
| NOTES:           |            |                 |  |   |                                 |                |                            |                                    |                                    |                                |                                     |                                   |                           |                                    |                             |                               |                                    |                                   |                                   |   |                                  |                     |                                   |   |                                | 1 |

n/a Not applicable - boring is not associated with a specific LOU but is located to evaluate soil for general area-wide coverage.

Х Sample will be collected and analyzed.

Blank cell indicates no sample collected under Phase B sampling program.

Sample for asbestos analysis was collected in June 2008.

DD\* Sample depth to be determined in the field where DD = sample depth (ft).

TPH-GRO Total petroleum hydrocarbons - Gasoline-Range Organics.

PH-DRO/OF Total petroleum hydrocarbons - Diesel-Range Organics/Oil-Range Organics.

SPLP SPLP samples will be analyzed by EPA method 1312 using two preparation methods: 1) with extraction fluid #2 (reagent water at pH 5.00±0.05), and 2) with extraction method #3 (reagent water); per NDEP.

NS Not sampled.

1. The 0.5 ft bgs sample will be collected from the 0.0 to 0.5 ft bgs interval, unless the area is paved. If area is paved, samples will be collected at 0.5 feet below or from a representative depth beneath the pavement. Alternately, if an unpaved area is within a reasonable distance, the sample will be moved to the unpaved area. 2. Metals analyses includes Aluminum, Antimony, Arsenic, Barium, Berollium, Boron, Cadmium, Choolit, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybednum, Nickel, Platinum, Potassium, Selenium, Silver, Sodium, Strontium, Tin, Titanium, Thallium, Tungsten, Uranidum, Zinc

3. Samples for VOC analysis will be preserved in the field using sodium bisulfate (or DI water) and methanol preservatives per EPA Method 5035.

4. Hexavalent Chromium

5. Wet chemistry parameters include: alkalinity (total, CO 3, HCO3), ammonia, bromide, chlorate, chloride, conductivity, nitrate, nitrite, perchlorate, pH, phosphate (total), sulfate, surfactants (MBAs), TDS, Total Organic Carbon, and TSS.

Organochlorine Pesticides (includes analysis for hexachlorobenzene). 6.

7. Semi-volatile Organic Compounds

Radionuclides consists of alpha spec reporting for isotopic thorium and isotopic uranium, and Radium-226, plus Radium-228 by beta counting (per NDEP).

Dioxins/furans will be analyzed by EPA Method 8290 for all samples. Screening reports will be provided for 90% of the samples and full data packages for 10% of the samples. Polychlorinated biphenyls - Sample locations will be analyzed by USEPA methods 8082 and 1668A. Concrete surfaces at these locations will also include chip and/or wipe samples per EPA Region 1 SOP for Sampling Concrete in the Field (1997). 9. 10.

11. Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs.

Geotechnical Tests consist of: moisture content (ASTM D-2216), grain size analysis (ASTM D-422 and C117-04), Soil Dry Bulk Density (ASTM D-2937), Grain Density (ASTM D-854, Soil-Water Filled Porosity (ASTM D-2216); Vertical Hydraulic Conductivity (ASTM D-5084/USEPA 9100). 12.

13. Organophosphorous Pesticides

Organic Acid analysis includes the following analytes: 4-Chlorbenzene sulfonic acid; Benzenesulfonic acid; O,O-Diethylphosphorodithioic acid; O,O-Dimethylphosphorodithioic acid; and Phthalic acid. Asbestos samples are to be collected from 0-2 inches bgs. 14.

15.

#### Table 2 (Field Team Version) Soil Sampling and Analytical Plan for Area I

Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 5 of 5

| Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient designations).  |
|---|
| Boring located to evaluate LOU 60 (Acid Drain System) pipelines and LOU 64 (Koch<br>Materials Company Site).<br>Groundwater anticipated at 39 feet bgs; MCfg ~22 feet bgs.  |
| Boring located to evaluate area between LOU 35 (Truck Emptying/Dumping Site) and LOU 64 (Koch Materials Company Site).<br>GW encountered at 45 feet bgs; MCfg ~22 feet bgs.   |
| Boring located to evaluate LOU 64 (Koch Materials Company Site) OCPs added to<br>SA46 at the request of NDEP in comments to the Phase A report.<br>GW encountered at 35.5 feet bgs; MCfg ~23 feet bgs.  |
| Boring located to evaluate LOU 64 (Koch Materials Company Site).<br>GW encountered at 40 feet bgs; MCfg ~20 feet bgs.   |
| Located as a downgradient boring to LOU 64 (Koch Materials Company Site) as a<br>step-out to LOU 35 (Truck Emptying/Dumping Site) to investigate for VOCs from<br>potential offsite sources to the west, and for general Site coverage.<br>GW anticipated at ~37 feet bgs; MCfg ~23 feet bgs. |
| Boring located to evaluate LOU 64 (Koch Materials Company Site).<br>GW encountered at 41 feet bgs; MCfg -23 feet bgs.   |
| Boring located to evaluate soil stain in northern portion of LOU 64 (Koch Materials<br>Company Site) and LOU 60 (Acid Drain System).<br>GW anticipated at -40 feet bgs; MCfg-23 feet bgs.<br>SPLP sample must be of Quaternary Alluvium (Qal) soils.  |
| SPLP sample must be of Muddy Creek soils & must be dry. If soil is not dry, don't collect sample<br>Boring located to evaluate soil stain in northern portion of LOU 64 (Koch Materials<br>Company Site).<br>GW encountered at ~37.5 feet bgs; MCfg ~20 feet bgs.                             |
|   |

|                  |                  |                        |                            |                             |   | Lab                                 | ooratory <sup>D</sup> :                  | CAS<br>Kelso, V            |                      |                                  |                                    |                                | Analytical S<br>ochester, NY       |                                      |                                       |                                    | GEL<br>Charleston, SC       | CAS<br>Houston, TX                  | STL Denver,<br>CO                | Alpha<br>Analytical<br>Sparks, NV |                           |  |
|------------------|------------------|------------------------|----------------------------|-----------------------------|---|-------------------------------------|--|----------------------------|----------------------|----------------------------------|------------------------------------|--------------------------------|------------------------------------|--------------------------------------|---------------------------------------|------------------------------------|-----------------------------|-------------------------------------|----------------------------------|-----------------------------------|---------------------------|--|
| Grid<br>Location | Location<br>Area | Monitoring<br>Well No. | Sample ID No. <sup>A</sup> | Screen Interval<br>(ft bgs) | Soil Type<br>Expected<br>Across Screen<br>Interval <sup>1,B</sup> | Date<br>Sampled<br>(for Phase<br>B) | Well<br>Sampled for<br>Phase A?<br>(y/n) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup> | VOCs <sup>3.</sup><br>(EPA 8260) | Hex Cr <sup>4.</sup><br>(EPA 7199) | Wet<br>Chemistry <sup>5.</sup> | Total Cyanide<br>J.<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(EPA<br>8081A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | PCBs <sup>8, E</sup><br>(EPA 8082) | Radionuclides <sup>9.</sup> | PCBs <sup>8, E</sup><br>(EPA 1668A) | OPPs <sup>10, F</sup><br>(8141A) | Organic<br>Acids <sup>F</sup>     | Rationale for<br>Revision | Location Description and Rationale for Investigation   |
|                  |                  |                        |                            |                             | Wells a   | are orgar                           | nized by g                               | rid location a             | s shown              | on Plate                         | A - Start                          | ing point i                    | s on the no                        | orthwest                             | ern-most                              | grid in A                          | rea I (A-3) an              | d ending wit                        | h the south                      | eastern-mos                       | st grid cove              | ring Area I (O-4).   |
| A-3              | Parcel A         | H-48                   | H-48B                      | TD = 41.1 ft                | Qal *   | 6/18/2008                           | No                                       | Х                          | Х                    | Х                                | Х                                  | х                              | х                                  | Х                                    | Х                                     |                                    | Х                           |                                     | х                                | х                                 | F, K, N                   | Serves as a stepout, generally upgradient for LOU 67 (Delbert Madsen Site), for general Site coverage and for BRC<br>Parcel A.   |
| A-5              | Parcel A         | PC-40                  | PC-40B                     | 15 - 55                     | Qal   | 6/18/2008                           | Yes                                      | Х                          | х                    | Х                                | Х                                  | х                              | х                                  | х                                    | х                                     |                                    | х                           |                                     | х                                | х                                 | F, N                      | Located to evaluate LOU 67; as general Site coverage; and to evaluate downgradient from Area I.  |
| B-3              | Parcel A         | H-49A                  | H-49AB                     | TD = 49 ft                  | Qal *   | 6/24/2008                           | No                                       | х                          | х                    | х                                | Х                                  | х                              | х                                  | х                                    | Х                                     |                                    | х                           |                                     |                                  |                                   | K, N                      | Located to evaluate LOU 67; as general Site coverage; and to evaluate downgradient from Area I.  |
| D-3              | Parcel A         | MC-62                  | MC-62B                     | TD = 59 ft                  | Qal *   | 6/23/2008                           | No                                       | х                          | х                    | х                                | Х                                  | х                              | х                                  | х                                    | х                                     |                                    | х                           |                                     |                                  |                                   | K, N                      | Located for general Site coverage and to evaluate downgradient from Area I.  |
| D-4              | Parcel B         | PC-72                  | PC-72B                     | 15 -35                      | Qal   | 6/23/2008                           | No                                       | Х                          | Х                    | Х                                | Х                                  | х                              | х                                  | х                                    | Х                                     |                                    | Х                           |                                     |                                  |                                   | N                         | Located to serve as a lateral stepout for M-95 for general Site coverage; and to evaluate downgradient from Area I.  |
| E-1              | Parcel D         | MC-45                  | MC-45B                     | TD = 35.33 ft               | Qal *   | 6/25/2008                           | Yes                                      | х                          | х                    | х                                | Х                                  | х                              | х                                  | х                                    | х                                     |                                    | х                           |                                     | х                                | х                                 | F, K, N                   | Located to evaluate potential offsite sources to the west; for general Site coverage downgradient from Area I.   |
| E-3              | Parcel A         | MC-65                  | MC-65B                     | TD = 41.78 ft               | Qal *   | 6/20/2008                           | No                                       | Х                          | х                    | х                                | Х                                  | х                              | х                                  | х                                    | Х                                     |                                    | х                           |                                     |                                  |                                   | K, N                      | Located for general Site coverage and to evaluate downgradient from Area I.  |
| E-3              | Parcel A         | MC-66                  | MC-66B                     | TD = 47.52 ft               | Qal *   | 6/20/2008                           | No                                       | Х                          | х                    | х                                | Х                                  | х                              | х                                  | х                                    | Х                                     |                                    | х                           |                                     |                                  |                                   | K, N                      | Located for general Site coverage and to evaluate downgradient from Area I.  |
| E-5              | Parcel B         | M-44                   | M-44B                      | 5 - 35                      | Qal/MCfg1   | 6/24/2008                           | No                                       | Х                          | х                    | х                                | Х                                  | х                              | х                                  | х                                    | х                                     |                                    | х                           |                                     | х                                | х                                 | F, N                      | Located to evaluate LOU 68 and as a lateral stepout for well M-95 and to evaluate BRC Parcels B and I.   |
| E-6              | Parcel I         | M-94                   | M-94B                      | 12 - 22                     | Qal   | 6/25/2008                           | No                                       | х                          | х                    | х                                | Х                                  | х                              | х                                  | х                                    | х                                     |                                    | х                           |                                     |                                  |                                   | N                         | Located to evaluate LOU 68; BRC Parcels B and I and the downgradient area of the Site.   |
| E-6              | Parcel I         | M-95                   | M-95B                      | 12 - 22                     | Qal   | 6/24/2008                           | Yes                                      | х                          | х                    | х                                | Х                                  | х                              | х                                  | х                                    | Х                                     |                                    | х                           |                                     |                                  |                                   | N                         | Located to evaluate LOU 68; BRC Parcel B; and the downgradient area of the Site.   |
| E-7              | Parcel I         | M-96                   | M-96B                      | 10.5 - 20.5                 | Qal   | 7/9/2008                            | No                                       | Х                          | Х                    | Х                                | Х                                  | х                              | х                                  | х                                    | Х                                     |                                    | Х                           |                                     |                                  |                                   | N                         | Located to evaluate LOU 68; BRC Parcel B; and the downgradient area of the Site.   |
| F-2              | Parcel D         | MC-53                  | MC-53B                     | 20 - 40                     | Qal *   | 6/25/2008                           | No                                       | х                          | х                    | х                                | х                                  | х                              | х                                  | х                                    | х                                     |                                    | х                           |                                     |                                  |                                   | N                         | Located to evaluate potential offsite sources to the west; for general Site coverage downgradient from Area I.   |
| F-4              | Parcel B         | PC-37                  | PC-37B                     | 16.8 - 41.8                 | Qal   | 6/20/2008                           | No                                       | х                          | х                    | х                                | х                                  | х                              | х                                  | х                                    | x                                     |                                    | х                           |                                     |                                  |                                   | N                         | Located to serve as a downgradient stepout for LOU 68; to evaluate downgradient areas; and for general Site coverage.  |
| G-1              | Olin             | MC-3                   | MC-3B                      | TD = 44.25 ft               | Qal *   |                                     | No                                       | х                          | x                    | х                                | х                                  | х                              | х                                  | x                                    | x                                     |                                    | x                           |                                     |                                  |                                   | K, N                      | Located offsite to the west for general Site coverage; to evaluate potential offsite sources to the west; and to evaluate<br>BRC Parcels C and E.  |
| G-2              | Parcel D         | MC-94                  | MC-94B                     | TD = 40 ft                  | Qal *   |                                     | No                                       | Х                          | х                    | x                                | х                                  | х                              | x                                  | х                                    | x                                     |                                    | х                           |                                     |                                  |                                   | K, N                      | Located to evaluate potential offsite sources to the west; for general Site coverage; and to evaluate downgradient from<br>Area I.   |
| G-2              | Parcel E         | MC-97                  | MC-97B                     | TD = 42 ft                  | Qal *   | 6/25/2008                           | No                                       | Х                          | х                    | x                                | Х                                  | х                              | x                                  | х                                    | х                                     |                                    | х                           |                                     |                                  |                                   | K, N                      | Located to evaluate potential offsite sources to the west; for general Site coverage; and to evaluate downgradient from<br>Area I.   |
| G-3              | Parcel D         | MC-55                  | MC-55B                     | TD = 23 ft                  | Qal *   |                                     | No                                       | х                          | х                    | х                                | х                                  | х                              | х                                  | х                                    | х                                     |                                    | х                           |                                     |                                  |                                   | K, N                      | Located to evaluate potential offsite sources to the west; for general Site coverage downgradient from Area I.   |
| H-2              | Parcel C         | H-28A                  | H-28AB                     | TD = 51 ft                  | MCfg1 *   |                                     | No                                       | х                          | х                    | x                                | х                                  | х                              | х                                  | х                                    | x                                     |                                    | х                           |                                     |                                  |                                   | K, N                      | Serves as a close stepout downgradient for LOU 1 and LOU 10; for general Site coverage; and to evaluate potential<br>offsite sources to the west.  |
| H-2              | Parcel C         | MC-32                  | MC-32B                     | TD = 34 ft                  | Qal *   | 6/25/2008                           | No                                       | x                          | х                    | x                                | х                                  | х                              | x                                  | х                                    | x                                     |                                    | x                           |                                     |                                  |                                   | K, N                      | Located to serve as a downgradient stepout for LOU 10; to evaluate potential offsite sources to the west; to provide general Site coverage; and to evaluate BRC Parcels C and E. This was a dry well - no water sample collected in June 2008. |
| H-2              | I                | M-6A                   | M-6AB                      | 26.8 - 41.5                 | Qal/MCfg1   | 6/27/2008                           | No                                       | Х                          | х                    | x                                | х                                  | х                              | x                                  | х                                    | х                                     | х                                  | Х                           | х                                   | х                                | x                                 | E, F, G                   | Located as a downgradient stepout for LOU 1 and LOU 10; to evaluate possible offsite sources to the west; and for general Site coverage.   |
| H-3              | I                | M-7B                   | M-7BB                      | 25.5 - 50.5                 | Qal/MCfg1   | 6/26/2008                           | Yes                                      | х                          | х                    | х                                | Х                                  | х                              | х                                  | х                                    | Х                                     | х                                  | х                           | х                                   | х                                | х                                 | E, F                      | Located as a downgradient stepout for LOU 1and LOU 10; to evaluate possible offsite sources to the west; and for<br>general Site coverage.   |
| H-3              | Parcel D         | MC-59                  | MC-59B                     | TD = 32.58 ft               | Qal *   |                                     | No                                       | х                          | х                    | х                                | х                                  | х                              | х                                  | х                                    | х                                     |                                    | х                           |                                     |                                  |                                   | K, N                      | Located to evaluate potential offsite sources to the west; for general Site coverage downgradient from Area I.   |
| H-6              | Parcel D         | M-23                   | M-23B                      | 9.4 - 37.4                  | Qal   | 6/25/2008                           | No                                       | Х                          | х                    | х                                | Х                                  | х                              | x                                  | х                                    | х                                     |                                    | х                           |                                     | х                                | х                                 | F, N                      | Located to serve as a upgradient stepout for LOU 68; as a downgradient stepout for LOU 1; to evaluate BRC Parcels C and D; and for general Site coverage.  |
| H-8              | Parcel J         | M-48                   | M-48B                      | 6.1 - 36.1                  | Qal/MCfg1   | 7/9/2008                            | Yes                                      | х                          | х                    | х                                | Х                                  | х                              | х                                  | х                                    | х                                     |                                    | х                           |                                     |                                  |                                   | N                         | Located to evaluate LOU 69 and to evaluate BRC Parcels B and J.  |
| -4               | I                | M-98                   | M-98B                      | 19 - 29                     | Qal   |                                     | Yes                                      | Х                          | х                    | х                                | Х                                  | х                              | х                                  | x                                    | х                                     |                                    | x                           |                                     |                                  |                                   |                           | Located to evaluate LOU 1 and for general Site coverage.   |
| I-5              | I                | M-99                   | M-99B                      | 16 - 31                     | Qal   |                                     | No                                       | Х                          | х                    | x                                | х                                  | х                              | x                                  | х                                    | x                                     |                                    | х                           |                                     |                                  |                                   |                           | Located to evaluate LOU 1; as a downgradient stepout for LOUs 22, 23, and 32; as an upgradient stepout for LOU 69;<br>and for general Site coverage.   |
| I-6              | I                | M-100                  | M-100B                     | 19 - 29                     | Qal   |                                     | No                                       | Х                          | x                    | x                                | х                                  | х                              | x                                  | х                                    | x                                     |                                    | Х                           |                                     |                                  |                                   |                           | Located to evaluate LOU 1; as a downgradient stepout for LOUs 22, 23, and 32; as an upgradient stepout for LOU 69; and for general Site coverage.  |
| I-7              | I                | M-101                  | M-101B                     | 17 - 27                     | Qal   |                                     | No                                       | Х                          | х                    | х                                | Х                                  | Х                              | х                                  | х                                    | х                                     |                                    | х                           |                                     |                                  |                                   |                           | Located to evaluate LOU 1; as a downgradient stepout for LOUs 22, 23, and 32; as an upgradient stepout for LOU 69; and for general Site coverage.  |
| J-2              | BRC              | AA-BW-02               | AA-BW-02B                  | 33 - 53                     | MCfg1 *   |                                     | No                                       | х                          | х                    | х                                | Х                                  | х                              | х                                  | х                                    | х                                     |                                    | х                           |                                     |                                  |                                   |                           | Located to evaluate constituents from off-Site sources to the west, and for general Site coverage.   |
| J-8              | I                | M-102                  | M-102B                     | 19.4 - 39.4                 | Qal   |                                     | No                                       | х                          | х                    | х                                | х                                  | х                              | x                                  | х                                    | х                                     |                                    | x                           |                                     |                                  |                                   |                           | Located to evaluate LOU 1; as a downgradient stepout for LOUs 22, 23, and 32; as an upgradient stepout for LOU 69; and for general Site coverage.  |
| K-2              | I                | M-5A                   | M-5AB                      | 40 - 50                     | MCfg1   | 6/26/2008                           | Yes                                      | Х                          | Х                    | х                                | Х                                  | х                              | х                                  | Х                                    | Х                                     | х                                  | Х                           | Х                                   | х                                | х                                 | E, F                      | Located to evaluate LOU 2 (Open Area South of the Trade Effluent Ponds); as an upgradient stepout for LOU 1 and LOU 10; to evaluate possible offsite sources to the west; and for general Site coverage.                                       |

Groundwater Sampling and Analysis Plan for Area I Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

Page 1 of 3

|                          |                          | Alpha<br>Analytical<br>Sparks, NV | STL Denver,<br>CO                | CAS<br>Houston, TX                  | GEL<br>Charleston, SC       |                                    |                                       |                                      | I Analytical S<br>ochester, NY     |                                |                                    |                                  |                      | CAS<br>Kelso, V            | boratory <sup>D</sup> :                  | Lai                                 |   |                             |                            |                        |                  |                  |
|--------------------------|--------------------------|-----------------------------------|----------------------------------|-------------------------------------|-----------------------------|------------------------------------|---------------------------------------|--------------------------------------|------------------------------------|--------------------------------|------------------------------------|----------------------------------|----------------------|----------------------------|--|-------------------------------------|---|-----------------------------|----------------------------|------------------------|------------------|------------------|
|                          | Rationale fo<br>Revision | Organic<br>Acids <sup>F</sup>     | OPPs <sup>10, F</sup><br>(8141A) | PCBs <sup>8, E</sup><br>(EPA 1668A) | Radionuclides <sup>9.</sup> | PCBs <sup>8, E</sup><br>(EPA 8082) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | OCPs <sup>6.</sup><br>(EPA<br>8081A) | Total Cyanide<br>J.<br>(EPA 9012A) | Wet<br>Chemistry <sup>5.</sup> | Hex Cr <sup>4.</sup><br>(EPA 7199) | VOCs <sup>3.</sup><br>(EPA 8260) | Metals <sup>2.</sup> | Perchlorate<br>(EPA 314.0) | Well<br>Sampled for<br>Phase A?<br>(y/n) | Date<br>Sampled<br>(for Phase<br>B) | Soil Type<br>Expected<br>Across Screen<br>Interval <sup>1,B</sup> | Screen Interval<br>(ft bgs) | Sample ID No. <sup>A</sup> | Monitoring<br>Well No. | Location<br>Area | Grid<br>Location |
| ering                    | st grid cov              | eastern-mos                       | h the south                      | d ending wit                        | Area I (A-3) an             | grid in A                          | ern-most                              | orthwest                             | s on the no                        | ing point                      | A - Start                          | on Plate                         | is shown             | rid location a             | nized by g                               | are orgai                           | Wells   |                             |                            | •                      |                  |                  |
| To ev                    | E, F                     | Х                                 | Х                                | Х                                   | х                           | Х                                  | Х                                     | х                                    | х                                  | Х                              | Х                                  | Х                                | Х                    | Х                          | No                                       | 7/8/2008                            | MCfg1   | 144.5 - 174.5               | TR-2B                      | TR-2                   | I                | K-2              |
| Newr                     |                          |                                   |                                  |                                     | x                           |                                    | х                                     | х                                    | х                                  | Х                              | х                                  | х                                | х                    | х                          | No                                       | 6/26/2008                           | MCfg1   | 24.7 - 39.7                 | MW-16B                     | MW-16                  | 1                | K-3              |
| Locat                    |                          |                                   |                                  |                                     | x                           |                                    | х                                     | х                                    | x                                  | Х                              | х                                  | х                                | х                    | x                          | No                                       | 7/8/2008                            | Qal/MCfg1   | 19.9 - 39.3                 | M-69B                      | M-69                   | I                | K-5              |
| Locat<br>cover           |                          |                                   |                                  |                                     | x                           |                                    | х                                     | х                                    | х                                  | х                              | х                                  | х                                | х                    | х                          | No                                       | 6/29/2008                           | Qal/MCfg1   | 10.8 - 35.4                 | M-79B                      | M-79                   | I                | K-5              |
| Locat<br>23; ar          | F                        | x                                 | x                                |                                     | x                           |                                    | х                                     | x                                    | х                                  | х                              | х                                  | x                                | x                    | х                          | No                                       |                                     | Qal/MCfg1   | 10.8-40.3                   | M-83B                      | M-83                   | 1                | K-6              |
| Locat                    |                          |                                   |                                  |                                     | x                           |                                    | x                                     | x                                    | х                                  | x                              | x                                  | x                                | x                    | x                          | No                                       | 6/29/2008                           | Qal/MCfg1   | 11.8 - 34.1                 | M-84B                      | M-84                   |                  | K-6              |
| 22 an<br>Locat           | G                        |                                   |                                  |                                     |                             |                                    | x                                     |                                      | x                                  |                                |                                    |                                  | x                    | x                          | No                                       |                                     | Qal/MCfg1   | 11.3 -40.9                  | M-86B                      | M-86                   |                  |                  |
| and 2                    | 6                        |                                   |                                  |                                     | X                           |                                    |                                       | X                                    |                                    | X                              | X                                  | X                                |                      |                            | INU                                      |                                     |   |                             |                            |                        |                  | K-7              |
| sourc                    |                          |                                   |                                  |                                     | X                           |                                    | Х                                     | X                                    | X                                  | Х                              | Х                                  | Х                                | X                    | Х                          | No                                       | 6/25/2008                           | Qal/MCfg1   | 7.3 - 36.8                  | M-88B                      | M-88                   |                  | K-8              |
| Locat                    | н                        |                                   |                                  |                                     | х                           |                                    | Х                                     | х                                    | х                                  | Х                              | х                                  | х                                | х                    | х                          | No                                       |                                     | MCfg1   | 20 - 40                     | M-129B                     | M-129                  | I                | K-9              |
| Serve                    |                          |                                   |                                  |                                     | x                           |                                    | х                                     | х                                    | х                                  | Х                              | х                                  | х                                | х                    | х                          | No                                       | 7/10/2008                           | Qal/MCfg1   | 25 -35                      | CLD1-RB                    | CLD1-R                 | TIMET            | K-9              |
| New r                    | E, F, H                  | х                                 | х                                | х                                   | x                           | х                                  | х                                     | х                                    | х                                  | х                              | х                                  | х                                | х                    | х                          | No                                       |                                     | MCfg1   | 35-50                       | M-127B                     | M-127                  | I                | L-2              |
| New r<br>from t          |                          |                                   |                                  |                                     | x                           |                                    | х                                     | х                                    | Х                                  | Х                              | х                                  | х                                | х                    | х                          | No                                       | 6/29/2008                           | MCfg1   | 19.7 - 39.7                 | M-126B                     | M-126                  | 1                | L-3              |
| Locat                    |                          |                                   |                                  |                                     | x                           |                                    | х                                     | x                                    | x                                  | Х                              | х                                  | x                                | x                    | x                          | No                                       | 6/30/2008                           | MCfg1   | 20 - 40                     | M-14AB                     | M-14A                  | 1                | L-4              |
| Locat                    |                          |                                   |                                  |                                     | x                           |                                    | x                                     | x                                    | x                                  | x                              | x                                  | x                                | x                    | x                          | No                                       | 6/27/2008                           | MCfg1   | 20 - 40                     | M-57AB                     | M-57A                  | <u> </u>         | L-4              |
| for ge<br>Locat          |                          |                                   |                                  |                                     | x                           |                                    | x                                     | x                                    | x                                  | x                              | x                                  | x                                | x                    | x                          | No                                       | 7/8/2008                            | Qal/MCfg1   | 17.8 - 42.5                 | I-BB                       | I-B                    |                  | L-5              |
| covera<br>Locate<br>LOUs |                          |                                   |                                  |                                     | x                           |                                    | x                                     | x                                    | x                                  | X                              | x                                  | x                                | x                    | x                          | Yes                                      | 7/1/2008                            | Qal/MCfg1   | 14.6 - 44.6                 | M-55B                      | M-55                   | · ·              | <br>L-6          |
| Locat                    |                          |                                   |                                  |                                     | x                           |                                    | х                                     | x                                    | x                                  | Х                              | х                                  | x                                | x                    | x                          | No                                       | 7/2/2008                            | Qal/MCfg1   | 14.4 - 39                   | M-65B                      | M-65                   | 1                | L-6              |
| Locat                    |                          |                                   |                                  |                                     | x                           |                                    | х                                     | х                                    | x                                  | Х                              | х                                  | х                                | х                    | x                          | No                                       |                                     | Qal/MCfg1   | 21.5 - 41.5                 | M-78B                      | M-78                   | 1                | L-6              |
| Locat                    |                          |                                   |                                  |                                     | х                           |                                    | Х                                     | х                                    | х                                  | Х                              | х                                  | х                                | х                    | х                          | No                                       | 6/26/2008                           | Qal/MCfg1   | 9.3 - 38.8                  | M-61B                      | M-61                   | I                | L-8              |
| Locat                    |                          |                                   |                                  |                                     | x                           |                                    | Х                                     | х                                    | x                                  | Х                              | х                                  | х                                | х                    | х                          | No                                       | 6/27/2008                           | Qal/MCfg1   | 7.8 - 37.8                  | M-67B                      | M-67                   | I                | L-8              |
| Locat<br>the e           |                          |                                   |                                  |                                     | x                           |                                    | Х                                     | х                                    | х                                  | Х                              | х                                  | х                                | х                    | х                          | No                                       | 6/27/2008                           | Qal/MCfg1   | 11.2 - 39.8                 | M-68B                      | M-68                   | I                | L-8              |
| Serve                    | 0                        |                                   |                                  |                                     | x                           |                                    | Х                                     | х                                    | х                                  | Х                              | х                                  | х                                | х                    | х                          | No                                       | 7/10/2008                           | Qal   | 20 - 40.27                  | CLD2-RB                    | CLD2-R                 | TIMET            | L-9              |
| Locat<br>samp            | н                        |                                   |                                  |                                     | х                           |                                    | х                                     | х                                    | х                                  | х                              | х                                  | х                                | х                    | х                          | No                                       |                                     | MCfg1   | 20 - 40                     | M-130B                     | M-130                  | I                | L-9              |
| Locat                    | 0                        |                                   |                                  |                                     | x                           |                                    | х                                     | х                                    | Х                                  | х                              | х                                  | х                                | х                    | х                          | No                                       | 7/10/2008                           | MCfg1*  | nr                          | CLD3-RB                    | CLD3-R                 | TIMET            | L-10             |
| To ev<br>cover           |                          |                                   |                                  |                                     | х                           |                                    | х                                     | х                                    | Х                                  | Х                              | х                                  | х                                | х                    | х                          | No                                       |                                     | Qal*  | 25 - 50                     | H-38B                      | H-38                   | Olin             | M-1              |
| Locate                   | E, F                     | x                                 | х                                | х                                   | x                           | х                                  | х                                     | х                                    | x                                  | Х                              | х                                  | х                                | х                    | x                          | No                                       | 7/9/2008                            | MCfg1   | 124.5 - 144.5               | TR-4B                      | TR-4                   | 1                | M-2              |
| Now                      | E, H, M, F               | х                                 | x                                | x                                   | x                           | х                                  | x                                     | х                                    | x                                  | х                              | х                                  | х                                | x                    | x                          | No                                       |                                     | MCfg1   | 35-50                       | M-125B                     | M-125                  | I                | M-3              |
| Locat                    | F                        | x                                 | x                                |                                     | x                           |                                    | х                                     | х                                    | x                                  | Х                              | х                                  | х                                | х                    | x                          | Yes                                      | 7/8/2008                            | Qal/MCfg1   | 24.9 - 39.9                 | M-39B                      | M-39                   | 1                | M-8              |
| New r<br>Shop)           | F, H                     | x                                 | x                                |                                     | x                           |                                    | x                                     | x                                    | x                                  | х                              | x                                  | x                                | x                    | x                          | No                                       |                                     | MCfg1   | 30-45                       | M-142B                     | M-142                  | 1                | N-4              |
| New                      | E, F, H, M               | x                                 | x                                | x                                   | x                           | x                                  | x                                     | x                                    | x                                  | x                              | x                                  | x                                | x                    | x                          | No                                       | 7/11/2008                           | MCfg1   | 34-51                       | M-123B                     | M-123                  | l                | O-2              |
| New I<br>for LC          | н                        |                                   |                                  |                                     | x                           |                                    | x                                     | x                                    | x                                  | x                              | x                                  | x                                | x                    | x                          | No                                       | 7/11/2008                           | MCfg1   | 34-49                       | M-124B                     | M-124                  | I                | O-4              |

Groundwater Sampling and Analysis Plan for Area I Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

Page 2 of 3

| Location Description and Rationale for Investigation  |
|---|
| ng Area I (O-4).  |
| o evaluate for SRCs in upper Muddy Creek Fm.  |
| lew monitoring well to evaluate SRCs in upper Muddy Creek from offsite sources from west.   |
| ocated to evaluate LOU 32 and to evaluate the western end of the Groundwater Barrier Wall.  |
| ocated to evaluate LOU 1; LOU 32 and the western end of the Groundwater Injection Trenches; and for general Site<br>overage.  |
| ocated to evaluate LOU 32 and the Groundwater Injection Area; as an upgradient stepout for LOU 1, and LOUs 22 and<br>3; and for general Site coverage.  |
| ocated to evaluate LOU 32 and the Groundwater Injection Trench area; as an upgradient stepout for LOU 1 and LOUs 2 and 23; and for general Site coverage.   |
| ocated to evaluate LOU 32 and the Groundwater Injection Trench area; as an upgradient stepout for LOU 1, LOUs 22<br>nd 23; and for general Site coverage.   |
| ocated to serve as an upgradient stepout for LOU 1; as a downgradient stepout for LOU 32; to evaluate possible offsite<br>ources to the east; and for general Site coverage.  |
| ocated to evaluate the eastern end of the barrier wall. Well was drilled and installed in March 2008.   |
| erves as a close stepout downgradient of LOU 5 (Beta Ditch) and general Site coverage. Located on Timet.  |
| lew monitoring well located to evaluate LOU 2; to evaluate potential offsite sources to the west; and for general Site<br>overage. Well was drilled and installed in June 2008, but not yet sampled for Phase B.  |
| lew monitoring well located to serve as an up- to crossgradient stepout for LOU 2; to evaluate potential offsite sources<br>om the west; and for general Site coverage.   |
| ocated as an upgradient stepout for LOUs 30, 56, and 58; as a downgradient well for LOU 39; and for general Site<br>overage.  |
| ocated to serve as an upgradient stepout for LOU 32; to evaluate the west end of the Groundwater Barrier Wall; and<br>r general Site coverage.  |
| ocated as a downgradient stepout for LOU 56 and LOU 58; as an upgradient stepout for LOU 57, and for general Site<br>overage.   |
| ocated just upgradient of the groundwater barrier wall; to evaluate LOU 32; to serve as a downgradient stepout for<br>OUs 19, 31, and 55 and for general Site coverage.   |
| ocated to serve as an upgradient stepout for LOU 32; as a downgradient stepout for LOU 57; and for general Site<br>overage.   |
| ocated to evaluate LOU 32; as a downgradient stepout for LOU 55; and for general Site coverage.   |
| ocated to evaluate LOU 32 and the eastern end of the Groundwater Barrier Wall.  |
| ocated to serve as an upgradient stepout for LOU 32 and for general Site coverage.  |
| ocated to serve as a downgradient stepout for LOU 5 and 20; as an upgradient stepout for LOU 32; as an evaluation of<br>e east end of the Groundwater Barrier Wall; and for general Site coverage.  |
| erves as a close stepout downgradient of LOU 5; and a further downgradient stepout for LOU 20 (Pond C-1 and<br>ssociated Piping), and for general Site coverage. Located on Timet.  |
| ocated to evaluate LOU 5 and the eastern end of the barrier wall. Well was installed in March 2008 but not yet<br>ampled for Phase B.   |
| ocated to evaluate LOU 67; as general Site coverage; and to evaluate downgradient from Area I. Located on Timet.  |
| o evaluate possible offsite sources from the west, as an upgradient stepout to LOU 5 (Beta Ditch) and for general Site<br>overage. Depth of screen will be confirmed in the field.  |
| ocated to serve as a downgradient stepout for LOU 5; to evaluate possible offsite sources to the west (particularly for<br>OCs); and for general Site coverage.   |
| lew monitoring well located to serve as a downgradient stepout for LOUs 5 and 54; to evaluate potential offsite sources<br>om the west; and for general Site coverage. Well was installed in June 2008 but not yet sampled for Phase B.   |
| ocated to serve as a downgradient stepout for LOUs 5, 18, 20, and 21; and for general Site coverage.  |
| lew monitoring well constructed in borehole for SA87 to evaluate LOU 39 (Satellite Accumulation Point, AP Maintenanci<br>hop). Well was installed in June 2008 but not yet sampled for Phase B.   |
| lew monitoring well located to evaluate LOU 35; as an upgradient stepout for LOUs 38 and 54; to evaluate potential<br>ffsite sources to the west; and for general Site coverage. PCB analysis for groundwater requested by NDEP at this<br>cation. Well was installed in June 2008 but not yet sampled for Phase B. |
| lew monitoring well located to evaluate LOU 64; serve as a downgradient stepout for LOU 63; as an upgradient stepout<br>or LOU 39; and for general Site coverage. Well was installed in June 2008 but not yet sampled for Phase B.  |

|   |   |   |   |   |   | Lab                                  | oratory <sup>D</sup> :                   | CAS<br>Kelso,                     |                      |                                  |                                    |                                | Analytical S<br>ochester, NY       |                                      |                                       |                                    | GEL<br>Charleston, SC                                  | CAS<br>Houston, TX                  | STL Denver,<br>CO                | Alpha<br>Analytical<br>Sparks, NV |                           |                 |
|---|---|---|---|---|---|--------------------------------------|--|-----------------------------------|----------------------|----------------------------------|------------------------------------|--------------------------------|------------------------------------|--------------------------------------|---------------------------------------|------------------------------------|--|-------------------------------------|----------------------------------|-----------------------------------|---------------------------|-----------------|
| Grid<br>Location  | Location<br>Area  | Monitoring<br>Well No.  | Sample ID No. <sup>A</sup>  | Screen Interval<br>(ft bgs)   | Soil Type<br>Expected<br>Across Screen<br>Interval <sup>1,B</sup> | Date<br>Sampled<br>(for Phase<br>B)  | Well<br>Sampled for<br>Phase A?<br>(y/n) | Perchlorate<br>(EPA 314.0)        | Metals <sup>2.</sup> | VOCs <sup>3.</sup><br>(EPA 8260) | Hex Cr <sup>4.</sup><br>(EPA 7199) | Wet<br>Chemistry <sup>5.</sup> | Total Cyanide<br>J.<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(EPA<br>8081A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | PCBs <sup>8, E</sup><br>(EPA 8082) | Radionuclides <sup>9.</sup>                            | PCBs <sup>8, E</sup><br>(EPA 1668A) | OPPs <sup>10, F</sup><br>(8141A) | Organic<br>Acids <sup>F</sup>     | Rationale for<br>Revision |                 |
|   |   |   |   |   | Wells a   | are organ                            | ized by g                                | rid location a                    | as shown             | on Plate                         | A - Start                          | ing point i                    | s on the no                        | orthwest                             | ern-mos                               | grid in A                          | rea I (A-3) an   | d ending wit                        | h the southe                     | eastern-mos                       | t grid cover              | ring /          |
| O-4   | I   | M-128   | M-128B  | 40-55   | MCfg1   |                                      | No                                       | х                                 | x                    | x                                | х                                  | х                              | х                                  | х                                    | x                                     |                                    | х  |                                     |                                  |                                   | н                         | New m<br>and 57 |
|   |   |   |   |   | Numbe   | er of Field                          | Samples:                                 | 64                                | 64                   | 64                               | 64                                 | 64                             | 64                                 | 64                                   | 64                                    | 8                                  | 64   | 8                                   | 16                               | 16                                |                           |                 |
| QA/QC San   |   |   |   |   |   |                                      |  |                                   |                      |                                  |                                    |                                | r                                  | 1                                    |                                       |                                    |  |                                     |                                  |                                   |                           |                 |
|   |   | cates (10%)   | 1   |   |   |                                      |  | 7                                 | 7                    | 7                                | 7                                  | 7                              | 7                                  | 7                                    | 7                                     | 1                                  | 7  | 0                                   | 2                                | 2                                 |                           |                 |
|   | Field Blan  | Rinseate B  | lanke   |   |   |                                      |  | 3                                 | 3                    | 1                                | 1<br>3                             | 3                              | 1                                  | 1<br>3                               | 1                                     | 1                                  | 3  | 0                                   | 1                                | 1                                 |                           |                 |
|   | Trip Blank  |   | lanks   |   |   |                                      |  | 0                                 | 0                    | 14                               | 0                                  | 0                              | 0                                  | 0                                    | 0                                     | 0                                  | 0  | 0                                   | 0                                | 0                                 |                           |                 |
|   | Matrix Spil   |   |   |   |   |                                      |  | 4                                 | 4                    | 4                                | 4                                  | 3                              | 3                                  | 4                                    | 3                                     | 1                                  | 4  | 0                                   | <u> </u>                         | 4                                 |                           |                 |
|   |   | ce Duplicate  | e (5%)  |   |   |                                      |  | 4                                 | 4                    | 4                                | 4                                  | 3                              | 3                                  | 4                                    | 3                                     | 1                                  | 4  | 0                                   | 1                                | 4                                 |                           |                 |
|   |   |   |   |   |   | Total                                | Samples:                                 | 83                                | 83                   | 97                               | 83                                 | 81                             | 81                                 | 83                                   | 81                                    | 12                                 | 83   | 8                                   | 22                               | 28                                |                           |                 |
| *<br>X<br>blank<br>1.<br>2.<br>3.<br>4.<br>5.<br>6.<br>7.<br>8.<br>9. | Sample will<br>No sample of<br>It is anticipat<br>Metals analy<br>VOCs = Vola<br>Hexavalent<br>Complete lis<br>OCPs = Org<br>SVOCs = Se | be collected<br>collected und<br>red that the la<br>rses includes<br>atile organic<br>Chromium.<br>t of wet cher<br>anochlorine | and analyzed.<br>er Phase B sa<br>arge majority o<br>s Aluminum, A<br>compounds (tr<br>nistry paramet | impling plan.<br>of the flow to the<br>ntimony, Arsen<br>o include analys | e well will be fro<br>c, Barium, Ber<br>sis for naphthal          | om the coar<br>yllium, Borc<br>ene). | se-grained                               | sediments. As s                   | such, in the         | cases wher                       | e there are                        | two lithologi                  | es present ac                      | oss the sc                           | reen interv                           | al, the wate                       | in the process of sampled will rep<br>Potassium, Seler | present conditio                    | ns in the coarse                 | e-grained interv                  | al.                       | ngsten,         |
| 10.   | Radionuclide<br>OPPs = Org  | anophospho  | rganic compo<br>s.<br>f alpha spec r<br>rous Pesticide  | include analysis<br>unds.<br>eporting for isot                            | s for hexachlor   | obenzene).                           |  | ll have pH meas<br>nd Radium-226, |                      |                                  | peta countir                       | ng (per NDEF                   | ?).                                |                                      |                                       |                                    |  |                                     |                                  |                                   |                           |                 |
|   | Radionuclide<br>OPPs = Org<br>To Be Deter   | es consists o<br>anophospho<br>mined when<br>d in Tronox d  | rganic compo<br>s.<br>f alpha spec rous Pesticide<br>well is constru                                  | include analysis<br>unds.<br>eporting for isot                            | s for hexachlor<br>opic Thorium a                                 | obenzene).<br>Ind isotopic           |  | ·                                 |                      |                                  | oeta countir                       | ng (per NDEF                   | <b>'</b> ).                        |                                      |                                       |                                    |  |                                     |                                  |                                   |                           |                 |

N The listed location area was revised to more clearly indicate the Parcel ID number (or other location indicator) that the well is in.
 O Well was sampled as part of the Phase B Area I investigation in June-July 2008.

### Table 3

Groundwater Sampling and Analysis Plan for Area I Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

Page 3 of 3

| Location Description and Rationale for Investigation   |
|--|
| ng Area I (O-4).   |
| ew monitoring well to serve as a downgradient stepout for LOUs 35 and 64; as an upgradient stepout for LOUs 39, 52,<br>d 57; and for general Site coverage. Well was installed in June 2008 but not yet sampled for Phase B. |
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| ten, Uranium, Vanadium, Zinc   |
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|   | tical   | Alpha<br>Analytica<br>Sparks, N | STL<br>Denver, CO                | CAS<br>Houston, TX                 |                      | GEL<br>Charleston |                                    |                                       | ervices                              | Analytical S<br>ochester, NY       |                                |                                    |                                  |                      | CAS<br>Kelso, V            | ooratory :                      | Lal                                      |                                     |   |                             |                            |                        |                  |                  |
|---|---------|---------------------------------|----------------------------------|------------------------------------|----------------------|-------------------|------------------------------------|---------------------------------------|--------------------------------------|------------------------------------|--------------------------------|------------------------------------|----------------------------------|----------------------|----------------------------|---------------------------------|--|-------------------------------------|---|-----------------------------|----------------------------|------------------------|------------------|------------------|
| Location Description and Rationale for Investigation  |         | Organic<br>Acids <sup>F</sup>   | OPPs <sup>10, F</sup><br>(8141A) | PCBs <sup>8, E</sup><br>EPA 1668A) | ides <sup>9.</sup> ( | Radionucli        | PCBs <sup>8, E</sup><br>(EPA 8082) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | OCPs <sup>6.</sup><br>(EPA<br>8081A) | Total Cyanide<br>J.<br>(EPA 9012A) | Wet<br>Chemistry <sup>5.</sup> | Hex Cr <sup>4.</sup><br>(EPA 7199) | VOCs <sup>3.</sup><br>(EPA 8260) | Metals <sup>2.</sup> | Perchlorate<br>(EPA 314.0) | Matrix<br>Spike/MS<br>Duplicate | Well<br>Sampled for<br>Phase A?<br>(y/n) | Date<br>Sampled<br>(for Phase<br>B) | Soil Type<br>Expected<br>Across Screen<br>Interval <sup>1,B</sup> | Screen Interval<br>(ft bgs) | Sample ID No. <sup>A</sup> | Monitoring<br>Well No. | Location<br>Area | Grid<br>Location |
| covering Area I (O-4).  | grid co | -most gri                       | utheastern                       | vith the so                        | ding w               | ) and end         | ea I (A-3)                         | rid in Ar                             | -most g                              | rthwesterr                         | on the no                      | g point is                         | Starting                         | Plate A -            | is shown on                | location a                      | l by grid                                | organized                           | Wells are   |                             |                            |                        |                  |                  |
| Serves as a stepout, generally upgradient for LOU 67 (Delbert Madsen Site), for general Site coverage ar<br>Parcel A.   |         | Х                               | х                                |                                    |                      | Х                 |                                    | Х                                     | Х                                    | х                                  | х                              | Х                                  | Х                                | Х                    | Х                          |                                 | No                                       | 6/18/2008                           | Qal *   | TD = 41.1 ft                | H-48B                      | H-48                   | Parcel A         | A-3              |
| Located to evaluate LOU 67; as general Site coverage; and to evaluate downgradient from Area I.   | Loc     | Х                               | х                                |                                    |                      | х                 |                                    | х                                     | Х                                    | х                                  | х                              | х                                  | х                                | Х                    | х                          |                                 | Yes                                      | 6/18/2008                           | Qal   | 15 - 55                     | PC-40B                     | PC-40                  | Dorool A         | ۸.E              |
| This is a duplicate sample of PC-40B.   | Thi     | Х                               | х                                |                                    |                      | х                 |                                    | х                                     | Х                                    | х                                  | х                              | х                                  | Х                                | Х                    | Х                          |                                 | 165                                      | 0/10/2000                           | Qai   | 15 - 55 (dup)               | PC-40BD                    | FC-40                  | Parcel A         | A-5              |
| Located to evaluate LOU 67; as general Site coverage; and to evaluate downgradient from Area I.   | Loo     |                                 |                                  |                                    |                      | х                 |                                    | х                                     | Х                                    | х                                  | х                              | х                                  | Х                                | Х                    | Х                          |                                 | No                                       | 6/24/2008                           | Qal *   | TD = 49 ft                  | H-49AB                     | H-49A                  | Parcel A         | B-3              |
| Located for general Site coverage and to evaluate downgradient from Area I.   | Loc     |                                 |                                  |                                    |                      | Х                 |                                    | Х                                     | Х                                    | Х                                  | Х                              | Х                                  | Х                                | Х                    | Х                          |                                 | No                                       | 6/23/2008                           | Qal *   | TD = 59 ft                  | MC-62B                     | MC-62                  | Parcel A         | D-3              |
| Located to serve as a lateral stepout for M-95 for general Site coverage; and to evaluate downgradient fro  | Loc     |                                 |                                  |                                    |                      | Х                 |                                    | Х                                     | Х                                    | Х                                  | Х                              | Х                                  | Х                                | Х                    | Х                          |                                 | No                                       | 6/23/2008                           | Qal   | 15 -35                      | PC-72B                     | PC-72                  | Parcel B         | D-4              |
| Located to evaluate potential offsite sources to the west; for general Site coverage downgradient from Are  | Loc     | Х                               | х                                |                                    |                      | х                 |                                    | х                                     | Х                                    | х                                  | х                              | х                                  | х                                | х                    | Х                          |                                 | Yes                                      | 6/25/2008                           | Qal *   | TD = 35.33 ft               | MC-45B                     | MC-45                  | Parcel D         | E-1              |
| Located for general Site coverage and to evaluate downgradient from Area I.   | Loc     |                                 |                                  |                                    |                      | х                 |                                    | х                                     | Х                                    | х                                  | х                              | х                                  | х                                | х                    | Х                          |                                 | No                                       | 6/20/2008                           | Qal *   | TD = 41.78 ft               | MC-65B                     | MC-65                  | Parcel A         | E-3              |
| Located for general Site coverage and to evaluate downgradient from Area I.   | Loo     |                                 |                                  |                                    |                      | х                 |                                    | х                                     | Х                                    | х                                  | х                              | х                                  | Х                                | х                    | Х                          |                                 | No                                       | 6/20/2008                           | Qal *   | TD = 47.52 ft               | MC-66B                     | MC-66                  | Parcel A         | E-3              |
| Located to evaluate LOU 68 and as a lateral stepout for well M-95 and to evaluate BRC Parcels B and I.  | Loo     | х                               | х                                |                                    |                      | х                 |                                    | Х                                     | Х                                    | х                                  | х                              | Х                                  | х                                | х                    | Х                          |                                 | No                                       | 6/24/2008                           | Qal/MCfg1   | 5 - 35                      | M-44B                      | M-44                   | Parcel B         | E-5              |
| Located to evaluate LOU 68; BRC Parcels B and I and the downgradient area of the Site.  | Loo     |                                 |                                  |                                    |                      | х                 |                                    | Х                                     | Х                                    | х                                  | х                              | Х                                  | х                                | х                    | Х                          |                                 | No                                       | 6/25/2008                           | Qal   | 12 - 22                     | M-94B                      | M-94                   | Parcel I         | E-6              |
| Located to evaluate LOU 68; BRC Parcel B; and the downgradient area of the Site.  | Loo     |                                 |                                  |                                    |                      | х                 |                                    | Х                                     | Х                                    | х                                  | х                              | х                                  | Х                                | х                    | Х                          |                                 | Yes                                      | 6/24/2008                           | Qal   | 12 - 22                     | M-95B                      | M-95                   | Parcel I         | E-6              |
| This is a matrix spike / matrix spike duplicate sample. Fill one set of bottles for MS sample & second set of<br>for MSD sample. Label both sets of bottles as M-95B.   |         |                                 |                                  |                                    |                      | х                 |                                    | х                                     | Х                                    | х                                  | х                              | х                                  | х                                | х                    | Х                          | х                               | 163                                      | 0/24/2000                           | Qai   | 12 - 22                     | M-95B                      | 101-95                 | T alcert         | L-0              |
| Located to evaluate LOU 68; BRC Parcel B; and the downgradient area of the Site.  | Loc     |                                 |                                  |                                    |                      | Х                 |                                    | Х                                     | Х                                    | х                                  | х                              | Х                                  | Х                                | х                    | Х                          |                                 | No                                       | 7/9/2008                            | Qal   | 10.5 - 20.5                 | M-96B                      | M-96                   | Parcel I         | E-7              |
| Located to evaluate potential offsite sources to the west; for general Site coverage downgradient from Are  | Loo     |                                 |                                  |                                    |                      | х                 |                                    | х                                     | Х                                    | х                                  | х                              | х                                  | х                                | х                    | х                          |                                 | No                                       | 6/25/2008                           | Qal *   | 20 - 40                     | MC-53B                     | MC-53                  | Parcel D         | F-2              |
| Located to serve as a downgradient stepout for LOU 68; to evaluate downgradient areas; and for general<br>coverage.   |         |                                 |                                  |                                    |                      | x                 |                                    | х                                     | х                                    | х                                  | х                              | х                                  | х                                | х                    | х                          |                                 | No                                       | 6/20/2008                           | Qal   | 16.8 - 41.8                 | PC-37B                     | PC-37                  | Parcel B         | F-4              |
| Located offsite to the west for general Site coverage; to evaluate potential offsite sources to the west; and<br>evaluate BRC Parcels C and E.  |         |                                 |                                  |                                    |                      | х                 |                                    | х                                     | х                                    | х                                  | х                              | х                                  | х                                | х                    | х                          |                                 | No                                       |                                     | Qal *   | TD = 44.25 ft               | MC-3B                      | MC-3                   | Olin             | G-1              |
| Located to evaluate potential offsite sources to the west; for general Site coverage; and to evaluate down<br>from Area I.  |         |                                 |                                  |                                    |                      | х                 |                                    | х                                     | Х                                    | х                                  | х                              | х                                  | х                                | х                    | Х                          |                                 | No                                       |                                     | Qal *   | TD = 40 ft                  | MC-94B                     | MC-94                  | Parcel D         | G-2              |
| Located to evaluate potential offsite sources to the west; for general Site coverage; and to evaluate down<br>from Area I.  |         |                                 |                                  |                                    |                      | х                 |                                    | х                                     | х                                    | х                                  | х                              | х                                  | х                                | х                    | х                          |                                 | No                                       | 6/25/2008                           | Qal *   | TD = 42 ft                  | MC-97B                     | MC-97                  | Parcel E         | G-2              |
| Located to evaluate potential offsite sources to the west; for general Site coverage downgradient from Are  | Loc     |                                 |                                  |                                    |                      | х                 |                                    | х                                     | х                                    | х                                  | х                              | х                                  | х                                | х                    | х                          |                                 | No                                       |                                     | Qal *   | TD = 23 ft                  | MC-55B                     | MC-55                  | Parcel D         | G-3              |
| Serves as a close stepout downgradient for LOU 1 and LOU 10; for general Site coverage; and to evalua<br>offsite sources to the west.   |         |                                 |                                  |                                    |                      | х                 |                                    | х                                     | Х                                    | х                                  | Х                              | х                                  | х                                | х                    | Х                          |                                 | No                                       |                                     | MCfg1 *   | TD = 51 ft                  | H-28AB                     | H-28A                  | Parcel C         | H-2              |
| Located to serve as a downgradient stepout for LOU 10; to evaluate potential offsite sources to the west;<br>general Site coverage; and to evaluate BRC Parcels C and E. This was a dry well - no water sample colle<br>2008. | ger     |                                 |                                  |                                    |                      | х                 |                                    | х                                     | х                                    | х                                  | х                              | х                                  | х                                | х                    | х                          |                                 | No                                       | 6/25/2008                           | Qal *   | TD = 34 ft                  | MC-32B                     | MC-32                  | Parcel C         | H-2              |
| Located as a downgradient stepout for LOU 1 and LOU 10; to evaluate possible offsite sources to the wes<br>general Site coverage.   |         | х                               | х                                | х                                  |                      | х                 | х                                  | х                                     | х                                    | х                                  | х                              | х                                  | х                                | х                    | х                          |                                 | No                                       | 6/27/2008                           | Qal/MCfg1   | 26.8 - 41.5                 | M-6AB                      | M-6A                   | I                | H-2              |
| Located as a downgradient stepout for LOU 1and LOU 10; to evaluate possible offsite sources to the wes<br>general Site coverage.  |         | х                               | х                                | х                                  |                      | х                 | х                                  | х                                     | х                                    | х                                  | Х                              | х                                  | х                                | х                    | х                          |                                 | Yes                                      | 6/26/2008                           | Qal/MCfg1   | 25.5 - 50.5                 | M-7BB                      | M-7B                   | I                | H-3              |
| Located to evaluate potential offsite sources to the west; for general Site coverage downgradient from Are  | Loo     |                                 |                                  |                                    |                      | х                 |                                    | х                                     | х                                    | х                                  | Х                              | х                                  | х                                | х                    | х                          |                                 | No                                       |                                     | Qal *   | TD = 32.58 ft               | MC-59B                     | MC-59                  | Parcel D         | H-3              |
| Located to serve as a upgradient stepout for LOU 68; as a downgradient stepout for LOU 1; to evaluate B C and D; and for general Site coverage.   |         | x                               | x                                |                                    |                      | x                 |                                    | х                                     | х                                    | х                                  | х                              | x                                  | x                                | x                    | Х                          |                                 | No                                       | 6/25/2008                           | Qal   | 9.4 - 37.4                  | M-23B                      | M-23                   | Parcel D         | H-6              |
| This is a duplicate sample of M-23B.  | Thi     | х                               | х                                |                                    |                      | х                 |                                    | Х                                     | Х                                    | Х                                  | Х                              | x                                  | х                                | х                    | Х                          |                                 |  |                                     |   | 9.4 - 37.4 (dup)            | M-23BD                     |                        |                  |                  |
| Located to evaluate LOU 69 and to evaluate BRC Parcels B and J.   | Loo     |                                 |                                  |                                    |                      | х                 |                                    | Х                                     | Х                                    | х                                  | Х                              | х                                  | Х                                | Х                    | Х                          |                                 | Yes                                      | 7/9/2008                            | Qal/MCfg1   | 6.1 - 36.1                  | M-48B                      | M-48                   | Parcel J         | H-8              |
| Located to evaluate LOU 1 and for general Site coverage.  | Loc     |                                 |                                  |                                    |                      | х                 |                                    | х                                     | Х                                    | х                                  | Х                              | х                                  | х                                | х                    | х                          |                                 | Yes                                      |                                     | Qal   | 19 - 29                     | M-98B                      | M-98                   | I                | I-4              |
| Located to evaluate LOU 1; as a downgradient stepout for LOUs 22, 23, and 32; as an upgradient stepoul 69; and for general Site coverage.   |         |                                 |                                  |                                    |                      | х                 |                                    | х                                     | Х                                    | х                                  | х                              | х                                  | х                                | x                    | Х                          |                                 | No                                       |                                     | Qal   | 16 - 31                     | M-99B                      | M-99                   | I                | I-5              |
| Located to evaluate LOU 1; as a downgradient stepout for LOUs 22, 23, and 32; as an upgradient stepou<br>69; and for general Site coverage.   |         |                                 |                                  |                                    |                      | х                 |                                    | х                                     | Х                                    | Х                                  | Х                              | х                                  | х                                | х                    | х                          |                                 | No                                       |                                     | Qal   | 19 - 29                     | M-100B                     | M-100                  | I                | I-6              |
| Located to evaluate LOU 1; as a downgradient stepout for LOUs 22, 23, and 32; as an upgradient stepou 69; and for general Site coverage.  |         |                                 |                                  |                                    |                      | х                 |                                    | х                                     | х                                    | х                                  | Х                              | х                                  | х                                | х                    | х                          |                                 | No                                       |                                     | Qal   | 17 - 27                     | M-101B                     | M-101                  | 1                | I-7              |

Table 3 (Field Version)

Groundwater Sampling and Analysis Plan for Area I Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

Page 1 of 3

|                  |                  |                        |                            |                             |   |                                     | Lal                                      | ooratory :                      | CAS<br>Kelso, V            |                      |                                  |                                    |                                | a Analytical S<br>ochester, NY     |          |                                       |                                    | GEL<br>Charleston, SC       | CAS<br>Houston, TX                  | STL<br>Denver, CO                | Alpha<br>Analytical<br>Sparks, NV |                        |
|------------------|------------------|------------------------|----------------------------|-----------------------------|---|-------------------------------------|--|---------------------------------|----------------------------|----------------------|----------------------------------|------------------------------------|--------------------------------|------------------------------------|----------|---------------------------------------|------------------------------------|-----------------------------|-------------------------------------|----------------------------------|-----------------------------------|------------------------|
| Grid<br>Location | Location<br>Area | Monitoring<br>Well No. | Sample ID No. <sup>A</sup> | Screen Interval<br>(ft bgs) | Soil Type<br>Expected<br>Across Screen<br>Interval <sup>1,8</sup> | Date<br>Sampled<br>(for Phase<br>B) | Well<br>Sampled for<br>Phase A?<br>(y/n) | Matrix<br>Spike/MS<br>Duplicate | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup> | VOCs <sup>3.</sup><br>(EPA 8260) | Hex Cr <sup>4.</sup><br>(EPA 7199) | Wet<br>Chemistry <sup>5.</sup> | Total Cyanide<br>J.<br>(EPA 9012A) | (EPA     | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | PCBs <sup>8, E</sup><br>(EPA 8082) | Radionuclides <sup>9.</sup> | PCBs <sup>8, E</sup><br>(EPA 1668A) | OPPs <sup>10, F</sup><br>(8141A) | Organic<br>Acids <sup>F</sup>     |                        |
|                  |                  |                        |                            |                             | Wells are c   | organized                           | d by grid                                | location a                      | as shown on                | Plate A -            | Starting                         | point is                           | on the no                      | orthwester                         | n-most g | rid in Ar                             | ea I (A-3                          | ) and ending                | y with the so                       | outheastern                      | -most grid                        | coveri                 |
| J-2              | BRC              | AA-BW-02               | AA-BW-02B                  | 33 - 53                     | MCfg1 *   |                                     | No                                       |                                 | х                          | х                    | х                                | х                                  | Х                              | х                                  | х        | х                                     |                                    | Х                           |                                     |                                  |                                   | Located                |
| J-8              | L                | M-102                  | M-102B                     | 19.4 - 39.4                 | Qal   |                                     | No                                       |                                 | х                          | х                    | х                                | х                                  | х                              | х                                  | х        | х                                     |                                    | х                           |                                     |                                  |                                   | Located<br>69; and f   |
| K-2              | I                | M-5A                   | M-5AB                      | 40 - 50                     | MCfg1   | 6/26/2008                           | Yes                                      |                                 | х                          | х                    | х                                | х                                  | Х                              | х                                  | х        | х                                     | х                                  | х                           | х                                   | х                                | х                                 | Located<br>LOU 10;     |
| K-2              | I                | TR-2                   | TR-2B                      | 144.5 - 174.5               | MCfg1   | 7/8/2008                            | No                                       |                                 | х                          | Х                    | х                                | х                                  | Х                              | х                                  | х        | х                                     | х                                  | х                           | х                                   | х                                | х                                 | To evalua              |
| K-3              | I                | MW-16                  | MW-16B                     | 24.7 - 39.7                 | - MCfg1   | 6/26/2008                           | No                                       |                                 | X                          | х                    | х                                | х                                  | Х                              | x                                  | х        | х                                     |                                    | х                           |                                     |                                  |                                   | New mon                |
|                  |                  |                        | MW-16B                     | 24.7 - 39.7                 |   |                                     |  | Х                               | X                          | Х                    | Х                                | Х                                  | Х                              | X                                  | Х        | Х                                     |                                    | Х                           |                                     |                                  |                                   | This is a<br>for MSD   |
| K-5              |                  | M-69                   | M-69B                      | 19.9 - 39.3                 | Qal/MCfg1   | 7/8/2008                            | No                                       |                                 | Х                          | Х                    | Х                                | Х                                  | Х                              | X                                  | Х        | Х                                     |                                    | Х                           |                                     |                                  |                                   | Located t              |
| K-5              | I                | M-79                   | M-79B                      | 10.8 - 35.4                 | Qal/MCfg1   | 6/29/2008                           | No                                       |                                 | Х                          | Х                    | х                                | х                                  | Х                              | ×                                  | х        | Х                                     |                                    | х                           |                                     |                                  |                                   | Located t<br>coverage  |
| K-6              | I                | M-83                   | M-83B                      | 10.8-40.3                   | Qal/MCfg1   |                                     | No                                       |                                 | х                          | х                    | х                                | х                                  | х                              | х                                  | х        | х                                     |                                    | х                           |                                     | х                                | Х                                 | Located and 23; a      |
| K-6              | I                | M-84                   | M-84B                      | 11.8 - 34.1                 | Qal/MCfg1   | 6/29/2008                           | No                                       |                                 | х                          | х                    | х                                | х                                  | х                              | х                                  | х        | х                                     |                                    | х                           |                                     |                                  |                                   | Located t<br>LOUs 22   |
| K-7              | I                | M-86                   | M-86B                      | 11.3 -40.9                  | Qal/MCfg1   |                                     | No                                       |                                 | х                          | х                    | х                                | х                                  | х                              | х                                  | х        | х                                     |                                    | х                           |                                     |                                  |                                   | Located to 22 and 2    |
| K-8              | I                | M-88                   | M-88B                      | 7.3 - 36.8                  | Qal/MCfg1   | 6/25/2008                           | No                                       |                                 | х                          | x                    | х                                | х                                  | х                              | x                                  | x        | х                                     |                                    | x                           |                                     |                                  |                                   | Located t              |
| K-9              | 1                | M-129                  | M-129B                     | 20 - 40                     | MCfg1   |                                     | No                                       |                                 | x                          | х                    | х                                | x                                  | х                              | х                                  | x        | х                                     |                                    | x                           |                                     |                                  |                                   | Located t              |
| K-9              | TIMET            | CLD1-R                 | CLD1-RB                    | 25 -35                      | Qal/MCfg1   | 7/10/2008                           | No                                       |                                 | х                          | х                    | х                                | х                                  | х                              | х                                  | х        | х                                     |                                    | х                           |                                     |                                  |                                   | Serves as              |
| L-2              | I                | M-127                  | M-127B                     | 35-50                       | MCfg1   |                                     | No                                       |                                 | х                          | х                    | х                                | х                                  | х                              | x                                  | x        | х                                     | х                                  | х                           | x                                   | х                                | х                                 | New mor<br>coverage    |
|                  |                  |                        | M-126B                     | 19.7 - 39.7                 |   |                                     |  |                                 | x                          | х                    | х                                | x                                  | х                              | х                                  | x        | х                                     |                                    | x                           |                                     |                                  |                                   | New mor<br>sources f   |
| L-3              | I                | M-126                  | M-126BD                    | 19.7-39.7 (dup)             | MCfg1   | 6/29/2008                           | No                                       |                                 | x                          | x                    | x                                | x                                  | х                              | x                                  | x        | х                                     |                                    | х                           |                                     |                                  |                                   | This is a              |
| L-4              | 1                | M-14A                  | M-14AB                     | 20 - 40                     | MCfg1   | 6/30/2008                           | No                                       |                                 | x                          | х                    | х                                | х                                  | х                              | х                                  | x        | х                                     |                                    | x                           |                                     |                                  |                                   | Located a              |
|                  |                  |                        | M-57AB                     | 20 - 40                     |   |                                     |  |                                 | x                          | х                    | х                                | х                                  | х                              | x                                  | x        | х                                     |                                    | x                           |                                     |                                  |                                   | Located t              |
| L-4              | I                | M-57A                  | M-57ABD                    | 20 - 40 (dup)               | MCfg1   | 6/27/2008                           | No                                       |                                 | х                          | х                    | х                                | х                                  | х                              | X                                  | x        | х                                     |                                    | х                           |                                     |                                  |                                   | This is a              |
| L-5              | I                | I-B                    | I-BB                       | 17.8 - 42.5                 | Qal/MCfg1   | 7/8/2008                            | No                                       |                                 | х                          | х                    | х                                | х                                  | х                              | х                                  | х        | х                                     |                                    | х                           |                                     |                                  |                                   | Located a<br>Site cove |
| L-6              | I                | M-55                   | M-55B                      | 14.6 - 44.6                 | Qal/MCfg1   | 7/1/2008                            | Yes                                      |                                 | х                          | х                    | х                                | х                                  | х                              | x                                  | х        | х                                     |                                    | х                           |                                     |                                  |                                   | Located<br>LOUs 19     |
|                  | 1                | M-65                   | M-65B                      | 14.4 - 39                   | Qal/MCfg1   | 7/2/2008                            | No                                       |                                 | х                          | х                    | х                                | х                                  | х                              | х                                  | х        | х                                     |                                    | х                           |                                     |                                  |                                   | Located t<br>coverage  |
| L-6              | I                | CO-IVI                 | M-65BD                     | 14.4 - 39 (dup)             |   | 1/2/2008                            | INU                                      |                                 | х                          | х                    | х                                | х                                  | Х                              | х                                  | х        | х                                     |                                    | х                           |                                     |                                  |                                   | This is a              |
| L-6              | I                | M-78                   | M-78B                      | 21.5 - 41.5                 | Qal/MCfg1   |                                     | No                                       |                                 | Х                          | Х                    | Х                                | Х                                  | х                              | х                                  | Х        | Х                                     |                                    | Х                           |                                     |                                  |                                   | Located t              |
| L-8              | I                | M-61                   | M-61B                      | 9.3 - 38.8                  | Qal/MCfg1   | 6/26/2008                           | No                                       |                                 | Х                          | Х                    | Х                                | Х                                  | х                              | х                                  | Х        | Х                                     |                                    | Х                           |                                     |                                  |                                   | Located t              |
|                  |                  |                        | M-67B                      | 7.8 - 37.8                  | -   |                                     |  |                                 | Х                          | Х                    | Х                                | Х                                  | х                              | x                                  | Х        | Х                                     |                                    | Х                           |                                     |                                  |                                   | Located t              |
| L-8              | T                | M-67                   | M-67BD                     | 7.8 - 37.8 (dup)            | Qal/MCfg1   | 6/27/2008                           | No                                       |                                 | Х                          | Х                    | Х                                | Х                                  | х                              | x                                  | Х        | Х                                     |                                    | Х                           |                                     |                                  |                                   | This is a              |
|                  |                  |                        | M-67B                      | 7.8 - 37.8                  |   |                                     |  | х                               | х                          | Х                    | х                                | Х                                  | х                              | х                                  | Х        | х                                     |                                    | х                           |                                     |                                  |                                   | This is a for MSD s    |
| L-8              | 1                | M-68                   | M-68B                      | 11.2 - 39.8                 | Qal/MCfg1   | 6/27/2008                           | No                                       |                                 | х                          | х                    | х                                | х                                  | х                              | х                                  | х        | х                                     |                                    | х                           |                                     |                                  |                                   | Located t<br>of the ea |
| L-9              | TIMET            | CLD2-R                 | CLD2-RB                    | 20 - 40.27                  | Qal   | 7/10/2008                           | No                                       |                                 | х                          | х                    | х                                | х                                  | х                              | х                                  | х        | х                                     |                                    | х                           |                                     |                                  |                                   | Serves a<br>Associate  |
| L-9              | I                | M-130                  | M-130B                     | 20 - 40                     | MCfg1   |                                     | No                                       |                                 | х                          | х                    | х                                | х                                  | х                              | х                                  | х        | х                                     |                                    | х                           |                                     |                                  |                                   | Located t<br>sampled   |
| L-10             | TIMET            | CLD3-R                 | CLD3-RB                    | nr                          | MCfg1*  | 7/10/2008                           | No                                       |                                 | х                          | х                    | х                                | х                                  | х                              | х                                  | х        | х                                     |                                    | х                           |                                     |                                  |                                   | Located t              |

Table 3 (Field Version)

Groundwater Sampling and Analysis Plan for Area I Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

Page 2 of 3

| Location Description and Rationale for Investigation   |
|--|
| ering Area I (O-4).  |
| ed to evaluate constituents from off-Site sources to the west, and for general Site coverage.  |
| ted to evaluate LOU 1; as a downgradient stepout for LOUs 22, 23, and 32; as an upgradient stepout for LOU<br>nd for general Site coverage.  |
| red to evaluate LOU 2 (Open Area South of the Trade Effluent Ponds); as an upgradient stepout for LOU 1 and<br>10; to evaluate possible offsite sources to the west; and for general Site coverage.  |
| valuate for SRCs in upper Muddy Creek Fm.  |
| monitoring well to evaluate SRCs in upper Muddy Creek from offsite sources from west.<br>s a matrix spike / matrix spike duplicate sample. Fill one set of bottles for MS sample & second set of bottles<br>SD sample. Label both sets of bottles as MW-16B. |
| ed to evaluate LOU 32 and to evaluate the western end of the Groundwater Barrier Wall.   |
| ed to evaluate LOU 1; LOU 32 and the western end of the Groundwater Injection Trenches; and for general Si<br>age.   |
| ted to evaluate LOU 32 and the Groundwater Injection Area; as an upgradient stepout for LOU 1, and LOUs 22<br>3; and for general Site coverage.  |
| ted to evaluate LOU 32 and the Groundwater Injection Trench area; as an upgradient stepout for LOU 1 and<br>s 22 and 23; and for general Site coverage.  |
| ed to evaluate LOU 32 and the Groundwater Injection Trench area; as an upgradient stepout for LOU 1, LOUs<br>d 23; and for general Site coverage.  |
| ted to serve as an upgradient stepout for LOU 1; as a downgradient stepout for LOU 32; to evaluate possible<br>a sources to the east; and for general Site coverage.   |
| ed to evaluate the eastern end of the barrier wall. Well was drilled and installed in March 2008.  |
| as a close stepout downgradient of LOU 5 (Beta Ditch) and general Site coverage. Located on Timet.   |
| monitoring well located to evaluate LOU 2; to evaluate potential offsite sources to the west; and for general Sit<br>age. Well was drilled and installed in June 2008, but not yet sampled for Phase B.  |
| monitoring well located to serve as an up- to crossgradient stepout for LOU 2; to evaluate potential offsite<br>es from the west; and for general Site coverage.   |
| s a duplicate sample of M-126B.  |
| ed as an upgradient stepout for LOUs 30, 56, and 58; as a downgradient well for LOU 39; and for general Site<br>age.   |
| ed to serve as an upgradient stepout for LOU 32; to evaluate the west end of the Groundwater Barrier Wall; ar<br>neral Site coverage.  |
| s a duplicate sample of M-57AB.  |
| ed as a downgradient stepout for LOU 56 and LOU 58; as an upgradient stepout for LOU 57, and for general<br>coverage.  |
| ed just upgradient of the groundwater barrier wall; to evaluate LOU 32; to serve as a downgradient stepout for<br>s 19, 31, and 55 and for general Site coverage.  |
| ed to serve as an upgradient stepout for LOU 32; as a downgradient stepout for LOU 57; and for general Site age.   |
| s a duplicate sample of M-65B.   |
| ed to evaluate LOU 32; as a downgradient stepout for LOU 55; and for general Site coverage.  |
| ed to evaluate LOU 32 and the eastern end of the Groundwater Barrier Wall.   |
| ed to serve as an upgradient stepout for LOU 32 and for general Site coverage.   |
| s a duplicate of M-67B.  |
| s a matrix spike / matrix spike duplicate sample. Fill one set of bottles for MS sample & second set of bottles<br>SD sample. Label both sets of bottles as M-67B.   |
| ed to serve as a downgradient stepout for LOU 5 and 20; as an upgradient stepout for LOU 32; as an evaluation<br>e east end of the Groundwater Barrier Wall; and for general Site coverage.  |
| es as a close stepout downgradient of LOU 5; and a further downgradient stepout for LOU 20 (Pond C-1 and<br>ciated Piping), and for general Site coverage. Located on Timet.   |
| ed to evaluate LOU 5 and the eastern end of the barrier wall. Well was installed in March 2008 but not yet<br>led for Phase B.   |
| ted to evaluate LOU 67; as general Site coverage; and to evaluate downgradient from Area I. Located on Time  |

|                  |                  |                        |                            |                             |   |                                     | Lal                                      | boratory :                      | CAS<br>Kelso, V            |                      |                                  |                                    |                                | a Analytical S<br>ochester, NY     |                                      |                                       |                                    | GEL<br>Charleston, SC       | CAS<br>Houston, TX                  | STL<br>Denver, CO                | Alpha<br>Analytical<br>Sparks, NV |   |
|------------------|------------------|------------------------|----------------------------|-----------------------------|---|-------------------------------------|--|---------------------------------|----------------------------|----------------------|----------------------------------|------------------------------------|--------------------------------|------------------------------------|--------------------------------------|---------------------------------------|------------------------------------|-----------------------------|-------------------------------------|----------------------------------|-----------------------------------|---|
| Grid<br>Location | Location<br>Area | Monitoring<br>Well No. | Sample ID No. <sup>A</sup> | Screen Interval<br>(ft bgs) | Soil Type<br>Expected<br>Across Screen<br>Interval <sup>1,B</sup> | Date<br>Sampled<br>(for Phase<br>B) | Well<br>Sampled for<br>Phase A?<br>(y/n) | Matrix<br>Spike/MS<br>Duplicate | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup> | VOCs <sup>3.</sup><br>(EPA 8260) | Hex Cr <sup>4.</sup><br>(EPA 7199) | Wet<br>Chemistry <sup>5.</sup> | Total Cyanide<br>J.<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(EPA<br>8081A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | PCBs <sup>8, E</sup><br>(EPA 8082) | Radionuclides <sup>9.</sup> | PCBs <sup>8, E</sup><br>(EPA 1668A) | OPPs <sup>10, F</sup><br>(8141A) | Organic<br>Acids <sup>F</sup>     |   |
|                  |                  |                        |                            |                             | Wells are o   | organized                           | d by grid                                | location                        | as shown on                | Plate A              | - Starting                       | point is                           | on the no                      | orthwestern                        | n-most g                             | rid in Ar                             | ea I (A-3)                         | and ending                  | g with the so                       | outheastern                      | -most grid                        | coverin                                     |
| M-1              | Olin             | H-38                   | H-38B                      | 25 - 50                     | Qal*  |                                     | No                                       |                                 | х                          | х                    | х                                | х                                  | х                              | х                                  | х                                    | х                                     |                                    | х                           |                                     |                                  |                                   | To evaluate<br>Site covera                  |
| M-2              | Ι                | TR-4                   | TR-4B                      | 124.5 - 144.5               | MCfg1   | 7/9/2008                            | No                                       |                                 | х                          | х                    | х                                | х                                  | Х                              | х                                  | х                                    | х                                     | х                                  | х                           | х                                   | х                                | х                                 | Located to<br>for VOCs);                    |
| M-3              | 1                | M-125                  | M-125B                     | 35-50                       | MCfq1   |                                     | No                                       |                                 | х                          | х                    | х                                | х                                  | х                              | x                                  | х                                    | х                                     | х                                  | х                           | х                                   | х                                | х                                 | New monito<br>sources fro<br>B.             |
|                  |                  |                        | M-125B                     | 35-50                       |   |                                     |  | х                               | x                          | х                    | х                                | х                                  | х                              | х                                  | х                                    | х                                     | х                                  | х                           | х                                   | х                                | х                                 | This is a ma<br>for MSD sa                  |
| M-8              | I                | M-39                   | M-39B                      | 24.9 - 39.9                 | Qal/MCfg1   | 7/8/2008                            | Yes                                      |                                 | х                          | х                    | Х                                | Х                                  | х                              | х                                  | х                                    | х                                     |                                    | х                           |                                     | х                                | х                                 | Located to                                  |
| N-4              | I                | M-142                  | M-142B                     | 30-45                       | MCfg1   |                                     | No                                       |                                 | х                          | х                    | х                                | х                                  | х                              | х                                  | х                                    | х                                     |                                    | х                           |                                     | х                                | х                                 | New monito<br>Maintenanc                    |
| 0-2              |                  | M-123                  | M-123B                     | 34-51                       | MCfg1   | 7/11/2008                           | No                                       |                                 | х                          | х                    | х                                | х                                  | х                              | х                                  | х                                    | х                                     | х                                  | х                           | x                                   | х                                | х                                 | New monito<br>offsite source<br>location. W |
| 0-2              | I                | 101-123                | M-123BD                    | 34-51 (dup)                 | Morgi   | //1//2000                           | NO                                       |                                 | х                          | х                    | х                                | х                                  | х                              | х                                  | х                                    | х                                     | х                                  | х                           | х                                   | х                                | х                                 | This is a du                                |
| 0-4              | I                | M-124                  | M-124B                     | 34-49                       | MCfg1   | 7/11/2008                           | No                                       |                                 | x                          | х                    | х                                | х                                  | х                              | x                                  | х                                    | х                                     |                                    | х                           |                                     |                                  |                                   | New monito<br>stepout for I                 |
| O-4              | I                | M-128                  | M-128B                     | 40-55                       | MCfg1   |                                     | No                                       |                                 | х                          | х                    | х                                | х                                  | х                              | х                                  | х                                    | х                                     |                                    | х                           |                                     |                                  |                                   | New monito<br>52, and 57;                   |
| Numbe            | er of Wells:     | 64                     | <u>I</u>                   | 1                           | <u>I</u>  | I                                   | 1  | 1                               | 1                          | I                    | L                                |                                    | 1                              | 1                                  | 1                                    |                                       | I                                  | 1                           | 1                                   | 1                                | 1                                 | <u> </u>                                    |

#### Number of Wells:

otes:

Well completion information or boring log not available. Soil type inferred from nearby wells and geologic cross-section provided in the Phase A Source Area Investigation Report (ENSR, 2007). ENSR is in the process of obtaining screen interval information from BMI. х Sample will be collected and analyzed.

No sample collected under Phase B sampling plan. blank

It is anticipated that the large majority of the flow to the well will be from the coarse-grained sediments. As such, in the cases where there are two lithologies present across the screen interval, the water sampled will represent conditions in the coarse-grained interval. 1

2. Metals analyses includes Aluminum, Antimony, Arsenic, Barium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Platinum, Potassium, Selenium, Silver, Sodium, Strontium, Tin, Titanium, Thallium, Tungste 3. VOCs = Volatile organic compounds (to include analysis for naphthalene).

Hexavalent Chromium. 4.

Complete list of wet chemistry parameters is shown on Table 1. All groundwater samples will have pH measured in the field. 5.

OCPs = Organochlorine pesticides (to include analysis for hexachlorobenzene). 6.

7. SVOCs = Semi volatile organic compounds.

8. Polychlorinated Biphenyls.

9. Radionuclides consists of alpha spec reporting for isotopic Thorium and isotopic Uranium, and Radium-226, plus Radium-228 by beta counting (per NDEP).

OPPs = Organophosphorous Pesticides 10.

TBD To Be Determined when well is constructed.

Not recorded in Tronox database (screen intervals to be acquired from BMI). nr

Qal Quaternary Alluvium.

6/25/2008 Yellow indicates sample was collected on the date shown.

MS/MSD Matrix Spike sample and Matrix Spike Duplicate sample (fill 2nd set of bottles for MS sample and 3rd set of bottles for MSD sample).

MCfg1 Muddy Creek Formation - first fine-grained facies.

Table 3 (Field Version)

Groundwater Sampling and Analysis Plan for Area I

Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

Page 3 of 3

| Location Description and Rationale for Investigation   |
|--|
| ing Area I (O-4).  |
| ate possible offsite sources from the west, as an upgradient stepout to LOU 5 (Beta Ditch) and for general<br>erage. Depth of screen will be confirmed in the field.   |
| to serve as a downgradient stepout for LOU 5; to evaluate possible offsite sources to the west (particularly s); and for general Site coverage.  |
| nitoring well located to serve as a downgradient stepout for LOUs 5 and 54; to evaluate potential offsite<br>from the west; and for general Site coverage. Well was installed in June 2008 but not yet sampled for Phas  |
| matrix spike / matrix spike duplicate sample. Fill one set of bottles for MS sample & second set of bottles sample. Label both sets of bottles as M-125B.  |
| to serve as a downgradient stepout for LOUs 5, 18, 20, and 21; and for general Site coverage.  |
| nitoring well constructed in borehole for SA87 to evaluate LOU 39 (Satellite Accumulation Point, AP<br>ance Shop). Well was installed in June 2008 but not yet sampled for Phase B.  |
| nitoring well located to evaluate LOU 35; as an upgradient stepout for LOUs 38 and 54; to evaluate potentia<br>ources to the west; and for general Site coverage. PCB analysis for groundwater requested by NDEP at this<br>. Well was installed in June 2008 but not yet sampled for Phase B. |
| duplicate sample of M-123B.  |
| nitoring well located to evaluate LOU 64; serve as a downgradient stepout for LOU 63; as an upgradient<br>for LOU 39; and for general Site coverage. Well was installed in June 2008 but not yet sampled for Phase 6   |
| nitoring well to serve as a downgradient stepout for LOUs 35 and 64; as an upgradient stepout for LOUs 39 57; and for general Site coverage. Well was installed in June 2008 but not yet sampled for Phase B.  |
| en, Uranium, Vanadium, Zinc  |



Area II

| Left         Num         Reft         Burg  |                                   | Rationale       | EMSL Westmont,<br>NJ | Alpha<br>Analytical<br>Sparks, NV | STL-<br>Denver      | GEL -<br>Charleston,<br>SC | louston   | CAS - H   |             |             |   | ster         | CAS - Roches | I          |             |   |  | Kelso | : CAS | boratory K.          | La         |         |            |            |
|---|-----------------------------------|-----------------|----------------------|-----------------------------------|---------------------|----------------------------|-----------|-----------|-------------|-------------|---|--------------|--------------|------------|-------------|---|--|-------|-------|----------------------|------------|---------|------------|------------|
| 1     1     0.77     0.78     0  | (NI                               |                 |                      | Organic                           | OPPs <sup>11.</sup> |                            |           | (EPA      |             |             |   | L.           | Chemistry    |            |             | DRO/ORO   |  |       |       | Depths <sup>1.</sup> |            |         | LOU Number |            |
| Image         Image <t< th=""><th></th><th>stern most grid</th><th>ith the southeas</th><th>and ending w</th><th>ea II (M-2) a</th><th>rid in Are</th><th>rn most g</th><th>orthweste</th><th>is on the n</th><th>rting point</th><th>te A - Sta</th><th>shown on Pla</th><th>location as</th><th>ed by grid</th><th>are organiz</th><th>Borings a</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>  |                                   | stern most grid | ith the southeas     | and ending w                      | ea II (M-2) a       | rid in Are                 | rn most g | orthweste | is on the n | rting point | te A - Sta  | shown on Pla | location as  | ed by grid | are organiz | Borings a   |  |       |       |                      |            |         |            |            |
| D         D         D         D         D         D         Z <thz< th="">         Z         <thz< th=""> <thz< th=""></thz<></thz<></thz<>   |                                   |                 | Х                    |                                   |                     |                            |           |           |             |             | _   |              |              |            |             |   |  |       |       |                      |            | SA72    |            |            |
| Image         Image <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>  |                                   |                 |                      |                                   |                     |                            | X         |           |             |             |   |              |              |            |             |   |  |       |       |                      |            |         |            |            |
| Image: Problem in the state of the | Ow estimated at -51 leet bgs.     |                 |                      | -                                 |                     |                            |           |           |             | -           |   | ^            |              |            |             |   |  |       |       |                      |            |         |            |            |
| Image         Image <th< td=""><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Х</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>29</td><td></td><td></td><td></td><td>L-5</td></th<>  | 4                                 |                 |                      |                                   |                     |                            |           |           |             |             |   | Х            |              |            |             |   |  |       |       | 29                   |            |         |            | L-5        |
| 15.0         15.0 <th< td=""><td>Poring located to avaluate LOL</td><td>A</td><td>×</td><td></td><td></td><td>R</td><td></td><td></td><td></td><td></td><td>R</td><td></td><td>R</td><td>R</td><td></td><td></td><td>R</td><td>R</td><td>R</td><td></td><td></td><td>SA122</td><td></td><td></td></th<>   | Poring located to avaluate LOL    | A               | ×                    |                                   |                     | R                          |           |           |             |             | R   |              | R            | R          |             |   | R  | R     | R     |                      |            | SA122   |            |            |
| 1           |                                   | E.L             | ^                    |                                   |                     | X                          | X         |           |             |             | R   | X            | X            | X          |             |   | X  | ×     | ×     |                      |            | - SA125 |            |            |
| Lie         State 3         St  | Process, AP Plant SI's and Tra    | E,L             |                      |                                   |                     |                            |           |           |             |             | R   | Х            |              |            |             |   |  |       |       | 10                   | SA123-10B  |         | 30, 56, 57 | L-5        |
| Li         Name         N   |                                   |                 |                      |                                   |                     |                            |           |           |             |             | R   |              |              |            |             |   |  |       |       |                      |            |         |            |            |
| 15.0         30.5         7         2012         6         8         1         7         7         8         7         7         8         7         7         8         7         7         8         7         7         8         7         7         8         7         7         8         7         7         8         7         7         8         7         7         8         7         7         8         7         7         8         7        7        7         7<   | Gvv estimated at ~29 feet bgs     |                 |                      |                                   |                     |                            |           |           |             |             | R   | X            |              |            |             |   |  |       |       |                      |            |         |            |            |
| Lo.         3.1         Alt. 3.8         Alt. 3.8         Alt. 4.8         Alt.  |                                   |                 |                      |                                   |                     |                            |           | -         |             |             |   | -            |              |            |             |   |  |       |       |                      |            | -       |            |            |
| Lob     John   |                                   |                 | Х                    |                                   |                     |                            |           |           |             |             | _   |              |              |            |             |   |  |       |       |                      |            | SA167   |            |            |
| Lef         B         AMP3         B         X        X         X         X <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>-</td> <td></td> <td></td>   |                                   |                 |                      |                                   |                     |                            | X         |           |             |             |   |              |              |            |             |   |  |       |       |                      |            | -       |            |            |
| 1.2         0.3         0.4 <td>. Gw estimated at ~ 50 leet bgs.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>ĸ</td> <td></td>  | . Gw estimated at ~ 50 leet bgs.  |                 |                      |                                   |                     |                            |           |           |             |             | ĸ   |              |              |            |             |   |  |       |       |                      |            |         |            |            |
| Lo.         dial         dial <th< td=""><td>Boring located to evaluate LOL</td><td></td><td>Х</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.0</td><td></td><td>SA173</td><td></td><td>L-5</td></th<>  | Boring located to evaluate LOL    |                 | Х                    |                                   |                     |                            |           |           |             |             |   |              |              |            |             |   |  |       |       | 0.0                  |            | SA173   |            | L-5        |
| Li         Sol  |                                   |                 |                      |                                   |                     |                            | Х         |           |             |             |   |              |              |            |             |   |  |       |       |                      |            |         |            |            |
| Lo.         G.         G.         J.         J. <thj.< th="">         J.         J.         J.&lt;</thj.<>   | GW estimated at ~31 feet bgs.     |                 |                      |                                   |                     |                            |           |           |             |             | R   |              |              |            |             |   |  |       |       |                      |            |         |            |            |
| Lie     6     6     5     5     7   | Boring located to evaluate LOL    | D,L,L,O         | х                    | 1                                 |                     | ~                          |           |           |             |             |   | ~            | ~            | ~          |             |   | ~  | ~     | ~     |                      |            | SA179   |            |            |
| Lo         BA         PAN         X        X         X         X  | boundary to evaluate potiential   |                 |                      |                                   |                     |                            | Х         |           |             |             | CONTRACTOR AND ADDRESS AND ADDRESS ADDRES |              | Х            |            |             |   | Х  | X     |       |                      | SA179-0.5B | -       | 56         | L-5        |
| Lie         B7  |                                   |                 |                      |                                   |                     |                            |           |           |             |             | R   |              |              |            |             |   |  |       |       |                      |            |         |            |            |
| Lie         Gr         Solution         Soluti   |                                   | B,E,L,S         | x                    | -                                 |                     | X                          |           |           |             |             |   | X            | X            | X          |             |   | X  | X     | X     |                      |            | SA73    |            |            |
| Lie         DT         SU 200         SD         R         R         R         L         R         R         R         L         R         R         R         L         R         R         R         R         R         L         R        R         R         R   |                                   | L,Z             | ~ ~                  | X                                 | Х                   | Х                          | Х         |           |             |             | Х   | Х            | Х            | Х          |             |   | Х  | х     | х     |                      |            | 0,110   |            |            |
| Lie         67/20         87/200         85         R         R         R         R         R         L         L         R         L         R         <   | GW estimated at ~30 feet bgs.     |                 |                      |                                   |                     |                            |           |           |             |             |   | Х            |              |            |             |   |  |       |       |                      |            |         |            |            |
| Lie         67         87.788         28         x        x        x         x<   | -                                 |                 |                      |                                   |                     |                            |           |           |             |             |   |              |              |            |             |   |  |       |       |                      |            | -       |            |            |
| Leb         SN         RALes         RALes         RALes         SN         RALes         SN         RALes         SN         Rest         RALes         SN         Rest         RALes         SN         Rest         RALes         SN         Rest         RALes         RAL  |                                   |                 |                      | X                                 | X                   |                            |           |           |             |             |   | X            |              |            |             | -   |  |       |       |                      |            | -       |            |            |
| Lie         SALE - OP         Index - OP         SALE - OP         A         X        X        X         X </td <td>Boring located to evaluate LOL</td> <td></td> <td>Х</td> <td></td> <td>0.0</td> <td></td> <td>RSAL6</td> <td></td> <td></td>  | Boring located to evaluate LOL    |                 | Х                    |                                   |                     |                            |           |           |             |             |   |              |              |            |             |   |  |       |       | 0.0                  |            | RSAL6   |            |            |
| L6         55         RSL250         20         R   |                                   |                 |                      |                                   |                     |                            | Х         |           |             |             |   |              |              |            |             |   |  |       |       |                      |            |         |            |            |
| Lie         Sol         Rolation         Rolat   | GW estimated at ~30 feet bgs.     | B               |                      |                                   |                     |                            |           |           |             |             |   |              |              |            |             |   |  |       |       |                      |            |         |            |            |
| Léa         5         SA13         SA13-08         0.0         -        -         -        - <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>  |                                   |                 |                      |                                   |                     |                            |           |           |             |             |   |              |              |            |             |   |  |       |       |                      |            |         |            |            |
| Lé         S         Statistical         0.6         X        <   |                                   |                 |                      |                                   |                     | X                          |           |           |             | Х           | Х   |              | Х            | Х          |             | Х   | Х  | Х     | Х     |                      |            |         |            |            |
| L6         S         SA13-06         10         X        X         X        X </td <td></td> <td>P.W/ 7</td> <td>X</td> <td>v</td> <td>~~~~~</td> <td></td> <td>v</td> <td>~~~~</td> <td>×</td> <td>~</td> <td>~</td> <td>v</td> <td>v</td> <td>v</td> <td>v</td> <td>v</td> <td></td> <td>×</td> <td></td> <td></td> <td></td> <td>SA131</td> <td>***</td> <td></td>   |                                   | P.W/ 7          | X                    | v                                 | ~~~~~               |                            | v         | ~~~~      | ×           | ~           | ~   | v            | v            | v          | v           | v   |  | ×     |       |                      |            | SA131   | ***        |            |
| Les         S         SA132/20         20         R        R        R        R<   |                                   |                 |                      |                                   |                     |                            | ^         |           |             |             |   |              |              |            |             |   |  |       |       |                      |            | -       |            |            |
| Let         SA131303         30         R        R        R         R   | 1 Č                               | В               |                      |                                   |                     |                            |           |           |             |             |   |              |              |            | R           |   |  |       |       | 20                   |            |         |            | L-8        |
| Image         S         Set Solution         S   |                                   |                 |                      | X                                 | Х                   |                            |           | X         | Х           |             |   |              |              |            |             |   |  |       |       |                      |            |         |            |            |
| M-3         S         SA66         SA66 0.0         U         <   | -                                 |                 |                      | -                                 |                     |                            |           |           |             |             |   |              |              |            |             |   |  |       |       |                      |            | -       |            |            |
| M-3         5         Sector         Sector         N         X         <   | Boring located to evaluate LOL    |                 | Х                    |                                   |                     |                            |           |           |             |             |   |              |              |            |             |   |  |       |       |                      |            | SA66    | -          |            |
| M3         S         Select02         20         R  |                                   |                 |                      |                                   |                     |                            | Х         |           |             |             |   |              |              |            |             |   |  |       |       |                      |            |         |            |            |
| M3     5     SA66-38     28     X    <  | GW estimated at ~30 feet bgs.     |                 |                      | X                                 | X                   |                            |           |           | X           |             |   | X            |              |            |             |   |  |       |       |                      |            |         |            |            |
| M-3       5       SA66-308       40       R <th< td=""><td>-</td><td></td><td></td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td><u> </u></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>~</td><td></td><td></td></th<>  | -                                 |                 |                      | X                                 | X                   |                            |           |           |             |             | <u> </u>  | X            |              |            |             |   |  |       |       |                      |            | ~       |            |            |
| M-2         5         SA67         SA67-08         0.0  | 1                                 |                 |                      |                                   |                     |                            |           |           |             |             |   |              |              |            |             | and the second se | the second s |       |       |                      |            |         | 5          |            |
| M-2         5         SA67-08         0.5         R <th< td=""><td>Desire la seta data sus lusta LOI</td><td></td><td></td><td></td><td></td><td>R</td><td></td><td></td><td></td><td>R</td><td>R</td><td></td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td></td><td></td><td>0407</td><td>5</td><td></td></th<>   | Desire la seta data sus lusta LOI |                 |                      |                                   |                     | R                          |           |           |             | R           | R   |              | R            | R          | R           | R   | R  | R     | R     |                      |            | 0407    | 5          |            |
| M2         5         SA67-108         10         R  |                                   | N (See Area I)  | ĸ                    |                                   |                     | R                          | R         |           |             | R           | R   |              | R            | R          | R           | R   | R  | R     | R     |                      |            | . SA67  |            |            |
| M-2         5         SA67-30B         30         R <th< td=""><td></td><td></td><td></td><td></td><td></td><td>R</td><td></td><td></td><td></td><td>R</td><td>R</td><td></td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>10</td><td>SA67-10B</td><td></td><td>5</td><td>M-2</td></th<>   |                                   |                 |                      |                                   |                     | R                          |           |           |             | R           | R   |              | R            | R          | R           | R   | R  | R     | R     | 10                   | SA67-10B   |         | 5          | M-2        |
| M-2         5         SAB7-408         40         R <th< td=""><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td></th<>   | -                                 |                 |                      |                                   |                     |                            |           |           |             |             |   |              |              |            |             |   |  |       |       |                      |            | -       |            |            |
| M4         5         SA128         SA128-00B         0.0                M-4         5         SA128-05B         0.5         X         X         X         X         X         X         X         X         M-4         5           M-4         5         SA128-05B         0.5         X         X         X         X         X         X         X         X         X         X         X         X         W.2         Boing located to evaluate 100           M-4         5         SA128-05B         0.5         X         X         X         X         X         X         X         X         X         W.2         Boing located to evaluate 100         Wetwint 100         Wetwi   | -                                 |                 |                      |                                   |                     |                            |           | -         |             |             |   |              |              |            |             |   |  |       |       |                      |            | -       |            | M-2<br>M-2 |
| M-4         5         SA128-02B         0.5         X         <   | Boring located to evaluate LOI    |                 | х                    |                                   |                     |                            |           |           |             |             | N   |              |              | IX.        | IX.         |   | IX.  |       |       |                      |            | SA128   |            |            |
| M-4         5         SA128-20B         20         R </td <td>Diversion Ditch to evaluate inflo</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Х</td> <td></td> <td>SA128-0.5B</td> <td></td> <td></td> <td></td>   | Diversion Ditch to evaluate inflo |                 |                      |                                   |                     |                            | Х         |           |             |             |   |              |              |            |             |   |  |       |       |                      | SA128-0.5B |         |            |            |
| M-4         5         SA128-20B         29         X </td <td>GW estimated at ~31 feet bgs.</td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>   | GW estimated at ~31 feet bgs.     |                 |                      | X                                 | X                   |                            |           | X         | X           |             |   |              |              |            | X           |   |  |       |       |                      |            |         |            |            |
| M4         5         SA128-30B         30         R <th< td=""><td>-</td><td></td><td></td><td>X</td><td>X</td><td></td><td></td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td></th<>  | -                                 |                 |                      | X                                 | X                   |                            |           | X         | X           |             |   |              |              |            | X           |   |  |       |       |                      |            | -       |            |            |
| M-5         52,57         SA65-0.6B         0.0         Image: constraint of the second                                     | 1                                 | A               |                      |                                   |                     | R                          |           |           |             | R           | R   | R            | R            | R          |             | R   | R  | R     | R     | 30                   | SA128-30B  |         |            | M-4        |
| M-5         52,57         SA65-0.58         0.5         X         X         X         X         X         X         X         X         X         X         Lines). Located within LOU 52           M-5         52,57         SA65-08         10         X         X         X         X         R         X         X         X         E,L         Lines). Located within LOU 52           M-5         52,57         SA65-08         10         X         X         X         X         R         X <td>Dering logated to surflust 1 Of</td> <td>A</td> <td>v</td> <td></td> <td></td> <td>R</td> <td></td> <td></td> <td></td> <td>R</td> <td>R</td> <td>R</td> <td>R</td> <td>R</td> <td></td> <td>R</td> <td>R</td> <td>R</td> <td>R</td> <td></td> <td></td> <td>8405</td> <td></td> <td></td>  | Dering logated to surflust 1 Of   | A               | v                    |                                   |                     | R                          |           |           |             | R           | R   | R            | R            | R          |             | R   | R  | R     | R     |                      |            | 8405    |            |            |
| M-5         52, 57         SA65-10B         10         X  |                                   | FI              | X                    |                                   |                     | ×                          | x         |           |             | x           | R   | x            | ×            | ×          |             |   | ×  | x     | ×     |                      |            | SA65    |            |            |
| M-5         52,57         SA65-20B         20         X         X         X         X         X         X         R         X         N         N         E,L         GW estimated at -33 feet bgs.           M-5         52,57         SA65-30B         30         R   |                                   |                 |                      |                                   |                     |                            | <u>^</u>  |           |             |             |   |              |              |            |             |   |  |       |       |                      |            | -       |            |            |
| M-5         52,57         SA65-31B         31         X   | GW estimated at ~33 feet bgs.     |                 |                      |                                   |                     |                            |           |           |             |             |   | X            | х            | Х          |             |   | Х  |       | Х     |                      | SA65-20B   |         | 52, 57     | M-5        |
| M-5         52,57         SA65-35B         35         R   | 4                                 |                 |                      |                                   |                     |                            |           |           |             |             | R   | v            |              |            |             |   |  |       |       |                      |            |         |            |            |
| M-5         57         SA70         SA70-0.0B         0.0         Image: Constraint of the state of the st  | 1                                 |                 |                      |                                   |                     |                            |           |           |             |             | R   |              |              |            |             |   |  |       |       |                      |            | -       |            |            |
| M-5         57         SA70-10B         10         X <t< td=""><td></td><td></td><td>х</td><td>l</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.0</td><td>SA70-0.0B</td><td>SA70</td><td>57</td><td>M-5</td></t<>   |                                   |                 | х                    | l                                 |                     |                            |           |           |             |             |   |              |              |            |             |   |  |       |       | 0.0                  | SA70-0.0B  | SA70    | 57         | M-5        |
| M-5         5,57         SA70-20B         20         R         R         R         R         R         R         R         R         R         GW estimated at ~32 feet bgs.           M-5         57         SA70-30B         30         X         X         X         X         X         X         X         X         R         X         X         X         B         GW estimated at ~32 feet bgs.   |                                   |                 |                      |                                   |                     |                            | Х         |           |             |             |   |              |              |            |             |   |  |       |       |                      |            |         |            |            |
| M-5 57 SA70-30B 30 X X X X X X X X X X X X X X X X X X  |                                   |                 |                      |                                   |                     |                            |           |           |             |             |   | Х            |              |            | X           | Х   |  |       |       |                      |            |         |            |            |
| M-5 5,57 SA70-35B 35 R R R R R R R R R A R A A A A A A A A  | orr countated at ~52 reet bys.    |                 |                      |                                   |                     |                            |           | -         |             |             |   | Х            |              |            | Х           | Х   |  |       |       |                      |            | -       |            |            |
|   | <u>I</u>                          |                 |                      |                                   |                     | R                          |           |           |             |             |   |              |              |            |             |   | R  | R     |       |                      |            |         | 5, 57      | M-5        |

Soil Sampling and Analytical Plan for Area II Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 1 of 10

| Location Description and Characterized Area Rationale<br>DEP may not agree with upgradient and downgradient descriptions)   |
|---|
| J 31 (Drum Crushing & Recycling Area) and as a down gradient boring for LOU 19 (Pond AP-5).   |
| of LOU 31 and in an accessible low area down slope of LOU 19 to evaluate potential releases.  |
|   |
| J 30 (AP Area Pad 35), LOU 56 (AP Plant Area<br>and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate<br>insfer Lines). Located at logical runoff point for releases from LOU 30 pad as an upslope<br>lope stepout for LOU 57. |
|   |
| J 31 (Drum Crushing and Recycling Area). Located at former drum crusher location and<br>A boring SA19 is located downslope of the drum storage area.  |
| J 56 (AP Plant Area Old D-1 Building Wash-Down). Located adjacent to LOU 56 bourndary to  |
| ses to the west. Phase A boring SA19 is located downslope of the drum storage area.   |
| L 50 (AD Direct Area Old D.4 Duilding Mark Dawn) Lagasted adjagast to the LOLL 50   |
| J 56 (AP Plant Area Old D-1 Building Wash-Down). Located adjacent to the LOU 56<br>runoff releases to the east. Phase A boring SA19 is located downslope of the drum  |
| J 57 (AP Plant Transfer Lines to Sodium Chlorate  |
| nsfer Lines). Located as a downslope stepout to the north of LOU 57 for area wide coverage.   |
|   |
| J 55 (Area Affected by July 1990 Fire). Random location within the LOU to evaluate area wide issues.<br>n the northwest protion of LOU 55.  |
|   |
| J 5 (Beta Ditch). Located in ditch bottom near downstream end of the Beta Ditch to evaluate<br>ric discharges into Beta Ditch   |
|   |
| J 5 (Beta Ditch). Located in the western ditch bottom to evaluate potential impacts from off-site sources   |
| bint of comparison for discharge to the downstream Western Diversion Ditch.   |
|   |
| J 5 (Beta Ditch). Located on the south bank to evaluate possible overflow releases from   |
| from areas to the south.  |
| J 5 (Beta Ditch). Located in the LOU 5 ditch bottom just downstream from the Western  |
| ow from the western and southwestern parts of Tronox and off-site facilities to the west.   |
|   |
| J 52 (AP Plant Screening Building, Dryer Building Process, AP Plant SIs and Transfer<br>2 in damaged pavement area to evaluate potiential releases and for general coverage of  |
|   |
| 7 (AP Plant Transfer and Associated Piping) and LOU 57 (AP Plant  |
| rate Lines to Sodium Chlorate Process, AP Plant SIs and Transfer Lines). Located for<br>d as a downslope stepout for possible releases from LOU 5.  |
|   |
|   |

| rganic Asbestos <sup>13.</sup> Revision (NDI   | Sparks, NV      | Denver              | Charleston,<br>SC                 |                                  | CAS - H                              |                                  |                                    |                               | ter                                | CAS - Roches                               | C                                 |                        |                                |                                    | Kelso                                     | CAS -                      | boratory K.                                 | Lat                      |               |                                  |                  |
|--|-----------------|---------------------|-----------------------------------|----------------------------------|--------------------------------------|----------------------------------|------------------------------------|-------------------------------|------------------------------------|--|-----------------------------------|------------------------|--------------------------------|------------------------------------|---|----------------------------|---|--------------------------|---------------|----------------------------------|------------------|
| 6105 ErA/340/R-3//020  | Organic         | OPPs <sup>11.</sup> | Radio-<br>nuclides <sup>10.</sup> | Dioxins/<br>Furans <sup>9.</sup> | PCBs <sup>8.</sup><br>(EPA<br>1668A) | PCBs <sup>8.</sup><br>(EPA 8082) | SVOCs <sup>7.</sup><br>(EPA 8270C) | OCPs <sup>6.</sup><br>(8081A) | Total Cyanide<br>L.<br>(EPA 9012A) | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | VOCs <sup>4.</sup><br>(EPA 8260B) | TPH-GRO<br>(EPA 8015B) | TPH-<br>DRO/ORO<br>(EPA 8015B) | Hex Cr <sup>3.</sup><br>(EPA 7199) | <b>Metals</b> <sup>2.</sup><br>(EPA 6020) | Perchlorate<br>(EPA 314.0) | Sample<br>Depths <sup>1.</sup><br>(ft. bgs) | Sample ID<br>Number      | Boring<br>No. | LOU Number                       | Grid<br>Location |
| ending with the southeastern most grid in Area II (S-7).   | 2) and ending v | ea II (M-2)         | grid in Are                       | rn most g                        | orthweste                            | s on the no                      | ting point is                      | e A - Star                    | shown on Plat                      | location as                                | ed by grid                        | are organiz            | Borings a                      |                                    |   |                            |   |                          |               | •                                |                  |
| X Boring located to evaluate LOU   |                 |                     |                                   |                                  |                                      |                                  |                                    |                               |                                    |  |                                   |                        |                                |                                    |   |                            | 0.0   | SA104-0.0B               | SA104         | 57                               | M-5              |
| E,L,W,bb Plant SIs and Transfer Lines). L  |                 |                     | X                                 | Х                                |                                      |                                  | X                                  | R                             | X                                  | X  | X                                 | X                      | X                              | X                                  | X   | X                          | 0.5   | SA104-0.5B               |               | 57                               | M-5              |
| E,L,W GW estimated at ~32 feet bgs.  |                 |                     | X<br>R                            |                                  |                                      |                                  | X<br>R                             | R<br>R                        | Х                                  | X<br>R                                     | X<br>R                            | X                      | X                              | X                                  | R   | X<br>R                     | 10 20                                       | SA104-10B<br>SA104-20B   |               | 57<br>5, 57                      | M-5<br>M-5       |
| B,E,L,W,bb   |                 |                     | X                                 |                                  |                                      |                                  | X                                  | R                             | Х                                  | X  | X                                 | X                      | Х                              | X                                  | X   | X                          | 30  | SA104-30B                |               | 57                               | M-5              |
| A  |                 |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                    | R  | R                                 |                        |                                | R                                  | R   | R                          | 35  | SA104-35B                |               | 5, 57                            | M-5              |
| X Boring located to evaluate LOU<br>X P,W,Z SIs and Transfer Lines). Locate  | ······          | x                   |                                   | ×                                | •••••                                | X                                | x                                  | x                             | X                                  | x  | x                                 | X                      | X                              | x                                  | X   | x                          | 0.0   | SA129-0.0B<br>SA129-0.5B | SA129         | 5, 57<br>5, 57                   | M-5<br>M-5       |
| X P,W,Z Sis and Transfer Lines). Locate<br>X P,W,Z discharges into Beta Ditch.   |                 | X                   | X                                 | ^                                |                                      | X                                | X                                  | X                             | x                                  | X  | X                                 | X                      | X                              | X                                  | X   | x                          | 10  | SA129-0.3B               |               | 5, 57                            | M-5              |
| B GW estimated at ~31 feet bgs.  |                 |                     | R                                 |                                  |                                      |                                  | R                                  | R                             | R                                  | R  | R                                 |                        | R                              | R                                  | R   | R                          | 20  | SA129-20B                |               | 5, 57                            | M-5              |
| X B,P,W,Z  | X               | X                   | X<br>R                            |                                  |                                      | X                                | X<br>R                             | X<br>R                        | X<br>R                             | X<br>R                                     | X<br>R                            | X                      | X<br>R                         | X<br>R                             | R   | X<br>R                     | 29  | SA129-29B                |               | 5, 57                            | M-5              |
| A  |                 |                     | R                                 |                                  |                                      |                                  | R                                  | R                             | R                                  | R  | R                                 |                        | R                              | R                                  | R   | R                          | 30<br>35                                    | SA129-30B<br>SA129-35B   |               | 5, 57<br>5, 57                   | M-5<br>M-5       |
| X Boring located to evaluateLOU 5  |                 |                     |                                   |                                  |                                      |                                  |                                    |                               |                                    |  |                                   |                        |                                |                                    |   |                            | 0.0   | RSAM5-0.0B               | RSAM5         | 57                               | M-5              |
| L,W Plant SIs and Transfer Lines). F   |                 |                     | X                                 | Х                                |                                      |                                  | X                                  | X                             | X                                  | X  | X                                 | X                      | X                              | X                                  | X   | X                          | 0.5   | RSAM5-0.5B               |               | 57                               | M-5              |
| L,W GW estimated at ~30 feet bgs.  |                 |                     | X<br>R                            |                                  |                                      |                                  | X<br>R                             | Hold<br>R                     | Х                                  | X  | X<br>R                            | Х                      | X<br>R                         | X<br>R                             | R   | X<br>R                     | 10  | RSAM5-10B<br>RSAM5-20B   |               | 57<br>5, 57                      | M-5<br>M-5       |
| B,L,W  |                 |                     | X                                 |                                  |                                      |                                  | X                                  | X                             | Х                                  | X  | X                                 | Х                      | X                              | X                                  | X   | X                          | 28  | RSAM5-28B                |               | 57                               | M-5              |
| A  |                 |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                    | R  | R                                 |                        | R                              | R                                  | R   | R                          | 30  | RSAM5-30B                |               | 5, 57                            | M-5              |
| X Boring located to evaluate LOUs  |                 |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                    | R  | R                                 |                        | R                              | R                                  | R   | R                          | 35<br>0.0                                   | RSAM5-35B<br>SA64-0.0B   | SA64          | 5, 57<br>16, 17, 57, 60          | M-5<br>M-6       |
| E,L,W Plant Transfer Lines to Sodium (   |                 |                     | Х                                 | Х                                |                                      |                                  | Х                                  | R                             | Х                                  | Х  | Х                                 |                        | Х                              | Х                                  | X   | X                          | 0.5   | SA64-0.5B                | 0404          | 16, 17, 57, 60                   | M-6              |
| E,L,W Located in a low spot of bottom  |                 |                     | Х                                 |                                  |                                      |                                  | Х                                  | R                             | Х                                  | Х  | Х                                 |                        | Х                              | Х                                  | X   | X                          | 10  | SA64-10B                 |               | 16, 17, 57, 60                   | M-6              |
| B releases, and for general covera   |                 |                     | R<br>X                            |                                  |                                      |                                  | R<br>X                             | R                             | x                                  | R<br>X                                     | R<br>X                            |                        | X                              | R<br>X                             | R<br>X                                    | R<br>X                     | 20  | SA64-20B<br>SA64-21B     |               | 16, 17, 57, 60                   | M-6<br>M-6       |
| B,E,L,W GW estimated at ~23 feet bgs.  |                 |                     | R                                 |                                  |                                      |                                  | R                                  | R                             | ~                                  | R  | R                                 |                        |                                | R                                  | R   | R                          | 30  | SA64-21B<br>SA64-30B     |               | 16, 17, 57, 60<br>16, 17, 57, 60 | M-6              |
| X Boring located to evaluate LOU   |                 |                     |                                   |                                  |                                      |                                  |                                    |                               |                                    |  |                                   |                        |                                |                                    |   |                            | 0.0   | SA175-0.0B               | SA175         | 5, 16,17, 18                     | M-6              |
| E,L,W,bb Lines), and LOU 18 (Pond AP-4)  |                 |                     | X                                 | Х                                |                                      |                                  | X                                  | R                             | X                                  | X  | X                                 | X                      | X                              | X                                  | <u>X</u>                                  | X                          | 0.5   | SA175-0.5B               |               | 5, 16,17, 18                     | M-6              |
| E,L,W potential overflow releases from<br>B GW estimated at ~30 feet bgs.  |                 |                     | X<br>R                            |                                  |                                      |                                  | X                                  | R<br>R                        | Х                                  | X  | X<br>R                            | Х                      | Х                              | X                                  | R   | X<br>R                     | 10  | SA175-10B<br>SA175-20B   |               | 5, 16,17, 18<br>5, 16,17, 18     | M-6<br>M-6       |
| B,E,L,W,bb   |                 |                     | X                                 |                                  |                                      |                                  | X                                  |                               | X                                  | X  | X                                 | Х                      | Х                              | X                                  | X   | X                          | 28  | SA175-28B                |               | 5, 16,17, 18                     | M-6              |
| A  |                 |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                    | R  | R                                 |                        |                                | R                                  | R   | R                          | 30  | SA175-30B                |               | 5, 16,17, 18                     | M-6              |
| X Boring located to evaluate LOU<br>Lines), Randomly located for get   |                 |                     | х                                 | Х                                |                                      |                                  | x                                  | х                             | Х                                  | x  | x                                 |                        | x                              | x                                  | х   | x                          | 0.0   | RSAM6-0.0B<br>RSAM6-0.5B | RSAM6         | 57<br>57                         | M-6<br>M-6       |
| L Lines). Randomly located for ge<br>L GW estimated at ~30 feet bgs.   |                 |                     | ^<br>X                            | ^                                | •••••                                |                                  | X                                  | Hold                          | × X                                | ^<br>X                                     | x                                 |                        | ^<br>X                         | ^<br>X                             | ^<br>X                                    | x                          | 10  | RSAM6-10B                |               | 57                               | M-6              |
| B  |                 |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                    | R  | R                                 |                        | R                              | R                                  | R   | R                          | 20  | RSAM6-20B                |               | 57                               | M-6              |
| B,L  |                 |                     | X                                 |                                  |                                      |                                  | X                                  | R                             | X                                  | X<br>R                                     | X<br>R                            |                        | X                              | X<br>R                             | X   | <u> </u>                   | 28  | RSAM6-28B<br>RSAM6-30B   |               | 57<br>57                         | M-6<br>M-6       |
| A  |                 |                     | R                                 |                                  |                                      |                                  | R<br>R                             | R                             |                                    | R  | R                                 |                        | R<br>R                         | R                                  | R   | R<br>R                     | 30<br>35                                    | RSAM6-30B<br>RSAM6-35B   |               | 57                               | M-6              |
| X Boring located to evaluate LOUs  |                 |                     |                                   |                                  |                                      |                                  |                                    |                               |                                    |  |                                   |                        |                                |                                    |   |                            | 0.0   | SA197-0.0B               | SA197         | 16, 17, 57                       | M-6              |
| E,L (AP Plant Transfer Lines to Sodi   |                 |                     | X                                 | X                                |                                      |                                  | X                                  | R                             | <u>X</u>                           | X  | X                                 |                        |                                | X                                  | <u> </u>                                  | X                          | 0.5   | SA197-0.5B               |               | 16, 17, 57                       | M-6              |
| E,L         of bottom of LOU 16 and 17 to e           B         GW estimated at ~23 feet bgs.                                |                 |                     | X<br>R                            |                                  |                                      |                                  | X<br>R                             | R<br>R                        | X                                  | X<br>R                                     | X<br>R                            |                        |                                | X<br>R                             | X<br>R                                    | X                          | 10 20                                       | SA197-10B<br>SA197-20B   |               | 16, 17, 57<br>16, 17, 57         | M-6<br>M-6       |
| B,E,L  |                 |                     | X                                 |                                  |                                      |                                  | X                                  |                               | Х                                  | X  | X                                 |                        |                                | X                                  | X   | X                          | 21  | SA197-21B                |               | 16, 17, 57                       | M-6              |
| A  |                 |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                    | R  | R                                 |                        |                                | R                                  | R   | R                          | 30  | SA197-30B                |               | 16, 17, 57                       | M-6              |
| X Boring located to evaluate LOU   |                 |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                    | R  | R                                 |                        |                                | R                                  | R   | R                          | 35<br>0.0                                   | SA197-35B<br>SA198-0.0B  | SA198         | 16, 17, 57<br>16, 17, 57, 60     | M-6<br>M-6       |
| E,L,W Plant Transfer Lines to Sodium (   |                 |                     | Х                                 | Х                                |                                      |                                  | Х                                  | R                             | Х                                  | Х  | Х                                 |                        | Х                              | Х                                  | Х   | х                          | 0.5   | SA198-0.5B               | 0/1100        | 16, 17, 57, 60                   | M-6              |
| E,L,W Located in a low spot of bottom  |                 |                     | Х                                 |                                  |                                      |                                  | Х                                  | R                             | Х                                  | Х  | Х                                 |                        | Х                              | Х                                  | Х   | X                          | 10  | SA198-10B                |               | 16, 17, 57, 60                   | M-6              |
| B and adjacent to the LOU 60 form<br>B,E,L,W releases. LOU 60 flume was o  |                 |                     | R<br>X                            |                                  |                                      |                                  | R<br>X                             | R                             | X                                  | R<br>X                                     | R<br>X                            |                        | X                              | R<br>X                             | R<br>X                                    | R<br>X                     | 20<br>27                                    | SA198-20B<br>SA198-27B   |               | 16, 17, 57, 60<br>16, 17, 57, 60 | M-6<br>M-6       |
| A releases. LOO 60 hume was o  |                 |                     | R                                 |                                  |                                      |                                  | R                                  | R                             | ^                                  | R  | R                                 |                        | ^                              | R                                  | R   | R                          | 30  | SA198-27B<br>SA198-30B   |               | 16, 17, 57, 60                   | M-6              |
| A  |                 |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                    | R  | R                                 |                        |                                | R                                  | R   | R                          | 35  | SA198-35B                |               | 16, 17, 57, 60                   | M-6              |
| X Boring located to evaluate LOU<br>E,L AP Plant SIs and Transfer Lines  |                 |                     | X                                 | ×                                |                                      |                                  |                                    | R                             | X                                  | x  | x                                 |                        |                                | x                                  | X   | x                          | 0.0   | SA63-0.0B<br>SA63-0.5B   | SA63          | 18, 57<br>18, 57                 | M-7<br>M-7       |
| E,L AP Plant Sis and Transfer Lines<br>E,L for general coverage of LOU 57.   |                 |                     | X                                 | X                                |                                      |                                  |                                    | R                             | X X                                | x  | X                                 |                        |                                | x                                  | X   | x                          | 10  | SA63-0.5B<br>SA63-10B    |               | 18, 57                           | M-7              |
| B GW estimated at ~25 feet bgs.  |                 |                     | R                                 |                                  |                                      |                                  |                                    | R                             |                                    | R  | R                                 |                        |                                | R                                  | R   | R                          | 20  | SA63-20B                 |               | 18, 57                           | M-7              |
| B,E,L  |                 |                     | X                                 |                                  |                                      |                                  |                                    | -                             | X                                  | X  | X                                 |                        |                                | X                                  | X   | X                          | 23  | SA63-23B                 |               | 18, 57                           | M-7              |
| X Boring located to evaluate LOU   |                 |                     | R                                 |                                  |                                      |                                  |                                    | R                             |                                    | R  | R                                 |                        |                                | R                                  | R   | R                          | 30<br>0.0                                   | SA63-30B<br>SA86-0.0B    | SA86          | 18, 57<br>5, 57                  | M-7<br>M-7       |
| X P,W,Z AP Plant SIs and Transfer Lines  |                 | Х                   | Х                                 | Х                                |                                      | Х                                | Х                                  | Х                             | Х                                  | Х  | Х                                 | Х                      | Х                              | Х                                  | Х   | Х                          | 0.5   | SA86-0.5B                | 2.100         | 5, 57                            | M-7              |
| X P,W,Z into Beta Ditch and for general c  | X               | X                   | X                                 |                                  |                                      | Х                                | X                                  | X                             | X                                  | X  | X                                 | Х                      | X                              | X                                  | X   | X                          | 10  | SA86-10B                 |               | 5, 57                            | M-7              |
| B GW estimated at ~30 feet bgs.  |                 |                     | R<br>R                            |                                  |                                      |                                  | R<br>R                             | R<br>R                        | R<br>R                             | R<br>R                                     | R<br>R                            |                        | R<br>R                         | R<br>R                             | R<br>R                                    | R<br>R                     | 20<br>25                                    | SA86-20B<br>SA86-25B     |               | 5, 57<br>5, 57                   | M-7<br>M-7       |
| X B,P,W,Z  | X               | X                   | X                                 |                                  |                                      | X                                | X                                  | X                             | X                                  | X  | X                                 | X                      | X                              | X                                  | X   | X                          | 28  | SA86-28B                 |               | 5, 57                            | M-7              |
| X Boring located to evaluate LOU   |                 |                     |                                   |                                  |                                      |                                  |                                    |                               |                                    |  |                                   |                        | ·····                          |                                    |   |                            | 0.0   | SA92-0.0B                | SA92          | 5, 20                            | M-7              |
| X         L,P,W,Z         Eastern Diversion Ditche to eval           X         L,P,W,Z         GW estimated at ~33 feet bgs. |                 | X                   | X                                 | X                                |                                      | X<br>X                           | X                                  | X                             | X                                  | X  | X                                 | X                      | X                              | X                                  | X X                                       | X                          | 0.5   | SA92-0.5B<br>SA92-10B    |               | 5, 20<br>5, 20                   | M-7<br>M-7       |
| B,L,P,W,Z GW estimated at ~33 feet bgs.  | ····            | ^                   | X                                 |                                  |                                      | ^                                | X                                  | Hold                          | <u>х</u><br>Х                      | X  | X                                 | X                      | X X                            | X                                  | X   | X                          | 20  | SA92-10B<br>SA92-20B     |               | 5, 20                            | M-7              |
| B  |                 |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                    | R  | R                                 |                        | R                              | R                                  | R   | R                          | 30  | SA92-30B                 |               | 5, 20                            | M-7              |
| X B,L,P,W,Z<br>X Boring located to evaluate LOU  | X               | Х                   | Х                                 |                                  |                                      | Х                                | Х                                  | Х                             | Х                                  | Х  | Х                                 | Х                      | Х                              | Х                                  | Х   | Х                          | 31  | SA92-31B                 | 01455         | 5, 20                            | M-7              |
| X Boring located to evaluate LOU<br>E,L,V,W,bb and LOU 57 (AP Plant Transfer   |                 |                     | x                                 | х                                |                                      |                                  | X                                  | R                             | Х                                  | x  | x                                 | Х                      | Х                              | х                                  | X   | x                          | 0.0   | SA155-0.0B<br>SA155-0.5B | SA155         | 22, 23, 57<br>22, 23, 57         | M-7<br>M-7       |
| E,L,V,W,bb potential LOU 22 and 23 piping i  |                 |                     | Х                                 |                                  |                                      |                                  | Х                                  | R                             | Х                                  | Х  | Х                                 | Х                      | Х                              | Х                                  | Х   | Х                          | 10  | SA155-10B                |               | 22, 23, 57                       | M-7              |
| B,E,L,S,V,W,bb GW estimated at ~32 feet bgs.   |                 |                     | Х                                 |                                  |                                      |                                  | Х                                  |                               | Х                                  | Х  | Х                                 | Х                      | Х                              | Х                                  | Х   | Х                          | 30  | SA155-30B                |               | 22, 23, 57                       | M-7              |

| Location Description and Characterized Area Rationale<br>DEP may not agree with upgradient and downgradient descriptions)   |
|---|
|   |
|   |
| J 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP<br>Located in a low area near existing LOU 57 piping and as an upslope stepout from LOU 5.   |
|   |
| J 5 (Beta Ditch), LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant<br>ted in a low spot within LOU 5 to evaluate potential impacts associated with historic   |
|   |
| J 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP<br>Randomly located as an upslope stepout for LOU 5 and general coverage for LOU 57.   |
|   |
| Js 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer Lines), LOU 57 (AP<br>n Chlorate Process, AP Plant SIs and Transfer Lines), and LOU 60 (Acid Drain System).<br>n of LOU 16 and 17 for worst case coverage, near LOU 60 to evaluate possible piping<br>rage of LOU 57. |
|   |
| J 5 (Beta Ditch), LOU 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer<br>4). Located in a low spot downslope of LOU 16 and 17. Upslope of LOU 5 to evaluate<br>m LOUs 5, 16, and 17.   |
|   |
| J 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer<br>general coverage of LOU 57 and for site wide coverage.   |
|   |
| Js 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer Lines) and LOU 57<br>dium Chlorate Process, AP Plant SIs and Transfer Lines). Located in a low spot<br>evaluate worst case conditions and for general coverage of LOU 57.   |
|   |
| J 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer Lines), LOU 57 (AP<br>n Chlorate Process, AP Plant SIs and Transfer Lines), and LOU 60 (Acid Drain System).<br>n of LOU 16 and 17 to evaluate worst case conditions and for general coverage of LOU 57                 |
| rmer conveyance flume to evaluate underlying soils for potential impacts from historical<br>on ground surface (0 feet bgs). GW estimated at ~29 feet bgs.   |
| J 18 (Pond AP-4), and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process,<br>as). Located in a low spot in the bottom of LOU 18 to evaluate worst case conditions and<br>7.   |
|   |
| U 5 (Beta Ditch) and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process,<br>sp). Located in the bottom of LOU 5 to evaluate potential impacts from historic discharges<br>I coverage of LOU 57.   |
| J 20 (Pond C-1 and Associated Piping) and LOU 5 (Beta Ditch). Located in bottom of<br>aluate upstream tributary releases and potiential overflow releases from LOU 20.  |
|   |
| J 22 (Pond WC-West Associated Piping), LOU 23 (Pond WC-East Associated Piping),<br>r Lines to Sodium Chlorate Process, AP Plant SIs and Transfer Lines). To evaluate<br>g releases and for general stepout coverage of LOU 57.  |
|   |

|                  |                |               | Lat                      | ooratory K. :                               | CAS -                      | - Kelso                                   |                                    |                                |                         | CAS       | S - Rochest                                | er  |                               |                                    |                                  | CAS - H                              | ouston                           | GEL -<br>Charleston,<br>SC        | STL-<br>Denver      | Alpha<br>Analytical<br>Sparks, NV | EMSL Westmont,<br>NJ                        | Rationale                     | Pag  |
|------------------|----------------|---------------|--------------------------|---|----------------------------|---|------------------------------------|--------------------------------|-------------------------|-----------|--|---|-------------------------------|------------------------------------|----------------------------------|--------------------------------------|----------------------------------|-----------------------------------|---------------------|-----------------------------------|---|-------------------------------|--|
| Grid<br>Location | LOU Number     | Boring<br>No. | Sample ID<br>Number      | Sample<br>Depths <sup>1.</sup><br>(ft. bgs) | Perchlorate<br>(EPA 314.0) | <b>Metals</b> <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>3.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO (EPA 8015B) (EF | PA 8260B) | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total Cyanide<br><sup>∟.</sup><br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA<br>1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup> | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | for<br>Revision               | Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions)  |
|                  | l l            |               |                          | ( 5)  |                            |   |                                    | Borings a                      | re organized            |           |  | ,   | e A - Start                   | ing point i                        | s on the no                      | orthwester                           | rn most g                        | rid in Area                       | a II (M-2) a        | nd ending w                       | ith the southeas                            | tern most grid                | i<br>in Area II (S-7).   |
| M-7              | 5, 57          | RSAM7         | RSAM7-0.0B               | 0.0   |                            |   |                                    |                                |                         |           |  |   |                               |                                    |                                  |                                      |                                  |                                   |                     |                                   | X   |                               | Boring located to evaluate LOU 5 (Beta Ditch) and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process,  |
| M-7<br>M-7       | 5, 57<br>5, 57 |               | RSAM7-0.5B<br>RSAM7-10B  | 0.5   | X X                        | X   | x<br>x                             | X<br>X                         | X                       | X         | X  | X<br>X  | X<br>Hold                     | X                                  |                                  |                                      | X                                | X<br>X                            |                     |                                   |   | L,W<br>L,W                    | AP Plant SIs and Transfer Lines). Randomly located to provide downslope overflow releases from LOU 5, general<br>coverage for LOU 57, and for site wide coverage.  |
| M-7              | 5, 57          |               | RSAM7-20B                | 20  | R                          | R   | R                                  | R                              | ~                       | R         | R  | <u>_</u>                                      | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | В                             | GW estimated at ~30 feet bgs.  |
| M-7<br>M-7       | 5, 57<br>5, 57 |               | RSAM7-28B<br>RSAM7-30B   | 28  | X                          | X   | X<br>R                             | X                              | X                       | X         | X  | Х   | X<br>R                        | X                                  |                                  |                                      |                                  | X<br>R                            |                     |                                   |   | B,L,W                         |  |
| M-7              | 5, 57          |               | RSAM7-30B<br>RSAM7-35B   | 30<br>35                                    | R                          | R   | R                                  | R                              |                         | R         | R  |   | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | A                             |  |
| M-8              | 20             | SA62          | SA62-0.0B                | 0.0   |                            |   |                                    |                                |                         |           |  |   |                               |                                    |                                  |                                      |                                  |                                   |                     |                                   | Х   |                               | Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping). Located in a low spot in the bottom and near an  |
| M-8<br>M-8       | 20<br>20       |               | SA62-0.5B<br>SA62-10B    | 0.5   | X X                        | X   | x<br>x                             | X                              |                         | X         | X<br>X                                     |   | R                             |                                    |                                  |                                      | X                                | X<br>X                            |                     |                                   |   | E,F<br>E,F                    | inflow piping outlet to evaluate worst case conditions.<br>GW estimated at ~26 feet bgs.   |
| M-8              | 20             |               | SA62-20B                 | 20  | R                          | R   | R                                  | R                              |                         | R         | R  |   | R                             |                                    |                                  |                                      |                                  | R                                 |                     |                                   |   | B                             |  |
| M-8<br>M-8       | 20<br>20       |               | SA62-22B<br>SA62-24B     | 22<br>24                                    | R<br>X                     | R<br>X                                    | R                                  | R<br>X                         |                         | R<br>X    | R  |   | R                             |                                    |                                  |                                      |                                  | R<br>X                            |                     |                                   |   | B.E.F                         |  |
| M-8              | 20             | SA71          | SA71-0.0B                | 0.0   | ~                          | ~   |                                    |                                |                         | ~         | ~  |   |                               |                                    |                                  |                                      |                                  |                                   |                     |                                   | Х   |                               | Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping). Located to evaluate  |
| M-8<br>M-8       | 20<br>20       |               | SA71-0.5B<br>SA71-10B    | 0.5   | X                          | X   | X                                  | X                              | X<br>X                  | X         | X  | X<br>X  | R                             | X                                  |                                  |                                      | X                                | X                                 |                     |                                   |   | E,F,L,V,W,bb<br>E,F,L,V,W     | possible overflow releases from historical LOU 5 Beta Ditch and overflows from lou 20; both LOUs are upslope<br>of SA71.   |
| M-8              | 5, 20          |               | SA71-10B<br>SA71-20B     | 20  | R                          | R   | R                                  | ^                              |                         | R         | R  | ~   | R                             | ^                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | Β                             | GW estimated at ~38 feet bgs.  |
| M-8              | 5, 20          |               | SA71-22B                 | 22  | R                          | R   | R                                  | V                              | ×                       | R         | R  | ×   | R                             |                                    |                                  |                                      |                                  | R                                 |                     |                                   |   | B                             |  |
| M-8<br>M-8       | 20<br>20       |               | SA71-25B<br>SA71-36B     | 25<br>36                                    | X                          | X   | X                                  | X                              | X                       | X         | X<br>X                                     | X<br>X  |                               | X<br>X                             |                                  |                                      |                                  | X                                 |                     |                                   |   | B,E,F,L,V,W<br>B,E,F,L,V,W,bb |  |
| M-8              | 20             | SA144         | SA144-0.0B               | 0.0   |                            |   |                                    |                                |                         |           |  |   |                               |                                    |                                  |                                      |                                  |                                   |                     |                                   | Х   |                               | Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping). Located to evaluate  |
| M-8<br>M-8       | 20 20          |               | SA144-0.5B<br>SA144-10B  | 0.5   | X                          | X   | X                                  | X                              | X                       | X         | X X  | X X   | R                             | X X                                |                                  |                                      | X                                | X X                               |                     | ·····                             |   | E,F,L,V,W<br>E,F,L,V,W        | possible overflow releases from historical LOU 5 (before LOU 20 was constructed) and a low spot in bottom<br>of LOU 20 for worst case conditions.  |
| M-8              | 5, 20          |               | SA144-20B                | 20  | R                          | R   | R                                  | R                              | ~~~~                    | R         | R  | <u>^</u>                                      | R                             | ~~~~                               |                                  |                                      |                                  | R                                 |                     |                                   |   | В                             | GW estimated at ~30 feet bgs.  |
| M-8<br>M-8       | 5, 20<br>20    |               | SA144-22B<br>SA144-28B   | 22<br>28                                    | R                          | R<br>X                                    | R                                  | R<br>X                         |                         | R         | R<br>X                                     | X   | R                             |                                    |                                  |                                      |                                  | R<br>X                            |                     |                                   |   | B,E,F,L,V,W                   |  |
| M-8              | 20             | SA145         | SA144-28B<br>SA145-0.0B  | 0.0   | ^                          | ^   | ^                                  | ^                              | ^                       | ^         | ^  | ^   |                               | ^                                  |                                  |                                      |                                  | ^                                 |                     |                                   | Х   | D,C,F,C,V,VV                  | Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping). Located in a lowspot at the bottom and near an   |
| M-8              | 20             |               | SA145-0.5B               | 0.5   | X                          | X   | X                                  | X                              |                         | X         | X  |   | R                             |                                    |                                  |                                      | Х                                | X                                 |                     |                                   |   | E,F                           | inlet pipe for worst case conditions in LOU 20.  |
| M-8<br>M-8       | 20<br>20       |               | SA145-10B<br>SA145-20B   | 10<br>20                                    | X<br>R                     | X<br>R                                    | R                                  | R                              |                         | R         | R  |   | R                             |                                    |                                  |                                      |                                  | X<br>R                            |                     |                                   |   | E,F<br>B                      | GW estimated at ~26 feet bgs.  |
| M-8              | 20             |               | SA145-22B                | 22  | R                          | R   | R                                  | R                              |                         | R         | R  |   | R                             |                                    |                                  |                                      |                                  | R                                 |                     |                                   |   | В                             |  |
| M-8<br>M-8       | 20<br>20       | RSAM8         | SA145-24B<br>RSAM8-0.0B  | 24<br>0.0                                   | Х                          | Х   | Х                                  | Х                              |                         | Х         | Х  |   |                               |                                    |                                  |                                      |                                  | Х                                 |                     |                                   | ×   | B,E,F                         | Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping). Randomly located to evaluate possible overflow   |
| M-8              | 20             | 110/1110      | RSAM8-0.5B               | 0.5   | Х                          | Х   | Х                                  | Х                              | Х                       | Х         | Х  | Х   | Х                             | Х                                  |                                  |                                      | Х                                | Х                                 |                     |                                   | ~ ~   | F,L,W                         | releases from LOU 20 and for site wide coverage.   |
| M-8<br>M-8       | 20<br>20       |               | RSAM8-10B<br>RSAM8-20B   | 10<br>20                                    | X                          | X   | X<br>X                             | X                              | X                       | X         | X  | X X   | Hold<br>Hold                  | X<br>X                             |                                  |                                      |                                  | X<br>X                            |                     |                                   |   | F,L,W<br>F,L,W                | GW estimated at ~33 feet bgs.  |
| M-8              | 20             |               | RSAM8-30B                | 30  | R                          | R   | R                                  | R                              | ~                       | R         | R  | ~   | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | В                             |  |
| M-8<br>M-8       | 20<br>20       |               | RSAM8-31B<br>RSAM8-35B   | 31<br>35                                    | X                          | X   | R                                  | X                              | X                       | X         | X  | Х   | X                             | X                                  |                                  |                                      |                                  | X                                 |                     |                                   |   | B,L,F,W                       |  |
| N-4              | 5              | SA165         | SA165-0.0B               | 0.0   | N                          | K   | N                                  | r.                             |                         | K         | N  |   | N                             | N                                  |                                  |                                      |                                  | N                                 |                     |                                   | х   | A                             | Boring located to evaluate LOU 5 (Beta Ditch). Located in the bottom of the ditch to evaluate for potential impacts from   |
| N-4<br>N-4       | 5              |               | SA165-0.5B<br>SA165-10B  | 0.5   | X                          | X   | X                                  | X                              |                         | X         | X  | X<br>X  | X<br>X                        | X<br>X                             | X                                |                                      | X                                | X<br>X                            | <u> </u>            | <u> </u>                          |   | L,Z<br>L,Z                    | storm sewer outfall into the Western Diversion Ditch segment of Beta Ditch.<br>GW estimated at ~30 feet bgs.   |
| N-4              | 5              |               | SA165-20B                | 20  | R                          | R   | R                                  | R                              |                         | R         | R  | ~   | R                             | R                                  | ~                                |                                      |                                  | R                                 | ~                   | ~                                 |   | B                             |  |
| N-4<br>N-4       | 5              |               | SA165-28B<br>SA165-30B   | 28  | X                          | X   | X<br>R                             | X                              |                         | X         | X<br>R                                     | Х   | X                             | X                                  | Х                                |                                      |                                  | X<br>R                            | Х                   | Х                                 |   | B,L,Z                         |  |
| N-4<br>N-4       | 5              |               | SA165-30B<br>SA165-35B   | 30<br>35                                    | R                          | R   | R                                  | R                              |                         | R         | R  |   | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | A                             |  |
| N-5              | 57             | SA58          | SA58-0.0B                | 0.0   | V                          |   | Y                                  |                                |                         | ~         | V  | V   | V                             | V                                  |                                  |                                      | V                                | ×                                 | V                   | V                                 | X   |                               | Boring located to evaluate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer   |
| N-5<br>N-5       | 57<br>57       |               | SA58-0.5B<br>SA58-10B    | 0.5   | X X                        | X   | X                                  |                                |                         | X         | X  | X<br>X  | X<br>Hold                     | X                                  |                                  |                                      | X                                | X<br>X                            | X                   | X                                 |   | L,Z<br>L,Z                    | Lines). Located as an upslope stepout for general coverage of LOU 57.<br>GW estimated at ~30 feet bgs.   |
| N-5              | 57             |               | SA58-20B                 | 20  | R                          | R   | R                                  |                                |                         | R         | R  |   | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | В                             |  |
| N-5<br>N-5       | 57<br>57       |               | SA58-28B<br>SA58-30B     | 28<br>30                                    | R                          | X   | R                                  |                                |                         | R         | R  | X   | X<br>R                        | X                                  |                                  |                                      |                                  | R                                 | X                   | X                                 |   | B,L,Z<br>A                    |  |
| N-5              | 57             |               | SA58-35B                 | 35  | R                          | R   | R                                  |                                |                         | R         | R  |   | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | A                             |  |
| N-5<br>N-5       | 57<br>57       | SA94          | SA94-0.0B<br>SA94-0.5B   | 0.0<br>0.5                                  | ×                          | x   | x                                  |                                |                         | Х         | х  | X   | R                             | X                                  |                                  |                                      | X                                | X                                 |                     |                                   | X   | E,L                           | Boring located to evaluate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer<br>Lines). Located to evaluate potential releases from historical piping releases associated with LOU 57. |
| N-5              | 57             |               | SA94-10B                 | 10  | X                          | X   | X                                  |                                |                         | Х         | X  | X   | R                             | X                                  |                                  |                                      |                                  | Х                                 |                     |                                   |   | E,L                           | GW estimated at ~31 feet bgs.  |
| N-5<br>N-5       | 57<br>57       |               | SA94-20B<br>SA94-29B     | 20<br>29                                    | R                          | R<br>X                                    | R<br>X                             |                                |                         | R<br>X    | R<br>X                                     | X   | R                             | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |                                   |   | B<br>B,E,L                    |  |
| N-5              | 57             |               | SA94-29B<br>SA94-30B     | 30  | R                          | R   | R                                  |                                |                         | R         | R  | ^   | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | A                             |  |
| N-5              | 57             | 64440         | SA94-35B                 | 35  | R                          | R   | R                                  |                                |                         | R         | R  |   | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   | V   | A                             | Design leasted to surgluste LOLLET (AD Diset Transfer Lines to Configure Objects Designs) AD Diset Object Object   |
| N-5<br>N-5       | 57<br>57       | SA113         | SA113-0.0B<br>SA113-0.5B | 0.0   | x                          | х   | х                                  |                                |                         | x         | Х  | Х   | R                             | Х                                  |                                  |                                      | х                                | х                                 |                     |                                   | X   | E,L                           | Boring located to evaluate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer<br>Lines). Located adjacent to LOU 57 associated pipeline to evaluate potential releases.                 |
| N-5              | 57             | 1             | SA113-10B                | 10  | X                          | X   | Х                                  |                                |                         | X         | Х  | X   | R                             | X                                  |                                  |                                      |                                  | Х                                 |                     |                                   |   | E,L                           | GW estimated at ~32 feet bgs.  |
| N-5<br>N-5       | 57<br>57       |               | SA113-20B<br>SA113-30B   | 20<br>30                                    | R<br>X                     | R<br>X                                    | R<br>X                             |                                |                         | R<br>X    | R<br>X                                     | x   | R                             | x                                  |                                  |                                      |                                  | R<br>X                            |                     |                                   |   | B<br>B,E,L                    |  |
| N-5              | 57             |               | SA113-35B                | 35  | R                          | R   | R                                  |                                |                         | R         | R  |   | R                             |                                    |                                  |                                      |                                  | R                                 |                     |                                   |   | A                             |  |
| N-5<br>N-5       | NA<br>NA       | RSAN5         | RSAN5-0.0B<br>RSAN5-0.5B | 0.0   | ×                          | x   | x                                  | x                              |                         | ×         | x  | X   | X                             | ×                                  |                                  |                                      | X                                | X                                 |                     |                                   | X   |                               | Boring located to evaluate general site wide subsurface soil conditions; not associated with a specific LOU.<br>GW estimated at ~35 feet bgs.  |
| N-5              | NA             | 1             | RSAN5-10B                | 10  | X                          | X   | X                                  | X                              |                         | X         | X  | X   | Hold                          | X                                  |                                  |                                      |                                  | Х                                 |                     |                                   |   | L                             | over odimination at not tool byga.   |
| N-5              | NA             |               | RSAN5-20B<br>RSAN5-30B   | 20  | X                          | X   | X<br>R                             | X                              |                         | X         | X<br>R                                     | Х   | Hold<br>R                     | X                                  |                                  |                                      |                                  | X<br>R                            |                     |                                   |   | L                             |  |
| N-5<br>N-5       | NA<br>NA       |               | RSAN5-30B<br>RSAN5-33B   | 30<br>33                                    | X                          | X   | X                                  | X                              |                         | X         | X  | X   | <u>к</u><br>Х                 | X                                  |                                  |                                      |                                  | X                                 |                     |                                   |   | B,L                           |  |
| N-5              | NA             | 0.4.100       | RSAN5-35B                | 35  | R                          | R   | R                                  | R                              |                         | R         | R  |   | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   | , y   | A                             |  |
| N-6<br>N-6       | 57<br>57       | SA196         | SA196-0.0B<br>SA196-0.5B | 0.0   | x                          | х   | х                                  |                                |                         | x         | Х  | Х   | R                             | X                                  |                                  |                                      | x                                | X                                 |                     |                                   | X   | E,L                           | Boring located to evaluate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer<br>Lines). Located along associated piping for LOU 57 and as an upslope stepout to LOU 57.                |
| N-6              | 57             | 1             | SA196-10B                | 10  | X                          | X   | Х                                  |                                |                         | Х         | Х  | Х   | R                             | Х                                  |                                  |                                      |                                  | Х                                 |                     |                                   |   | E,L                           | GW estimated at ~31 feet bgs.  |
| N-6              | 57             |               | SA196-29B                | 29  | Х                          | Х   | Х                                  |                                |                         | Х         | Х  | Х   |                               | Х                                  |                                  |                                      |                                  | Х                                 |                     |                                   |   | B,E,L,S                       | 1  |

| Image         Burg         <  |            |               |        | Lab                    | ooratory K. :        | CAS - | - Kelso |   |           |              | c          | CAS - Roches | ter           |  |              |            | CAS -     | Houston    | GEL -<br>Charleston,<br>SC | STL-<br>Denver      | Alpha<br>Analytical<br>Sparks, NV | EMSL Westmont,<br>NJ                  | Rationale  |                                    |
|---|------------|---------------|--------|------------------------|----------------------|-------|---------|---|-----------|--------------|------------|--------------|---------------|--|--------------|------------|-----------|------------|----------------------------|---------------------|-----------------------------------|---------------------------------------|--|------------------------------------|
| Ho         Ho        Ho        Ho         Ho <th></th> <th>LOU Number</th> <th></th> <th></th> <th>Depths<sup>1.</sup></th> <th></th> <th></th> <th></th> <th>DRO/ORO</th> <th></th> <th></th> <th>Chemistry</th> <th>Ľ.</th> <th></th> <th></th> <th></th> <th>(EPA</th> <th></th> <th></th> <th>OPPs<sup>11.</sup></th> <th>Organic</th> <th></th> <th></th> <th>(ND</th>  |            | LOU Number    |        |                        | Depths <sup>1.</sup> |       |         |   | DRO/ORO   |              |            | Chemistry    | Ľ.            |  |              |            | (EPA      |            |                            | OPPs <sup>11.</sup> | Organic                           |                                       |  | (ND                                |
| 15.     15. <th></th> <th></th> <th>•</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>Borings a</th> <th>ire organize</th> <th>ed by grid</th> <th>location as</th> <th>shown on Plat</th> <th>te A - Star</th> <th>ting point i</th> <th>s on the n</th> <th>orthweste</th> <th>ern most g</th> <th>grid in Are</th> <th>ea II (M-2) a</th> <th>and ending w</th> <th>ith the southeas</th> <th>stern most grid</th> <th>in Area II (S-7).</th>   |            |               | •      |                        |                      |       |         |   | Borings a | ire organize | ed by grid | location as  | shown on Plat | te A - Star  | ting point i | s on the n | orthweste | ern most g | grid in Are                | ea II (M-2) a       | and ending w                      | ith the southeas                      | stern most grid  | in Area II (S-7).                  |
|   |            |               | SA60   |                        |                      |       |         |   |           |              |            |              |               |  |              |            |           |            |                            |                     |                                   | Х                                     |  | Boring located to evaluate LOU     |
| 64         53 mm         640 mm         640 mm         7        7         7         7       <   |            |               | -      |                        |                      |       |         |   |           |              |            |              |               |  |              |            |           | X          |                            |                     |                                   |                                       |  |                                    |
| Image: state         Image: state<  | N-6        |               |        | SA60-20B               | 20                   |       |         |   |           |              |            |              |               |  |              |            |           |            | Х                          |                     |                                   |                                       | E,L  |                                    |
| Lie         Lie <thlie< th=""> <thlie< th=""> <thlie< th=""></thlie<></thlie<></thlie<>   |            |               | -      |                        |                      |       |         | ******  |           |              |            |              | ×             | R  |              |            |           |            |                            |                     |                                   |                                       |  |                                    |
| Image         BASC         BASC         BASC         BASC         S     <   |            |               |        |                        |                      |       |         |   |           |              |            |              | ~             | R  |              |            |           |            |                            |                     |                                   |                                       |  |                                    |
| Image   |            |               | SA105  |                        |                      | V     | V       | V   | V         |              | V          | V            | ×             | P  |              |            |           |            | V                          |                     |                                   | Х                                     |  | Boring located to evaluate LOU     |
| Image     Subscription     Subscri  |            |               |        |                        |                      |       |         |   |           |              |            |              |               | Concernant of the American State Street and Street State |              |            |           | ^          |                            |                     |                                   |                                       |  |                                    |
| Inte         69, 37         60, 37         61         50  |            |               |        |                        |                      |       |         |   |           |              |            |              | Х             |  |              |            |           |            |                            |                     |                                   |                                       |  |                                    |
| Inte         Nx.st         matrix         State         matrix  |            |               |        |                        |                      |       |         | And the second se |           |              |            |              | × ×           | R  |              |            |           |            |                            |                     |                                   |                                       |  |                                    |
| Impo         Statucity         Sta  | N-6        | 53, 57        |        | SA105-37B              | 37                   |       |         |   |           |              |            |              | ~~~~~~        | R  |              |            |           |            |                            |                     |                                   |                                       |  | -                                  |
| 140     NN     Shipping     NN     NN <td></td> <td></td> <td>SA150</td> <td></td> <td></td> <td>v</td> <td>v</td> <td>v</td> <td>v</td> <td></td> <td>v</td> <td>v</td> <td>~</td> <td>P</td> <td>~</td> <td></td> <td></td> <td>~</td> <td>v</td> <td></td> <td></td> <td>Х</td> <td></td> <td></td>  |            |               | SA150  |                        |                      | v     | v       | v   | v         |              | v          | v            | ~             | P  | ~            |            |           | ~          | v                          |                     |                                   | Х                                     |  |                                    |
| No.     No.     State   |            |               | -      |                        |                      |       |         |   |           |              |            |              |               |  |              |            |           | ^          |                            |                     |                                   |                                       |  | GW estimated at ~32 feet bgs.      |
| Inte         NA         State         State         NA         NA        NA        <  |            |               |        |                        |                      |       |         |   |           |              |            |              |               |  |              |            |           |            |                            |                     |                                   |                                       |  |                                    |
| NA         NA<  |            |               |        |                        |                      |       |         |   |           |              |            |              |               |  |              |            |           |            |                            |                     |                                   |                                       |  | -                                  |
| No.         No. <td></td> <td>NA</td> <td>RSAN6</td> <td>RSAN6-0.0B</td> <td>0.0</td> <td></td> <td>Х</td> <td></td> <td>Boring located to evaluate gene</td>   |            | NA            | RSAN6  | RSAN6-0.0B             | 0.0                  |       |         |   |           |              |            |              |               |  |              |            |           |            |                            |                     |                                   | Х                                     |  | Boring located to evaluate gene    |
| NAG         NAG         NAG         SAN 628         30         X        <   |            |               | -      |                        |                      |       |         |   |           |              |            |              |               |  |              |            |           | X          |                            |                     |                                   |                                       |  | GW estimated at ~35 feet bgs.      |
| MA         MA<  |            |               | -      |                        |                      |       |         |   |           |              |            |              |               |  |              |            |           |            |                            |                     |                                   |                                       | В  | -                                  |
| NA         NA         SA         R  |            |               |        |                        |                      |       |         |   |           |              |            |              |               |  |              |            |           |            |                            |                     |                                   |                                       |  |                                    |
| NH         20         NH         Status B  |            |               |        |                        |                      |       |         |   |           |              |            |              |               |  |              |            |           |            |                            |                     |                                   |                                       |  |                                    |
| NH         20         SAM1-MB         10         X        X        X        X </td <td></td> <td></td> <td>SA151</td> <td></td> <td>0.0</td> <td></td> <td>, N</td> <td>i.</td> <td></td> <td></td> <td></td> <td>i v</td> <td></td> <td></td> <td>, K</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Х</td> <td></td> <td>Boring located to evaluate LOU</td>  |            |               | SA151  |                        | 0.0                  |       | , N     | i.  |           |              |            | i v          |               |  | , K          |            |           |            |                            |                     |                                   | Х                                     |  | Boring located to evaluate LOU     |
| Image         20         Stati-SR         25         X        X </td <td></td> <td></td> <td>-</td> <td></td> <td>Х</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>  |            |               | -      |                        |                      |       |         |   |           |              |            |              |               |  |              |            |           | Х          |                            |                     |                                   |                                       |  |                                    |
| NN         O         SA11-308         33         X        X        X        X </td <td></td> <td>ĸ</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Gvv estimated at ~41 reet bgs.</td>   |            |               |        |                        |                      |       |         |   |           |              |            |              |               | ĸ  |              |            |           |            |                            |                     |                                   |                                       |  | Gvv estimated at ~41 reet bgs.     |
| N.7         6, 67         SA40_68         0.5         X        X         X        X </td <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>Х</td> <td>Х</td> <td></td> <td>Х</td> <td>X</td> <td></td> <td></td> <td>Х</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td>B,E,F,S</td> <td></td>   |            |               |        |                        |                      | X     | X       | Х   | Х         |              | Х          | X            |               |  | Х            |            |           |            | X                          |                     |                                   |                                       | B,E,F,S  |                                    |
| N.7         6,57         SAB-106         10         X        X <th< td=""><td></td><td></td><td>SA49</td><td></td><td></td><td>x</td><td>x</td><td>x</td><td>x</td><td>x</td><td>x</td><td>x</td><td>×</td><td>R</td><td>X</td><td></td><td></td><td>x</td><td>x</td><td></td><td></td><td>X</td><td>FLVWbb</td><td></td></th<>   |            |               | SA49   |                        |                      | x     | x       | x   | x         | x            | x          | x            | ×             | R  | X            |            |           | x          | x                          |                     |                                   | X                                     | FLVWbb   |                                    |
| N7         5.57         SA49.38         30         R <t< td=""><td>N-7</td><td>5, 57</td><td></td><td>SA49-10B</td><td>10</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>R</td><td>Х</td><td></td><td></td><td></td><td>Х</td><td></td><td></td><td></td><td>E,L,V,W</td><td>and for general coverage of LOI</td></t<>   | N-7        | 5, 57         |        | SA49-10B               | 10                   | Х     | Х       | Х   | Х         | Х            | Х          | Х            | Х             | R  | Х            |            |           |            | Х                          |                     |                                   |                                       | E,L,V,W  | and for general coverage of LOI    |
| N-7         5.67         SAMe 328         32         X        <   |            |               |        |                        |                      |       |         |   | X         | X            |            |              | X             |  | X            |            |           |            |                            |                     |                                   |                                       |  | GW estimated at ~34 feet bgs.      |
| N-7         5,60         SA154 0.6         0.0         -         -         -         -         -         N         X  |            |               |        |                        |                      |       |         |   | Х         | Х            |            |              | ×             | K  | X            |            |           |            |                            |                     |                                   |                                       |  | -                                  |
| N-7         5,60         SA154-0.58         0.5         X   |            |               | 04454  |                        |                      | R     | R       | R   |           |              | R          | R            |               | R  |              |            |           |            | R                          |                     |                                   | ×                                     | A  |                                    |
| N-7         5,60         SA154-108         10         X       <   |            |               | 5A154  |                        |                      | Х     | X       | X   | Х         | X            | X          | X            | X             | X  | X            | X          |           | X          | X                          | X                   | X                                 | · · · · · · · · · · · · · · · · · · · | L.P.W.Z  |                                    |
| N7         5         SA (54-30)         30         R <t< td=""><td>N-7</td><td>5, 60</td><td>-</td><td>SA154-10B</td><td>10</td><td></td><td>Х</td><td></td><td>Х</td><td>Х</td><td>Х</td><td></td><td>X</td><td>Х</td><td>Х</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>L,P,W,Z</td><td>source flows into Beta Ditch. Th</td></t<>  | N-7        | 5, 60         | -      | SA154-10B              | 10                   |       | Х       |   | Х         | Х            | Х          |              | X             | Х  | Х            |            |           |            |                            |                     |                                   |                                       | L,P,W,Z  | source flows into Beta Ditch. Th   |
| N-7         5,60         SA154-33B         33         X       <   |            |               |        |                        |                      |       |         |   |           | X            |            |              | X             |  |              |            |           |            |                            |                     |                                   |                                       |  |                                    |
| N-7     5     SA107     SA107-06     0.0  |            |               |        | SA154-33B              | 33                   |       |         | Х   |           | X            |            |              | X             |  |              | X          |           |            | Х                          | Х                   | X                                 |                                       |  |                                    |
| N-7         5         SA107-058         0.5         X         <   |            |               | \$4107 |                        |                      | R     | R       | R   | R         |              | R          | R            |               | R  | R            |            |           |            | R                          |                     |                                   | ×                                     | A  | Paring located to avaluate LOLL    |
| N7         5         SA107-20B         20         R <th< td=""><td></td><td></td><td>34107</td><td></td><td></td><td>Х</td><td>Х</td><td>х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>х</td><td>х</td><td>х</td><td>Х</td><td>Х</td><td>х</td><td>х</td><td>х</td><td>Х</td><td>^</td><td>L,P,W,Z</td><td>potential impacts from historical</td></th<>   |            |               | 34107  |                        |                      | Х     | Х       | х   | Х         | Х            | Х          | Х            | х             | х  | х            | Х          | Х         | х          | х                          | х                   | Х                                 | ^                                     | L,P,W,Z  | potential impacts from historical  |
| N7         5         SA107-288         29         X <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Х</td><td>Х</td><td></td><td></td><td>Х</td><td></td><td></td><td>Х</td><td>Х</td><td></td><td></td><td>Х</td><td>Х</td><td></td><td></td><td>GW estimated at ~31 feet bgs.</td></th<>   |            |               |        |                        |                      |       |         |   | Х         | Х            |            |              | Х             |  |              | Х          | Х         |            |                            | Х                   | Х                                 |                                       |  | GW estimated at ~31 feet bgs.      |
| N7         5         SA107-308         30         R <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>*****</td><td>x</td><td>X</td><td></td><td></td><td>×</td><td></td><td></td><td>×</td><td>X</td><td></td><td></td><td>×</td><td>X</td><td>-</td><td>decomposite to constant of the constant of the</td><td>-</td></th<> |            |               |        |                        |                      |       |         | *****   | x         | X            |            |              | ×             |  |              | ×          | X         |            |                            | ×                   | X                                 | -                                     | decomposite to constant of the | -                                  |
| N-7         5, 20, 22, 23         RSAN7         RSAN7.0.06         0.0         ///         // <t< td=""><td>N-7</td><td></td><td></td><td>SA107-30B</td><td>30</td><td>R</td><td>R</td><td>R</td><td></td><td></td><td>R</td><td>R</td><td></td><td>R</td><td>R</td><td></td><td></td><td></td><td>R</td><td></td><td></td><td></td><td>A</td><td>-</td></t<>  | N-7        |               |        | SA107-30B              | 30                   | R     | R       | R   |           |              | R          | R            |               | R  | R            |            |           |            | R                          |                     |                                   |                                       | A  | -                                  |
| N-7         5, 20, 22, 23         RSAN7-05B         0.5         X <td></td> <td>5 20 22 23</td> <td>PSAN7</td> <td></td> <td></td> <td>R</td> <td>R</td> <td>R</td> <td></td> <td></td> <td>R</td> <td>R</td> <td></td> <td>R</td> <td>R</td> <td></td> <td></td> <td></td> <td>R</td> <td></td> <td></td> <td>X</td> <td>A</td> <td>Boring located to evaluate LOLL</td>   |            | 5 20 22 23    | PSAN7  |                        |                      | R     | R       | R   |           |              | R          | R            |               | R  | R            |            |           |            | R                          |                     |                                   | X                                     | A  | Boring located to evaluate LOLL    |
| N-7         5, 20, 22, 23         RSAN7-26B         20         R <td></td> <td></td> <td>NOAN</td> <td></td> <td></td> <td>Х</td> <td></td> <td></td> <td>Х</td> <td>Х</td> <td></td> <td></td> <td>~</td> <td>F,L,W,bb</td> <td>Associated Piping), and LOU 23</td>   |            |               | NOAN   |                        |                      | Х     | Х       | Х   | Х         | Х            | Х          | Х            | Х             | Х  | Х            |            |           | Х          | Х                          |                     |                                   | ~                                     | F,L,W,bb   | Associated Piping), and LOU 23     |
| N-7         5, 20, 22, 23         RSAN7-25B         25         X <td></td> <td>•, =•, ==, =•</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Х</td> <td></td> <td></td> <td>X</td> <td></td>   |            | •, =•, ==, =• |        |                        |                      |       |         |   |           | Х            |            |              | X             |  |              |            |           |            |                            |                     |                                   |                                       |  |                                    |
| N-7         5, 20, 22, 23         RSAN7-30B         30         R <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td>x</td> <td></td> <td>GW estimated at ~40 feet bgs.</td>   |            |               |        |                        |                      |       |         |   |           | X            |            |              | x             |  |              |            |           |            |                            |                     |                                   |                                       |  | GW estimated at ~40 feet bgs.      |
| N-7         5, 20, 22, 23         RSAN7-38B         38         X <td>N-7</td> <td>5, 20, 22, 23</td> <td></td> <td>RSAN7-30B</td> <td>30</td> <td>R</td> <td>R</td> <td>R</td> <td>R</td> <td></td> <td>R</td> <td>R</td> <td></td> <td>R</td> <td>R</td> <td></td> <td></td> <td></td> <td>R</td> <td></td> <td></td> <td></td> <td>В</td> <td></td>   | N-7        | 5, 20, 22, 23 |        | RSAN7-30B              | 30                   | R     | R       | R   | R         |              | R          | R            |               | R  | R            |            |           |            | R                          |                     |                                   |                                       | В  |                                    |
| N-8         20         SA61         0.0         -         -         -         -         -         -         A         A         Boring located to evaluate LOU           N-8         20         N-8         20         SA61-0.0B         0.5         X         X         X         R         -         X         X         C         E,F         outfal piping to evaluate position outfal piping to   |            | 5, 20, 22, 23 |        | RSAN7-35B              |                      |       |         |   |           | ×            |            |              | ×             |  |              |            |           |            |                            |                     |                                   |                                       |  | -                                  |
| N-8         20         SA61-10B         10         X </td <td>N-8</td> <td>20</td> <td>SA61</td> <td>SA61-0.0B</td> <td>0.0</td> <td></td> <td></td> <td></td> <td>~</td> <td></td> <td></td> <td></td> <td>~</td> <td></td> <td>~</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Х</td> <td></td> <td>Boring located to evaluate LOU</td>  | N-8        | 20            | SA61   | SA61-0.0B              | 0.0                  |       |         |   | ~         |              |            |              | ~             |  | ~            |            |           |            |                            |                     |                                   | Х                                     |  | Boring located to evaluate LOU     |
| N-8         20         SA61-20B         20         R <t< td=""><td></td><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td>outfall piping to evaluate possibl</td></t<>  |            |               | -      |                        |                      |       |         |   |           |              |            |              |               |  |              |            |           | X          |                            |                     |                                   |                                       |  | outfall piping to evaluate possibl |
| N-8         20         SA61-30B         30         X <t< td=""><td></td><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td><td>R</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td>GW estimated at ~32 feet bgs.</td></t<>  |            |               | 1      |                        |                      |       |         |   | R         |              |            |              |               |  |              |            | -         |            |                            |                     |                                   |                                       |  | GW estimated at ~32 feet bgs.      |
| N-8         5,20         SA158-0.5B         0.5         X   | N-8        | 20            |        | SA61-30B               | 30                   |       |         |   |           | Х            |            |              |               |  |              |            |           |            |                            |                     |                                   |                                       |  | -                                  |
| N-8         5,20         SA158-10B         10         X   |            |               | SA158  |                        |                      | x     | x       | ×   | x         | X            | x          | x            | X             | R  | x            |            |           | x          | x                          |                     |                                   | ×                                     | E.F.L.V.W.bb   |                                    |
| N-8 5,20 SA158-30B 30 R R R R R R R R R R R R R R R R R R   | N-8        | 5, 20         |        | SA158-10B              | 10                   | Х     | Х       | Х   | Х         | Х            | Х          | Х            | Х             | R  | Х            |            |           |            | Х                          |                     |                                   |                                       | E,F,L,V,W  | overflow releases.                 |
|   |            |               |        |                        |                      |       |         |   |           | X            |            |              | X             |  | X            |            |           |            |                            |                     |                                   |                                       |  | GW estimated at ~33 feet bgs.      |
|   | N-8<br>N-8 | 5, 20         |        | SA158-30B<br>SA158-31B | 30                   | X     |         |   | X         | X            |            |              | X             | ĸ  | X            |            | -         |            |                            |                     |                                   |                                       | B,E,F,L,S,V,W,bb   | -                                  |

| Location Description and Characterized Area Rationale<br>DEP may not agree with upgradient and downgradient descriptions)   |
|---|
|   |
| J 53 (AP Plant Area Tank Farm) and LOU 57 (AP Plant Transfer Lines to Sodium  |
| s and Transfer Lines). Located at a low spot at location of former tanks in LOU 53<br>orical source) to evaluate worst case conditions, and for general coverage of LOU 57. |
|   |
|   |
|   |
| J 53 (AP Plant Area Tank Farm) and LOU 57 (AP Plant Transfer Lines to Sodium  |
| 's and Transfer Lines). Located at a low spot at location of former tanks in LOU 53   |
| orical source) to evaluate worst case conditions, and for general coverage of LOU 57.   |
|   |
|   |
|   |
| eral Site-wide conditions, is not associated with a specific LOU.   |
|   |
|   |
|   |
| eral Site-wide conditions. Randomly located boring not associated with a specific LOU.  |
| eral Sile-wide conditions. Randomly located boring not associated with a specific LOO.  |
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|   |
|   |
| J 20 (Pond C-1 and Associated Piping). Located along LOU 20 piping to evaluate  |
|   |
|   |
|   |
| J 5 (Beta Ditch) and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process,<br>ss). Located as a downslope stepout for LOU 5 to evaluate potential overflows releases  |
| DU 57.  |
|   |
|   |
| J 5 (Beta Ditch) and LOU 60 (Acid Drain System) conveyance route. Located in the bottom   |
| of LOU 5 to evaluate underlying soil for potential impacts from historical upstream tributary   |
| The former segment of LOU 60 conveyance system consisted of a flume that was situated   |
| ogs).   |
|   |
|   |
| J 5 (Beta Ditch). Located in the bottom of the Eastern Diversion Ditch to evaluate  |
| al upstream tributary source flows into Beta Ditch.   |
|   |
|   |
|   |
| LE (Rete Ditab) LOLI 20 (Read C 1 and Associated Dising ) LOLI 22 (Read WC West   |
| J 5 (Beta Ditch), LOU 20 (Pond C-1 and Associated Piping), LOU 22 (Pond WC-West<br>23 (Pond WC-East Associated Piping). Randomly located in a low spot of the Eastern       |
| aluate possible releases and overflow runoff from LOU 20. Also to evaluate potential  |
| piping.   |
|   |
|   |
|   |
| J 20 (Pond C-1 and Associated Piping). Located adjacent to a sharp bend in LOU 20   |
| ble pipeline releases and upslope of LOU 20 to evaluate   |
|   |
|   |
| J 20 (Pond C-1 and Associated Piping). Located adjacent to a sharp bend in LOU 20   |
| ble pipeline releases and upslope of LOU 20 to evaluate   |
|   |
|   |
|   |

|                  |                          |               | Lat                      | ooratory K. :                               | CAS -                      | Kelso                              |                                    |   |                        | c                                 | CAS - Roches                               | ster                               |                               |                                    |                                  | CAS - H                              | louston                          | GEL -<br>Charleston,<br>SC        | STL-<br>Denver      | Alpha<br>Analytical<br>Sparks, NV | EMSL Westmont,<br>NJ                        | Rationale        |   |
|------------------|--------------------------|---------------|--------------------------|---|----------------------------|------------------------------------|------------------------------------|---|------------------------|-----------------------------------|--|------------------------------------|-------------------------------|------------------------------------|----------------------------------|--------------------------------------|----------------------------------|-----------------------------------|---------------------|-----------------------------------|---|------------------|---|
| Grid<br>Location | LOU Number               | Boring<br>No. | Sample ID<br>Number      | Sample<br>Depths <sup>1.</sup><br>(ft. bgs) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>3.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B)          | TPH-GRO<br>(EPA 8015B) | VOCs <sup>4.</sup><br>(EPA 8260B) | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total Cyanide<br>L.<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA<br>1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup> | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | for<br>Revision  | (ND   |
|                  |                          |               |                          |   |                            |                                    |                                    | Borings a                               | re organiz             | ed by grid                        | location as                                | shown on Plat                      | te A - Star                   | ting point                         | is on the n                      | orthweste                            | rn most g                        | rid in Are                        | a II (M-2)          | and ending w                      | ith the southea                             | stern most grid  | in Area II (S-7).   |
| O-4              | n/a                      | SA54          | SA54-0.0B                | 0.0   |                            |                                    |                                    |   |                        |                                   |  |                                    |                               |                                    |                                  |                                      |                                  |                                   |                     | Ĭ                                 | Х   | Ĭ                | Boring located to evaluate gener                                    |
| 0-4              | n/a                      | -             | SA54-0.5B                | 0.5   | X                          | X                                  | Х                                  | X                                       |                        | Х                                 | X  | X                                  | R                             | Х                                  |                                  |                                      | Х                                | X                                 |                     |                                   |   | E,L              | GW estimated at ~33 feet bgs.                                       |
| 0-4<br>0-4       | n/a<br>n/a               | -             | SA54-10B<br>SA54-20B     | 10<br>20                                    | X<br>X                     | X                                  | X                                  | X                                       |                        | X<br>X                            | X  | X                                  | R<br>R                        | X                                  |                                  |                                      |                                  | X                                 |                     |                                   |   | E,L<br>B,E,L     |   |
| 0-4              | n/a                      |               | SA54-30B                 | 30  | R                          | R                                  | R                                  | R                                       |                        | R                                 | R  | ~                                  | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | B                |   |
| O-4              | n/a                      |               | SA54-31B                 | 31  | Х                          | X                                  | Х                                  | Х                                       |                        | Х                                 | Х  | Х                                  |                               | Х                                  |                                  |                                      |                                  | Х                                 |                     |                                   |   | B,E,L            | 4   |
| 0-4              | n/a                      | SA41          | SA54-37B                 | 37  | R                          | R                                  | R                                  | R                                       |                        | R                                 | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   | ×   | A                | Desire la cata data availuata LOLL                                  |
| O-5<br>O-5       | 45, 59, 60<br>45, 59, 60 | SA41          | SA41-0.0B<br>SA41-0.5B   | 0.0   | х                          | х                                  | х                                  | х                                       |                        | x                                 | х  | Х                                  | R                             | Х                                  |                                  |                                      | x                                | X                                 |                     |                                   | X   | E,L              | Boring located to evaluate LOU<br>System). Located on the perime    |
| O-5              | 45, 59, 60               |               | SA41-10B                 | 10  | R                          | R                                  | R                                  | R                                       |                        | R                                 | R  | ·····                              | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | J                | for historic details) and between                                   |
| O-5              | 45, 59, 60               |               | SA41-12B                 | 12  | Х                          | Х                                  | Х                                  | Х                                       |                        | Х                                 | Х  | Х                                  | R                             | Х                                  |                                  |                                      |                                  | Х                                 |                     |                                   |   | E,J,L            | LOU 60 pipeline invert occurs at                                    |
| O-5<br>O-5       | 45, 59, 60<br>45, 59, 60 |               | SA41-20B<br>SA41-25B     | 20<br>25                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                                  |                        | R<br>X                            | R<br>X                                     | X                                  | R                             | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |                                   |   | B,E,L            | GW estimated at ~40 feet bgs.                                       |
| O-5              | 45, 59, 60               |               | SA41-25B                 | 30  | R                          | R                                  | R                                  | R                                       |                        | R                                 | R  | ^                                  | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | B                | 1   |
| O-5              | 45, 59, 60               |               | SA41-38B                 | 38  | X                          | X                                  | Х                                  | X                                       |                        | Х                                 | X  | X                                  |                               | Х                                  |                                  |                                      |                                  | X                                 |                     |                                   |   | B,E,L            |   |
| 0-5              | 45, 59, 60               | 01.11         | SA41-40B                 | 40  | R                          | R                                  | R                                  | R                                       |                        | R                                 | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | A                |   |
| O-5<br>O-5       | 45<br>45                 | SA44          | SA44-0.0B<br>SA44-0.5B   | 0.0   | х                          | х                                  | х                                  | х                                       |                        | x                                 | х  | Х                                  | R                             | Х                                  |                                  |                                      | x                                | X                                 |                     |                                   | X   | E,L              | Boring located to evaluate LOU<br>aboveground storage tank to ev    |
| 0-5<br>0-5       | 45                       |               | SA44-0.3B                | 10  | X                          | X                                  | X                                  | X                                       |                        | X                                 | X  | X X                                | R                             | X                                  |                                  |                                      |                                  | X                                 |                     |                                   |   | E,L              | GW estimated at ~44 feet bgs.                                       |
| O-5              | 45                       |               | SA44-20B                 | 20  | R                          | R                                  | R                                  | R                                       |                        | R                                 | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | В                | , i i i i i i i i i i i i i i i i i i i                             |
| 0-5              | 45                       |               | SA44-25B                 | 25  | X                          | X                                  | X                                  | <u> </u>                                |                        | <u>X</u>                          | X  | X                                  |                               | X                                  |                                  |                                      |                                  | X                                 |                     |                                   |   | B,E,L            |   |
| O-5<br>O-5       | 45<br>45                 | -             | SA44-30B<br>SA44-40B     | 30<br>40                                    | R                          | R                                  | R                                  | R                                       | <u> </u>               | R                                 | R  |                                    | R                             | R                                  |                                  | ·                                    |                                  | R                                 |                     | ·                                 |   | B                | 4   |
| O-5              | 45                       | -             | SA44-42B                 | 42  | X                          | X                                  | X                                  | X                                       |                        | X                                 | X  | X                                  |                               | X                                  |                                  |                                      |                                  | X                                 |                     |                                   |   | B,E,L            | 1   |
| O-5              | 45, 60                   | SA45          | SA45-0.0B                | 0.0   |                            |                                    |                                    |   |                        |                                   |  |                                    |                               |                                    |                                  |                                      |                                  |                                   |                     |                                   | Х   |                  | Boring located to evaluate LOU                                      |
| 0-5              | 45, 60                   | -             | SA45-0.5B                | 0.5   | X                          | X                                  | X                                  | X                                       |                        | X                                 | X  | X                                  | R                             | X                                  |                                  |                                      | X                                | X                                 |                     |                                   |   | E,L              | of a former tank to evaluate pote                                   |
| O-5<br>O-5       | 45, 60<br>45, 60         |               | SA45-10B<br>SA45-20B     | 10 20                                       | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                                  |                        | X<br>R                            | X<br>R                                     | X                                  | R<br>R                        | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | J,E,L<br>B       | location.<br>LOU 60 pipeline invert occurs a                        |
| O-5              | 45, 60                   | -             | SA45-25B                 | 25  | X                          | X                                  | X                                  | X                                       |                        | X                                 | X  | Х                                  |                               | X                                  |                                  |                                      |                                  | X                                 | -                   |                                   |   | B,E,L            | GW estimated at ~38 feet bgs.                                       |
| O-5              | 45, 60                   |               | SA45-30B                 | 30  | R                          | R                                  | R                                  | R                                       |                        | R                                 | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | В                | 1   |
| O-5<br>O-5       | 45, 60<br>45, 60         |               | SA45-36B<br>SA45-40B     | 36<br>40                                    | X<br>R                     | X<br>R                             | R                                  | X<br>R                                  |                        | X<br>R                            | R  | X                                  | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | B,E,L<br>A       | 4   |
| 0-5<br>0-5       | 45,60<br>8,60            | SA106         | SA106-0.0B               | 0.0   | ĸ                          | ĸ                                  | ĸ                                  | ĸ                                       |                        | ĸ                                 | ĸ  |                                    | ĸ                             | ĸ                                  |                                  |                                      |                                  | ĸ                                 |                     |                                   | X   | A                | Boring located to evaluate LOU                                      |
| O-5              | 8, 60                    |               | SA106-0.5B               | 0.5   | Х                          | Х                                  | Х                                  | х                                       | Х                      | Х                                 | Х  | Х                                  | Х                             | Х                                  |                                  |                                      | Х                                | Х                                 | Х                   | Х                                 |   | L,Q,Z            | of pond where historic boring SE                                    |
| 0-5              | 8,60                     | -             | SA106-12B                | 12  | X                          | X                                  | X                                  | X                                       | X                      | X                                 | X  | X                                  | X                             | X                                  |                                  |                                      |                                  | X                                 | Х                   | X                                 |   | J,L,Q            | GW estimated at~37 feet bgs.  |
| O-5<br>O-5       | 8, 60<br>8, 60           | -             | SA106-20B<br>SA106-35B   | 20<br>35                                    | X                          | X                                  | X                                  | X                                       | X                      | X                                 | X  | X                                  | Hold<br>X                     | X                                  |                                  |                                      |                                  | X                                 | X                   | X                                 |   | B,L,Q<br>B,L,Q,Z | LOU 60 pipeline invert occurs at                                    |
| 0-5              | 8,60                     | SA50          | SA50-0.0B                | 0.0   | X                          | X                                  | ~                                  | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | Λ                      | ~                                 | X  | X                                  | ~                             | ~                                  |                                  |                                      |                                  | ~                                 | ~                   | ~~~~                              | Х   | 0,2,0,2          | Boring located as a westward st                                     |
| O-5              | 8, 60                    |               | SA50-0.5B                | 0.5   | X                          | X                                  | X                                  | X                                       | Х                      | Х                                 | X  | Х                                  | R                             | Х                                  |                                  |                                      | Х                                | Х                                 |                     |                                   |   | E,L,W,bb         | site conditions and possible ove                                    |
| O-5<br>O-5       | 8,60<br>8,60             |               | SA50-10B<br>SA50-12B     | 10<br>12                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                                  | X                      | R<br>X                            | R<br>X                                     | X                                  | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | J<br>E,J,L,W     | from LOU 60 (former Acid Drain<br>LOU 60 pipeline invert (bottom of |
| 0-5              | 8,60                     |               | SA50-20B                 | 20  | R                          | R                                  | R                                  | R                                       |                        | R                                 | R  | ~                                  | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | B                | GW estimated at ~38 feet bgs.                                       |
| O-5              | 8, 60                    |               | SA50-25B                 | 25  | Х                          | Х                                  | Х                                  | Х                                       | Х                      | Х                                 | Х  | Х                                  |                               | Х                                  |                                  |                                      |                                  | Х                                 |                     |                                   |   | B,E,L,W          |   |
| O-5<br>O-5       | 8,60<br>8,60             |               | SA50-30B<br>SA50-36B     | 30<br>36                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                                  | x                      | R<br>X                            | R<br>X                                     | ······                             | R                             | R                                  |                                  |                                      |                                  | R<br>X                            |                     |                                   |   | B,E,L,W,bb       | -   |
| 0-5<br>0-5       | 7, 8, 9                  | SA53          | SA50-36B<br>SA53-0.0B    | 0.0   | ^                          | ^                                  | ^                                  | ^                                       | ^                      | ^                                 | ^  | Х                                  |                               | ^                                  |                                  |                                      |                                  | ^                                 |                     |                                   | X   | D,E,L,VV,DD      | Boring located to evaluate LOU                                      |
| O-5              | 7, 8, 9                  |               | SA53-0.5B                | 0.5   | X                          | X                                  | Х                                  | Х                                       | Х                      | Х                                 | Х  | X                                  | R                             | Х                                  |                                  |                                      | Х                                | Х                                 |                     |                                   |   | E,L,W            | Facilities), and LOU 9 (New P-2                                     |
| 0-5              | 7, 8, 9                  |               | SA53-10B                 | 10  | X                          | X                                  | X                                  | X                                       | Х                      | X                                 | X  | X                                  | R                             | X                                  |                                  |                                      |                                  | X                                 |                     |                                   |   | E,L,W            | evaluate potential overflow surfa                                   |
| O-5<br>O-5       | 7, 8, 9<br>7, 8, 9       | -             | SA53-20B<br>SA53-25B     | 20<br>25                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                                  | X                      | R<br>X                            | R<br>X                                     | X                                  | R                             | R                                  |                                  |                                      |                                  | R<br>X                            |                     |                                   |   | B,E,L,W          | GW estimated at ~34 feet bgs.                                       |
| 0-5              | 7, 8, 9                  |               | SA53-30B                 | 30  | R                          | R                                  | R                                  | R                                       | ~                      | R                                 | R  | ·····                              | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | В                |   |
| O-5              | 7, 8, 9                  |               | SA53-32B                 | 32  | X                          | Х                                  | Х                                  | Х                                       | X                      | Х                                 | Х  | X                                  |                               | Х                                  |                                  |                                      |                                  | Х                                 |                     |                                   |   | B,E,L,W          |   |
| O-5<br>O-5       | 7                        | SA102         | SA102-0.0B<br>SA102-0.5B | 0.0   | ×                          | x                                  | x                                  | X                                       | X                      | x                                 | X  | X                                  | R                             | x                                  |                                  |                                      |                                  |                                   |                     |                                   | X   | E,L,W            | Boring located to evaluate LOU<br>Located at a lowspot in bottom    |
| 0-5<br>0-5       | 7                        | -             | SA102-0.5B<br>SA102-10B  | 10  | X                          | X                                  | X                                  | X                                       | X                      | X                                 | X  | X                                  | R                             | X                                  |                                  |                                      | ^                                | X                                 |                     |                                   |   | E,L,W            | GW estimated at ~32 feet bgs.                                       |
| O-5              | 7                        |               | SA102-20B                | 20  | Ŕ                          | R                                  | R                                  |   |                        | R                                 | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | В                | go.   |
| O-5<br>O-5       | 7                        | 64400         | SA102-30B                | 30  | Х                          | Х                                  | Х                                  | Х                                       | Х                      | Х                                 | Х  | Х                                  |                               | Х                                  |                                  |                                      |                                  | Х                                 |                     |                                   | ~   | B,E,L,W          | Boring located to evaluate LOU                                      |
| O-5<br>O-5       | 7                        | SA109         | SA109-0.0B<br>SA109-0.5B | 0.0   | х                          | X                                  | x                                  | x                                       | x                      | x                                 | x  | Х                                  |                               | X                                  |                                  |                                      | x                                | x                                 |                     |                                   | Х   | G,Q<br>Q,W       | Boring located to evaluate LOU<br>sidewall where soil staining was  |
| O-5              | 7                        | -             | SA109-10B                | 10  | X                          | X                                  | X                                  | X                                       | X                      | X                                 | X  | X                                  |                               | X                                  |                                  |                                      | ·····                            | X                                 |                     |                                   |   | Q,W<br>Q,W       | GW estimated at ~36 feet bgs.                                       |
| O-5              | 7                        | _             | SA109-25B                | 25  | Х                          | Х                                  | Х                                  | Х                                       | Х                      | Х                                 | Х  | Х                                  |                               | Х                                  |                                  |                                      |                                  | Х                                 |                     |                                   |   | B,Q,W            | -   |
| O-5<br>O-5       | 7 7                      | SA114         | SA109-34B<br>SA114-0.0B  | 34<br>0.0                                   | Х                          | Х                                  | Х                                  | Х                                       | Х                      | Х                                 | Х  | X                                  |                               | Х                                  |                                  |                                      |                                  | Х                                 |                     |                                   | X   | B,Q,W<br>G,Q     | Boring located to evaluate LOU                                      |
| 0-5<br>0-5       | 7                        | - 0/114       | SA114-0.0B               | 0.0   | Х                          | Х                                  | X                                  | Х                                       | Х                      | х                                 | Х  | x                                  |                               | X                                  |                                  |                                      | x                                | X                                 |                     |                                   | ^   | Q,W              | where white encrustations were                                      |
| O-5              | 7                        |               | SA114-10B                | 10  | Х                          | Х                                  | Х                                  | Х                                       | Х                      | Х                                 | Х  | Х                                  |                               | Х                                  |                                  |                                      |                                  | Х                                 |                     |                                   |   | B,Q,W            | GW estimated at ~32 feet bgs.                                       |
| O-5              | 7                        | 0.4.1-5       | SA114-30B                | 30  | Х                          | Х                                  | Х                                  | Х                                       | Х                      | Х                                 | Х  | Х                                  |                               | Х                                  |                                  |                                      |                                  | Х                                 |                     |                                   |   | B,Q,W            |   |
| O-5<br>O-5       | 45<br>45                 | SA153         | SA153-0.0B<br>SA153-0.5B | 0.0   | х                          | x                                  | x                                  | x                                       |                        | x                                 | x  | Х                                  | R                             | x                                  |                                  |                                      | x                                | x                                 |                     |                                   | X   | E,L              | Boring located to evaluate LOU<br>tank to evaluate subsurface rele  |
| O-5              | 45                       | -             | SA153-0.5B               | 10  | X                          | X                                  | X                                  | X                                       |                        | X                                 | X  | X                                  | R                             | X                                  |                                  |                                      | ^                                | X                                 |                     |                                   | 1   | E,L              | GW estimated at ~40 feet bgs.                                       |
| O-5              | 45                       |               | SA153-20B                | 20  | R                          | R                                  | R                                  | R                                       |                        | R                                 | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | В                |   |
| O-5<br>O-5       | 45<br>45                 |               | SA153-25B<br>SA153-30B   | 25<br>30                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                                  |                        | X<br>R                            | X<br>R                                     | X                                  | R                             | R                                  |                                  |                                      |                                  | X<br>R                            |                     |                                   |   | B,E,L<br>B       | 4   |
| 0-5              | 45                       | -             | SA153-30B<br>SA153-38B   | 30  | X                          | X                                  | X                                  | X                                       |                        | X                                 | X  | X                                  | ĸ                             | X                                  |                                  |                                      |                                  | X                                 |                     |                                   | -   | B,E,L            |   |
|                  | 10                       |               | 0000000                  | 50  | ~                          | ~                                  |                                    | · ^                                     |                        | ~                                 | ~  | ~                                  |                               |                                    |                                  |                                      | 1                                | ~                                 |                     |                                   |   |                  | J   |

Soil Sampling and Analytical Plan for Area II Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 5 of 10

| Location Description and Characterized Area Rationale<br>NDEP may not agree with upgradient and downgradient descriptions)   |
|--|
|  |
| neral site wide subsurface soil conditions and not associated with a specific LOU.   |
|  |
| IU 45 (Diesel Storage Tanks), LOU 59 (Storm Sewer System), and LOU 60 Acid Drain<br>meter of the former aboveground storage tank to evaluate potential releases (see text<br>en LOUs 59 and 60 to evaluate possible piping releases. |
| at approximately 11 feet bgs.  |
|  |
| IU 45 (Diesel Storage Tanks), System). Located on the perimeter of the former<br>evaluate potential releases (see text for historic details).  |
| S.   |
| PU 45 (Diesel Storage Tanks) and LOU 60 (Acid Drain System). Located within the footprint  |
| otential subsurface releases and near LOU 60 manhole which is a high risk release  |
| at approximately 9 feet bgs.<br>5.   |
|  |
| U 8 (Old P-3 Pond and Associated Conveyance Facilities) to further evaluate north edge SB2-8 was drilled & sampled. New boring added per NDEP July 21, 2008).  |
| step out to LOU 8 (Old P-3 Pond and Associated Conveyance Facilities). For general<br>verflow release of surface runoff. Boring will also serve to evaluate for potential impacts<br>ain System).                                    |
| n of pipeline) occurs at approx 11 feet bgs.<br>5.   |
|  |
| U 7 (Old P-2 Pond and Associated Conveyance Pond and Associated Conveyance<br>-2 Pond and Associated Piping). Located downslope between all three LOUs to<br>Inface runoff releases.   |
| 5.   |
| U 7 (Old P-2 Pond and Associated Conveyance Facilities) and LOU 8 (Old P-3 Facilities).<br>n of LOU 7 for worst case evaluation.   |
|  |
| U 7 (Old P-2 Pond and Associated Conveyance Facilities) in area near western<br>as noted in 1991 observations. New boring added per NDEP (July 21, 2008).<br>S.  |
| U 7 (Old P-2 Pond and Associated Conveyance Facilities) to evaluate pond floor area<br>re noted in 1991 observations. New boring added per NDEP (July 21, 2008).   |
| U 45 (Diesel Storage Tanks). Located beneath the footprint of a aboveground storage<br>eleases (See LOU 45 summary for historical data).   |
|  |
|  |

|                  |                  |               | Lab                      | oratory K. :                                | CAS -                      | - Kelso                            |                                    |                                |                                       | с        | AS - Roches                                | ter                                |                               |                                    |                                  | CAS - H                              | ouston                           | GEL -<br>Charleston,<br>SC        | STL-<br>Denver      | Alpha<br>Analytical                           | EMSL Westmont,<br>NJ                        | Rationale       | ray   |
|------------------|------------------|---------------|--------------------------|---|----------------------------|------------------------------------|------------------------------------|--------------------------------|---------------------------------------|----------|--|------------------------------------|-------------------------------|------------------------------------|----------------------------------|--------------------------------------|----------------------------------|-----------------------------------|---------------------|---|---|-----------------|---|
| Grid<br>Location | LOU Number       | Boring<br>No. | Sample ID<br>Number      | Sample<br>Depths <sup>1.</sup><br>(ft. bgs) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>3.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO (EPA 8015B) (EF               |          | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total Cyanide<br>L.<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA<br>1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup> | Sparks, NV<br>Organic<br>Acids <sup>12.</sup> | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | for<br>Revision | Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions)   |
|                  |                  |               |                          |   |                            |                                    |                                    | Borings a                      | are organized                         | by grid  | location as                                | shown on Plat                      | e A - Start                   | ing point i                        | s on the n                       | orthwester                           | rn most g                        | rid in Area                       | a II (M-2) a        | ind ending w                                  | ith the southeas                            | tern most grid  | in Area II (S-7).   |
| O-5              | 45               | SA172         | SA172-0.0B               | 0.0   |                            |                                    |                                    |                                |                                       |          |  |                                    | -                             |                                    |                                  |                                      |                                  |                                   |                     |   | Х   | _               | Boring located to evaluate LOU 45 (Diesel Storage Tanks) potential releases.  |
| 0-5              | 45               | -             | SA172-0.5B               | 0.5   | X                          | X                                  | X                                  | X                              | ll                                    | <u>X</u> | <u> </u>                                   | X                                  | R                             | <u>X</u>                           |                                  |                                      | X                                | X                                 |                     |   |   | E,L             | Located beneath the footprint of a aboveground storage tank to evaluate subsurface releases (See LOU 45   |
| O-5<br>O-5       | 45<br>45, 59     | -             | SA172-10B<br>SA172-20B   | 10<br>20                                    | X                          | R                                  | R                                  | X<br>R                         |                                       | X        | R  | X                                  | R                             | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |   |   | E,L<br>B        | summary for historical data).<br>GW estimated at ~41 feet bgs.  |
| O-5              | 45               | -             | SA172-25B                | 25  | x                          | X                                  | X                                  | X                              |                                       | X        | X  | X                                  |                               | X                                  |                                  |                                      |                                  | X                                 |                     |   |   | B,E,L           |   |
| O-5              | 45, 59           | -             | SA172-30B                | 30  | R                          | R                                  | R                                  | R                              |                                       | R        | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | В               |   |
| 0-5              | 45, 59           |               | SA172-35B                | 35  | R<br>X                     | R                                  | R                                  | R                              |                                       | R        | R  | ······                             | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | B               |   |
| O-5<br>O-5       | 45<br>45         | RSA05         | SA172-39B<br>RSA05-0.0B  | 39<br>0.0                                   | ~                          | Х                                  | Х                                  | Х                              |                                       | Х        | Х  | Х                                  |                               | Х                                  |                                  |                                      |                                  | Х                                 |                     |   | X   | B,E,L           | Boring located to evaluate LOU 45 (Diesel Storage Tanks). Randomly located within LOU 45 to evaluate possible   |
| 0-5              | 45               |               | RSA05-0.5B               | 0.5   | X                          | X                                  | Х                                  | х                              |                                       | Х        | X  | Х                                  | Х                             | Х                                  |                                  |                                      | Х                                | Х                                 |                     |   |   | E,L             | surface runoff releases and to evaluate site wide conditions.   |
| O-5              | 45               | -             | RSAO5-10B                | 10  | X                          | X                                  | Х                                  | Х                              |                                       | Х        | Х  | Х                                  | Hold                          | Х                                  |                                  |                                      |                                  | Х                                 |                     |   |   | E,L             | GW estimated at ~43 feet bgs.   |
| O-5<br>O-5       | 45<br>45         | -             | RSAO5-20B<br>RSAO5-25B   | 20  | R                          | R<br>X                             | R<br>X                             | R                              |                                       | R        | R<br>X                                     | X                                  | R<br>Hold                     | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |   |   | B,E,L           |   |
| 0-5              | 45               | -             | RSA05-25B<br>RSA05-30B   | 25<br>30                                    | R                          | R                                  | R                                  | R                              | · · · · · · · · · · · · · · · · · · · | X        | R  | ···· ^                             | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | D,E,L<br>B      |   |
| O-5              | 45               | -             | RSAO5-35B                | 35  | R                          | R                                  | R                                  | R                              |                                       | R        | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | В               |   |
| O-5              | 45               |               | RSAO5-41B                | 41  | Х                          | Х                                  | Х                                  | Х                              |                                       | Х        | Х  | Х                                  | Х                             | Х                                  |                                  |                                      |                                  | Х                                 |                     |   |   | B,E,L           |   |
| 0-5              | 45               | SA185         | SA185-0.0B               | 0.0   | v                          | x                                  | v                                  | ~                              |                                       | Х        | x  | X                                  | P                             | x                                  |                                  |                                      | x                                | x                                 |                     |   | Х   | E.L             | Boring located to evaluate LOU 45 (Diesel Storage Tanks), System). Located on the perimeter of the former   |
| 0-5<br>0-5       | 45<br>45         | -             | SA185-0.5B<br>SA185-10B  | 0.5   | X X                        | X                                  | X                                  | X                              | · · · · ·                             | X X      | X<br>                                      | X X                                | R                             | X                                  |                                  |                                      | ^                                | X X                               |                     |   |   | E,L<br>E,L      | aboveground storage tank to evaluate potential releases (see text for historic details).<br>GW estimated at ~43 feet bgs.   |
| O-5              | 45               |               | SA185-20B                | 20  | R                          | R                                  | R                                  | R                              |                                       | R        | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | В               |   |
| O-5              | 45               | -             | SA185-25B                | 25  | X                          | X                                  | X                                  | Х                              |                                       | X        | X  | X                                  |                               | X                                  |                                  |                                      |                                  | X                                 |                     |   |   | B,E,L           |   |
| 0-5              | 45               | -             | SA185-30B                | 30  | R                          | R                                  | R                                  | R                              | ····                                  | R        | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | B               |   |
| O-5<br>O-5       | 45<br>45         |               | SA185-35B<br>SA185-41B   | 35<br>41                                    | к<br>Х                     | X                                  | X                                  | к<br>Х                         |                                       | X        | X  | X                                  | ĸ                             | X                                  |                                  |                                      |                                  | X                                 |                     |   |   | B,E,L           |   |
| 0-5              | 45               | SA186         | SA186-0.0B               | 0.0   | X                          | ~                                  | ~                                  | ~                              |                                       | ~        | ~  | ~                                  |                               | ~                                  |                                  |                                      |                                  | ~                                 |                     |   | Х   | _,_,_           | Boring located to evaluate LOU 45 (Diesel Storage Tanks), System). Located on the perimeter of the former   |
| O-5              | 45               | -             | SA186-0.5B               | 0.5   | Х                          | Х                                  | Х                                  | Х                              |                                       | Х        | Х  | Х                                  | R                             | Х                                  |                                  |                                      | Х                                | Х                                 |                     |   |   | E,L             | aboveground storage tank to evaluate potential releases (see text for historic details).  |
| 0-5              | 45               | -             | SA186-10B                | 10  | X                          | X                                  | X                                  | X                              |                                       | X        | <u> </u>                                   | X                                  | R                             | X                                  |                                  |                                      |                                  | X<br>R                            |                     |   |   | E,L             | GW estimated at ~39 feet bgs.   |
| O-5<br>O-5       | 45<br>45         | -             | SA186-20B<br>SA186-25B   | 20<br>25                                    | X                          | R<br>X                             | R                                  | к<br>Х                         |                                       | R<br>X   | R<br>X                                     | X                                  | R                             | K<br>X                             |                                  |                                      |                                  | X                                 |                     |   |   | B<br>B,E,L      |   |
| O-5              | 45               | -             | SA186-30B                | 30  | R                          | R                                  | R                                  | R                              |                                       | R        | R  | ~                                  | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | B               |   |
| O-5              | 45               | -             | SA186-35B                | 35  | R                          | R                                  | R                                  | R                              |                                       | R        | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | В               |   |
| 0-5              | 45               | 0.1.107       | SA186-37B                | 37  | Х                          | Х                                  | Х                                  | Х                              |                                       | Х        | Х  | Х                                  |                               | Х                                  |                                  |                                      |                                  | Х                                 |                     |   | X   | B,E,L           |   |
| O-5<br>O-5       | 45, 59<br>45, 59 | SA187         | SA187-0.0B<br>SA187-0.5B | 0.0   | x                          | x                                  | x                                  | ×                              |                                       | Х        | X  | X                                  | P                             | x                                  |                                  |                                      | X                                | x                                 |                     |   | Х   | E,L             | Boring located to evaluate LOU 45 (Diesel Storage Tanks) and LOU 59 (Storm Sewer System). Located on the<br>perimeter of the former aboveground storage tank area to evaluate potential releases (see text for historic details). |
| 0-5              | 45, 59           | -             | SA187-10B                | 10  | X                          | X                                  | X                                  | X                              |                                       | X        | X  | X                                  | R                             | X                                  |                                  |                                      |                                  | X                                 |                     |   |   | E,L             | GW estimated at ~41 feet bgs.   |
| O-5              | 45, 59           |               | SA187-20B                | 20  | R                          | R                                  | R                                  | R                              |                                       | R        | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | В               |   |
| 0-5              | 45, 59           | -             | SA187-25B<br>SA187-30B   | 25  | X                          | R                                  | X                                  | <u> </u>                       |                                       | X        | <u> </u>                                   | X                                  |                               | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | B,E,L           |   |
| O-5<br>O-5       | 45, 59<br>45, 59 |               | SA187-30B                | 30<br>35                                    | R                          | R                                  | R                                  | R                              |                                       | R        | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | B               |   |
| O-5              | 45, 59           |               | SA187-39B                | 39  | X                          | X                                  | X                                  | X                              | · · · · · · · · · · · · · · · · · · · | X        | X  | X                                  |                               | X                                  |                                  |                                      |                                  | X                                 |                     |   |   | B,E,L           |   |
| O-5              | 45               | SA188         | SA188-0.0B               | 0.0   |                            |                                    |                                    |                                |                                       |          |  |                                    | -                             |                                    |                                  |                                      |                                  |                                   |                     |   | Х   |                 | Boring located to evaluate LOU 45 (Diesel Storage Tanks) and LOU 59 (Storm Sewer System), and LOU 60 (Acid Drain  |
| O-5<br>O-5       | 45<br>45         | -             | SA188-0.5B<br>SA188-10B  | 0.5   | X                          | X                                  | X                                  | X                              |                                       | X        | × ×  | X                                  | R                             | X                                  |                                  |                                      | Х                                | X<br>X                            |                     |   |   | E,L<br>E,J,L    | System). Located beneath the footprint of an aboveground storage tank to evaluate subsurface releases (See LOU 45<br>summary for historical data).  |
| 0-5              | 45, 59, 60       | -             | SA188-20B                | 20  | R                          | R                                  | R                                  | R                              |                                       | R        |  | ^                                  | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | B               | GW estimated at ~39 feet bgs.   |
| O-5              | 45               |               | SA188-25B                | 25  | X                          | X                                  | X                                  | Х                              |                                       | X        | X  | X                                  |                               | X                                  |                                  |                                      |                                  | X                                 |                     |   |   | B,E,L           |   |
| 0-5              | 45, 59, 60       | -             | SA188-30B                | 30  | R                          | R                                  | R                                  | R                              |                                       | R        | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | В               |   |
| O-5<br>O-5       | 45, 59, 60<br>45 | -             | SA188-35B<br>SA188-37B   | 35<br>37                                    | X                          | R                                  | R                                  | R<br>X                         |                                       | R        | R  | ×                                  | ĸ                             | R                                  |                                  |                                      |                                  | R<br>X                            |                     |   |   | B,E,L           |   |
| O-6              | 45               | SA40          | SA40-0.0B                | 0.0   | ~                          |                                    | ~                                  |                                |                                       | X        | ~  | ~                                  |                               | ~                                  |                                  |                                      |                                  | ~                                 |                     |   | Х   | 2,2,2           | Boring located to evaluate LOU 45 (Diesel Storage Tanks), LOU 59 (Storm Sewer System), and LOU 60 Acid Drain  |
| O-6              | 45               | -             | SA40-0.5B                | 0.5   | Х                          | Х                                  | Х                                  | Х                              |                                       | Х        | Х  | Х                                  | R                             | Х                                  |                                  |                                      | Х                                | Х                                 |                     |   |   | E,L             | System). Located on the perimeter of the former aboveground storage tank to evaluate potential releases (see text   |
| 0-6              | 45               | -             | SA40-10B                 | 10  | X                          | X                                  | X                                  | X                              |                                       | X        | X  | X                                  | R                             | X                                  |                                  |                                      |                                  | X                                 |                     |   |   | J               | for historic details) and between LOUs 59 and 60 to evaluate possible piping releases.  |
| O-6<br>O-6       | 45, 59, 60<br>45 | -             | SA40-20B<br>SA40-25B     | 20<br>25                                    | X                          | R<br>X                             | R<br>X                             | X                              |                                       | R<br>X   | R<br>X                                     | ×                                  | ĸ                             | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |   |   | B,E,L           | GW estimated at ~43 feet bgs.   |
| O-6              | 45, 59, 60       | -             | SA40-20B                 | 30  | R                          | R                                  | R                                  | R                              |                                       | R        | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | B               |   |
| O-6              | 45, 59, 60       |               | SA40-40B                 | 40  | R                          | R                                  | R                                  | R                              |                                       | R        | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | В               |   |
| 0-6              | 45               | 84.40         | SA40-41B                 | 41<br>0.0                                   | Х                          | Х                                  | Х                                  | Х                              |                                       | Х        | Х  | Х                                  |                               | Х                                  |                                  |                                      |                                  | X                                 |                     |   | v   | B,E,L           | Boring located to evaluate LOU 45 (Diesel Storage Tanks). Located at a low spot within the footprint of former  |
| O-6<br>O-6       | 45<br>45         | SA42          | SA42-0.0B<br>SA42-0.5B   | 0.0   | X                          | X                                  | X                                  | X                              |                                       | X        | X  | X                                  | R                             | x                                  |                                  |                                      | x                                | х                                 |                     |   | X   | E,L             | boring located to evaluate LOU 45 (Diesel Storage Tanks). Located at a low spot within the tootprint of former<br>aboveground storage tank to evaluate potential releases.  |
| O-6              | 45               | 1             | SA42-10B                 | 10  | X                          | X                                  | X                                  | X                              |                                       | X        | X  | X                                  | R                             | Х                                  |                                  |                                      |                                  | Х                                 |                     |   |   | E,L             | GW estimated at ~40 feet bgs.   |
| O-6              | 45               | -             | SA42-20B                 | 20  | R                          | R                                  | R                                  | R                              |                                       | R        | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | В               |   |
| 0-6              | 45               | -             | SA42-25B<br>SA42-30B     | 25  | X                          | R                                  | R                                  | X<br>R                         |                                       | X<br>R   | R  | X                                  | P                             | X                                  |                                  |                                      |                                  | X<br>R                            |                     |   |   | B,E,L<br>B      |   |
| O-6<br>O-6       | 45<br>45         | -             | SA42-30B<br>SA42-38B     | 30<br>38                                    | X                          | X                                  | X                                  | X                              |                                       | X        | <u>к</u><br>Х                              | X                                  | R.                            | X                                  |                                  |                                      |                                  | X                                 |                     |   |   | В               |   |
| O-6              | 45               |               | SA42-40B                 | 40  | R                          | R                                  | R                                  | R                              |                                       | R        | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | B,E,L           |   |
| 0-6              | 45               | SA43          | SA43-0.0B                | 0.0   |                            |                                    |                                    |                                |                                       |          |  |                                    | -                             |                                    |                                  |                                      |                                  | ~~~~                              |                     |   | Х   |                 | Boring located to evaluate LOU 45 (Diesel Storage Tanks), LOU 59 (Storm Sewer System), and LOU 60 Acid Drain  |
| 0-6<br>0-6       | 45<br>45         | -             | SA43-0.5B<br>SA43-10B    | 0.5   | X X                        | X                                  | X                                  | X                              |                                       | X<br>X   | X X  |                                    | R                             | X<br>X                             |                                  |                                      | X                                | X<br>X                            |                     |   |   | E               | System). Located on the perimeter of the former aboveground storage tank to evaluate potential releases (see text<br>for historic details) and between LOUs 59 and 60 to evaluate possible piping releases.                       |
| 0-6<br>0-6       | 45<br>45         | 1             | SA43-10B<br>SA43-20B     | 20  | R                          | R                                  | R                                  | R                              |                                       | R        | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | B               | GW estimated at ~45 feet bgs.   |
| O-6              | 45               |               | SA43-25B                 | 25  | X                          | X                                  | X                                  | Х                              |                                       | Х        | X  |                                    |                               | Х                                  |                                  |                                      |                                  | Х                                 |                     |   |   | E               |   |
| 0-6              | 45               |               | SA43-30B                 | 30  | R                          | R                                  | R                                  | R                              |                                       | R        | R  |                                    | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | В               |   |
| O-6<br>O-6       | 45<br>45         | -             | SA43-40B<br>SA43-43B     | 40<br>43                                    | X                          | R<br>X                             | R                                  | R<br>X                         |                                       | R<br>X   | R  |                                    | ĸ                             | R<br>X                             |                                  |                                      |                                  | R                                 |                     |   |   | B.E             |   |
| 0-0              | 40               |               | 0,140-400                | 40  | ~                          | ~                                  | ~                                  | ~                              |                                       | ~        | ~  |                                    |                               | ~                                  |                                  |                                      |                                  | ~                                 |                     |   |   | 0,2             | 1   |

|   | Rationale        | EMSL Westmont,<br>NJ                        | Alpha<br>Analytical<br>Sparks, NV | STL-<br>Denver      | GEL -<br>Charleston,<br>SC        | louston                          | CAS - H                              |                                  |                                    |                               | ster                               | CAS - Roches                               |            |                        |                                |                                    | - Kelso                                   | CAS                        | ooratory K.                                 | La                       |               |                          |                  |
|---|------------------|---|-----------------------------------|---------------------|-----------------------------------|----------------------------------|--------------------------------------|----------------------------------|------------------------------------|-------------------------------|------------------------------------|--|------------|------------------------|--------------------------------|------------------------------------|---|----------------------------|---|--------------------------|---------------|--------------------------|------------------|
| (N  | for<br>Revision  | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Organic<br>Acids <sup>12.</sup>   | OPPs <sup>11.</sup> | Radio-<br>nuclides <sup>10.</sup> | Dioxins/<br>Furans <sup>9.</sup> | PCBs <sup>8.</sup><br>(EPA<br>1668A) | PCBs <sup>8.</sup><br>(EPA 8082) | SVOCs <sup>7.</sup><br>(EPA 8270C) | OCPs <sup>6.</sup><br>(8081A) | Total Cyanide<br>L.<br>(EPA 9012A) | Wet<br>Chemistry<br>Analytes <sup>5.</sup> |            | TPH-GRO<br>(EPA 8015B) | TPH-<br>DRO/ORO<br>(EPA 8015B) | Hex Cr <sup>3.</sup><br>(EPA 7199) | <b>Metals</b> <sup>2.</sup><br>(EPA 6020) | Perchlorate<br>(EPA 314.0) | Sample<br>Depths <sup>1.</sup><br>(ft. bgs) | Sample ID<br>Number      | Boring<br>No. | LOU Number               | Grid<br>Location |
|   | stern most grid  | ith the southeas                            | and ending w                      | ea II (M-2)         | grid in Are                       | rn most g                        | orthwester                           | is on the n                      | ting point                         | te A - Sta                    | shown on Pla                       | l location as                              | ed by grid | are organiz            | Borings a                      |                                    | 1   | 1                          | -   |                          | 1             |                          |                  |
| Boring located to evaluate LOU bottom of LOU 14 to evaluate         | E,W              | X   |                                   |                     | x                                 | x                                |                                      |                                  | x                                  | R                             |                                    | x  | x          | X                      | x                              | x                                  | x   | x                          | 0.0   | SA51-0.0B<br>SA51-0.5B   | SA51          | 14<br>14                 | O-6<br>O-6       |
| GW estimated at ~38 feet bgs.                                       | E,W              |   |                                   |                     | Х                                 | ~ ~                              |                                      |                                  | X                                  | R                             |                                    | Х  | Х          | X                      | Х                              | Х                                  | Х   | Х                          | 10  | SA51-10B                 |               | 14                       | O-6              |
|   | B<br>B,E,W       |   |                                   |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                    | R  | R<br>X     | x                      | R<br>X                         | R                                  | R<br>X                                    | R<br>X                     | 20<br>25                                    | SA51-20B<br>SA51-25B     | -             | 14<br>14                 | O-6<br>O-6       |
|   | B,E,W            |   |                                   |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                    | R  | R          | ^                      | R                              | R                                  | R   | R                          | 30  | SA51-25B<br>SA51-30B     |               | 14                       | O-6              |
| Device la cata data availuata LOI                                   | B,E,W            | × ×   |                                   |                     | Х                                 |                                  |                                      |                                  | Х                                  |                               |                                    | Х  | Х          | Х                      | Х                              | Х                                  | Х   | Х                          | 36  | SA51-36B<br>RSAO6-0.0B   | RSAO6         | 14                       | O-6<br>O-6       |
| Boring located to evaluate LOL<br>worst case conditions and site    | W                | X   |                                   |                     | х                                 | х                                |                                      |                                  | Х                                  | х                             |                                    | х  | х          | Х                      | Х                              | х                                  | Х   | х                          | 0.0   | RSA06-0.0B<br>RSA06-0.5B | RSAUG         | 13<br>13                 | 0-6<br>0-6       |
| GW estimated at ~36 feet bgs.                                       | W                |   |                                   |                     | X                                 |                                  |                                      |                                  | X                                  | Hold                          |                                    | X  | X          | Х                      | X                              | X                                  | X   | X                          | 10  | RSAO6-10B                | -             | 13                       | O-6              |
| -   | B,W<br>B         |   |                                   |                     | R                                 |                                  |                                      |                                  | R                                  | Hold<br>R                     |                                    | X<br>R                                     | X<br>R     |                        | X<br>R                         | X<br>R                             | X<br>R                                    | X<br>R                     | 20<br>30                                    | RSAO6-20B<br>RSAO6-30B   |               | 13<br>13                 | O-6<br>O-6       |
| 1   | B,W              |   |                                   |                     | Х                                 |                                  |                                      |                                  | Х                                  | Х                             |                                    | Х  | Х          | Х                      | Х                              | Х                                  | Х   | X                          | 34  | RSAO6-34B                |               | 13                       | O-6              |
| Boring located to evaluate LOL                                      | A                | x   |                                   |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                    | R  | R          |                        | R                              | R                                  | R   | R                          | 35<br>0.0                                   | RSAO6-35B<br>SA200-0.0B  | SA200         | 13<br>9                  | O-6<br>O-6       |
| to evaluate worst case condition                                    | E,W              |   |                                   |                     | Х                                 | Х                                |                                      |                                  | Х                                  | R                             |                                    | Х  | Х          | Х                      | Х                              | Х                                  | Х   | Х                          | 0.5   | SA200-0.5B               |               | 9                        | O-6              |
| GW estimated at ~33 feet bgs.                                       | E,W<br>B,E,W     |   |                                   |                     | X                                 |                                  |                                      |                                  | X                                  | R<br>R                        |                                    | X  | X          | X                      | X                              | X                                  | X   | X                          | 10<br>20                                    | SA200-10B<br>SA200-20B   | -             | 9                        | O-6<br>O-6       |
|   | В                |   |                                   |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                    | R  | R          |                        | R                              | R                                  | R   | R                          | 30  | SA200-30B                |               | 9                        | O-6              |
| Boring located to evaluate LOL                                      | B,E,W            | ×   |                                   |                     | Х                                 |                                  |                                      |                                  | Х                                  |                               |                                    | Х  | Х          | Х                      | Х                              | Х                                  | Х   | Х                          | 31<br>0.0                                   | SA200-31B<br>SA117-0.0B  | 04447         | 9                        | O-6              |
| possible piping releases and for                                    | G,Q<br>L,Q,Z     | X   | X                                 | X                   | X                                 | X                                |                                      |                                  | X                                  | X                             | X                                  | X  | X          |                        | X                              | X                                  | X   | X                          | 0.0   | SA117-0.0B<br>SA117-0.5B | SA117         | 59, 60<br>59, 60         | P-5<br>P-5       |
| LOU 60 pipeline invert occurs a                                     | J,L,Q,Z          |   | Х                                 | Х                   | X                                 |                                  |                                      |                                  | X                                  | Х                             | X                                  | X  | X          |                        | X                              | X                                  | Х   | X                          | 9   | SA117-9B                 | -             | 59,60                    | P-5              |
| -   | B,L,Q<br>B,L,Q,Z |   | Х                                 | X                   | X                                 |                                  |                                      |                                  | X                                  | Hold<br>X                     | X                                  | X  | X          |                        | X<br>X                         | X                                  | X   | X                          | 25<br>41                                    | SA117-25B<br>SA117-41B   |               | 59, 60<br>59, 60         | P-5<br>P-5       |
| Boring located to evaluate LOL                                      |                  | Х   |                                   |                     |                                   |                                  |                                      |                                  |                                    |                               |                                    |  |            |                        |                                |                                    |   |                            | 0.0   | SA124-0.0B               | SA124         | 11                       | Q-5              |
| at a likely runoff location to eva<br>GW estimated at ~44 feet bgs. | E,L<br>E,L       |   |                                   |                     | X                                 | X                                |                                      |                                  | X                                  | R<br>R                        | X                                  | X  | X          |                        |                                | X<br>X                             | X   | X                          | 0.5   | SA124-0.5B<br>SA124-10B  |               | 11<br>11                 | Q-5<br>Q-5       |
| ov commated at the feet bys.  | В                |   |                                   |                     | R                                 |                                  |                                      |                                  | R                                  | R                             | ~ ~                                | R  | R          |                        |                                | R                                  | R   | R                          | 20  | SA124-20B                |               | 11                       | Q-5              |
|   | B,E,L<br>B       |   |                                   |                     | X<br>R                            |                                  |                                      |                                  | X<br>R                             | R                             | Х                                  | X<br>R                                     | X<br>R     |                        |                                | X<br>R                             | X<br>R                                    | X<br>R                     | 25<br>30                                    | SA124-25B<br>SA124-30B   |               | 11<br>11                 | Q-5<br>Q-5       |
|   | B                |   |                                   |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                    | R  | R          |                        |                                | R                                  | R   | R                          | 35  | SA124-30B                | -             | 11                       | Q-5              |
| Boring located to evaluate LOL                                      | B,E,L            | ×   |                                   |                     | Х                                 |                                  |                                      |                                  | Х                                  |                               | Х                                  | Х  | Х          |                        |                                | Х                                  | Х   | Х                          | 42  | SA124-42B<br>RSAQ5-0.0B  | RSAQ5         | 11<br>59                 | Q-5<br>Q-5       |
| possible piping releases and for                                    | L                | X   |                                   |                     | x                                 | X                                |                                      |                                  | X                                  | X                             | X                                  | x  | x          |                        | X                              | X                                  | X   | x                          | 0.0   | RSAQ5-0.0B<br>RSAQ5-0.5B | KSAQS         | 59                       | Q-5<br>Q-5       |
| GW estimated at ~43 feet bgs.                                       | L                |   |                                   |                     | Х                                 |                                  |                                      |                                  | X                                  | X                             | Х                                  | Х  | Х          |                        | X                              | X                                  | X   | X                          | 10  | RSAQ5-10B                |               | 59                       | Q-5              |
|   | B<br>B,L         |   |                                   |                     | R<br>X                            | • • • • • • • • • • •            |                                      |                                  | R<br>X                             | R<br>Hold                     | X                                  | R<br>X                                     | R<br>X     |                        | R<br>X                         | R<br>X                             | R<br>X                                    | R<br>X                     | 20<br>25                                    | RSAQ5-20B<br>RSAQ5-25B   | -             | 59<br>59                 | Q-5<br>Q-5       |
|   | В                |   |                                   |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                    | R  | R          |                        | R                              | R                                  | R   | R                          | 30  | RSAQ5-30B                |               | 59                       | Q-5              |
|   | B.L              |   |                                   |                     | R<br>X                            |                                  |                                      |                                  | R                                  | R<br>X                        | X                                  | R  | R<br>X     |                        | R                              | R                                  | R<br>X                                    | R<br>X                     | 35<br>41                                    | RSAQ5-35B<br>RSAQ5-41B   | -             | 59<br>59                 | Q-5<br>Q-5       |
| Boring located to evaluate LOU                                      |                  | Х   |                                   |                     |                                   |                                  |                                      |                                  |                                    |                               |                                    |  |            |                        |                                |                                    |   |                            | 0.0   | SA125-0.0B               | SA125         | 12, 59, 60               | Q-6              |
| (Acid DrainSystem). Located d<br>piping to evaluate high risk rele  | E,L<br>E,L       |   |                                   |                     | X X                               | X                                |                                      |                                  | X                                  | R<br>R                        | X                                  | X  | X          |                        | X<br>X                         | X                                  | X   | X                          | 0.5   | SA125-0.5B<br>SA125-10B  | -             | 12, 59, 60<br>12, 59, 60 | Q-6<br>Q-6       |
| LOU 60 pipeline invert occurs a                                     | B                |   |                                   |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                    | R  | R          |                        | R                              | R                                  | R   | R                          | 20  | SA125-20B                |               | 12, 59, 60               | R-6              |
| GW estimated at ~41 feet bgs.                                       | B,E,L<br>B       |   |                                   |                     | R                                 |                                  |                                      |                                  | X<br>R                             | R                             | X                                  | R  | X<br>R     |                        | X<br>R                         | R                                  | X<br>R                                    | X<br>R                     | 25<br>30                                    | SA125-25B<br>SA125-30B   | -             | 12, 59, 60               | Q-6<br>R-6       |
|   | B                |   |                                   |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                    | R  | R          |                        | R                              | R                                  | R   | R                          | 35  | SA125-35B                |               | 12, 59, 60               | R-6              |
| Boring located to evaluate LOL                                      | B,E,L            | X   |                                   |                     | Х                                 |                                  |                                      |                                  | Х                                  |                               | Х                                  | Х  | Х          |                        | Х                              | Х                                  | Х   | Х                          | 39<br>0.0                                   | SA125-39B<br>SA126-0.0B  | SA126         | 12, 59, 60<br>15, 60     | Q-6<br>Q-6       |
| possible and downslope of LO  | E,H,L,bb         | ^   |                                   |                     | x                                 | Х                                |                                      |                                  | Х                                  | R                             | Х                                  | Х  | х          |                        | Х                              | X                                  | Х   | Х                          | 0.0   | SA126-0.0B               | 5A120         | 15,60                    | Q-6              |
| evaluate local piping releases.                                     | E,H,L            |   |                                   |                     | X                                 |                                  |                                      |                                  | X                                  | R                             | X                                  | X  | X          |                        | Х                              | X                                  | X   | X                          | 10  | SA126-10B                | -             | 15,60                    | Q-6              |
| LOU 60 pipeline invert occurs a<br>GW estimated at ~42 feet bgs.    | E,H,J,L<br>B     |   |                                   |                     | R                                 |                                  |                                      |                                  | R                                  | R                             | X                                  | R  | X<br>R     |                        | R                              | R                                  | X<br>R                                    | X<br>R                     | 18<br>20                                    | SA126-18B<br>SA126-20B   |               | 15, 60<br>15, 60         | Q-6<br>Q-6       |
| ĺ   | B,E,H,L          |   |                                   |                     | Х                                 |                                  |                                      |                                  | Х                                  |                               | Х                                  | Х  | Х          |                        | Х                              | Х                                  | Х   | Х                          | 25  | SA126-25B                |               | 15, 60                   | Q-6              |
| l.  | B                |   |                                   |                     | R<br>R                            |                                  |                                      |                                  | R                                  | R<br>R                        |                                    | R  | R<br>R     |                        | R                              | R                                  | R<br>R                                    | R<br>R                     | 30<br>35                                    | SA126-30B<br>SA126-35B   | -             | 15, 60<br>15, 60         | Q-6<br>Q-6       |
|   | B,E,H,L,bb       | ***************************************     | ****                              |                     | X                                 |                                  |                                      |                                  | X                                  |                               | Х                                  | X  | X          |                        | X                              | X                                  | X   | X                          | 40  | SA126-40B                |               | 15, 60                   | Q-6              |
| Boring located to evaluate for p<br>GW estimated at ~42 feet bgs.   | Q,W,Z            | Х   | x                                 | X                   | X                                 | X                                |                                      |                                  | x                                  | X                             |                                    | x  | X          |                        | x                              | ×                                  | x   | x                          | 0.0   | SA136-0.0B<br>SA136-0.5B | SA136         | 59<br>59                 | Q-6<br>Q-6       |
| estimated at ~42 reet bgs.  | Q,W,Z<br>Q,W,Z   |   | X                                 | X                   | X                                 | ^^                               |                                      |                                  | X                                  | Х                             |                                    | X  | Х          |                        | X                              | X                                  | X   | X                          | 10  | SA136-0.5B<br>SA136-10B  |               | 59                       | Q-6              |
|   | B,Q,W<br>B,Q,W,Z |   | X                                 | X                   | X<br>X                            |                                  |                                      |                                  | X<br>X                             | Hold<br>X                     |                                    | X<br>X                                     | X<br>X     |                        | X<br>X                         | X<br>X                             | X<br>X                                    | X<br>X                     | 25<br>40                                    | SA136-25B<br>SA136-40B   | -             | 59<br>59                 | Q-6<br>Q-6       |
| Boring located nearby LOU 43  | D,Q,VV,Z         | Х   | X                                 | ~                   | ~                                 |                                  |                                      |                                  | ~                                  | ~                             |                                    | ~  | ~          |                        | X                              | X                                  | X   | X                          | 40<br>0.0                                   | RSAQ6-0.0B               | RSAQ6         | 43, 59, 60               | Q-6<br>Q-6       |
| Sewer System), and LOU 60 (A  | L,bb             |   |                                   |                     | X                                 | X                                |                                      |                                  | X                                  | X                             | X                                  | X  | X          |                        | X                              | X                                  | X   | X                          | 0.5   | RSAQ6-0.5B               | 1             | 43, 59, 60               | Q-6              |
| releases and near LOU 60 pipi<br>LOU 60 pipeline invert occurs      | L<br>B           |   |                                   |                     | X<br>R                            |                                  |                                      |                                  | R                                  | Hold<br>R                     | X                                  | X<br>R                                     | X<br>R     |                        | X<br>R                         | X<br>R                             | X<br>R                                    | X<br>R                     | 10 20                                       | RSAQ6-10B<br>RSAQ6-20B   |               | 43, 59, 60<br>43, 59, 60 | Q-6<br>Q-6       |
| GW estimated at ~40 feet bgs.                                       | B,L              |   |                                   |                     | Х                                 |                                  |                                      |                                  | Х                                  | Hold                          | Х                                  | Х  | Х          |                        | Х                              | Х                                  | X   | Х                          | 25  | RSAQ6-25B                |               | 43, 59, 60               | Q-6              |
|   | B                |   |                                   |                     | R                                 |                                  |                                      |                                  | R<br>R                             | R<br>R                        |                                    | R<br>R                                     | R<br>R     |                        | R<br>R                         | R<br>R                             | R<br>R                                    | R<br>R                     | 30<br>35                                    | RSAQ6-30B<br>RSAQ6-35B   |               | 43, 59, 60<br>43, 59, 60 | Q-6<br>Q-6       |
| 1   | U                |   |                                   |                     | IX.                               |                                  |                                      |                                  | IX.                                |                               | I                                  | IX IX                                      | IX.        |                        |                                |                                    | I. I.                                     | IN IN                      |   | 10/100-00D               | 1             | 40, 00, 00               |                  |

Soil Sampling and Analytical Plan for Area II Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 7 of 10

| Location Description and Characterized Area Rationale<br>IDEP may not agree with upgradient and downgradient descriptions)  |
|---|
|   |
| U 14 (Pond P-1 and Associated Conveyance Piping). Located in a low spot in the<br>worst case conditions.  |
|   |
| U 13 (Pond S-1). Random boring in a lowspot in the bottom of LOU 13 to evaluate<br>wide conditions.   |
|   |
| U 9 (New P-2 Pond and Associated Piping). Located in a lowspot in the bottom of LOU 9<br>ons.   |
|   |
|   |
| U 59 (Storm Sewer System). Random boring located near LOU 59 piping to evaluate<br>or site wide conditions. New boring added per NDEP (July 21, 2008).<br>approximately 8 feet bgs. GW estimated at ~43 feet bgs. |
| U 11 (Sodium Chlorate Filter Cake Holding Area). Located adjacent to LOU 11 pad<br>aluate possible release runoff. Phase A boring SA05 located north (downslope) of LOU 11.                                       |
|   |
| U 59 (Storm Sewer System). Random boring located near LOU 59 piping to evaluate<br>or site wide conditions.   |
|   |
| U 12 (Hazardous Waste Storage Area), LOU 59 (Storm Sewer System), and LOU 60<br>downslope of LOU 12 to evaluate surface runoff releases and adjacent to LOU 59 and 60<br>ease locations (Manhole).                |
| at approximately 9 feet bgs.  |
|   |
| U 15 (Platinum Drying Unit) and LOU 60 (Acid Drain System). Located as close as<br>U 15 to evaluate potential surface runoff releases and adjacent to LOU 60 piping to  |
| at approximately 17 feet bgs.   |
|   |
| potential impacts associated with LOU 59 (Storm Sewer System) pipeline segment/junction.<br>. New boring added per NDEP (July 21, 2008).  |
| 3 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning), LOU 59 Storm<br>(Acid Drain System). Located downslope of OU 43 to evaluate potential subsurface<br>ing to evaluate local piping releases.     |
| at approximately 19 feet bgs.   |

|                  |                          |               | Lat                      | boratory K. :                               | CAS -                      | - Kelso                            |                                    |                                |                           | c             | AS - Rochest                               | ter  |                               |                                    |   | CAS - H                              | ouston                           | GEL -<br>Charleston,<br>SC        | STL-<br>Denver      | Alpha<br>Analytical<br>Sparks, NV | EMSL Westmont,<br>NJ                        | Rationale  |  |
|------------------|--------------------------|---------------|--------------------------|---|----------------------------|------------------------------------|------------------------------------|--------------------------------|---------------------------|---------------|--|--|-------------------------------|------------------------------------|---|--------------------------------------|----------------------------------|-----------------------------------|---------------------|-----------------------------------|---|--|--|
| Grid<br>Location | LOU Number               | Boring<br>No. | Sample ID<br>Number      | Sample<br>Depths <sup>1.</sup><br>(ft. bgs) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>3.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B) (( |               | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total Cyanide<br><sup>ل</sup><br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>8.</sup><br>(EPA 8082)        | PCBs <sup>8.</sup><br>(EPA<br>1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup> | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | for<br>Revision  | Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions)  |
|                  |                          |               |                          |   |                            |                                    |                                    | Borings a                      | are organized             | d by grid     | location as                                | shown on Pla                                 | te A - Star                   | ting point i                       | s on the no                             | orthwester                           | rn most gr                       | id in Area                        | a II (M-2) a        | ind ending wi                     | th the southeas                             | al hospital set his second let his contact his histories has | d in Area II (S-7).  |
| Q-6<br>R-5       | 43, 59, 60               | SA133         | RSAQ6-38B<br>SA133-0.0B  | 38<br>0.0                                   | Х                          | Х                                  | Х                                  | Х                              |                           | Х             | Х  | Х  | Х                             | Х                                  |   |                                      |                                  | Х                                 |                     |                                   | Х   | B,L,bb   | Boring located to evaluate LOU 36 (Former Satellite Accumulation Point, Unit 3, Maintenance Shop). Located in  |
| R-5              | 36<br>36                 | 3A133         | SA133-0.5B               | 0.5   | X                          | X                                  | X                                  | X                              |                           | X             | X  | X  | R                             |                                    | X                                       |                                      | X                                | X                                 |                     |                                   | ^   | E,L,P,U  | damaged pavement area within LOU 36 to evaluate worst case location of surface releases.   |
| R-5              | 36                       |               | SA133-10B                | 10  | X                          | Х                                  | Х                                  | Х                              |                           | Х             | Х  | X  | R                             |                                    |   |                                      |                                  | Х                                 |                     |                                   |   | E,L,U  | GW estimated at ~33 feet bgs.  |
| R-5              | 36                       |               | SA133-20B                | 20  | <u> </u>                   | X                                  | X                                  | X                              |                           | X             | X  | X  | R<br>R                        |                                    |   |                                      |                                  | X                                 |                     |                                   |   | B,E,L,U  | Borehole for SA133 will be converted into monitoring well M-146.   |
| R-5<br>R-5       | 36<br>36                 |               | SA133-30B<br>SA133-31B   | 30<br>31                                    | X                          | R<br>X                             | R                                  | R<br>X                         |                           | <u>к</u><br>х | R<br>X                                     | X  | ĸ                             |                                    | x                                       |                                      |                                  | R<br>X                            |                     |                                   |   | B,E,L,P,U  | -  |
| R-5              | 36                       |               | SA133-35B                | 35  | R                          | R                                  | R                                  | R                              |                           | R             | R  |  | R                             |                                    |   |                                      |                                  | R                                 |                     |                                   |   | A  |  |
| R-6              | 59, 60                   | SA30          | SA30-0.0B                | 0.0   |                            |                                    |                                    |                                |                           |               |  |  | _                             |                                    |   |                                      |                                  |                                   |                     |                                   | Х   |  | Boring located to evaluate LOU 59 (Storm Sewer System) and LOU 60 (Acid 'Drain System). Located near LOU 59  |
| R-6<br>R-6       | 59, 60<br>59, 60         |               | SA30-0.5B<br>SA30-9B     | 0.5   | X                          | X                                  | X                                  | X                              |                           | X             | X<br>X                                     | X<br>X                                       | R                             | X                                  |   |                                      | X                                | X                                 |                     |                                   |   | E,L<br>E,L   | and 60 piping to evaluate possible local piping releases and for general site coverage in Unit Buildings area.<br>LOU 60 pipeline invert occurs at approximately 8 feet bgs.   |
| R-6              | 59,60                    |               | SA30-10B                 | 10  | R                          | R                                  | R                                  | R                              |                           | R             | R  | ~  | R                             | R                                  |   |                                      |                                  | R                                 |                     |                                   |   | B  | GW estimated at ~40 feet bgs.  |
| R-6              | 59, 60                   |               | SA30-20B                 | 20  | R                          | R                                  | R                                  | R                              |                           | R             | R  |  | R                             | R                                  |   |                                      |                                  | R                                 |                     |                                   |   | В  |  |
| R-6              | 59,60                    |               | SA30-25B                 | 25  | X                          | X                                  | X                                  | X                              |                           | R             | X  | X  | P                             | X                                  |   |                                      |                                  | X                                 |                     |                                   |   | B,E,L  |  |
| R-6<br>R-6       | 59, 60<br>59, 60         | -             | SA30-30B<br>SA30-35B     | 30<br>35                                    | R                          | R                                  | R                                  | R                              |                           | R             | R  |  | R                             | R                                  |   |                                      |                                  | R                                 |                     |                                   |   | B  | -  |
| R-6              | 59,60                    |               | SA30-38B                 | 38  | X                          | X                                  | X                                  | X                              |                           | X             | X  | Х  |                               | X                                  |   | <u> </u>                             |                                  | X                                 |                     |                                   |   | B,E,L  |  |
| R-6              | 43                       | SA31          | SA31-0.0B                | 0.0   |                            |                                    |                                    |                                |                           |               |  |  |                               |                                    |   |                                      |                                  |                                   |                     |                                   | X   |  | Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning). Located   |
| R-6<br>R-6       | 43<br>43                 | -             | SA31-0.5B<br>SA31-10B    | 0.5   | X<br>X                     | X                                  | X                                  |                                | -                         | X X           | X  |  | R                             | X                                  |   |                                      | X                                | X                                 |                     |                                   |   | E,P,V<br>E,V   | upslope as a stepout for LOU 43 and co-located with SG43 to compare VOC results, and for general site coverage.<br>GW estimated at ~34 feet bgs.   |
| R-6              | 43                       |               | SA31-10B<br>SA31-20B     | 20  | x                          | X                                  | X                                  |                                |                           | X             | X  |  | R                             | X                                  |   |                                      |                                  | x                                 |                     |                                   |   | B,E,V  | Gwy estimated at ~54 reet bys.   |
| R-6              | 43                       |               | SA31-30B                 | 30  | R                          | R                                  | R                                  |                                |                           | R             | R  |  | R                             |                                    |   |                                      |                                  | R                                 |                     |                                   |   | V  |  |
| R-6              | 43                       |               | SA31-32B                 | 32  | X                          | X                                  | X                                  |                                |                           | <u>X</u>      | <u>X</u>                                   |  |                               | X                                  |   |                                      |                                  | X                                 |                     |                                   |   | B,E,P,V  | ~  |
| R-6<br>R-6       | 43<br>43, 60             | SA32          | SA31-35B<br>SA32-0.0B    | 35<br>0.0                                   | R                          | R                                  | R                                  |                                |                           | R             | R  |  | R                             |                                    |   |                                      |                                  | R                                 |                     |                                   | Х   | A  | Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning), and LOU 60  |
| R-6              | 43,60                    | 3432          | SA32-0.0B<br>SA32-0.5B   | 0.5   | X                          | ×                                  | X                                  | X                              |                           | X             | X  | X  | R                             | X                                  |   |                                      | X                                | X                                 |                     |                                   | ·····^                                      | E,L,V  | (Acid DrainSystem). Located within the footprint of LOU 43 as a worst case location and also located near LOU 60   |
| R-6              | 43, 60                   |               | SA32-9B                  | 9   | X                          | Х                                  | Х                                  | Х                              |                           | Х             | Х  | X  | R                             | X                                  |   |                                      |                                  | Х                                 |                     |                                   |   | E,J,L,V  | piping to evaluate local piping releases near a manhole.   |
| R-6              | 43, 60                   |               | SA32-10B                 | 10  | R                          | R                                  | R                                  | R                              |                           | R             | R  |  | R                             |                                    |   |                                      |                                  | R                                 |                     |                                   |   | В  | LOU 60 pipeline invert occurs at approximately 8 feet bgs.   |
| R-6<br>R-6       | 43, 60<br>43, 60         |               | SA32-20B<br>SA32-25B     | 20<br>25                                    | R<br>V                     | к<br>Х                             | R<br>X                             | R<br>Y                         |                           | к<br>Х        | X  | Х  | R                             | X                                  |   |                                      |                                  | R<br>X                            |                     |                                   |   | B<br>B,E,L,V   | GW estimated at ~39 feet bgs.  |
| R-6              | 43,60                    |               | SA32-30B                 | 30  | R                          | R                                  | R                                  | R                              |                           | R             | R  | ~  | R                             | ^                                  |   |                                      |                                  | R                                 |                     |                                   |   | B, 2, 2, V   |  |
| R-6              | 43, 60                   |               | SA32-35B                 | 35  | R                          | R                                  | R                                  | R                              |                           | R             | R  |  | R                             |                                    |   |                                      |                                  | R                                 |                     |                                   |   | В  |  |
| R-6              | 43, 60                   | 0.4464        | SA32-37B                 | 37  | Х                          | Х                                  | Х                                  | Х                              |                           | Х             | Х  | Х  |                               | Х                                  |   |                                      |                                  | Х                                 |                     |                                   | Y   | B,E,L,V  |  |
| R-6<br>R-6       | 43<br>43                 | SA161         | SA161-0.0B<br>SA161-0.5B | 0.0   | X                          | X                                  | X                                  |                                |                           | X             | X  | X  | R                             | X                                  |   |                                      | X                                | X                                 |                     |                                   | X   | E,L,V  | Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning).<br>Co-located with SG70 to compare VOC results, and for general site coverage.  |
| R-6              | 43                       |               | SA161-10B                | 10  | X                          | X                                  | X                                  |                                |                           | X             | X  | X  | R                             | X                                  |   |                                      |                                  | X                                 |                     |                                   |   | E,L,V  | GW estimated at ~39 feet bgs.  |
| R-6              | 43                       |               | SA161-20B                | 20  | R                          | R                                  | R                                  |                                |                           | R             | R  |  | R                             |                                    |   |                                      |                                  | R                                 |                     |                                   |   | В  |  |
| R-6<br>R-6       | 43<br>43                 |               | SA161-25B<br>SA161-30B   | 25<br>30                                    | X                          | X<br>R                             | X                                  |                                |                           | R             | X<br>R                                     | Х  | R                             | Х                                  |   |                                      |                                  | X<br>R                            |                     |                                   |   | B,E,L,V<br>B   |  |
| R-6              | 43                       | -             | SA161-35B                | 35  | R                          | R                                  | R                                  |                                |                           | R             | R  |  | R                             |                                    |   |                                      |                                  | R                                 |                     |                                   |   | B  |  |
| R-6              | 43                       | _             | SA161-37B                | 37  | Х                          | Х                                  | Х                                  |                                |                           | Х             | Х  | Х  |                               | Х                                  |   |                                      |                                  | Х                                 |                     |                                   |   | B,E,L,V  |  |
| R-6<br>R-6       | 43<br>43                 | SA208         | SA208-0.0B<br>SA208-0.5B | 0.0   | x                          | x                                  | x                                  | X                              |                           | x             | x  |  | R                             | х                                  |   |                                      | х                                | x                                 |                     |                                   | X   | E,F,V,W  | Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning). Located<br>in the basement footprint of LOU 43 as a worst case location to evaluate surface releases.                       |
| R-6              | 43                       | -             | SA208-10B                | 10  | x                          | x                                  | X                                  | ^<br>X                         |                           | ^<br>X        | X  |  | R                             | X                                  |   |                                      | ····                             | X                                 |                     |                                   |   | E,F,V,W  | GW estimated at ~39 feet bgs.  |
| R-6              | 43                       |               | SA208-20B                | 20  | R                          | R                                  | R                                  |                                |                           | R             | R  |  | R                             |                                    |   |                                      |                                  | R                                 |                     |                                   |   | В  |  |
| R-6              | 43                       |               | SA208-25B                | 25  | X                          | X                                  | R                                  | X                              |                           | X             | X<br>R                                     |  | R                             | X                                  |   |                                      |                                  | X<br>R                            |                     |                                   |   | B,E,F,V,W  | _  |
| R-6<br>R-6       | 43<br>43                 |               | SA208-30B<br>SA208-35B   | 30<br>35                                    | R                          | R                                  | R                                  |                                |                           | R             | R  |  | R                             |                                    |   |                                      |                                  | R                                 |                     |                                   |   | В  |  |
| R-6              | 43                       |               | SA208-37B                | 37  | X                          | X                                  | X                                  | Х                              | ·····                     | X             | X  |  |                               | X                                  |   |                                      | ******                           | X                                 | ******              |                                   |   | B,E,F,V,W  |  |
| R-6              | 43, 59, 60               | RSAR6         | RSAR6-0.0B               | 0.0   |                            |                                    |                                    |                                | T                         |               |  |  |                               |                                    |   |                                      |                                  |                                   |                     |                                   | X   |  | Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning),   |
| R-6<br>R-6       | 43, 59, 60<br>43, 59, 60 | -             | RSAR6-0.5B<br>RSAR6-9B   | 0.5   | X                          | X                                  | X                                  | X                              |                           | X             | X<br>X                                     | X X  | X<br>Hold                     | X                                  |   |                                      | X                                | X<br>X                            |                     |                                   |   | L<br>  | and LOU 59 (Storm Sewer System ) and LOU 60 (Acid Drain System). Random boring located near LOU 43 as a<br>stepout for general coverage, adjacent to LOU 59 and 60 piping to evaluate for potential releases and for area-wide |
| R-6              | 43, 59, 60               |               | RSAR6-10B                | 10  | R                          | R                                  | R                                  | R                              |                           | R             |  | ^  | R                             | R                                  |   |                                      |                                  | R                                 |                     |                                   |   | J  | coverage.  |
| R-6              | 43, 59, 60               |               | RSAR6-20B                | 20  | R                          | R                                  | R                                  | R                              |                           | R             | R  |  | R                             | R                                  |   |                                      |                                  | R                                 |                     |                                   |   | В  | LOU 60 pipeline invert occurs at approximately 8 feet bgs.   |
| R-6              | 43, 59, 60<br>43, 59, 60 |               | RSAR6-25B<br>RSAR6-30B   | 25  | X<br>R                     | X<br>R                             | R                                  | X<br>R                         |                           | R             | X<br>R                                     | Х  | Hold<br>R                     | X<br>R                             |   |                                      |                                  | X<br>R                            |                     |                                   |   | B,L  | GW estimated at ~39 feet bgs.  |
| R-6              | 43, 59, 60<br>43, 59, 60 | -             | RSAR6-30B<br>RSAR6-35B   | 30<br>35                                    | R                          | R<br>R                             | R                                  | R                              |                           | R             | R  |  | R                             | R                                  |   |                                      |                                  | R                                 |                     |                                   |   | B  | -  |
| R-6              | 43, 59, 60               |               | RSAR6-37B                | 37  | X                          | X                                  | X                                  | X                              | ·····                     | X             | X  | X  | X                             | X                                  |   |                                      | ******                           | X                                 | ******              |                                   |   | B,L  |  |
| S-7              | 29, WAPA                 | SA122         | SA122-0.0B               | 0.0   |                            |                                    |                                    |                                |                           |               |  |  | -                             |                                    |   |                                      |                                  |                                   |                     |                                   | X   |  | Boring located to evaluate LOU 29 (Solid Waste Dumpsters). Located within the footprint of LOU 29 at an area   |
| S-7<br>S-7       | 29, WAPA<br>29, WAPA     | -             | SA122-0.5B<br>SA122-10B  | 0.5   | X<br>X                     | X<br>X                             | X                                  | X                              |                           | X             | X<br>X                                     |  | R                             |                                    | X                                       |                                      | X                                | X<br>X                            |                     |                                   |   | E,P,W<br>E.W   | between the two active dumpsters and to evaluate for potential impacts from nearby WAPA site to the south.<br>GW estimated at ~33 feet bgs.  |
| S-7              | 29, WAPA<br>29, WAPA     | 1             | SA122-10B<br>SA122-20B   | 20  | X                          | X                                  | X                                  | X                              |                           | X             | ×<br>X                                     |  | <u>^</u>                      |                                    |   |                                      |                                  | x                                 |                     |                                   |   | B,E,S,W  |  |
| S-7              | 29, WAPA                 |               | SA122-31B                | 31  | Х                          | X                                  | X                                  | Х                              |                           | Х             | X  |  |                               |                                    | X                                       |                                      |                                  | X                                 |                     |                                   |   | B,E,P,S,W  |  |
| S-7              | 29, WAPA                 | SA170         | SA170-0.0B               | 0.0   | ····· ·                    | v                                  |                                    | V                              | -                         | ~~~~          | v  |  | D                             |                                    | ~ |                                      | ~~~~                             |                                   |                     |                                   | Х   | E D W  | Boring located to evaluate LOU 29 (Solid Waste Dumpsters). Located within the footprint of LOU 29 at a   |
| S-7<br>S-7       | 29, WAPA<br>29, WAPA     | -             | SA170-0.5B<br>SA170-10B  | 0.5   | X                          | X                                  | X                                  | X                              | -                         | X             | X<br>X                                     |  | R                             |                                    | X                                       |                                      | X                                | X                                 |                     |                                   |   | E,P,W<br>E.W   | stained area to evaluate visible surface release area and to evaluate for potential impacts from nearby WAPA site to the.  |
| S-7              | 29, WAPA                 |               | SA170-20B                | 20  | X                          | x                                  | X                                  | X                              |                           | X             | X  |  |                               |                                    |   |                                      |                                  | X                                 |                     |                                   |   | B,E,S,W  | GW estimated at ~33 feet bgs.  |
| S-7              | 29, WAPA                 | L             | SA170-31B                | 31  | Х                          | Х                                  | Х                                  | Х                              |                           | Х             | Х  |  |                               |                                    | Х                                       |                                      |                                  | Х                                 |                     |                                   |   | B,E,P,S,W  |  |
| Nun              | ber of Borings:          | 87            |                          |   |                            |                                    |                                    |                                |                           |               |  |  |                               |                                    |   |                                      |                                  |                                   |                     |                                   |   |  |  |

|   | Rationale                            | EMSL Westmont,<br>NJ                        | Alpha<br>Analytical<br>Sparks, NV | STL-<br>Denver      | GEL -<br>Charleston,<br>SC        | Houston                          | CAS - I                              |                                  |                                    |                               | ter   | AS - Roches                                | c          |                        |                                |                                    | Kelso                                    | CAS -                      | oratory K. :                                | Lab                 |                       |                    |                  |
|---|--------------------------------------|---|-----------------------------------|---------------------|-----------------------------------|----------------------------------|--------------------------------------|----------------------------------|------------------------------------|-------------------------------|---|--|------------|------------------------|--------------------------------|------------------------------------|--|----------------------------|---|---------------------|-----------------------|--------------------|------------------|
| (   | for<br>Revision                      | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Organic<br>Acids <sup>12.</sup>   | OPPs <sup>11.</sup> | Radio-<br>nuclides <sup>10.</sup> | Dioxins/<br>Furans <sup>9.</sup> | PCBs <sup>8.</sup><br>(EPA<br>1668A) | PCBs <sup>8.</sup><br>(EPA 8082) | SVOCs <sup>7.</sup><br>(EPA 8270C) | OCPs <sup>6.</sup><br>(8081A) | Total Cyanide<br><sup>L.</sup><br>(EPA 9012A) | Wet<br>Chemistry<br>Analytes <sup>5.</sup> |            | TPH-GRO<br>(EPA 8015B) | TPH-<br>DRO/ORO<br>(EPA 8015B) | Hex Cr <sup>3.</sup><br>(EPA 7199) | <b>Metals<sup>2.</sup></b><br>(EPA 6020) | Perchlorate<br>(EPA 314.0) | Sample<br>Depths <sup>1.</sup><br>(ft. bgs) | Sample ID<br>Number | Boring<br>No.         | LOU Number         | Grid<br>Location |
| in Area II (S-7).   | stern most grid                      | ith the southeas                            | and ending w                      | ea II (M-2) a       | grid in Are                       | ern most g                       | orthweste                            | is on the n                      | ting point                         | e A - Star                    | shown on Pla                                  | location as                                | ed by grid | re organiz             | Borings a                      |                                    |  |                            |   |                     |                       |                    |                  |
|   | Geotechnical<br>Tests <sup>12.</sup> |   |                                   |                     |                                   |                                  |                                      |                                  |                                    |                               |   |  |            |                        |                                |                                    |  |                            | oles :                                      | re (SPLP) Sam       | ng Procedu            | Precipitate Leachi | Synthetic        |
| Soil sample collected from the s<br>analytes from Alluvium (Qal) soi                                  | х                                    |   |                                   |                     | х                                 |                                  |                                      |                                  | х                                  | х                             |   | х  | х          |                        | х                              | х                                  | х  | х                          | 0.5   | RSAL6-0.5           | RSAL6                 | 55                 | L-6              |
| <b>Optional sample</b> - only to be co<br>between Qal & MCfg1 is approx<br>Calichified Gravelly Sand. | x                                    |   |                                   |                     | х                                 |                                  |                                      |                                  | х                                  | х                             |   | х  | х          |                        | х                              | х                                  | х  | х                          | 28 DD*                                      | RSAL6-DD            | RSAL6                 | 55                 | L-6              |
| Soil sample collected from within<br>System) to evaluate leaching po                                  | х                                    |   | х                                 | х                   | х                                 |                                  | х                                    | х                                | х                                  | х                             | х   | х  | х          | х                      | х                              | х                                  | х  | х                          | 10  | SA128-10            | SA128                 | 5                  | M-4              |
| Optional sample - only to be co<br>between Qal & MCfg1 is approx                                      | х                                    |   | х                                 | х                   | х                                 |                                  | х                                    | х                                | х                                  | х                             | х   | х  | х          | х                      | х                              | х                                  | х  | х                          | 29 DD*                                      | SA128-DD            | SA128                 | 5                  | M-4              |
| Soil sample collected from within related analytes from Alluvium (                                    | х                                    |   |                                   |                     | х                                 |                                  |                                      |                                  | х                                  | R                             | х   | х  | х          |                        | х                              | Х                                  | х  | х                          | 10  | SA64-10             | SA64                  | 5, 16, 17, 57, 60  | M-6              |
| Optional sample - only to be co<br>between Qal & MCfg1 is approx<br>Calichified Gravelly Sand.        | x                                    |   |                                   |                     | х                                 |                                  |                                      |                                  | x                                  | R                             | х   | х  | х          |                        | х                              | х                                  | х  | x                          | 21 DD*                                      | SA64-DD             | SA64                  | 5, 16, 17, 57, 60  | M-6              |
| Soil sample collected within the related analytes. Expected soil                                      | х                                    |   |                                   |                     | х                                 |                                  |                                      |                                  | х                                  | R                             | х   | х  | х          | х                      | х                              | х                                  | х  | х                          | 10  | SA102-10            | SA102                 | 7                  | O-5              |
| Optional sample - only to be co<br>between Qal & MCfg1 is approx<br>Calichified Gravel.               | x                                    |   |                                   |                     | х                                 |                                  |                                      |                                  | ×                                  | R                             | х   | х  | х          | х                      | х                              | х                                  | х  | х                          | 30 DD*                                      | SA102-DD            | SA102                 | 7                  | O-5              |
| Soil sample collected west of LC<br>analytes. Expected soil type: S                                   | х                                    |   |                                   |                     | х                                 |                                  |                                      |                                  | х                                  | R                             | х   | х  | Х          |                        | х                              | Х                                  | х  | х                          | 9   | SA30-9              | SA30                  | 59, 60             | R-6              |
|   | R                                    |   |                                   |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |   | R  | R          |                        |                                | R                                  | R  | R                          | 10  | SA30-10             | SA30                  | 59, 60             | R-6              |
| Optional sample - only to be co<br>between Qal & MCfg1 is approx                                      | х                                    |   |                                   |                     | х                                 |                                  |                                      |                                  | х                                  | R                             | х   | х  | х          |                        | х                              | х                                  | х  | х                          | 35 DD*                                      | SA30-DD             | SA30                  | 59, 60             | R-6              |
|   | 10                                   | 86  | 42                                | 42                  | 319                               | 86                               | 11                                   | 34                               | 273                                | 70                            | 261   | 319  | 319        | 107                    | 259                            | 319                                | 319                                      | 319                        |   | mple Count:         | Subtotal Sa           | r of Soil Samples  | Numbe            |
|   |                                      |   |                                   |                     |                                   | -                                | -                                    |                                  |                                    |                               |   |  |            |                        |                                |                                    |  |                            |   |                     | QA/QC Sam             |                    |                  |
|   | 0                                    | 0   | 51                                | 51                  | 32                                | 9                                | 2                                    | 41                               | 28                                 | 71                            | 27  | 32   | 32         | 11                     | 26                             | 32                                 | 32                                       | 32                         |   | plicates (10%)      | Field Du<br>Field Bla |                    |                  |
|   | 0                                    | 0   | 2                                 | 2                   | 16                                | 4                                | 1                                    | 2                                | 14                                 | 4                             | 13  | 16   | 16         | 5                      | 13                             | 16                                 | 16                                       | 16                         | nks   | ent Rinsate Bla     |                       |                    |                  |
|   | 0                                    | 0   | 0                                 | 0                   | 0                                 | 0                                | 0                                    | 0                                | 0                                  | 0                             | 0   | 0  | 15         | 15                     | 0                              | 0                                  | 0  | 0                          |   | nk Samples          |                       |                    |                  |
|   | 0                                    | 0   | 3                                 | 3                   | 16                                | 5                                | 1                                    | 2                                | 14                                 | 4                             | 14  | 16   | 16         | 6                      | 13                             | 16                                 | 16                                       | 16                         |   |                     | Matrix S              |                    |                  |
|   | 0                                    | 0   | 3                                 | 3                   | 16                                | 1                                | 1                                    | 2                                | 14                                 | 4                             | 14  | 16   | 16         | 6                      | 13                             | 16                                 | 16                                       | 16                         | (5%)  | pike Duplicate      |                       |                    |                  |
|   | 10                                   | 86  | 56                                | 56                  | 400                               | 106                              | 17                                   | 45                               | 344                                | 90                            | 330   | 400  | 415        | 151                    | 325                            | 400                                | 400                                      | 400                        |   | le count:           | Total Samp            |                    |                  |

Notes:

n/a Not applicable - boring is not associated with a specific LOU but is located to evaluate soil for general area-wide coverage.

Х Sample will be collected and analyzed.

No sample collected under Phase B sampling program.

DD\* Sample depth to be determined in the field where DD = sample depth (ft).

TPH-GRO Total petroleum hydrocarbons - Gasoline-Range Organics.

TPH-DRO Total petroleum hydrocarbons - Diesel-Range Organics and Oil-Range Organics (ORO).

SPLP SPLP samples will be analyzed by EPA method 1312 using two preparation methods: 1) with extraction fluid #2 (reagent water at pH 5.00±0.05), and 2) with extraction method #3 (reagent water); per NDEP.

The 0.5 ft bgs sample will be collected from the 0.0 to 0.5 ft bgs interval, unless the area is paved. If area is paved, samples will be collected at 0.5 feet below or from a representative depth beneath the pavement. Alternately, if an unpaved area is within a reasonable distance, the sample will be moved to the unpaved area. 1. Metals analyses includes Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybednum, Nickel, Platinum, Potassium, Selenium, Silver, Sodium, Strontium, Tin, Titanium, Tungsten, Uranium, Vanadium, and Zinc. 2.

3. Hexavalent Chromiun

Samples for VOC analysis will be preserved in the field using sodium bisulfate (or DI water) and methanol preservatives per EPA Method 5035. 4.

Wet chemistry parameters include: alkalinity (total, CQ, HCO<sub>3</sub>), ammonia, bromide, chlorate, chloride, conductivity, nitrate, nitrite, perchlorate, pH, phosphate (total), sulfate, surfactants (MBAs), TDS, Total Organic Carbon, and TSS. 5.

6. Organochlorine Pesticides (includes analysis for hexachlorobenzene).

7 Semi-volatile Organic Compounds

8. Polychlorinated biphenyls - Sample locations will be analyzed by USEPA methods 8082 and 1668A. Concrete surfaces at these locations will also include chip and/or wipe samples per EPA Region 1 SOP for Sampling Concrete in the Field (1997). A column for Aroclor PCBs (EPA 8082)

was added to this table to show which samples will be analyzed for Aroclor PCBs.

Dioxins/furans will be analyzed by EPA Method 8290 for all samples. Screening reports will be provided for 90% of the samples and full data packages for 10% of the samples. 9.

Radionuclides consists of alpha spec reporting for isotopic thorium and isotopic uranium, and Radium-226, plus Radium-228 by beta counting (per NDEP). 10.

11. Organophosphorous Pesticides were added to SAP by NDEP (July 21, 2008).

12. Organic Acid analysis includes the following analytes: 4-Chlorbenzene sulfonic acid; Benzenesulfonic acid; O,O-Diethylphosphorodithioic acid; O,O-Dimethylphosphorodithioic acid; and Phthalic acid.

13. Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs.

Geotechnical Tests consist of: moisture content (ASTM D-2216), grain size analysis (ASTM D-422 and C117-04), Soil Dry Bulk Density (ASTM D-2937), Grain Density (ASTM D-854), Soil-Water Filled Porosity (ASTM D-2216); Vertical Hydraulic Conductivity (ASTM D-5084/USEPA 9100). 14

ational Code:

R Brown-shading indicates items that have been removed from Table 2 in the june 2008 Area II Work Plan originally reviewed by NDEP.

Green-shading indicates items that have been added or changed from Table 2 in the june 2008 Area II Work Plan originally reviewed by NDEP. х

Α

The soil sample was removed from the sampling plan because the 2008 groundwater data indicates that the water table is likely at or above this depth. Tronox has chosen to increase the interval between sample depths as discussed with NDEP (October 1, 2008). Soil samples will be collected at the following depths: 0 to 2-inches (asbestos only), 0.5-ft, 10-ft (or 1-ft below the pipeline invert as appropriate), and the capillary fringe (2-ft above the water table). в

Additional samples will be collected if the vertical distance between samples exceeds 20-ft (sample depth will be rounded-off to the closest 5-ft interval). Unless otherwise indicated, soil samples will not be collected at 20, 30 or 40-ft.

Table 2

Soil Sampling and Analytical Plan for Area II

Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 9 of 10

| Location Description and Characterized Area Rationale<br>IDEP may not agree with upgradient and downgradient descriptions)   |
|--|
|  |
|  |
| utheast corner of LOU 55 (Area Affected by July 1990 Fire) to evaluate leaching potential of Site-related  |
| 5. Expected soil type: Gravelly Sand.<br>lected if soil type is different than at 10 ft bgs; no sample will be collected within the capillary fringe Contact<br>nately 36 feet bgs. Groundwater is expected to occur at approximately 30 feet bgs. Expected soil type: |
| LOU 5 (Beta Ditch) at the confluence of the Stauffer Extension and the out-flow from LOU 59 (Storm Sewer<br>ential of Site-related analytes. Expected soil type: Sand.   |
| lected if soil type is different than at 10 ft bgs; <b>no sample will be collected within the capillary fringe</b> Contact<br>nately 30 feet bgs. Groundwater is expected to occur at approximately 31 feet bgs. Expected soil type: Sand.                             |
| LOU 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer Lines) to evaluate leaching potential of Site-<br>tal) soils. Expected soil type: Gravelly Sand.  |
| lected if soil type is different than at 10 ft bgs; <b>no sample will be collected within the capillary fringe</b> Contact<br>nately 26 feet bgs. Groundwater is expected to occur at approximately 23 feet bgs. Expected soil type:                                   |
| oundaries of LOU 7 (Old P-2 Pond and Associated Conveyance Facilities ) to evaluate leaching potential of Site-<br>rpe: Gravelly Sand.   |
| lected if soil type is different than at 10 ft bgs; <b>no sample will be collected within the capillary fringe</b> Contact<br>nately 39 feet bgs. Groundwater is expected to occur at approximately 32 feet bgs. Expected soil type:                                   |
| U 43 (Old Sodium Plant Decommissioning and Unit-4 Basement) to evaluate leaching potential of Site-related<br>nd with caliche lens.  |
|  |
| lected if soil type is different than at 10 ft bgs; no sample will be collected within the capillary fringe Contact nately 33 feet bgs. Groundwater is expected to occur at approximately 40 feet bgs. Expected soil type: Sand.                                       |
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|                  |                    |                | La                  | boratory K.                                 | CAS -                      | - Kelso                            |                                    |                    |                        |                | CAS - Roche                                | ster                               |                               |                                    |                                  | CAS - I       | Houston                          | GEL -<br>Charleston,<br>SC        | STL-<br>Denver      | Alpha<br>Analytical<br>Sparks, NV | EMSL Westmont,<br>NJ                        | Rationale         |                                     |
|------------------|--------------------|----------------|---------------------|---|----------------------------|------------------------------------|------------------------------------|--------------------|------------------------|----------------|--|------------------------------------|-------------------------------|------------------------------------|----------------------------------|---------------|----------------------------------|-----------------------------------|---------------------|-----------------------------------|---|-------------------|-------------------------------------|
| Grid<br>Location | LOU Number         | Boring<br>No.  | Sample ID<br>Number | Sample<br>Depths <sup>1.</sup><br>(ft. bgs) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>3.</sup><br>(EPA 7199) |                    | TPH-GRO<br>(EPA 8015B) |                | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total Cyanide<br>L.<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>8.</sup><br>(EPA 8082) |               | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup> | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | for<br>Revision   | (NDEP                               |
|                  |                    |                |                     |   |                            |                                    |                                    | Borings a          | re organiz             | ed by grid     | l location as                              | shown on Pla                       | te A - Star                   | ting point is                      | s on the n                       | orthweste     | ern most g                       | grid in Are                       | a II (M-2) a        | and ending w                      | ith the southeas                            | stern most grid   | in Area II (S-7).                   |
| E                | OCP analysis wa    |                |                     |   |                            |                                    |                                    |                    |                        |                |  |                                    |                               |                                    |                                  |               |                                  |                                   |                     |                                   |   |                   |                                     |
| F                |                    |                |                     |   |                            |                                    |                                    | ation, but Trone   | ox proposes            | not to anal    | yze soil for PO                            | CBs (both 8082 a                   | nd 1668A) f                   | or the followi                     | ing reasons                      | s: 1) Creatio | on of conge                      | ener PCBs r                       | equire high         | operating temp                    | eratures (400 to 7                          | 00 degrees Celsiv | us) whereas Tronox production proce |
|                  | associated with e  |                |                     |   | rs were not ass            | sociated with thi                  | s area.                            |                    |                        |                |  |                                    |                               |                                    |                                  |               |                                  |                                   |                     |                                   |   |                   |                                     |
| G                | New boring adde    |                |                     |   |                            |                                    |                                    |                    |                        |                |  |                                    |                               |                                    |                                  |               |                                  |                                   |                     |                                   |   |                   |                                     |
| н                | Platinum analysis  |                |                     |   |                            |                                    |                                    |                    |                        |                |  |                                    |                               |                                    |                                  |               |                                  |                                   |                     |                                   |   |                   |                                     |
| J                | Soil sample will b | e collected a  | at this depth bec   | ause the dep                                | th is one-foot b           | elow pipeline in                   | vert.                              |                    |                        |                |  |                                    |                               |                                    |                                  |               |                                  |                                   |                     |                                   |   |                   |                                     |
| к                | Laboratory inform  | nation was ac  | dded to Table 2     | to assist field                             | sampling perso             | onnel in shippin                   | g the sample                       | e containers to    | the appropri           | iate laborate  | ory.                                       |                                    |                               |                                    |                                  |               |                                  |                                   |                     |                                   |   |                   |                                     |
| L                | Cyanide analysis   | was added t    | to this borning b   | y the NDEP (                                | July 21, 2008)             |                                    |                                    |                    |                        |                |  |                                    |                               |                                    |                                  |               |                                  |                                   |                     |                                   |   |                   |                                     |
| N                | Boring was remo    | ved from the   | table because i     | it is not locate                            | d in Area II.              |                                    |                                    |                    |                        |                |  |                                    |                               |                                    |                                  |               |                                  |                                   |                     |                                   |   |                   |                                     |
| Р                | Aroclor and cong   | ener PCBs w    | vere added per      | NDEP (July 2                                | 1, 2008).                  |                                    |                                    |                    |                        |                |  |                                    |                               |                                    |                                  |               |                                  |                                   |                     |                                   |   |                   |                                     |
| Q                | Analysis selected  | for this addi  | itional boring are  | e consistent v                              | ith the LOU pa             | cket for the rep                   | resented LO                        | U(s)               |                        |                |  |                                    |                               |                                    |                                  |               |                                  |                                   |                     |                                   |   |                   |                                     |
| S                | Soil boring was e  | xtended to g   | roundwater, per     | r NDEP (July                                | 21, 2008).                 |                                    |                                    |                    |                        |                |  |                                    |                               |                                    |                                  |               |                                  |                                   |                     |                                   |   |                   |                                     |
| U                | NDEP requested     | (July 21, 200  | 08) that 1,4-diox   | kane be adde                                | d. 1,4-Dioxane             | is a standard a                    | nalyte in the                      | SVOC analysis      | S.                     |                |  |                                    |                               |                                    |                                  |               |                                  |                                   |                     |                                   |   |                   |                                     |
| v                | SVOC analysis w    | as added to    | this boring by N    | IDEP (July 21                               | , 2008).                   |                                    |                                    |                    |                        |                |  |                                    |                               |                                    |                                  |               |                                  |                                   |                     |                                   |   |                   |                                     |
| w                | TPH-DRO/ORO        | (and/or TPH-   | GRO) was adde       | ed to this bori                             | ng by NDEP (Ju             | uly 21, 2008).                     |                                    |                    |                        |                |  |                                    |                               |                                    |                                  |               |                                  |                                   |                     |                                   |   |                   |                                     |
| z                | OPPs and OAs v     | vere added to  | o this boring by    | Tronox for ge                               | neral coverage             | and to evaluate                    | the potentia                       | al transport of th | nese constitu          | uents by wi    | nd and ground                              | dwater.                            |                               |                                    |                                  |               |                                  |                                   |                     |                                   |   |                   |                                     |
| bb               | OPPs and OAs f     | or this boring | were requested      | d by NDEP (J                                | uly 21, 2008); h           | owever, Tronox                     | proposes n                         | ot to sample th    | is boring be           | cause it is le | ocated in an a                             | rea considered n                   | ot to have b                  | een potentia                       | ally impacted                    | d by migrati  | on of off-sit                    | te sources t                      | o the west.         |                                   |   |                   |                                     |

Location Description and Characterized Area Rationale DEP may not agree with upgradient and downgradient descriptions) rocesses (historic and current) operate at ambient temperatures, and 2) Aroclor PCBs are typically

|                  |               |                          |   | I                               | Laboratory :   | CAS -                      | - Kelso                            |                                    |                                |                                     | (                                 | CAS - Roches                               | ter                                |                               |                                       |                                  | CAS-I                                | Houston                          | GEL -<br>Charleston,<br>SC | STL-<br>Denver          | Alpha<br>Analytical<br>Sparks, NV | EMSL Westmont<br>NJ                         | PTS<br>Santa Fe Springs,<br>CA |   |
|------------------|---------------|--------------------------|---|---------------------------------|----------------|----------------------------|------------------------------------|------------------------------------|--------------------------------|-------------------------------------|-----------------------------------|--|------------------------------------|-------------------------------|---------------------------------------|----------------------------------|--------------------------------------|----------------------------------|----------------------------|-------------------------|-----------------------------------|---|--------------------------------|---|
| Grid<br>Location | Boring<br>No. | Sample ID<br>Number      | Sample<br>Depths <sup>1.</sup><br>(ft. bgs) | Matrix<br>Spike/MS<br>Duplicate | SPLP<br>Sample | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>3.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B)              |                                   | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total Cyanide<br>L.<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA<br>1668A) | Dioxins/<br>Furans <sup>9.</sup> |                            | OPPs <sup>11.</sup>     | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Geotechnical<br>Tests          |   |
|                  |               |                          |   | Number of C                     | Containers :   | 1 - 4 oz                   | jar                                |                                    |                                | 1- 40 ml VOA<br>vial w/<br>methanol | 3 VOA vials<br>(TerraCore<br>Kit) |  | 3 - 4 oz. Jars                     |                               |                                       | •                                | 1 - 4 c                              | oz. Jar                          | 1-250 ml ja<br>(plastic)   | <sup>r</sup> 1-4 oz Jar | 1-4 oz Jar                        | ≥1 kg<br>in plastic bag                     | 2 brass tubes                  |   |
|                  |               |                          |   | 1                               |                |                            |                                    | Borin                              | igs are orgar                  | nized by gri                        | d location                        | as shown o                                 | n Plate A - Sta                    | rting poir                    | nt is on the                          | e northwes                       | tern mos                             | st grid in                       | Area II (M                 | -2) and e               | nding with th                     | ne southeastern                             | most grid in A                 |   |
| L-5<br>L-5       | SA72          | SA72-0.0B<br>SA72-0.5B   | 0.0   |                                 |                | x                          | x                                  | X                                  |                                |                                     | х                                 | x  | X                                  |                               |                                       |                                  |                                      | x                                | X                          |                         |                                   | X   |                                | Boring located to evalua<br>Boring is in drum storag      |
| L-5              |               | SA72-10B                 | 10  |                                 |                | Х                          | Х                                  | Х                                  |                                |                                     | Х                                 | Х  | Х                                  |                               |                                       |                                  |                                      |                                  | Х                          |                         |                                   |   |                                | GW estimated at ~31 fe                                    |
| L-5<br>L-5       | SA123         | SA72-29B<br>SA123-0.0B   | 29<br>0.0                                   |                                 |                | Х                          | Х                                  | Х                                  |                                |                                     | Х                                 | Х  | X                                  |                               |                                       |                                  |                                      |                                  | Х                          |                         |                                   | Х   |                                | Boring located to evalua                                  |
| L-5              | 0/(120        | SA123-0.5B               | 0.5   |                                 |                | Х                          | Х                                  | Х                                  |                                |                                     | Х                                 | Х  | Х                                  |                               |                                       |                                  |                                      | Х                                | Х                          |                         |                                   | ~~~~~                                       |                                | Old D-1 Building Wash-                                    |
| L-5              |               | SA123-10B                | 10  |                                 |                | X                          | X                                  | X                                  |                                |                                     | X                                 | X  | X                                  |                               |                                       |                                  |                                      |                                  | X<br>X                     |                         |                                   |   |                                | Process, AP Plant SI's a                                  |
| L-5              |               | SA123-27B                | 27  |                                 |                | X                          | X                                  | X                                  |                                |                                     | X                                 | X  | X                                  |                               |                                       |                                  |                                      | -                                | ^                          |                         |                                   |   |                                | stepout for LOU 56 and<br>GW estimated at ~29 fe          |
| L-5              | SA167         | SA167-0.0B               | 0.0   |                                 |                |                            |                                    |                                    |                                |                                     |                                   |  |                                    |                               |                                       |                                  |                                      |                                  |                            |                         |                                   | Х   |                                | Boring located to evaluate                                |
| L-5<br>L-5       | -             | SA167-0.5B<br>SA167-10B  | 0.5<br>10                                   |                                 |                | X                          | X X                                | X                                  |                                | -                                   | X                                 | X  | X                                  |                               |                                       |                                  |                                      | X                                | X                          |                         |                                   |   |                                | downslope of LOU 56.<br>GW estimated at ~ 30 fe           |
| L-5              |               | SA167-10BD               | 10 (dup)                                    |                                 |                | x                          | X                                  | X                                  |                                |                                     | X                                 | X  | X                                  |                               |                                       |                                  |                                      |                                  | X                          |                         |                                   |   |                                |   |
| L-5              | 64170         | SA167-28B                | 28<br>0.0                                   |                                 |                | х                          | Х                                  | Х                                  |                                |                                     | Х                                 | Х  | Х                                  |                               |                                       |                                  |                                      |                                  | Х                          |                         |                                   | ×   | -                              | Paring located to evolue                                  |
| L-5<br>L-5       | SA173         | SA173-0.0B<br>SA173-0.5B | 0.0   |                                 |                | X                          | X                                  | X                                  |                                |                                     | X                                 | X  | ×                                  |                               |                                       |                                  |                                      | X                                | X                          |                         |                                   | X   |                                | Boring located to evaluate<br>evaluate potiential runo    |
| L-5              |               | SA173-0.5BD              | 0.5 (dup)                                   |                                 |                | X                          | Х                                  | X                                  |                                |                                     | Х                                 | X  | X                                  |                               |                                       |                                  |                                      | Х                                | X                          |                         |                                   |   |                                | GW estimated at ~31 fe                                    |
| L-5<br>L-5       |               | SA173-10B<br>SA173-29B   | 10<br>29                                    |                                 |                | X                          | X                                  | X                                  |                                |                                     | X                                 | X  | X                                  |                               |                                       |                                  |                                      |                                  | X                          |                         | -                                 |   |                                |   |
| L-5              | SA179         | SA179-0.0B               | 0.0   |                                 |                |                            |                                    |                                    |                                |                                     |                                   |  |                                    |                               |                                       |                                  |                                      |                                  |                            |                         |                                   | Х   |                                | Boring located to evaluate                                |
| L-5<br>L-5       |               | SA179-0.5B<br>SA179-0.5B | 0.5   | x                               |                | X X                        | X X                                | <u> </u>                           |                                |                                     | X                                 | X  | X X                                |                               |                                       |                                  |                                      | X<br>X                           | X X                        |                         |                                   |   |                                | boundary to evaluate po<br>storage area.                  |
| L-5              | -             | SA179-10B                | 10  |                                 |                | X                          | X                                  | X                                  |                                |                                     | X                                 | X  | X                                  |                               |                                       |                                  |                                      |                                  | X                          |                         |                                   |   |                                | GW estimated at ~31 fe                                    |
| L-5              | 0.470         | SA179-29B                | 29  |                                 |                | Х                          | Х                                  | Х                                  |                                |                                     | Х                                 | Х  | Х                                  |                               |                                       |                                  |                                      |                                  | Х                          |                         |                                   | ×   |                                | Dening lagested to evolve                                 |
| L-6<br>L-6       | SA73          | SA73-0.0B<br>SA73-0.5B   | 0.0   |                                 |                | x                          | X                                  | X                                  |                                |                                     | X                                 | X  | X                                  | X                             |                                       |                                  |                                      | X                                | X                          | X                       | X                                 | Х   |                                | Boring located to evalua<br>Process, AP Plant SIs a       |
| L-6              |               | SA73-10B                 | 10  |                                 |                | Х                          | Х                                  | Х                                  |                                |                                     | Х                                 | Х  | Х                                  | Hold                          |                                       |                                  |                                      |                                  | Х                          |                         |                                   |   |                                | GW estimated at ~30 fe                                    |
| L-6<br>L-6       | RSAL6         | SA73-28B<br>RSAL6-0.0B   | 28<br>0.0                                   | 1                               |                | Х                          | Х                                  | Х                                  |                                | -                                   | Х                                 | Х  | Х                                  | Х                             |                                       |                                  |                                      | -                                | Х                          | Х                       | Х                                 | х   |                                | Boring located to evaluate                                |
| L-6              | 110/120       | RSAL6-0.5B               | 0.5   |                                 |                | х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  |                                    | Х                             | Х                                     |                                  |                                      | Х                                | Х                          |                         |                                   | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~     |                                | Phase A boring SA20 lo                                    |
| L-6<br>L-6       |               | RSAL6-0.5B<br>RSAL6-10B  | 0.5<br>10                                   |                                 | Х              | X                          | X                                  | x<br>x                             | X                              |                                     | X<br>X                            | X  |                                    | X<br>Hold                     | X                                     |                                  |                                      |                                  | X                          |                         |                                   |   | X                              | SPLP sample must be o                                     |
| L-6              |               | RSAL6-28B                | 28  |                                 |                | x                          | <u>x</u>                           | - <u>^</u>                         | × ×                            |                                     | X                                 | x  |                                    | X                             | X                                     |                                  |                                      |                                  | X                          |                         |                                   |   |                                |   |
| L-6              |               | RSAL6-28B                | 28  |                                 | Х              | Х                          | Х                                  | X                                  | Х                              |                                     | Х                                 | Х  |                                    | Х                             | Х                                     |                                  |                                      |                                  | Х                          |                         |                                   |   | Х                              | SPLP sample must be o                                     |
| L-8<br>L-8       | SA131         | SA131-0.0B<br>SA131-0.5B | 0.0   |                                 |                | x                          | X                                  | ×                                  | X                              | x                                   | x                                 | x  | X                                  | x                             | x                                     | x                                | x                                    | x                                | X                          | X                       | X                                 | X   |                                | Boring located to evaluate<br>for potential impacts from  |
| L-8              |               | SA131-0.5BD              | 0.5 (dup)                                   |                                 |                | Х                          | Х                                  | Х                                  | Х                              | Х                                   | Х                                 | Х  | Х                                  | Х                             | Х                                     | Х                                | Х                                    | X                                | Х                          | Х                       | Х                                 |   |                                | GW estimated at ~29 fe                                    |
| L-8<br>L-8       |               | SA131-10B<br>SA131-27B   | 10<br>27                                    |                                 |                | X                          | X X                                | X                                  | X                              | X                                   | X                                 | X  | X                                  | X                             | X                                     | X                                | X                                    |                                  | X                          | X                       | X                                 |   |                                | _   |
| M-3              | SA66          | SA66-0.0B                | 0.0   |                                 |                | ^                          | ^                                  | ^                                  | ^                              | ^                                   | ^                                 | ^  | ^                                  | ^                             | ^                                     | ^                                | ^                                    |                                  | ^                          | ^                       | ^                                 | х   |                                | Boring located to evalua                                  |
| M-3              |               | SA66-0.5B                | 0.5   |                                 |                | X                          | <u>X</u>                           | X                                  | X                              | X                                   | X                                 | X  | X                                  | X                             | X                                     | X                                |                                      | X                                | X                          | X                       | X                                 |   |                                | sources to the west. Als                                  |
| M-3<br>M-3       |               | SA66-0.5BD<br>SA66-10B   | 0.5 (dup)<br>10                             |                                 |                | X X                        | X                                  | X<br>X                             | X<br>X                         | X                                   | X                                 | X  | X X                                | X<br>X                        | X                                     | X                                |                                      | X                                | X                          | X                       | X                                 |   |                                | _GW estimated at ~30 fe                                   |
| M-3              |               | SA66-28B                 | 28  |                                 |                | Х                          | Х                                  | Х                                  | Х                              | Х                                   | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      |                                  | Х                          | Х                       | Х                                 |   |                                |   |
| M-4<br>M-4       | SA128         | SA128-0.0B<br>SA128-0.5B | 0.0   |                                 |                | ×                          | x                                  | x                                  | x                              | x                                   | х                                 | X  | Х                                  | х                             | x                                     | x                                | x                                    | x                                | x                          | x                       | x                                 | X   |                                | Boring located to evaluate<br>Diversion Ditch to evaluate |
| M-4              |               | SA128-10B                | 10  |                                 |                | X                          | Х                                  | Х                                  | X                              | Х                                   | Х                                 | Х  | Х                                  | Х                             | X                                     | Х                                | Х                                    |                                  | Х                          | Х                       | X                                 |   |                                | GW estimated at ~31 fe                                    |
| M-4<br>M-4       |               | SA128-10B<br>SA128-29B   | 10<br>29                                    |                                 | X              | X X                        | X X                                | X<br>X                             | X                              | X                                   | X                                 | X  | X                                  | X                             | X                                     | X                                | X                                    |                                  | X                          | X                       | X                                 |   | X                              | SPLP sample must be o                                     |
| M-4<br>M-4       |               | SA128-29B                | 29 DD*                                      |                                 | Х              | X                          | X                                  |                                    | X                              | X                                   | X                                 | X  | X                                  | X                             | X                                     | X                                | X                                    | ~~~~                             | X                          | X                       | X                                 |   | Х                              | SPLP sample must be o                                     |
| M-5<br>M-5       | SA65          | SA65-0.0B                | 0.0   |                                 |                | ×                          | v                                  | x                                  |                                |                                     | ×                                 | X  | ×                                  |                               | x                                     |                                  |                                      | X                                | X                          |                         |                                   | X   |                                | Boring located to evalua                                  |
| M-5<br>M-5       | -             | SA65-0.5B<br>SA65-10B    | 0.5   |                                 |                | X                          | X                                  | - X                                |                                |                                     | X                                 | X  | X                                  |                               | X                                     |                                  |                                      | ~                                | X                          |                         |                                   |   |                                | Lines). Located within LOU 57.                            |
| M-5              |               | SA65-20B                 | 20  |                                 |                | Х                          | Х                                  | Х                                  |                                |                                     | Х                                 | Х  | X                                  |                               | Х                                     |                                  |                                      |                                  | Х                          |                         |                                   |   |                                | GW estimated at ~33 fe                                    |
| M-5<br>M-5       | SA70          | SA65-31B<br>SA70-0.0B    | 31<br>0.0                                   | -                               | +              | Х                          | Х                                  | X                                  | +                              | +                                   | Х                                 | X  | Х                                  |                               | Х                                     |                                  | ł                                    | +                                | Х                          | +                       |                                   | Х   |                                | Boring located to evaluate                                |
| M-5              |               | SA70-0.5B                | 0.5   |                                 |                | Х                          | Х                                  | Х                                  | Х                              | Х                                   | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      | Х                                | Х                          |                         |                                   | ^^  |                                | Transfer Lines to Sodiu                                   |
| M-5<br>M-5       |               | SA70-10B<br>SA70-30B     | 10<br>30                                    |                                 |                | X                          | <u> </u>                           | X<br>X                             | X                              | X                                   | X                                 | X  | X                                  |                               | X                                     |                                  |                                      | +                                | X                          |                         |                                   |   |                                | general coverage of LO<br>GW estimated at ~32 fe          |
| M-5              | SA104         | SA104-0.0B               | 0.0   |                                 |                |                            |                                    |                                    |                                |                                     |                                   |  |                                    |                               |                                       |                                  |                                      |                                  |                            |                         |                                   | х   |                                | Boring located to evaluate                                |
| M-5              | -             | SA104-0.5B               | 0.5   |                                 |                | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  |                               | X                                     |                                  |                                      | Х                                | X                          |                         |                                   |   |                                | Plant SIs and Transfer I                                  |
| M-5<br>M-5       | -             | SA104-10B<br>SA104-10BD  | 10<br>10 (dup)                              |                                 |                | X                          | X X                                |                                    | X<br>X                         | X                                   | X                                 | X  | X                                  |                               | X                                     |                                  |                                      |                                  | X                          |                         |                                   |   |                                | GW estimated at ~32 fe                                    |
| M-5              |               | SA104-30B                | 30  |                                 |                | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  |                               | X                                     |                                  |                                      |                                  | X                          |                         |                                   |   |                                |   |
| M-5<br>M-5       | SA129         | SA129-0.0B<br>SA129-0.5B | 0.0   |                                 |                | x                          | X                                  | x                                  | x                              | X                                   | x                                 | x  | x                                  | x                             | x                                     | x                                |                                      | x                                | x                          | ×                       | x                                 | X   |                                | Boring located to evalua<br>SIs and Transfer Lines)       |
| M-5              | 1             | SA129-0.5BD              | 0.5 (dup)                                   |                                 |                | Х                          | Х                                  | Х                                  | Х                              | Х                                   | Х                                 | Х  | Х                                  | Х                             | Х                                     | Х                                |                                      | X                                | Х                          | Х                       | Х                                 |   |                                | discharges into Beta Di                                   |
| M-5<br>M-5       | -             | SA129-10B<br>SA129-29B   | 10<br>29                                    |                                 |                | X                          | X<br>X                             | X<br>X                             | X                              | X                                   | X<br>X                            | X<br>X                                     | X                                  | X<br>X                        | X<br>X                                | X<br>X                           |                                      |                                  | X                          | X                       | X                                 |   |                                | GW estimated at ~31 fe                                    |
| M-5<br>M-5       | RSAM5         |                          | 29  |                                 |                | Х                          | × –                                | ×                                  | ^                              | ^                                   | ~                                 | ~  | Х                                  | ^                             | ~                                     | ^                                |                                      | +                                | ×                          | ~                       | Х                                 | x   |                                | Boring located to evaluate                                |
| M-5              | 1             | RSAM5-0.5B               | 0.5   |                                 |                | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  | X                             | X                                     |                                  |                                      | X                                | X                          |                         |                                   |   |                                | Plant SIs and Transfer L                                  |
| M-5<br>M-5       |               | RSAM5-0.5BD<br>RSAM5-10B | 0.5 (dup)<br>10                             |                                 | +              | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  | X<br>Hold                     | X                                     |                                  | l                                    | X                                | X                          |                         |                                   |   |                                | GW estimated at ~30 fe                                    |
| M-5              | 1             | RSAM5-28B                | 28  |                                 |                | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  | X                             | X                                     | 1                                |                                      |                                  | X                          |                         | 1                                 | -   | 1                              | -   |

| Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions)  |
|--|
|  |
| iate LOU 31 (Drum Crushing & Recycling Area) and as a down gradient boring for LOU 19 (Pond AP-5).<br>ge area of LOU 31 and in an accessible low area down slope of LOU 19 to evaluate potential releases.<br>eet bgs.   |
| Iate LOU 30 (AP Area Pad 35), LOU 56 (AP Plant Area<br>I-Down), and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate<br>and Transfer Lines). Located at logical runoff point for releases from LOU 30 pad as an upslope<br>d downslope stepout for LOU 57.<br>eet bgs                            |
| ate LOU 31 (Drum Crushing and Recycling Area). Located at former drum crusher location and<br>Phase A boring SA19 is located downslope of the drum storage area.<br>feet bgs.  |
| ate LOU 56 (AP Plant Area Old D-1 Building Wash-Down). Located adjacent to LOU 56 bourndary to<br>off releases to the west. Phase A boring SA19 is located downslope of the drum storage area.<br>eet bgs.   |
| ate LOU 56 (AP Plant Area Old D-1 Building Wash-Down). Located adjacent to the LOU 56<br>obtiential runoff releases to the east. Phase A boring SA19 is located downslope of the drum<br>eet bgs.  |
| iate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate<br>and Transfer Lines). Located as a downslope stepout to the north of LOU 57 for area wide coverage.<br>eet bgs.  |
| Iate LOU 55 (Area Affected by July 1990 Fire). Random location within the LOU to evaluate area wide issues.<br>located in the northwest protion of LOU 55. GW estimated at ~30 feet bgs.<br>of Quaternary Alluvium (Qal) soils.  |
| of Muddy Creek soils & must be dry. If soils not dry, don't collect sample. Choose another boring.<br>Iate LOU 5 (Beta Ditch). Located in ditch bottom near downstream end of the Beta Ditch to evaluate<br>om historic discharges into Beta Ditch<br>eet bgs.                                     |
| ate LOU 5 (Beta Ditch). Located in the western ditch bottom to evaluate potential impacts from off-site sources<br>Iso, a point of comparison for discharge to the downstream Western Diversion Ditch.<br>eet bgs.   |
| ate LOU 5 (Beta Ditch). Located in the LOU 5 ditch bottom just downstream from the Western<br>uate inflow from the western and southwestern parts of Tronox and off-site facilities to the west.<br>eet bgs.<br>of Quaternary Alluvium (Qal) soils.  |
| of Muddy Creek soils & must be dry. If soils not dry, don't collect sample. Choose another boring.<br>tate LOU 52 (AP Plant Screening Building, Dryer Building Process, AP Plant SIs and Transfer<br>a LOU 52 in damaged pavement area to evaluate potiential releases and for general coverage of |
| eet bgs.<br>e LOU 57 (AP Plant Transfer and Associated Piping) and LOU 57 (AP Plant  |
| um Chlorate Lines to Sodium Chlorate Process, AP Plant SIs and Transfer Lines). Located for<br>DU 57 and as a downslope stepout for possible releases from LOU 5.<br>eet bgs.  |
| Iate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP<br>Lines). Located in a low area near existing LOU 57 piping and as an upslope stepout from LOU 5.<br>eet bgs.   |
| iate LOU 5 (Beta Ditch), LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant<br>). Located in a low spot within LOU 5 to evaluate potential impacts associated with historic<br>itch.<br>eet bgs.   |
| ateLOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP<br>Lines). Randomly located as an upslope stepout for LOU 5 and general coverage for LOU 57.<br>eet bgs.   |

|                  |               |                          |   | L                               | _aboratory :   | CAS -                                   | Kelso                                 |                                    |   |                                     | (                                       | CAS - Rochest                              | er                                 |                               |                                       |                                  | CAS-I                                | Houston                          | GEL -<br>Charleston,<br>SC        | STL-<br>Denver      | Alpha<br>Analytical<br>Sparks, NV | EMSL Westmont,<br>NJ                        | PTS<br>Santa Fe Springs,<br>CA |   |
|------------------|---------------|--------------------------|---|---------------------------------|----------------|---|---------------------------------------|------------------------------------|---|-------------------------------------|---|--|------------------------------------|-------------------------------|---------------------------------------|----------------------------------|--------------------------------------|----------------------------------|-----------------------------------|---------------------|-----------------------------------|---|--------------------------------|---|
| Grid<br>Location | Boring<br>No. | Sample ID<br>Number      | Sample<br>Depths <sup>1.</sup><br>(ft. bgs) | Matrix<br>Spike/MS<br>Duplicate | SPLP<br>Sample | Perchlorate<br>(EPA 314.0)              | Metals <sup>2.</sup><br>(EPA 6020)    | Hex Cr <sup>3.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B)          | TPH-GRO<br>(EPA 8015B)              |   | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total Cyanide<br>L.<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA<br>1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup> | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Geotechnical<br>Tests          |   |
|                  |               |                          |   | Number of C                     | Containers :   | 1 - 4 oz j                              | ar                                    |                                    |   | 1- 40 ml VOA<br>vial w/<br>methanol | (TerraCore<br>Kit)                      |  | 3 - 4 oz. Jars                     |                               |                                       |                                  | 1 - 4 c                              |                                  | 1-250 ml jar<br>(plastic)         | 1-4 oz Jar          | 1-4 oz Jar                        | <u>≥</u> 1 kg<br>in plastic bag             | 2 brass tubes                  |   |
|                  | 0101          | 0404000                  |   | 1                               | 1              | 1                                       | 1                                     | Borin                              | gs are organ                            | ized by gri                         | id location                             | as shown o                                 | n Plate A - Sta                    | rting poin                    | nt is on the                          | e northwes                       | stern mos                            | t grid in A                      | Area II (M·                       | -2) and er          | nding with th                     | e southeastern                              | most grid in A                 |   |
| M-6<br>M-6       | SA64          | SA64-0.0B<br>SA64-0.5B   | 0.0   |                                 |                | X                                       | X                                     | x                                  | x                                       |                                     | X                                       | X  | x                                  |                               | x                                     |                                  |                                      | x                                | X                                 |                     |                                   | X   |                                | Boring located to evalua<br>Plant Transfer Lines to S |
| M-6              |               | SA64-10B                 | 10  |                                 |                | X                                       | X                                     | X                                  | X                                       |                                     | X                                       | X  | X                                  |                               | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                | Located in a low spot of                              |
| M-6              |               | SA64-10B                 | 10  |                                 | Х              | X                                       | X                                     | X                                  | X                                       |                                     | X                                       | X  | X                                  |                               | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   | X                              | releases, and for genera                              |
| M-6<br>M-6       |               | SA64-21B<br>SA64-21B     | 21<br>21 DD*                                |                                 | x              | X                                       | X                                     | X                                  | X                                       |                                     | X                                       | X  | X                                  |                               | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   | X                              | 10-Foot SPLP sample n<br>21-Foot SPLP sample n        |
| 101-0            |               | 3A04-218                 | 2100  |                                 | · · · · · ·    | ^                                       | ^                                     | ^                                  | ^                                       |                                     | ^                                       | <u>^</u>                                   | ^                                  |                               | ^                                     |                                  |                                      |                                  | ^                                 |                     |                                   |   | ^                              | another boring.                                       |
| M-6              | SA175         | SA175-0.0B               | 0.0   |                                 |                |   |                                       |                                    |   |                                     |   |  |                                    |                               |                                       |                                  |                                      |                                  |                                   |                     |                                   | Х   |                                | Boring located to evaluate                            |
| M-6              |               | SA175-0.5B               | 0.5   |                                 |                | X                                       | X                                     | X                                  | X                                       | X                                   | X                                       | X  | X                                  |                               | X                                     |                                  |                                      | Х                                | X                                 |                     |                                   |   |                                | Lines), and LOU 18 (Por                               |
| M-6<br>M-6       |               | SA175-10B<br>SA175-28B   | 10<br>28                                    |                                 |                | x                                       | X<br>X                                | X X                                | X X                                     | X                                   | X                                       | X  | x                                  |                               | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                | potential overflow releas<br>GW estimated at ~30 fe   |
|                  |               | 0/11/0/202               |   |                                 |                | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | · · · · · · · · · · · · · · · · · · · |                                    | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | X                                   | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | · · · · · ·                                | ~~~~~                              |                               | ·····                                 |                                  |                                      |                                  | ~~~~~                             |                     |                                   |   |                                |   |
| M-6              | RSAM6         | RSAM6-0.0B               | 0.0   |                                 |                |   |                                       |                                    |   |                                     |   |  |                                    |                               |                                       |                                  |                                      |                                  |                                   |                     |                                   | Х   |                                | Boring located to evalua                              |
| M-6<br>M-6       |               | RSAM6-0.5B<br>RSAM6-10B  | 0.5   |                                 |                | X                                       | X                                     | X                                  | X                                       |                                     | X                                       | X  | X                                  | X<br>Hold                     | X                                     |                                  |                                      | X                                | X                                 |                     |                                   |   |                                | Lines). Randomly locate<br>GW estimated at ~30 fee    |
| M-6              |               | RSAM6-28B                | 28  |                                 |                | x                                       | X                                     | X                                  | x                                       |                                     | X                                       | x  | x                                  | X                             | X                                     |                                  |                                      |                                  | x                                 |                     |                                   |   |                                | GW estimated at ~30 let                               |
| M-6              |               | RSAM6-28BD               | 28 (dup)                                    |                                 |                | Х                                       | Х                                     | Х                                  | Х                                       |                                     | Х                                       | Х  | Х                                  | Х                             | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                |   |
| M-6              | SA197         | SA197-0.0B               | 0.0   |                                 |                | ~                                       | N/                                    | V                                  |   |                                     | N/                                      | ~  | ~                                  |                               | N/                                    |                                  |                                      |                                  | X                                 |                     |                                   | Х   |                                | Boring located to evalua                              |
| M-6<br>M-6       |               | SA197-0.5B<br>SA197-10B  | 0.5   |                                 |                | X<br>X                                  | X X                                   | X X                                |   |                                     | X                                       | X  | x                                  |                               | X                                     |                                  |                                      | X                                | X                                 |                     |                                   |   |                                | (AP Plant Transfer Lines<br>of bottom of LOU 16 and   |
| M-6              |               | SA197-10BD               | 10 (dup)                                    |                                 |                | X                                       | X                                     | X                                  |   |                                     | X                                       | X  | X                                  |                               | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                | GW estimated at ~23 fe                                |
| M-6              |               | SA197-21B                | 21  |                                 |                | Х                                       | Х                                     | Х                                  |   |                                     | Х                                       | Х  | Х                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                |   |
| M-6<br>M-6       | SA198         | SA198-0.0B               | 0.0   |                                 |                | x                                       | ~                                     | v                                  | ×                                       |                                     | x                                       | x  | ×                                  |                               | x                                     |                                  |                                      |                                  | x                                 |                     |                                   | X   |                                | Boring located to evalua                              |
| M-6              |               | SA198-0.5B<br>SA198-10B  | 0.5   |                                 |                | x                                       | X                                     | X<br>X                             | X                                       |                                     | X                                       | X  | X                                  |                               | X                                     |                                  |                                      | X                                | X                                 |                     |                                   |   |                                | Plant Transfer Lines to S<br>Located in a low spot of |
| M-6              |               | SA198-27B                | 27  |                                 |                | Х                                       | х                                     | Х                                  | Х                                       |                                     | Х                                       | Х  | Х                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                | and adjacent to the LOU                               |
|                  |               |                          |   |                                 |                |   |                                       |                                    |   |                                     |   |  |                                    |                               |                                       |                                  |                                      |                                  |                                   |                     |                                   |   |                                | releases. LOU 60 flum                                 |
| M-7<br>M-7       | SA63          | SA63-0.0B<br>SA63-0.5B   | 0.0   |                                 |                | x                                       | X                                     | x                                  |   |                                     | x                                       | X  | x                                  |                               |                                       |                                  |                                      | x                                | x                                 |                     |                                   | X   |                                | Boring located to evalua<br>AP Plant SIs and Transf   |
| M-7              |               | SA63-10B                 | 10  |                                 |                | X                                       | X                                     | X                                  |   |                                     | X                                       | X  | X                                  |                               |                                       |                                  |                                      | ~                                | X                                 |                     |                                   |   |                                | for general coverage of                               |
| M-7              |               | SA63-10B                 | 10  | Х                               |                | Х                                       | Х                                     | Х                                  |   |                                     | Х                                       | X  | X                                  |                               |                                       |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                | GW estimated at ~25 fee                               |
| M-7<br>M-7       | SA86          | SA63-23B<br>SA86-0.0B    | 23<br>0.0                                   |                                 |                | Х                                       | Х                                     | Х                                  |   |                                     | Х                                       | Х  | Х                                  |                               |                                       |                                  |                                      |                                  | Х                                 |                     |                                   | х   |                                | Boring located to evalua                              |
| M-7              | 0400          | SA86-0.5B                | 0.5   |                                 |                | X                                       | Х                                     | Х                                  | X                                       | Х                                   | Х                                       | х  | Х                                  | Х                             | Х                                     | Х                                |                                      | Х                                | Х                                 | Х                   | Х                                 | ~   |                                | AP Plant SIs and Transf                               |
| M-7              |               | SA86-10B                 | 10  |                                 |                | Х                                       | Х                                     | Х                                  | Х                                       | Х                                   | Х                                       | Х  | Х                                  | Х                             | Х                                     | Х                                |                                      |                                  | Х                                 | Х                   | Х                                 |   |                                | into Beta Ditch and for g                             |
| M-7<br>M-7       |               | SA86-10BD<br>SA86-28B    | 10 (dup)<br>28                              |                                 |                | X                                       | X<br>X                                | X                                  | X                                       | X                                   | X                                       | X  | X                                  | X                             | X                                     | X                                |                                      |                                  | X                                 | X                   | X                                 |   |                                | GW estimated at ~30 fee                               |
| M-7              | SA92          | SA92-0.0B                | 0.0   |                                 |                | ~                                       | ^                                     | ^                                  | ^                                       | ^                                   | ^                                       | ^  | ^                                  | ^                             | ^                                     | ^                                |                                      |                                  | ^                                 | ^                   | ^                                 | Х   |                                | Boring located to evalua                              |
| M-7              |               | SA92-0.5B                | 0.5   |                                 |                | Х                                       | Х                                     | Х                                  | Х                                       | Х                                   | Х                                       | Х  | Х                                  | Х                             | Х                                     | Х                                |                                      | Х                                | Х                                 | Х                   | Х                                 |   |                                | Eastern Diversion Ditche                              |
| M-7              |               | SA92-10B                 | 10  |                                 |                | X                                       | X                                     | X                                  | <u> </u>                                | X                                   | X                                       | X  | X                                  | X                             | X                                     | X                                |                                      |                                  | X                                 | X                   | X                                 |   |                                | GW estimated at ~33 fe                                |
| M-7<br>M-7       |               | SA92-10B<br>SA92-20B     | 10<br>20                                    | X                               |                | X                                       | X                                     | X                                  | X                                       | X                                   | X                                       | X  | X                                  | X<br>Hold                     | X                                     | X                                |                                      |                                  | X                                 | X                   | Х                                 |   |                                | -   |
| M-7              |               | SA92-31B                 | 31  |                                 |                | X                                       | X                                     | X                                  | X                                       | X                                   | X                                       | X  | X                                  | X                             | X                                     | Х                                |                                      |                                  | X                                 | Х                   | Х                                 |   |                                |   |
| M-7              | SA155         | SA155-0.0B               | 0.0   |                                 |                |   |                                       |                                    |   |                                     |   |  |                                    |                               |                                       |                                  |                                      |                                  |                                   |                     |                                   | Х   |                                | Boring located to evalua                              |
| M-7<br>M-7       |               | SA155-0.5B<br>SA155-10B  | 0.5   |                                 |                | X                                       | X                                     | X<br>X                             | X                                       | X                                   | X                                       | X  | X                                  |                               | X                                     |                                  |                                      | X                                | X                                 |                     |                                   |   |                                | and LOU 57 (AP Plant T<br>potential LOU 22 and 23     |
| M-7              |               | SA155-30B                | 30  |                                 | 1              | X                                       | X                                     | X                                  | X                                       | X                                   | X                                       | X  | x                                  |                               | X                                     |                                  | 1                                    | 1                                | X                                 | 1                   |                                   | 1   |                                | GW estimated at ~32 fee                               |
| M-7              | RSAM7         | RSAM7-0.0B               | 0.0   |                                 |                |   |                                       |                                    |   |                                     |   |  |                                    |                               |                                       |                                  |                                      |                                  |                                   |                     |                                   | Х   |                                | Boring located to evalua                              |
| M-7<br>M-7       |               | RSAM7-0.5B<br>RSAM7-10B  | 0.5   |                                 |                | X                                       | X                                     | X                                  | X                                       | X                                   | X                                       | X  | X                                  | X<br>Hold                     | X<br>X                                |                                  |                                      | X                                | X                                 |                     |                                   |   |                                | AP Plant SIs and Transf<br>coverage for LOU 57, ar    |
| M-7              |               | RSAM7-10B<br>RSAM7-10BD  | 10 (dup)                                    |                                 |                | X                                       | X                                     | X                                  | X                                       | X                                   | X                                       | X  | X                                  | Hold                          | X                                     |                                  |                                      |                                  | X                                 |                     |                                   | 1   |                                | GW estimated at ~30 fee                               |
| M-7              |               | RSAM7-28B                | 28  |                                 |                | X                                       | X                                     | X                                  | X                                       | X                                   | X                                       | X  | X                                  | X                             | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                | ~   |
| M-8              | SA62          | SA62-0.0B                | 0.0   |                                 |                | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | ~                                     |                                    | v                                       |                                     |   |  |                                    |                               |                                       |                                  |                                      |                                  |                                   |                     |                                   | X   |                                | Boring located to evalua                              |
| M-8<br>M-8       |               | SA62-0.5B<br>SA62-0.5BD  | 0.5<br>0.5 (dup)                            |                                 |                | X                                       | X<br>X                                | X<br>X                             | X                                       |                                     | X                                       | X  |                                    |                               |                                       |                                  |                                      | X                                | X                                 |                     |                                   |   |                                | inflow piping outlet to ev<br>GW estimated at ~26 fe  |
| M-8              |               | SA62-10B                 | 10  |                                 |                | X                                       | X                                     | X                                  | X                                       |                                     | X                                       | X  |                                    |                               |                                       |                                  |                                      |                                  | X                                 |                     |                                   |   |                                |   |
| M-8              |               | SA62-24B                 | 24  |                                 |                | X                                       | Х                                     | X                                  | X                                       |                                     | Х                                       | Х  |                                    |                               |                                       |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                |   |
| M-8<br>M-8       | SA71          | SA71-0.0B<br>SA71-0.5B   | 0.0   |                                 |                | x                                       | X                                     | X                                  | Х                                       | X                                   | х                                       | X  | x                                  |                               | x                                     |                                  |                                      | x                                | X                                 |                     |                                   | X   |                                | Boring located to evalua<br>possible overflow releas  |
| M-8              |               | SA71-0.5B                | 10  | 1                               | 1              | x                                       | X                                     | X                                  | X                                       | X                                   | X                                       | X  | x                                  | ··· ···                       | X                                     |                                  | 1                                    |                                  | X                                 | · ·· ·              |                                   | 1   |                                | of SA71.  |
| M-8              |               | SA71-25B                 | 25  |                                 |                | Х                                       | Х                                     | Х                                  | Х                                       | Х                                   | Х                                       | Х  | X                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                | GW estimated at ~38 fe                                |
| M-8              | 64444         | SA71-36B                 | 36  |                                 |                | Х                                       | Х                                     | Х                                  | Х                                       | Х                                   | Х                                       | Х  | Х                                  |                               | Х                                     |                                  |                                      | ļ                                | Х                                 |                     |                                   | ~   |                                | Paring logots of to an                                |
| M-8<br>M-8       | SA144         | SA144-0.0B<br>SA144-0.5B | 0.0   |                                 |                | х                                       | X                                     | x                                  | X                                       | X                                   | х                                       | X  | х                                  |                               | x                                     |                                  |                                      | x                                | X                                 |                     |                                   | X   |                                | Boring located to evalua<br>possible overflow releas  |
| M-8              |               | SA144-10B                | 10  |                                 |                | X                                       | X                                     | X                                  | X                                       | X                                   | X                                       | X  | X                                  |                               | X                                     |                                  |                                      |                                  | X                                 | L                   |                                   | 1   |                                | of LOU 20 for worst case                              |
| M-8              |               | SA144-10BD               | 10 (dup)                                    |                                 |                | X                                       | X                                     | X                                  | Х                                       | Х                                   | Х                                       | X  | X                                  |                               | Х                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                | GW estimated at ~30 fe                                |
| M-8<br>M-8       | SA145         | SA144-28B<br>SA145-0.0B  | 28<br>0.0                                   | -                               |                | Х                                       | Х                                     | Х                                  | Х                                       | Х                                   | Х                                       | Х  | Х                                  |                               | Х                                     | -                                |                                      |                                  | Х                                 |                     |                                   | х   |                                | Boring located to evalua                              |
| M-8              | 07.140        | SA145-0.0B<br>SA145-0.5B | 0.0   | 1                               | +              | x                                       | х                                     | Х                                  | Х                                       | 1                                   | Х                                       | Х  | <u> </u>                           |                               | · · · · ·                             | 1                                | 1                                    | x                                | х                                 | ·····               | <u> </u>                          | 1   |                                | inlet pipe for worst case                             |
| M-8              |               | SA145-0.5B               | 0.5   | Х                               |                | Х                                       | Х                                     | Х                                  | Х                                       |                                     | Х                                       | Х  |                                    |                               |                                       |                                  |                                      | X                                | Х                                 |                     |                                   |   |                                | GW estimated at ~26 fee                               |
| M-8              |               | SA145-10B                | 10  |                                 |                | X                                       | X                                     | X                                  | X                                       |                                     | X                                       | X  |                                    |                               |                                       |                                  |                                      |                                  | X                                 |                     |                                   |   |                                | -   |
| M-8              |               | SA145-24B                | 24  |                                 | 1              | Х                                       | Х                                     | Х                                  | Х                                       |                                     | Х                                       | Х  | 1                                  |                               | 1                                     | 1                                | 1                                    | 1                                | Х                                 | 1                   |                                   | 1   |                                |   |

| Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions)   |
|---|
|   |
| uate LOUs 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer Lines), LOU 57 (AP<br>Sodium Chlorate Process, AP Plant SIs and Transfer Lines), and LOU 60 (Acid Drain System).<br>of bottom of LOU 16 and 17 for worst case coverage, near LOU 60 to evaluate possible piping<br>ral coverage of LOU 57. GW estimated at ~23 feet bgs.<br>must be of Quaternary Alluvium (QaI) soils.<br>must be of Muddy Creek soils & must be dry. If soils not dry, don't collect sample. Choose<br>uate LOU 5 (Beta Ditch), LOU 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer |
| ond AP-4). Located in a low spot downslope of LOU 16 and 17. Upslope of LOU 5 to evaluate<br>ases from LOUs 5, 16, and 17.<br>eet bgs.  |
| Jate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer<br>ated for general coverage of LOU 57 and for site wide coverage.<br>eet bgs.   |
| iate LOUs 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer Lines) and LOU 57<br>es to Sodium Chlorate Process, AP Plant SIs and Transfer Lines). Located in a low spot<br>nd 17 to evaluate worst case conditions and for general coverage of LOU 57.<br>eet bgs.   |
| ate LOU 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer Lines), LOU 57 (AP<br>Sodium Chlorate Process, AP Plant SIs and Transfer Lines), and LOU 60 (Acid Drain System).<br>of bottom of LOU 16 and 17 to evaluate worst case conditions and for general coverage of LOU 57<br>U 60 former conveyance flume to evaluate underlying soils for potential impacts from historical<br>me was on ground surface (0 feet bgs). GW estimated at ~29 feet bgs.   |
| Late LOU 18 (Pond AP-4), and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process,<br>sfer Lines). Located in a low spot in the bottom of LOU 18 to evaluate worst case conditions and<br>if LOU 57.<br>eet bgs.  |
| uate LOU 5 (Beta Ditch) and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process,<br>sfer Lines). Located in the bottom of LOU 5 to evaluate potential impacts from historic discharges<br>general coverage of LOU 57.<br>eet bgs.  |
| Jate LOU 20 (Pond C-1 and Associated Piping) and LOU 5 (Beta Ditch). Located in bottom of<br>he to evaluate upstream tributary releases and potiential overflow releases from LOU 20.<br>eet bgs.   |
| iate LOU 22 (Pond WC-West Associated Piping), LOU 23 (Pond WC-East Associated Piping),<br>Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer Lines). To evaluate<br>23 piping releases and for general stepout coverage of LOU 57.<br>eet bgs.  |
| uate LOU 5 (Beta Ditch) and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process,<br>sfer Lines). Randomly located to provide downslope overflow releases from LOU 5, general<br>and for site wide coverage.<br>eet bgs.  |
| ate LOU 20 (Pond C-1 and Associated Piping). Located in a low spot in the bottom and near an<br>evaluate worst case conditions.<br>eet bgs.   |
| Jate LOU 20 (Pond C-1 and Associated Piping). Located to evaluate<br>ases from historical LOU 5 Beta Ditch and overflows from lou 20; both LOUs are upslope<br>eet bgs.   |
| uate LOU 20 (Pond C-1 and Associated Piping). Located to evaluate<br>ases from historical LOU 5 (before LOU 20 was constructed) and a low spot in bottom<br>se conditions.<br>eet bgs.  |
| iate LOU 20 (Pond C-1 and Associated Piping). Located in a lowspot at the bottom and near an<br>e conditions in LOU 20.<br>eet bgs.   |
|   |

|                  |               |                          |  | La           | aboratory :    | CAS - F                                 | Kelso                                   |                                    |                                |                                     |                                   | CAS - Roches                               | ster                               |                               |                                       |                                  | CAS-H                                | louston                          | GEL -<br>Charleston,<br>SC        | STL-<br>Denver      | Alpha<br>Analytical<br>Sparks, NV | EMSL Westmont,<br>NJ                        | PTS<br>Santa Fe Springs,<br>CA |   |
|------------------|---------------|--------------------------|--|--------------|----------------|---|---|------------------------------------|--------------------------------|-------------------------------------|-----------------------------------|--|------------------------------------|-------------------------------|---------------------------------------|----------------------------------|--------------------------------------|----------------------------------|-----------------------------------|---------------------|-----------------------------------|---|--------------------------------|---|
| Grid<br>Location | Boring<br>No. | Sample ID<br>Number      | Sample<br>Depths <sup>1</sup><br>(ft. bgs) |              | SPLP<br>Sample | Perchlorate<br>(EPA 314.0)              | Metals <sup>2.</sup><br>(EPA 6020)      | Hex Cr <sup>3.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B)              | VOCs <sup>4.</sup><br>(EPA 8260B) | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total Cyanide<br>L.<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA<br>1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup> | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Geotechnical<br>Tests          |   |
|                  |               |                          |  | Number of Co | ontainers :    | 1 - 4 oz ja                             | ar                                      |                                    | -                              | 1- 40 ml VOA<br>vial w/<br>methanol | 3 VOA vials<br>(TerraCore<br>Kit) |  | 3 - 4 oz. Jars                     |                               |                                       | -                                | 1 - 4 o                              | z. Jar                           | 1-250 ml jar<br>(plastic)         | 1-4 oz Jar          | 1-4 oz Jar                        | <u>≥</u> 1 kg<br>in plastic bag             | 2 brass tubes                  |   |
|                  |               |                          |  |              |                |   |   | Borin                              | gs are orgar                   | nized by gr                         | id location                       | as shown o                                 | on Plate A - Sta                   | rting poir                    | nt is on the                          | e northwes                       | tern mos                             | t grid in                        | Area II (M                        | -2) and en          | nding with th                     | e southeastern                              | most grid in A                 |   |
| M-8<br>M-8       | RSAM8         | RSAM8-0.0B<br>RSAM8-0.5B | 0.0  |              |                | x                                       | X                                       | x                                  | x                              | x                                   | x                                 | x  | x                                  | X                             | x                                     |                                  |                                      | x                                | x                                 |                     |                                   | X   |                                | Boring located to evaluate<br>releases from LOU 20 and    |
| M-8              |               | RSAM8-10B                | 10   |              |                | X                                       | X                                       | X                                  | X                              | X                                   | X                                 | X  | X                                  | Hold                          | X                                     |                                  |                                      | ~                                | X                                 |                     |                                   |   |                                | GW estimated at ~33 feet                                  |
| M-8              |               | RSAM8-20B                | 20   |              |                | X                                       | X                                       | Х                                  | X                              | Х                                   | X                                 | Х  | X                                  | Hold                          | X                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                |   |
| M-8<br>M-8       |               | RSAM8-20BD<br>RSAM8-31B  | 20 (dup)<br>31                             | )            |                | X                                       | X<br>X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  | Hold<br>X                     | X                                     |                                  |                                      |                                  | x                                 |                     |                                   |   |                                |   |
| N-4              | SA165         | SA165-0.0B               | 0.0  |              |                | ~                                       | ~                                       | Χ.                                 | Λ                              | ~                                   |                                   | ~  | ~                                  | Λ                             | ~                                     |                                  |                                      |                                  | ~                                 |                     |                                   | Х   |                                | Boring located to evaluate                                |
| N-4              |               | SA165-0.5B               | 0.5  |              |                | X                                       | X                                       | X                                  | X                              |                                     | X                                 | X  | X                                  | X                             | X                                     | X                                |                                      | X                                | X                                 | X                   | X                                 |   |                                | storm sewer outfall into th                               |
| N-4<br>N-4       |               | SA165-10B<br>SA165-10B   | 10<br>10                                   | x            |                | X                                       | X                                       | X                                  | X                              |                                     | X                                 | X  | X                                  | X                             | X                                     | X                                |                                      |                                  | X                                 | X                   | X                                 |   |                                | GW estimated at ~30 feet                                  |
| N-4              |               | SA165-28B                | 28   |              |                | X                                       | X                                       | X                                  | X                              |                                     | X                                 | X  | X                                  | X                             | X                                     | X                                |                                      |                                  | X                                 | X                   | X                                 |   |                                |   |
| N-5              | SA58          | SA58-0.0B                | 0.0  |              |                | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | V                                       | X                                  |                                |                                     | V                                 | V  |                                    | V                             | ×.                                    |                                  |                                      | V                                | v                                 | ×                   |                                   | Х   |                                | Boring located to evaluate                                |
| N-5<br>N-5       |               | SA58-0.5B<br>SA58-10B    | 0.5  |              |                | X                                       | X<br>X                                  | X                                  |                                |                                     | X                                 | X  | X                                  | X<br>Hold                     | X                                     |                                  |                                      | X                                | X                                 | X                   | X                                 |   |                                | Lines). Located as an ups<br>GW estimated at ~30 feet     |
| N-5              |               | SA58-28BD                | 28 (dup)                                   | )            |                | Х                                       | Х                                       | Х                                  |                                |                                     | Х                                 | Х  | Х                                  | Х                             | Х                                     |                                  |                                      |                                  | Х                                 | Х                   | Х                                 |   |                                |   |
| N-5<br>N-5       | SA94          | SA58-28B<br>SA94-0.0B    | 28<br>0.0                                  | _            |                | Х                                       | Х                                       | Х                                  |                                |                                     | Х                                 | Х  | Х                                  | Х                             | Х                                     | -                                |                                      |                                  | Х                                 | Х                   | Х                                 | х   |                                | Boring located to evaluate                                |
| N-5              | 5A94          | SA94-0.0B<br>SA94-0.5B   | 0.0  |              |                | x                                       | х                                       | X                                  |                                |                                     | X                                 | X  | x                                  |                               | x                                     |                                  |                                      | x                                | X                                 |                     |                                   | ^   |                                | Lines). Located to evaluate                               |
| N-5              |               | SA94-10B                 | 10   |              |                | Х                                       | Х                                       | Х                                  |                                |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                | GW estimated at ~31 feet                                  |
| N-5<br>N-5       | SA113         | SA94-29B<br>SA113-0.0B   | 29<br>0.0                                  |              |                | Х                                       | Х                                       | Х                                  |                                |                                     | Х                                 | Х  | X                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   | Х   |                                | Boring located to evaluate                                |
| N-5              | OATIS         | SA113-0.5B               | 0.5  |              |                | Х                                       | Х                                       | Х                                  |                                |                                     | Х                                 | Х  | х                                  |                               | Х                                     |                                  |                                      | Х                                | Х                                 |                     |                                   | ~   |                                | Lines). Located adjacent t                                |
| N-5              |               | SA113-10B                | 10   |              |                | X                                       | Х                                       | Х                                  |                                |                                     | Х                                 | Х  | X                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                | GW estimated at ~32 feet                                  |
| N-5<br>N-5       | RSAN5         | SA113-30B<br>RSAN5-0.0B  | 30<br>0.0                                  | _            |                | Х                                       | Х                                       | Х                                  |                                |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   | х   |                                | Boring located to evaluate                                |
| N-5              | 100/110       | RSAN5-0.5B               | 0.5  |              |                | Х                                       | Х                                       | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  | Х                             | Х                                     |                                  |                                      | х                                | Х                                 |                     |                                   | ~   |                                | GW estimated at ~35 feet                                  |
| N-5              |               | RSAN5-10B                | 10   |              |                | X                                       | X                                       | X                                  | X                              |                                     | X                                 | X  | X                                  | Hold                          | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                |   |
| N-5<br>N-5       |               | RSAN5-20B<br>RSAN5-33B   | 20<br>33                                   |              |                | X X                                     | X                                       | X                                  | X                              |                                     | X                                 | X  | X X                                | Hold<br>X                     | X                                     |                                  |                                      |                                  | x                                 |                     |                                   |   |                                | -   |
| N-6              | SA196         | SA196-0.0B               | 0.0  |              |                | ~~~~                                    | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |                                    |                                |                                     |                                   | ~~~~~                                      | ~~~~~                              | ~                             | , A                                   |                                  |                                      |                                  | ~                                 |                     |                                   | Х   |                                | Boring located to evaluate                                |
| N-6              |               | SA196-0.5B               | 0.5  |              |                | X                                       | X                                       | X                                  |                                |                                     | X                                 | X  | X                                  |                               | X                                     |                                  |                                      | X                                | X                                 |                     |                                   |   |                                | Lines). Located along ass                                 |
| N-6<br>N-6       |               | SA196-10B<br>SA196-29B   | 10<br>29                                   |              |                | X                                       | X                                       | X                                  |                                |                                     | X                                 | x  | X                                  |                               | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                | GW estimated at ~31 feet                                  |
| N-6              | SA60          | SA60-0.0B                | 0.0  |              |                |   |   |                                    |                                |                                     |                                   |  |                                    |                               |                                       |                                  |                                      |                                  |                                   |                     |                                   | Х   |                                | Boring located to evaluate                                |
| N-6<br>N-6       |               | SA60-0.5B<br>SA60-10B    | 0.5  |              |                | X                                       | X<br>X                                  | X                                  |                                |                                     | X                                 | X<br>X                                     | X X                                |                               | X                                     |                                  |                                      | X                                | X                                 |                     |                                   |   |                                | Chlorate Process, AP Plat<br>(see LOU 53 summary for      |
| N-6              |               | SA60-10B<br>SA60-20B     | 20   |              |                | ×                                       | X                                       | X                                  |                                |                                     | X                                 | × ×  | ×                                  |                               | X                                     |                                  |                                      |                                  | x                                 |                     |                                   |   |                                | GW estimated at ~35 feet                                  |
| N-6              |               | SA60-20BD                | 20 (dup)                                   | )            |                | X                                       | Х                                       | Х                                  |                                |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                |   |
| N-6<br>N-6       | SA105         | SA60-33B<br>SA105-0.0B   | 33<br>0.0                                  |              |                | X                                       | Х                                       | Х                                  |                                |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   | Х   |                                | Boring located to evaluate                                |
| N-6              | 0/1100        | SA105-0.5B               | 0.5  |              |                | Х                                       | Х                                       | Х                                  | Х                              |                                     | Х                                 | Х  | X                                  |                               |                                       |                                  |                                      | Х                                | Х                                 |                     |                                   |   |                                | Chlorate Process, AP Pla                                  |
| N-6              |               | SA105-10B                | 10   |              |                | X                                       | X                                       | X                                  | X                              |                                     | X                                 | X  | X                                  |                               |                                       |                                  |                                      |                                  | X                                 |                     |                                   |   |                                | (see LOU 53 summary for                                   |
| N-6<br>N-6       |               | SA105-10BD<br>SA105-20B  | 10 (dup)<br>20                             | )            |                | X                                       | X<br>X                                  | X                                  | X                              |                                     | X                                 | X  | X X                                |                               |                                       |                                  |                                      |                                  | X                                 |                     |                                   |   |                                | GW estimated at ~33 feet                                  |
| N-6              |               | SA105-31B                | 31   |              |                | Х                                       | Х                                       | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  |                               |                                       |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                | -   |
| N-6<br>N-6       | SA150         | SA150-0.0B<br>SA150-0.5B | 0.0  |              |                | X                                       | х                                       | x                                  | x                              |                                     | x                                 | x  | X                                  |                               | x                                     |                                  |                                      | X                                | x                                 |                     |                                   | X   |                                | Boring located to evaluate<br>GW estimated at ~32 feet    |
| N-6              |               | SA150-0.5B               | 0.5  | X            |                | x                                       | X                                       | X                                  | X                              |                                     | x                                 | X  | x                                  |                               | X                                     | 1                                |                                      | X                                | X                                 |                     |                                   |   |                                | GW estimated at ~32 leet                                  |
| N-6              |               | SA150-10B                | 10   |              |                | Х                                       | Х                                       | Х                                  | Х                              |                                     | Х                                 | X  | Х                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                | -   |
| N-6<br>N-6       | RSAN6         | SA150-30B<br>RSAN6-0.0B  | 30<br>0.0                                  |              |                | Х                                       | Х                                       | Х                                  | Х                              | +                                   | Х                                 | Х  | Х                                  |                               | Х                                     | +                                | ł                                    |                                  | Х                                 | 1                   | +                                 | х   | ł                              | Boring located to evaluate                                |
| N-6              |               | RSAN6-0.5B               | 0.5  |              |                | Х                                       | Х                                       | Х                                  | Х                              |                                     | Х                                 | Х  |                                    | Х                             | Х                                     |                                  |                                      | Х                                | Х                                 |                     |                                   | X   |                                | GW estimated at ~35 feet                                  |
| N-6<br>N-6       |               | RSAN6-10B<br>RSAN6-10BD  | 10<br>10 (dup)                             |              |                | X<br>X                                  | X<br>X                                  | X                                  | X                              |                                     | X<br>X                            | X<br>X                                     |                                    | Hold<br>Hold                  | X<br>X                                |                                  |                                      |                                  | X<br>X                            |                     |                                   |   |                                | -   |
| N-6              |               | RSAN6-20B                | 10 (dup)<br>20                             |              |                | x                                       | X                                       | X                                  | X                              |                                     | X                                 | X X  |                                    | Hold                          | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                | -   |
| N-6              |               | RSAN6-33B                | 33   |              |                | Х                                       | Х                                       | Х                                  | Х                              |                                     | Х                                 | Х  |                                    | Х                             | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                |   |
| N-6<br>N-6       | SA151         | SA151-0.0B<br>SA151-0.5B | 0.0  |              |                | х                                       | x                                       | x                                  | x                              | +                                   | x                                 | x  |                                    |                               | x                                     |                                  | l                                    | x                                | x                                 |                     |                                   | X   |                                | Boring located to evaluate<br>potential releases.         |
| N-6              |               | SA151-0.5B<br>SA151-10B  | 0.5  |              |                | X                                       | X                                       | X                                  | X                              |                                     | X                                 | X  |                                    |                               | X                                     |                                  |                                      | · . ^                            | X                                 |                     |                                   |   |                                | GW estimated at ~41 feet                                  |
| N-6              |               | SA151-25B                | 25   |              |                | Х                                       | Х                                       | Х                                  | Х                              |                                     | Х                                 | Х  |                                    |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                | ]   |
| N-6<br>N-6       |               | SA151-39B<br>SA151-39BD  | 39<br>39 (dup)                             |              |                | X                                       | X<br>X                                  | X                                  | X                              |                                     | X                                 | X  |                                    |                               | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                | -   |
| N-7              | SA49          | SA49-0.0B                | 0.0  |              |                |   |   |                                    |                                |                                     |                                   |  |                                    |                               |                                       |                                  |                                      |                                  |                                   |                     |                                   | Х   |                                | Boring located to evaluate                                |
| N-7              |               | SA49-0.5B                | 0.5  |              |                | X                                       | X                                       | X                                  | X                              | X                                   | X                                 | X  | X                                  |                               | X                                     |                                  |                                      | х                                | X                                 |                     |                                   |   |                                | AP Plant SIs and Transfer                                 |
| N-7<br>N-7       |               | SA49-10B<br>SA49-20B     | 10<br>20                                   |              |                | X<br>X                                  | X<br>X                                  | X                                  | X X                            | X X                                 | X                                 | X  | X X                                |                               | X                                     | +                                |                                      |                                  | X                                 |                     |                                   | +   | <b> </b>                       | and for general coverage<br>GW estimated at ~34 feet      |
| N-7              |               | SA49-32B                 | 32   |              |                | X                                       | X                                       | X                                  | X                              | X                                   | X                                 | X  | X                                  |                               | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                |   |
| N-7<br>N-7       | SA154         | SA154-0.0B               | 0.0  |              |                | X                                       | x                                       | x                                  | x                              | X                                   | x                                 | x  | X                                  | X                             | x                                     | x                                |                                      | X                                | ~                                 | X                   | X                                 | Х   |                                | Boring located to evaluate<br>of the Eastern Diversion d  |
| N-7<br>N-7       |               | SA154-0.5B<br>SA154-10B  | 0.5  |              |                | X                                       | X                                       | X                                  | X                              | X                                   | X                                 | X  | X                                  | X                             | X                                     | X                                |                                      | ^                                | X                                 | X                   | X                                 |   |                                | of the Eastern Diversion d<br>source flows into Beta Dite |
| N-7              |               | SA154-20B                | 20   |              |                | Х                                       | Х                                       | Х                                  | Х                              | Х                                   | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                | on the ground surface (0 f                                |
| N-7              |               | SA154-33B                | 33   |              |                | Х                                       | Х                                       | Х                                  | Х                              | Х                                   | Х                                 | Х  | Х                                  | Х                             | Х                                     | Х                                |                                      |                                  | Х                                 | Х                   | Х                                 |   |                                | GW estimated at ~35 feet                                  |

| Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions)   |
|---|
|   |
| ate LOU 20 (Pond C-1 and Associated Piping). Randomly located to evaluate possible overflow<br>and for site wide coverage.<br>set bgs.  |
| ate LOU 5 (Beta Ditch). Located in the bottom of the ditch to evaluate for potential impacts from<br>the Western Diversion Ditch segment of Beta Ditch.<br>eet bgs.   |
| ate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer<br>ipslope stepout for general coverage of LOU 57.<br>eet bgs.  |
| ate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer<br>uate potential releases from historical piping releases associated with LOU 57.<br>set bgs.  |
| ate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer<br>nt to LOU 57 associated pipeline to evaluate potential releases.<br>set bgs.   |
| ate general site wide subsurface soil conditions; not associated with a specific LOU.<br>eet bgs.   |
| ate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer<br>associated piping for LOU 57 and as an upslope stepout to LOU 57.<br>aet bgs.  |
| ate LOU 53 (AP Plant Area Tank Farm) and LOU 57 (AP Plant Transfer Lines to Sodium<br>Plant SI's and Transfer Lines). Located at a low spot at location of former tanks in LOU 53<br>for historical source) to evaluate worst case conditions, and for general coverage of LOU 57.<br>aet bgs.                          |
| ate LOU 53 (AP Plant Area Tank Farm) and LOU 57 (AP Plant Transfer Lines to Sodium<br>Vant SI's and Transfer Lines). Located at a low spot at location of former tanks in LOU 53<br>for historical source) to evaluate worst case conditions, and for general coverage of LOU 57.<br>set bgs.                           |
| ate general Site-wide conditions, is not associated with a specific LOU.<br>eet bgs.  |
| ate general Site-wide conditions. Randomly located boring not associated with a specific LOU.<br>eet bgs.   |
| ate LOU 20 (Pond C-1 and Associated Piping). Located along LOU 20 piping to evaluate<br>set bgs.  |
| ate LOU 5 (Beta Ditch) and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process,<br>fer Lines). Located as a downslope stepout for LOU 5 to evaluate potential overflows releases<br>ge of LOU 57.<br>set bgs.  |
| ate LOU 5 (Beta Ditch) and LOU 60 (Acid Drain System) conveyance route. Located in the bottom<br>n ditch of LOU 5 to evaluate underlying soil for potential impacts from historical upstream tributary<br>Ditch. The former segment of LOU 60 conveyance system consisted of a flume that was situated<br>(0 feet bgs). |

|                  |               |                          |   | ı                               | Laboratory :   | CAS -                      | Kelso                              |                                    |                                |                                     |                                   | CAS - Roches                               | ter                                |                               |                                       |                                  | CAS - Housto                                     | n GEL -<br>Charlestor<br>SC | STL-<br>Denve         | Alpha<br>Analytical<br>Sparks, NV | EMSL Westmont<br>NJ                         | PTS<br>' Santa Fe Springs,<br>CA |   |
|------------------|---------------|--------------------------|---|---------------------------------|----------------|----------------------------|------------------------------------|------------------------------------|--------------------------------|-------------------------------------|-----------------------------------|--|------------------------------------|-------------------------------|---------------------------------------|----------------------------------|--|-----------------------------|-----------------------|-----------------------------------|---|----------------------------------|---|
| Grid<br>Location | Boring<br>No. | Sample ID<br>Number      | Sample<br>Depths <sup>1.</sup><br>(ft. bgs) | Matrix<br>Spike/MS<br>Duplicate | SPLP<br>Sample | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>3.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B)              |                                   | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total Cyanide<br>L.<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup> Dioxi<br>(EPA<br>1668A) Furar | ns/ Radio-                  | 0. OPPs <sup>11</sup> | Organic                           | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Geotechnical<br>Tests            |   |
|                  |               |                          |   | Number of C                     | Containers :   | 1 - 4 oz                   | jar                                |                                    |                                | 1- 40 ml VOA<br>vial w/<br>methanol | 3 VOA vials<br>(TerraCore<br>Kit) |  | 3 - 4 oz. Jars                     |                               | •                                     |                                  | 1 - 4 oz. Jar                                    | 1-250 ml j<br>(plastic)     |                       | ar 1-4 oz Jar                     | ≥1 kg<br>in plastic bag                     | 2 brass tubes                    |   |
|                  | 1             |                          |   | 1                               |                |                            |                                    | Borin                              | gs are orgar                   | nized by gr                         | id location                       | as shown o                                 | on Plate A - Sta                   | rting poir                    | nt is on the                          | northwes                         | stern most grid                                  | in Area II (M               | /I-2) and e           | ending with th                    | he southeastern                             | most grid in A                   |   |
| N-7<br>N-7       | SA107         | SA107-0.0B<br>SA107-0.5B | 0.0   |                                 |                | x                          | x                                  | X                                  | x                              | x                                   | x                                 | X  | X                                  | x                             | ×                                     | X                                | x x  | ×                           | x                     | X                                 | X   |                                  | Boring located to evaluate<br>potential impacts from h  |
| N-7              |               | SA107-10B                | 10  |                                 |                | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  | X                             | X                                     | X                                | X  | X                           | X                     | X                                 |   |                                  | GW estimated at ~31 fe  |
| N-7              |               | SA107-10BD               | 10 (dup)                                    |                                 |                | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  | X                             | X                                     | X                                | X  | X                           | X                     | X                                 |   |                                  | -   |
| N-7<br>N-7       | RSAN7         | SA107-29B<br>RSAN7-0.0B  | 29<br>0.0                                   |                                 |                | Х                          | Х                                  | Х                                  | Х                              | Х                                   | Х                                 | Х  | Х                                  | Х                             | Х                                     | Х                                | X  | Х                           | Х                     | Х                                 | X   |                                  | Boring located to evaluate  |
| N-7              | NOAN          | RSAN7-0.5B               | 0.5   |                                 |                | Х                          | х                                  | Х                                  | Х                              | Х                                   | Х                                 | Х  | X                                  | Х                             | Х                                     |                                  | X  | Х                           |                       |                                   |   |                                  | Associated Piping), and   |
| N-7              |               | RSAN7-10B                | 10  |                                 |                | X                          | X                                  | X                                  | X                              | Х                                   | X                                 | X  | X                                  | Hold                          | X                                     |                                  |  | X                           |                       |                                   |   |                                  | Diversion Ditch of LOU  |
| N-7<br>N-7       |               | RSAN7-25B<br>RSAN7-38B   | 25<br>38                                    |                                 |                | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  | Hold<br>X                     | X                                     |                                  |  | X X                         |                       |                                   |   |                                  | releases from LOUs 22<br>GW estimated at ~40 fe   |
| N-8              | SA61          | SA61-0.0B                | 0.0   |                                 |                | ~                          | ~                                  | ~                                  | ~                              | X                                   | ~                                 | ~  | ~                                  | ~                             | ~                                     |                                  |  | ~                           |                       |                                   | Х   |                                  | Boring located to evalua  |
| N-8              |               | SA61-0.5B                | 0.5   |                                 |                | Х                          | Х                                  | Х                                  |                                | Х                                   | Х                                 | Х  |                                    |                               |                                       |                                  | X  |                             |                       |                                   |   |                                  | outfall piping to evaluat   |
| N-8<br>N-8       |               | SA61-10B<br>SA61-30B     | 10<br>30                                    |                                 |                | X                          | X                                  | X                                  |                                | X                                   | X                                 | X  |                                    |                               |                                       |                                  |  | X                           |                       |                                   |   |                                  | _overflow releases.<br>GW estimated at ~32 fe   |
| N-8              | SA158         | SA01-30B<br>SA158-0.0B   | 0.0   |                                 |                | ^                          | ^                                  | ^                                  |                                | ^                                   | ^                                 | ^  |                                    |                               |                                       |                                  |  | ^                           |                       | _                                 | X   |                                  | Boring located to evalu   |
| N-8              | 0,1100        | SA158-0.5B               | 0.5   |                                 |                | X                          | Х                                  | Х                                  | Х                              | Х                                   | Х                                 | Х  | X                                  |                               | Х                                     |                                  | X  | Х                           |                       |                                   | <u>`</u>                                    |                                  | outfall piping to evaluat   |
| N-8              |               | SA158-10B                | 10  |                                 |                | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  |                               | X                                     |                                  |  | <u>X</u>                    |                       |                                   |   |                                  | overflow releases.  |
| N-8<br>N-8       |               | SA158-20B<br>SA158-31B   | 20<br>31                                    |                                 |                | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  |                               | X                                     |                                  |  | X X                         |                       |                                   |   |                                  | GW estimated at ~33 fe  |
| 0-4              | SA54          | SA54-0.0B                | 0.0   |                                 |                | ^                          | ~                                  | ~                                  | ~                              | ~                                   | ~                                 | ~  | ^                                  |                               | ~                                     |                                  |  | ~                           |                       | +                                 | Х   |                                  | Boring located to evalu   |
| 0-4              |               | SA54-0.5B                | 0.5   |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  | X  |                             |                       |                                   |   |                                  | GW estimated at ~33 fe  |
| <u> </u>         |               | SA54-10B<br>SA54-20B     | 10  |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  |                               | X                                     |                                  |  | X X                         |                       |                                   |   |                                  | -   |
| 0-4              |               | SA54-20B<br>SA54-31B     | 20<br>31                                    |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  |                               | X                                     |                                  |  | X                           |                       |                                   |   |                                  |   |
| 0-4              |               | SA54-31B                 | 31  | X                               |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  |                               | X                                     |                                  |  | X                           |                       |                                   |   |                                  | -   |
| 0-5              | SA41          | SA41-0.0B                | 0.0   |                                 |                |                            |                                    |                                    |                                |                                     |                                   |  |                                    |                               |                                       |                                  |  |                             |                       |                                   | Х   |                                  | Boring located to evalu   |
| 0-5<br>0-5       |               | SA41-0.5B<br>SA41-12B    | 0.5   |                                 |                | X                          | X<br>X                             | X                                  | X                              |                                     | X                                 | X<br>X                                     | X X                                |                               | X                                     |                                  | X  | X X                         |                       |                                   |   |                                  | System). Located on the<br>for historic details) and  |
| 0-5              |               | SA41-12B<br>SA41-25B     | 25  |                                 |                | x                          | × ×                                | X                                  | X                              |                                     | X                                 | ×  | X                                  |                               | X                                     |                                  |  | X                           |                       |                                   |   |                                  | LOU 60 pipeline invert  |
| 0-5              |               | SA41-38B                 | 38  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |  | Х                           |                       |                                   |   |                                  | GW estimated at ~40 fe  |
| 0-5              | SA44          | SA44-0.0B<br>SA44-0.5B   | 0.0   |                                 |                | v                          | v                                  |                                    | x                              |                                     | ~                                 | v  | ~~~~~                              |                               | x                                     |                                  | v  | ~~~~~                       |                       |                                   | X   |                                  | Boring located to evalu   |
| O-5<br>O-5       |               | SA44-0.5B<br>SA44-10B    | 0.5   |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  |                               | X                                     |                                  | X  | X X                         |                       |                                   |   |                                  | aboveground storage ta<br>GW estimated at ~44 fe  |
| 0-5              |               | SA44-25B                 | 25  |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  |                               | X                                     |                                  |  | X                           |                       |                                   |   |                                  |   |
| 0-5              | 01.45         | SA44-42B                 | 42  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |  | Х                           | _                     |                                   | ~   |                                  |   |
| O-5<br>O-5       | SA45          | SA45-0.0B<br>SA45-0.5B   | 0.0   |                                 |                | ×                          | x                                  | X                                  | X                              |                                     | X                                 | x  | X                                  |                               | X                                     |                                  | x  | X                           |                       |                                   | X   |                                  | Boring located to evaluate<br>of a former tank to eval  |
| 0-5              |               | SA45-0.5BD               | 0.5 (dup)                                   |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  |                               | X                                     |                                  | X  |                             |                       |                                   |   |                                  | location. LOU 60 pipel  |
| 0-5              |               | SA45-10B                 | 10  |                                 |                | X                          | X                                  | Х                                  | X                              |                                     | X                                 | X  | X                                  |                               | Х                                     |                                  |  | X                           |                       |                                   |   |                                  | GW estimated at ~38 fe  |
| O-5<br>O-5       |               | SA45-25B<br>SA45-36B     | 25<br>36                                    |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X X                                |                               | <u> </u>                              |                                  |  | X                           |                       |                                   |   |                                  | and the second se |
| 0-5              | SA106         | SA106-0.0B               | 0.0   |                                 |                | ~                          | X                                  | X                                  | X                              |                                     | ~                                 | X  | ~                                  |                               | ~                                     |                                  |  | ~                           |                       |                                   | Х   |                                  | Boring located to evalu   |
| O-5              |               | SA106-0.5B               | 0.5   |                                 |                | X                          | Х                                  | Х                                  | Х                              | Х                                   | Х                                 | Х  | Х                                  | Х                             | Х                                     |                                  | X  |                             | Х                     | X                                 |   |                                  | of pond where historic l  |
| O-5<br>O-5       |               | SA106-0.5B<br>SA106-12B  | 0.5   | X                               |                | X X                        | X<br>X                             | X<br>X                             | X                              | X                                   | X                                 | X<br>X                                     | X X                                | X<br>X                        | X                                     |                                  | X  | X                           | X X                   | X X                               |   |                                  | GW estimated at~37 fe<br>LOU 60 pipeline invert   |
| 0-5              |               | SA106-20B                | 20  |                                 |                | x                          | X                                  | X                                  | - Â                            | X                                   | X                                 | X  | x                                  | Hold                          | X                                     |                                  |  |                             | ^                     | ^                                 |   |                                  | _LOO 00 pipeline invert   |
| O-5              |               | SA106-35B                | 35  |                                 |                | Х                          | Х                                  | Х                                  | Х                              | Х                                   | Х                                 | Х  | Х                                  | Х                             | Х                                     |                                  |  | Х                           | Х                     | Х                                 |   |                                  |   |
| 0-5              | SA50          | SA50-0.0B<br>SA50-0.5B   | 0.0   |                                 |                | x                          | x                                  |                                    | X                              | ~                                   | x                                 | ~  | ~                                  |                               | x                                     |                                  | x  | x                           |                       |                                   | X   |                                  | Boring located as a we  |
| O-5<br>O-5       |               | SA50-0.5B<br>SA50-12B    | 12  |                                 |                | x                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  |                               | X                                     |                                  | <u> </u>   |                             |                       |                                   |   |                                  | site conditions and pos<br>from LOU 60 (former A  |
| O-5              |               | SA50-12BD                | 12 (dup)                                    |                                 |                | x                          | Х                                  | Х                                  | Х                              | Х                                   | Х                                 | Х  | Х                                  |                               | X                                     |                                  |  | Х                           |                       |                                   |   |                                  | LOU 60 pipeline invert  |
| 0-5              |               | SA50-25B                 | 25  |                                 |                | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  |                               | X                                     |                                  |  | X                           |                       |                                   |   |                                  | GW estimated at ~38 fe  |
| O-5<br>O-5       | SA53          | SA50-36B<br>SA53-0.0B    | 36<br>0.0                                   |                                 |                | Х                          | Х                                  | Х                                  | Х                              | Х                                   | Х                                 | Х  | Х                                  |                               | Х                                     |                                  | <u>├                                    </u>     | X                           |                       |                                   | X   | 1                                | Boring located to evaluate  |
| O-5              | 5, 00         | SA53-0.5B                | 0.5   |                                 |                | X                          | Х                                  | Х                                  | X                              | Х                                   | Х                                 | Х  | Х                                  |                               | X                                     |                                  | x  |                             |                       |                                   |   |                                  | Facilities), and LOU 9 (  |
| 0-5              |               | SA53-10B                 | 10  |                                 |                | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  |                               | X                                     |                                  |  | X                           |                       |                                   |   |                                  | evaluate potential over   |
| O-5<br>O-5       |               | SA53-25B<br>SA53-32B     | 25<br>32                                    |                                 |                | X<br>X                     | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  |                               | X                                     |                                  | <u> </u>   | X                           |                       |                                   |   | -                                | GW estimated at ~34 fe  |
| 0-5              | SA102         | SA102-0.0B               | 0.0   |                                 |                |                            |                                    |                                    |                                |                                     |                                   |  |                                    |                               |                                       |                                  |  | ^                           |                       |                                   | Х   | 1                                | Boring located to evalu   |
| O-5              |               | SA102-0.5B               | 0.5   |                                 |                | X                          | Х                                  | Х                                  | Х                              | Х                                   | Х                                 | Х  | X                                  |                               | Х                                     |                                  | Х  |                             |                       |                                   |   |                                  | Located at a lowspot in   |
| O-5<br>O-5       |               | SA102-10B<br>SA102-10B   | 10<br>10                                    |                                 | x              | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X X                                |                               | <u> </u>                              |                                  | <b>├</b> ──── <b>│</b> ────                      | X X                         |                       |                                   |   | x                                | GW estimated at ~32 fe<br>10-Foot SPLP sample   |
| 0-5              |               | SA102-10B<br>SA102-30B   | 30  |                                 | ^              | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  |                               | X                                     |                                  | <u> </u>   | X                           |                       |                                   |   |                                  |   |
| O-5              |               | SA102-30B                | 30 DD*                                      |                                 | Х              | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  |                               | X                                     |                                  |  | X                           |                       |                                   |   | X                                | SPLP sample must be   |
| 0-5              | SA109         | SA109-0.0B               | 0.0   |                                 |                |                            |                                    |                                    | V                              | ~                                   |                                   | ~  |                                    |                               | ~                                     |                                  |  | ~                           |                       |                                   | X   |                                  | Boring located to evalu   |
| O-5<br>O-5       |               | SA109-0.5B<br>SA109-10B  | 0.5   |                                 |                | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  |                               | X                                     |                                  | X  | X                           |                       |                                   |   | -                                | sidewall where soil stai<br>GW estimated at ~36 fe  |
| 0-5              |               | SA109-10B<br>SA109-25B   | 25  |                                 |                | x                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | x                                  |                               | X                                     |                                  |  | ^<br>X                      |                       |                                   |   |                                  | at countaied at ~30 lt  |
| O-5              |               | SA109-34B                | 34  | 1                               |                | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  |                               | X                                     |                                  |  | X                           |                       |                                   |   |                                  | 1   |
| O-5<br>O-5       | SA114         | SA114-0.0B<br>SA114-0.5B | 0.0   |                                 |                | ~ ~ ~                      | x                                  |                                    | x                              |                                     | ~                                 | v  |                                    |                               | ~                                     |                                  |  | ~~~~~                       |                       |                                   | X   |                                  | Boring located to evalu<br>where white encrustation   |
| 0-5<br>0-5       |               | SA114-0.5BD              | 0.5<br>0.5 (dup)                            |                                 |                | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  | X                                  |                               | X                                     |                                  | X  |                             |                       |                                   |   |                                  | GW estimated at ~32 fe  |
| O-5              |               | SA114-10B                | 10  |                                 |                | Х                          | Х                                  | Х                                  | Х                              | Х                                   | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |  | Х                           |                       |                                   |   |                                  |   |
| O-5              |               | SA114-30B                | 30  |                                 |                | Х                          | Х                                  | Х                                  | Х                              | Х                                   | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |  | Х                           |                       |                                   |   |                                  |   |

| Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions)   |
|---|
|   |
| ate LOU 5 (Beta Ditch). Located in the bottom of the Eastern Diversion Ditch to evaluate  |
| istorical upstream tributary source flows into Beta Ditch.<br>et bgs.   |
| ate LOU 5 (Beta Ditch), LOU 20 (Pond C-1 and Associated Piping), LOU 22 (Pond WC-West<br>LOU 23 (Pond WC-East Associated Piping). Randomly located in a low spot of the Eastern<br>5 to evaluate possible releases and overflow runoff from LOU 20. Also to evaluate potential<br>and 23 piping.<br>et bqs. |
| ate LOU 20 (Pond C-1 and Associated Piping). Located adjacent to a sharp bend in LOU 20<br>e possible pipeline releases and upslope of LOU 20 to evaluate<br>net bqs.   |
| te LOU 20 (Pond C-1 and Associated Piping). Located adjacent to a sharp bend in LOU 20<br>e possible pipeline releases and upslope of LOU 20 to evaluate<br>et bgs.   |
| ate general site wide subsurface soil conditions and not associated with a specific LOU.<br>et bgs.   |
| ate LOU 45 (Diesel Storage Tanks), LOU 59 (Storm Sewer System), and LOU 60 Acid Drain<br>te perimeter of the former aboveground storage tank to evaluate potential releases (see text<br>between LOUs 59 and 60 to evaluate possible piping releases.<br>occurs at approximately 11 feet bgs.<br>et bgs.    |
| ate LOU 45 (Diesel Storage Tanks), System). Located on the perimeter of the former<br>ank to evaluate potential releases (see text for historic details).<br>eet bgs.   |
| ate LOU 45 (Diesel Storage Tanks) and LOU 60 (Acid Drain System). Located within the footprint<br>uate potential subsurface releases and near LOU 60 manhole which is a high risk release<br>ine invert occurs at approximately 9 feet bgs.<br>et bgs.  |
| ate LOU 8 (Old P-3 Pond and Associated Conveyance Facilities) to further evaluate north edge<br>oring SB2-8 was drilled & sampled. New boring added per NDEP July 21, 2008).<br>et bgs.<br>occurs at approximately 11 ft bgs.   |
| stward step out to LOU 8 (Old P-3 Pond and Associated Conveyance Facilities). For general<br>sible overflow release of surface runoff. Boring will also serve to evaluate for potential impacts<br>cid Drain System).<br>(bottom of pipeline) occurs at approx 11 feet bgs.<br>et bgs.                      |
| ate LOU 7 (Old P-2 Pond and Associated Conveyance Pond and Associated Conveyance<br>New P-2 Pond and Associated Piping). Located downslope between all three LOUs to<br>low surface runoff releases.<br>et bgs.   |
| ate LOU 7 (Old P-2 Pond and Associated Conveyance Facilities) and LOU 8 (Old P-3 Facilities).<br>bottom of LOU 7 for worst case evaluation.<br>set bgs.<br>nust be of Quaternary Alluvium (Qal) soils.  |
| of Muddy Creek soils & must be dry. If soils not dry, don't collect sample. Choose another boring.<br>ate LOU 7 (Old P-2 Pond and Associated Conveyance Facilities) in area near western<br>ning was noted in 1991 observations. New boring added per NDEP (July 21, 2008).<br>bet bgs.                     |
| ate LOU 7 (Old P-2 Pond and Associated Conveyance Facilities) to evaluate pond floor area<br>ns were noted in 1991 observations. New boring added per NDEP (July 21, 2008).<br>et bgs.  |

|                  |               |                          |   | Laboratory :                                | CAS -                      | Kelso                              |                                    |                                |                                     |                                   | CAS - Rochest                              | er                                 |                               |                                       |                                  | CAS - H                              | louston                          | GEL -<br>Charlestor<br>SC       | STL-<br>Denver         | Alpha<br>Analytical                           | EMSL Westmont                               | t,<br>Santa Fe Springs,<br>CA |   |
|------------------|---------------|--------------------------|---|---|----------------------------|------------------------------------|------------------------------------|--------------------------------|-------------------------------------|-----------------------------------|--|------------------------------------|-------------------------------|---------------------------------------|----------------------------------|--------------------------------------|----------------------------------|---------------------------------|------------------------|---|---|-------------------------------|---|
| Grid<br>Location | Boring<br>No. | Sample ID<br>Number      | Sample<br>Depths <sup>1.</sup><br>(ft. bgs) | Matrix SPLP<br>Spike/MS Sample<br>Duplicate | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>3.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B)              | VOCs <sup>4.</sup><br>(EPA 8260B) | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total Cyanide<br>L.<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA<br>1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>1</sup> | 0. OPPs <sup>11.</sup> | Sparks, NV<br>Organic<br>Acids <sup>12.</sup> | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Geotechnical<br>Tests         | Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions)   |
|                  | 1             |                          |   | Number of Containers :                      | 1 - 4 oz j                 | ar                                 |                                    | 1                              | 1- 40 ml VOA<br>vial w/<br>methanol | 3 VOA vials<br>(TerraCore<br>Kit) |  | 3 - 4 oz. Jars                     | 1                             | 1                                     | 1                                | 1 - 4 oz                             | z. Jar                           | 1-250 ml j<br>(plastic)         |                        | 1-4 oz Jar                                    | <u>≥</u> 1 kg<br>in plastic bag             | 2 brass tubes                 |   |
|                  |               |                          |   |   |                            |                                    | Boring                             | gs are organ                   | ized by gri                         | d location                        | as shown or                                | n Plate A - Sta                    | arting poin                   | t is on th                            | e northwes                       | tern most                            | t grid in /                      | Area II (M                      | M-2) and er            | nding with th                                 | e southeastern                              | n most grid in A              |   |
| 0-5<br>0-5       | SA153         | SA153-0.0B<br>SA153-0.5B | 0.0   |   | X                          | v                                  | ×                                  | ~                              |                                     | x                                 | ×  | ····· v                            |                               | x                                     |                                  |                                      | x                                | X                               |                        |   | X   |                               | Boring located to evaluate LOU 45 (Diesel Storage Tanks). Located beneath the footprint of a aboveground storage<br>tank to evaluate subsurface releases (See LOU 45 summary for historical data).                                |
| 0-5              | -             | SA153-0.5B<br>SA153-10B  | 10  |   | ×                          | X                                  | X                                  | X                              |                                     | X                                 | X  | x                                  |                               | X                                     |                                  |                                      | ^                                | X                               |                        |   |   |                               | GW estimated at ~40 feet bgs.   |
| 0-5              | -             | SA153-25B                | 25  |   | X                          | X                                  | X                                  | X                              |                                     | X                                 | Х  | X                                  |                               | X                                     |                                  |                                      |                                  | X                               |                        |   |   |                               |   |
| O-5<br>O-5       | SA172         | SA153-38B<br>SA172-0.0B  | 38<br>0.0                                   |   | X                          | Х                                  | X                                  | Х                              |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      |                                  | Х                               | -                      |   | x   | +                             | Boring located to evaluate LOU 45 (Diesel Storage Tanks) potential releases.  |
| O-5              |               | SA172-0.5B               | 0.5   |   | X                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      | Х                                | Х                               |                        |   |   |                               | Located beneath the footprint of a aboveground storage tank to evaluate subsurface releases (See LOU 45   |
| 0-5<br>0-5       | -             | SA172-10B<br>SA172-25B   | 10<br>25                                    |   | X X                        | X<br>X                             | X                                  | X                              |                                     | X<br>X                            | X  | X<br>X                             |                               | X X                                   |                                  |                                      |                                  | X<br>X                          |                        |   |   |                               | summary for historical data).<br>GW estimated at ~41 feet bgs.  |
| 0-5              | -             | SA172-25B<br>SA172-39B   | 39  |   | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | × X                                |                               | X                                     |                                  |                                      |                                  | X                               |                        |   |   |                               | GW estimated at ~41 feet bgs.   |
| O-5              | RSAO5         | RSAO5-0.0B               | 0.0   |   |                            |                                    |                                    |                                |                                     |                                   |  |                                    |                               |                                       |                                  |                                      |                                  | ·····                           |                        |   | Х   |                               | Boring located to evaluate LOU 45 (Diesel Storage Tanks). Randomly located within LOU 45 to evaluate possible   |
| O-5<br>O-5       | -             | RSAO5-0.5B<br>RSAO5-10B  | 0.5<br>10                                   |   | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  | X<br>Hold                     | X                                     |                                  |                                      | Х                                | X                               |                        |   |   |                               | surface runoff releases and to evaluate site wide conditions.<br>GW estimated at ~43 feet bgs.  |
| 0-5              |               | RSA05-10B<br>RSA05-25B   | 25  |   | X                          | x                                  | X                                  | x                              |                                     | X                                 | X  | x                                  | Hold                          | X                                     |                                  |                                      |                                  | X                               |                        |   | -   | -                             |   |
| 0-5              | 0.4.105       | RSA05-41B                | 41  |   | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | X                                  | Х                             | Х                                     |                                  |                                      |                                  | Х                               |                        |   | ~   |                               | Device leasted to surfluste LOLI (5 (Discel Otherse Techs) Our)   |
| O-5<br>O-5       | SA185         | SA185-0.0B<br>SA185-0.5B | 0.0   | <u>├</u> ────                               | ×                          | x                                  | x                                  | x                              |                                     | х                                 | x  | x                                  | +                             | x                                     | +                                |                                      | x                                | х                               |                        | +   | Х   | +                             | Boring located to evaluate LOU 45 (Diesel Storage Tanks), System). Located on the perimeter of the former<br>aboveground storage tank to evaluate potential releases (see text for historic details).                             |
| O-5              | -             | SA185-10B                | 10  |   | X                          | X                                  | X                                  | X                              |                                     | Х                                 | Х  | X                                  |                               | Х                                     |                                  |                                      |                                  | Х                               |                        |   |   |                               | GW estimated at ~43 feet bgs.   |
| 0-5              |               | SA185-10B                | 10  | X   | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  |                               | X                                     |                                  |                                      |                                  | X                               |                        |   |   |                               | -   |
| O-5<br>O-5       | -             | SA185-25B<br>SA185-41B   | 25<br>41                                    |   | X X                        | X                                  | X                                  | X                              |                                     | X<br>X                            | X  | X<br>X                             |                               | X                                     |                                  |                                      |                                  | X<br>X                          |                        |   |   |                               | 4   |
| O-5              | SA186         | SA186-0.0B               | 0.0   |   |                            |                                    |                                    |                                |                                     |                                   |  |                                    |                               |                                       |                                  |                                      |                                  |                                 |                        |   | Х   |                               | Boring located to evaluate LOU 45 (Diesel Storage Tanks), System). Located on the perimeter of the former   |
| O-5<br>O-5       |               | SA186-0.5B<br>SA186-10B  | 0.5<br>10                                   |   | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  |                               | X                                     |                                  |                                      | X                                | X<br>X                          |                        |   |   |                               | aboveground storage tank to evaluate potential releases (see text for historic details).<br>GW estimated at ~39 feet bqs.   |
| 0-5              | -             | SA186-25B                | 25  |   | x                          | × X                                | X                                  | X                              |                                     | X                                 | X  | ^<br>X                             |                               | x                                     |                                  |                                      |                                  | x                               |                        |   |   |                               | GW estimated at ~39 feet bigs.  |
| 0-5              |               | SA186-37B                | 37  |   | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      |                                  | Х                               |                        |   |   |                               |   |
| 0-5<br>0-5       | SA187         | SA187-0.0B<br>SA187-0.5B | 0.0   |   | ×                          |                                    | Y                                  | ×                              |                                     | X                                 | ×  | ×                                  |                               | x                                     |                                  |                                      | x                                | x                               |                        |   | X   |                               | Boring located to evaluate LOU 45 (Diesel Storage Tanks) and LOU 59 (Storm Sewer System). Located on the<br>perimeter of the former aboveground storage tank area to evaluate potential releases (see text for historic details). |
| 0-5              |               | SA187-10B                | 10  |   | x                          | X                                  | X                                  | X                              |                                     | X                                 | X  | ×                                  |                               | X                                     |                                  |                                      | ····^                            | X                               |                        |   |   |                               | GW estimated at ~41 feet bgs.   |
| O-5              | -             | SA187-25B                | 25  |   | X                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      |                                  | Х                               |                        |   |   |                               |   |
| O-5<br>O-5       | SA188         | SA187-39B<br>SA188-0.0B  | 39<br>0.0                                   |   | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | X                                  |                               | Х                                     |                                  |                                      |                                  | х                               | -                      |   | x   |                               | Boring located to evaluate LOU 45 (Diesel Storage Tanks) and LOU 59 (Storm Sewer System), and LOU 60 (Acid Drain  |
| 0-5              | 04100         | SA188-0.5B               | 0.5   |   | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | X                                  |                               | х                                     |                                  |                                      | х                                | х                               |                        |   | X   |                               | System). Located beneath the footprint of an aboveground storage tank to evaluate subsurface releases (See LOU 45   |
| 0-5              | -             | SA188-10B                | 10  |   | X                          | Х                                  | Х                                  | Х                              |                                     | X                                 | Х  | X                                  |                               | X                                     |                                  |                                      |                                  | Х                               |                        |   |   |                               | summary for historical data).   |
| O-5<br>O-5       | -             | SA188-25B<br>SA188-37B   | 25<br>37                                    |   | X X                        | X                                  | X                                  | X                              |                                     | X                                 | X  | X X                                |                               | X                                     |                                  |                                      |                                  | X X                             |                        |   |   |                               | _GW estimated at ~39 feet bgs.  |
| O-6              | SA40          | SA40-0.0B                | 0.0   |   |                            |                                    |                                    |                                |                                     |                                   |  |                                    |                               |                                       |                                  |                                      |                                  |                                 |                        |   | Х   |                               | Boring located to evaluate LOU 45 (Diesel Storage Tanks), LOU 59 (Storm Sewer System), and LOU 60 Acid Drain  |
| 0-6<br>0-6       | -             | SA40-0.5B<br>SA40-10B    | 0.5   |   | X                          | X                                  | X                                  | X                              |                                     | X<br>X                            | X  | X                                  |                               | X                                     |                                  |                                      | X                                | X<br>X                          |                        |   |   |                               | System). Located on the perimeter of the former aboveground storage tank to evaluate potential releases (see text<br>for historic details) and between LOUs 59 and 60 to evaluate possible piping releases.                       |
| 0-6              | -             | SA40-10B<br>SA40-25B     | 25  |   | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  |                               | x                                     |                                  |                                      |                                  | x                               | -                      |   |   | -                             | GW estimated at ~43 feet bgs.   |
| O-6              | -             | SA40-41B                 | 41  |   | X                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      |                                  | Х                               |                        |   |   |                               |   |
| O-6<br>O-6       | SA42          | SA40-41B<br>SA42-0.0B    | 41<br>0.0                                   | X   | X                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  |                               | х                                     |                                  |                                      |                                  | Х                               |                        |   | ×   |                               | Boring located to evaluate LOU 45 (Diesel Storage Tanks). Located at a low spot within the footprint of former  |
| O-6              | 0/142         | SA42-0.5B                | 0.5   |   | Х                          | Х                                  | х                                  | Х                              |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      | Х                                | Х                               |                        |   | ~   |                               | aboveground storage tank to evaluate potential releases.  |
| 0-6              | -             | SA42-10B                 | 10<br>10 (dup)                              |   | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  |                               | X                                     |                                  |                                      |                                  | X                               |                        |   |   |                               | GW estimated at ~40 feet bgs.   |
| O-6<br>O-6       | 1             | SA42-10BD<br>SA42-25B    | 10 (dup)<br>25                              |   | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  | +                             | X                                     |                                  |                                      |                                  | X                               |                        |   | +   | +                             | -   |
| O-6              |               | SA42-38B                 | 38  |   | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  |                               | X                                     |                                  |                                      |                                  | X                               |                        |   |   |                               |   |
| 0-6<br>0-6       | SA43          | SA43-0.0B<br>SA43-0.5B   | 0.0   |   | X                          | X                                  | x                                  | X                              |                                     | x                                 | ×  |                                    |                               | x                                     |                                  |                                      | X                                | X                               |                        |   | X   |                               | Boring located to evaluate LOU 45 (Diesel Storage Tanks), LOU 59 (Storm Sewer System), and LOU 60 Acid Drain<br>System). Located on the perimeter of the former aboveground storage tank to evaluate potential releases (see text |
| 0-6              |               | SA43-0.5BD               | 0.5 (dup)                                   |   | x                          | X                                  | X                                  | X                              |                                     | X                                 | X  |                                    | +                             | X                                     | +                                |                                      | X                                | X                               | +                      | † · · · · ·                                   | 1   |                               | for historic details) and between LOUs 59 and 60 to evaluate possible piping releases.  |
| O-6              | _             | SA43-10B                 | 10  |   | X                          | X                                  | Х                                  | X                              |                                     | Х                                 | X  |                                    |                               | Х                                     |                                  |                                      |                                  | X                               |                        |   |   |                               | GW estimated at ~45 feet bgs.   |
| O-6<br>O-6       | -             | SA43-25B<br>SA43-43B     | 25<br>43                                    |   | X                          | X X                                | X                                  | X X                            |                                     | X                                 | X<br>X                                     |                                    |                               | X                                     |                                  |                                      |                                  | X                               |                        |   | -   |                               | -   |
| O-6              | SA51          | SA51-0.0B                | 0.0   |   |                            | ^                                  |                                    |                                |                                     |                                   |  |                                    |                               |                                       |                                  |                                      |                                  |                                 |                        |   | х   |                               | Boring located to evaluate LOU 14 (Pond P-1 and Associated Conveyance Piping). Located in a low spot in the   |
| 0-6              | -             | SA51-0.5B                | 0.5   |   | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  |                                    |                               | X                                     |                                  |                                      | Х                                | X                               |                        |   |   |                               | bottom of LOU 14 to evaluate worst case conditions.   |
| O-6<br>O-6       | -             | SA51-10B<br>SA51-10BD    | 10<br>10 (dup)                              |   | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  |                                    |                               | X                                     | -                                |                                      |                                  | X                               |                        |   | +   | +                             | GW estimated at ~38 feet bgs.   |
| 0-6              |               | SA51-25B                 | 25  |   | X                          | X                                  | X                                  | X                              | Х                                   | Х                                 | Х  |                                    |                               | X                                     |                                  |                                      |                                  | Х                               |                        |   |   |                               | 1   |
| 0-6              | RSAO6         | SA51-36B                 | 36  |   | X                          | Х                                  | Х                                  | Х                              | Х                                   | Х                                 | Х  |                                    |                               | Х                                     |                                  |                                      |                                  | Х                               |                        |   | ~   |                               | Boring located to evaluate LOU 13 (Pond S-1). Random boring in a lowspot in the bottom of LOU 13 to evaluate  |
| 0-6<br>0-6       | RSAUD         | RSAO6-0.0B<br>RSAO6-0.5B | 0.0   |   | x                          | Х                                  | X                                  | X                              | Х                                   | Х                                 | Х  |                                    | x                             | x                                     |                                  |                                      | x                                | X                               |                        |   | X   | -                             | Boring located to evaluate LOU 13 (Pond S-1). Random boring in a lowspot in the bottom of LOU 13 to evaluate worst case conditions and site wide conditions.  |
| O-6              | 1             | RSAO6-10B                | 10  |   | Х                          | X                                  | Х                                  | X                              | X                                   | Х                                 | Х  |                                    | Hold                          | Х                                     |                                  |                                      |                                  | Х                               |                        |   |   |                               | GW estimated at ~36 feet bgs.   |
| O-6<br>O-6       | -             | RSAO6-20B<br>RSAO6-34B   | 20<br>34                                    |   | X                          | X                                  | X                                  | X                              | Y                                   | X                                 | X  |                                    | Hold                          | X                                     |                                  |                                      |                                  | X                               |                        |   |   |                               | -   |
| 0-6              | 1             | RSA06-34B                | 34  | X   | X                          | X X                                | X                                  | X                              | X                                   | X                                 | X  |                                    | X                             | X                                     |                                  |                                      |                                  |                                 |                        |   |   |                               | 4   |
| O-6              | SA200         | SA200-0.0B               | 0.0   |   |                            |                                    |                                    |                                |                                     |                                   |  |                                    |                               |                                       |                                  |                                      |                                  |                                 |                        |   | Х   |                               | Boring located to evaluate LOU 9 (New P-2 Pond and Associated Piping). Located in a lowspot in the bottom of LOU 9  |
| O-6<br>O-6       | -             | SA200-0.5B<br>SA200-10B  | 0.5   |   | X                          | X X                                | X                                  | X                              | X                                   | X X                               | X  |                                    |                               | X                                     |                                  |                                      | X                                | X                               |                        |   | +   | ·····                         | to evaluate worst case conditions.<br>GW estimated at ~33 feet bgs.   |
| 0-6              |               | SA200-10B<br>SA200-20B   | 20  |   | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  |                                    |                               | X                                     |                                  |                                      |                                  | X                               |                        |   |   |                               |   |
| O-6              | ]             | SA200-31B                | 31  |   | X                          | X                                  | X                                  | X                              | X                                   | X                                 | X  |                                    |                               | X                                     |                                  |                                      |                                  | X                               |                        |   |   |                               |   |
| O-6              | I             | SA200-31BD               | 31 (dup)                                    |   | Х                          | Х                                  | Х                                  | Х                              | Х                                   | Х                                 | Х  |                                    |                               | Х                                     |                                  |                                      |                                  | Х                               |                        | 1   |   |                               | ]   |

| Grid<br>Location |               |                          |   | La                              | boratory :     | CAS - H                    | Kelso                              |                                    |                                |                                     |                                   | CAS - Roches                               | ster                               |                               |                                       |                                  | CAS - H                              | Houston                          | GEL -<br>Charleston,<br>SC        | STL-<br>Denver      | Alpha<br>Analytical<br>Sparks, NV | EMSL Westmont                               | PTS<br>' Santa Fe Springs,<br>CA |   |
|------------------|---------------|--------------------------|---|---------------------------------|----------------|----------------------------|------------------------------------|------------------------------------|--------------------------------|-------------------------------------|-----------------------------------|--|------------------------------------|-------------------------------|---------------------------------------|----------------------------------|--------------------------------------|----------------------------------|-----------------------------------|---------------------|-----------------------------------|---|----------------------------------|---|
|                  | Boring<br>No. | Sample ID<br>Number      | Sample<br>Depths <sup>1.</sup><br>(ft. bgs) | Matrix<br>Spike/MS<br>Duplicate | SPLP<br>Sample | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>3.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B)              |                                   | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total Cyanide<br>L.<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA<br>1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup> | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Geotechnical<br>Tests            |   |
|                  |               |                          |   | Number of Co                    | ontainers :    | 1 - 4 oz j                 | ar                                 |                                    |                                | 1- 40 ml VOA<br>vial w/<br>methanol | 3 VOA vials<br>(TerraCore<br>Kit) |  | 3 - 4 oz. Jars                     |                               |                                       |                                  | 1 - 4 o                              | oz. Jar                          | 1-250 ml jar<br>(plastic)         | 1-4 oz Jar          | 1-4 oz Jar                        | <u>≥</u> 1 kg<br>in plastic bag             | 2 brass tubes                    |   |
|                  |               |                          |   |                                 |                |                            |                                    | Boring                             | gs are orgar                   | nized by gr                         | id location                       | as shown o                                 | on Plate A - Sta                   | rting poin                    | nt is on the                          | e northwes                       | tern mos                             | t grid in A                      | Area II (M                        | -2) and er          | nding with th                     | e southeastern                              | most grid in A                   |   |
| P-5<br>P-5       | SA117         | SA117-0.0B<br>SA117-0.5B | 0.0   |                                 |                | x                          | x                                  | x                                  | x                              |                                     | x                                 | x  | x                                  | x                             | x                                     |                                  |                                      | x                                | x                                 | ×                   | x                                 | X   |                                  | Boring located to evaluat<br>possible piping releases     |
| P-5              |               | SA117-0.5B<br>SA117-9B   | 9   |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  | X                             | X                                     |                                  |                                      | ····^                            | X                                 | X                   | X                                 |   |                                  | LOU 60 pipeline invert of                                 |
| P-5              |               | SA117-9B                 | 9   | Х                               |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  | Х                             | Х                                     |                                  |                                      |                                  | Х                                 | Х                   | X                                 |   |                                  |   |
| P-5              |               | SA117-25B                | 25  |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  | Hold                          | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                  | _   |
| P-5<br>Q-5       | SA124         | SA117-41B<br>SA124-0.0B  | 41<br>0.0                                   | + +                             |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  | Х                             | Х                                     |                                  |                                      |                                  | Х                                 | Х                   | Х                                 | х   | -                                | Boring located to evaluat                                 |
| Q-5              | 0/1121        | SA124-0.5B               | 0.5   |                                 |                | Х                          | Х                                  | Х                                  |                                |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      | Х                                | Х                                 |                     |                                   | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~     |                                  | at a likely runoff location                               |
| Q-5              |               | SA124-10B                | 10  |                                 |                | X                          | Х                                  | Х                                  |                                |                                     | Х                                 | Х  | X                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                  | GW estimated at ~44 fee                                   |
| Q-5<br>Q-5       |               | SA124-10BD<br>SA124-25B  | 10 (dup)<br>25                              |                                 |                | X<br>X                     | X<br>X                             | X                                  |                                |                                     | X                                 | X  | X X                                |                               | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                  | -   |
| Q-5              |               | SA124-25B<br>SA124-42B   | 42  |                                 |                | X                          | ^<br>X                             | X                                  |                                | -                                   | X                                 | X  | X                                  |                               | X                                     | -                                |                                      |                                  | X                                 |                     |                                   |   |                                  |   |
| Q-5              | RSAQ5         | RSAQ5-0.0B               | 0.0   |                                 |                |                            |                                    |                                    |                                |                                     |                                   |  |                                    |                               |                                       |                                  |                                      |                                  |                                   |                     |                                   | Х   |                                  | Boring located to evaluat                                 |
| Q-5              |               | RSAQ5-0.5B               | 0.5   |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  | X                             | X                                     |                                  |                                      | Х                                | X                                 |                     |                                   |   |                                  | possible piping releases                                  |
| Q-5<br>Q-5       |               | RSAQ5-10B<br>RSAQ5-25B   | 10<br>25                                    |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  | X<br>Hold                     | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                  | GW estimated at ~43 fee                                   |
| Q-5              |               | RSAQ5-23B<br>RSAQ5-41B   | 41  |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  | X                             | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                  | 1   |
| Q-5              |               | RSAQ5-41B                | 41  | Х                               |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | X                                  | Х                             | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                  |   |
| Q-6<br>Q-6       | SA125         | SA125-0.0B<br>SA125-0.5B | 0.0   |                                 |                | X                          | X                                  | x                                  | ×                              |                                     | x                                 | x  | x                                  |                               | x                                     |                                  |                                      | x                                | x                                 |                     |                                   | X   |                                  | Boring located to evaluat<br>(Acid DrainSystem). Located  |
| Q-6              |               | SA125-0.5B<br>SA125-10B  | 10  |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | ×                                  |                               | X                                     |                                  |                                      | ^                                | X                                 |                     |                                   |   |                                  | piping to evaluate high ri                                |
| Q-6              |               | SA125-25B                | 25  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                  | LOU 60 pipeline invert of                                 |
| Q-6              |               | SA125-39B                | 39  |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | ×                                  |                               | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                  | GW estimated at ~41 fee                                   |
| Q-6<br>Q-6       | SA126         | SA125-39BD<br>SA126-0.0B | 39 (dup)<br>0.0                             |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   | х   |                                  | Boring located to evaluat                                 |
| Q-6              | 0/1120        | SA126-0.5B               | 0.5   |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      | Х                                | Х                                 |                     |                                   | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~     |                                  | possible and downslope                                    |
| Q-6              |               | SA126-10B                | 10  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | X                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                  | evaluate local piping rele                                |
| Q-6<br>Q-6       |               | SA126-18B<br>SA126-25B   | 18<br>25                                    |                                 |                | X<br>X                     | X                                  | X                                  | x                              |                                     | X                                 | x  | X X                                |                               | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                  | LOU 60 pipeline invert of<br>GW estimated at ~42 fee      |
| Q-6              |               | SA126-25B<br>SA126-40B   | 40  | -                               |                | X                          | ^<br>X                             | X                                  | X                              |                                     | X                                 | X  | X                                  |                               | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                  | - GW estimated at ~42 let                                 |
| Q-6              |               | SA126-40B                | 40  | Х                               |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | X                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                  |   |
| Q-6              | SA136         | SA136-0.0B               | 0.0   |                                 |                | ×                          | v                                  |                                    | N N                            |                                     | V                                 | V  |                                    | V                             | X                                     |                                  |                                      | N N                              | ×                                 | N N                 | × ×                               | Х   |                                  | Boring located to evaluat                                 |
| Q-6<br>Q-6       |               | SA136-0.5B<br>SA136-10B  | 0.5   |                                 |                | X                          | X<br>X                             | X                                  | X                              |                                     | X                                 | X  |                                    | X                             | X                                     |                                  |                                      | X                                | X                                 | X                   | X                                 |   |                                  | GW estimated at ~42 fee                                   |
| Q-6              |               | SA136-25B                | 25  |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  |                                    | Hold                          | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                  |   |
| Q-6              | <b>DO</b> 100 | SA136-40B                | 40  |                                 |                | х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  |                                    | Х                             | Х                                     |                                  |                                      |                                  | Х                                 | Х                   | Х                                 | ~   |                                  |   |
| Q-6<br>Q-6       | RSAQ6         | RSAQ6-0.0B<br>RSAQ6-0.5B | 0.0   |                                 |                | X                          | X                                  | х                                  | x                              |                                     | x                                 | х  | X                                  | х                             | x                                     |                                  |                                      | x                                | x                                 |                     |                                   | X   |                                  | Boring located nearby L<br>Sewer System), and LOU         |
| Q-6              |               | RSAQ6-10B                | 10  |                                 |                | X                          | X                                  | X                                  | X                              | -                                   | X                                 | X  | X                                  | Hold                          | X                                     | -                                |                                      |                                  | X                                 |                     |                                   |   |                                  | releases and near LOU 6                                   |
| Q-6              |               | RSAQ6-25B                | 25  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | X                                  | Hold                          | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                  | LOU 60 pipeline invert of                                 |
| Q-6<br>Q-6       |               | RSAQ6-38B<br>RSAQ6-38BD  | 38<br>38 (dup)                              |                                 |                | X                          | X<br>X                             | X                                  | X                              |                                     | X                                 | X  | X                                  | X X                           | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                  | GW estimated at ~40 fee                                   |
| R-5              | SA133         | SA133-0.0B               | 0.0   | 1 1                             |                | ~                          | ~                                  | ~                                  | ~                              |                                     | ~                                 | Λ  | ~                                  | ~                             | ~                                     |                                  |                                      |                                  | ~                                 |                     |                                   | х   |                                  | Boring located to evaluat                                 |
| R-5              |               | SA133-0.5B               | 0.5   |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  |                               |                                       | Х                                |                                      | Х                                | Х                                 |                     |                                   |   |                                  | damaged pavement area                                     |
| R-5<br>R-5       |               | SA133-10B<br>SA133-20B   | 10<br>20                                    |                                 |                | X                          | X<br>X                             | X                                  | X                              |                                     | X                                 | X  | X X                                |                               |                                       |                                  |                                      |                                  | X                                 |                     |                                   |   |                                  | _GW estimated at ~33 fee<br>Borehole for SA133 will I     |
| R-5              |               | SA133-31B                | 31  |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | x                                  |                               |                                       | Х                                |                                      |                                  | x                                 |                     |                                   |   |                                  |   |
| R-5              |               | SA133-31B                | 31  | X                               |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  |                               |                                       | X                                |                                      |                                  | X                                 |                     |                                   |   |                                  | 1   |
| R-6<br>R-6       | SA30          | SA30-0.0B<br>SA30-0.5B   | 0.0   |                                 |                | x                          | x                                  | x                                  | ×                              |                                     | x                                 | x  | x                                  |                               |                                       |                                  |                                      | x                                | x                                 |                     |                                   | X   |                                  | Boring located to evaluat<br>and 60 piping to evaluate    |
| R-6              |               | SA30-0.5B<br>SA30-9B     | 0.5   | <u> </u>                        |                | X                          | X                                  | X                                  | X                              | -                                   | X                                 | X  | X                                  |                               | X                                     |                                  |                                      | ^                                | X                                 |                     |                                   |   |                                  | LOU 60 pipeline invert of                                 |
| R-6              |               | SA30-9B                  | 9   |                                 | Х              | Х                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   | Х                                | 9-Foot SPLP sample mu                                     |
| R-6              |               | SA30-25B                 | 25  |                                 |                | X                          | X                                  | X                                  | X                              |                                     | X                                 | X  | X                                  |                               | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   | ~                                | SDI D come la must l                                      |
| R-6<br>R-6       |               | SA30-35B<br>SA30-38B     | 35<br>38                                    | ++                              | X              | X                          | X<br>X                             | X                                  | X                              |                                     | X                                 | X  | X X                                |                               | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   | X                                | SPLP sample must be of                                    |
| R-6              | SA31          | SA31-0.0B                | 0.0   |                                 |                |                            |                                    |                                    |                                | 1                                   |                                   |  |                                    |                               |                                       |                                  | <u> </u>                             | 1                                |                                   | 1                   | 1                                 | Х   |                                  | Boring located to evaluat                                 |
| R-6              |               | SA31-0.5B                | 0.5   |                                 |                | X                          | X                                  | X                                  |                                |                                     | X                                 | X  |                                    |                               | X                                     | 1                                |                                      | Х                                | X                                 |                     |                                   |   |                                  | upslope as a stepout for                                  |
| R-6<br>R-6       |               | SA31-10B<br>SA31-20B     | 10<br>20                                    |                                 |                | X                          | X<br>X                             | X                                  |                                |                                     | X                                 | X  |                                    |                               | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                  | GW estimated at ~34 fee                                   |
| R-6              |               | SA31-32B                 | 32  | 1                               |                | X                          | X                                  | X                                  | 1                              | 1                                   | X                                 | X  | +                                  |                               | X                                     | 1                                |                                      | 1                                | X                                 | ····                | 1                                 | <u> </u>                                    | 1                                | 1   |
| R-6              | SA32          | SA32-0.0B                | 0.0   |                                 |                |                            |                                    |                                    |                                |                                     |                                   |  |                                    |                               |                                       |                                  |                                      |                                  |                                   |                     |                                   | Х   |                                  | Boring located to evaluat                                 |
| R-6              |               | SA32-0.5B                | 0.5   |                                 |                | X                          | X X                                | X                                  | X                              |                                     | X                                 | X  | X                                  |                               | X                                     |                                  |                                      | Х                                | X                                 |                     |                                   |   |                                  | (Acid DrainSystem). Loc<br>piping to evaluate local p     |
| R-6<br>R-6       |               | SA32-9B<br>SA32-25B      | 9<br>25                                     | ++                              |                | X                          | X<br>X                             | X                                  | X                              |                                     | X                                 | X  | X X                                |                               | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                  | _ piping to evaluate local p<br>LOU 60 pipeline invert or |
| R-6              |               | SA32-25BD                | 25 (dup)                                    |                                 |                | X                          | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                  | GW estimated at ~39 fee                                   |
| R-6              | 04404         | SA32-37B                 | 37  | +                               |                | X                          | Х                                  | Х                                  | X                              |                                     | Х                                 | Х  | X                                  |                               | Х                                     |                                  |                                      |                                  | Х                                 |                     |                                   |   |                                  | Device la set 11 1  |
| R-6<br>R-6       | SA161         | SA161-0.0B<br>SA161-0.5B | 0.0   |                                 |                | x                          | X                                  | X                                  |                                |                                     | x                                 | x  | X                                  |                               | X                                     |                                  |                                      | x                                | x                                 |                     |                                   | Х   |                                  | Boring located to evaluat<br>Co-located with SG70 to      |
| R-6              |               | SA161-10B                | 10  |                                 |                | X                          | X                                  | X                                  |                                |                                     | X                                 | X  | X                                  |                               | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                  | GW estimated at ~39 fee                                   |
|                  |               | SA161-25B                | 25  |                                 |                | X                          | X                                  | Х                                  |                                |                                     | X                                 | X  | Х                                  |                               | X                                     |                                  |                                      |                                  | X                                 |                     |                                   |   |                                  | -   |
| R-6<br>R-6       |               | SA161-25BD               | 25 (dup)                                    | 1                               |                | Х                          | Х                                  | Х                                  |                                |                                     | X                                 | X  |                                    |                               | Х                                     |                                  | 1                                    |                                  | Х                                 | 1                   |                                   |   | 1                                |   |

| Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions)  |
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|  |
|  |
| ate LOU 59 (Storm Sewer System). Random boring located near LOU 59 piping to evaluate<br>s and for site wide conditions. New boring added per NDEP (July 21, 2008).<br>occurs approximately 8 feet bgs. GW estimated at ~43 feet bgs.  |
| ate LOU 11 (Sodium Chlorate Filter Cake Holding Area). Located adjacent to LOU 11 pad<br>n to evaluate possible release runoff. Phase A boring SA05 located north (downslope) of LOU 11.<br>eet bgs.   |
| ate LOU 59 (Storm Sewer System). Random boring located near LOU 59 piping to evaluate<br>s and for site wide conditions.<br>eet bgs.   |
| ate LOU 12 (Hazardous Waste Storage Area), LOU 59 (Storm Sewer System), and LOU 60<br>cated downslope of LOU 12 to evaluate surface runoff releases and adjacent to LOU 59 and 60<br>risk release locations (Manhole).<br>occurs at approximately 9 feet bgs.<br>et bgs.                           |
| ate LOU 15 (Platinum Drying Unit) and LOU 60 (Acid Drain System). Located as close as<br>e of LOU 15 to evaluate potential surface runoff releases and adjacent to LOU 60 piping to<br>leases.<br>occurs at approximately 17 feet bgs.<br>aet bgs.   |
| ate for potential impacts associated with LOU 59 (Storm Sewer System) pipeline segment/junction.<br>eet bgs. New boring added per NDEP (July 21, 2008).  |
| LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning), LOU 59 Storm<br>JU 60 (Acid Drain System). Located downslope of OU 43 to evaluate potential subsurface<br>60 piping to evaluate local piping releases.<br>occurs at approximately 19 feet bgs.<br>set bgs.                 |
| ate LOU 36 (Former Satellite Accumulation Point, Unit 3, Maintenance Shop). Located in<br>a within LOU 36 to evaluate worst case location of surface releases.<br>set bgs.<br>be converted into monitoring well M-146.   |
| ate LOU 59 (Storm Sewer System) and LOU 60 (Acid 'Drain System). Located near LOU 59<br>te possible local piping releases and for general site coverage in Unit Buildings area.<br>occurs at approximately 8 feet bgs. GW estimated at ~40 feet bgs.<br>ust be of Quaternary Alluvium (Qal) soils. |
| of Muddy Creek soils & must be dry. If soils not dry, don't collect sample. Choose another boring.   |
| ate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning). Located<br>r LOU 43 and co-located with SG43 to compare VOC results, and for general site coverage.<br>et bgs.   |
| ate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning), and LOU 60<br>cated within the footprint of LOU 43 as a worst case location and also located near LOU 60<br>piping releases near a manhole.<br>occurs at approximately 8 feet bgs.<br>aet bgs.                         |
| ate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning).<br>o compare VOC results, and for general site coverage.<br>et bgs.  |

|                  |               |                         |   | L                               | Laboratory :   | CAS -                                  | Kelso                              |                                    |                                |                                     |                                   | CAS - Rochest                              | er                                 |                               |                                       |                                  | CAS - H                              | louston                          | GEL -<br>Charleston,<br>SC        | STL-<br>Denver           | Alpha<br>Analytical<br>Sparks, NV | EMSL Westmont                               | PTS<br>Santa Fe Springs,<br>CA |                                    |
|------------------|---------------|-------------------------|---|---------------------------------|----------------|--|------------------------------------|------------------------------------|--------------------------------|-------------------------------------|-----------------------------------|--|------------------------------------|-------------------------------|---------------------------------------|----------------------------------|--------------------------------------|----------------------------------|-----------------------------------|--------------------------|-----------------------------------|---|--------------------------------|------------------------------------|
| Grid<br>Location | Boring<br>No. | Sample ID<br>Number     | Sample<br>Depths <sup>1.</sup><br>(ft. bgs) | Matrix<br>Spike/MS<br>Duplicate | SPLP<br>Sample | Perchlorate<br>(EPA 314.0)             | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>3.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B)              |                                   | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total Cyanide<br>L.<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA<br>1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup>      | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Geotechnical<br>Tests          |                                    |
|                  |               |                         |   | Number of C                     | Containers :   | 1 - 4 oz j                             | jar                                |                                    |                                | 1- 40 ml VOA<br>vial w/<br>methanol | 3 VOA vials<br>(TerraCore<br>Kit) |  | 3 - 4 oz. Jars                     |                               |                                       |                                  | 1 - 4 o                              | z. Jar                           | 1-250 ml jar<br>(plastic)         | 1-4 oz Jar               | 1-4 oz Jar                        | <u>≥</u> 1 kg<br>in plastic bag             | 2 brass tubes                  |                                    |
|                  |               |                         |   |                                 |                |  |                                    | Boring                             | gs are organ                   | ized by gri                         | d location                        | as shown or                                | n Plate A - Sta                    | rting poin                    | t is on the                           | e northwes                       | tern mos                             | t grid in <i>i</i>               | Area II (M·                       | <ol><li>and en</li></ol> | ding with the                     | e southeastern                              | most grid in A                 | rea II (S-7).                      |
| R-6              | SA208         | SA208-0.0B              | 0.0   |                                 |                |  |                                    |                                    |                                |                                     |                                   |  |                                    |                               |                                       |                                  |                                      |                                  |                                   |                          |                                   | Х   |                                | Boring located to evalu            |
| R-6              |               | SA208-0.5B              | 0.5   |                                 |                | Х                                      | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  |                                    |                               | Х                                     |                                  |                                      | Х                                | Х                                 |                          |                                   |   |                                | in the basement footpri            |
| R-6              |               | SA208-10B               | 10  |                                 |                | Х                                      | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  |                                    |                               | Х                                     |                                  |                                      |                                  | Х                                 |                          |                                   |   |                                | GW estimated at ~39 fe             |
| R-6              |               | SA208-25B               | 25  |                                 |                | Х                                      | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  |                                    |                               | Х                                     |                                  |                                      |                                  | Х                                 |                          |                                   |   |                                |                                    |
| R-6              |               | SA208-37B               | 37  |                                 |                | Х                                      | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  |                                    |                               | Х                                     |                                  |                                      |                                  | Х                                 |                          |                                   |   |                                |                                    |
| R-6              | RSAR6         | RSAR6-0.0B              | 0.0   |                                 |                |  |                                    |                                    |                                |                                     |                                   |  |                                    |                               |                                       |                                  |                                      |                                  |                                   |                          |                                   | Х   |                                | Boring located to evalu            |
| R-6              |               | RSAR6-0.5B              | 0.5   |                                 |                | Х                                      | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  | Х                             | Х                                     |                                  |                                      | Х                                | Х                                 |                          |                                   |   |                                | and LOU 59 (Storm Se               |
| R-6              |               | RSAR6-9B                | 9   |                                 |                | X                                      | X                                  | Х                                  | X                              |                                     | Х                                 | X  | Х                                  | Hold                          | X                                     |                                  |                                      |                                  | Х                                 |                          |                                   |   |                                | stepout for general cov            |
| R-6              |               | RSAR6-25B               | 25  |                                 |                | Х                                      | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  | Hold                          | X                                     |                                  |                                      |                                  | X                                 |                          |                                   |   |                                | coverage. LOU 60 pip               |
| R-6              | -             | RSAR6-37B               | 37  |                                 |                | X                                      | X                                  | X                                  | X                              |                                     | Χ                                 | X  | x                                  | X                             | X                                     |                                  |                                      |                                  | X                                 |                          |                                   |   |                                | GW estimated at ~39 fe             |
| R-6              |               | RSAR6-37B               | 37  | Х                               |                | Х                                      | Х                                  | Х                                  | Х                              |                                     | Х                                 | Х  | Х                                  | Х                             | Х                                     |                                  |                                      |                                  | Х                                 |                          |                                   |   |                                |                                    |
| S-7              | SA122         | SA122-0.0B              | 0.0   |                                 |                |  |                                    |                                    |                                |                                     |                                   |  |                                    |                               |                                       |                                  |                                      |                                  |                                   |                          |                                   | Х   |                                | Boring located to evalu            |
| S-7              | -             | SA122-0.5B              | 0.5   |                                 |                | X                                      | X                                  | X                                  | X                              |                                     | X                                 | X  |                                    |                               |                                       | X                                |                                      | X                                | X                                 |                          |                                   |   |                                | between the two active             |
| S-7              | -             | SA122-10B               | 10  | +                               | +              | X                                      | X                                  | X                                  | X                              | l                                   | X                                 | X  | ·                                  |                               |                                       |                                  |                                      |                                  | X                                 |                          |                                   | · · · · · · · · · · · · · · · · · · ·       |                                | GW estimated at ~33 fe             |
| S-7              | -             | SA122-20B               | 20  |                                 |                | <u>X</u>                               | X                                  | X                                  | X                              |                                     | X                                 | X  |                                    |                               |                                       | ·····                            |                                      |                                  | X                                 |                          |                                   |   |                                | 4                                  |
| S-7              | 04470         | SA122-31B<br>SA170-0.0B | 31  | -                               |                | X                                      | Х                                  | X                                  | X                              |                                     | Х                                 | Х  |                                    |                               |                                       | Х                                |                                      |                                  | Х                                 |                          |                                   | v   |                                | Desire la sete dite avalu          |
| S-7              | SA170         |                         | 0.0   |                                 |                | V                                      | V                                  |                                    |                                |                                     | V                                 |  |                                    |                               |                                       |                                  |                                      | ······                           | ······                            |                          |                                   | X   |                                | Boring located to evalu            |
| S-7<br>S-7       | -             | SA170-0.5B<br>SA170-10B | 0.5   |                                 |                | X                                      | X                                  | X                                  | ×                              |                                     | X                                 | X  |                                    |                               |                                       | X                                |                                      | X                                | X                                 |                          |                                   |   |                                | stained area to evaluate<br>south. |
| S-7<br>S-7       | -             | SA170-10B<br>SA170-20B  | 20  |                                 |                | × ×                                    | X                                  | X                                  |                                |                                     | X                                 | X X  |                                    |                               |                                       |                                  |                                      |                                  | X                                 |                          |                                   |   |                                | GW estimated at ~33 fe             |
| S-7              | -             | SA170-20B<br>SA170-31B  | 20  |                                 |                | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | X                                  | X                                  | ÷                              |                                     | X X                               | ×<br>×                                     | +                                  |                               |                                       | X                                |                                      |                                  | X                                 |                          |                                   | +   |                                | Gw estimated at ~33 fe             |
| 5-7              | 86            | = Number of Bo          | ÷ .   | 1                               | 1              | ~                                      | ^                                  | ^                                  | ^                              | 1                                   | ~                                 | ~  |                                    |                               |                                       | ^                                |                                      |                                  | ^                                 |                          |                                   | 1   |                                | L                                  |

Notes

n/a Not applicable - boring is not associated with a specific LOU but is located to evaluate soil for general area-wide coverage.

X Sample will be collected and analyzed.

No sample collected under Phase B sampling program.

DD\* Sample depth to be determined in the field where DD = sample depth (ft).

TPH-GRO Total petroleum hydrocarbons - Gasoline-Range Organics.

TPH-DRO Total petroleum hydrocarbons - Diesel-Range Organics and Oil-Range Organics (ORO).

SPLP SPLP samples will be analyzed by EPA method 1312 using two preparation methods: 1) with extraction fluid #2 (reagent water at pH 5.00±0.05), and 2) with extraction method #3 (reagent water); per NDEP.

The 0.5 ft bgs sample will be collected from the 0.0 to 0.5 ft bgs interval, unless the area is paved, sample will be collected at 0.5 feet below or from a representative depth beneath the pavement. Alternately, if an unpaved area is within a reasonable distance, the sample will be moved to the unpaved area.
 Metals analyses includes Aluminum, Antimony, Arsenic, Barium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybednum, Nickel, Platinum, Potassium, Selenium, Silver, Sodium, Strontium, Tin, Titanium, Thalium, Tungsten, Uranium, Vanadium, and Zinc.
 Hexavalent Chromium

4. Samples for VOC analysis will be preserved in the field using sodium bisulfate (or DI water) and methanol preservatives per EPA Method 5035.

5. Wet chemistry parameters include: alkalinity (total, CQ, HCO<sub>3</sub>), ammonia, bromide, chlorate, chloride, conductivity, nitrate, nitrite, perchlorate, pH, phosphate (total), sulfate, surfactants (MBAs), TDS, Total Organic Carbon, and TSS.

6. Organochlorine Pesticides (includes analysis for hexachlorobenzene).

7. Semi-volatile Organic Compounds

Polychlorinated biphenyls - Sample locations will be analyzed by USEPA methods 8082 and 1668A. Concrete surfaces at these locations will also include chip and/or wipe samples per EPA Region 1 SOP for Sampling Concrete in the Field (1997). A column for Aroclor PCBs (EPA 8082) was added to this table to show which samples will be analyzed for Aroclor PCBs.

9. Dioxins/furans will be analyzed by EPA Method 8290 for all samples. Screening reports will be provided for 90% of the samples and full data packages for 10% of the samples.

10. Radionuclides consists of alpha spec reporting for isotopic thorium and isotopic uranium, and Radium-226, plus Radium-228 by beta counting (per NDEP).

11. Organophosphorous Pesticides were added to SAP by NDEP (July 21, 2008).

12. Organic Acid analysis includes the following analytes: 4-Chlorbenzene sulfonic acid; Benzenesulfonic acid; O,O-Diethylphosphorodithioic acid; O,O-Dimethylphosphorodithioic acid; and Phthalic acid.

13. Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs.

14. Geotechnical Tests consist of: moisture content (ASTM D-2216), grain size analysis (ASTM D-422 and C117-04), Soil Dry Bulk Density (ASTM D-2937), Grain Density (ASTM D-854), Soil-Water Filled Porosity (ASTM D-2216); Vertical Hydraulic Conductivity (ASTM D-5084/USEPA 9100).

 Table 2 (Field Version)

 Soil Sampling and Analytical Plan for Area II

Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 7 of 7

| Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions)  |
|--|
|  |
| ate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning). Located<br>nt of LOU 43 as a worst case location to evaluate surface releases.<br>set bgs.   |
| ate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning),<br>wer System ) and LOU 60 (Acid Drain System). Random boring located near LOU 43 as a<br>erage, adjacent to LOU 59 and 60 piping to evaluate for potential releases and for area-wide<br>eline invert occurs at approximately 8 feet bgs.<br>eet bgs. |
| ate LOU 29 (Solid Waste Dumpsters). Located within the footprint of LOU 29 at an area<br>dumpsters and to evaluate for potential impacts from nearby WAPA site to the south.<br>set bgs.   |
| ate LOU 29 (Solid Waste Dumpsters). Located within the footprint of LOU 29 at a<br>e visible surface release area and to evaluate for potential impacts from nearby WAPA site to the.<br>set bgs.  |
|  |
|  |

|               |                  |                        |                               |                             | Li   | aboratory <sup>E.</sup> :             | CAS - Ke                   | lso, WA              |                                  |                                    | CAS - Roch                     | ester, NY                                     |                                      |                                       | GEL -<br>Charleston,<br>SC  | STL-<br>Denver                 | Alpha<br>Analytical |                           |  |
|---------------|------------------|------------------------|-------------------------------|-----------------------------|--|---------------------------------------|----------------------------|----------------------|----------------------------------|------------------------------------|--------------------------------|---|--------------------------------------|---------------------------------------|-----------------------------|--------------------------------|---------------------|---------------------------|--|
| Grid Location | Location<br>Area | Monitoring<br>Well No. | Sample ID<br>No. <sup>A</sup> | Screen Interval<br>(ft bgs) | Soil Type<br>Expected<br>Across Screen<br>Interval <sup>1.</sup> | Well Sampled<br>for Phase A?<br>(y/n) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup> | VOCs <sup>3.</sup><br>(EPA 8260) | Hex Cr <sup>4.</sup><br>(EPA 7199) | Wet<br>Chemistry <sup>5.</sup> | Total<br>Cyanide <sup>F.</sup><br>(EPA 9012A) | OCPs <sup>6.</sup><br>(EPA<br>8081A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | Radionuclides <sup>9.</sup> | OPPs <sup>10.</sup><br>(8141A) | Organic Acids       | Rationale for<br>Revision | Location Description and Rationale for Investigation   |
|               |                  |                        |                               | Well                        |  | ed by grid                            | location as                | shown or             | n Plate A -                      | Starting                           | point is o                     | n the nort                                    | nwesterr                             | n-most g                              | l<br>rid in Area I          | l<br>I (L-4) an                | d ending wi         | ith the sout              | I<br>neastern-most grid covering Area II (S-7).  |
| L-4           | IIE              | M-14A                  | M-14AB                        | 20 - 40                     | Qal/MCfg1  | no                                    | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                | _                   | D (see Area I)            | Located to serve as a downgradient stepout to LOU 5; and for general Site coverage.  |
| L-5           | IIN              | I-B                    | I-BB                          | 17.8 - 42.5                 | Qal/MCfg1  | no                                    | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                |                     | D (see Area I)            | Located to serve as a downgradient stepout to LOUs 30 and 56 and for general Site coverage.  |
| L-5           | Ш                | I-AR                   | I-ARB                         | 25 - 45                     | MCfg1  | yes                                   | х                          | х                    | х                                | Х                                  | х                              | х   | х                                    | х                                     | х                           |                                |                     | F                         | Located as an upgradient stepout for LOUs 30, 31, and 56; and LOU 58 and for general Site coverage.  |
| L-6           | IIN              | M-55                   | M-55B                         | 14.6 - 44.6                 | Qal/MCfg1  | yes                                   | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                |                     | D (see Area I)            | Located as a downgradient stepout to LOU 55; and for general Site coverage.  |
| L-6           | IIN              | M-78                   | M-78B                         | 21.5 - 41.5                 | Qal/MCfg1  | no                                    | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                |                     | D (see Area I)            | Located as a downgradient stepout to LOU 55; and for general Site coverage.  |
| L-6           | Ш                | M-64                   | M-64B                         | 12.7 - 37.3                 | Qal/MCfg1  | no                                    | х                          | Х                    | х                                | Х                                  | х                              | х   | Х                                    | Х                                     | Х                           |                                |                     | F                         | Located to evaluate LOU 55; as a downgradient stepout for LOUs 30 and 56 and for general Site coverage.  |
| L-6           | П                | M-25                   | M-25B                         | 24 - 39                     | Qal/MCfg1  | no                                    | х                          | х                    | х                                | х                                  | х                              | х   | х                                    | х                                     | х                           |                                |                     | F                         | Located to serve as a downgradient stepout for LOUs 16, 19 and 53; as an upgradient stepout for LOU 55; and for general Site coverage.   |
| L-6           | Ш                | M-38                   | M-38B                         | 20 - 35                     | MCfg1  | no                                    | х                          | х                    | х                                | Х                                  | х                              | х   | х                                    | х                                     | х                           |                                |                     | F                         | Located to serve as a downgradient stepout for LOUs 16, 17, 19, and LOU 57; and for general Site coverage.   |
| L-8           | IIN              | M-68                   | M-68B                         | 11.2 - 39.8                 | Qal/MCfg1  | no                                    | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                |                     | D (see Area I)            | Located to serve as a downgradient stepout for LOU 5; and for general Site coverage.   |
| L-9           | IIN              | CLD2-R                 | CLD2-RB                       | 20 - 40.27                  | Qal  | no                                    | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                |                     | D (see Area I)            | Located to serve as a downgradient stepout for LOU 5; and for general Site coverage.   |
| M-2           | IIN              | TR-4                   | TR-4B                         | 124.5 - 144.5               | MCfg1  | no                                    | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                |                     | D (see Area I)            | Located to serve as a downgradient stepout for LOU 5; and for general Site coverage.   |
| M-3           | IIN              | M-125                  | M-125B                        | 35 - 50                     | MCfg1  | new well                              | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                |                     | D (see Area I)            | Located to serve as a downgradient stepout for LOU 5; and for general Site coverage.   |
| M-5           | II               | M-110                  | M-110B                        | 30 - 40                     | Qal/MCfg1  | no                                    | х                          | Х                    | х                                | Х                                  | х                              | х   | х                                    | х                                     | Х                           |                                |                     | F                         | Located to evaluate LOU 57 as a downgradient stepout for LOU 5; and for general Site coverage.   |
| M-5           | П                | M-111A                 | M-111AB                       | 29.7 - 39.7                 | MCfg1  | no                                    | х                          | х                    | х                                | х                                  | х                              | х   | х                                    | х                                     | x                           | х                              | х                   | B, C, F                   | Replacement well for M-111 which was destroyed by site grading and located to evaluate LOU 57; a<br>downgradient stepout for LOU 52; as an upgradient stepout for LOUs 5 and 19; and for general Site coverage.                          |
| M-6           | Ш                | M-89                   | M-89B                         | 18 - 38.2                   | Qal/MCfg1  | yes                                   | х                          | х                    | х                                | Х                                  | х                              | х   | х                                    | х                                     | х                           | х                              | х                   | B, F                      | Located to evaluate LOU 57; as a downgradient stepout for LOUs 5, 16, 17, and 53; and for general Site coverage.   |
| M-7           | Ш                | M-22A                  | M-22AB                        | 16 - 36                     | Qal/MCfg1  | no                                    | х                          | х                    | х                                | х                                  | х                              | х   | х                                    | х                                     | х                           |                                |                     | F                         | Located to evaluate LOU 57; as a downgradient stepout for LOUs 5, and 16 through 18; and for general Site coverage.  |
| M-8           | IIN              | M-39                   | M-39B                         | 24.9 - 39.9                 | Qal/MCfg1  | yes                                   | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                |                     | D (see Area I)            | Located as a downgradient stepout for LOUs 5, 20, 22 (pipelines in Area II) and LOU 23 (pipelines in Area II); and for general Site coverage.  |
| M-8           | II               | M-19                   | M-19B                         | 14.5 - 34.5                 | MCfg1  | no                                    | х                          | х                    | х                                | х                                  | х                              | х   | х                                    | х                                     | х                           |                                |                     | F                         | Located to serve as an upgradient stepout for LOUs 5 and 20; to evaluate LOUs 22 and 23 and potential offsite sources to the east; and as general Site coverage.   |
| N-4           | IIN              | M-142                  | M-142B                        | 30 - 45                     | MCfg1  | new well                              | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                |                     | D (see Area I)            | Located to serve as an upgradient stepout for LOU 5; and for general Site coverage.  |
| N-5           | Ш                | M-75                   | M-75B                         | 34.6 - 49.3                 | Qal/MCfg1  | no                                    | х                          | х                    | х                                | Х                                  | х                              | х   | х                                    | х                                     | х                           |                                |                     | F                         | Located to serve as a downgradient stepout for LOUs 7, 8, 9, and 45; as an upgradient stepout for LOUs 16, 17, 19, 53 and 57; and for general Site coverage.   |
| N-5           | Ш                | M-76                   | M-76B                         | 34.6 - 49.3                 | MCcg1  | yes                                   | х                          | х                    | х                                | х                                  | х                              | х   | х                                    | х                                     | х                           |                                |                     | F                         | Located to serve as a downgradient stepout for LOUs 8 and 45; as an upgradient stepout for LOUs 53 and 57; and for general Site coverage.  |
| N-6           | II               | M-2A                   | M-2AB                         | 30 - 40                     | Qal  | yes                                   | х                          | х                    | х                                | х                                  | х                              | х   | х                                    | х                                     | х                           |                                |                     | C, F                      | Located as a downgradient stepout for LOUs 7, 8, 9, 13, 14, 20, 34, and 45; as an upgradient stepout for LOUs 16, 17, 18, 22, 23, 53, and 57; and for general Site coverage.   |
| N-6           | II               | M-17A                  | M-17AB                        | 35 - 45                     | Qal/MCfg1  | no                                    | х                          | Х                    | х                                | Х                                  | х                              | х   | х                                    | х                                     | х                           |                                |                     | F                         | Located to evaluate LOU 57; as an upgradient stepout for LOUs 5, 16, 17, 18, 22, and 23; and for general Site coverage.  |
| N-7           | Ш                | M-34                   | M-34B                         | 25 - 40                     | Qal/MCfg1  | no                                    | х                          | х                    | х                                | х                                  | х                              | х   | х                                    | х                                     | х                           | х                              | х                   | B, F                      | Located to evaluate the outfall of the culvert that empties into the Eastern Diversion segment of LOU 5; as a downgradient stepout for LOUs 13 and 14; as an upgradient step out for LOUs 20, 22, and 23; and for general Site coverage. |
| N-7           | IIE              | M-35                   | M-35B                         | 25 - 40                     | Qal/MCfg1  | no                                    | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                |                     | D (see Area III)          | Located to evaluate LOUs 5, 20, 22, and 23; and for general Site coverage.   |
| 0-2           | IIS              | M-123                  | M-123B                        | 34 - 51                     | MCfg1  | new well                              | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                |                     | D (see Area I)            | Located to serve as an upgradient stepout for LOU 5; and for general Site coverage.  |
| O-5           | II               | M-21                   | M-21B                         | 18 - 38                     | MCfg1  | no                                    | x                          | х                    | x                                | х                                  | х                              | x   | Х                                    | х                                     | х                           |                                |                     | F                         | Located to evaluate LOU 45; as an upgradient stepout for LOUs 7, 9, 13 and 14; as a downgradient stepout for LOU 59; and for general Site coverage.  |
| O-6           | IIS              | M-50                   | M-50B                         | 39.6 - 59.6                 | MCfg1  | no                                    | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                |                     | D (see Area III)          | Located to serve as a downgradient well for a segment of LOU 59 located in Area II; as upgradient well for LOUs 13 and 14; and for general Site coverage.  |
| P-5           | IIS              | M-97                   | M-97B                         | 35 - 45                     | MCfg1/MCcg1  | yes                                   | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                |                     | D (see Area IV)           | Located to serve as an upgradient stepout for LOU 45 and segments of LOU 59 located in Area II; and for general Site coverage.   |
| P-7           | Ш                | M-52                   | M-52B                         | 34.5 - 44.5                 | MCfg1  | no                                    | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                |                     | D (see Area III)          | Located to evaluate LOUs 43, 11, 12, and 15; and for general Site coverage.  |

## Groundwater Sampling And Analysis Plan for Area II Phase B Source Area Investigation Work Plan Tronox Facility - Henderson Nevada

Page 1 of 2

|  |                           |                             |                               |                                  | La   | aboratory <sup>E.</sup> :             | CAS - Ke                   | lso, WA              |                                  |                                    | CAS - Roc                      | hester, NY                                    |  |                                       | GEL -<br>Charleston,<br>SC  | STL-<br>Denver                 | Alpha<br>Analytical | Rationale for    |  |
|--|---------------------------|-----------------------------|-------------------------------|----------------------------------|--|---------------------------------------|----------------------------|----------------------|----------------------------------|------------------------------------|--------------------------------|---|--|---------------------------------------|-----------------------------|--------------------------------|---------------------|------------------|--|
| rid Location   | Location<br>Area          | Monitoring<br>Well No.      | Sample ID<br>No. <sup>A</sup> | Screen Interval<br>(ft bgs)      | Soil Type<br>Expected<br>Across Screen<br>Interval <sup>1.</sup> | Well Sampled<br>for Phase A?<br>(y/n) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup> | VOCs <sup>3.</sup><br>(EPA 8260) | Hex Cr <sup>4.</sup><br>(EPA 7199) | Wet<br>Chemistry <sup>5.</sup> | Total<br>Cyanide <sup>F.</sup><br>(EPA 9012A) | OCPs <sup>6.</sup><br>(EPA<br>) 8081A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | Radionuclides <sup>9.</sup> | OPPs <sup>10.</sup><br>(8141A) | Organic Acids       | Revision         | Location Description and Rationale for Investigation   |
|  |                           |                             |                               | Wells                            | are organiz  | ed by grid l                          | ocation as                 | shown or             | Plate A -                        | Starting                           | point is o                     | on the nort                                   | thwesteri                              | n-most gi                             | id in Area I                | l (L-4) an                     | d ending w          | ith the sout     | heastern-most grid covering Area II (S-7).   |
| Q-5  | П                         | M-13                        | M-13B                         | 28 - 48                          | MCfg1  | yes                                   | х                          | х                    | х                                | х                                  | х                              | х   | х                                      | х                                     | х                           |                                |                     | F                | Located to serve as a downgradient stepout for LOU 60; as an upgradient stepout for LOUs 36 and 45; and f general Site coverage. |
| Q-6  | П                         | M-12A                       | M-12AB                        | 40 - 50                          | MCfg1  | yes                                   | х                          | х                    | х                                | х                                  | х                              | x   | х                                      | х                                     | х                           |                                |                     | F, H             | Located as a downgradient stepout for LOUs 12, 15, 29, 36, 43, 59 and 60; and for general Site coverage.                         |
| Q-7  | IIN                       | M-11                        | M-11B                         | 33.3 - 53                        | Qal/MCfg1  | yes                                   | R                          | R                    | R                                | R                                  | R                              | R   | R                                      | R                                     | R                           |                                |                     | D (see Area III) | Located to serve as a downgradient stepout for LOUs 29 and 43; and for general Site coverage.                                    |
| R-5  | IIS                       | M-144                       | M-144B                        | TBD                              | Qal/MCfg1  | new well                              | R                          | R                    | R                                | R                                  | R                              | R   | R                                      | R                                     | R                           |                                |                     | D (see Area IV)  | Co-located with Boring SA133 as an upgradient stepout for LOU 60; and for general Site coverage.                                 |
| R-5  | П                         | M-146                       | M-146B                        | TBD                              | Qal/MCfg1*   | no                                    | х                          | х                    | х                                | х                                  | х                              | х   | х                                      | х                                     | Х                           |                                |                     | F, G             | Located to evaluate LOU 36; and for general Site coverage.   |
| T-7  | IIS                       | M-10                        | M10B                          | 43 - 63                          | MCcg1  | no                                    | R                          | R                    | R                                | R                                  | R                              | R   | R                                      | R                                     | R                           |                                |                     | D (see Area IV)  | Located to serve as an upgradient stepout for LOUs 29, 43 and segments of LOU 60 in Area II; and for general Site coverage.      |
| N/OC Same  |                           |                             |                               |                                  | Number of Fi   | eld Samples:                          | 18                         | 18                   | 18                               | 18                                 | 18                             | 18  | 18                                     | 18                                    | 18                          | 3                              | 3                   | _                |  |
| A/QC Samp  |                           | icates (10%)                |                               |                                  |  |                                       | 2                          | 2                    | 2                                | 2                                  | 2                              | 2   | 2                                      | 2                                     | 2                           | 1                              | 1                   | _                |  |
|  | Field Blanl               |                             |                               |                                  |  |                                       | 1                          | 1                    | 1                                | 1                                  | 1                              | 1   | 1                                      | 1                                     | 1                           | 1                              | 1                   |                  |  |
|  |                           | t Rinseate Bla              | anks                          |                                  |  |                                       | 2                          | 2                    | 2                                | 2                                  | 2                              | 2   | 2                                      | 2                                     | 2                           | 1<br>0                         | 1                   | -                |  |
|  | Trip Blank<br>Matrix Spil |                             |                               |                                  |  |                                       | 0                          | 0                    | 5                                | 0                                  | 0                              | 0   | 0                                      | 0                                     | 1                           | 1                              | 0                   | _                |  |
|  |                           | ke Duplicate                | (5%)                          |                                  |  |                                       | 1                          | 1                    | 1                                | 1                                  | 1                              | 1   | 1                                      | 1                                     | 1                           | 1                              | 1                   |                  |  |
|  |                           |                             |                               |                                  | Тс   | otal Samples:                         | 25                         | 25                   | 30                               | 25                                 | 25                             | 25  | 25                                     | 25                                    | 25                          | 8                              | 8                   |                  |  |
| Notes:           Vell completion information or boring log not available. Soil type inferred from nearby wells and geologic cross-section provided in the Phase A Source Area Investigation Report (ENSR, 2007). Tronox is in the process of obtaining information from BMI.           X         Sample will be collected and analyzed.           blank         No sample collected under Phase B sampling plan.           1.         It is anticipated that the large majority of the flow to the well will be from the coarse-grained sediments. As such, in the cases where there are two lithologies present across the screen interval, the water sampled will represent conditions in the coarse-grained interval.           2.         Metale analyses includes Aluminum, Antimony. Arsenic, Barium, Berylium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Platinum, Potassium, Selenium, Silver, Sodium, Strontium, Tin, Titanium, Thalium, Tungsten, Uranium, Vanadi           3.         VOCs = Voltalie organic compounds to indude analysis for naphthalene).           4.         Hexavalent Chromium.           5.         Complete list of wet chemistry parameters are shown on Table 1. All groundwater samples will have pH measured in the field.           6.         OCPs = Organochionize pesticides (to include analysis for hexachiorobenzene).           7.         SVOCs = Semi volatile organic compounds.           8.         Redionuclides consists of alpha space reporting for isotopic Thorium and isotopic Uranium, and Radium-226 by beta counting (per NDEP).           10. |                           |                             |                               |                                  |  |                                       |                            |                      |                                  |                                    |                                |   |  |                                       |                             |                                |                     |                  |  |
| R E  | Brown-shac<br>Sample ID   | ding indicates was added to | items that h convey sam       | ave been remov<br>ple ID nomencl | d or changed fro<br>ved from Table :<br>ature to field sa        | 3 in the June 2                       | 008 Area II Wo             | ork Plan orig        | inally review                    | ved by NDEF                        | <b>&gt;</b> .                  | event).                                       |  |                                       |                             |                                |                     |                  |  |
| B (  |                           |                             |                               | per NDEP (Jul<br>08 submission   |  |                                       |                            |                      |                                  |                                    |                                |   |  |                                       |                             |                                |                     |                  |  |

Page 2 of 2

|               |                  |                        |                               |                             |  | La                                    | aboratory <sup>E.</sup> :       | CAS - Ke                   | lso, WA              |                                  |                                    | CAS - Roci                     | nester, NY                                    |                                      |                                       | GEL -<br>Charleston,<br>SC | STL-<br>Denver                    | Alpha<br>Analytical |   |
|---------------|------------------|------------------------|-------------------------------|-----------------------------|--|---------------------------------------|---------------------------------|----------------------------|----------------------|----------------------------------|------------------------------------|--------------------------------|---|--------------------------------------|---------------------------------------|----------------------------|-----------------------------------|---------------------|---|
| Grid Location | Location<br>Area | Monitoring<br>Well No. | Sample ID<br>No. <sup>A</sup> | Screen Interval<br>(ft bgs) | Soil Type<br>Expected<br>Across Screen<br>Interval <sup>1.</sup> | Well Sampled<br>for Phase A?<br>(y/n) | Matrix<br>Spike/MS<br>Duplicate | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup> | VOCs <sup>3.</sup><br>(EPA 8260) | Hex Cr <sup>4.</sup><br>(EPA 7199) | Wet<br>Chemistry <sup>5.</sup> | Total<br>Cyanide <sup>F.</sup><br>(EPA 9012A) | OCPs <sup>6.</sup><br>(EPA<br>8081A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | Radionuclides <sup>s</sup> | o. OPPs <sup>10.</sup><br>(8141A) | Organic Acids       | Location Description and Rationale for Investigation  |
|               |                  |                        |                               | Wells                       | are organiz  | ed by grid lo                         | ocation as                      | shown on F                 | Plate A - S          | starting po                      | oint is on t                       | the north                      | western-n                                     | nost grid                            | in Area                               | ll (L-5) and               | ending w                          | ith the sou         | theastern-most grid covering Area II (R-5).   |
| L-5           | П                | I-AR                   | I-ARB                         | 25 - 45                     | MCfg1  | yes                                   |                                 | х                          | х                    | х                                | х                                  | х                              | Х   | Х                                    | Х                                     | х                          |                                   |                     | Located as an upgradient stepout for LOUs 30, 31, and 56; and LOU 58 and for general Site coverage.   |
| L-6           | П                | M-64                   | M-64B                         | 12.7 - 37.3                 | Qal/MCfg1  | no                                    |                                 | х                          | х                    | х                                | х                                  | х                              | Х   | х                                    | Х                                     | х                          |                                   |                     | Located to evaluate LOU 55; as a downgradient stepout for LOUs 30 and 56 and for general Site coverage.   |
| L-6           | П                | M-25                   | M-25B                         | 24 - 39                     | Qal/MCfg1  | no                                    |                                 | х                          | х                    | x                                | х                                  | х                              | х   | х                                    | х                                     | х                          |                                   |                     | Located to serve as a downgradient stepout for LOUs 16, 19 and 53; as an upgradient stepout for LOU 55; and for general Site coverage.  |
| L-6           | П                | M-38                   | M-38B                         | 20 - 35                     | MCfg1  | no                                    |                                 | х                          | х                    | x                                | х                                  | х                              | х   | x                                    | х                                     | х                          |                                   |                     | Located to serve as a downgradient stepout for LOUs 16, 17, 19, and LOU 57; and for general Site coverage.  |
| M-5           | П                | M-110                  | M-110B                        | 30 - 40                     | Qal/MCfg1  | no                                    |                                 | х                          | х                    | х                                | х                                  | х                              | х   | х                                    | Х                                     | Х                          |                                   |                     | Located to evaluate LOU 57 as a downgradient stepout for LOU 5; and for general Site coverage.  |
| M-5           | П                | M-111A                 | M-111AB                       | 29.7 - 39.7                 | MCfg1  | no                                    |                                 | х                          | х                    | x                                | х                                  | х                              | x   | x                                    | х                                     | х                          | х                                 | х                   | Replacement well for M-111 which was destroyed by site grading and located to evaluate LOU 57; a downgradient stepout for LOU 52; as an upgradient stepout for LOUs 5 and 19; and for general Site coverage                                   |
| M-6           | ш                | M-89                   | M-89B                         | 18 - 38.2                   | Qal/MCfg1  | ves                                   |                                 | х                          | х                    | x                                | х                                  | х                              | х   | x                                    | х                                     | х                          | х                                 | х                   | Located to evaluate LOU 57; as a downgradient stepout for LOUs 5, 16, 17, and 53; and for general Site coverage.  |
| IVI-O         | п                | 101-09                 | M-89B                         | 18 - 38.2                   | Qai/MCigi  | yes                                   | х                               | х                          | х                    | x                                | х                                  | х                              | х   | х                                    | х                                     | х                          | х                                 | х                   | This is a matirx spike / matirx spike duplicate sample. Fill one set of bottles for MS sample & a second set of bottles for MSD sample. Label both sets of bottles as M-89B.  |
| M-7           | П                | M-22A                  | M-22AB                        | 16 - 36                     | Qal/MCfg1  | no                                    |                                 | х                          | х                    | x                                | х                                  | х                              | х   | х                                    | х                                     | х                          |                                   |                     | Located to evaluate LOU 57; as a downgradient stepout for LOUs 5, and 16 through 18; and for general Site coverage.   |
| M-8           | П                | M-19                   | M-19B                         | 14.5 - 34.5                 | MCfg1  | no                                    |                                 | х                          | х                    | x                                | х                                  | х                              | х   | x                                    | х                                     | х                          |                                   |                     | Located to serve as an upgradient stepout for LOUs 5 and 20; to evaluate LOUs 22 and 23 and potential offsite sources to the east; and as general Site coverage.  |
| N-5           | П                | M-75                   | M-75B                         | 34.6 - 49.3                 | Qal/MCfg1  | no                                    |                                 | х                          | х                    | x                                | х                                  | х                              | х   | x                                    | х                                     | х                          |                                   |                     | Located to serve as a downgradient stepout for LOUs 7, 8, 9, and 45; as an upgradient stepout for LOUs 16, 17, 19, 53 and 57; and for general Site coverage.  |
| N-5           | II               | M-76                   | M-76B                         | 34.6 - 49.3                 | MCcg1  | yes                                   |                                 | х                          | х                    | x                                | х                                  | х                              | х   | х                                    | х                                     | х                          |                                   |                     | Located to serve as a downgradient stepout for LOUs 8 and 45; as an upgradient stepout for LOUs 53 and 57 and for general Site coverage.  |
| N-6           | Ш                | M-2A                   | M-2AB                         | 30-40                       | Qal  | yes                                   |                                 | х                          | х                    | x                                | х                                  | х                              | х   | x                                    | х                                     | х                          |                                   |                     | Located as a downgradient stepout for LOUs 7, 8, 9, 13, 14, 20, 34, and 45; as an upgradient stepout for LOUs 16, 17, 18, 22, 23, 53, and 57; and for general Site coverage.  |
|               |                  |                        | M-2ABD                        | 30 - 40 (dup)               | Gui  | 300                                   |                                 | х                          | х                    | х                                | х                                  | х                              | х   | x                                    | х                                     | х                          |                                   |                     | This is a duplicate sample of M-2AB.  |
| N-6           | II               | M-17A                  | M-17AB                        | 35 - 45                     | Qal/MCfg1  | no                                    |                                 | х                          | х                    | х                                | х                                  | х                              | х   | x                                    | х                                     | х                          |                                   |                     | Located to evaluate LOU 57; as an upgradient stepout for LOUs 5, 16, 17, 18, 22, and 23; and for general Site coverage.   |
| N-7           | II               | M-34                   | M-34B                         | 25 - 40                     | Qal/MCfg1  | no                                    |                                 | х                          | х                    | x                                | х                                  | х                              | x   | х                                    | х                                     | х                          | х                                 | х                   | Located to evaluate the outfall of the culvert that empties into the Eastern Diversion segment of LOU 5; as a<br>downgradient stepout for LOUs 13 and 14; as an upgradient step out for LOUs 20, 22, and 23; and for genera<br>Site coverage. |
| O-5           | II               | M-21                   | M-21B                         | 18 - 38                     | MCfg1  | no                                    |                                 | х                          | х                    | x                                | х                                  | х                              | x   | х                                    | Х                                     | х                          |                                   |                     | Located to evaluate LOU 45; as an upgradient stepout for LOUs 7, 9, 13 and 14; as a downgradient stepout for LOU 59; and for general Site coverage.   |
| Q-5           | Ш                | M-13                   | M-13B                         | 28-48                       | MCfg1  | Ves                                   |                                 | х                          | х                    | x                                | х                                  | х                              | х   | х                                    | х                                     | х                          |                                   |                     | Located to serve as a downgradient stepout for LOU 60; as an upgradient stepout for LOUs 36 and 45; and fo general Site coverage.   |
| <u>v</u> -v   |                  | 10-13                  | M-13BD                        | 28 - 48 (dup)               | worgi  | yes                                   |                                 | х                          | х                    | x                                | х                                  | х                              | х   | x                                    | х                                     | х                          |                                   |                     | This is a duplicate sample of M-13B.  |
| Q-6           | II               | M-12A                  | M-12AB                        | 40 - 50                     | MCfg1  | yes                                   |                                 | х                          | х                    | х                                | х                                  | х                              | х   | х                                    | х                                     | х                          |                                   |                     | Located as a downgradient stepout for LOUs 12, 15, 29, 36, 43, 59 and 60; and for general Site coverage.  |
| R-5           | II               | M-146                  | M-146B                        | TBD                         | Qal/MCfg1*   | no                                    |                                 | х                          | х                    | х                                | х                                  | х                              | х   | х                                    | х                                     | х                          |                                   |                     | Located to evaluate LOU 36; and for general Site coverage.  |

Notes:

Well completion information or boring log not available. Soil type inferred from nearby wells and geologic cross-section provided in the Phase A Source Area Investigation Report (ENSR, 2007). Tronox is in the process of obtaining information from BMI. Sample will be collected and analyzed. Х

blank No sample collected under Phase B sampling plan.

1. It is anticipated that the large majority of the flow to the well will be from the coarse-grained sediments. As such, in the cases where there are two lithologies present across the screen interval, the water sampled will represent conditions in the coarse-grained interval.

Metals analyses includes Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chonnium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Platinum, Potassium, Selenium, Silver, Sodium, Strontium, Tin, Titanium, Tungsten, Uranium, Vanadium, Zinc 2.

VOCs = Volatile organic compounds (to include analysis for naphthalene). 3.

4. Hexavalent Chromium.

Complete list of wet chemistry parameters are shown on Table 1. All groundwater samples will have pH measured in the field. 5.

OCPs = Organochlorine pesticides (to include analysis for hexachlorobenzene). 6.

## Table 3 (Field Version) Groundwater Sampling And Analysis Plan for Area II

Phase B Source Area Investigation Work Plan Tronox Facility - Henderson Nevada

Page 1 of 2

|               |                  |                        |                               |                             |  | La                                    | aboratory <sup>E.</sup> :       | CAS - Ke                   | lso, WA              |                                  |                                    | CAS - Roch                     | nester, NY                                    |                                      |                                       | GEL -<br>Charleston,<br>SC  | STL-<br>Denver                 | Alpha<br>Analytical |                     |
|---------------|------------------|------------------------|-------------------------------|-----------------------------|--|---------------------------------------|---------------------------------|----------------------------|----------------------|----------------------------------|------------------------------------|--------------------------------|---|--------------------------------------|---------------------------------------|-----------------------------|--------------------------------|---------------------|---------------------|
| Grid Location | Location<br>Area | Monitoring<br>Well No. | Sample ID<br>No. <sup>A</sup> | Screen Interval<br>(ft bgs) | Soil Type<br>Expected<br>Across Screen<br>Interval <sup>1.</sup> | Well Sampled<br>for Phase A?<br>(y/n) | Matrix<br>Spike/MS<br>Duplicate | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup> | VOCs <sup>3.</sup><br>(EPA 8260) | Hex Cr <sup>4.</sup><br>(EPA 7199) | Wet<br>Chemistry <sup>5.</sup> | Total<br>Cyanide <sup>F.</sup><br>(EPA 9012A) | OCPs <sup>6.</sup><br>(EPA<br>8081A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | Radionuclides <sup>9.</sup> | OPPs <sup>10.</sup><br>(8141A) | Organic Acids       | Lo                  |
|               |                  |                        |                               | Wells                       | are organize   | ed by grid lo                         | ocation as                      | shown on F                 | Plate A - S          | starting po                      | oint is on t                       | the north                      | western-m                                     | ost grid                             | in Area                               | II (L-5) and                | ending w                       | vith the sou        | theastern-most grid |
| 7.            | SVOCs = S        | Semi volatile o        | rganic com                    | pounds.                     |  |                                       |                                 | -                          | •                    | •                                |                                    | •                              | •   |                                      |                                       |                             | •                              |                     |                     |
| 8.            | Polychlorin      | ated Biphenyl          | ls.                           |                             |  |                                       |                                 |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                |                     |                     |
|               |                  |                        |                               |                             | sotopic Thorium  | and isotopic U                        | Jranium, and F                  | Radium-226, pl             | us Radium-           | 228 by beta                      | counting (pe                       | er NDEP).                      |   |                                      |                                       |                             |                                |                     |                     |
|               |                  | rganophospho           |                               |                             |  |                                       |                                 |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                |                     |                     |
| IIIN/E/W/S    | Well locate      | ed outside (no         | orth, east, we                | est, or south) of           | Area II.   |                                       |                                 |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                |                     |                     |
|               | To Be Dete       | ermined when           | well is cons                  | structed.                   |  |                                       |                                 |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                |                     |                     |
| TD            | Total Deptl      | h of the well d        | etermined b                   | y Site-wide rou             | tine groundwate  | r monitoring.                         |                                 |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                |                     |                     |
| nr            | Not record       | ed in Tronox o         | database (so                  | creen intervals t           | to be acquired fr  | om BMI where                          | possible or d                   | etermined by c             | lownhole ca          | mera).                           |                                    |                                |   |                                      |                                       |                             |                                |                     |                     |
| Qal           | Quaternary       | / Alluvium.            |                               |                             |  |                                       |                                 |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                |                     |                     |
| 0             |                  | ek Formation           |                               |                             |  |                                       |                                 |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                |                     |                     |
| MCcg1         | Muddy Cre        | ek Formation           | - first coarse                | e-grained facies            | S  |                                       |                                 |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                |                     |                     |

## Table 3 (Field Version) Groundwater Sampling And Analysis Plan for Area II

Phase B Source Area Investigation Work Plan Tronox Facility - Henderson Nevada

Page 2 of 2

Location Description and Rationale for Investigation

rid covering Area II (R-5).



Area III

|                  |  |               |                          | Laboratory <sup>ĸ.</sup>                    | Columbia A<br>Services K   |                                    |                                    |                                |                        | Colu                              | umbia Analytica                            | al Services - I                 | Rochester, N                  | IΥ                                 |                                  | Columbia<br>Services - H          |                                  | GEL -<br>Charleston, SC           | STL<br>Denver, CO                 | Alpha<br>Analytical<br>Sparks, NV | EMSL<br>Westmont, NJ                        |                           | T      |
|------------------|--|---------------|--------------------------|---|----------------------------|------------------------------------|------------------------------------|--------------------------------|------------------------|-----------------------------------|--|---------------------------------|-------------------------------|------------------------------------|----------------------------------|-----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---|---------------------------|--------|
| Grid<br>Location | LOU Number                                 | Boring<br>No. | Sample ID<br>Number      | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>3.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B) | VOCs <sup>4.</sup><br>(EPA 8260B) | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total<br>Cyanide<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA 1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup><br>(EPA 8141) | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Rationale For<br>Revision | Ľ      |
|                  |  |               | Borin                    | gs are organiz                              | ed by grid locatio         | on as shown                        | on Plate A                         | - Starting po                  | int is on the          | northwester                       | n most grid in                             | Area 3 (N-7)                    | and ending                    | g with the so                      | outheaster                       | n most grid                       | l in Area 3                      | (S-8).                            |                                   |                                   |   |                           | _      |
| N-7<br>N-7       | 20, 21, 22, 23<br>20, 21, 22, 23           | SA157         | SA157-0.0B<br>SA157-0.5B | 0.0   | X                          | X                                  | X                                  | X                              |                        | X                                 | X  | X                               | R                             | X                                  |                                  |                                   | X                                | X                                 |                                   |                                   | X   | 0, G                      | E      |
| N-7<br>N-7       | 20, 21, 22, 23<br>20, 21, 22, 23           | -             | SA157-10B<br>SA157-20B   | 10<br>20                                    | X<br>R                     | X                                  | X<br>R                             | Х                              |                        | X<br>R                            | X<br>R                                     | Х                               | R<br>R                        | X                                  |                                  |                                   | -                                | X                                 |                                   |                                   |   | O, G<br>B                 | f      |
| N-7              | 20, 21, 22, 23                             |               | SA157-25B                | 25  | X                          | Х                                  | X                                  | Х                              |                        | Х                                 | X  | Х                               |                               | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   | B, O, G                   |        |
| N-7<br>N-7       | 20, 21, 22, 23<br>20, 21, 22, 23           | ~             | SA157-30B<br>SA157-40B   | 30<br>40                                    | R<br>R                     | R<br>R                             | R<br>R                             |                                |                        | R<br>R                            | R<br>R                                     |                                 | R<br>R                        | R<br>R                             |                                  |                                   |                                  | R<br>R                            |                                   |                                   |   | B<br>B                    |        |
| N-7<br>N-8       | 20, 21, 22, 23<br>21, 24, 46               | RSAN8         | SA157-44B<br>RSAN8-0.0B  | 44<br>0.0                                   | Х                          | X                                  | Х                                  | Х                              |                        | Х                                 | Х  | Х                               |                               | X                                  |                                  |                                   |                                  | Х                                 |                                   |                                   | Х   | I, O,G                    | E      |
| N-8<br>N-8       | 21, 24, 46<br>21, 24, 46                   | _             | RSAN8-0.5B<br>RSAN8-10B  | 0.5<br>10                                   | X                          | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                                     | X<br>X                          | X<br>Hold                     | X<br>X                             |                                  |                                   | х                                | X<br>X                            |                                   |                                   |   |                           |        |
| N-8<br>N-8       | 21, 24, 46<br>21, 24, 46<br>21, 24, 46     | -             | RSAN8-20B<br>RSAN8-30B   | 20<br>30                                    | X                          | X                                  | X                                  | X                              |                        | X                                 | X  | X                               | Hold                          | X                                  |                                  |                                   | -                                | X                                 |                                   |                                   |   | В                         | (      |
| N-8              | 21, 24, 46                                 | -             | RSAN8-34B                | 34  | X                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х  | x                               | Х                             | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   | B, I                      | _      |
| N-8<br>N-8       | 21, 24, 46<br>21, 24, 46                   | SA139         | RSAN8-40B<br>SA139-0.0B  | 40<br>0.0                                   | R                          | R                                  | R                                  | R                              |                        | R                                 | R  |                                 | R                             | R                                  |                                  |                                   |                                  | R                                 |                                   |                                   | Х   | A                         | E      |
| N-8<br>N-8       | 21, 24, 46<br>21, 24, 46                   | -             | SA139-0.5B<br>SA139-10B  | 0.5   | X                          | X                                  | X                                  |                                |                        | X                                 | X  |                                 | R<br>R                        |                                    |                                  |                                   | X                                | X                                 |                                   |                                   |   | G<br>G                    | L      |
| N-8<br>N-8       | 21, 24, 46<br>21, 24, 46                   |               | SA139-20B<br>SA139-25B   | 20<br>25                                    | R<br>X                     | R<br>X                             | R<br>X                             |                                |                        | R<br>X                            | R<br>X                                     |                                 | R                             |                                    |                                  |                                   |                                  | R<br>X                            |                                   |                                   |   | B<br>B, G                 | (      |
| N-8<br>N-8       | 21, 24, 46<br>21, 24, 46<br>21, 24, 46     | -             | SA139-30B<br>SA139-35B   | 30<br>35                                    | R                          | R<br>X                             | R<br>X                             |                                |                        | R<br>X                            | R<br>X                                     |                                 | R                             |                                    |                                  |                                   |                                  | R                                 |                                   |                                   |   | B<br>I, G                 |        |
| N-8              | 21, 24, 46                                 |               | SA139-40B                | 40  | R                          | R                                  | R                                  |                                |                        | R                                 | R  |                                 | R                             |                                    |                                  |                                   |                                  | R                                 |                                   |                                   |   | A A                       |        |
| N-8<br>N-8       | 21, 24, 46<br>21, 24, 46                   | SA160         | SA160-0.0B<br>SA160-0.5B | 0.0<br>0.5                                  | X                          | х                                  | х                                  |                                |                        | х                                 | х  |                                 | R                             |                                    |                                  |                                   | x                                | Х                                 |                                   |                                   | X   | G                         | E      |
| N-8<br>N-8       | 21, 24, 46<br>21, 24, 46                   | -             | SA160-10B<br>SA160-20B   | 10<br>20                                    | X                          | X                                  | X                                  |                                |                        | X                                 | X  |                                 | R<br>R                        |                                    |                                  |                                   |                                  | X                                 |                                   |                                   |   | G<br>B, G                 | t      |
| N-8<br>N-8       | 21, 24, 46<br>21, 24, 46                   |               | SA160-30B<br>SA160-34B   | 30<br>34                                    | R<br>X                     | R<br>X                             | R<br>X                             |                                |                        | R<br>X                            | R<br>X                                     |                                 | R                             |                                    |                                  |                                   |                                  | R<br>X                            |                                   |                                   |   | B<br>I, G                 |        |
| N-8<br>0-6       | 21, 24, 46<br>34W                          | SA39          | SA160-40B<br>SA39-0.0B   | <u>40</u><br>0.0                            | R                          | R                                  | R                                  |                                |                        | R                                 | R  |                                 | R                             |                                    |                                  |                                   |                                  | R                                 |                                   |                                   | X   | A                         | E      |
| O-6              | 34W  | - 3839        | SA39-0.5B                | 0.5   | X                          | X                                  | X                                  | X                              |                        | X                                 | X  |                                 | R                             |                                    |                                  |                                   | х                                | X                                 |                                   |                                   | ^   | G                         |        |
| O-6<br>O-6       | 34W<br>34W                                 | -             | SA39-10B<br>SA39-20B     | 10<br>20                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                                     |                                 | R<br>R                        |                                    |                                  |                                   |                                  | X<br>R                            |                                   |                                   |   | G<br>B                    |        |
| O-6<br>O-6       | 34W<br>34W                                 |               | SA39-25B<br>SA39-30B     | 25<br>30                                    | R                          | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                                     |                                 | R                             |                                    |                                  |                                   |                                  | X<br>R                            |                                   |                                   |   | B, G<br>B                 | -      |
| O-6<br>O-6       | 34W<br>34W                                 |               | SA39-40B<br>SA39-41B     | 40<br>41                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                                     |                                 | R                             |                                    |                                  |                                   |                                  | R<br>X                            |                                   |                                   |   | B<br>I, G                 |        |
| 0-7<br>0-7       | 24, 46                                     | RSAO7         | RSAO7-0.0B               | 0.0   | X                          |                                    |                                    | X                              |                        | X                                 |  |                                 | x                             |                                    |                                  |                                   |                                  |                                   |                                   |                                   |   | Y<br>B                    | E      |
| 0-7              | 24, 46<br>24, 46                           |               | RSAO7-15B#<br>RSAO7-10B  | 15 #<br>10                                  | R                          | X<br>R                             | X<br>R                             | R                              |                        | R                                 | X<br>R                                     |                                 | R                             | X<br>R                             |                                  |                                   | X                                | X<br>R                            |                                   |                                   |   | В                         | t      |
| 0-7<br>0-7       | 24, 46<br>24, 46                           |               | RSAO7-25B##<br>RSAO7-20B | 25 ##<br>20                                 | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                                     |                                 | Hold<br>R                     | X<br>R                             |                                  |                                   |                                  | X<br>R                            |                                   |                                   |   | B                         | 0      |
| 0-7<br>0-7       | 24, 46<br>24, 46                           |               | RSAO7-30B<br>RSAO7-35B#  | 30<br>35 #                                  | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                                     |                                 | R<br>Hold                     | R<br>X                             |                                  |                                   |                                  | R<br>X                            |                                   |                                   |   | B<br>B                    | _      |
| 0-7<br>0-7       | 24, 46<br>24, 46                           |               | RSAO7-40B<br>RSAO7-47B   | 40<br>47                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                                     |                                 | R<br>X                        | R<br>X                             |                                  |                                   |                                  | R<br>X                            |                                   |                                   |   | B                         | _      |
| 0-7              | 34W, 60, 20, 22, 23                        | SA178         | SA178-0.0B               | 0.0   |                            |                                    |                                    |                                |                        |                                   |  |                                 |                               |                                    |                                  |                                   |                                  |                                   |                                   |                                   | Х   |                           |        |
| 0-7<br>0-7       | 34W, 60, 20, 22, 23<br>34W, 60, 20, 22, 23 | _             | SA178-0.5B<br>SA178-10B  | 0.5<br>10                                   | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                                     | X<br>X                          | R<br>R                        | X<br>X                             |                                  |                                   | X                                | X<br>X                            |                                   |                                   |   | O, G<br>O, G              | /      |
| 0-7<br>0-7       | 34W, 60, 20, 22, 23<br>34W, 60, 20, 22, 23 | -             | SA178-17B<br>SA178-20B   | 17<br>20                                    | R                          | X<br>R                             | X<br>R                             | Х                              |                        | X<br>R                            | X<br>R                                     | X<br>R                          | R                             | X<br>R                             |                                  |                                   |                                  | X<br>R                            |                                   |                                   |   | E, G, O<br>B              | f      |
| 0-7<br>0-7       | 34W, 60, 20, 22, 23<br>34W, 60, 20, 22, 23 | -             | SA178-25B<br>SA178-30B   | 25<br>30                                    | X<br>R                     | X<br>R                             | X<br>R                             | Х                              |                        | X<br>R                            | X<br>R                                     | X<br>R                          | R                             | X                                  |                                  |                                   |                                  | X<br>R                            |                                   |                                   |   | B, G, O<br>B              | (      |
| 0-7<br>0-7       | 34W, 60, 20, 22, 23<br>34W, 60, 20, 22, 23 | -             | SA178-40B                | 40<br>43                                    | R                          | R<br>X                             | R<br>X                             | x                              |                        | R                                 | R<br>X                                     | R                               | R                             | R                                  | -                                |                                   |                                  | R                                 |                                   |                                   |   | B<br>I, G, O              | -      |
| 0-7              | 24, 46                                     | SA52          | SA178-43B<br>SA52-0.0B   | 0.0   |                            |                                    |                                    |                                |                        | X                                 |  | ^                               |                               | ^                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   | I, G, O<br>Y              | E      |
| 0-7<br>0-7       | 24, 46<br>24, 46                           |               | SA52-19B#<br>SA52-10B    | 19 #<br>10                                  | X<br>R                     | X<br>R                             | X<br>R                             |                                |                        | X<br>R                            | X<br>R                                     |                                 | R<br>R                        |                                    |                                  |                                   | X                                | X<br>R                            |                                   |                                   |   | В                         | (      |
| 0-7<br>0-7       | 24, 46<br>24, 46                           | -             | SA52-20B<br>SA52-30B     | 20<br>30                                    | R                          | R<br>R                             | R<br>R                             |                                |                        | R<br>R                            | R<br>R                                     |                                 | R<br>R                        |                                    |                                  |                                   |                                  | R<br>R                            |                                   |                                   |   | B                         | 5<br>  |
| 0-7<br>0-7       | 24, 46<br>24, 46                           |               | SA52-33B#<br>SA52-40B    | 33 #<br>40                                  | X<br>R                     | X<br>R                             | X<br>R                             |                                |                        | X<br>R                            | X<br>R                                     |                                 | R                             |                                    |                                  |                                   |                                  | X<br>R                            |                                   |                                   |   | E,G<br>B                  | (      |
| 0-7<br>0-7       | 24, 46<br>24, 46                           | SA149         | SA52-43B<br>SA149-0.0B   | 43  | X                          | X                                  | X                                  |                                |                        | X                                 | X  |                                 |                               |                                    |                                  |                                   |                                  | X                                 |                                   |                                   |   | I, G<br>Y                 | 1      |
| 0-7              | 24, 46                                     | - SA149       | SA149-17B#               | 17 #  | X                          | X                                  | X                                  |                                |                        | X                                 | X  |                                 | R                             |                                    |                                  |                                   | X                                | X                                 |                                   |                                   |   | B,G                       |        |
| 0-7<br>0-7       | 24, 46<br>24, 46                           |               | SA149-10B<br>SA149-27B#  | 10<br>27 ##                                 | R<br>X                     | R<br>X                             | R<br>X                             |                                |                        | R<br>X                            | R<br>X                                     |                                 | R                             |                                    |                                  |                                   |                                  | R<br>X                            |                                   |                                   |   | B<br>B,G                  |        |
| 0-7<br>0-7       | 24, 46<br>24, 46                           | -             | SA149-20B<br>SA149-30B   | 20<br>30                                    | R<br>R                     | R<br>R                             | R<br>R                             |                                |                        | R<br>R                            | R<br>R                                     |                                 | R<br>R                        |                                    |                                  |                                   |                                  | R<br>R                            |                                   |                                   |   | B<br>B, G                 | (      |
| 0-7<br>0-7       | 24, 46<br>24, 46                           | -             | SA149-40B<br>SA149-45B   | 40<br>45                                    | R                          | R                                  | R                                  |                                |                        | R                                 | R  |                                 | R                             |                                    |                                  |                                   |                                  | R                                 |                                   |                                   |   | B<br>I, G                 |        |
| 0-7              | 24, 60                                     | SA137         | SA137-0.0B               | 0.0   |                            |                                    |                                    |                                |                        |                                   |  |                                 |                               |                                    |                                  | 1                                 |                                  |                                   |                                   |                                   | Х   | N.                        |        |
| 0-7<br>0-7       | 24, 60<br>24, 60                           | -             | SA137-0.5B<br>SA137-15B  | 0.5<br>15                                   | X                          | X                                  | X<br>X                             | X<br>X                         |                        | X<br>X                            | X  | X<br>X                          |                               | X                                  |                                  |                                   | X                                | X                                 |                                   |                                   |   | E, G                      | F      |
| 0-7<br>0-7       | 24, 60<br>24, 46, 60                       | SA141         | SA137-31B<br>SA141-0.0B  | 31<br>0.0                                   | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х  | Х                               |                               | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   | I, G<br>Q,Y               | E      |
| 0-7<br>0-7       | 24, 46, 60<br>24, 46, 60                   |               | SA141-13B#<br>SA141-10B  | 13 #<br>10                                  | X<br>R                     | X                                  | X                                  | х                              |                        | X<br>R                            | X  |                                 | R                             | Х                                  |                                  |                                   | Х                                | X                                 |                                   |                                   |   | O, G, L<br>B              | C<br>F |
| 0-7<br>0-7       | 24, 46, 60<br>24, 46, 60<br>24, 46, 60     |               | SA141-23B##<br>SA141-20B | 23 ##<br>20                                 | X<br>R                     | X<br>R                             | X<br>R                             | х                              |                        | X<br>R                            | X<br>R                                     |                                 | R                             | Х                                  |                                  |                                   |                                  | X<br>R                            |                                   |                                   |   | B, O, G, L<br>B           | - 2    |
| 0-7              | 24, 46, 60                                 | -             | SA141-30B                | 30  | X                          | Х                                  | Х                                  | х                              |                        | Х                                 | X  |                                 | R                             | x                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   | B, G, O, L                | Ę      |
| 0-7              | 24, 46, 60                                 |               | SA141-40B                | 40  | R                          | R                                  | R                                  |                                |                        | R                                 | R  |                                 | R                             |                                    |                                  |                                   |                                  | R                                 |                                   |                                   |   | A                         | *      |

## Soil Sampling and Analysis Plan - Area III Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

1 of 5

|   | Location Description and Rationale for Investigation<br>may not agree with upgradient and downgradient descriptions)  | (NDE |
|---|---|------|
|   |   |      |
|   |   |      |
|   | Boring located to evaluate LOU 20 (Pond C-1 Associated Piping), LOU 21 (Pond Mn-1 and Associated Piping),<br>LOU 22 (WC-West Associated Piping), and LOU 23 (WC-East Associated Piping). Located at piping junction<br>from all LOUs at highest release potential location (manhole and junction).  |      |
|   | GW anticipated at ~46 feet bgs.   |      |
| ~ |   |      |
|   | Boring located to evaluate LOU 24 (Manganese [Mn] Tailings Pile Area), LOU 46 (Former Old Main Cooling<br>Tower and Recirculation Lines), and LOU 21 (Pond Mn-1 and Associated Piping). Located near the perimeter<br>of two LOUs and associated piping at a high release potential location (down slope and low spot).   |      |
|   | GW anticipated at ~36 feet bgs.   |      |
| ~ |   |      |
| ~ | Boring located to evaluate LOU 21 (Pond Mn-1 and Associated Piping), LOU 24 (Mn Tailings Pile area), and<br>LOU 46 (Former Old Main Cooling Tower and Recirculation Lines). Located near the perimeter of two LOUs<br>and associated piping at a high release potential location (down slope and low spot)  |      |
|   | GW anticipated at ~37 feet bgs.   |      |
|   |   |      |
|   | Boring located to evaluate upgradient LOU 24 (Mn Tailings Pile Area) , LOU 46 (Former Old Main Cooling<br>Tower and Recirculation Lines) and LOU 21 (Pond Mn-1 and Associated Piping). Located near perimeter of<br>two LOUs and piping at high release potential location (down slope and low spot)  |      |
| - | GW anticipated at ~36 feet bgs.   |      |
|   |   |      |
|   | Boring located north of Chemstar to evaluate LOU 34W (Historic Mn Tailings Pile Area, West). Located in low<br>spot of LOU 34W at likely worst case location.   |      |
|   | GW anticipated at ~43 feet bgs.   |      |
| - |   |      |
| ~ | Boring located to evaluate potential impacts to soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46<br>(Former Old Main Cooling Tower and Recirculation Lines). Located in low spot of LOU 24 and down hill<br>topographically of LOU 46.   |      |
| ~ | Soil samples will be collected below Mn-tailings/soil interface; interface at approx. 15 ft bgs.<br>GW anticipated at ~49 feet bgs.   |      |
|   |   |      |
| - | Boring located to evaluate LOU 20 (Pond C-1 Associated Piping Associated Piping), LOU 22 (WC-West<br>Associated Piping), LOU 23 (WC-East Associated Piping), LOU 34W (Historic Mn Tailings Pile Area, West),<br>and LOU 60 (Acid Drain system). Located within this cluster of LOUs at a likely high release potential location<br>for all five LOUs (low point, edge of road). |      |
| _ | LOU 60 pipeline invert located approximately 16 ft bgs.   |      |
| - | GW anticipated at ~45 feet bgs.   |      |
|   | Boring located to evaluate soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46 (Former Old Main   |      |
| - | Cooling Tower and Recirculation Lines). Located within the footprint of both LOUs at a topographically low<br>area for worst case coverage.   |      |
|   | Soil samples will be collected below Mn-tailings/soil interface; interface at approx. 19 to 25 feet bgs.<br>LOU 60 pipeline invert located approximately 13 feet below Mn tailings/soil interface (32 to 38 bgs).<br>GW anticipated at ~45 feet bgs.  |      |
|   |   |      |
|   | Boring located to evaluate soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46 (Former Old Main Cooling<br>Tower and Recirculation Lines). Located within LOU 24 and just upgradient of LOU 46 to provide area coverage   |      |
|   | of both LOUs.<br>Soil samples will be collected below Mn-tailings/soil interface; interface at approx. 16 feet bgs.   |      |
|   | GW anticipated at ~47 feet bgs.   |      |
| - | Boring located to evaluate LOU 24 (Mn Tailings Pile Area) historical surface drainage path and LOU 60 (Acid   |      |
|   | Drain System) conveyance route. Boring to be drilled on soil in surface drainage swale near toe of Mn tailings<br>pile (not on top of tailings pile). LOU 60 pipeline invert occurs approximately 14 feet bgs.<br>GW anticipated at -33 feet bgs.   |      |
|   | Boring located to evaluate potential impacts to underlying soil from LOU 24 (Mn Tailings Pile Area), LOU 46<br>Cooling Tower and Recirculation Lines), and LOU 60 (Acid Drain System).  |      |
|   | Former Old Main Cooling Tower soil samples will be collected below Mn-tailings/soil interface; interface at<br>approx 18 ft bgs. LOU 60 pipeline invert occurs at 13 feet below Mn tailings/soil interface (`31 feet bgs).<br>The soil sample for the pipeline invert will determined in the field based on the depth to the Mn tailings/soil                                   |      |
|   | interface. Groundwater anticipated at ~32 ft bgs.<br>*The anticipated groundwater level is at the same depth that the pipeline invert is anticipated to be located.   |      |

|                  |  |               |                          | Laboratory <sup>K.</sup> :                  | Columbia A<br>Services K   |                                    |                                    |                                |                        | Colu                              | umbia Analytica                            | Il Services - R                 | ochester, N                   | IY                                    |                                  | Columbia<br>Services - H          |                                  | GEL -<br>Charleston, SC           | STL<br>Denver, CO                 | Alpha<br>Analytical<br>Sparks, NV | EMSL<br>Westmont, NJ                        |                           | Γ   |
|------------------|--|---------------|--------------------------|---|----------------------------|------------------------------------|------------------------------------|--------------------------------|------------------------|-----------------------------------|--|---------------------------------|-------------------------------|---------------------------------------|----------------------------------|-----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---|---------------------------|-----|
| Grid<br>Location | LOU Number                                   | Boring<br>No. | Sample ID<br>Number      | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>3.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B) | VOCs <sup>4.</sup><br>(EPA 8260B) | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total<br>Cyanide<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C)    | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA 1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup><br>(EPA 8141) | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Rationale For<br>Revision | L   |
|                  |  |               | Borin                    | gs are organized                            | d by grid locatio          | on as shown o                      | on Plate A                         | - Starting po                  | oint is on the         | northwester                       | n most grid in                             | Area 3 (N-7)                    | and ending                    | g with the s                          | outheaster                       | n most grid                       | d in Area 3                      | (S-8).                            |                                   |                                   |   |                           | -   |
| O-8<br>O-8       | 24, 46<br>24, 46                             | RSAO8         | RSAO8-0.0B<br>RSAO8-15B# | 0.0<br>15 #                                 | x                          | X                                  | x                                  | x                              |                        | x                                 | x  |                                 | X                             |                                       |                                  |                                   | X                                | X                                 |                                   |                                   |   | Y                         | B   |
| O-8              | 24, 46                                       |               | RSAO8-10B                | 10  | R                          | R                                  | R                                  | R                              |                        | R                                 | R  |                                 | R                             |                                       |                                  |                                   | ~                                | R                                 |                                   |                                   |   | B                         | а   |
| O-8<br>O-8       | 24, 46<br>24, 46                             |               | RSAO8-25B##<br>RSAO8-20B | 25 ##<br>20                                 | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                                     |                                 | Hold<br>R                     |                                       |                                  |                                   |                                  | X<br>R                            |                                   |                                   |   | B                         | E   |
| O-8<br>O-8       | 24, 46<br>24, 46                             |               | RSAO8-30B<br>RSAO8-40B   | 30<br>40                                    | R<br>R                     | R                                  | R<br>R                             | R<br>R                         |                        | R<br>R                            | R<br>R                                     |                                 | R<br>R                        |                                       |                                  |                                   |                                  | R                                 |                                   |                                   |   | B                         | 1   |
| O-8              | 24, 46                                       |               | RSAO8-43B                | 43  | X                          | X                                  | X                                  | X                              |                        | X                                 | X  |                                 | X                             |                                       |                                  |                                   |                                  | X                                 |                                   |                                   |   |                           | -   |
| O-8<br>O-8       | 24, 46<br>24, 46                             | SA108         | SA108-0.0B<br>SA108-20B# | 0.0 20 #                                    | x                          | X                                  | x                                  |                                |                        | x                                 | x  |                                 | R                             |                                       |                                  |                                   | x                                | x                                 |                                   |                                   | X   | G                         | B   |
| O-8              | 24, 46                                       |               | SA108-10B                | 10  | R                          | R                                  | R                                  |                                |                        | R                                 | R  |                                 | R                             |                                       |                                  |                                   | ~                                | R                                 |                                   |                                   |   | В                         | n   |
| 0-8<br>0-8       | 24, 46<br>24, 46                             |               | SA108-20B<br>SA108-30B## | 20<br>30 ##                                 | R<br>X                     | R<br>X                             | R<br>X                             |                                |                        | R<br>X                            | R<br>X                                     |                                 | R                             |                                       |                                  |                                   |                                  | R<br>X                            |                                   |                                   |   | B<br>B, G                 | S   |
| O-8<br>O-8       | 24, 46<br>24, 46                             |               | SA108-40B<br>SA108-48B   | 40<br>48                                    | R<br>X                     | R<br>X                             | R<br>X                             |                                |                        | R<br>X                            | R<br>X                                     |                                 | R                             |                                       |                                  |                                   |                                  | R<br>X                            |                                   |                                   |   | B<br>I, G                 | _   |
| O-8              | 24, 46, 60                                   | SA142         | SA142-0.0B               | 0.0   |                            |                                    |                                    |                                |                        |                                   |  |                                 |                               |                                       |                                  |                                   |                                  |                                   |                                   |                                   |   | Y                         | E   |
| O-8<br>O-8       | 24, 46, 60<br>24, 46, 60                     |               | SA142-20B<br>SA142-10B   | 20<br>10                                    | X<br>R                     | X<br>R                             | X<br>R                             | X                              |                        | X<br>R                            | X<br>R                                     | X                               | R<br>R                        | Х                                     |                                  |                                   | X                                | X<br>R                            |                                   |                                   |   | B,O, L, G<br>B            | _(  |
| O-8              | 24, 46, 60                                   |               | SA142-20B                | 20  | R                          | R                                  | R                                  |                                |                        | R                                 | R  |                                 | R                             |                                       |                                  |                                   |                                  | R                                 |                                   |                                   |   | B                         | Ľ   |
| O-8<br>O-8       | 24, 46, 60<br>24, 46, 60                     |               | SA142-34B<br>SA142-30B   | 34<br>30                                    | X<br>R                     | X<br>R                             | X<br>R                             | Х                              |                        | X<br>R                            | X<br>R                                     | X                               | R<br>R                        | Х                                     |                                  |                                   |                                  | X<br>R                            |                                   |                                   |   | B, E, O, G, L<br>B, O, L  | - 0 |
| O-8              | 24, 46, 60                                   |               | SA142-40B                | 40  | R                          | R                                  | R                                  |                                |                        | R                                 | R  |                                 | R                             | · · · · · · · · · · · · · · · · · · · |                                  |                                   |                                  | R                                 |                                   |                                   |   | В                         |     |
| O-8<br>O-8       | 24, 46, 60<br>24, 46                         | SA143         | SA142-51B<br>SA143-0.0B  | 51<br>0.0                                   | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х  | Х                               |                               | Х                                     |                                  |                                   |                                  | Х                                 |                                   |                                   | Х   | I, O, G, L                | E   |
| O-8<br>O-8       | 24, 46<br>24, 46                             |               | SA143-31B#<br>SA143-10B  | 31 #<br>10                                  | X<br>R                     | X                                  | X<br>R                             |                                |                        | X<br>R                            | X<br>R                                     |                                 | R<br>R                        |                                       |                                  |                                   | Х                                | X                                 |                                   |                                   |   | G<br>B                    | (   |
| O-8              | 24, 46                                       |               | SA143-20B                | 20  | R                          | R                                  | R                                  |                                |                        | R                                 | R  |                                 | R                             |                                       |                                  |                                   |                                  | R                                 |                                   |                                   |   | В                         | S   |
| O-8<br>O-8       | 24, 46<br>24, 46                             |               | SA143-30B<br>SA143-41B#  | 30<br>41 ##                                 | R<br>X                     | R<br>X                             | R<br>X                             |                                |                        | R<br>X                            | R<br>X                                     |                                 | R                             |                                       |                                  |                                   |                                  | R<br>X                            |                                   |                                   |   | В, G                      |     |
| O-8              | 24, 46                                       |               | SA143-40B                | 40  | R                          | R                                  | R                                  |                                |                        | R                                 | R  |                                 | R                             |                                       |                                  |                                   |                                  | R                                 |                                   |                                   |   | B, G                      |     |
| 0-8<br>0-8       | 24, 46<br>21, 24, 46, 59, 60                 | SA171         | SA143-52B<br>SA171-0.0B  | 52<br>0.0                                   | Х                          | Х                                  | Х                                  |                                |                        | Х                                 | Х  |                                 |                               |                                       |                                  |                                   |                                  | X                                 |                                   |                                   |   | I, G<br>Y                 | E   |
| O-8<br>O-8       | 21, 24, 46, 59, 60<br>21, 24, 46, 59, 60     |               | SA171-5B#<br>SA171-10B   | 5 #   | X<br>R                     | X                                  | X                                  | X<br>R                         |                        | X<br>R                            | X<br>R                                     | Х                               | R<br>R                        | X<br>R                                |                                  |                                   | Х                                | X                                 |                                   |                                   |   | G, L, O<br>E, G, L, O     | Ĺ   |
| 0-8              | 21, 24, 46, 59, 60                           |               | SA171-10B<br>SA171-18B#  | 10<br>18 ##                                 | X                          | X                                  | R<br>X                             | X                              |                        | X                                 | X  | X                               | ĸ                             | X                                     |                                  |                                   |                                  | X                                 |                                   |                                   |   | B,E,G,L,O                 | _(, |
| O-8<br>O-8       | 21, 24, 46, 59, 60<br>21, 24, 46, 59, 60     |               | SA171-20B<br>SA171-30B   | 20<br>30                                    | R<br>X                     | R<br>X                             | R<br>X                             | х                              |                        | R<br>X                            | R<br>X                                     | x                               | R<br>R                        | x                                     |                                  |                                   |                                  | R<br>X                            |                                   |                                   |   | B, G, L, O                | S   |
| O-8              | 21, 24, 46, 59, 60                           |               | SA171-40B                | 40  | R                          | R                                  | R                                  |                                |                        | R                                 | R  |                                 | R                             |                                       |                                  |                                   |                                  | R                                 |                                   |                                   |   | В                         | 0   |
| O-8<br>P-6       | 21, 24, 46, 59, 60<br>59                     | SA130         | SA171-42B<br>SA130-0.0B  | 42  | Х                          | X                                  | Х                                  | X                              |                        | Х                                 | Х  | Х                               |                               | X                                     |                                  |                                   |                                  | X                                 |                                   |                                   | Х   | I, G, L, O<br>N           | E   |
| P-6              | 59   |               | SA130-0.5B               | 0.5   | X                          | X                                  | X                                  | X                              |                        | X                                 | X  | X                               |                               | X                                     |                                  |                                   | Х                                | X                                 |                                   |                                   |   |                           | s   |
| P-6<br>P-6       | 59<br>59                                     |               | SA130-10B<br>SA130-25B   | 10<br>25                                    | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                                     | X<br>X                          |                               | X<br>X                                |                                  |                                   |                                  | X<br>X                            |                                   |                                   |   | B,G<br>B,G                | -   |
| P-6<br>P-6       | 59<br>34W                                    | RSAP6         | SA130-43B<br>RSAP6-0.0B  | 43<br>0.0                                   | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х  | Х                               |                               | Х                                     |                                  |                                   |                                  | Х                                 |                                   |                                   | X   | G, I                      | 1   |
| P-6              | 34W  | KSAF0         | RSAP6-0.5B               | 0.5   | X                          | Х                                  | х                                  | Х                              |                        | Х                                 | Х  |                                 | Х                             | Х                                     |                                  |                                   | х                                | Х                                 |                                   |                                   | ^   |                           | 2   |
| P-6<br>P-6       | 34W<br>34W                                   |               | RSAP6-10B<br>RSAP6-20B   | 10<br>20                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                                     |                                 | Hold                          | R                                     |                                  |                                   |                                  | X                                 |                                   |                                   |   | В                         | 0   |
| P-6              | 34W  |               | RSAP6-25B                | 25  | Х                          | X                                  | Х                                  | Х                              |                        | X                                 | Х  |                                 | Hold                          | Х                                     |                                  |                                   |                                  | X                                 |                                   |                                   |   | В                         |     |
| P-6<br>P-6       | 34W<br>34W                                   |               | RSAP6-30B<br>RSAP6-40B   | 30<br>40                                    | R<br>R                     | R<br>R                             | R<br>R                             | R<br>R                         |                        | R<br>R                            | R<br>R                                     |                                 | R<br>R                        | R<br>R                                |                                  |                                   |                                  | R<br>R                            |                                   |                                   |   | <u> </u>                  | -   |
| P-6              | 34W  | DSAD7         | RSAP6-44B                | 44  | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х  |                                 | Х                             | Х                                     |                                  |                                   |                                  | Х                                 |                                   |                                   | Х   | <u> </u>                  | -   |
| P-7<br>P-7       | 60, 20, 21, 22, 23<br>60, 20, 21, 22, 23     | NOAT I        | RSAP7-0.0B<br>RSAP7-0.5B | 0.0   | X                          | X                                  | х                                  | X                              |                        | Х                                 | X  | X                               | Х                             | x                                     |                                  |                                   | х                                | X                                 | Х                                 | Х                                 | ^   | Z                         | _ F |
| P-7<br>P-7       | 60, 20, 21, 22, 23<br>60, 20, 21, 22, 23     |               | RSAP7-10B<br>RSAP7-14B   | <u>10</u><br>14                             | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                                     | R<br>X                          | R<br>Hold                     | R<br>X                                |                                  |                                   |                                  | R<br>X                            | X                                 | X                                 |   | В<br>Е, Z                 | -   |
| P-7              | 60, 20, 21, 22, 23                           |               | RSAP7-20B                | 20  | R                          | R                                  | R                                  | R                              |                        | R                                 | R  | R                               | R                             | R                                     |                                  |                                   |                                  | R                                 |                                   | -                                 |   | В                         | 0   |
| P-7<br>P-7       | 60, 20, 21, 22, 23<br>60, 20, 21, 22, 23     |               | RSAP7-25B<br>RSAP7-30B   | 25<br>30                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                                     | X<br>R                          | Hold<br>R                     | X<br>R                                |                                  |                                   |                                  | X<br>R                            |                                   |                                   |   | B                         |     |
| P-7<br>P-7       | 60, 20, 21, 22, 23<br>60, 20, 21, 22, 23     |               | RSAP7-40B<br>RSAP7-41B   | 40<br>41                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                                     | R<br>X                          | R<br>X                        | R<br>X                                |                                  |                                   |                                  | R<br>X                            | X                                 | X                                 |   | B<br>I, Z                 | _   |
| P-7              | 48, 49, 50                                   | SA140         | SA140-0.0B               | 0.0   |                            |                                    |                                    | ~                              |                        |                                   |  |                                 |                               | ^                                     |                                  |                                   |                                  |                                   |                                   |                                   | Х   | i, Z                      | E   |
| P-7<br>P-7       | 48, 49, 50<br>48, 49, 50                     |               | SA140-0.5B<br>SA140-10B  | 0.5   | X                          | X                                  | x                                  |                                |                        | X                                 | X  |                                 | X<br>Hold                     |                                       |                                  |                                   | X                                | X<br>X                            |                                   |                                   |   |                           | a   |
| P-7              | 48, 49, 50                                   |               | SA140-20B                | 20  | Х                          | Х                                  | Х                                  |                                |                        | Х                                 | Х  |                                 | Hold                          |                                       |                                  |                                   |                                  | Х                                 |                                   |                                   |   | В                         | E   |
| P-7<br>P-7       | 48, 49, 50<br>48, 49, 50                     |               | SA140-30B<br>SA140-40B   | <u> </u>                                    | X                          | X                                  | x<br>x                             |                                |                        | X<br>X                            | X  |                                 | Hold<br>X                     |                                       |                                  |                                   |                                  | X<br>X                            |                                   |                                   |   |                           |     |
| P-8              | 47, 70                                       | RSAP8         | RSAP8-0.0B               | 0.0   |                            |                                    |                                    | ~                              |                        |                                   |  |                                 |                               | ~                                     |                                  |                                   | ~                                |                                   |                                   |                                   | Х   |                           | E   |
| P-8<br>P-8       | 47, 70<br>47, 70                             |               | RSAP8-0.5B<br>RSAP8-10B  | 0.5<br>10                                   | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                                     |                                 | X<br>Hold                     | X<br>X                                |                                  |                                   | X                                | X<br>X                            |                                   |                                   |   |                           |     |
| P-8<br>P-8       | 47, 70<br>47, 70                             |               | RSAP8-20B<br>RSAP8-25    | 20<br>25                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                                     |                                 | R<br>Hold                     | R<br>X                                |                                  |                                   |                                  | R<br>X                            |                                   |                                   |   | B<br>B                    | 0   |
| P-8              | 47, 70                                       |               | RSAP8-30B                | 30  | R                          | R                                  | R                                  | R                              |                        | R                                 | R  |                                 | R                             | R                                     |                                  |                                   |                                  | R                                 |                                   |                                   |   | B                         |     |
| P-8<br>P-8       | 47, 70<br>34E, 47, 48, 51, A70               | SA38          | RSAP8-40B<br>SA38-0.0B   | 40<br>0.0                                   | Х                          | X                                  | Х                                  | Х                              |                        | Х                                 | Х  |                                 | Х                             | Х                                     |                                  |                                   |                                  | X                                 |                                   |                                   | R   | Н                         | F   |
| P-8              | 34E, 47, 48, 51, A70                         | 0,100         | SA38-0.5B                | 0.5   | R                          | R                                  | R                                  | R                              | R                      | R                                 | R  |                                 | R                             | R                                     |                                  |                                   | R                                | R                                 |                                   |                                   |   |                           | F   |
| P-8<br>P-8       | 34E, 47, 48, 51, A70<br>34E, 47, 48, 51, A70 |               | SA38-10B<br>SA38-20B     | 10<br>20                                    | R<br>R                     | R<br>R                             | R<br>R                             | R<br>R                         | R<br>R                 | R<br>R                            | R<br>R                                     |                                 | R<br>R                        | R<br>R                                |                                  |                                   | -                                | R<br>R                            |                                   |                                   |   |                           | _(  |
| P-8              | 34E, 47, 48, 51, A70                         |               | SA38-30B                 | 30  | R                          | R                                  | R                                  | R                              | R                      | R                                 | R  |                                 | R                             | R                                     |                                  |                                   |                                  | R                                 |                                   |                                   |   |                           | 1   |
| P-8              | 34E, 47, 48, 51, A70                         |               | SA38-40B                 | 40  | R                          | R                                  | R                                  | R                              | R                      | R                                 | R  |                                 | R                             | R                                     |                                  |                                   |                                  | R                                 |                                   |                                   |   |                           | 4   |

Soil Sampling and Analysis Plan - Area III Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

2 of 5

| Location Description and Rationale for Investigation<br>may not agree with upgradient and downgradient descriptions)   | (NDE |
|--|------|
|  |      |
| <br>Boring located to evaluate for potential impacts to soil underlying LOU 24 (Manganese Tailings Pile Area) and<br>LOU 46 (Former Old Main Cooling Tower and Recirculation Lines). Located within LOU 24 and just upgradient of<br>area coverage LOU 46 to provide of both LOUs.   |      |
| <br>Soil samples will be collected below Mn-tailings/soil interface at approx 15 ft bgs. GW anticipated at ~45 feet bgs.<br>Borehole for RSAO8 will be converted to well M-148.  |      |
|  |      |
| Boring located to evaluate soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46 (Former Old Main Cooling Tower and Recirculation Lines). Located within the footprint of both LOUs at a slight low spot to provide reasonable coverage of both.   |      |
| <br>Soil samples will be collected below Mn-tailings/soil interface; interface at approx 20 to 29 feet bgs.  |      |
| <br>GW anticipated at ~50 feet bgs.  |      |
| <br>Boring located to evaluate potential impacts to underlying soil from LOU 24 (Mn Tailings Pile Area), LOU 46<br>(Former Old Main Cooling Tower and Recirculation Lines), and LOU 60 (Acid Drain System).<br>Soil samples will be collected below Mn-tailings/soil interface; interface at approx 20 to 30 ft bgs.<br>Lou 60 pipeline invert occurs at approximately 13 feet below Mn tailings/soil interface (33-43 bgs).   |      |
| <br>Groundwater anticipated at ~53 ft bgs.   |      |
|  |      |
| <br>Boring located to evaluate for potential impacts to soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46<br>(Former Old Main Cooling Tower and Recirculation Lines). Located within LOU 42 and downgradient of LOU 46<br>to provide area coverage of both LOUs.   |      |
| <br>Soil samples will be collected below Mn-tailings/soil interface; interface estimated to occur at 31 ft bgs.<br>GW anticipated at ~54 feet bgs.   |      |
|  |      |
| Boring located to evaluate potential impacts to soil underlying LOU 21 (Pipeline associated with Pond Mn-1),<br>LOU 24 (Mn Tailings Pile Area), LOU 46 (Former Old Main Cooling Tower and Recirculation Lines), LOU 59<br>(Storm Sewer System), and LOU 60 (Acid Drain System). Located within LOU 24 nearby LOU 46 and adjacent to<br>LOUs 21, 59 and 60 piping at a reasonable release location to evaluate all five LOUs.<br>Soil samples will be collected below Mn-tailings/soil interface at approx 5 feet bgs. LOU 60 invert at 17 bgs. |      |
| <br>Storm sewer pipeline occurs approximately 9 feet bgs.<br>GW anticipated at ~44 feet bgs.   |      |
| <br>Boring located to evaluate potential impacts to soil from possible LOU 59 (Storm Sewer System) pipeline<br>segment/junction releases.<br>GW anticipated at ~45 feet bgs.   |      |
| <br>Boring located to evaluate LOU 34W (Historic Mn Tailings Pile Area, West). Random boring located within low spo<br>at worst case potential environmental issue location.   | t of |
| <br>GW anticipated at ~46 feet bgs.  |      |
|  |      |
| <br>Boring located to evaluate LOU 20 (Pipeline route associated with Pond C-1), LOU 21 (Pond Mn-1 associated<br>pipeline route), LOU 22 (WC-West Associated Piping), LOU 23 (Pond WC-East associated pipeline), and LOU<br>60 (Acid Drain System).  |      |
| <br>LOU 60 pipeline invert occurs at approximately 13 feet bgs.<br>GW anticipated at ~43 feet bgs.   |      |
|  |      |
| <br>Boring located to evaluate LOU 48 (Leach Plant Anolyte Tank), LOU 49 (Leach Plant Area<br>Sulfuric Acid Storage Tank), and LOU 50 (Leach Plant Area Leach Tanks). Located adjacent to three LOUs   |      |
| Sulfuir Acid Storage Tank, and LOO So (Leach Prant Area Leach Tanks). Located adjacent to three LOOs<br>at an accessible and reasonable potential release point for all three LOUs (just down slope).<br>Borehole SA140 will be converted to well M-141.   |      |
|  |      |
| <br>Boring located to evaluate LOU 47 (Leach Plant Area Mn Ore Pile Area) and Area 70 (Former U.S. Vanadium<br>Site). Random boring located within LOU 47 and at downgradient edge of Area 70 to evaluate potential area<br>releases from both LOU 47 and Area 70 LOUs (down slope and low spot).  |      |
| <br>GW anticipated at ~42 feet bgs.  |      |
|  |      |
| Boring located to evaluate LOU 34E (Historic Mn Tailings Pile Area, East), LOU 47 (Leach<br>Plant Manganese Ore Pile Area), LOU 48 (Leach Plant Anolyte Storage Tanks), LOU 51<br>(Leach Plant Area Transfer Lines To/From Unit-6), and Area 70 (Former U.S. Vanadium Site).   |      |
|  |      |

|                  |  |               |                          | Laboratory <sup>K.</sup> :                  | Columbia A<br>Services K   |  |                                    |                                |                        | Colu                              | umbia Analytica                            | al Services - F                 | lochester, N                  | IY                                 |                                  | Columbia<br>Services - H          |                                  | GEL -<br>Charleston, SC           | STL<br>Denver, CO                 | Alpha<br>Analytical<br>Sparks, NV | EMSL<br>Westmont, NJ                        |                           |          |
|------------------|--|---------------|--------------------------|---|----------------------------|--|------------------------------------|--------------------------------|------------------------|-----------------------------------|--|---------------------------------|-------------------------------|------------------------------------|----------------------------------|-----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---|---------------------------|----------|
| Grid<br>Location | LOU Number                               | Boring<br>No. | Sample ID<br>Number      | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Perchlorate<br>(EPA 314.0) | <b>Metals<sup>2.</sup></b><br>(EPA 6020) | Hex Cr <sup>3.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B) | VOCs <sup>4.</sup><br>(EPA 8260B) | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total<br>Cyanide<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA 1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup><br>(EPA 8141) | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Rationale For<br>Revision | Ľ        |
|                  |  |               | Borin                    | gs are organized                            | by grid locatio            | on as shown o                            | on Plate A                         | - Starting po                  | int is on the          | northwester                       | n most grid in                             | Area 3 (N-7)                    | and endin                     | g with the s                       | outheaster                       | n most grid                       | in Area 3                        | (S-8).                            |                                   |                                   |   |                           |          |
| Q-7              | 20, 22, 23, 48, 50                       | RSAQ7         | RSAQ7-0.0B               | 0.0   |                            |  |                                    |                                |                        |                                   |  |                                 |                               |                                    |                                  |                                   |                                  |                                   |                                   |                                   | Х   |                           | B        |
| Q-7<br>Q-7       | 20, 22, 23, 48, 50<br>20, 22, 23, 48, 50 | -             | RSAQ7-0.5B<br>RSAQ7-10B  | 0.5   | X<br>X                     | X<br>X                                   | X<br>X                             | X                              |                        | X                                 | X  | X                               | X<br>Hold                     | X<br>X                             |                                  |                                   | X                                | × X                               |                                   |                                   |   |                           | (V<br>   |
| Q-7              | 20, 22, 23, 48, 50                       |               | RSAQ7-20B                | 20  | R                          | R  | R                                  | R                              |                        | R                                 | R  | R                               | R                             | R                                  |                                  |                                   |                                  | R                                 |                                   |                                   |   | В                         | G        |
| Q-7<br>Q-7       | 20, 22, 23, 48, 50<br>20, 22, 23, 48, 50 |               | RSAQ7-25B<br>RSAQ7-30B   | 25<br>30                                    | X<br>R                     | X<br>R                                   | R                                  | X<br>R                         |                        | R                                 | X<br>R                                     | R                               | Hold<br>R                     | R                                  |                                  |                                   |                                  | X<br>R                            |                                   |                                   |   | <u>В</u><br>В             |          |
| Q-7              | 20, 22, 23, 48, 50                       |               | RSAQ7-37B                | 37  | Х                          | X  | Х                                  | Х                              |                        | Х                                 | Х  | X                               | Х                             | Х                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   | I                         |          |
| Q-7<br>Q-7       | 20, 22, 23, 48, 50<br>20, 22, 23, 61     | SA36          | RSAQ7-40B<br>SA36-0.0B   | 40 0.0                                      | R                          | R  | R                                  | R                              |                        | R                                 | R  |                                 | R                             | R                                  |                                  |                                   |                                  | R                                 |                                   |                                   | R   | A<br>H                    | B        |
| Q-7              | 20, 22, 23, 61                           |               | SA36-0.5B                | 0.5   | R                          | R  | R                                  | R                              |                        | R                                 | R  |                                 | R                             |                                    |                                  |                                   | R                                | R                                 |                                   |                                   |   |                           | Pi       |
| Q-7<br>Q-7       | 20, 22, 23, 61<br>20, 22, 23, 61         |               | SA36-10B<br>SA36-20B     | 10<br>20                                    | R<br>R                     | R<br>R                                   | R<br>R                             | R<br>R                         |                        | R<br>R                            | R<br>R                                     |                                 | R<br>R                        |                                    |                                  |                                   |                                  | R<br>R                            |                                   |                                   |   |                           | a        |
| Q-7<br>Q-7       | 20, 22, 23, 61<br>20, 22, 23, 61         |               | SA36-30B<br>SA36-40B     | 30<br>40                                    | R<br>R                     | R  | R<br>R                             | R<br>R                         |                        | R<br>R                            | R<br>R                                     |                                 | R<br>R                        |                                    |                                  |                                   |                                  | R                                 |                                   |                                   |   |                           | 4        |
| Q-8              | 47, 48, 59                               | RSAQ8         | RSAQ8-0.0B               | 0.0   |                            |  |                                    |                                |                        |                                   |  |                                 |                               |                                    |                                  |                                   |                                  |                                   |                                   |                                   | X   |                           | В        |
| Q-8<br>Q-8       | 47, 48, 59<br>47, 48, 59                 |               | RSAQ8-0.5B<br>RSAQ8-10B  | 0.5   | X<br>X                     | X X                                      | X<br>X                             | X                              |                        | X                                 | X  |                                 | X<br>Hold                     | X<br>X                             |                                  |                                   | X                                | X<br>X                            |                                   |                                   |   |                           | <br>47   |
| Q-8              | 47, 48, 59                               |               | RSAQ8-20B                | 20  | Х                          | Х  | Х                                  | Х                              |                        | Х                                 | Х  |                                 | Hold                          | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   | В                         | G        |
| Q-8<br>Q-8       | 47, 48, 59<br>47, 48, 59                 |               | RSAQ8-30B<br>RSAQ8-34B   | <u>30</u><br>34                             | R<br>X                     | R<br>X                                   | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                                     |                                 | R<br>X                        | R<br>X                             |                                  |                                   |                                  | R<br>X                            |                                   |                                   |   | В                         | -        |
| Q-8              | 47, 48, 59                               | 0407          | RSAQ8-40B                | 40  | R                          | R  | R                                  | R                              |                        | R                                 | R  |                                 | R                             | R                                  |                                  |                                   |                                  | R                                 |                                   |                                   |   | A                         |          |
| Q-8<br>Q-8       | 47, 48, 51, 59,A70<br>47, 48, 51, 59,A70 | SA37          | SA37-0.0B<br>SA37-0.5B   | 0.0<br>0.5                                  | R                          | R  | R                                  | R                              | R                      | R                                 | R  |                                 | R                             | R                                  |                                  |                                   | R                                | R                                 |                                   |                                   | R   | Н                         | Bo<br>(L |
| Q-8              | 47, 48, 51, 59,A70                       |               | SA37-10B                 | 10  | R                          | R  | R                                  | R                              | R                      | R                                 | R  |                                 | R                             | R                                  |                                  |                                   |                                  | R<br>R                            |                                   |                                   |   |                           | S        |
| Q-8<br>Q-8       | 47, 48, 51, 59,A70<br>47, 48, 51, 59,A70 | •             | SA37-20B<br>SA37-30B     | 20<br>30                                    | R<br>R                     | R<br>R                                   | R<br>R                             | R<br>R                         | R<br>R                 | R<br>R                            | R<br>R                                     |                                 | R<br>R                        | R<br>R                             | -                                |                                   |                                  | R                                 |                                   |                                   |   |                           | fo       |
| Q-8<br>Q-8       | 47, 48, 51, 59,A70<br>21, 59, 60         | SA174         | SA37-40B<br>SA174-0.0B   | 40 0.0                                      | R                          | R  | R                                  | R                              | R                      | R                                 | R  |                                 | R                             | R                                  |                                  |                                   |                                  | R                                 |                                   |                                   | R   | Н                         | -<br>-   |
| Q-8              | 21, 59, 60                               | 5A174         | SA174-0.0B<br>SA174-0.5B | 0.5   | R                          | R  | R                                  |                                |                        | R                                 | R  |                                 | R                             |                                    |                                  |                                   | R                                | R                                 |                                   |                                   | ĸ   | n                         | wi       |
| Q-8<br>Q-8       | 21, 59, 60<br>21, 59, 60                 |               | SA174-10B<br>SA174-11B   | 10<br>11                                    | R<br>R                     | R  | R<br>R                             |                                |                        | R<br>R                            | R<br>R                                     |                                 | R<br>R                        |                                    |                                  |                                   |                                  | R                                 |                                   |                                   |   |                           | 4        |
| Q-8              | 21, 59, 60                               |               | SA174-20B                | 20  | R                          | R  | R                                  |                                |                        | R                                 | R  |                                 | R                             |                                    |                                  |                                   |                                  | R                                 |                                   |                                   |   |                           | Ē        |
| Q-8<br>Q-8       | 21, 59, 60<br>21, 59, 60                 |               | SA174-30B<br>SA174-40B   | 30<br>40                                    | R                          | R  | R<br>R                             |                                |                        | R<br>R                            | R<br>R                                     |                                 | R<br>R                        |                                    |                                  |                                   |                                  | R                                 |                                   |                                   |   |                           | 4        |
| Q-8              | 37, 44, 60                               | SA177         | SA177-0.0B               | 0.0   |                            |  |                                    |                                |                        |                                   |  |                                 |                               |                                    |                                  |                                   |                                  |                                   |                                   |                                   | R   | Н                         | В        |
| Q-8<br>Q-8       | 37, 44, 60<br>37, 44, 60                 |               | SA177-0.5B<br>SA177-10B  | 0.5   | R<br>R                     | R  | R<br>R                             |                                |                        | R<br>R                            | R<br>R                                     |                                 | R                             | R                                  |                                  |                                   | R                                | R                                 |                                   |                                   |   |                           | m        |
| Q-8              | 37, 44, 60                               |               | SA177-11B                | 11  | R                          | R  | R                                  |                                |                        | R                                 | R  |                                 | R                             | R                                  |                                  |                                   |                                  | R                                 |                                   |                                   |   |                           | fro      |
| Q-8<br>Q-8       | 37, 44, 60<br>37, 44, 60                 |               | SA177-20B<br>SA177-30B   | 20<br>30                                    | R<br>R                     | R<br>R                                   | R<br>R                             |                                |                        | R<br>R                            | R<br>R                                     |                                 | R<br>R                        | R<br>R                             |                                  |                                   |                                  | R<br>R                            |                                   |                                   |   |                           |          |
| Q-8<br>R-7       | 37, 44, 60<br>40, 59, 61                 | RSAR7         | SA177-40B<br>RSAR7-0.0B  | <u>40</u><br>0.0                            | R                          | R  | R                                  |                                |                        | R                                 | R  |                                 | R                             | R                                  |                                  |                                   |                                  | R                                 |                                   |                                   | Х   |                           | B        |
| R-7              | 40, 59, 61                               | 100/110/      | RSAR7-0.5B               | 0.5   | Х                          | Х  | Х                                  | Х                              |                        | Х                                 | Х  |                                 | Х                             | Х                                  |                                  |                                   | Х                                | Х                                 |                                   |                                   | ^   |                           |          |
| R-7<br>R-7       | 40, 59, 61<br>40, 59, 61                 |               | RSAR7-9B<br>RSAR7-10B    | 9 10  | X<br>R                     | R  | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                                     |                                 | Hold<br>R                     | X<br>R                             |                                  |                                   |                                  | X<br>R                            |                                   |                                   |   | Е<br>В                    | _L(<br>G |
| R-7              | 40, 59, 61                               |               | RSAR7-20B                | 20  | Х                          | Х  | Х                                  | X                              |                        | Х                                 | Х  |                                 | Hold                          | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   | В                         | 1        |
| R-7<br>R-7       | 40, 59, 61<br>40, 59, 61                 |               | RSAR7-30B<br>RSAR7-34B   | 30<br>34                                    | R<br>X                     | R<br>X                                   | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                                     |                                 | R<br>X                        | R<br>X                             |                                  |                                   |                                  | R<br>X                            |                                   |                                   |   | B                         |          |
| R-7              | 40, 59, 61                               | 64110         | RSAR7-40B                | 40  | R                          | R  | R                                  | R                              |                        | R                                 | R  |                                 | R                             | R                                  | ~                                | ×                                 |                                  | R                                 |                                   |                                   |   | A<br>W, F                 |          |
| R-7<br>R-7       | 40, 61<br>40, 61                         | SA112         | SA112-0.0B<br>SA112-0.5B | 0.0 0.5                                     | Х                          | X  | х                                  | х                              |                        | х                                 | Х  |                                 | R                             | Х                                  | X<br>X                           | X<br>X                            | х                                | Х                                 |                                   |                                   | X   | G, L, F                   | B        |
| R-7<br>R-7       | 40, 61<br>40, 61                         | -             | SA112-10B<br>SA112-20B   | 10<br>20                                    | X X                        | X X                                      | X                                  | X<br>X                         |                        | X                                 | X  |                                 | R                             | X                                  |                                  | R                                 |                                  | X<br>X                            |                                   |                                   |   | G, L<br>G, L              | G        |
| R-7              | 40, 61                                   |               | SA112-30B                | 30  | R                          | R  | R                                  | R                              |                        | R                                 | R  |                                 | R                             |                                    |                                  | R                                 |                                  | R                                 |                                   |                                   |   | В                         |          |
| R-7<br>R-7       | 40, 61<br>40, 61                         |               | SA112-34B<br>SA112-40B   | <u> </u>                                    | X<br>R                     | X<br>R                                   | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                                     |                                 | R                             | X                                  | X                                | X                                 |                                  | R                                 |                                   |                                   |   | I, G, L, F<br>A           | -        |
| R-7              | 33, 59, 61                               | SA132         | SA132-0.0B               | 0.0   |                            |  |                                    |                                |                        |                                   |  |                                 |                               |                                    |                                  |                                   |                                  |                                   |                                   |                                   | X   | F,W                       | Lo       |
| R-7<br>R-7       | 33, 59, 61<br>33, 59, 61                 | -             | SA132-0.5B<br>SA132-10B  | 0.5   | X<br>X                     | X<br>X                                   | X                                  | X                              |                        | X                                 | X  |                                 | X<br>Hold                     |                                    |                                  |                                   | X                                | X<br>X                            |                                   |                                   |   | B,C,F,G,L<br>B,C,G,L      | (5       |
| R-7              | 33, 59, 61                               |               | SA132-20B                | 20  | Х                          | X  | X                                  | Х                              |                        | Х                                 | X  |                                 | Hold                          |                                    |                                  |                                   |                                  | Х                                 |                                   |                                   |   | B,C,G,L                   | a        |
| R-7<br>R-7       | 33, 59, 61<br>33, 59, 61                 | -             | SA132-30B<br>SA132-34B   | 30<br>34                                    | R<br>X                     | R<br>X                                   | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                                     |                                 | R<br>X                        |                                    |                                  |                                   |                                  | R<br>X                            |                                   |                                   |   | B<br>C,F,G,I,L            | G        |
| R-7<br>R-7       | 33, 59, 61<br>40, 61                     | SA33          | SA132-40B<br>SA33-0.0B   | <u>40</u><br>0.0                            | R                          | R  | R                                  | R                              |                        | R                                 | R  |                                 | R                             |                                    | X                                | X                                 |                                  | R                                 |                                   |                                   | Х   | A<br>W, F                 |          |
| R-7              | 40, 61                                   | 5A33          | SA33-0.0B<br>SA33-0.5B   | 0.5   | Х                          | Х  | Х                                  | Х                              |                        | Х                                 | Х  |                                 | R                             |                                    | X                                | X                                 | х                                | Х                                 |                                   |                                   | ^   | G, F                      | D        |
| R-7<br>R-7       | 40, 61<br>40, 61                         |               | SA33-10B<br>SA33-20B     | 10<br>20                                    | X X                        | X  | X                                  | X                              |                        | X<br>X                            | X  |                                 | R<br>R                        |                                    |                                  |                                   |                                  |                                   |                                   |                                   |   | G<br>G                    | _(a      |
| R-7              | 40, 61                                   |               | SA33-30B                 | 30  | R                          | R  | R                                  | R                              |                        | R                                 | R  |                                 | R                             |                                    |                                  |                                   |                                  | R                                 |                                   |                                   |   | B,G                       | G        |
| R-7<br>R-7       | 40, 61<br>40, 61                         |               | SA33-33B<br>SA33-40B     | 33<br>40                                    | X<br>R                     | X<br>R                                   | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                                     |                                 | R                             |                                    | X                                | Х                                 |                                  | X<br>R                            |                                   |                                   |   | I, G, F<br>A              | ~        |
| R-8              | 44                                       | RSAR8         | RSAR8-0.0B               | 0.0   |                            |  |                                    |                                |                        |                                   |  |                                 |                               |                                    |                                  |                                   |                                  |                                   |                                   |                                   | Х   |                           | В        |
| R-8<br>R-8       | 44 44                                    | -             | RSAR8-0.5B<br>RSAR8-10B  | 0.5   | X                          | X X                                      | X                                  | X                              | l                      | X                                 | X  | <u> </u>                        | X<br>Hold                     | X                                  | X                                |                                   | X                                | X X                               |                                   |                                   |   | M, C<br>C                 | _pc      |
| R-8              | 44                                       | 1             | RSAR8-20B                | 20  | Х                          | Х  | Х                                  | Х                              |                        | Х                                 | Х  |                                 | Hold                          | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   | С                         | G        |
| R-8<br>R-8       | 44                                       | -             | RSAR8-30B<br>RSAR8-34B   | <u>30</u><br>34                             | R<br>X                     | R<br>X                                   | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                                     |                                 | R<br>X                        | R<br>X                             | X                                |                                   |                                  | R<br>X                            |                                   |                                   |   | В<br>I, M, C              | -        |
| R-8              | 44                                       | 0464          | RSAR8-40B                | 40  | R                          | R  | R                                  | R                              |                        | R                                 | R  |                                 | R                             | R                                  |                                  |                                   |                                  | R                                 |                                   |                                   | v   | A                         | 1        |
| R-8<br>R-8       | 33, 44, 59, 61<br>33, 44, 59, 61         | SA34          | SA34-0.0B<br>SA34-0.5B   | 0.0<br>0.5                                  | X                          | X  | x                                  | x                              |                        | x                                 | X  |                                 | R                             | x                                  |                                  |                                   | x                                | X                                 |                                   |                                   | X   | G,L                       | B        |
| R-8<br>R-8       | 33, 44, 59, 61<br>33, 44, 59, 61         | -             | SA34-10B<br>SA34-20B     | 10<br>20                                    | X<br>X                     | X  | X                                  | X<br>X                         |                        | X<br>X                            | X<br>X                                     |                                 | R                             | X                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   | G,L<br>B,G,L              | - P      |
| R-8              | 33, 44, 59, 61                           |               | SA34-30B                 | 30  | R                          | R  | R                                  | R                              |                        | R                                 | R  |                                 | R                             | R                                  |                                  |                                   |                                  | R                                 |                                   |                                   |   | В                         | ľ        |
| R-8<br>R-8       | 33, 44, 59, 61<br>33, 44, 59, 61         |               | SA34-34B<br>SA34-40B     | 34<br>40                                    | X<br>R                     | X  | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                                     |                                 | R<br>R                        | X<br>R                             |                                  |                                   |                                  | X<br>R                            |                                   |                                   |   | B,G,I,L<br>A              | G        |
| R-0              | 33, 44, 39, 01                           |               | 3A34-40D                 | 40  | 71                         | 71                                       | л                                  | л                              |                        | Л                                 | Л  |                                 | Л                             | Л                                  |                                  |                                   |                                  | 71                                |                                   |                                   |   | A                         | 4        |

Soil Sampling and Analysis Plan - Area III Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

3 of 5

| Location Description and Rationale for Investigation (NDE<br>may not agree with upgradient and downgradient descriptions)   |
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|   |
| <br>Boring located to evaluate potential releases associated with LOU 20 (Pond C-1 Associated Piping), LOU 22 (WC-West Associated Piping), LOU 23 (WC-East Associated Piping), LOU 48 (Leach Plant Anolyte Storage Tanks), and LOU 50 (Leach Plant Area Leach Tanks).<br>GW anticipated at ~39 feet bgs.  |
|   |
| <br>Boring located to evaluate LOU 20 (Pond C-1 Associated Piping), LOU 22 (WC-West Associated<br>Piping), LOU 23 (WC-East Associated Piping), and LOU 61 (Old Sodium Plant Decommissioning<br>and Unit-5 Basement). Located adjacent to piping for LOUs 20,22,and 23 for potential release points,<br>and downgradient of LOU 61 for likely releases (accessible low area).  |
| <br>Boring located to evaluate LOU 47 (Leach Plant Mn Ore Pile Area), LOU 48 (Leach Plant Anolyte Storage<br>Tanks), and LOU 59 (Storm Sewer System). Random boring in accessible location within LOUs nearby LOU<br>47 and 48 and 59 for accessible area coverage and a low spot.<br>GW anticipated at ~36 feet bgs.   |
| <br>Boring located to evaluate LOU 51 (Mn Leach Plant Area Transfer Lines), LOU 47  |
| <br>(Leach Plant Area Mn Ore Pile Area), LOU 48 (Leach Plant Sewer System), LOU 59 (Storm<br>Sewer System), and Area 70 (Former U.S. Vanadium Site). Located at an accessible location at low spot<br>for LOUs 47,48, 51,and Area 70 for worst case releases and nearby LOU 59 pipeline for possible releases.  |
| Boring located to evaluate potential soil impacts associated with LOU 21 (pipeline route associated<br>with Pond Mn-1), LOU 59 (Storm Sewer System), and LOU 60 (Acid Drain System).<br>LOU 60 pipeline invert located at roughly 10 feet bgs.  |
| <br>Boring located to evaluate LOU 37 (Former Satellite Accumulation Point for Unit-6), LOU 44 (Unit 6 Base-<br>ment), and LOU 60 (Acid Drain System). Located at a close but accessible location to evaluate releases  |
| <br>from LOUs 37 and 44, and adjacent to LOU 60 pipeline for potential releases at a pipeline junction.<br>LOU 60 pipeline invert occurs at approximately 10 feet bgs.  |
| Boring located to evaluate soils for potential impacts associated with LOU 40 (former PCB Transformer Spill),<br>LOU 59 ( Storm Sewer System), and LOU 61 (Old Sodium Chlorate Plant Decommissioning and Unit-5 Basement).<br>LOU 60 pipeline invert occurs at approximately 8 feet bgs.<br>GW anticipated at ~36 feet bgs.   |
| <br>Boring is located to evaluate LOU 40 (PCB Transformer Spill), and LOU 61 (Old Sodium Chlorate Plant   |
| <br>Decommissioning and Unit-5 Basement). Located in PCB transformer Spill area at visible spill location and<br>adjacent to LOU 61 basement for area coverage.<br>GW anticipated at ~36 feet bgs.  |
| <br>Located to evaluate LOU 33 (Former Sodium Perchlorate Platinum By-Product Filter), LOU 59<br>(Storm Sewer System), and LOU 61 (Old Sodium Chlorate Plant Decommissioning and Unit-5   |
| <br>Basement). Located at high risk point, adjacent to containment in pavement crack within LOU 33<br>and nearby LOUs 59 and 61 for area coverage.  |
| <br>GW anticipated at ~36 feet bgs.<br>Boring located to evaluate LOU 40 (PCB Transformer Spill) and LOU 61 (Old Sodium Chlorate Plant<br>Decommissioning and Unit-5 Basement). Located at an accessible interior location adjacent to LOUs 40 and 61   |
| <br>(as close as upgradient utilities allow) to potential release points.<br>W = Concrete Wipe Sample for PCBs Per NDEP (July 21,2008)<br>GW anticipated at ~35 feet bgs.   |
| <br>Boring located south of Unit-6 to evaluate LOU 44 (Unit-6 Basement) and as part of site-wide coverage for   |
| <br>potential historical chemical use. Located as close as possible outside to LOU 44 near potential release<br>point and for area wide coverage.<br>GW anticipated at ~36 feet bgs.  |
| <br>Boring located to evaluate LOU 33 (Former Sodium Perchlorate Platinum By-Product Filter), LOU<br>44 (Unit-6 Basement), LOU 59 (Storm Sewer System), and LOU 61 (Old Sodium Chlorate Plant<br>Decommissioning and Unit-5 Basement). Located in between LOUs 44,33 and 61 to evaluate all three<br>LOUs and adjacent to LOU 59 to evaluate for potential pipeline releases. |
| <br>GW anticipated at ~36 feet bgs.   |

|                  |                                |   |   | Laboratory <sup>K.</sup>                    | Columbia<br>Services M     |                                    |                                    |                                |                        | Colu                              | Imbia Analytica                            | l Services - R                  | Rochester, N                  | Y  |                                  | Columbia<br>Services - H          |                                  | GEL -<br>Charleston, SC           | STL<br>Denver, CO                 | Alpha<br>Analytical<br>Sparks, NV | EMSL<br>Westmont, NJ                        |                                 |
|------------------|--------------------------------|---|---|---|----------------------------|------------------------------------|------------------------------------|--------------------------------|------------------------|-----------------------------------|--|---------------------------------|-------------------------------|--|----------------------------------|-----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---|---------------------------------|
| Grid<br>₋ocation | LOU Number                     | Boring<br>No.   | Sample ID<br>Number   | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>3.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B) | VOCs <sup>4.</sup><br>(EPA 8260B) | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total<br>Cyanide<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C)   | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA 1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup><br>(EPA 8141) | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Rationale For<br>Revision       |
|                  |                                |   | Borin   | gs are organize                             | d by grid locati           | on as shown                        | on Plate A                         | - Starting po                  | int is on the          | northwesterr                      | n most grid in                             | Area 3 (N-7)                    | and ending                    | g with the so  | outheaster                       | n most grid                       | l in Area 3                      | (S-8).                            |                                   |                                   |   |                                 |
| R-8<br>R-8       | 44                             | SA59  | SA59-0.0B<br>SA59-0.5B  | 0.0<br>0.5                                  | X                          | X                                  | X                                  | x                              |                        | x                                 | X  |                                 |                               | x  | x                                |                                   | х                                | x                                 |                                   |                                   | X   | N<br>G,M                        |
| R-8              | 44 44                          | -   | SA59-10B  | 10  | x                          | x                                  | X                                  | X                              |                        | X                                 | Â  |                                 |                               | X  | ^                                |                                   | ^                                | X                                 |                                   |                                   | ******                                      | G                               |
| R-8              | 44                             |   | SA59-25B  | 25  | X                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х  |                                 |                               | Х  |                                  |                                   |                                  | Х                                 |                                   |                                   |   | B,G                             |
| R-8              | 44                             | 0400  | SA59-36B  | 36<br>0.0                                   | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х  |                                 |                               | Х  | Х                                |                                   |                                  | Х                                 | -                                 |                                   | ×   | G,I,M                           |
| R-8<br>R-8       | 44, 59<br>44, 59               | SA68  | SA68-0.0B<br>SA68-0.5B  | 0.0   | x                          | X                                  | X                                  | X                              |                        | x                                 | X  |                                 |                               | X  |                                  |                                   | X                                | X                                 |                                   |                                   | Х   | N<br>G                          |
| R-8              | 44, 59                         |   | SA68-10B  | 10  | X                          | X                                  | X                                  | X                              |                        | X                                 | X  |                                 |                               | X  |                                  |                                   |                                  | X                                 |                                   |                                   |   | G                               |
| R-8              | 44, 59                         |   | SA68-25B  | 25  | X                          | Х                                  | X                                  | X                              |                        | X                                 | X  |                                 |                               | Х  |                                  |                                   |                                  | X                                 |                                   |                                   |   | B,G                             |
| R-8<br>S-8       | 44, 59<br>WAPA site, 59        | SA77  | SA68-36B<br>SA77-0.0B   | 36<br>0.0                                   | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х  |                                 |                               | Х  |                                  |                                   |                                  | Х                                 |                                   |                                   | Х   | G, I<br>N                       |
| S-8              | WAPA site, 59<br>WAPA site, 59 | SATT  | SA77-0.0B<br>SA77-0.5B  | 0.5   | X                          | Х                                  | X                                  | X                              |                        | X                                 | x  | X                               |                               | X  | X                                |                                   | Х                                | X                                 |                                   |                                   | ·····                                       | G,M                             |
| S-8              | WAPA site, 59                  |   | SA77-10B  | 10  | X                          | X                                  | X                                  | X                              |                        | X                                 | X  | X                               |                               | X  |                                  |                                   |                                  | X                                 |                                   |                                   |   | G                               |
| S-8              | WAPA site, 59                  |   | SA77-25B  | 25  | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х  | Х                               |                               | Х  |                                  |                                   |                                  | X                                 |                                   |                                   |   | B,G                             |
| S-8              | WAPA site, 59                  | DOAGO   | SA77-41B  | 41  | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х  | Х                               |                               | Х  | Х                                |                                   |                                  | Х                                 |                                   |                                   | ×   | G, I, M                         |
| S-8<br>S-8       | WAPA site<br>WAPA site         | RSAS8   | RSAS8-0.0B<br>RSAS8-0.5B  | 0.0   | x                          | X                                  | X                                  | X                              |                        | x                                 | x  | X                               | x                             | X  | X                                |                                   | Х                                | X                                 |                                   |                                   | Х   | м                               |
| S-8              | WAPA site                      | -   | RSAS8-10B   | 10  | X                          | X                                  | X                                  | X                              |                        | X                                 | X  | X                               | Hold                          | X  | ~                                |                                   | ~                                | X                                 |                                   |                                   |   |                                 |
| S-8              | WAPA site                      |   | RSAS8-20B   | 20  | R                          | R                                  | R                                  | R                              |                        | R                                 | R  |                                 | R                             | R  |                                  |                                   |                                  | R                                 |                                   |                                   |   | В                               |
| S-8              | WAPA site                      | -   | RSAS8-25B   | 25  | X                          | X                                  | X                                  | X                              |                        | X                                 | X  | Х                               | Hold                          | X  |                                  |                                   |                                  | <u> </u>                          |                                   |                                   |   | В                               |
| S-8<br>S-8       | WAPA site<br>WAPA site         |   | RSAS8-30B<br>RSAS8-35B  | 30<br>35                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                                     | X                               | R<br>X                        | R<br>X   | X                                |                                   |                                  | R<br>X                            |                                   |                                   |   | B<br>I, M                       |
| S-8              | WAPA site                      | -   | RSAS8-40B   | 40  | R                          | R                                  | R                                  | R                              |                        | R                                 | R  | ^                               | R                             | R  | ^                                |                                   | -                                | R                                 |                                   |                                   |   | A                               |
|                  | Number of Borings:             | 33  | Nur   | mber of Samples:                            | 126                        | 126                                | 126                                | 101                            | 0                      | 126                               | 126  | 43                              | 26                            | 86   | 14                               | 6                                 | 33                               | 126                               | 3                                 | 3                                 | 26  |                                 |
|                  |                                |   |   |   |                            |                                    |                                    |                                |                        |                                   |  |                                 |                               |  |                                  |                                   |                                  |                                   |                                   |                                   |   |                                 |
| Synthetic Pr     | recipitate Leaching Pro        | ocedure (SF   | PLP) Samples:   |   | _                          |                                    |                                    |                                |                        | -                                 |  |                                 |                               |  | _                                | -                                 |                                  |                                   |                                   | -                                 | -   | Geotechnical Tests <sup>1</sup> |
| N-8              | 21, 24, 46                     | RSAN8   | RSAN8-10B   | 10  | х                          | х                                  | х                                  | х                              |                        | х                                 | х  | Х                               | Hold                          | х  | х                                |                                   |                                  | х                                 |                                   |                                   |   | х                               |
| N-8              | 21, 24, 46                     | RSAN8   | RSAN8-DDB   | 33 DD*                                      | х                          | х                                  | х                                  | х                              |                        | х                                 | х  | х                               | х                             | х  | х                                |                                   |                                  | х                                 |                                   |                                   |   | х                               |
| 0-7              | 24, 46                         | SA52  | SA52-10B  | 19 DD*                                      | x                          | х                                  | х                                  |                                |                        | х                                 | x  |                                 | x                             |  | х                                |                                   |                                  | x                                 |                                   |                                   |   | x                               |
| 0-7              | 24, 46                         | SA52  | SA52-DDB  | 33 DD*                                      | x                          | х                                  | х                                  |                                |                        | х                                 | х  |                                 | х                             |  | х                                |                                   |                                  | х                                 |                                   |                                   |   | х                               |
| Q-8              | 34E, 47, 48, 59, A70           | RSAQ8   | RSAQ8-10B   | 10  | x                          | x                                  | x                                  | x                              |                        | x                                 | x  |                                 | Hold                          | x  | х                                |                                   |                                  | х                                 |                                   |                                   |   | x                               |
| Q-8              | 34E, 47, 48, 59, A70           | RSAQ8   | RSAQ8-DDB   | 31 DD*                                      | х                          | х                                  | x                                  | х                              |                        | х                                 | х  |                                 | x                             | х  | х                                |                                   |                                  | х                                 |                                   |                                   |   | х                               |
| R-8              | 33, 44, 61, 59                 | SA34  | SA34-10   | 10  | x                          | x                                  | x                                  | x                              |                        | х                                 | х  |                                 |                               | x  | x                                |                                   |                                  | х                                 |                                   |                                   |   | х                               |
| R-8              | 33, 44, 61, 59                 | SA34  | SA34-DD   | 31 DD*                                      | x                          | х                                  | х                                  | х                              |                        | х                                 | х  |                                 |                               | х  | x                                |                                   |                                  | х                                 |                                   |                                   |   | х                               |
|                  |                                |   |   |   | 134                        | 134                                | 134                                | 107                            | 0                      | 134                               | 134  | 45                              | 32                            | 92   | 22                               | 6                                 | 33                               | 134                               | 3                                 | 3                                 | 28  | 8                               |
|                  | mber of Soil Samples           |   |   |   | 134                        | 1.54                               |                                    |                                |                        | 134                               |  | -3                              |                               | 52   | <u> </u>                         |                                   |                                  |                                   |                                   | J                                 |   |                                 |
| Nui              | mber of Soil Samples:          |   | nples:  |   |                            |                                    |                                    | 11                             | 0                      | 13                                | 13   | 5                               | 3                             | 9  | 2                                | 1                                 | 4                                | 13                                | 1                                 | 1                                 |   | 0                               |
| Nui              | -                              | QA/QC Sa<br>Field Dupl  | cates (10%)   |   | 13                         | 13                                 | 13                                 |                                |                        |                                   |  |                                 |                               |  |                                  |                                   |                                  |                                   |                                   |                                   | 3   | 0                               |
| Nu               | -                              | QA/QC Sa<br>Field Dupl<br>Field Blan  | cates (10%)<br>ks   |   | 1                          | 1                                  | 1                                  | 1                              | 0                      | 1                                 | 1  | 0                               | 1                             | 1  | 1                                | 1                                 | 1                                | 1                                 | 1                                 | 1                                 | 0   | 0                               |
| Nu               |                                | QA/QC Sar<br>Field Dupl<br>Field Blan<br>Equipment                                | cates (10%)<br><s<br>Rinsate Blanks</s<br>                                  |   | 1<br>6                     | 1<br>6                             | 1<br>6                             | 1<br>6                         | 0                      | 1<br>6                            | 6  | 0                               | 2                             | 5  | 2                                | 1                                 | 1<br>2                           | 1<br>6                            | 1<br>1                            | 1<br>3                            | 0<br>0                                      | 0<br>0                          |
| Nu               |                                | QA/QC Sa<br>Field Dupl<br>Field Blan  | cates (10%)<br><s<br>Rinsate Blanks<br/>Samples</s<br>                      |   | 1                          | 1                                  | 1                                  | 1                              | 0                      | 1                                 |  |                                 |                               | and a second sec |                                  |                                   | 1                                | 1                                 | 1                                 | 1                                 | 0   | 0                               |
| Nu               |                                | QA/QC Sar<br>Field Dupli<br>Field Blanl<br>Equipment<br>Trip Blank<br>Matrix Spil | cates (10%)<br>(S<br>Rinsate Blanks<br>Samples<br>(e (5%)<br>Duplicate (5%) |   | 1<br>6<br>0                | 1<br>6                             | 1<br>6                             | 1<br>6<br>0                    | 0<br>0<br>0            | 1<br>6                            | 6  | 0<br>0                          | 2<br>0                        | 5  | 2<br>0                           | 1                                 | 1<br>2<br>0                      | 1<br>6<br>0                       | 1<br>1<br>0                       | 1<br>3<br>0                       | 0<br>0<br>0                                 | 0<br>0<br>0                     |

Green-shading indicates new addition to this table. Х

Brown-shading indicates item will be removed from this table. Sample will be collected and analyzed. R х

No sample will be collected under Phase B sampling program. Sample depth to be determined in the field where DD = sample depth (ft). DD\*

TPH-GRO Total petroleum hydrocarbons - Gasoline-Range Organics.

TPH-D/C Total periodentin hydrocarbons - Disel-Range Organics. SPLP Supples will be collected from the 0.0 to 0.5 ft bgs interval, unless the area is paved. If area is paved, samples will be collected at 0.5 ft below or from a representative depth beneath the pavement. Alternately, if an unpaved area is within a reasonable distance, the sample will be moved to the unpaved area. Metals analyses includes Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Platinum, Potassium, Selenium, Silver, Sodium, Strontium, Tin, Titanium, Thallium, Tungsten, Uranium, Vanadium, and Zinc.

3. Hexavalent Chromium

Samples for VOC analysis will be preserved in the field using sodium bisulfate (or DI water) and methanol preservatives per EPA Method 5035. 4.

5. Wet chemistry parameters include: alkalinity (total, CQ, HCO<sub>3</sub>), ammonia, bromide, chlorate, chlorate, conductivity, nitrate, nitrite, perchlorate, pH, phosphate (total), sulfate, surfactants (MBAs), TDS, Total Organic Carbon, and TSS.

Organochlorine Pesticides (includes analysis for hexachlorobenzene).

Semi-volatile Organic Compounds Semi-volatile Organic Compounds Polychlorinated biphenyls - Sample locations will be analyzed by USEPA methods 8082 and in some cases 1668A. Concrete surfaces at these locations will also include chip and/or wipe samples per EPA Region 1 SOP for Sampling Concrete in the Field (1997). A column for Aroclor PCBs (EPA 8082) was added to this table to show which samples will be analyzed for Aroclor PCBs. Dioxins/furans will be analyzed by EPA Method 8290 for all samples. Screening reports will be provided for 90% of the samples and full data packages for 10% of the samples. Radionuclides consists of alpha spec reporting for isotopic thorium and isotopic uranium, and Radium-226, plus Radium-226 by beta counting (per NDE 8. 9.

10.

Organophosphorous Pesticides were added to the SAP by NDEP (July 21, 2008). Tonox proposes to sample at 0.5 ft bys, capillary fringe, and in some cases at the mid-point depth.
 Organic Acid analysis includes the following analytes: 4-Chlorbenzene sulfonic acid; Benzenesulfonic acid; O,O-Diethylphosphorodithioic acid; O,O-Dimethylphosphorodithioic acid; and Phtalic acid.

04020-023-430 - Phase B

#### Table 2

#### Soil Sampling and Analysis Plan - Area III

Phase B Source Area Investigation Work Plan

Tronox Facility - Henderson, Nevada

4 of 5

|     | Location Description and Rationale for Investigation (NDE<br>may not agree with upgradient and downgradient descriptions)   |
|-----|---|
|     |   |
|     | Boring located south (upgradient) of Unit-6 to evaluate LOU 44 (Unit-6 Basement) and as part of site-wide<br>coverage for potential historical chemical use. Borehole SA59 will be converted into well M-139.<br>GW anticipated at ~38 feet bgs.  |
|     | Boring located south of Unit-6 to evaluate for potential impacts associated with LOU 44 (Unit-6 Basement) and Western Area Power Administration (WAPA) site as part of site-wide coverage for potential historical chemical use. Borehole SA68 will be converted into well M-145.   |
|     | GW anticipated at ~38 feet bgs.<br>This boring is located to evaluate Site-wide conditions and potential impacts from the offsite Western Area<br>Power Administration (WAPA) site.<br>GW anticipated at ~43 feet bgs.  |
|     | This boring is located to evaluate Site-wide conditions and potential impacts from the offsite Western Area<br>Power Administration (WAPA) site.<br>GW anticipated at ~37 feet bgs.   |
|     |   |
|     |   |
| 14. |   |
|     | Soil sample collected from the southeast corner of LOU 21 (Pond Mn-1 and Associated Piping) to evaluate leaching potential of<br>Site-related analytes from Altuvium (QaI) soils. Expected soil type: Gravelly Sand.  |
|     | Optional sample - only to be collected if soil type is different than at 10 ft bgs; no sample will be collected within the capillary<br>fringe. Contact between Qal & MCfg1 is approximately 32 feet bgs. Groundwater is expected to occur at approximately 36 feet<br>bgs. Expected soil type: Calichified Gravel.                           |
|     | Soil sample collected from the western portion of LOU 46 (Old Main Cooling Towers and Recirculation Lines) and LOU 24 (Mn<br>Tailings Pile Area) to evaluate leaching potential of Site-related analytes from Alluvium (Qal) soils. Expected soil type: Gravelly<br>Sand.   |
|     | Optional sample - only to be collected if soil type is different than at 10 ft bgs; no sample will be collected within the capillary<br>fringe. Contact between Qal & MCfg1 is approximately 48 feet bgs. Groundwater is expected to occur at approximately 45 feet<br>bgs. Expected soil type: Calichified Gravel.                           |
|     | Soil sample collected within the boundaries of LOU 47 (Leach Plant Mn Ore Pile Area) and Area 70 (Former U.S. Vanadium Site) to<br>evaluate leaching potential of Site-related analytes. Expected soil type: Sand.  |
|     | Optional sample - only to be collected if soil type is different than at 10 ft bgs; no sample will be collected within the capillary<br>fringe. Contact between Qal & MCfg1 is approximately 37 feet bgs. Groundwater is expected to occur at approximately 36 feet<br>bgs. Expected soil type: Calichified Gravel.                           |
|     | Soil sample collected from between LOU 61 (Old Sodium Plant Decommissioning and Unit-5 Basement), LOU 44 (Unit-6 Basement<br>LOU 33 (Former Sodium Perchlorate Platinum By-Product Filter), LOU 59 (Storm Sewer System), and LOU 60 (Acid Drain System)<br>to evaluate leaching potential of Site-related analytes. Expected soil type: Sand. |
|     | Optional sample - only to be collected if soil type is different than at 10 ft bgs; no sample will be collected within the capillary<br>fringe. Contact between QaI & MCfg1 is approximately 37 feet bgs. Groundwater is expected to occur at approximately 36 feet<br>bgs. Expected soil type: Sand.   |
|     |   |
|     |   |
|     |   |
|     |   |
|     |   |
|     |   |
|     |   |

|  |  |  |  | Laboratory <sup>K.</sup>  | Columbia A<br>Services M  | •   |   |  |  | Coli   | umbia Analytica   | al Services - F                                      | Rochester, N  | Y   |   | Columbia<br>Services - H          |                                  | GEL -<br>Charleston, SC           | STL<br>Denver, CO                 | Alpha<br>Analytical<br>Sparks, NV | EMSL<br>Westmont, NJ                        |                           |     |
|--|--|--|--|---|---|---|---|--|--|--|---|--|---|---|---|-----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---|---------------------------|-----|
| Grid<br>Location   | LOU Number   | Boring<br>No.  | Sample ID<br>Number  | Sample<br>Depths <sup>1.</sup><br>(ft, bgs)   | Perchlorate<br>(EPA 314.0)  | <b>Metals<sup>2.</sup></b><br>(EPA 6020)  | Hex Cr <sup>3.</sup><br>(EPA 7199)  | TPH-<br>DRO/ORO<br>(EPA 8015B)   | TPH-GRO<br>(EPA 8015B)   | VOCs <sup>4.</sup><br>(EPA 8260B)                                      | Wet<br>Chemistry<br>Analytes <sup>5.</sup>                    | Total<br>Cyanide<br>(EPA 9012A)                      | OCPs <sup>6.</sup><br>(8081A)                       | SVOCs <sup>7.</sup><br>(EPA 8270C)                  | PCBs <sup>8.</sup><br>(EPA 8082)            | PCBs <sup>8.</sup><br>(EPA 1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup><br>(EPA 8141) | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Rationale For<br>Revision |     |
|  |  | 1  | Borir  | ngs are organized   | d by grid locati  | on as shown   | on Plate A  | - Starting po  | int is on the  | northwester  | n most grid in  | Area 3 (N-7)   | and ending  | g with the s  | outheasteri                                 | n most grid                       | l in Area 3                      | (S-8).                            |                                   |                                   |   |                           |     |
| 13.<br>14.<br><b>Rationale</b><br>A<br>B<br>C<br>E<br>F<br>G<br>H<br>I<br>K<br>L<br>M<br>N<br>O<br>#<br>Q<br>##<br>W<br>Y<br>Z | Soil samples for asbest<br>Geotechnical Tests con<br>Codes<br>The soil sample was rer<br>Tronox has chosen to ir<br>Additional samples N<br>Platinum was added pe<br>Soil sample will be colle<br>Aroclor and congener P<br>Where indicated, judgm<br>Tronox is not requesting<br>Sample depth was add<br>Laboratory information -<br>SVOC analysis was add<br>Aroclor PCB analysis (E<br>New boring added per h<br>TPH-DRO/ORO was ad<br>Sample depth dependel<br>SA141 was moved to g<br>Sample depth should bo<br>Wipe sample of concret<br>Asbestos sample remov<br>OPPs and organic Acids | sist of: mois<br>noved from<br>crease the i<br>vill be collectivill be collectivill be<br>collectivill be collectivill be<br>collectivill be<br>collectivill be<br>closure for<br>d so that this<br>was added the<br>PA 8082) w<br>DEP (July 2<br>ded per ND<br>ht upon deptid<br>d O-7 from<br>a 10-ft deeppe<br>e surface for<br>e d because | sture content (AS<br>the sampling pla<br>nterval between<br>ted if the vertical<br>y 21, 2008)<br>depth because th<br>dided per NDEP<br>y 21, 2008)<br>depth because the<br>capillary finge<br>or Table 2 to assi<br>oring per NDEP (<br>as added to this<br>as added to this<br>21, 2008)<br>EP (July 21, 200<br>hof the Mn tallin<br>r Aroclor and cor<br>it is not feasible | TM D-2216), grain<br>n because the 2008<br>sample depths as c<br>distance between s<br>re depth is one-foot<br>(July 21, 2008),<br>to moved from the sam<br>nis time because the<br>sample will be colle<br>t field sampling pe<br>July 21, 2008).<br>boring per NDEP (J<br>8),<br>gs/soil interface. F<br>July 21, 2008).<br>diings/soil interface sample<br>gener PCBs was a<br>to collect a sample | size analysis (AS<br>groundwater dat<br>discussed with NE<br>samples exceeds<br>below pipeline in<br>apling plan because<br>ey are still active;<br>scted 2 feet above<br>rsonnel in shippin<br>luly 21, 2008).<br>inal depth will be<br>sample or 1-ft bel<br>dded to sampling<br>from the Mn tailir | ta indicates tha<br>DEP (October 1<br>20 ft. (depth rc<br>vert.<br>se OCPs were<br>therefore, Judy<br>the sample c<br>determined in fi<br>low a pipeline in<br>plan per NDEF<br>gs pile or the fi | t the water tal<br>, 2008). Soil<br>unded off to t<br>not created, s<br>gmental borin<br>e.<br>ontainers to t<br>he field<br>hvert. Final d<br>? (July 21, 20/<br>An tallings/soi | ble is likely abb<br>samples will b<br>the closest 5-ft<br>stored, convey<br>gs were remov<br>he appropriate<br>epth will be de<br>08).<br>il interface. | ed, or potential<br>ed, or potential<br>ved from the PI<br>a laboratory. | he following d<br>ess otherwise i<br>lly disposed at<br>hase B samplin | epths: 0 to 2-incl<br>indicated, soil sa<br>this location. Al | hes (asbestos<br>amples will not<br>Il random grid s | only), 0.5-ft (o<br>be collected a<br>samples are a | or at Mn tailin<br>at depths of 2<br>analyzed for 0 | gs/soil interfa<br>20, 30, or 40-1<br>DCPs. | ace, as appro<br>ft.              | opriate), 10-                    | ft (or 10-ft bene                 | eath Mn tailings/s                | soil interface or                 | 1-ft below a pipeli                         | ne invert, as appropria   | te) |

#### Table 2

#### Soil Sampling and Analysis Plan - Area III

Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

5 of 5

Location Description and Rationale for Investigation may not agree with upgradient and downgradient descriptions) (NDE

e), and the capillary fringe (2-ft above the water table).

|                  |               |                            |   |                                 | Laboratory :   | Columbia /<br>Services k   |                                    |                                    |                                |                                   | Colur                             | nbia Analytica                             | al Services - I                 | Rochester, N                  | IY                                 |                                  | Columbia<br>Services - H          |                                  | GEL -<br>Charleston, SC           | STL<br>Denver, CO                 | Alpha<br>Analytical<br>Sparks, NV | EMSL<br>Westmont, NJ                        | PTS<br>Santa Fe Springs, CA | T          |
|------------------|---------------|----------------------------|---|---------------------------------|----------------|----------------------------|------------------------------------|------------------------------------|--------------------------------|-----------------------------------|-----------------------------------|--|---------------------------------|-------------------------------|------------------------------------|----------------------------------|-----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---|-----------------------------|------------|
| Grid<br>Location | Boring<br>No. | Sample ID<br>Number        | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Matrix<br>Spike/MS<br>Duplicate | SPLP<br>Sample | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>3.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B)            | VOCs <sup>4.</sup><br>(EPA 8260B) | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total<br>Cyanide<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA 1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup><br>(EPA 8141) | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Geotechnical<br>Tests       |            |
|                  |               |                            | Number of                                   | Containers p                    | er Sample:     | 1 - 4 o                    | z. Jar                             | 1 - 4                              | l oz Jar                       | 1 - 40 ml VOA<br>vial w/ methanol | 3 VOA vials<br>(TerraCore Kit)    |  |                                 | 2 - 4 oz Jars                 | 5                                  |                                  | 1 - 4 c                           | z Jar                            | 1 - 250 ml Jar<br>(plastic)       | 1 - 4 oz Jar                      | 1 - 4 oz Jar                      | <u>≥</u> 1 kg<br>(in plastic bag)           | 2 Brass Tubes               | 1          |
|                  |               |                            | E   | Borings are                     | organized k    | by grid location           | n as shown c                       | on Plate A                         | - Starting po                  | int is on the r                   | northwesterr                      | n most grid ir                             | n Area 3 (N-7                   | 7) and endir                  | ng with the                        | southeast                        | ern most g                        | rid in Are                       | a 3 (S-8).                        |                                   |                                   |   |                             | -          |
| N-7<br>N-7       | SA157         | SA157-0.0B<br>SA157-0.5B   | 0.0   |                                 |                | x                          | X                                  | X                                  | X                              |                                   | X                                 | X  | X                               |                               | X                                  |                                  |                                   | x                                | X                                 |                                   |                                   | Х   |                             | Bo         |
| N-7              |               | SA157-0.5BD                | 0.5 (dup)                                   |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                   | Х                                 | Х  | Х                               |                               | Х                                  |                                  |                                   | X                                | Х                                 |                                   |                                   |   |                             | fro        |
| N-7<br>N-7       |               | SA157-10B<br>SA157-25B     | 10<br>25                                    |                                 |                | X                          | X                                  | X<br>X                             | X                              |                                   | X                                 | X<br>X                                     | X                               |                               | X                                  |                                  |                                   |                                  | X<br>X                            |                                   |                                   |   |                             | G١         |
| N-7              | 501110        | SA157-44B                  | 44  |                                 |                | Х                          | Х                                  | X                                  | Х                              |                                   | Х                                 | Х  | Х                               |                               | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             | 1          |
| N-8<br>N-8       | RSAN8         | RSAN8-0.0B<br>RSAN8-0.5B   | 0.0   |                                 |                | х                          | X                                  | x                                  | x                              |                                   | х                                 | X  | X                               | X                             | X                                  |                                  |                                   | x                                | X                                 |                                   |                                   | Х   |                             | Bo         |
| N-8              |               | RSAN8-10B                  | 10  |                                 |                | Х                          | Х                                  | X                                  | Х                              |                                   | X                                 | Х  | Х                               | Hold                          | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             | of         |
| N-8<br>N-8       |               | RSAN8-10B<br>RSAN8-20B     | 10 20                                       |                                 | X              | X<br>X                     | X<br>X                             | X<br>X                             | X                              |                                   | X<br>X                            | X<br>X                                     | X                               | Hold<br>Hold                  | X                                  | X                                |                                   |                                  | X X                               |                                   |                                   |   | X                           | G١         |
| N-8              |               | RSAN8-33B                  | 33  |                                 | Х              | Х                          | Х                                  | Х                                  | Х                              |                                   | Х                                 | Х  | Х                               | Х                             | Х                                  | Х                                |                                   |                                  | Х                                 |                                   |                                   |   | Х                           | Qa         |
| N-8<br>N-8       | SA139         | RSAN8-34B<br>SA139-0.0B    | 34<br>0.0                                   |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                   | Х                                 | Х  | Х                               | Х                             | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   | х   |                             | Bo         |
| N-8              |               | SA139-0.5B                 | 0.5   |                                 |                | X                          | Х                                  | Х                                  |                                |                                   | Х                                 | Х  |                                 |                               |                                    |                                  |                                   | Х                                | Х                                 |                                   |                                   |   |                             | LC         |
| N-8<br>N-8       |               | SA139-10B<br>SA139-25B     | 10<br>25                                    |                                 |                | X                          | X<br>X                             | X                                  |                                |                                   | X                                 | X<br>X                                     |                                 |                               |                                    |                                  |                                   |                                  | X<br>X                            |                                   |                                   |   |                             | an<br>G\   |
| N-8              |               | SA139-25BD                 | 25 (dup)                                    |                                 |                | X                          | X                                  | X                                  |                                |                                   | X                                 | X  |                                 |                               |                                    |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             | 101        |
| N-8<br>N-8       | SA160         | SA139-35B<br>SA160-0.0B    | 35<br>0.0                                   |                                 |                | х                          | Х                                  | Х                                  |                                |                                   | Х                                 | Х  |                                 |                               |                                    |                                  |                                   |                                  | Х                                 |                                   |                                   | х   |                             | Во         |
| N-8              | 0/1100        | SA160-0.5B                 | 0.5   |                                 |                | х                          | X                                  | X                                  |                                |                                   | Х                                 | Х  |                                 |                               |                                    |                                  |                                   | X                                | Х                                 |                                   |                                   | ~   |                             | To         |
| N-8<br>N-8       |               | SA160-10B<br>SA160-10B     | 10<br>10                                    | x                               |                | X                          | X                                  | X                                  |                                |                                   | X<br>X                            | X  |                                 |                               |                                    |                                  |                                   |                                  | X X                               |                                   |                                   |   |                             | two<br>GV  |
| N-8              |               | SA160-20B                  | 20  | ^                               |                | x                          | X                                  | Х                                  |                                |                                   | X                                 | × ×  |                                 |                               |                                    |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             |            |
| N-8<br>O-6       | 6400          | SA160-34B<br>SA39-0.0B     | 34  |                                 |                | Х                          | Х                                  | Х                                  |                                |                                   | Х                                 | Х  |                                 |                               |                                    |                                  |                                   |                                  | Х                                 |                                   |                                   | v   |                             |            |
| 0-6              | SA39          | SA39-0.0B<br>SA39-0.5B     | 0.0   |                                 |                | х                          | Х                                  | x                                  | х                              |                                   | х                                 | х  |                                 |                               |                                    |                                  |                                   | х                                | Х                                 |                                   |                                   | X   |                             | Bo         |
| 0-6              |               | SA39-10B                   | 10  |                                 |                | X                          | X                                  | X                                  | X                              |                                   | X                                 | X  |                                 |                               |                                    |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             | G١         |
| 0-6<br>0-6       |               | SA39-25B<br>SA39-25B       | 25<br>25                                    | X                               |                | X                          | X                                  | X                                  | X                              |                                   | X                                 | X<br>X                                     |                                 |                               |                                    |                                  |                                   |                                  | X<br>X                            |                                   |                                   |   |                             | -          |
| 0-6              | D0407         | SA39-41B                   | 41  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                   | Х                                 | Х  |                                 |                               |                                    |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             | 1          |
| 0-7<br>0-7       | RSAO7         | RSAO7-0.0B<br>RSAO7-15B#   | 0.0   |                                 |                | x                          | Х                                  | х                                  | Х                              |                                   | х                                 | Х  |                                 | х                             | X                                  |                                  |                                   | x                                | Х                                 |                                   |                                   |   |                             | Bc<br>(Fi  |
| 0-7              |               | RSAO7-25B##                | 25 ##                                       |                                 |                | X                          | Х                                  | Х                                  | Х                              |                                   | Х                                 | Х  |                                 | Hold                          | Х                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             | top        |
| 0-7<br>0-7       |               | RSAO7-35B#<br>RSAO7-47B    | 35 #<br>47                                  |                                 |                | X                          | X<br>X                             | X                                  | X                              |                                   | X                                 | X<br>X                                     |                                 | Hold<br>X                     | X                                  |                                  |                                   |                                  | X<br>X                            |                                   |                                   |   |                             | _So<br>G\  |
| 0-7              | SA178         | SA178-0.0B                 | 0.0   |                                 |                |                            |                                    |                                    |                                |                                   |                                   |  |                                 |                               |                                    |                                  |                                   |                                  |                                   |                                   |                                   | Х   |                             | Во         |
| 0-7<br>0-7       |               | SA178-0.5B<br>SA178-10B    | 0.5   |                                 |                | X                          | X                                  | X                                  | X                              |                                   | X                                 | X<br>X                                     | X                               |                               | X                                  |                                  |                                   | X                                | X<br>X                            |                                   |                                   |   |                             | _As<br>an  |
| 0-7              |               | SA178-17B                  | 17  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                   | Х                                 | Х  | Х                               |                               | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             | for        |
| 0-7<br>0-7       |               | SA178-25B<br>SA178-43B     | 25<br>43                                    |                                 |                | X                          | X<br>X                             | X                                  | X                              |                                   | X<br>X                            | X<br>X                                     | X                               |                               | X                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             | LC<br>G\   |
| 0-7              | SA52          | SA52-0.0B                  | 0.0   |                                 |                |                            |                                    |                                    | ~                              |                                   |                                   |  | ~                               |                               | ~                                  |                                  |                                   |                                  |                                   |                                   |                                   |   |                             | Bo         |
| 0-7<br>0-7       |               | SA52-19B#<br>SA52-19B#     | 19 #<br>19 #                                |                                 | x              | X                          | X                                  | X                                  |                                |                                   | X                                 | X X  |                                 | x                             |                                    | x                                |                                   | X                                | X                                 |                                   |                                   |   | X                           | Co         |
| 0-7              |               | SA52-33B#                  | 33 #  |                                 |                | Х                          | Х                                  | Х                                  |                                |                                   | Х                                 | Х  |                                 |                               |                                    |                                  |                                   |                                  | X                                 |                                   |                                   |   | ~                           | Sc         |
| 0-7<br>0-7       |               | SA52-33B#<br>SA52-43B      | 33 #<br>43                                  |                                 | Х              | X                          | X<br>X                             | X                                  |                                |                                   | X                                 | X  |                                 | X                             |                                    | X                                |                                   |                                  | X                                 |                                   |                                   |   | Х                           | LC<br>G\   |
| 0-7              | SA149         | SA149-0.0B                 | 0.0   |                                 |                | ~                          |                                    |                                    |                                |                                   | ~                                 | ~  |                                 |                               |                                    |                                  |                                   |                                  | ~                                 |                                   |                                   |   |                             | Bc         |
| 0-7<br>0-7       |               | SA149-17B#<br>SA149-27B#   | 17 #<br>27 ##                               |                                 |                | X                          | X<br>X                             | X                                  |                                |                                   | X                                 | X  |                                 |                               |                                    |                                  |                                   | X                                | X X                               |                                   |                                   |   |                             | To         |
| 0-7              |               | SA149-45B                  | 45  |                                 |                | X<br>X                     | Х                                  | Х                                  |                                |                                   | Х                                 | X<br>X                                     |                                 |                               |                                    |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             | Sc         |
| 0-7<br>0-7       | SA137         | SA149-45BD<br>SA137-0.0B   | 45 (dup)<br>0.0                             |                                 |                | Х                          | Х                                  | Х                                  |                                |                                   | Х                                 | Х  |                                 |                               |                                    |                                  |                                   |                                  | Х                                 |                                   |                                   | X   |                             | G\<br>Bo   |
| 0-7              | 37137         | SA137-0.5B                 | 0.5   |                                 |                | Х                          | Х                                  | x                                  | Х                              |                                   | Х                                 | Х  | х                               |                               | х                                  |                                  |                                   | х                                | Х                                 |                                   |                                   | ^   |                             | Dr         |
| 0-7<br>0-7       |               | SA137-15B<br>SA137-31B     | 15<br>31                                    |                                 |                | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                                   | X<br>X                            | X<br>X                                     | X<br>X                          |                               | X<br>X                             |                                  |                                   |                                  | X<br>X                            |                                   |                                   |   |                             | <br>G\     |
| 0-7              | SA141         | SA137-31B<br>SA141-0.0B    | 0.0   |                                 |                | ^                          | ^                                  |                                    | ^                              |                                   | ^                                 |  | ^                               |                               | ^                                  |                                  |                                   |                                  |                                   |                                   |                                   |   |                             | Bc         |
| 0-7<br>0-7       |               | SA141-13B#<br>SA141-13BD#  | 13 #  |                                 |                | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                                   | X<br>X                            | X  |                                 |                               | X<br>X                             |                                  |                                   | X<br>X                           | X                                 |                                   |                                   |   |                             | Co<br>Fo   |
| 0-7              |               | SA141-13BD#<br>SA141-23B## | 13 (dup)#<br>23 ##                          |                                 |                | X X                        | X                                  | X                                  | X                              |                                   | X                                 | X<br>X                                     |                                 |                               | X                                  |                                  |                                   | ^                                | X<br>X                            |                                   |                                   |   |                             | _ но<br>ар |
| 0-7              |               | SA141-30B                  | 30  |                                 |                | Х                          | Х                                  | х                                  | Х                              |                                   | Х                                 | Х  |                                 |                               | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             | Th         |
|                  |               |                            |   |                                 |                |                            |                                    |                                    |                                |                                   |                                   |  |                                 |                               |                                    |                                  |                                   |                                  |                                   |                                   |                                   |   |                             | *Т         |
| 0-8<br>0-8       | RSAO8         | RSAO8-0.0B<br>RSAO8-15B#   | 0.0   |                                 |                | v                          | v                                  |                                    | v                              |                                   |                                   |  |                                 | v                             |                                    |                                  |                                   | ~                                | v                                 |                                   |                                   |   |                             | Bo         |
| 0-8<br>0-8       |               | RSA08-15B#<br>RSA08-25B##  | 25 ##                                       |                                 |                | X                          | X                                  | X                                  | X                              |                                   | X<br>X                            | X  |                                 | X<br>Hold                     |                                    |                                  |                                   | X                                | X                                 |                                   |                                   |   |                             | ar         |
| O-8              |               | RSAO8-43B                  | 43  |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                   | Х                                 | Х  |                                 | Х                             |                                    |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             | Sc         |
| O-8              | SA108         | SA108-0.0B                 | 0.0   |                                 |                |                            |                                    |                                    |                                |                                   |                                   |  | -                               |                               |                                    |                                  |                                   |                                  |                                   |                                   |                                   | Х   |                             | Bo         |
| O-8              |               | SA108-20B#                 | 20 #  |                                 |                | X                          | X                                  | X                                  |                                |                                   | X                                 | X  |                                 |                               |                                    |                                  |                                   | X                                | X                                 |                                   |                                   |   |                             | To         |
| 0-8<br>0-8       |               | SA108-20B#<br>SA108-30B##  | 20 #  | Х                               |                | X                          | X<br>X                             | X                                  |                                |                                   | X<br>X                            | X<br>X                                     |                                 |                               |                                    |                                  |                                   | Х                                | X<br>X                            |                                   |                                   |   |                             | rea<br>So  |
| O-8              | 0.4.1.10      | SA108-48B                  | 48  |                                 |                | X                          | X                                  | X                                  |                                |                                   | X                                 | X  |                                 |                               |                                    |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             | ٦G١        |
| 0-8<br>0-8       | SA142         | SA142-0.0B<br>SA142-20B    | 0.0   |                                 |                | x                          | x                                  | x                                  | x                              |                                   | x                                 | x  | x                               |                               | x                                  |                                  |                                   | x                                | X                                 |                                   |                                   |   |                             | Bo<br>(Fo  |
| O-8              |               | SA142-20BD                 | 20 (dup)                                    |                                 |                | Х                          | Х                                  | Х                                  | Х                              |                                   | Х                                 | Х  | Х                               |                               | Х                                  |                                  |                                   | X                                | Х                                 |                                   |                                   |   |                             | S          |
| 0-8<br>0-8       |               | SA142-34B<br>SA142-51B     | 34<br>51                                    |                                 |                | X                          | X                                  | X                                  | X                              |                                   | X<br>X                            | X<br>X                                     | X                               |                               | X                                  |                                  |                                   |                                  | X<br>X                            |                                   |                                   |   |                             | _Lo<br>Gr  |
|                  |               |                            |   |                                 | 1              |                            |                                    |                                    |                                |                                   |                                   |  |                                 |                               |                                    |                                  |                                   |                                  |                                   | 1                                 |                                   | 0   |                             | 1          |

## Table 2 (Field Version) Soil Sampling and Analysis Plan - Area III Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

1 of 3

| A |   |
|---|---|
|   | Location Description and Rationale for Investigation  |
|   | (NDEP may not agree with upgradient and downgradient descriptions)  |
|   |   |
|   |   |
|   |   |
|   |   |
|   |   |
|   | Boring located to evaluate LOU 20 (Pond C-1 Associated Piping), LOU 21 (Pond Mn-1 and Associated Piping),   |
|   | LOU 22 (WC-West Associated Piping), and LOU 23 (WC-East Associated Piping). Located at piping junction  |
|   | from all LOUs at highest release potential location (manhole and junction).<br>GW anticipated at ~46 feet bgs.  |
|   | ow anticipated at ~40 reet bgs.   |
|   | Boring located to evaluate LOU 24 (Manganese [Mn] Tailings Pile Area), LOU 46 (Former Old Main Cooling  |
|   | Tower and Recirculation Lines), and LOU 21 (Pond Mn-1 and Associated Piping). Located near the perimeter  |
|   | of two LOUs and associated piping at a high release potential location (down slope and low spot).   |
|   | GW anticipated at ~36 feet bgs. SPLP sample must be of Quaternary Alluvium (Qal) soils.   |
|   | Qal/MC contact at ~ 32 feet bgs. SPLP sample must be of Muddy Creek soils & dry. If moist, don't collect SPLP he  |
| _ | Boring located to evaluate LOU 21 (Pond Mn-1 and Associated Piping), LOU 24 (Mn Tailings Pile area), and  |
|   | LOU 46 (Former Old Main Cooling Tower and Recirculation Lines). Located near the perimeter of two LOUs  |
|   | and associated piping at a high release potential location (down slope and low spot)<br>GW anticipated at ~37 feet bgs.   |
|   |   |
|   | Boring located to evaluate upgradient LOU 24 (Mn Tailings Pile Area), LOU 46 (Former Old Main Cooling   |
|   | Tower and Recirculation Lines) and LOU 21 (Pond Mn-1 and Associated Piping). Located near perimeter of  |
|   | two LOUs and piping at high release potential location (down slope and low spot)  |
|   | GW anticipated at ~36 feet bgs.   |
|   |   |
|   | Boring located north of Chemstar to evaluate LOU 34W (Historic Mn Tailings Pile Area, West). Located in low<br>spot of LOU 34W at likely worst case location.   |
|   | GW anticipated at ~43 feet bgs.   |
|   |   |
|   |   |
|   | Boring located to evaluate potential impacts to soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46   |
|   | (Former Old Main Cooling Tower and Recirculation Lines). Located in low spot of LOU 24 and down hill<br>topographically of LOU 46.  |
|   | Soil samples will be collected below Mn-tailings/soil interface; interface at approx. 15 ft bgs.  |
| _ | GW anticipated at ~ 49 feet bgs.<br>Boring located to evaluate LOU 20 (Pond C-1 Associated Piping Associated Piping), LOU 22 (WC-West   |
|   | Associated Piping), LOU 23 (WC-East Associated Piping), LOU 34W (Historic Mn Tailings Pile Area, West),   |
|   | and LOU 60 (Acid Drain system). Located within this cluster of LOUs at a likely high release potential location   |
|   | for all five LOUs (low point, edge of road).<br>LOU 60 pipeline invert located approximately 16 ft bgs.   |
|   | GW anticipated at ~45 feet bgs.   |
|   | Boring located to evaluate soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46 (Former Old Main<br>Cooling Tower and Recirculation Lines). Located within the footprint of both LOUs at a topographically low           |
|   | area for worst case coverage.   |
|   | Soil samples will be collected below Mn-tailings/soil interface; interface at approx. 19 to 25 feet bgs.<br>LOU 60 pipeline invert located approximately 13 feet below Mn tailings/soil interface (32 to 38 bgs).             |
|   | GW anticipated at ~45 feet bgs.   |
| ] | Boring located to evaluate soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46 (Former Old Main Cooling<br>Tower and Recirculation Lines). Located within LOU 24 and just upgradient of LOU 46 to provide area coverage |
|   | of both LOUs.   |
|   | Soil samples will be collected below Mn-tailings/soil interface; interface at approx. 16 feet bgs.  |
|   | GW anticipated at ~47 feet bgs.<br>Boring located to evaluate LOU 24 (Mn Tailings Pile Area) historical surface drainage path and LOU 60 (Acid  |
|   | Drain System) conveyance route. Boring to be drilled on soil in surface drainage swale near toe of Mn tailings  |
|   | pile (not on top of tailings pile). LOU 60 pipeline invert occurs approximately 14 feet bgs.<br>GW anticipated at ~33 feet bgs.   |
|   | Boring located to evaluate potential impacts to underlying soil from LOU 24 (Mn Tailings Pile Area), LOU 46   |
|   | Cooling Tower and Recirculation Lines), and LOU 60 (Acid Drain System).<br>Former Old Main Cooling Tower soil samples will be collected below Mn-tailings/soil interface; interface at  |
|   | approx 18 ft bgs. LOU 60 pipeline invert occurs at 13 feet below Mn tailings/soil interface ('31 feet bgs).   |
|   | The soil sample for the pipeline invert will determined in the field based on the depth to the Mn tailings/soil interface. Groundwater anticipated at -32 ft bas  |
|   | interface. Groundwater anticipated at ~32 ft bgs.<br>*The anticipated groundwater level is at the same depth that the pipeline invert is anticipated to be located.   |
| _ | Boring located to evaluate for potential impacts to soil underlying LOU 24 (Manganese Tailings Pile Area) and   |
|   | LOU 46 (Former Old Main Cooling Tower and Recirculation Lines). Located within LOU 24 and just upgradient of<br>area coverage LOU 46 to provide of both LOUs.   |
|   | Soil samples will be collected below Mn-tailings/soil interface at approx 15 ft bgs. GW anticipated at ~45 feet bgs.  |
| _ | Borehole for RSAO8 will be converted to well M-148.<br>Boring located to evaluate soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46 (Former Old Main Cooling  |
|   | Tower and Recirculation Lines). Located within the footprint of both LOUs at a slight low spot to provide   |
| _ | reasonable coverage of both.<br>Soil samples will be collected below Mn-tailings/soil interface; interface at approx 20 to 29 feet bgs.   |
|   | GW anticipated at ~50 feet bgs.   |
| _ | Boring located to evaluate potential impacts to underlying soil from LOU 24 (Mn Tailings Pile Area), LOU 46   |
|   | (Former Old Main Cooling Tower and Recirculation Lines), and LOU 60 (Acid Drain System).<br>Soil samples will be collected below Mn-tailings/soil interface; interface at approx 20 to 30 ft bgs.                             |
|   | Lou 60 pipeline invert occurs at approximately 13 feet below Mn tailings/soil interface (33-43 bgs).  |
|   | Groundwater anticipated at ~53 ft bgs.  |

|                  |               |                          |   |                                 |                | r                          |  | 1                                  |                                |                                   |                                   |  |                                 |                               |                                    |                                  |                                   |                                  |                                   |                                   |                                   | r   |                             |
|------------------|---------------|--------------------------|---|---------------------------------|----------------|----------------------------|--|------------------------------------|--------------------------------|-----------------------------------|-----------------------------------|--|---------------------------------|-------------------------------|------------------------------------|----------------------------------|-----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---|-----------------------------|
|                  |               |                          |   |                                 | Laboratory :   | Columbia /<br>Services K   |  |                                    |                                |                                   | Colur                             | nbia Analytica                             | l Services - F                  | Rochester, N                  | IY                                 |                                  |                                   | Analytical<br>louston, TX        | GEL -<br>Charleston, SC           | STL<br>Denver, CO                 | Alpha<br>Analytical<br>Sparks, NV | EMSL<br>Westmont, NJ                        | PTS<br>Santa Fe Springs, CA |
| Grid<br>Location | Boring<br>No. | Sample ID<br>Number      | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Matrix<br>Spike/MS<br>Duplicate | SPLP<br>Sample | Perchlorate<br>(EPA 314.0) | <b>Metals<sup>2.</sup></b><br>(EPA 6020) | Hex Cr <sup>3.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B)            | VOCs <sup>4.</sup><br>(EPA 8260B) | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total<br>Cyanide<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA 1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup><br>(EPA 8141) | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Geotechnical<br>Tests       |
|                  |               |                          | Number of                                   | Containers p                    | er Sample:     | 1 - 4 o                    | z. Jar                                   | 1 - 4                              | oz Jar                         | 1 - 40 ml VOA<br>vial w/ methanol | 3 VOA vials<br>(TerraCore Kit)    |  |                                 | 2 - 4 oz Jars                 | 5                                  |                                  | 1 - 4 c                           | oz Jar                           | 1 - 250 ml Jar<br>(plastic)       | 1 - 4 oz Jar                      | 1 - 4 oz Jar                      | <u>≥</u> 1 kg<br>(in plastic bag)           | 2 Brass Tubes               |
|                  |               |                          | I   | Borings are                     | organized b    | by grid location           | n as shown o                             | on Plate A -                       | Starting po                    | int is on the n                   | orthwestern                       | n most grid in                             | Area 3 (N-7                     | ) and endir                   | ng with the s                      | southeast                        | ern most g                        | rid in Are                       | a 3 (S-8).                        |                                   |                                   |   |                             |
| 0-8              | SA143         | SA143-0.0B               | 0.0   |                                 |                | X                          |  |                                    |                                |                                   | ······                            | X  |                                 |                               |                                    |                                  |                                   | X                                |                                   |                                   |                                   | Х   |                             |
| O-8<br>O-8       |               | SA143-31B#<br>SA143-41B# | 31 #<br>41 ##                               |                                 |                | X                          | X<br>X                                   | X                                  |                                |                                   | X                                 | X<br>X                                     |                                 |                               |                                    |                                  |                                   | х                                | X                                 |                                   |                                   |   |                             |
| O-8              |               | SA143-52B                | 52  |                                 |                | Х                          | Х  | Х                                  |                                |                                   | Х                                 | Х  |                                 |                               |                                    |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             |
| O-8<br>O-8       | SA171         | SA143-52BD<br>SA171-0.0B | 52 (dup)<br>0.0                             |                                 |                | Х                          | Х  | Х                                  |                                |                                   | Х                                 | X  |                                 |                               |                                    |                                  |                                   |                                  | Х                                 |                                   |                                   |   | ł                           |
| O-8              |               | SA171-5B#                | 5 #   |                                 |                | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  | Х                               |                               | Х                                  |                                  |                                   | Х                                | Х                                 |                                   |                                   |   |                             |
| O-8<br>O-8       |               | SA171-18B#<br>SA171-30B  | 18 ##<br>30                                 |                                 |                | X<br>X                     | X<br>X                                   | X<br>X                             | X<br>X                         |                                   | X<br>X                            | X<br>X                                     | X                               |                               | X                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             |
| O-8              |               | SA171-42B                | 42  |                                 |                | X                          | X  | X                                  | X                              |                                   | X                                 | X  | X                               |                               | X                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             |
|                  |               |                          |   |                                 |                |                            |  |                                    |                                |                                   |                                   |  |                                 |                               |                                    |                                  |                                   |                                  |                                   |                                   |                                   |   | Ì                           |
| P-6              | SA130         | SA130-0.0B               | 0.0   |                                 |                |                            | ·····                                    |                                    |                                |                                   |                                   | ······                                     |                                 |                               |                                    |                                  |                                   |                                  |                                   |                                   |                                   | Х   | ļ                           |
| P-6<br>P-6       |               | SA130-0.5B<br>SA130-10B  | 0.5<br>10                                   |                                 |                | X<br>X                     | X<br>X                                   | X<br>X                             | X<br>X                         |                                   | X<br>X                            | X  | X<br>X                          |                               | X<br>X                             |                                  |                                   | Х                                | X                                 |                                   |                                   |   |                             |
| P-6              |               | SA130-25B                | 25  |                                 |                | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  | Х                               |                               | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             |
| P-6<br>P-6       | RSAP6         | SA130-43B<br>RSAP6-0.0B  | 43<br>0.0                                   |                                 |                | Х                          | Х  | X                                  | Х                              |                                   | Х                                 | Х  | X                               |                               | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   | Х   |                             |
| P-6              | NOAFO         | RSAP6-0.0B               | 0.0   |                                 |                | Х                          | x  | x                                  | x                              |                                   | X                                 | X  |                                 | X                             | x                                  |                                  |                                   | x                                | X                                 |                                   |                                   | ^   |                             |
| P-6              |               | RSAP6-10B                | 10  |                                 |                | X                          | X  | X                                  | X                              |                                   | X                                 | X  |                                 | Hold                          | X                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             |
| P-6<br>P-6       |               | RSAP6-25B<br>RSAP6-44B   | 25<br>44                                    |                                 |                | X                          | X<br>X                                   | X<br>X                             | X<br>X                         |                                   | X<br>X                            | X  |                                 | Hold<br>X                     | X                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             |
| P-7              | RSAP7         | RSAP7-0.0B               | 0.0   |                                 |                |                            |  |                                    |                                |                                   |                                   |  |                                 |                               |                                    |                                  |                                   |                                  |                                   |                                   |                                   | Х   |                             |
| P-7<br>P-7       |               | RSAP7-0.5B<br>RSAP7-0.5B | 0.5<br>0.5                                  | х                               |                | X<br>X                     | X<br>X                                   | X<br>X                             | X<br>X                         |                                   | X<br>X                            | X<br>X                                     | X<br>X                          | X                             | X<br>X                             |                                  |                                   | X                                | X<br>X                            | X                                 | X<br>X                            |   |                             |
| P-7              |               | RSAP7-14B                | 14  |                                 |                | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  | Х                               | Hold                          | Х                                  |                                  |                                   |                                  | X                                 | X                                 | X                                 |   |                             |
| P-7<br>P-7       |               | RSAP7-25B<br>RSAP7-41B   | 25<br>41                                    |                                 |                | X<br>X                     | X  | X<br>X                             | X<br>X                         |                                   | X<br>X                            | X  | X<br>X                          | Hold<br>X                     | X                                  |                                  |                                   |                                  | X<br>X                            | x                                 | x                                 |   |                             |
| P-7              | SA140         | SA140-0.0B               | 0.0   |                                 |                |                            | ~  | ~                                  | ~                              |                                   |                                   | ~  | ~                               | ~                             | ~                                  |                                  |                                   |                                  | X                                 | ~                                 | ~                                 | Х   |                             |
| P-7<br>P-7       |               | SA140-0.5B<br>SA140-10B  | 0.5<br>10                                   |                                 |                | X                          | X  | X                                  |                                |                                   | X<br>X                            | X<br>X                                     |                                 | X<br>Hold                     |                                    |                                  |                                   | Х                                | X                                 |                                   |                                   |   |                             |
| P-7              |               | SA140-10B<br>SA140-10BD  | 10 (dup)                                    |                                 |                | X                          | X  | X                                  |                                |                                   | X                                 | X  |                                 | Hold                          |                                    |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             |
| P-7<br>P-7       |               | SA140-30B<br>SA140-40B   | 30<br>40                                    |                                 |                | X<br>X                     | X<br>X                                   | X<br>X                             |                                |                                   | X<br>X                            | X  |                                 | Hold<br>X                     |                                    |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             |
| P-7              | RSAP8         | RSAP8-0.0B               | 0.0   |                                 |                | ^                          | ^  | ^                                  |                                |                                   | ^                                 | ^  |                                 | ~                             |                                    |                                  |                                   |                                  | ^                                 |                                   |                                   | х   |                             |
| P-8              |               | RSAP8-0.5B               | 0.5   |                                 |                | X                          | X  | X                                  | X                              |                                   | X                                 | X  |                                 | X                             | X                                  |                                  |                                   | Х                                | X                                 |                                   |                                   |   |                             |
| P-8<br>P-8       |               | RSAP8-10B<br>RSAP8-25    | 10<br>25                                    |                                 |                | X                          | X  | X                                  | X<br>X                         |                                   | X<br>X                            | X  |                                 | Hold<br>Hold                  | X<br>X                             |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             |
| P-8              | 50107         | RSAP8-40B                | 40  |                                 |                | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  |                                 | Х                             | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   | ~   |                             |
| Q-7<br>Q-7       | RSAQ7         | RSAQ7-0.0B<br>RSAQ7-0.5B | 0.0   |                                 |                | X                          | x  | x                                  | x                              |                                   | X                                 | X  | X                               | X                             | x                                  |                                  |                                   | x                                | X                                 |                                   |                                   | X   |                             |
| Q-7              |               | RSAQ7-10B                | 10  |                                 |                | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  | Х                               | Hold                          | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             |
| Q-7<br>Q-7       |               | RSAQ7-25B<br>RSAQ7-37B   | 25<br>37                                    |                                 |                | X<br>X                     | X<br>X                                   | X                                  | X                              |                                   | X<br>X                            | X<br>X                                     | X                               | Hold<br>X                     | X                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             |
| Q-7              |               | RSAQ7-37B                | 37  | Х                               |                | X                          | X  | X                                  | X                              |                                   | X                                 | X  | X                               | X                             | X                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             |
| Q-8<br>Q-8       | RSAQ8         | RSAQ8-0.0B<br>RSAQ8-0.5B | 0.0   |                                 |                | x                          | x  | x                                  | x                              |                                   | x                                 | x  |                                 |                               | x                                  |                                  |                                   | X                                | x                                 |                                   |                                   | Х   | <b> </b>                    |
| Q-8              |               | RSAQ8-10B                | 10  |                                 |                | Х                          | Х  | X                                  | Х                              |                                   | Х                                 | X  |                                 | Hold                          | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             |
| Q-8<br>Q-8       |               | RSAQ8-10B<br>RSAQ8-20B   | 10<br>20                                    |                                 | X              | X<br>X                     | X<br>X                                   | X<br>X                             | X<br>X                         |                                   | X<br>X                            | X<br>X                                     |                                 | Hold<br>Hold                  | X<br>X                             | х                                |                                   |                                  | X<br>X                            |                                   |                                   |   | X                           |
| Q-8              |               | RSAQ8-31B                | 31  |                                 | х              | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  |                                 | Х                             | Х                                  | х                                |                                   |                                  | Х                                 |                                   |                                   |   | х                           |
| Q-8<br>R-7       | RSAR7         | RSAQ8-34B<br>RSAR7-0.0B  | 34<br>0.0                                   |                                 |                | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  |                                 | Х                             | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   | X   |                             |
| R-7              | NOAN /        | RSAR7-0.0B               | 0.0   |                                 |                | Х                          | X  | x                                  | х                              |                                   | Х                                 | Х  |                                 | X                             | x                                  |                                  |                                   | x                                | X                                 |                                   |                                   | ^   |                             |
| R-7<br>R-7       |               | RSAR7-9B<br>RSAR7-9BD    | 9<br>0 (dup)                                |                                 |                | X<br>X                     | X  | X<br>X                             | X<br>X                         |                                   | X                                 | X<br>X                                     |                                 | Hold<br>Hold                  | X<br>X                             |                                  |                                   |                                  | X<br>X                            |                                   |                                   |   | l                           |
| R-7<br>R-7       |               | RSAR7-9BD<br>RSAR7-20B   | 9 (dup)<br>20                               |                                 |                | X                          | X  | X                                  | X                              |                                   | X<br>X                            | X<br>X                                     |                                 | Hold                          | X                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   | 1                           |
| R-7              | 0.110         | RSAR7-34B                | 34  | -                               |                | Х                          | Х  | X                                  | Х                              |                                   | X                                 | X  |                                 | Х                             | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   | v   |                             |
| R-7<br>R-7       | SA112         | SA112-0.0B<br>SA112-0.5B | 0.0   |                                 |                | х                          | х  | х                                  | х                              |                                   | Х                                 | х  |                                 |                               | x                                  | X                                | X<br>X                            | х                                | х                                 |                                   |                                   | Х   | l                           |
| R-7              |               | SA112-10B                | 10  |                                 |                | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  |                                 |                               | Х                                  |                                  | R                                 |                                  | Х                                 |                                   |                                   |   |                             |
| R-7<br>R-7       |               | SA112-20B<br>SA112-34B   | 20<br>34                                    |                                 |                | X                          | X  | X                                  | X<br>X                         |                                   | X                                 | X  |                                 |                               | X<br>X                             | X                                | R<br>X                            |                                  | X                                 |                                   |                                   |   | <u> </u>                    |
| R-7              | SA132         | SA132-0.0B               | 0.0   | İ                               |                |                            |  |                                    |                                |                                   |                                   |  |                                 |                               |                                    |                                  |                                   | 1                                |                                   | 1                                 |                                   | Х   |                             |
| R-7<br>R-7       |               | SA132-0.5B<br>SA132-10B  | 0.5<br>10                                   |                                 |                | X<br>X                     | X<br>X                                   | X<br>X                             | X<br>X                         |                                   | X<br>X                            | X  |                                 | X<br>Hold                     |                                    |                                  |                                   | Х                                | X                                 |                                   |                                   |   | <b> </b>                    |
| R-7              |               | SA132-10BD               | 10 (dup)                                    |                                 |                | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  |                                 | Hold                          |                                    |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             |
| R-7<br>R-7       |               | SA132-20B<br>SA132-34B   | 20<br>34                                    |                                 |                | X<br>X                     | X<br>X                                   | X<br>X                             | X<br>X                         |                                   | X<br>X                            | X<br>X                                     |                                 | Hold<br>X                     |                                    |                                  |                                   |                                  | X<br>X                            |                                   |                                   |   |                             |
| R-7<br>R-7       | SA33          | SA33-0.0B                | 0.0   |                                 |                | ^                          | ^  | ^                                  | ^                              |                                   | ^                                 |  |                                 |                               |                                    | х                                | Х                                 |                                  | ^                                 |                                   |                                   | Х   | <u> </u>                    |
| R-7<br>R-7       |               | SA33-0.5B<br>SA33-0.5BD  | 0.5   |                                 |                | X<br>X                     | X<br>X                                   | X<br>X                             | X<br>X                         |                                   | X<br>X                            | X<br>X                                     |                                 |                               |                                    | X<br>X                           | X<br>X                            | X<br>X                           | X<br>X                            |                                   |                                   |   |                             |
| R-7<br>R-7       |               | SA33-0.5BD<br>SA33-10B   | 0.5 (dup)<br>10                             |                                 |                | X                          | X X                                      | X                                  | X X                            |                                   | X X                               | X X  |                                 |                               |                                    | ^                                | <u> </u>                          |                                  | X                                 |                                   |                                   |   |                             |
| R-7              |               | SA33-20B                 | 20  |                                 |                | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  |                                 |                               |                                    |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             |
| R-7              |               | SA33-33B                 | 33  | 1                               |                | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  |                                 |                               |                                    | Х                                | Х                                 | I                                | Х                                 | I                                 |                                   | 1   | L                           |

## Table 2 (Field Version) Soil Sampling and Analysis Plan - Area III Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

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2 of 3

| СА |  |
|----|--|
| ıl | Location Description and Rationale for Investigation<br>(NDEP may not agree with upgradient and downgradient descriptions)   |
|    |  |
| S  |  |
|    |  |
|    | Boring located to evaluate for potential impacts to soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46<br>(Former Old Main Cooling Tower and Recirculation Lines). Located within LOU 42 and downgradient of LOU 46<br>to provide area coverage of both LOUs.   |
|    | Soil samples will be collected below Mn-tailings/soil interface; interface estimated to occur at 31 ft bgs.<br>GW anticipated at ~54 feet bgs.   |
|    | Boring located to evaluate potential impacts to soil underlying LOU 21 (Pipeline associated with Pond Mn-1),<br>LOU 24 (Mn Tailings Pile Area), LOU 46 (Former Old Main Cooling Tower and Recirculation Lines), LOU 59<br>(Storm Sewer System), and LOU 60 (Acid Drain System). Located within LOU 24 nearby LOU 46 and adjacent to<br>LOUs 21, 59 and 60 piping at a reasonable release location to evaluate all five LOUs.<br>Soil samples will be collected below Mn-tailings/soil interface at approx 5 feet bgs. LOU 60 invert at 17 bgs.<br>Storm sewer pipeline invert occurs approximately 9 feet bgs. |
|    | GW anticipated at ~44 feet bgs.  |
|    | Boring located to evaluate potential impacts to soil from possible LOU 59 (Storm Sewer System) pipeline<br>segment/junction releases.<br>GW anticipated at ~45 feet bgs.   |
|    | Boring located to evaluate LOU 34W (Historic Mn Tailings Pile Area, West). Random boring located within low<br>at worst case potential environmental issue location.<br>GW anticipated at ~46 feet bgs.  |
|    | Boring located to evaluate LOU 20 (Pipeline route associated with Pond C-1), LOU 21 (Pond Mn-1 associated pipeline route), LOU 22 (WC-West Associated Piping), LOU 23 (Pond WC-East associated pipeline), and LOU 60 (Acid Drain System).<br>LOU 60 pipeline invert occurs at approximately 13 feet bgs.<br>GW anticipated at ~ 43 feet bgs.   |
|    | Boring located to evaluate LOU 48 (Leach Plant Anolyte Tank), LOU 49 (Leach Plant Area<br>Sulfuric Acid Storage Tank), and LOU 50 (Leach Plant Area Leach Tanks). Located adjacent to three LOUs<br>at an accessible and reasonable potential release point for all three LOUs (just down slope).<br>Borehole SA140 will be converted to well M-141.   |
|    | Boring located to evaluate LOU 47 (Leach Plant Area Mn Ore Pile Area) and Area 70 (Former U.S. Vanadium<br>Site). Random boring located within LOU 47 and at downgradient edge of Area 70 to evaluate potential area<br>releases from both LOU 47 and Area 70 LOUs (down slope and low spot).<br>GW anticipated at ~42 feet bgs.   |
|    | Boring located to evaluate potential releases associated with LOU 20 (Pond C-1 Associated Piping), LOU 22 (WC-West Associated Piping), LOU 23 (WC-East Associated Piping), LOU 48 (Leach Plant Anolyte Storage Tanks), and LOU 50 (Leach Plant Area Leach Tanks). GW anticipated at ~39 feet bgs.  |
|    | Boring located to evaluate LOU 47 (Leach Plant Mn Ore Pile Area), LOU 48 (Leach Plant Anolyte Storage<br>Tanks), and LOU 59 (Storm Sewer System). Random boring in accessible location within LOUs nearby LOU<br>47 and 48 and 59 for accessible area coverage and a low spot. GW anticipated at ~36 feet bgs.<br>SPLP sample must be of Qal & must be dry soils (above cap fringe).   |
|    | SPLP sample must be of MC fm & must be dry soils (above cap fringe). If neither is present, don't collect SPLP<br>sample.  |
|    | Boring located to evaluate soils for potential impacts associated with LOU 40 (former PCB Transformer Spill),<br>LOU 59 (Storm Sewer System), and LOU 61 (Old Sodium Chlorate Plant Decommissioning and Unit-5 Basement)<br>LOU 60 pipeline invert occurs at approximately 8 feet bgs.<br>GW anticipated at ~36 feet bgs.  |
|    | Boring is located to evaluate LOU 40 (PCB Transformer Spill), and LOU 61 (Old Sodium Chlorate Plant<br>Decommissioning and Unit-5 Basement). Located in PCB transformer Spill area at visible spill location and<br>adjacent to LOU 61 basement for area coverage.<br>GW anticipated at ~36 feet bgs.  |
|    | Located to evaluate LOU 33 (Former Sodium Perchlorate Platinum By-Product Filter), LOU 59<br>(Storm Sewer System), and LOU 61 (Old Sodium Chlorate Plant Decommissioning and Unit-5<br>Basement). Located at high risk point, adjacent to containment in pavement crack within LOU 33<br>and nearby LOUs 59 and 61 for area coverage.<br>GW anticipated at ~36 feet bgs.   |
|    | Boring located to evaluate LOU 40 (PCB Transformer Spill) and LOU 61 (Old Sodium Chlorate Plant<br>Decommissioning and Unit-5 Basement). Located at an accessible interior location adjacent to LOUs 40 and 61<br>(as close as upgradient utilities allow) to potential release points.<br>W = Concrete Wipe Sample for PCBs Per NDEP (July 21,2008)<br>GW anticipated at ~35 feet bgs.  |

|                  |               |                      |   |                                 | Laboratory :   | Columbia A<br>Services K   |  |                                    |                                |                                   | Colu                              | nbia Analytica                             | I Services - F                  | Rochester, N                  | IY                                 |                                  | Columbia<br>Services - H          |                                  | GEL -<br>Charleston, SC           | STL<br>Denver, CO                 | Alpha<br>Analytical<br>Sparks, NV | EMSL<br>Westmont, NJ                        | PTS<br>Santa Fe Springs, Ca | A      |
|------------------|---------------|----------------------|---|---------------------------------|----------------|----------------------------|--|------------------------------------|--------------------------------|-----------------------------------|-----------------------------------|--|---------------------------------|-------------------------------|------------------------------------|----------------------------------|-----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---|-----------------------------|--------|
| Grid<br>Location | Boring<br>No. | Sample ID<br>Number  | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Matrix<br>Spike/MS<br>Duplicate | SPLP<br>Sample | Perchlorate<br>(EPA 314.0) | <b>Metals<sup>2.</sup></b><br>(EPA 6020) | Hex Cr <sup>3.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO<br>(EPA 8015B)            | VOCs <sup>4.</sup><br>(EPA 8260B) | Wet<br>Chemistry<br>Analytes <sup>5.</sup> | Total<br>Cyanide<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA 1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup><br>(EPA 8141) | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Geotechnical<br>Tests       |        |
|                  |               |                      | Number of (                                 | Containers p                    | er Sample:     | 1 - 4 oz                   | z. Jar                                   | 1 - 4                              | oz Jar                         | 1 - 40 ml VOA<br>vial w/ methanol | 3 VOA vials<br>(TerraCore Kit)    |  |                                 | 2 - 4 oz Jars                 | 5                                  |                                  | 1 - 4 c                           | oz Jar                           | 1 - 250 ml Jar<br>(plastic)       | 1 - 4 oz Jar                      | 1 - 4 oz Jar                      | <u>≥</u> 1 kg<br>(in plastic bag)           | 2 Brass Tubes               |        |
|                  |               |                      | В   | Borings are                     | organized b    | y grid locatior            | n as shown c                             | on Plate A -                       | - Starting po                  | int is on the                     | northwesteri                      | n most grid in                             | Area 3 (N-7                     | ') and endir                  | ng with the                        | southeast                        | ern most g                        | rid in Are                       | a 3 (S-8).                        |                                   |                                   |   |                             |        |
| R-8              | RSAR8         | RSAR8-0.0B           | 0.0   |                                 |                |                            |  |                                    |                                |                                   |                                   |  |                                 |                               |                                    |                                  |                                   |                                  |                                   |                                   |                                   | Х   |                             | T      |
| R-8              |               | RSAR8-0.5B           | 0.5   |                                 |                | Х                          | Х  | X                                  | Х                              |                                   | Х                                 | Х  |                                 | Х                             | Х                                  | Х                                |                                   | Х                                | Х                                 |                                   |                                   |   |                             |        |
| R-8              |               | RSAR8-10B            | 10  |                                 |                | X                          | X  | Х                                  | Х                              |                                   | Х                                 | Х  |                                 | Hold                          | X                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             |        |
| R-8              |               | RSAR8-20B            | 20  |                                 |                | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  |                                 | Hold                          | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             |        |
| R-8              |               | RSAR8-34B            | 34  |                                 |                | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  |                                 | Х                             | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             |        |
| R-8              |               | RSAR8-34B            | 34  | Х                               |                | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  |                                 | Х                             | Х                                  | Х                                |                                   |                                  | Х                                 |                                   |                                   |   |                             | _      |
| R-8              | SA34          | SA34-0.0B            | 0.0   |                                 |                |                            |  |                                    |                                |                                   |                                   |  |                                 |                               |                                    |                                  |                                   |                                  |                                   |                                   |                                   | Х   |                             |        |
| R-8              |               | SA34-0.5B            | 0.5   |                                 |                | X                          | X  | X                                  | X                              |                                   | X                                 | X  |                                 |                               | X                                  |                                  |                                   | X                                | X                                 |                                   |                                   |   |                             |        |
| R-8              |               | SA34-10B             | 10  |                                 |                | X                          | X  | X                                  | X                              |                                   | X                                 | X  |                                 |                               | X                                  | N/                               |                                   |                                  | X                                 |                                   |                                   |   | V                           |        |
| R-8<br>R-8       |               | SA34-10B<br>SA34-20B | 10<br>20                                    |                                 | Χ              | X                          | X  | X                                  | X                              |                                   | X                                 | X<br>X                                     |                                 |                               | X                                  | Х                                |                                   |                                  | X X                               |                                   |                                   |   | X                           | -      |
| R-8              |               | SA34-20B<br>SA34-31B | 20  |                                 | X              | X                          | X  | X X                                | X                              |                                   | X                                 | X  |                                 |                               | X                                  | X                                |                                   |                                  | X                                 |                                   |                                   |   | X                           | - 3    |
| R-8              |               | SA34-31B<br>SA34-34B | 34  |                                 | ^              | X                          | X  | X                                  | X                              |                                   | X                                 | x  |                                 |                               | X                                  | ^                                |                                   |                                  | <u> </u>                          |                                   |                                   |   | ^                           |        |
| R-8              | SA59          | SA59-0.0B            | 0.0   | -                               |                | ^                          | ^  | ^                                  | ^                              |                                   | ^                                 | ^  | -                               |                               | ^                                  |                                  | 1                                 |                                  | ^                                 |                                   |                                   | х   |                             |        |
| R-8              | 3433          | SA59-0.5B            | 0.0   |                                 |                | X                          | x  | X                                  | X                              |                                   | X                                 | x  |                                 |                               | X                                  | X                                |                                   | X                                | X                                 |                                   |                                   | ^   |                             |        |
| R-8              |               | SA59-10B             | 10  |                                 |                | ×                          | X  | X                                  | ×                              |                                   | X                                 | X  |                                 |                               | X                                  | <u> </u>                         |                                   | ^                                | X                                 |                                   |                                   |   |                             |        |
| R-8              |               | SA59-25B             | 25  |                                 |                | X                          | X  | X                                  | X                              |                                   | X                                 | X  |                                 |                               | X                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             | -1     |
| R-8              |               | SA59-25BD            | 25 (dup)                                    |                                 |                | X                          | X  | X                                  | X                              |                                   | X                                 | X  |                                 |                               | X                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             |        |
| R-8              |               | SA59-36B             | 36  |                                 |                | X                          | X  | X                                  | X                              |                                   | X                                 | X  |                                 |                               | X                                  | Х                                |                                   |                                  | X                                 |                                   |                                   |   |                             |        |
| R-8              | SA68          | SA68-0.0B            | 0.0   |                                 |                |                            |  |                                    |                                |                                   |                                   |  |                                 |                               |                                    |                                  |                                   |                                  |                                   |                                   |                                   | Х   |                             | $\neg$ |
| R-8              |               | SA68-0.5B            | 0.5   |                                 |                | Х                          | Х  | X                                  | Х                              |                                   | Х                                 | Х  |                                 |                               | Х                                  |                                  |                                   | Х                                | Х                                 |                                   |                                   |   |                             | ·····  |
| R-8              |               | SA68-10B             | 10  |                                 |                | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  |                                 |                               | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             | 1      |
| R-8              |               | SA68-25B             | 25  |                                 |                | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  |                                 |                               | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             |        |
| R-8              |               | SA68-25BD            | 25 (dup)                                    |                                 |                | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  |                                 |                               | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             | _      |
| R-8              |               | SA68-36B             | 36  |                                 |                | Х                          | Х  | X                                  | Х                              |                                   | Х                                 | X  |                                 |                               | Х                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             |        |
| S-8              | SA77          | SA77-0.0B            | 0.0   |                                 |                |                            |  |                                    |                                |                                   |                                   |  |                                 |                               |                                    |                                  |                                   |                                  |                                   |                                   |                                   | Х   |                             | T      |
| S-8              |               | SA77-0.5B            | 0.5   |                                 |                | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  | Х                               |                               | Х                                  | Х                                |                                   | Х                                | Х                                 |                                   |                                   |   |                             | I      |
| S-8              |               | SA77-10B             | 10  |                                 |                | Х                          | X  | Х                                  | Х                              |                                   | Х                                 | X  | X                               |                               | X                                  |                                  |                                   |                                  | Х                                 |                                   |                                   |   |                             |        |
| S-8              |               | SA77-10BD            | 10 (dup)                                    |                                 |                | X                          | X  | Х                                  | X                              |                                   | X                                 | X  | X                               |                               | X                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             |        |
| S-8              |               | SA77-25B             | 25  |                                 |                | X                          | X  | X                                  | X                              |                                   | X                                 | X  | X                               | *****                         | X                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             |        |
| S-8              | 50100         | SA77-41B             | 41  |                                 |                | Х                          | Х  | Х                                  | Х                              |                                   | Х                                 | Х  | Х                               |                               | Х                                  | Х                                |                                   |                                  | Х                                 |                                   |                                   |   |                             | 4      |
| S-8              | RSAS8         | RSAS8-0.0B           | 0.0   |                                 |                | Y                          | ×  | N/                                 |                                |                                   | N N                               | N/   | V                               | N/                            | V                                  | N/                               |                                   | N N                              |                                   |                                   |                                   | Х   |                             | _      |
| S-8              |               | RSAS8-0.5B           | 0.5   |                                 |                | X                          | X  | X                                  | X                              |                                   | X                                 | X  | X                               | X                             | X                                  | X                                |                                   | X                                | <u> </u>                          |                                   |                                   |   |                             | _      |
| S-8              |               | RSAS8-10B            | 10  |                                 |                | X                          | X  | X                                  | X                              |                                   | X                                 | X  | X                               | Hold                          | X                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             |        |
| S-8              |               | RSAS8-25B            | 25  |                                 |                | X                          | X  | X                                  | X                              |                                   | X                                 | X  | X                               | Hold                          | X                                  |                                  |                                   |                                  | X                                 |                                   |                                   |   |                             |        |
| S-8              |               | RSAS8-35B            | 35  | ~                               |                | X                          | X  | X                                  | X                              |                                   | X                                 | X  | X                               | X                             | X                                  | X                                |                                   |                                  | X X                               |                                   |                                   |   |                             | _      |
| S-8              |               | RSAS8-35B            | 35  | Х                               | 1              | Х                          | Х  | Х                                  | Х                              | 1                                 | Х                                 | Х  | Х                               | Х                             | Х                                  | Х                                | I                                 | L                                | Х                                 |                                   |                                   | 1   | I                           | _      |

#### Notes

Sample will be collected and analyzed. Х

No sample will be collected under Phase B sampling program.

DD\* Sample depth to be determined in the field where DD = sample depth (ft).

TPH-GC Total petroleum hydrocarbons - Gasoline-Range Organics. TPH-DV Total petroleum hydrocarbons - Disel-Range Organics. SPLP samples will be analyzed by EPA method 1312 using two preparation methods: 1) with extraction fluid #2 (reagent water at pH 5.00 ± 0.05), and 2) with extraction method #3 (reagent water); per NDEP, May 6, 2008.

The 0.5 ft best will be collected from the Use structure in the structure 2. Hexavalent Chromium 3.

Samples for VOC analysis will be preserved in the field using sodium bisulfate (or DI water) and methanol preservatives per EPA Method 5035. 4.

Wet chemistry parameters include: alkalinity (total, CO 3, HCO3), ammonia, bromide, chlorate, chloride, conductivity, nitrate, nitrite, perchlorate, pH, phosphate (total), sulfate, surfactants (MBAs), TDS, Total Organic Carbon, and TSS. 5.

Organochlorine Pesticides (includes analysis for hexachlorobenzene). 6.

Semi-volatile Organic Compounds

Polychlorinated biphenotes in Computing Search and the stable to show which samples at these locations will be analyzed by USEPA methods 8082 and in some cases 1668A. Concrete surfaces at these locations will also include chip and/or wipe samples per EPA Region 1 SOP for Sampling Concrete in the Field (1997). A column for Aroclor PCBs (EPA 8082) was added to this table to show which samples will be analyzed for Aroclor PCBs. Dioxins/furans will be analyzed by EPA Method 8290 for all samples. Screening reports will be provided for 90% of the samples and full data packages for 10% of the samples.

10. 11.

Radionuclides consists of alpha spec reporting for isotopic thorium and isotopic uranium, and Radium-226, plus Radium-228 by beta counting (per NDEP). Organophosphorous Pesticides were added to the SAP by NDEP (July 21, 2008). Tronox proposes to sample at 0.5 ft bgs, capillary fringe, and in some cases at the mid-point depth. Organic Acid analysis includes the following analytes: 4-Chlorbenzene sulfonic acid; Benzenesulfonic acid; O,O-Diethylphosphorodithioic acid; O,O-Dimethylphosphorodithioic acid; and Phthalic acid. 12.

13. Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs.

14. Geotechnical Tests consist of: moisture content (ASTM D-2216), grain size analysis (ASTM D-422 and C117-04), Soil Dry Bulk Density (ASTM D-2937), Grain Density (ASTM D-854), Soil-Water Filled Porosity (ASTM D-2216); Vertical Hydraulic Conductivity (ASTM D-5084/USEPA 9100).

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Sample depth dependent upon depth of the Mn tailings/soil interface. Final depth will be determined in the field Sample depth should be 10-ft deeper than the Mn tailings/soil interface sample or 1-ft below a pipeline invert. Final depth will be determined in the fields

#### Table 2 (Field Version) Soil Sampling and Analysis Plan - Area III

Phase B Source Area Investigation Work Plan

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| 3 of 3  |
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| Location Description and Rationale for Investigation<br>(NDEP may not agree with upgradient and downgradient descriptions)  |
|   |
| Boring located south of Unit-6 to evaluate LOU 44 (Unit-6 Basement) and as part of site-wide coverage for<br>potential historical chemical use. Located as close as possible outside to LOU 44 near potential release<br>point and for area wide coverage.<br>GW anticipated at ~36 feet bgs.   |
| Boring located to evaluate LOU 33 (Former Sodium Perchlorate Platinum By-Product Filter), LOU<br>44 (Unit-6 Basement), LOU 59 (Storm Sewer System), and LOU 61 (Old Sodium Chlorate Plant<br>Decommissioning and Unit-5 Basement). Located in between LOUs 44,33 and 61 to evaluate all three<br>LOUs and adjacent to LOU 59 to evaluate for potential pipeline releases.<br>SPLP sample at 10 feet bgs must be of Qal & dry soil.<br>SPLP sample must be of MC fm & must be dry soils (above cap fringe). If neither is present, don't collect SPLP<br>sample. GW anticipated at ~36 feet bgs. |
| Boring located south (upgradient) of Unit-6 to evaluate LOU 44 (Unit-6 Basement) and as part of site-wide<br>coverage for potential historical chemical use. Borehole SA59 will be converted into well M-139.<br>GW anticipated at ~38 feet bgs.  |
| Boring located south of Unit-6 to evaluate for potential impacts associated with LOU 44 (Unit-6 Basement) and Western Area Power Administration (WAPA) site as part of site-wide coverage for potential historical chemical use. Borehole SA68 will be converted into well M-145. GW anticipated at ~ 38 feet bgs.  |
| This boring is located to evaluate Site-wide conditions and potential impacts from the offsite Western Area<br>Power Administration (WAPA) site.<br>GW anticipated at ~43 feet bgs.   |
| This boring is located to evaluate Site-wide conditions and potential impacts from the offsite Western Area<br>Power Administration (WAPA) site.<br>GW anticipated at ~37 feet bgs.   |
|   |

|                  |                        |                               |                               |                             |   |                                       |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                 |  |                   | Page   |
|------------------|------------------------|-------------------------------|-------------------------------|-----------------------------|---|---------------------------------------|----------------------------|----------------------|----------------------------------|------------------------------------|--------------------------------|---|--------------------------------------|---------------------------------------|-----------------------------|---------------------------------|--|-------------------|--|
|                  |                        |                               |                               |                             | La  | aboratory <sup>E.</sup> :             | CAS - Ke                   | elso, WA             |                                  |                                    | CAS - Roch                     | nester, NY                                    |                                      |                                       | GEL -Charleston,<br>SC      | STL - Denver                    | Alpha<br>Analytical<br><sub>Sparks, NV</sub> | Rationale for     |  |
| Grid<br>Location | Location<br>Area       | Monitoring<br>Well No.        | Sample ID<br>No. <sup>A</sup> | Screen Interval<br>(ft bgs) | Soil Type Expected<br>Across Screen<br>Interval <sup>1.</sup> | Well Sampled<br>for Phase A?<br>(y/n) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup> | VOCs <sup>3.</sup><br>(EPA 8260) | Hex Cr <sup>4.</sup><br>(EPA 7199) | Wet<br>Chemistry <sup>5.</sup> | Total Cyanide<br><sup>F.</sup><br>(EPA 9012A) | OCPs <sup>6.</sup><br>(EPA<br>8081A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | Radionuclides <sup>9.</sup> | OPPs <sup>10.B</sup><br>(8141A) | Organic Acids <sup>c</sup>                   | Revision          | Location Description and Rationale for Investigation   |
|                  |                        |                               |                               | N                           | Vells are organ   | nized by grid                         | location as                | shown or             | n Plate A -                      | Starting po                        | oint is on th                  | ne northwes                                   | tern-mos                             | t grid in <i>l</i>                    | Area III (N-7) an           | nd ending with                  | the southeas                                 | stern-most gr     | id covering Area III (Q-9).  |
| M-8              | IIIN                   | M-19                          | M-19B                         | 14.5 - 34.5                 | Qal/MCfg1   | no                                    | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                 |  | D (see Area II)   | Located to serve as a downgradient step out for LOU 21 and for general Site coverage.  |
| N-7              | IIIW                   | M-34                          | M-34B                         | 25 - 40                     | Qal/MCfg1   | no                                    | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                 |  | D (see Area II)   | Located to serve as a downgradient step out for LOU 46; as a crossgradient step out for LOUs 20, 22, 23, and 60<br>and for general Site coverage.  |
| N-7              | ш                      | M-35                          | M-35B                         | 25 - 40                     | MCfg1   | no                                    | x                          | х                    | х                                | х                                  | х                              | x   | Х                                    | Х                                     | х                           |                                 |  | F                 | Located to serve as a downgradient step out for LOUs 24 and 46; as an crossgradient step out for LOU 21; and for general Site coverage.  |
| N-8              | III                    | M-147                         | M-147B                        | TBD                         | Qal/MCfg1*  | new well                              | Х                          | Х                    | X                                | х                                  | X                              | X   | Х                                    | Х                                     | X                           |                                 |  | F                 |  |
| N-9              | TIMET                  | CLD-4R                        | CLD-4RB                       | nr                          | Qal/MCfg1*  | no                                    | х                          | х                    | Х                                | х                                  | Х                              | Х   | Х                                    | Х                                     | Х                           |                                 |  | F                 | Serves as a step out downgradient well for LOUs 24 and 46; as a step out upgradient well for LOU 21; as a cross<br>gradient step out to LOUs 59 and 60; and general Site coverage located on Timet.  |
| O-6              | ш                      | M-50                          | M-50B                         | 39.6 - 59.6                 | MCfg1   | no                                    | х                          | х                    | х                                | х                                  | х                              | х   | Х                                    | Х                                     | х                           |                                 |  | F                 | Located to evaluate LOU 34W; as an upgradient step out for LOU 60; and for general Site coverage.  |
| O-8              | ш                      | M-33                          | M-33B                         | 30 - 45                     | MCfg1   | no                                    | х                          | х                    | х                                | х                                  | x                              | х   | х                                    | х                                     | х                           |                                 |  | F                 | Located to serve as a downgradient step out for LOU 59; as upgradient step out for LOUs 24 and 46; and for<br>general Site coverage.   |
| O-8              | Ш                      | M-148                         | M-148B                        | TBD                         | MCfg1*  | new well                              | X                          | Х                    | х                                | х                                  | X                              | X   | Х                                    | Х                                     | X                           |                                 |  | F                 | Located south of LOU 46 (Former Old Main Cooling Tower) per NDEP.  |
| O-10             | TIMET                  | CLU1                          | CLU1B                         | nr                          | MCfg1*  | no                                    | х                          | х                    | х                                | х                                  | Х                              | х   | Х                                    | Х                                     | Х                           |                                 |  | F                 | Serves as a step out downgradient for LOUs 34E, 47, 48, 51, and Area 70 (former U.S. Vanadium), and general<br>Site coverage located on Timet.   |
| P-7              | Ш                      | M-31A                         | M-31AB                        | 35 - 55                     | MCfg1   | yes                                   | x                          | х                    | х                                | х                                  | x                              | х   | х                                    | x                                     | x                           |                                 |  | F                 | Located to serve as a downgradient step out for LOU 59; as an upgradient step out for LOUs 24 and 46; as a<br>crossgradient step out for LOUs 20, 21, 22, and 23; and for general Site coverage.   |
| P-7              | Ш                      | M-52                          | M-52B                         | 34.5 - 44.5                 | MCfg1   | no                                    | x                          | х                    | x                                | х                                  | x                              | х   | х                                    | x                                     | x                           |                                 |  | F                 | Located to evaluate LOUs 34E, 47 through 51, and Area 70 (former U.S. Vanadium); as a crossgradient step out<br>for LOUs 20, 21, 22, 23, and 60; and for general Site coverage.  |
| P-7              | III                    | M-141                         | M-141B                        | TBD                         | MCfg1*  | new well                              | х                          | х                    | х                                | х                                  | Х                              | х   | Х                                    | Х                                     | Х                           |                                 |  | F                 | New monitoring well co-located with boring SA140 to evaluate LOUs 49 and 50.   |
| P-8              | III                    | M-77                          | M-77B                         | 29 - 43.8                   | Qal/MCfg1   | no                                    | х                          | х                    | х                                | х                                  | x                              | х   | х                                    | х                                     | x                           |                                 |  | F                 | Located to evaluate LOUs 34E, 47 through 51 and Area 70 (former U.S. Vanadium); as a downgradient step out LOUs 33, 40, and 61; as a crossgradient step out for LOU 59; and for general Site coverage.   |
| Q-6              | IIIN                   | M-12A                         | M-12AB                        | 28-48                       | MCfg1   | yes                                   | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                 |  | D (see Area II)   | Located to serve as a upgradient step out for LOUs 20, 22, and 23 and for general Site coverage.   |
| Q-7              | ш                      | M-11                          | M-11B                         | 33.3 - 53                   | Qal/MCfg1   | yes                                   | х                          | х                    | х                                | х                                  | х                              | х   | х                                    | х                                     | x                           |                                 |  | F                 | Located as a downgradient step out for LOU 61; as an upgradient step out for LOUs 34E, 47 through 51 and Are<br>70 (former U.S. Vanadium); as a crossgradient step out for LOUs 20, 22, 23, and 60, and for general Site<br>coverage.                                      |
| Q-8              | ш                      | M-122                         | M-122B                        | TBD                         | Qal/MCfg1*  | new well                              | x                          | х                    | x                                | x                                  | x                              | x   | х                                    | x                                     | x                           |                                 |  | F                 | New monitoring well located to serve as a downgradient step out for LOUs 37, 44, and 60; as an upgradient step<br>out for LOUs 34E, 47, 48, 51, 59 and Area 70 (former U.S. Vanadium); to evaluate possible offsite sources to the<br>east; and for general Site coverage. |
| Q-9              | TIMET                  | MW-6R                         | MW-6RB                        | 39.7 - 59.7                 | Qal/MCfg1*  | no                                    | x                          | Х                    | x                                | х                                  | x                              | x   | х                                    | х                                     | x                           |                                 |  | F                 | Located to serve as a downgradient step out for LOUs 37and 44; as a crossgradient step out for LOUs 59 and 60<br>to evaluate possible offsite sources to the east; and for general Site coverage.  |
| R-8              | ш                      | M-139                         | M-139B                        | TBD                         | MCfg1*  | new well                              | х                          | х                    | х                                | х                                  | х                              | х   | Х                                    | Х                                     | Х                           |                                 |  | F                 | Located as an upgradient step out for LOUs 37 and 44, and general Site coverage.   |
| R-8              | ш                      | M-145                         | M-145B                        | TBD                         | MCfg1*  | new well                              | x                          | х                    | х                                | х                                  | х                              | х   | Х                                    | Х                                     | х                           |                                 |  | F                 | New monitoring well located to serve as a crossgradient step out for LOU 44, to evaluate possible offsite sources<br>to the east; and for general Site coverage.   |
| R-8              | ш                      | M-29                          | M-29B                         | 22-42                       | MCfg1   | no                                    | х                          | х                    | х                                | х                                  | х                              | х   | Х                                    | Х                                     | х                           |                                 |  | F                 | Located to evaluate groundwater conditions beneath the Unit 6 building for LOUs 44 and 37.   |
| T-7              | IIIS                   | M-10                          | M-10B                         | 43 - 63                     | MCcg1   | no                                    | R                          | R                    | R                                | R                                  | R                              | R   | R                                    | R                                     | R                           |                                 |  | D (see Area IV)   | Located as a downgradient step out for LOUs 33, 40, and 61; and for general Site coverage.   |
| QA/QC Sar        | nples:                 |                               |                               |                             | Number of   | Field Samples:                        | 17                         | 17                   | 17                               | 17                                 | 17                             | 17  | 17                                   | 17                                    | 17                          | 0                               | 0  |                   |  |
| 4,140 04         | Field Dup              | plicates (10%                 | 6)                            |                             |   |                                       | 2                          | 2                    | 2                                | 2                                  | 2                              | 2   | 2                                    | 2                                     | 2                           | 0                               | 0  |                   |  |
|                  | Field Bla<br>Equipme   | nks<br>nt Rinseate            | Blanks                        |                             |   |                                       | 1                          | 1                    | 1                                | 1                                  | 1                              | 1   | 1                                    | 1                                     | 1                           | 0                               | 0  |                   |  |
|                  | Trip Blan              | k Samples                     |                               |                             |   |                                       | 0                          | 0                    | 5                                | 0                                  | 0                              | 0   | 0                                    | 0                                     | 0                           | 0                               | 0  |                   |  |
|                  | Matrix Sp<br>Matrix Sp | oike (5%)<br>oike Duplica     | te (5%)                       |                             |   |                                       | 1                          | 1<br>1               | 1                                | 1                                  | 1                              | 1   | 1                                    | 1<br>1                                | 1<br>1                      | 0                               | 0<br>0                                       |                   |  |
|                  |                        |                               |                               |                             | То  | otal Samples:                         | 23                         | 23                   | 28                               | 23                                 | 23                             | 23  | 23                                   | 23                                    | 23                          | 0                               | 0  |                   |  |
| Notes:           | Moll con-              | lation inform                 | otion or her                  | na loa not our              | ilable. Soil type in  | forred from                           | orby wells cr              | d goologia -         |                                  |                                    | the Dhese A                    | Source Are-                                   |                                      | n Donor (                             |                             | ISP is in the sec               | oooo of chicks                               | information for   | Dm PMI   |
| Х                | Sample wi              | ill be collecte               | d and analy                   | zed.                        |   |                                       | any wens and               | u geologic c         | 1035-SECUON                      | provided in                        | ine Fhase A                    | Source Area                                   | mvestigatio                          |                                       | LINGR, $2007$ ). EN         | sort is in the pro              |  | g miornation ff   | JIII DIVII.  |
|                  |                        |                               |                               | B sampling pla              |   | from the coars                        | se-grained sec             | diments. As          | such, in the                     | cases where                        | e there are tv                 | vo lithologies                                | present ac                           | ross the sc                           | reen interval, the          | water sampled v                 | will represent co                            | nditions in the o | coarse-grained interval.   |
| 2.               | Metals and             | alyses includ                 | es Aluminur                   | n, Antimony, A              |   | eryllium, Boro                        |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                 |  |                   | ntium, Tin, Titanium, Thallium, Tungsten, Uranium, Vanadium, and Zinc.   |
| 4.               | Hexavaler              | nt Chromium.                  |                               |                             | · ·   | ,                                     |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                 |  |                   |  |
|                  |                        |                               |                               |                             | own on Table 1. A alysis for hexachle                         |                                       | er samples wil             | I have pH m          | neasured in t                    | he field.                          |                                |   |                                      |                                       |                             |                                 |  |                   |  |
| 7.               | SVOCs =                | Semi-volatile                 | organic cor                   |                             | ,   |                                       |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                 |  |                   |  |
| 8.<br>9.         |                        | nated Biphen<br>ides consists |                               | ec reporting fo             | r isotopic Thorium  | n and isotopic                        | Uranium, and               | Radium-22            | 6, plus Radi                     | um-228 by b                        | eta counting                   | (per NDEP).                                   |                                      |                                       |                             |                                 |  |                   |  |
|                  |                        | rganophosph                   |                               |                             |   |                                       |                            |                      |                                  |                                    | J                              |   |                                      |                                       |                             |                                 |  |                   |  |

## Table 3 Indwater Sampling and Analysis Plan - Area III Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 1 of 2

|                  |   |                        |                               |                             | La  | boratory <sup>E.</sup> :              | CAS - Ke                   | elso, WA             |                                  |                                    | CAS - Roch                     | ester, NY                                     |                                      |                                       | GEL -Charleston,<br>SC      | STL - Denver                    | Sparke NV                  | Rationale for |          |
|------------------|---|------------------------|-------------------------------|-----------------------------|---|---------------------------------------|----------------------------|----------------------|----------------------------------|------------------------------------|--------------------------------|---|--------------------------------------|---------------------------------------|-----------------------------|---------------------------------|----------------------------|---------------|----------|
| Grid<br>Location | Location<br>Area  | Monitoring<br>Well No. | Sample ID<br>No. <sup>A</sup> | Screen Interval<br>(ft bgs) | Soil Type Expected<br>Across Screen<br>Interval <sup>1.</sup> | Well Sampled<br>for Phase A?<br>(y/n) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup> | VOCs <sup>3.</sup><br>(EPA 8260) | Hex Cr <sup>4.</sup><br>(EPA 7199) | Wet<br>Chemistry <sup>5.</sup> | Total Cyanide<br><sup>F.</sup><br>(EPA 9012A) | OCPs <sup>6.</sup><br>(EPA<br>8081A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | Radionuclides <sup>9.</sup> | OPPs <sup>10.B</sup><br>(8141A) | Organic Acids <sup>C</sup> | Revision      |          |
|                  |   |                        |                               | v                           | Vells are organ   | ized by grid                          | location as                | shown or             | Plate A -                        | Starting po                        | oint is on th                  | e northwes                                    | tern-mos                             | t grid in A                           | Area III (N-7) an           | d ending with                   | the southeas               | stern-most gr | rid cove |
| IIIN/E/W/S       | Well locate   | ed outside (r          | north, east, v                | west, or south)             | of Area III.  |                                       |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                 |                            |               |          |
| TBD              | To be dete  | rmined wher            | n well is con                 | structed.                   |   |                                       |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                 |                            |               |          |
| (a)              |   |                        |                               |                             |   |                                       |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                 |                            |               |          |
| TD               | Total Depth of the well determined by Site wide routine groundwater monitoring. |                        |                               |                             |   |                                       |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                 |                            |               |          |
| nr               |   |                        | nox Databa                    | se (June 2008)              | ) - information will  | be acquired fr                        | om BMI or de               | etermined by         | / downhole o                     | amera.                             |                                |   |                                      |                                       |                             |                                 |                            |               |          |
| Qal              | Quaternary  |                        |                               |                             |   |                                       |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                 |                            |               |          |
| MCfg1            |   |                        |                               | grained facies.             |   |                                       |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                 |                            |               |          |
| MCcg1            |   |                        |                               | se-grained fac              |   | om Toble 2 in                         | the lune 200               |                      | lark Dian aris                   |                                    |                                |   |                                      |                                       |                             |                                 |                            |               |          |
| X<br>R           |   |                        |                               |                             | ded or changed fr<br>noved from Table                         |                                       |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                 |                            |               |          |
| A                |   |                        |                               |                             |   |                                       | 2000 Alea III              | WUIKFIAII            | originally lev                   | lewed by NL                        | JEF.                           |   |                                      |                                       |                             |                                 |                            |               |          |
| В                | ······································  |                        |                               |                             |   |                                       |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                 |                            |               |          |
|                  | C Organic Acids were added per NDEP (July 21, 2008).                            |                        |                               |                             |   |                                       |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                 |                            |               |          |
| D                |   |                        |                               |                             | is not located in   | Area III.                             |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                 |                            |               |          |
| Е                | Laboratory  | information            | was added                     | to Table 3 to a             | ssist field samplin   | g personnel in                        | shipping the               | sample con           | tainers to the                   | e appropriate                      | e laboratory.                  |   |                                      |                                       |                             |                                 |                            |               |          |
| F                |   |                        |                               | er NDEP (July               |   |                                       | 0                          |                      |                                  |                                    | ,                              |   |                                      |                                       |                             |                                 |                            |               |          |
|                  |   |                        |                               |                             |   |                                       |                            |                      |                                  |                                    |                                |   |                                      |                                       |                             |                                 |                            |               |          |

## Table 3 Groundwater Sampling and Analysis Plan - Area III Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 2 of 2

# Location Description and Rationale for Investigation vering Area III (Q-9).

|                        | Alpha<br>Analytica<br><sub>Sparks, NV</sub> | STL - Denver                    | GEL -Charleston,<br>SC      |                                       |                                      | ester, NY                                     | CAS - Roch                     |                                    |                                  | elso, WA             | CAS - Ke                   | aboratory <sup>E.</sup> :       | La                                    |   |                             |                               |                        |                  |               |
|------------------------|---|---------------------------------|-----------------------------|---------------------------------------|--------------------------------------|---|--------------------------------|------------------------------------|----------------------------------|----------------------|----------------------------|---------------------------------|---------------------------------------|---|-----------------------------|-------------------------------|------------------------|------------------|---------------|
| c                      | Organic Acids                               | OPPs <sup>10.B</sup><br>(8141A) | Radionuclides <sup>9.</sup> | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | OCPs <sup>6.</sup><br>(EPA<br>8081A) | Total Cyanide<br><sup>F.</sup><br>(EPA 9012A) | Wet<br>Chemistry <sup>5.</sup> | Hex Cr <sup>4.</sup><br>(EPA 7199) | VOCs <sup>3.</sup><br>(EPA 8260) | Metals <sup>2.</sup> | Perchlorate<br>(EPA 314.0) | Matrix<br>Spike/MS<br>Duplicate | Well Sampled<br>for Phase A?<br>(y/n) | Soil Type Expected<br>Across Screen<br>Interval <sup>1.</sup> | Screen Interval<br>(ft bgs) | Sample ID<br>No. <sup>A</sup> | Monitoring<br>Well No. | Location<br>Area | Grid Location |
| grid co                | stern-most                                  | h the southea                   | and ending wit              | a III (N-7)                           | rid in Are                           | tern-most g                                   | e northwes                     | oint is on th                      | Starting po                      | n Plate A -          | as shown o                 | rid location                    | ganized by g                          | Wells are or  |                             |                               |                        | 1                |               |
| Loca<br>gene           |   |                                 | Х                           | Х                                     | Х                                    | х   | х                              | х                                  | х                                | х                    | х                          |                                 | no                                    | MCfg1   | 25 - 40                     | M-35B                         | M-35                   | III              | N-7           |
|                        |   |                                 | X                           | Х                                     | Х                                    | Х   | Х                              | Х                                  | Х                                | Х                    | Х                          |                                 | new well                              | Qal/MCfg1*  | TBD                         | M-147B                        | M-147                  | III              | N-8           |
| Serve<br>gradi         |   |                                 | х                           | х                                     | х                                    | x   | х                              | х                                  | х                                | х                    | х                          |                                 | no                                    | Qal/MCfg1*  | nr                          | CLD-4RB                       | CLD-4R                 | TIMET            | N-9           |
| Loca                   |   |                                 | Х                           | х                                     | х                                    | х   | х                              | х                                  | х                                | х                    | х                          |                                 | no                                    | MCfg1   | 39.6 - 59.6                 | M-50B                         | M-50                   | Ш                | O-6           |
| Loca<br>gene           |   |                                 | Х                           | х                                     | х                                    | х   | х                              | х                                  | х                                | х                    | х                          |                                 | no                                    | MCfg1   | 30 - 45                     | M-33B                         | M-33                   | Ш                | O-8           |
| Loca                   |   |                                 | Х                           | Х                                     | Х                                    | Х   | Х                              | Х                                  | Х                                | Х                    | Х                          |                                 | new well                              | MCfg1*  | TBD                         | M-148B                        | M-148                  | III              | O-8           |
| Serve<br>Site o        |   |                                 | Х                           | Х                                     | Х                                    | х   | х                              | х                                  | х                                | х                    | х                          |                                 | no                                    | MCfg1*  | nr                          | CLU1B                         | CLU1                   | TIMET            | O-10          |
| Loca                   |   |                                 | х                           | х                                     | х                                    | х   | х                              | х                                  | х                                | х                    | х                          |                                 | yes                                   | MCfg1   | 35 - 55                     | M-31AB                        | M-31A                  | Ш                | P-7           |
| Loca<br>for L          |   |                                 | x                           | х                                     | х                                    | х   | х                              | х                                  | х                                | х                    | х                          |                                 | no                                    | MCfg1   | 34.5 - 44.5                 | M-52B                         | M-52                   | Ш                | P-7           |
| New                    |   |                                 | х                           | х                                     | х                                    | х   | х                              | х                                  | х                                | х                    | х                          |                                 | new well                              | - MCfq1*  | TBD                         | M-141B                        | M-141                  | ш                | P-7           |
| This                   |   |                                 | х                           | х                                     | х                                    | х   | х                              | х                                  | х                                | х                    | x                          |                                 | new wen                               | - WCIGI   | TBD (dup)                   | M-141BD                       | 101-141                |                  | F-7           |
| Loca<br>for L          |   |                                 | х                           | х                                     | х                                    | x   | х                              | х                                  | х                                | х                    | х                          |                                 | no                                    | Qal/MCfg1   | 29 - 43.8                   | M-77B                         | M-77                   | ш                | P-8           |
| This<br>for M          |   |                                 | x                           | х                                     | х                                    | x   | х                              | х                                  | х                                | х                    | х                          | х                               | no                                    |   | 29 - 43.8                   | M-77B                         | 101-77                 |                  | 1-0           |
| Loca<br>70 (fo<br>cove |   |                                 | x                           | х                                     | х                                    | х   | х                              | х                                  | х                                | х                    | х                          |                                 | yes                                   | Qal/MCfg1   | 33.3 - 53                   | M-11B                         | M-11                   | ш                | Q-7           |
| This                   |   |                                 | х                           | х                                     | х                                    | x   | х                              | х                                  | х                                | х                    | х                          |                                 | ,                                     |   | 33.3 - 53<br>(dup)          | M-11BD                        |                        |                  |               |
| New<br>out fo<br>east; |   |                                 | х                           | х                                     | х                                    | x   | х                              | х                                  | х                                | х                    | x                          |                                 | new well                              | Qal/MCfg1*  | TBD                         | M-122B                        | M-122                  | ш                | Q-8           |
| Loca<br>to ev          |   |                                 | x                           | х                                     | х                                    | x   | х                              | х                                  | х                                | х                    | х                          |                                 | no                                    | Qal/MCfg1*  | 39.7 - 59.7                 | MW-6RB                        | MW-6R                  | TIMET            | Q-9           |
| Loca                   |   |                                 | х                           | х                                     | х                                    | х   | х                              | х                                  | х                                | х                    | x                          |                                 | new well                              | MCfg1*  | TBD                         | M-139B                        | M-139                  | Ш                | R-8           |
| New<br>to the          |   |                                 | х                           | х                                     | х                                    | х   | х                              | х                                  | х                                | х                    | x                          |                                 | new well                              | MCfg1*  | TBD                         | M-145B                        | M-145                  | 111              | R-8           |
| Loca                   |   |                                 | х                           | Х                                     | Х                                    | х   | х                              | х                                  | х                                | х                    | х                          |                                 | no                                    | MCfg1   | 22-42                       | M-29B                         | M-29                   | Ш                | R-8           |
|                        |   |                                 | 1                           | 1                                     |                                      |   |                                |                                    | 1                                |                      |                            |                                 |                                       |   |                             |                               |                        | 1                |               |

Notes:

Well completion information or boring log not available. Soil type inferred from nearby wells and geologic cross-section provided in the Phase A Source Area Investigation Report (ENSR, 2007). ENSR is in the process of obtaining information from BMI. Sample will be collected and analyzed. Х

blank No sample collected under Phase B sampling plan.

1. It is anticipated that the large majority of the flow to the well will be from the coarse-grained sediments. As such, in the cases where there are two lithologies present across the screen interval, the water sampled will represent conditions in the coarse-grained interval.

Metals analyses includes Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Nickel, Platinum, Potassium, Selenium, Silver, Sodium, Strontium, Tin, Titanium, Thallium, Tungsten, Uranium, Vanadium, and Zinc. 2. VOCs = Volatile organic compounds (to include analysis for naphthalene). 3.

4 Hexavalent Chromium

Complete list of wet chemistry parameters are shown on Table 1. All groundwater samples will have pH measured in the field. 5.

OCPs = Organochlorine pesticides (to include analysis for hexachlorobenzene) 6.

7 SVOCs = Semi-volatile organic compounds.

Polychlorinated Biphenyls. 8.

9 Radionuclides consists of alpha spec reporting for isotopic Thorium and isotopic Uranium, and Radium-226, plus Radium-228 by beta counting (per NDEP).

10. OPPs = Organophosphorous Pesticides

IIIN/E/W/S Well located outside (north, east, west, or south) of Area III.

TBD To be determined when well is constructed.

TD Total Depth of the well determined by Site wide routine groundwater monitoring.

Not recorded in the Tronox Database (June 2008) - information will be acquired from BMI or determined by downhole camera. nr

Qal Quaternary Alluvium.

Muddy Creek Formation - first fine-grained facies. MCfg1

MCcg1 Muddy Creek Formation - first coarse-grained facies

## Location Description and Rationale for Investigation

#### covering Area III (R-8).

cated to serve as a downgradient step out for LOUs 24 and 46; as an crossgradient step out for LOU 21; and fo neral Site coverage.

rves as a step out downgradient well for LOUs 24 and 46; as a step out upgradient well for LOU 21; as a crossadient step out to LOUs 59 and 60; and general Site coverage located on Timet.

cated to evaluate LOU 34W; as an upgradient step out for LOU 60; and for general Site coverage.

cated to serve as a downgradient step out for LOU 59; as upgradient step out for LOUs 24 and 46; and for neral Site coverage.

cated south of LOU 46 (Former Old Main Cooling Tower) per NDEP.

rves as a step out downgradient for LOUs 34E, 47, 48, 51, and Area 70 (former U.S. Vanadium), and general e coverage located on Timet.

cated to serve as a downgradient step out for LOU 59; as an upgradient step out for LOUs 24 and 46; as a ossgradient step out for LOUs 20, 21, 22, and 23; and for general Site coverage.

cated to evaluate LOUs 34E, 47 through 51, and Area 70 (former U.S. Vanadium); as a crossgradient step out LOUs 20, 21, 22, 23, and 60; and for general Site coverage.

w monitoring well co-located with boring SA140 to evaluate LOUs 49 and 50.

is is a duplicate sample of M-141B.

cated to evaluate LOUs 34E, 47 through 51 and Area 70 (former U.S. Vanadium); as a downgradient step out LOUs 33, 40, and 61; as a crossgradient step out for LOU 59; and for general Site coverage.

is is a matrix spike / matrix spike duplicate sample. Fill one set of bottles for MS sample & second set of bottles MSD sample. Label both sets of bottles as M-77B.

cated as a downgradient step out for LOU 61; as an upgradient step out for LOUs 34E, 47 through 51 and Area (former U.S. Vanadium); as a crossgradient step out for LOUs 20, 22, 23, and 60, and for general Site verage.

is is a duplicate sample of M-11B.

w monitoring well located to serve as a downgradient step out for LOUs 37, 44, and 60; as an upgradient step t for LOUs 34E, 47, 48, 51, 59 and Area 70 (former U.S. Vanadium); to evaluate possible offsite sources to the st; and for general Site coverage.

cated to serve as a downgradient step out for LOUs 37 and 44; as a crossgradient step out for LOUs 59 and 60; evaluate possible offsite sources to the east: and for general Site coverage.

cated as an upgradient step out for LOUs 37 and 44, and general Site coverage.

w monitoring well located to serve as a crossgradient step out for LOU 44, to evaluate possible offsite sources the east; and for general Site coverage.

cated to evaluate groundwater conditions beneath the Unit 6 building for LOUs 44 and 37.



Area IV

|                   |                  |                          |                                      | Laboratory                                  | y CAS-                     | Kelso, WA                          |                                    |                                |                        | CA                                | S - Rochester             | , NY                            |                               |                                    |                                  | CAS                                  | - Houston                        | GEL Charleston,<br>SC             | STL - Denver        | Alpha<br>Analytical                           | EMSL<br>Westmont, NJ                        |                              |   |
|-------------------|------------------|--------------------------|--------------------------------------|---|----------------------------|------------------------------------|------------------------------------|--------------------------------|------------------------|-----------------------------------|---------------------------|---------------------------------|-------------------------------|------------------------------------|----------------------------------|--------------------------------------|----------------------------------|-----------------------------------|---------------------|---|---|------------------------------|---|
| Grid<br>Location  | LOU<br>Number    | Phase B<br>Boring<br>No. | Sample ID<br>Number                  | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>4.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH GRO<br>(EPA 8015B) | VOCs <sup>3.</sup><br>(EPA 8260B) | Wet<br>Chem <sup>5.</sup> | Total<br>Cyanide<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA<br>1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup> | Sparks, NV<br>Organic<br>Acids <sup>12.</sup> | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Rationale<br>for<br>Revision |   |
|                   |                  | 1                        | Boring                               | s are orga                                  | nized by grid              | d location as s                    | hown on I                          | Plate A - Sta                  | rting point is         | s on the nort                     | thwestern me              | ost grid in A                   | rea IV (P-4                   | ) and ending                       | g with the s                     | outheast                             | ern most                         | grid in Area IV                   | ′ (U-7).            |   |   |                              |   |
| P-4<br>P-4        | n/a<br>n/a       | SA103                    | SA103-0.0B<br>SA103-0.5B             | 0.0   | X                          | X                                  | Х                                  | x                              |                        | X                                 | x                         | x                               | Х                             | x                                  |                                  |                                      | Х                                | х                                 |                     |   | Х   |                              | Boring located to evalue<br>GW anticipated at ~37   |
| P-4<br>P-4        | n/a<br>n/a       | -                        | SA103-10B<br>SA103-25B               | 10<br>25                                    | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                    | X<br>X                          | Hold<br>Hold                  | X<br>X                             |                                  |                                      |                                  | X<br>X                            |                     |   |   | В                            |   |
| P-4<br>P-5        | n/a<br>n/a       | RSAP5                    | SA103-35B<br>RSAP5-0.0B              | 35<br>0.0                                   | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | Х                               | Х                             | Х                                  |                                  |                                      |                                  | Х                                 |                     |   | X   | Q                            | Boring located to evalu                             |
| P-5<br>P-5        | n/a<br>n/a       |                          | RSAP5-0.5B<br>RSAP5-10B              | 0.5<br>10                                   | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                    | X<br>X                          | X<br>Hold                     | X<br>X                             |                                  |                                      | Х                                | X<br>X                            |                     |   |   |                              | GW anticipated at ~41                               |
| P-5<br>P-5        | n/a<br>n/a       |                          | RSAP5-20B<br>RSAP5-25B               | 20<br>25                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | x                               | R<br>Hold                     | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |   |   | BB                           |   |
| P-5<br>P-5        | n/a<br>n/a       |                          | RSAP5-30B<br>RSAP5-37B               | 30<br>37                                    | R<br>R                     | R<br>R                             | R<br>R                             | R<br>R                         |                        | R                                 | R<br>R                    |                                 | R                             | R<br>R                             |                                  |                                      |                                  | R<br>R                            |                     |   |   | B                            |   |
| P-5<br>Q-3        | n/a<br>41        | RSAQ3                    | RSAP5-39B<br>RSAQ3-0.0B              | 39<br>0.0                                   | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         | Х                               | X                             | X                                  |                                  |                                      |                                  | X                                 |                     |   | X   | Q                            | Boring located to evalu                             |
| Q-3<br>Q-3        | 41 41            |                          | RSAQ3-0.5B<br>RSAQ3-10B              | 0.5   | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                    | X<br>X                          | X<br>Hold                     | X<br>X                             |                                  |                                      | Х                                | X<br>X                            |                     |   | ~~~~  |                              | LOU 41 at probable lo<br>GW anticipated at ~43      |
| Q-3<br>Q-3        | 41 41            |                          | RSAQ3-20B<br>RSAQ3-25B               | 20<br>25                                    | R                          | R<br>X                             | R                                  | R                              |                        | R                                 | R<br>X                    | x                               | R                             | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |   |   | B                            | GW anticipated at -40                               |
| Q-3               | 41               |                          | RSAQ3-30B                            | 30  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         | ^                               | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | В                            |   |
| Q-3<br>Q-3        | 41<br>41         | 0.1.100                  | RSAQ3-40B<br>RSAQ3-41B               | 40<br>41                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | X                                 | R<br>X                    | х                               | X                             | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |   | X   | B<br>Q                       |   |
| Q-3<br>Q-3        | 41, 60<br>41, 60 | SA169                    | SA169-0.0B<br>SA169-0.5B             | 0.0   | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         | X                               | R                             | X                                  |                                  |                                      | Х                                | X                                 |                     |   | X   | G                            | Boring located to evalu<br>(Acid Drain System). I   |
| Q-3<br>Q-3        | 41, 60<br>41, 60 |                          | SA169-10B<br>SA169-20B               | 10<br>20                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    | X                               | R<br>R                        | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |   |   | G<br>B                       | and adjacent to LOU 6 detailed information).        |
| Q-3<br>Q-3        | 41,60<br>41,60   |                          | SA169-25B<br>SA169-30B               | 25<br>30                                    | R                          | X<br>R                             | R                                  | X<br>R                         |                        | X<br>R                            | X<br>R                    | X                               | R                             | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |   |   | B,G<br>B                     | GW anticipated at ~44                               |
| Q-3<br>Q-3        | 41, 60<br>41, 60 |                          | SA169-40B<br>SA169-42B               | 40<br>42                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | х                               | R                             | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |   |   | B<br>G,Q                     |   |
| Q-3<br>Q-3        | 65a<br>65a       | SA193                    | SA193-0.0B<br>SA193-0.5B             | 0.0   | х                          | х                                  | Х                                  | х                              |                        | Х                                 | х                         | х                               | R                             | х                                  |                                  |                                      | х                                | х                                 |                     |   | X   | G                            | Boring located to evalu<br>Located in an area pre   |
| Q-3<br>Q-3        | 65a<br>65a       |                          | SA193-10B<br>SA193-20B               | 10<br>20                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    | X                               | R<br>R                        | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |   |   | G<br>B,G                     | information).<br>GW anticipated at ~44              |
| Q-3<br>Q-3        | 65a<br>65a       |                          | SA193-25B<br>SA193-30B               | 25<br>30                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    | X                               | R                             | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |   |   | B,G<br>B                     |   |
| Q-3<br>Q-3        | 65a<br>65a       |                          | SA193-40B<br>SA193-42B               | 40<br>42                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | х                               | R                             | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |   |   | B<br>G,Q                     |   |
| Q-3<br>Q-3        | 59, 60<br>59, 60 | SA211                    | SA211-0.0B<br>SA211-0.5B             | 0.0   | X                          | Х                                  | Х                                  | х                              |                        | X                                 | х                         | x                               |                               | х                                  | X                                | х                                    | Х                                | Х                                 | х                   | х   | Х   | G,L,S                        | Boring located to evalu<br>point of entry to Trono  |
| Q-3<br>Q-3        | 59, 60<br>59, 60 | -                        | SA211-11B<br>SA211-25B               | 11<br>25                                    | X                          | X<br>X                             | X<br>X                             | X<br>X                         |                        | X                                 | X<br>X                    | X<br>X                          |                               | X<br>X                             |                                  |                                      |                                  | X<br>X                            | X                   | X   |   | G,S<br>G                     | GW anticipated at ~45<br>Boring added per NDE       |
| Q-3<br>Q-3        | 59, 60<br>60     | SA212                    | SA211-43B<br>SA212-0.0B              | 43<br>0.0                                   | X                          | Х                                  | Х                                  | X                              |                        | X                                 | Х                         | Х                               |                               | X                                  | X                                | Х                                    |                                  | Х                                 | Х                   | Х   | Х   | G,L,Q,S                      | Pipeline invert for this<br>Boring located to evalu |
| Q-3<br>Q-3        | 60<br>60         |                          | SA212-0.5B<br>SA212-13B              | 0.5<br>13                                   | X<br>X                     | X<br>X                             | X                                  | X<br>X                         |                        | X                                 | X<br>X                    | X<br>X                          |                               | X<br>X                             |                                  |                                      | Х                                | X<br>X                            |                     |   |   | G G                          | GW anticipated at ~46<br>Pipeline invert for this   |
| Q-3<br>Q-3        | 60<br>60         |                          | SA212-30B<br>SA212-44B               | 30<br>44                                    | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                    | X<br>X                          |                               | X<br>X                             |                                  |                                      |                                  | X<br>X                            |                     |   |   | G<br>G,Q                     | Boring added per NDE                                |
| Q-4<br>Q-4        | 60<br>60         | SA213                    | SA213-0.0B<br>SA213-0.5B             | 0.0<br>0.5                                  | X                          | Х                                  | Х                                  | х                              |                        | х                                 | Х                         | х                               |                               | х                                  |                                  |                                      | х                                | Х                                 |                     |   | Х   | G                            | Boring located to evalu<br>GW anticipated at ~46    |
| Q-4<br>Q-4        | <u>60</u><br>60  | _                        | SA213-14B<br>SA213-30B               | 14<br>30                                    | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                        | X                                 | X<br>X                    | X<br>X                          | -                             | X<br>X                             |                                  |                                      |                                  | X<br>X                            |                     |   |   | G<br>G                       | Pipeline invert for this<br>Boring added per NDE    |
| Q-4<br>Q-4        | 60<br>59, 60     | SA214                    | SA213-44B<br>SA214-0.0B              | 44<br>0.0                                   | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | Х                               |                               | Х                                  |                                  |                                      |                                  | Х                                 |                     |   | х   | G,Q                          | Boring located to evalu                             |
| Q-4<br>Q-4        | 59, 60<br>59, 60 |                          | SA214-0.5B<br>SA214-15B              | 0.5<br>15                                   | X<br>X                     | X<br>X                             | X                                  | X<br>X                         |                        | X                                 | X<br>X                    | X<br>X                          | X<br>X                        | X<br>X                             |                                  |                                      | Х                                | X<br>X                            |                     |   |   | G G                          | potential worst-case re<br>GW anticipated at ~45    |
| Q-4<br>Q-4        | 59, 60<br>59, 60 |                          | SA214-30B<br>SA214-43B               | 30<br>43                                    | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                    | X<br>X                          | Hold<br>X                     | X<br>X                             |                                  |                                      |                                  | X<br>X                            |                     |   |   | G<br>G,Q                     | Pipeline invert for this<br>Boring added per NDE    |
| Q-4<br>Q-4        | 4 4              | RSAQ4                    | RSAQ4-0.0B<br>RSAQ4-0.5B             | 0.0   | х                          | х                                  | х                                  | х                              |                        | х                                 | х                         | х                               | Х                             | х                                  |                                  | -                                    | х                                | Х                                 |                     |   | Х   |                              | Boring located to evalu<br>in a low spot to evalua  |
| Q-4<br>Q-4        | 4 4              |                          | RSAQ4-10B<br>RSAQ4-20B               | 10<br>20                                    | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                    | X<br>X                          | X<br>Hold                     | X<br>X                             |                                  |                                      |                                  | X<br>X                            |                     |   |   |                              | GW anticipated at ~34                               |
| Q-4<br>Q-4        | 4 4              |                          | RSAQ4-30B<br>RSAQ4-32B               | 30<br>32                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | X                               | R<br>X                        | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |   |   | BQ                           |   |
| Q-4<br>Q-4        | 4 4, 60          | SA84                     | RSAQ4-40B<br>SA84-0.0B               | 40<br>0.0                                   | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |                                 | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   | Х   | A                            | Boring located to evalu                             |
| Q-4<br>Q-4        | 4, 60<br>4, 60   | -                        | SA84-0.5B<br>SA84-10B                | 0.5   | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                    | X<br>X                          | X                             | X<br>X                             |                                  |                                      | Х                                | X<br>X                            | Х                   | Х   |   | S                            | of LOU 60 (Acid Drain<br>adjacent to LOU 60 to      |
| Q-4<br>Q-4        | 4, 60<br>4, 60   |                          | SA84-20B<br>SA84-25B                 | 20<br>25                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | х                               | R<br>Hold                     | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |   |   | B                            | GW anticipated at ~45<br>Pipeline invert for this   |
| Q-4<br>Q-4        | 4, 60<br>4, 60   |                          | SA84-30B<br>SA84-35B                 | 30<br>35                                    | R                          | R<br>R                             | R<br>R                             | R<br>R                         |                        | R<br>R                            | R<br>R                    |                                 | R<br>R                        | R<br>R                             |                                  |                                      |                                  | R<br>R                            |                     |   |   | BB                           |   |
| Q-4<br>Q-4        | 4, 60<br>4, 27   | SA101                    | SA84-43B<br>SA101-0.0B               | 43<br>0.0                                   | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | Х                               | Х                             | Х                                  |                                  |                                      |                                  | Х                                 | Х                   | Х   | X   | Q,S                          | Boring located to evalu                             |
| Q-4<br>Q-4        | 4, 27<br>4, 27   | -                        | SA101-0.5B<br>SA101-10B              | 0.5   | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                    | X<br>X                          | X<br>X                        | X<br>X                             | Х                                | Х                                    | Х                                | X<br>X                            |                     |   |   | F                            | (Former PCB Storage<br>LOU 27 consists of co        |
| Q-4<br>Q-4        | 4,27 4,27        |                          | SA101-20B<br>SA101-25B               | 20<br>25                                    | R                          | R<br>X                             | R                                  | R                              |                        | R                                 | R<br>X                    | X                               | R<br>Hold                     | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |   |   | B                            | Assessment through L<br>releases in from LOU        |
| Q-4<br>Q-4        | 4,27             |                          | SA101-30B<br>SA101-40B               | 30<br>40                                    | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |                                 | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   |   | B                            | Pipeline invert for this                            |
| Q-4<br>Q-4<br>Q-4 | 4,27             | SA120                    | SA101-40B<br>SA101-42B<br>SA120-0.0B | 40  | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         | х                               | X                             | X                                  | Х                                | х                                    |                                  | X                                 |                     |   | X   | F,Q                          | GW anticipated at ~44<br>Boring located to evalu    |
| Q-4<br>Q-4<br>Q-4 | 26<br>26<br>26   | 0,1120                   | SA120-0.5B<br>SA120-10B              | 0.0   | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                    | X<br>X                          | R<br>R                        | X<br>X                             |                                  |                                      | Х                                | X<br>X                            |                     |   | ^   | G<br>G                       | area-wide coverage. I<br>worst case location for    |
| Q-4<br>Q-4<br>Q-4 | 26<br>26<br>26   |                          | SA120-10B<br>SA120-20B<br>SA120-25B  | 20<br>25                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | X                               | R                             | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |   |   | B<br>B,G                     | GW anticipated at ~45                               |
| Q-4<br>Q-4<br>Q-4 | 26<br>26<br>26   |                          | SA120-25B<br>SA120-30B<br>SA120-40B  | 30<br>40                                    | R                          | R<br>R                             | R                                  | R<br>R                         |                        | R                                 | R                         | ^                               | R<br>R                        | R<br>R                             |                                  |                                      |                                  | R<br>R                            |                     |   |   | B,G<br>B<br>B                |   |
| Q-4<br>Q-4        | 26               | -                        | SA120-40B<br>SA120-43B               | 40  | X                          | X                                  | X                                  | X                              |                        | X                                 | R<br>X                    | х                               | n                             | X                                  |                                  |                                      |                                  | X                                 |                     |   |   | Q                            |   |

Page 1 of 6

| Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions.)   |
|--|
| aluate soils for area-wide coverage and not associated with any specific LOU.<br>37 feet bgs.  |
| aluate soils for area-wide coverage and not associated with any specific LOU.<br>41 feet bgs.  |
|  |
| aluate LOU 41 (Tenant stains north of Unit 1). Random boring located within footprint of<br>location of former Tenant stains (See LOU 41 summary for detailed information).<br>43 feet bgs.  |
| aluate LOU 41 (Tenant stains north of Unit 1) and a pipeline segment of LOU 60   |
| . Boring located within footprint of LOU 41 at probable location of former tenant stains<br>16 at a high risk for release location (manhole) (See LOU 41 and 60 summaries for<br>44 feet bgs.  |
| aluate LOU 65a (Ebony Construction Sites) and soils north (downgradient) of Unit 1.<br>reviously described as the location of a release (See LOU 65a summary for detailed  |
| 44 feet bgs.   |
| aluate LOU 59 (storm Sewer System) and LOU 60 (acid Drain System). Located to evaluate<br>nox for LOU 60 piping and adjacent to LOU 59 piping at same location.<br>45 feet bgs.  |
| DEP June 18, 2008 letter.<br>is boirng is estimated at 10 feet bgs.<br>aluate LOU 60 (Acid Drain System). Located at a high risk release location (junction of multiple piping).<br>46 feet bgs.<br>is boirng is estimated at 12 feet bgs.   |
| DEP June 18, 2008 letter.<br>aluate LOU 60 (Acid Drain System). Located at a high risk release location (junction of multiple piping).<br>46 feet bgs.   |
| is boirng is estimated at 13 feet bgs.<br>DEP June 18, 2008 letter.<br>aluate LOU 59 (Storm Sewer System) and LOU 60 (Acid Drain System). For LOU 60 located at a  |
| release point (junction of multiple pipes) and for general coverage of LOU 59 piping.<br>45 feet bgs.<br>is boirng is estimated at 14 feet bgs.<br>DF June 18, 2008 letter.  |
| aluate northern area of LOU 4 (Hardesty Chemical Company Site). Random boring located<br>uate the western portion of this LOU for potential worst case releases.<br>34 feet bgs.   |
| aluate southern area of LOU 4 (Hardesty Chemical Company Site) and a pipeline segment<br>in System). Located at a high risk spot for surface releases from LOU 4 and directly  |
| to evaluate potential pipeline releases.<br>45 feet bgs.<br>is boirng is estimated at 8 feet bgs.  |
| aluate southern area of LOU 4 (Hardesty Chemical Company Site) and LOU 27<br>ge Area). Located downslope of LOU 27 to evaluate potential runoff. The surface of<br>concrete in good condition and this area is currently used to store old equipment.<br>h LOU 27 would compromise containment. Boring also locate to evaluate potential surface<br>U 4. |
| is boirng is estimated at 8 feet bgs.<br>44 feet bgs.<br>aluate LOU 26 (Trash Storage Area) and is north (downgradient) from Unit 1 for general<br>Located within the footprint of LOU 26 at a location considered to represent the  |
| for the assessment of potential releases.<br>45 feet bgs.  |

|                  |                                  |                          |                           | Laboratory                                  | CAS-                       | Kelso, WA                          |                                    |                                |                        | CA                                | S - Rochester             | , NY                            |                               |                                    |                                  | CAS                                  | - Houston                        | GEL Charleston,<br>SC             | STL - Denver        | Alpha<br>Analytical                           | EMSL<br>Westmont, NJ                        |                              |  |
|------------------|----------------------------------|--------------------------|---------------------------|---|----------------------------|------------------------------------|------------------------------------|--------------------------------|------------------------|-----------------------------------|---------------------------|---------------------------------|-------------------------------|------------------------------------|----------------------------------|--------------------------------------|----------------------------------|-----------------------------------|---------------------|---|---|------------------------------|--|
| Grid<br>Location | LOU<br>Number                    | Phase B<br>Boring<br>No. | Sample ID<br>Number       | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>4.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH GRO<br>(EPA 8015B) | VOCs <sup>3.</sup><br>(EPA 8260B) | Wet<br>Chem <sup>5.</sup> | Total<br>Cyanide<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA<br>1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup> | Sparks, NV<br>Organic<br>Acids <sup>12.</sup> | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Rationale<br>for<br>Revision |  |
|                  |                                  |                          | Boring                    | s are orga                                  | nized by gric              | d location as s                    | hown on I                          | Plate A - Sta                  | rting point is         | s on the nort                     | hwestern mo               | ost grid in A                   | rea IV (P-4                   | ) and ending                       | g with the s                     | outheast                             | ern most                         | grid in Area IV                   | / (U-7).            |   |   |                              | <u>.</u>   |
| Q-4<br>Q-4       | 26, 4<br>26, 4                   | SA121                    | SA121-0.0B<br>SA121-0.5B  | 0.0   | X                          | х                                  | Х                                  | x                              |                        | х                                 | х                         | х                               | х                             | x                                  |                                  |                                      | х                                | Х                                 |                     |   | Х   |                              | Boring located to eval<br>and the boring is north  |
| Q-4<br>Q-4       | 26, 4<br>26, 4                   |                          | SA121-10B<br>SA121-20B    | 10 20                                       | X                          | Х                                  | Х                                  | X                              |                        | X                                 | X                         | X                               | X                             | Х                                  |                                  |                                      | ~                                | X                                 |                     |   |   | В                            | LOU 26 and 4 at a loc<br>releases.                 |
| Q-4              | 26, 4                            |                          | SA121-25B                 | 25  | Х                          | R<br>X                             | R<br>X                             | Х                              |                        | Х                                 | Х                         | х                               | Hold                          | R<br>X                             |                                  |                                      |                                  | Х                                 |                     |   |   | В                            | GW anticipated at ~46                              |
| Q-4<br>Q-4       | 26, 4<br>26, 4                   |                          | SA121-30B<br>SA121-40B    | 30<br>40                                    | R<br>R                     | R<br>R                             | R<br>R                             | R<br>R                         |                        | R<br>R                            | R<br>R                    |                                 | R<br>R                        | R<br>R                             |                                  |                                      |                                  | R<br>R                            |                     |   |   | B                            |  |
| Q-4<br>Q-4       | 26, 4<br>4                       | SA138                    | SA121-44B<br>SA138-0.0B   | 44<br>0.0                                   | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | Х                               | Х                             | Х                                  |                                  |                                      |                                  | Х                                 |                     |   | Х   | Q                            | Boring located to eval                             |
| Q-4<br>Q-4       | 4 4                              | -                        | SA138-0.5B<br>SA138-10B   | 0.5   | X<br>X                     | X                                  | X                                  | X<br>X                         |                        | X                                 | X<br>X                    | X<br>X                          | X                             | X<br>X                             |                                  |                                      | Х                                | X                                 |                     |   |   |                              | GW anticipated at ~4                               |
| Q-4<br>Q-4       | 4                                |                          | SA138-20B<br>SA138-30B    | 20<br>30                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | х                               | R<br>Hold                     | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |   |   | В                            | -  |
| Q-4<br>Q-4       | 4                                |                          | SA138-35B<br>SA138-45B    | 35<br>45                                    | R<br>X                     | R<br>X                             | R                                  | R                              |                        | R                                 | R<br>X                    | X                               | R                             | R                                  |                                  |                                      |                                  | R<br>X                            |                     |   |   | B                            | -  |
| Q-4              | 4, 60                            | SA148                    | SA148-0.0B                | 0.0   |                            |                                    |                                    |                                |                        |                                   |                           |                                 |                               |                                    |                                  |                                      |                                  |                                   |                     |   | X   |                              | Boring located to eval                             |
| Q-4<br>Q-4       | 4, 60<br>4, 60                   |                          | SA148-0.5B<br>SA148-10B   | 0.5<br>10                                   | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                    | X<br>X                          | X                             | X<br>X                             |                                  |                                      | Х                                | X<br>X                            | X                   | X   |   | S                            | segment of LOU 60 (A<br>surface releases and       |
| Q-4<br>Q-4       | 4, 60<br>4, 60                   |                          | SA148-20B<br>SA148-30B    | 20<br>30                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | х                               | R<br>Hold                     | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |   |   | В                            | GW anticipated at ~47                              |
| Q-4<br>Q-4       | 4, 60<br>4, 60                   | -                        | SA148-35B<br>SA148-45B    | 35<br>45                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | х                               | R<br>X                        | R<br>X                             |                                  |                                      |                                  | R<br>X                            | X                   | х   |   | B<br>Q,S                     |  |
| Q-4<br>Q-4       | 4 4                              | SA203                    | SA203-0.0B<br>SA203-0.5B  | 0<br>0.5                                    | x                          | x                                  | х                                  | x                              |                        | х                                 | х                         | X                               | х                             | х                                  |                                  |                                      | х                                | х                                 |                     |   | Х   |                              | Boring located to eval<br>Hardesty Chemical Co     |
| Q-4              | 4                                |                          | SA203-10B                 | 10  | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | X                               | Х                             | Х                                  |                                  |                                      | ~                                | Х                                 |                     |   |   |                              | case release at a jog                              |
| Q-4<br>Q-4       | 4 4                              |                          | SA203-20B<br>SA203-30B    | 20<br>30                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | х                               | R<br>Hold                     | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |   |   | В                            | GW anticipated at ~48                              |
| Q-4<br>Q-4       | 4                                |                          | SA203-40B<br>SA203-46B    | 40<br>46                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | х                               | R<br>X                        | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |   |   | B<br>Q                       |  |
| Q-4<br>Q-4       | 4, 60<br>4, 60                   | SA204                    | SA204-0.0B<br>SA204-0.5B  | 0   | x                          | х                                  | x                                  | x                              |                        | х                                 | x                         | x                               | х                             | x                                  |                                  | -                                    | х                                | x                                 |                     |   | Х   |                              | Boring located to eval<br>pipeline segment of L    |
| Q-4<br>Q-4       | 4, 60<br>4, 60                   |                          | SA204-10B<br>SA204-20B    | 10<br>20                                    | X<br>R                     | X<br>R                             | X<br>R                             | X                              |                        | X                                 | X<br>R                    | Х                               | X<br>R                        | X<br>R                             |                                  |                                      |                                  | X                                 |                     |   |   | В                            | surface releases in LC<br>Boring will be convert   |
| Q-4<br>Q-4       | 4,60                             |                          | SA204-30B<br>SA204-40B    | 30<br>40                                    | X                          | X                                  | X                                  | X                              |                        | X                                 | X<br>R                    | х                               | Hold                          | X<br>R                             |                                  |                                      |                                  | X                                 |                     |   |   | В                            | GW anticipated at ~4                               |
| Q-4              | 4, 60                            | 501.05                   | SA204-45B                 | 45  | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         | х                               | X                             | X                                  |                                  |                                      |                                  | X                                 |                     |   |   | Q                            |  |
| Q-5<br>Q-5       | 4, 28, 59<br>4, 28, 59           | RSAQ5                    | RSAQ5-0.0B<br>RSAQ5-0.5B  | 0<br>0.5                                    | х                          | х                                  | х                                  | х                              |                        | х                                 | х                         | х                               | х                             | х                                  |                                  |                                      | х                                | х                                 |                     |   | Х   |                              | Boring located to eval<br>Storage Area), LOU 5     |
| Q-5<br>Q-5       | 4, 28, 59<br>4, 28, 59           |                          | RSAQ5-10B<br>RSAQ5-20B    | 10<br>20                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    | Х                               | X<br>R                        | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |   |   | В                            | adjacent to LOU 59 pi<br>LOUs 4 and 28.            |
| Q-5<br>Q-5       | 4, 28, 59<br>4, 28, 59           |                          | RSAQ5-25B<br>RSAQ5-30B    | 25<br>30                                    | X<br>R                     | X                                  | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    | х                               | Hold<br>R                     | X<br>R                             |                                  |                                      |                                  | X                                 |                     |   |   | B                            | GW anticipated at ~43                              |
| Q-5<br>Q-5       | 4, 28, 59<br>4, 28, 59           | -                        | RSAQ5-40B<br>RSAQ5-41B    | 40<br>41                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | x                               | R<br>X                        | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |   |   | B<br>Q                       |  |
| Q-5              | 28, 59<br>28, 59                 | SA205                    | RSA205-0.0B               | 0   |                            |                                    | x                                  |                                |                        |                                   |                           |                                 | x                             |                                    |                                  |                                      | x                                | X                                 |                     |   | Х   |                              | Boring located as nor                              |
| Q-5<br>Q-5       | 28, 59                           |                          | RSA205-0.5B<br>RSA205-10B | 10  | X<br>X                     | X<br>X                             | Х                                  | X<br>X                         |                        | X<br>X                            | X<br>X                    | X<br>X                          | Х                             | X<br>X                             |                                  |                                      | ^                                | Х                                 |                     |   |   |                              | as requested by NDE<br>Phase A comments a          |
| Q-5<br>Q-5       | 28, 59<br>28, 59                 |                          | RSA205-25B<br>RSA205-41B  | 25<br>41                                    | X<br>X                     | X<br>X                             | X                                  | X<br>X                         |                        | X<br>X                            | X<br>X                    | X<br>X                          | Hold<br>X                     | X<br>X                             |                                  |                                      |                                  | X<br>X                            |                     |   |   | B<br>Q                       | GW anticipated at ~43                              |
| Q-5<br>Q-5       | 28<br>28                         | SA191                    | SA191-0.0B<br>SA191-0.5B  | 0.0   | x                          | х                                  | x                                  | x                              |                        | х                                 | х                         | х                               | Х                             | Х                                  |                                  |                                      | х                                | х                                 |                     |   | Х   | к                            | Boring located to eval<br>GW anticipated at ~42    |
| Q-5<br>Q-5       | 28<br>28                         |                          | SA191-10B<br>SA191-20B    | 10<br>20                                    | X<br>R                     | X                                  | X<br>R                             | X                              |                        | X<br>R                            | X<br>R                    | Х                               | X<br>R                        | Х                                  |                                  |                                      |                                  | X                                 |                     |   |   | K<br>B                       |  |
| Q-5<br>Q-5       | 28<br>28                         | -                        | SA191-25B<br>SA191-30B    | 25<br>30                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    | Х                               | Hold<br>R                     | Х                                  |                                  |                                      |                                  | X<br>R                            |                     |   |   | B,K<br>B                     |  |
| Q-5<br>Q-5       | 28                               | SA156                    | SA191-40B<br>SA156-0.0B   | 40  | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         | Х                               | X                             | Х                                  |                                  |                                      |                                  | X                                 |                     |   |   | K,Q                          | Boring located to eval                             |
| Q-5<br>Q-5       | 28                               | 54130                    | SA156-2B                  | 2   | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | Х                               | Х                             | Х                                  |                                  |                                      | Х                                | Х                                 |                     |   |   | К                            | hand augered to 2-ft b<br>will not be collected w  |
| Q-5              | 28                               | <b>D</b> 0480            |                           |   |                            |                                    |                                    |                                |                        |                                   |                           |                                 |                               |                                    |                                  |                                      |                                  |                                   |                     |   |   |                              | sample will be collected                           |
| R-3<br>R-3       | 60, Unit 1<br>60, Unit 1         | RSAR3                    | RSAR3-0.0B<br>RSAR3-0.5B  | 0.0   | X                          | Х                                  | х                                  | X                              |                        | Х                                 | X                         | X                               | Х                             | X                                  |                                  |                                      | х                                | Х                                 |                     |   | X   |                              | Unit 1, and for general<br>located directly adjace |
| R-3<br>R-3       | 60, Unit 1<br>60, Unit 1         |                          | RSAR3-10B<br>RSAR3-20B    | 10<br>20                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    | X                               | Hold<br>R                     | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |   |   | В                            | GW anticipated at ~40                              |
| R-3<br>R-3       | 60, Unit 1<br>60, Unit 1         |                          | RSAR3-25B<br>RSAR3-30B    | 25<br>30                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    | Х                               | Hold<br>R                     | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |   |   | B                            | I  |
| R-3<br>R-3       | 60, Unit 1<br>60, Unit 1         |                          | RSAR3-38B<br>RSAR3-40B    | 38<br>40                                    | X<br>R                     | X<br>R                             | X                                  | X<br>R                         |                        | X<br>R                            | X<br>R                    | х                               | X                             | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |   |   | Q                            |  |
| R-3<br>R-3       | Unit 1<br>Unit 1                 | SA110                    | SA110-0.0B<br>SA110-0.5B  | 0.0   | x                          | x                                  | x                                  | x                              |                        | x                                 | x                         | x                               | R                             | x                                  |                                  |                                      | х                                | x                                 |                     |   | X   | G                            | Boring located to eval<br>GW anticipated at ~39    |
| R-3              | Unit 1                           |                          | SA110-10B                 | 10  | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | X                               | R                             | Х                                  |                                  |                                      | ~                                | Х                                 |                     |   |   | G                            |  |
| R-3<br>R-3       | Unit 1<br>Unit 1                 |                          | SA110-20B<br>SA110-25B    | 20<br>25                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | Х                               | R                             | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |   |   | B                            |  |
| R-3<br>R-3       | Unit 1<br>Unit 1                 |                          | SA110-30B<br>SA110-37B    | 30<br>37                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | X                               | R                             | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |   |   | B<br>Q                       |  |
| R-3<br>R-3       | Unit 1<br>59, 65b, Unit1         | SA192                    | SA110-40B<br>SA192-0.0B   | 40<br>0.0                                   | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |                                 | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |   | X   | A                            | Boring located to eval                             |
| R-3<br>R-3       | 59, 65b, Unit1<br>59, 65b, Unit1 |                          | SA192-0.5B<br>SA192-10B   | 0.5   | X<br>X                     | X<br>X                             | X<br>X                             | X<br>X                         |                        | X<br>X                            | X<br>X                    | X<br>X                          | X<br>X                        | X<br>X                             | Х                                | Х                                    | Х                                | X<br>X                            | X<br>X              | X<br>X  |   | S<br>S                       | and not associated wi<br>located in accessible     |
| R-3              | 59, 65b, Unit1                   |                          | SA192-20B                 | 20  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |                                 | R                             | R                                  |                                  |                                      |                                  | R                                 | ^                   | ^   |   | В                            | organic acids were ad                              |
| R-3<br>R-3       | 59, 65b, Unit1<br>59, 65b, Unit1 |                          | SA192-25B<br>SA192-30B    | 25<br>30                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    | X                               | Hold<br>R                     | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |   |   | B,S<br>B                     | GW anticipated at ~41                              |
| R-3<br>R-3       | 59, 65b, Unit1<br>59, 65b, Unit1 |                          | SA192-39B<br>SA192-40B    | 39<br>40                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    | X                               | X<br>R                        | X<br>R                             | X                                | X                                    |                                  | X<br>R                            | Х                   | X   |   | Q,S<br>A                     |  |
| R-3<br>R-3       | 59, 60<br>59, 60                 | SA209                    | SA209-0.0B<br>SA209-0.5B  | 0.0   | X                          | X                                  | Х                                  | X                              |                        | X                                 | X                         | X                               | Х                             | X                                  | X                                | Х                                    | х                                | X                                 | X                   | X   | X   | L,S                          | Boring located to eval<br>locations for both LOL   |
| R-3<br>R-3       | 59, 60<br>59, 60                 |                          | SA209-10B<br>SA209-25B    | 10 25                                       | X                          | X                                  | X                                  | X<br>X                         |                        | X                                 | X                         | X                               | X                             | X                                  |                                  |                                      |                                  | X                                 | Х                   | Х   |   | S<br>B                       | GW anticipated at ~37                              |
| R-3              | 59,60                            |                          | SA209-35B                 | 35  | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         | X                               | X                             | X                                  | Х                                | Х                                    |                                  | X                                 | Х                   | Х   |   | L,Q,S                        |  |

Page 2 of 6

| Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions.)  |
|---|
|   |
| aluate LOU 26 (Trash Storage Area), LOU 4 (former Hardesty Chemical Company Site),<br>rth (downgradient) of Unit 2 for general area coverage. Located within the footprint of   |
| ocation considered to represent the worst case location for the assessment of potential   |
| 46 feet bgs.  |
|   |
| aluate northern area of LOU 4 (former Hardesty Chemical Company Site).  |
| 47 feet bgs.  |
|   |
| aluate southern area of LOU 4 (former Hardesty Chemical Company Site) and a pipeline<br>(Acid Drain System). Located on the northern edge of LOU 4 to evaluate potential<br>4 laso located above LOU 60 to evaluate potential pipeline releases.  |
| 47 feet bgs.  |
|   |
| aluate pipeline route connecting northern and southern areas of LOU 4 (former<br>Company Site). Located along the former pipeline route to evaluate potential worst   |
| g in the line.<br>48 feet bgs.  |
|   |
| aluate southern area of LOU 4 (former Hardesty Chemical Company Site) and a   |
| LOU 60 (Acid Drain System). Located to evaluate potential worst case location for<br>LOU 4. Also directly adjacent to LOU 60 to evaluate potential historical pipeline releases.  |
| rted into well M-143.   |
| 47 feet bgs.  |
| aluate LOU 4 (Former Hardesty Chemical Company Site), LOU 28 (Hazardous Waste<br>59 (Storm Sewer Drain), and for area-wide coverage. Random boring located directly<br>pipeline to evaluate potential pipeline releases and for general stepout coverage for  |
|   |
| 43 feet bgs.  |
|   |
| rthward stepout boring from Phase A boring SA04 (for Hex Cr) to evaluate LOU 59<br>EP in comments on Phase A Investigation report and LOU 28 and 59. Located to satisfy NDEP<br>and to evaluate potential pipeline releases from LOU 59   |
| 43 feet bgs.  |
| aluate LOU 28 (Hazardous Waste Storage Area)<br>42 feet bgs.  |
|   |
|   |
| aluate LOU 28 (Hazardous Waste Storage Area). Containment liner will be cut and the boring will be  |
| bgs (below original grade) to collect a soil sample, and the liner will be repaired. Deeper soil samples<br>with the use of powered drilling equiment to avoid further damage to the contaiment liner. No asbestos<br>ted.  |
| ral area-wide coverage. Random boring<br>cent to LOU 60 at a high risk location (inlet).  |
| 40 feet bgs.  |
|   |
|   |
| aluate Unit 1 and for general area-wide coverage and not associated with a specific LOU   |
| 39 feet bgs.  |
|   |
|   |
| aluate LOU 59 (Storm Sewer Drain), LOU 65b (former Buckles Construction Company Site) and Unit 1<br>with a specific LOU. Located directly adjacent to LOU 59 pipeline to evaluate potential releases. Also<br>a rest of LOU 55 ha such as a strategies and releases and the strategies and set of the set of |
| e area of LOU 65b to evaluate surface releases, and within Unit 1 for area coverage. OPPs and<br>added to the SAP to evaluate for potential impacts from offsite sources from the west per NDEP.  |
| 41 feet bgs.  |
|   |
|   |
| aluate LOU 59 (storm Sewer System) and LOU 60 (acid Drain System). Located at high risk release<br>DUs (junctions and bends in piping).<br>37 feet hos  |
|   |

| le                                  | Rationale       | EMSL<br>Westmont, NJ                        | Alpha<br>Analytical<br>Sparks, NV | STL - Denver        | GEL Charleston,<br>SC             | Houston                          | CAS -                                |                                  |                                    |                               | NY                              | S - Rochester             | CA                                |                        |                                |                                    | Kelso, WA                          | CAS -                      | Laboratory                                  |                          |                          |  |                  |
|-------------------------------------|-----------------|---|-----------------------------------|---------------------|-----------------------------------|----------------------------------|--------------------------------------|----------------------------------|------------------------------------|-------------------------------|---------------------------------|---------------------------|-----------------------------------|------------------------|--------------------------------|------------------------------------|------------------------------------|----------------------------|---|--------------------------|--------------------------|--|------------------|
|                                     | for<br>Revision | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Organic<br>Acids <sup>12.</sup>   | OPPs <sup>11.</sup> | Radio-<br>nuclides <sup>10.</sup> | Dioxins/<br>Furans <sup>9.</sup> | PCBs <sup>8.</sup><br>(EPA<br>1668A) | PCBs <sup>8.</sup><br>(EPA 8082) | SVOCs <sup>7.</sup><br>(EPA 8270C) | OCPs <sup>6.</sup><br>(8081A) | Total<br>Cyanide<br>(EPA 9012A) | Wet<br>Chem <sup>5.</sup> | VOCs <sup>3.</sup><br>(EPA 8260B) | TPH GRO<br>(EPA 8015B) | TPH-<br>DRO/ORO<br>(EPA 8015B) | Hex Cr <sup>4.</sup><br>(EPA 7199) | Metals <sup>2.</sup><br>(EPA 6020) | Perchlorate<br>(EPA 314.0) | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Sample ID<br>Number      | Phase B<br>Boring<br>No. | LOU<br>Number                            | Grid<br>Location |
|                                     |                 |   |                                   | / (U-7).            | grid in Area IV                   | ern most                         | outheast                             | g with the s                     | ) and ending                       | ea IV (P-4                    | ost grid in Ar                  | hwestern mo               | s on the nort                     | arting point is        | Plate A - Sta                  | shown on I                         | l location as s                    | nized by gric              | s are orga                                  | Boring                   |                          |  |                  |
| Boring located coverage. Ran        |                 | Х   |                                   |                     | х                                 | Х                                |                                      |                                  | x                                  | х                             | Х                               | х                         | х                                 |                        | х                              | х                                  | х                                  | х                          | 0.0   | RSAR4-0.0B<br>RSAR4-0.5B | RSAR4                    | 25, 59, Unit 2<br>25, 59, Unit 2         | R-4<br>R-4       |
| and adjacent to                     |                 |   |                                   |                     | Х                                 | ~                                |                                      |                                  | Х                                  | Hold                          | X                               | Х                         | Х                                 |                        | Х                              | Х                                  | Х                                  | Х                          | 10  | RSAR4-10B                |                          | 25, 59, Unit 2                           | R-4              |
| GW anticipated                      | B               |   |                                   |                     | R<br>X                            |                                  |                                      |                                  | R<br>X                             | R<br>Hold                     | Х                               | R<br>X                    | R<br>X                            |                        | R<br>X                         | R<br>X                             | R<br>X                             | R<br>X                     | 20<br>25                                    | RSAR4-20B<br>RSAR4-25B   |                          | 25, 59, Unit 2<br>25, 59, Unit 2         | R-4<br>R-4       |
|                                     | B<br>Q          |   |                                   |                     | R<br>X                            |                                  |                                      |                                  | R<br>X                             | R<br>X                        | х                               | R<br>X                    | R<br>X                            |                        | R<br>X                         | R<br>X                             | R<br>X                             | R<br>X                     | 30<br>37                                    | RSAR4-30B<br>RSAR4-37B   |                          | 25, 59, Unit 2<br>25, 59, Unit 2         | R-4<br>R-4       |
| Boring located                      | A               | Х   |                                   |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                 | R                         | R                                 |                        | R                              | R                                  | R                                  | R                          | 40<br>0.0                                   | RSAR4-40B<br>SA29-0.0B   | SA29                     | 25, 59, Unit 2<br>25, Unit 2             | R-4<br>R-4       |
| general covera                      |                 | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~     |                                   |                     | X                                 | Х                                |                                      |                                  | X                                  | X                             | X                               | X                         | X                                 |                        | X                              | X                                  | X                                  | X                          | 0.5   | SA29-0.5B                | 0,120                    | 25, Unit 2                               | R-4              |
| GW anticipated                      | В               |   |                                   |                     | X<br>R                            |                                  |                                      |                                  | X<br>R                             | X<br>R                        | X                               | X<br>R                    | X<br>R                            |                        | X<br>R                         | X<br>R                             | X<br>R                             | X<br>R                     | 10<br>20                                    | SA29-10B<br>SA29-20B     |                          | 25, Unit 2<br>25, Unit 2                 | R-4<br>R-4       |
|                                     | B               |   |                                   |                     | X<br>R                            |                                  |                                      |                                  | X<br>R                             | Hold<br>R                     | X                               | X<br>R                    | X<br>R                            |                        | X<br>R                         | X<br>R                             | X<br>R                             | X<br>R                     | 25<br>30                                    | SA29-25B<br>SA29-30B     |                          | 25, Unit 2<br>25, Unit 2                 | R-4<br>R-4       |
|                                     | B<br>Q          |   |                                   |                     | R<br>X                            |                                  |                                      |                                  | R<br>X                             | R<br>X                        | X                               | R<br>X                    | R<br>X                            |                        | R<br>X                         | R<br>X                             | R<br>X                             | R<br>X                     | 35<br>40                                    | SA29-35B<br>SA29-40B     |                          | 25, Unit 2<br>25, Unit 2                 | R-4<br>R-4       |
| Boring located                      |                 | Х   |                                   |                     |                                   |                                  |                                      |                                  |                                    |                               |                                 |                           |                                   |                        |                                |                                    |                                    |                            | 0.0   | SA111-0.0B               | SA111                    | 25, 59, 60, Unit 2                       | R-4              |
| System) and fo<br>for LOU 60 pipi   | G               |   |                                   |                     | X<br>X                            | Х                                |                                      |                                  | X<br>X                             | R                             | X<br>X                          | X<br>X                    | X<br>X                            |                        | X<br>X                         | X<br>X                             | X<br>X                             | X<br>X                     | 0.5<br>10                                   | SA111-0.5B<br>SA111-10B  |                          | 25, 59, 60, Unit 2<br>25, 59, 60, Unit 2 | R-4<br>R-4       |
| GW anticipated                      | B               |   |                                   |                     | R<br>X                            |                                  |                                      |                                  | R<br>X                             | R                             | Х                               | R<br>X                    | R<br>X                            |                        | R<br>X                         | R<br>X                             | R<br>X                             | R<br>X                     | 20<br>25                                    | SA111-20B<br>SA111-25B   |                          | 25, 59, 60, Unit 2<br>25, 59, 60, Unit 2 | R-4<br>R-4       |
|                                     | B<br>Q          |   |                                   |                     | R<br>X                            |                                  |                                      |                                  | R<br>X                             | R                             | х                               | R<br>X                    | R<br>X                            |                        | R<br>X                         | R<br>X                             | R<br>X                             | R<br>X                     | 30<br>39                                    | SA111-30B<br>SA111-39B   | 1                        | 25, 59, 60, Unit 2<br>25, 59, 60, Unit 2 | R-4<br>R-4       |
| Boring located                      | A               | Х   |                                   |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                 | R                         | R                                 |                        | R                              | R                                  | R                                  | R                          | 40  | SA111-40B<br>SA190-0.0B  | SA190                    | 25, 59, 60, Unit 2                       | R-4<br>R-4       |
| stepout for LOL                     | G               | ^   |                                   |                     | Х                                 | Х                                |                                      |                                  | Х                                  | R                             | Х                               | Х                         | Х                                 |                        | х                              | Х                                  | Х                                  | Х                          | 0.5   | SA190-0.5B               | SAT90                    | 25, Unit 1<br>25, Unit 1                 | R-4              |
| GW anticipated                      | G<br>B          |   |                                   |                     | X<br>R                            |                                  |                                      |                                  | X<br>R                             | R                             | Х                               | X<br>R                    | X<br>R                            |                        | X<br>R                         | X<br>R                             | X<br>R                             | X<br>R                     | 10<br>20                                    | SA190-10B<br>SA190-20B   |                          | 25, Unit 1<br>25, Unit 1                 | R-4<br>R-4       |
|                                     | B               |   |                                   |                     | X<br>R                            |                                  |                                      |                                  | X<br>R                             | R                             | Х                               | X<br>R                    | X<br>R                            |                        | X<br>R                         | X                                  | X                                  | X<br>R                     | 25<br>30                                    | SA190-25B<br>SA190-30B   |                          | 25, Unit 1<br>25, Unit 1                 | R-4<br>R-4       |
|                                     | Q               |   |                                   |                     | Х                                 |                                  |                                      |                                  | Х                                  |                               | Х                               | Х                         | Х                                 |                        | Х                              | Х                                  | Х                                  | Х                          | 38  | SA190-38B                |                          | 25, Unit 1                               | R-4              |
| Boring located                      | A               | Х   |                                   |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                 | R                         | R                                 |                        | R                              | R                                  | R                                  | R                          | 40<br>0.0                                   | SA190-40B<br>SA191-0.0B  | SA191                    | 25, Unit 1<br>Unit 2                     | R-4<br>R-4       |
| GW anticipated                      | K<br>K          |   |                                   |                     | X                                 | Х                                |                                      |                                  | X<br>X                             | X                             | X                               | X                         | X                                 |                        | X<br>X                         | X                                  | X<br>X                             | X                          | 0.5   | SA191-0.5B<br>SA191-10B  |                          | Unit 2<br>Unit 2                         | R-4<br>R-4       |
|                                     | B<br>B,K        |   |                                   |                     | R<br>X                            |                                  |                                      |                                  |                                    | R<br>Hold                     | X                               | R<br>X                    | R<br>X                            |                        | R<br>X                         | R<br>X                             | R<br>X                             | R<br>X                     | 20<br>25                                    | SA191-20B<br>SA191-25B   |                          | Unit 2<br>Unit 2                         | R-4<br>R-4       |
|                                     | В               |   |                                   |                     | R                                 |                                  |                                      |                                  | X                                  | R                             |                                 | R                         | R                                 |                        | R                              | R                                  | R                                  | R                          | 30  | SA191-30B                |                          | Unit 2                                   | R-4              |
| Boring located                      | K,Q             | х   |                                   |                     | Х                                 |                                  |                                      |                                  | Х                                  | Х                             | Х                               | Х                         | Х                                 |                        | Х                              | Х                                  | Х                                  | Х                          | 40  | SA191-40B<br>RSAR5-0.0B  | RSAR5                    | Unit 2<br>4, 59, 60                      | R-4<br>R-5       |
| (Acid Drain Sys<br>59 and LOU 60    |                 |   |                                   |                     | X                                 | Х                                |                                      |                                  | X<br>X                             | X<br>Hold                     | X<br>X                          | X                         | X<br>X                            |                        | X<br>X                         | X                                  | X<br>X                             | X                          | 0.5   | RSAR5-0.5B<br>RSAR5-10B  |                          | 4, 59, 60<br>4, 59, 60                   | R-5<br>R-5       |
| GW anticipated                      | B               |   |                                   |                     | R<br>X                            |                                  |                                      |                                  | R<br>X                             | R<br>Hold                     | X                               | R<br>X                    | R<br>X                            |                        | R<br>X                         | R<br>X                             | R<br>X                             | R<br>X                     | 20<br>25                                    | RSAR5-20B<br>RSAR5-25B   |                          | 4, 59, 60<br>4, 59, 60                   | R-5<br>R-5       |
|                                     | B               |   |                                   |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                 | R                         | R                                 |                        | R                              | R                                  | R                                  | R                          | 30  | RSAR5-30B                |                          | 4, 59, 60                                | R-5              |
| Boring located                      | Q               | Х   |                                   |                     | Х                                 |                                  |                                      |                                  | Х                                  | Х                             | Х                               | X                         | Х                                 |                        | Х                              | Х                                  | Х                                  | Х                          | 40  | RSAR5-40B<br>SA135-0.0B  | SA135                    | 4, 59, 60<br>42                          | R-5<br>R-5       |
| (conveyor and i<br>GW anticipated   | G,K<br>G,K      |   |                                   |                     | X                                 | Х                                |                                      |                                  | X<br>X                             | R                             | X                               | X                         | X                                 |                        | X<br>X                         | X                                  | X<br>X                             | X                          | 0.5   | SA135-0.5B<br>SA135-10B  |                          | 42<br>42                                 | R-5<br>R-5       |
|                                     | B<br>B,K        |   |                                   |                     | R<br>X                            |                                  |                                      |                                  | X                                  | R                             | X                               | R<br>X                    | R<br>X                            |                        | R<br>X                         | R<br>X                             | R<br>X                             | R<br>X                     | 20<br>25                                    | SA135-20B<br>SA135-25B   |                          | 42<br>42                                 | R-5<br>R-5       |
|                                     | В               |   |                                   |                     | R                                 |                                  |                                      |                                  |                                    | R                             |                                 | R                         | R                                 |                        | R                              | R                                  | R                                  | R                          | 30  | SA135-30B                |                          | 42                                       | R-5              |
|                                     | K,Q<br>A        |   |                                   |                     | X<br>R                            |                                  |                                      |                                  | X                                  | R                             | X                               | X<br>R                    | X<br>R                            |                        | X<br>R                         | X<br>R                             | X<br>R                             | X<br>R                     | 37<br>40                                    | SA135-37B<br>SA135-40B   |                          | 42<br>42                                 | R-5<br>R-5       |
| Boring located<br>PCBs and TPH      | L,N,S           | Х   | х                                 | х                   | х                                 | х                                |                                      | x                                | x                                  | x                             | Х                               | х                         | х                                 |                        | x                              | x                                  | х                                  | x                          | 0.0   | RSAS3-0.0B<br>RSAS3-0.5B | RSAS3                    | n/a<br>n/a                               | S-3<br>S-3       |
| (WAPA) site pe<br>GW anticipated    | N<br>B          |   |                                   |                     | X                                 |                                  |                                      |                                  | X                                  | Hold<br>R                     | Х                               | X                         | X                                 |                        | X                              | X                                  | X                                  | X                          | 10<br>20                                    | RSAS3-10B<br>RSAS3-20B   |                          | n/a<br>n/a                               | S-3<br>S-3       |
|                                     | B,N             |   |                                   |                     | Х                                 |                                  |                                      |                                  | X                                  | Hold                          | Х                               | Х                         | X                                 |                        | X                              | Х                                  | X                                  | Х                          | 25  | RSAS3-25B                |                          | n/a                                      | S-3              |
|                                     | B               |   |                                   |                     | R<br>R                            |                                  |                                      |                                  | R<br>R                             | R<br>R                        |                                 | R<br>R                    | R<br>R                            |                        | R<br>R                         | R<br>R                             | R<br>R                             | R<br>R                     | 30<br>40                                    | RSAS3-30B<br>RSAS3-40B   |                          | n/a<br>n/a                               | S-3<br>S-3       |
| Boring located                      | L,N,Q,S         | х   | Х                                 | Х                   | Х                                 |                                  |                                      | Х                                | Х                                  | Х                             | Х                               | Х                         | Х                                 |                        | Х                              | X                                  | Х                                  | Х                          | 44<br>0.0                                   | RSAS3-44B<br>RSAS4-0.0B  | RSAS4                    | n/a<br>59                                | S-3<br>S-4       |
| boring adjacent<br>and for area-wi  | L,N<br>N        |   |                                   |                     | X<br>X                            | Х                                |                                      | X                                | X<br>X                             | X<br>Hold                     | X                               | X<br>X                    | X<br>X                            |                        | X<br>X                         | X<br>X                             | X<br>X                             | X<br>X                     | 0.5   | RSAS4-0.5B<br>RSAS4-10B  |                          | 59<br>59                                 | S-4<br>S-4       |
| site per NDEP.<br>GW anticipated    | B<br>N          |   |                                   |                     | R<br>X                            |                                  |                                      |                                  | R<br>X                             | R<br>Hold                     | X                               | R                         | R                                 |                        | R                              | R                                  | R<br>X                             | R<br>X                     | 20<br>30                                    | RSAS4-20B<br>RSAS4-30B   |                          | 59<br>59                                 | S-4<br>S-4       |
|                                     | В               |   |                                   |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                 | R                         | R                                 |                        | R                              | R                                  | R                                  | R                          | 40  | RSAS4-40B                |                          | 59                                       | S-4              |
| Boring located                      | L,N,Q           | Х   |                                   |                     | Х                                 |                                  |                                      | Х                                | Х                                  | Х                             | Х                               | X                         | Х                                 |                        | Х                              | Х                                  | Х                                  | Х                          | 45<br>0.0                                   | RSAS4-45B<br>RSAS5-0.0B  | RSAS5                    | 59<br>n/a                                | S-4<br>S-5       |
| associated with<br>SAP to evaluate  | L,N<br>N        |   |                                   |                     | X<br>X                            | Х                                |                                      | Х                                | X<br>X                             | X<br>Hold                     | X<br>X                          | X<br>X                    | X<br>X                            |                        | X<br>X                         | X<br>X                             | X<br>X                             | X<br>X                     | 0.5<br>10                                   | RSAS5-0.5B<br>RSAS5-10B  |                          | n/a<br>n/a                               | S-5<br>S-5       |
| GW anticipated                      | В               |   |                                   |                     | R                                 |                                  |                                      |                                  | R                                  | R                             |                                 | R                         | R                                 |                        | R                              | R                                  | R                                  | R                          | 20  | RSAS5-20B                |                          | n/a                                      | S-5              |
|                                     | B,N<br>B        |   |                                   |                     | X<br>R                            |                                  |                                      |                                  | X<br>R                             | Hold<br>R                     | X                               | X<br>R                    | X<br>R                            |                        | X<br>R                         | X<br>R                             | X<br>R                             | X<br>R                     | 25<br>30                                    | RSAS5-25B<br>RSAS5-30B   |                          | n/a<br>n/a                               | S-5<br>S-5       |
| +                                   | L,N,Q<br>A      |   |                                   |                     | X<br>R                            |                                  |                                      | Х                                | X<br>R                             | X<br>R                        | Х                               | X<br>R                    | X                                 |                        | X<br>R                         | X                                  | X<br>R                             | X<br>R                     | 36<br>40                                    | RSAS5-36B<br>RSAS5-40B   |                          | n/a<br>n/a                               | S-5<br>S-5       |
| Boring located<br>with a specific I | L,N             | Х   |                                   |                     | x                                 | x                                |                                      | x                                | x                                  |                               | х                               | x                         | X                                 |                        | x                              | x                                  | x                                  | x                          | 0.0   | RSAS6-0.0B<br>RSAS6-0.5B | RSAS6                    | n/a<br>n/a                               | S-6<br>S-6       |
| NDEP.                               | Ň               |   |                                   |                     | Х                                 | ^                                |                                      | ^                                | Х                                  | X<br>Hold                     | X                               | Х                         | Х                                 |                        | х                              | Х                                  | Х                                  | Х                          | 10  | RSAS6-10B                |                          | n/a                                      | S-6              |
| GW anticipated                      | B<br>B,N        |   |                                   |                     | R<br>X                            |                                  |                                      |                                  | R<br>X                             | R<br>Hold                     | X                               | R<br>X                    | R<br>X                            |                        | R<br>X                         | R<br>X                             | R<br>X                             | R<br>X                     | 20<br>25                                    | RSAS6-20B<br>RSAS6-25B   |                          | n/a<br>n/a                               | S-6<br>S-6       |
|                                     | B<br>L,N,Q      |   |                                   |                     | R<br>X                            |                                  |                                      | X                                | R<br>X                             | RX                            | X                               | R<br>X                    | R<br>X                            |                        | R<br>X                         | R<br>X                             | R<br>X                             | R<br>X                     | 30<br>39                                    | RSAS6-30B<br>RSAS6-39B   | -                        | n/a<br>n/a                               | S-6<br>S-6       |
|                                     | A               |   |                                   |                     | R                                 |                                  |                                      | ~                                | R                                  | R                             | A A                             | R                         | R                                 |                        | R                              | R                                  | R                                  | R                          | 40  | RSAS6-40B                |                          | n/a                                      | S-6              |

Page 3 of 6

| Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions.)   |
|--|
| aluate LOU 25 (Process Hardware Storage Area), LOU 59 (Storm Sewer System), and for Unit 2 area<br>during located at a low spot of LOU 25 to evaluate worst-case scenario surface releases in LOU 25<br>J 59 to evaluate piping releases.<br>39 feet bgs.  |
|  |
|  |
| nslope of LOU 25 (Process Hardware Storage Area) and to evaluate surface runoff releases and for<br>Unit 2.<br>42 feet bgs.  |
| 42 1001 bys.   |
|  |
| aluate LOU 25 (Process Hardware Storage Area), LOU 59 (Storm Sewer Drain), LOU 60 (Acid Drain<br>it 2 area coverage. Located in the central portion of LOU 25 to evaluate surface releases, at the inlet<br>evaluate surface runoff into the inlet, and near LOU 59 piping to evaluate local piping releases<br>41 feet bgs. |
|  |
| aluate LOU 25 (Process Hardware Storage Area) and for Unit 1 area-coverage. Located as a general<br>and for general coverage of Unit 1.<br>40 feet bgs.  |
|  |
|  |
| aluate Unit 2 for area coverage.<br>42 feet bgs.   |
| -  |
| aluate LOU 4 (Former Hardesty Chemical Company Site), LOU 59 (Storm Sewer System), and LOU 60<br>and for Unit 3 area-wide coverage. Random boring as a step out for LOU 4. Boring adjacent to LOU<br>valuate potential piping releases, and for general coverage of Unit 3.<br>42 feet bgs.                                  |
| -2 1001 090.   |
|  |
| n LOU 42 (former location of salt conveyor) to evaluate worst-case scenario release location<br>hopper). Boring to be converted to Well M-144.<br>39 feet bgs.   |
|  |
|  |
|  |
| oximately 200 feet south of Unit 1 for area-wide coverage and not associated with any specific LOU.<br>D/ORO added to SAP to evaluate for potential impacts from Western Area Power Administration   |
| EP.<br>46 feet bgs.  |
|  |
|  |
| aluate LOU 59 (Storm Sewer System) 350 feet south of Unit 2 for area-wide coverage. Random<br>OU 59 pipino to evaluate potential pipino releases, adiacent to SG46 for VOC comparison purposes<br>overage. PCBs and TPH-DRO/ORO added to SAP to evaluate for potential impacts from WAPA                                     |
| 47 feet bgs.   |
|  |
| feet south of Unit 3 for area-wide coverage and north (downgradient) of WAPA Site and not<br>ecific LOU. Adjacent to SG65 for VOC comparison purposes. PCBs and TPH-DRO/ORO added to<br>potential impacts from WAPA site per NDEP.   |
| 38 feet bgs.   |
|  |
| eet south-southeast of Tronox Administration Building for area-wide coverage and not associated<br>PCBs and TPH-DRO/ORO added to SAP to evaluate for potential impacts from WAPA site per  |
| 41 feet bgs.   |
|  |
|  |
|  |
|  |

| Image         Image <t< th=""><th></th><th></th><th></th><th></th><th>Laboratory</th><th>CAS -</th><th>Kelso, WA</th><th></th><th></th><th></th><th>CA</th><th>S - Rochester</th><th>, NY</th><th></th><th></th><th></th><th>CAS</th><th>- Houston</th><th>GEL Charleston,<br/>SC</th><th>STL - Denver</th><th>Alpha<br/>Analytical<br/>Sparks, NV</th><th>EMSL<br/>Westmont, NJ</th><th></th><th></th></t<> |     |        |        |                        | Laboratory           | CAS -         | Kelso, WA       |           |               |                | CA           | S - Rochester | , NY          |             |              |              | CAS      | - Houston | GEL Charleston,<br>SC | STL - Denver        | Alpha<br>Analytical<br>Sparks, NV | EMSL<br>Westmont, NJ |        |  |
|--|-----|--------|--------|------------------------|----------------------|---------------|-----------------|-----------|---------------|----------------|--------------|---------------|---------------|-------------|--------------|--------------|----------|-----------|-----------------------|---------------------|-----------------------------------|----------------------|--------|--|
| 1         0         N         N         N         1         -         -         -         -         -         -         -         -         N  |     |        | Boring |                        | Depths <sup>1.</sup> |               |                 |           | DRO/ORO       |                |              |               | Cyanide       |             |              |              | (EPA     |           | Radio-                | OPPs <sup>11.</sup> | Organic                           |                      | for    |  |
| 1          |     |        |        | Boring                 | s are orga           | nized by grid | d location as s | hown on F | Plate A - Sta | rting point is | s on the nor | hwestern me   | ost grid in A | rea IV (P-4 | ) and ending | g with the s | outheast | ern most  | grid in Area IV       | / (U-7).            |                                   |                      |        |  |
| 1          |     |        | RSAS7  |                        |                      | x             | x               | x         | x             |                | x            | x             | x             | x           | x            | x            | -        | ×         | ×                     |                     |                                   | Х                    | I N    | Boring located upgrad                          |
| b         0  | S-7 |        |        | RSAS7-10B              | 10                   | X             | X               |           |               |                | X            | X             |               | Hold        |              | ^            |          | ~         | Х                     |                     |                                   |                      |        | GW anticipated at ~4                           |
| No.         No. <td></td> <td>Y</td> <td></td>   |     |        |        |                        |                      |               |                 |           |               |                |              |               | Y             |             |              |              |          |           |                       |                     |                                   |                      |        |  |
| Image         Matrix         Matrix </td <td></td> <td></td> <td></td> <td>RSAS7-30B</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>~</td> <td></td>   |     |        |        | RSAS7-30B              |                      |               |                 |           |               |                |              |               | ~             |             |              |              |          |           |                       |                     |                                   |                      |        |  |
| P1         P2         P3         P3<   |     |        |        |                        |                      |               |                 |           |               |                |              |               | Y             |             |              | x            |          |           |                       |                     |                                   |                      |        |  |
| 1         0  |     | 59     | RSAT3  |                        |                      | ~             | ~               | ~         | ~             |                | ~            | ~             | ~             | ~           | ~            | ~            |          |           | ~                     |                     |                                   | Х                    | L.N, Q | Boring located to eval                         |
| Dia         Dia <thdia< th=""> <thdia< th=""> <thdia< th=""></thdia<></thdia<></thdia<>  |     |        |        |                        |                      |               |                 |           |               |                |              |               |               |             |              |              | -        | Х         |                       |                     |                                   |                      |        | to LOU 59 piping to ev                         |
| D          | T-3 | 59     |        | RSAT3-20B              |                      |               |                 |           |               |                |              |               |               | R           |              |              |          |           |                       |                     |                                   |                      | В      | OW anticipated at ~50                          |
| 10         30<   |     |        |        |                        |                      |               |                 |           |               |                |              |               |               |             |              |              |          |           |                       |                     |                                   |                      |        |  |
| 1-4         93         95   | T-3 | 59     |        | RSAT3-40B              | 40                   |               |                 | Х         |               |                |              |               |               |             |              |              |          |           |                       |                     |                                   |                      |        |  |
| 1         0         0         X  |     |        | DCAT4  |                        |                      | Х             | Х               | Х         | Х             |                | Х            | Х             | Х             | Х           | Х            |              |          |           | х                     |                     |                                   | ×                    | Q      | Poring located to avai                         |
| Image         Sectors  | T-4 |        | KSA14  |                        |                      |               | х               | х         | х             |                | х            |               |               | х           | х            |              |          | х         | x                     |                     |                                   | ^                    |        | to LOU 59 piping to ev                         |
| Image         No         o         No         N   |     |        |        |                        |                      |               |                 |           |               |                |              |               | Х             |             |              |              |          |           |                       |                     |                                   |                      | D      | GW anticipated at ~55                          |
| No         o        No        No <td></td> <td>Х</td> <td></td>  |     |        |        |                        |                      |               |                 |           |               |                |              |               | Х             |             |              |              |          |           |                       |                     |                                   |                      |        |  |
| Image         Set         Set </td <td></td> <td>v</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>В</td> <td></td>   |     |        |        |                        |                      |               |                 |           |               |                |              |               | v             |             |              |              |          |           |                       |                     |                                   |                      | В      |  |
| Het         6.0         6.0         7 </td <td></td> <td>Q</td> <td></td>  |     |        |        |                        |                      |               |                 |           |               |                |              |               |               |             |              |              |          |           |                       |                     |                                   |                      | Q      |  |
| TM         81/6         0         X        X         X         X   |     |        | SA119  | SA119-0.0B             |                      | v             |                 | X         | v             |                | V            | V             | V             | V           | V            | v            | X        | X         | ~                     | V                   | V                                 | Х                    | 1.0    | Boring located to eval                         |
| Ind         Mathematical   |     |        |        |                        |                      |               |                 |           |               |                |              |               |               |             |              | ×            |          | X         |                       |                     |                                   |                      |        | surface impoundment                            |
| Tric         58,13         68,118,08         60         R     <  |     |        |        |                        |                      |               |                 |           |               |                |              |               |               |             |              |              |          |           |                       |                     |                                   |                      | В      | Tronox site).                                  |
| T+4         54/19-00         54/19-00         54/19-00         54/19-00         74 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>В</td><td>GW anticipated at ~50</td></t<>   |     |        |        |                        |                      |               |                 |           |               |                |              |               |               |             |              |              |          |           |                       |                     |                                   |                      | В      | GW anticipated at ~50                          |
| Tr.5         na         R8X568         d.5         X        X        X        X  | T-4 | 59, 62 | DOATE  | SA119-48B              | 48                   |               |                 |           | Х             |                | Х            |               |               | Х           |              | Х            | Х        |           |                       | Х                   | Х                                 | ×                    | L,Q,S  |  |
| T-5         0.0         T-5         0.0         X         X         X         N         X         N  |     |        | RSAT5  |                        |                      | х             | Х               | х         | х             |                | х            | х             | Х             | х           | х            |              |          | х         | х                     |                     |                                   | X                    |        | Boring located approx<br>wide coverage and no  |
| Info         main         Restriction         x     <  | T-5 | n/a    |        | RSAT5-10B              | 10                   |               |                 | Х         |               |                |              | Х             | Х             |             |              |              |          |           |                       |                     |                                   |                      |        | GW anticipated at ~53                          |
| Tr.5         nm         Res/Tege         30         R         <  |     |        |        | RSAT5-20B<br>RSAT5-25B |                      |               |                 |           |               |                |              |               | Х             |             |              |              |          |           |                       |                     |                                   |                      |        |  |
| Tris         ON         Rescription         Statistics  | T-5 | n/a    |        | RSAT5-30B              | 30                   | R             | R               | R         | R             |                | R            | R             |               | R           | R            |              |          |           | R                     |                     |                                   |                      |        |  |
| Tris         Span         SA11         SA11         Span         Span <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Q</td><td></td></th<>  |     |        |        |                        |                      |               |                 |           |               | -              |              |               |               |             |              |              |          |           |                       |                     |                                   |                      | Q      |  |
| Tris         G9         SA115-108         10         X         X         X         X         R         X         R         K   | T-5 | 59     | SA115  | SA115-0.0B             | 0.0                  |               |                 |           |               |                |              |               |               |             |              |              |          |           |                       |                     |                                   | Х                    |        | Boring located to eval                         |
| Tris         69         SA115-208         20         R   |     |        |        |                        |                      |               |                 |           |               |                |              |               |               |             |              |              | -        | X         |                       |                     |                                   | -                    |        | 59 piping and manhole<br>GW anticipated at ~53 |
| T5         69         SA115-30         30         R <th< td=""><td>T-5</td><td>59</td><td></td><td>SA115-20B</td><td>20</td><td>R</td><td>R</td><td>R</td><td>R</td><td></td><td>R</td><td>R</td><td>R</td><td></td><td>R</td><td></td><td></td><td></td><td>R</td><td></td><td></td><td></td><td>В</td><td></td></th<>  | T-5 | 59     |        | SA115-20B              | 20                   | R             | R               | R         | R             |                | R            | R             | R             |             | R            |              |          |           | R                     |                     |                                   |                      | В      |  |
| T6         99         SA115-08         40         X         X         X         X         X         X         R         X         X         I         G         G           T5         59         SA115-08         61         X  |     |        |        |                        |                      |               |                 |           |               |                |              |               |               | R           |              |              |          |           |                       |                     |                                   |                      |        |  |
| T6         59         SATI6_028         0.0  | T-5 | 59     |        | SA115-40B              | 40                   | Х             | Х               | Х         |               |                |              | Х             | Х             | R           | Х            |              |          |           | Х                     |                     |                                   |                      |        |  |
| T-5         59         SA116-0.58         0.5         X         X         X         X         X         R         X         R         X         X         X         G         G         69         SA116-0.8         0.5         X </td <td></td> <td></td> <td>SA116</td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td>X</td> <td></td> <td>1</td> <td></td> <td>X</td> <td></td> <td></td> <td>X</td> <td>Q</td> <td>Boring located to eval</td>   |     |        | SA116  |                        |                      | X             | X               | X         | X             |                | X            | X             | X             |             | X            |              | 1        |           | X                     |                     |                                   | X                    | Q      | Boring located to eval                         |
| T5         59         SA116-208         20         R <t< td=""><td>T-5</td><td></td><td></td><td>SA116-0.5B</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Х</td><td></td><td></td><td></td><td></td><td></td><td>59 piping for general of</td></t<>   | T-5 |        |        | SA116-0.5B             |                      |               |                 |           |               |                |              |               |               |             |              |              |          | Х         |                       |                     |                                   |                      |        | 59 piping for general of                       |
| T5         59         SA116-300         30         X         X         X         X         X         R </td <td></td> <td>GW anticipated at ~52</td>   |     |        |        |                        |                      |               |                 |           |               |                |              |               |               |             |              |              |          |           |                       |                     |                                   |                      |        | GW anticipated at ~52                          |
| T-5         6.9         SAT16-508         50         X         X         X         X         X         V         X         V         X         V         X         V         X         V         X         V         X         V         X         V         X         V         X         V         X        <  |     |        |        |                        |                      |               |                 |           |               |                |              |               |               |             |              |              |          |           |                       |                     |                                   |                      |        |  |
| T-6         n/a         RSATe         RSATe 0.08         0.0   -   |     |        |        |                        |                      |               |                 |           |               |                |              |               |               | ĸ           |              |              |          |           |                       |                     |                                   |                      |        |  |
| T-6         n/a         RSATE-108         10         X         X         X         Mode         X         X         Mode         N         GWantiopated           T-6         n/a         n/a         RSATE-308         30         X         X         X         X         X         X         X         X         X         X         X         X         N         Manifopated           T-6         n/a         RSATE-308         30         X </td <td></td> <td></td> <td>RSAT6</td> <td></td> <td></td> <td>v</td> <td>~</td> <td>×</td> <td>v</td> <td></td> <td>V</td> <td>V</td> <td>V</td> <td>X</td> <td>V</td> <td></td> <td></td> <td>v</td> <td>~</td> <td></td> <td></td> <td>Х</td> <td>N</td> <td>Boring located to eval</td>   |     |        | RSAT6  |                        |                      | v             | ~               | ×         | v             |                | V            | V             | V             | X           | V            |              |          | v         | ~                     |                     |                                   | Х                    | N      | Boring located to eval                         |
| T-6         n/a         RSATE-30B         30         X   |     |        |        |                        |                      |               |                 | X         |               |                |              |               |               |             |              |              |          | ×         |                       |                     |                                   |                      |        | GW anticipated at ~51                          |
| T-6         n/a         PSAT6-40B         40         R   |     |        |        |                        |                      |               |                 |           |               |                |              |               | Y             |             |              |              |          |           |                       |                     |                                   |                      |        |  |
| T-6         n/a         RSAT6-498         49         X        <  |     |        |        | RSAT6-40B              |                      |               |                 |           |               |                |              |               | X             |             |              |              |          |           |                       |                     |                                   |                      |        |  |
| T-6         59         SA118-05B         0.5         X         X         X         X         X         R         X   | T-6 | n/a    | 64440  | RSAT6-49B              |                      |               | Х               |           |               |                | Х            |               | Х             | Х           |              |              |          |           | Х                     |                     |                                   | ~                    | N,Q    | Devine leasts days                             |
| T-6         59         SA118-10B         10         X         X         X         X         X         X         R         X         R         X         N         N         G         G           T-6         59         SA118-20B         20         R <td>T-6</td> <td>59</td> <td>SAT18</td> <td></td> <td></td> <td></td> <td>Х</td> <td></td> <td>х</td> <td></td> <td></td> <td></td> <td>*</td> <td>G</td> <td>GW anticipated at ~53</td>   | T-6 | 59     | SAT18  |                        |                      |               | Х               |           |               |                |              |               |               |             |              |              |          | х         |                       |                     |                                   | *                    | G      | GW anticipated at ~53                          |
| T-6         59         SA118-25B         25         X         <  |     |        |        |                        |                      |               |                 |           |               |                |              |               | Х             |             |              |              |          |           |                       |                     |                                   |                      |        |  |
| T-6       59       SA118-40B       40       X       X       X       X       X       X       R       X       R       X       N       <  | T-6 | 59     |        |                        |                      |               |                 |           |               |                |              |               | Х             | ĸ           |              |              |          |           |                       |                     |                                   |                      |        |  |
| T-6       59       SA118-51B       51       X       X       X       X       X       X       X       X       X       Q       Q         T-7       59       RSAT7       RSAT7-0.0B       0.0       -       -       -       -       -       -       -       -       -       A       M  |     |        |        |                        |                      |               |                 |           |               |                |              |               | Y             |             |              |              |          |           |                       |                     |                                   |                      | В      |  |
| T-7       59       RSAT7-0.5B       0.5       X       X       X       X       X       X       X       X       X       X       X       X       X       DU 059 pint         T-7       59       RSAT7-10B       10       X <td></td> <td>ĸ</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Q</td> <td></td>  |     |        |        |                        |                      |               |                 |           |               |                |              |               |               | ĸ           |              |              |          |           |                       |                     |                                   |                      | Q      |  |
| T-7       59       RSAT7-10B       10       X       X       X       X       X       N       impacts from W         T-7       59       RSAT7-20B       20       R       R       R       R       R       R       R       R       R       R       Minipacts from W         T-7       59       RSAT7-25B       20       R       R       R       R       R       R       R       R       R       R       Minipacts from W         T-7       59       RSAT7-25B       25       X       X       X       X       Hold       X       Impacts from W       Minipacts from W       Minipac   | T-7 | 59     | RSAT7  | RSAT7-0.0B             | 0.0                  |               |                 |           |               |                |              |               |               | v           |              | v            |          | v         |                       |                     |                                   | Х                    | 1.51   | Boring located to eval                         |
| T-7       59       RSAT7-20B       20       R       <  |     |        | -      |                        |                      |               |                 |           |               |                |              |               |               |             |              | X            |          | ~         |                       |                     |                                   |                      |        | impacts from WAPA s                            |
| T-7 59 RSAT7-30B 30 R R R R R R R R R R R R R R R R R R  | T-7 | 59     |        | RSAT7-20B              | 20                   | R             | R               | R         | R             |                | R            | R             |               | R           | R            |              |          |           | R                     |                     |                                   |                      | В      | GW anticipated at ~46                          |
|  |     |        |        |                        |                      |               |                 |           |               |                |              |               | X             |             |              |              |          |           |                       |                     |                                   |                      |        | -  |
|  | T-7 | 59     |        | RSAT7-40B              | 40                   | R             | R               | R         | R             |                | R            | R             |               | R           | R            |              |          |           | R                     |                     |                                   |                      | В      |  |
| T-7         59         RSAT7-44B         44         X         <  |     |        | RSAT8  |                        |                      | Х             | Х               | X         | X             |                | Х            | Х             | Х             | X           | Х            | Х            |          |           | Х                     |                     |                                   | x                    | L,N,Q  | Boring located to eval                         |
| T-8 59 RSAT8-0.5B 0.5 X X X X X X X X X X X X X X X X X X X  | T-8 | 59     | 1      | RSAT8-0.5B             | 0.5                  |               |                 |           |               |                |              |               |               |             |              | Х            |          | Х         |                       |                     |                                   |                      |        | to LOU 59 piping and                           |
|  |     |        | -      |                        |                      |               |                 |           |               |                |              |               | Х             |             |              |              |          |           |                       |                     |                                   |                      |        | SAP to evaluate for p<br>GW anticipated at ~46 |
| T-8 59 RSAT8-25B 25 X X X X X X X X X X Hold X A A A A A A A A A A A A A A A A A A   | T-8 | 59     |        | RSAT8-25B              | 25                   | Х             | Х               | Х         | Х             |                | Х            | Х             | х             | Hold        | Х            |              |          |           | Х                     |                     |                                   |                      | B,N    |  |
| T-8         59         RSAT8-30B         30         R  |     |        | -      |                        |                      |               |                 |           |               |                |              |               |               |             |              |              |          |           |                       |                     |                                   |                      |        |  |
| To         SS         Romotor         R  |     |        |        |                        |                      |               |                 |           |               |                |              |               | Х             |             |              | Х            |          |           |                       |                     |                                   |                      |        |  |

Page 4 of 6

| Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions.)   |
|--|
| adient of WAPA site, for general area-wide coverage and not associated with a specific LOU. PCBs<br>Dadded to SAP to evaluate for potential impacts from WAPA site per NDEP.<br>44 feet bgs.   |
|  |
| raluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Random boring adjacent<br>evaluate potential piping releases.  |
| 55 feet bgs.   |
|  |
| raluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Random boring adjacent<br>evaluate potential piping releases<br>55 feet bgs.   |
|  |
|  |
| raluate LOU 59 (Storm Sewer System) adjacent to former State Industries building (Building T-5) and<br>stries, Inc. Site). Located adjacent to LOU 59 piping and manhole/inlet where waste water from the<br>ints associated with LOU 62 was released to, as well as for general coverage for LOU 62 (on and off |
| 50 feet bgs.   |
| oximately 200 feet west of Tronox Purchasing/Training Building to evaluate soils for general area-   |
| not associated with a specific LOU.<br>53 feet bgs.  |
|  |
| valuate LOU 59 (Storm Sewer System) and for general area-wide coverage. Located adjacent to LOU<br>ole/inlet to evaluate high risk piping release locations (piping and inlet structure).  |
| 53 feet bgs.   |
|  |
| raluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Located adjacent to LOU<br>a coverage and adjacent to SG68 for VOC comparison purposes.  |
| 52 feet bgs.   |
|  |
| raluate soils for general area-wide coverage and not associated with a specific LOU. PCBs and TPH-<br>SAP to evaluate for potential impacts from WAPA site per NDEP.<br>51 feet bgs.   |
|  |
| raluate LOU 59 (Storm Sewer System).   |
| 53 feet bgs.   |
|  |
|  |
| aluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Random boring adjacent<br>evaluate potential piping releases. PCBs and TPH-DRO/ORO added to SAP to evaluate for potential<br>site per NDEP.   |
| 46 feet bgs.   |
|  |
| aluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Random boring adjacent<br>ad manhole/inlet to evaluate potential releases (piping and inlet). PCBs and TPH-DRO/ORO added to<br>r potential impacts from WAPA site per NDEP.   |
| 46 feet bgs.   |
|  |
|  |

|                  |                           |                          |                          | Laboratory                                  | y CAS-                     | Kelso, WA                          |                                    |                                |                        | CA                                | AS - Rocheste             | r, NY                           |                               |                                    |                                  | CAS -                                | Houston                          | GEL Charleston,<br>SC             | STL - Denver        | Alpha<br>Analytical<br>Sparks, NV | EMSL<br>Westmont, NJ                        | Rationale       |  |
|------------------|---------------------------|--------------------------|--------------------------|---|----------------------------|------------------------------------|------------------------------------|--------------------------------|------------------------|-----------------------------------|---------------------------|---------------------------------|-------------------------------|------------------------------------|----------------------------------|--------------------------------------|----------------------------------|-----------------------------------|---------------------|-----------------------------------|---|-----------------|--|
| Grid<br>Location | LOU<br>Number             | Phase B<br>Boring<br>No. | Sample ID<br>Number      | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>4.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH GRO<br>(EPA 8015B) | VOCs <sup>3.</sup><br>(EPA 8260B) | Wet<br>Chem <sup>5.</sup> | Total<br>Cyanide<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA<br>1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup> | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | for<br>Revision | (  |
|                  |                           |                          | Boring                   | js are orga                                 | nized by grid              | d location as s                    | shown on l                         | Plate A - Sta                  | rting point is         | s on the nor                      | thwestern m               | ost grid in A                   | rea IV (P-4                   | ) and endin                        | g with the s                     | outheast                             | ern most                         | grid in Area IV                   | / (U-7).            |                                   |   |                 |  |
| T-8<br>T-8       | 59<br>59                  | SA210                    | SA210-0.0B<br>SA210-0.5B | 0.0   | X                          | X                                  | X                                  | x                              |                        | x                                 | X                         | X                               |                               | x                                  | X                                |                                      | X                                | X                                 |                     |                                   | Х   | L               | Boring located to evaluate<br>rather than at a worst-cas |
| T-8              | 59                        | -                        | SA210-10B                | 10  | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | Х                               |                               | Х                                  | ~                                |                                      | ~                                | Х                                 |                     |                                   |   |                 | GW anticipated at ~51 fee                                |
| T-8<br>T-8       | 59<br>59                  | -                        | SA210-30B<br>SA210-49B   | 30<br>49                                    | X                          | X                                  | X                                  | X<br>X                         |                        | X                                 | X                         | X                               |                               | X                                  | x                                |                                      |                                  | X                                 |                     |                                   |   | L,Q             |  |
| U-4              | 62                        | RSAU4                    | RSAU4-0.0B               | 0.0   |                            |                                    |                                    |                                |                        |                                   |                           |                                 |                               |                                    | ~                                |                                      |                                  |                                   |                     |                                   | X   | L, 9            | Boring located to evaluate                               |
| U-4<br>U-4       | 62<br>62                  | -                        | RSAU4-0.5B<br>RSAU4-10B  | 0.5   | X<br>X                     | X                                  | X                                  | X<br>X                         |                        | X                                 | X                         | X                               | X<br>Hold                     | X                                  |                                  |                                      | Х                                | X                                 |                     |                                   |   |                 | center of the former pond details).                      |
| U-4              | 62                        |                          | RSAU4-20B                | 20  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         | R                               | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | B               | GW anticipated at ~58 fee                                |
| U-4<br>U-4       | 62<br>62                  |                          | RSAU4-25B<br>RSAU4-30B   | 25<br>30                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    | X<br>R                          | Hold<br>R                     | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |                                   |   | B               |  |
| U-4<br>U-4       | 62<br>62                  |                          | RSAU4-40B<br>RSAU4-50B   | 40  | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X                         | X                               | Hold<br>R                     | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |                                   |   | В               |  |
| U-4              | 62                        |                          | RSAU4-56B                | 56  | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | X                               | Х                             | Х                                  |                                  |                                      |                                  | Х                                 |                     |                                   |   | Q               |  |
| U-4<br>U-4       | 62<br>62                  | SA146                    | RSAU4-60B<br>SA146-0.0B  | 60<br>0.0                                   | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         | R                               | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   | X   | A               | Boring located to evaluate                               |
| U-4<br>U-4       | 62<br>62                  |                          | SA146-0.5B<br>SA146-10B  | 0.5<br>10                                   | X                          | X                                  | X                                  | X<br>X                         |                        | X                                 | X<br>X                    | X                               | R                             | X                                  |                                  |                                      | Х                                | X<br>X                            |                     |                                   |   | GG              | pond to provide general co                               |
| U-4              | 62                        |                          | SA146-20B                | 20  | X<br>R                     | X<br>R                             | X<br>R                             | R                              |                        | X<br>R                            | R                         | X<br>R                          | R<br>R                        | X<br>R                             |                                  |                                      |                                  | R                                 |                     |                                   |   | B               | GW anticipated at ~57 fee                                |
| U-4<br>U-4       | 62<br>62                  |                          | SA146-25B<br>SA146-30B   | 25<br>30                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    | X<br>R                          | R                             | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |                                   |   | B               |  |
| U-4              | 62                        |                          | SA146-40B                | 40  | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | Х                               | R                             | Х                                  |                                  |                                      |                                  | Х                                 |                     |                                   |   | G               |  |
| U-4<br>U-4       | 62<br>62                  |                          | SA146-50B<br>SA146-55B   | 50<br>55                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | R<br>X                          | R                             | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |                                   |   | B<br>Q          |  |
| U-4              | 62                        | 0.1.1.7                  | SA146-60B                | 60  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         | R                               | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   | ×   | A               |  |
| U-4<br>U-4       | 62<br>62                  | SA147                    | SA147-0.0B<br>SA147-0.5B | 0.0   | х                          | Х                                  | х                                  | х                              |                        | Х                                 | Х                         | х                               | R                             | Х                                  |                                  |                                      | х                                | Х                                 |                     |                                   | Х   | G               | Boring located to evaluate<br>pond to provide general co |
| U-4<br>U-4       | 62<br>62                  |                          | SA147-10B<br>SA147-20B   | 10<br>20                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X                                 | X<br>R                    | X<br>R                          | R<br>R                        | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |                                   |   | G<br>B          | GW anticipated at ~58 fee                                |
| U-4              | 62                        |                          | SA147-25B                | 25  | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | Х                               |                               | Х                                  |                                  |                                      |                                  | Х                                 |                     |                                   |   | В               |  |
| U-4<br>U-4       | 62<br>62                  |                          | SA147-30B<br>SA147-40B   | 30<br>40                                    | R<br>X                     | R<br>X                             | R                                  | R<br>X                         |                        | R<br>X                            | R<br>X                    | R<br>X                          | R<br>R                        | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |                                   |   | B<br>G          |  |
| U-4              | 62                        |                          | SA147-50B                | 50  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         | R                               | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | В               |  |
| U-4<br>U-4       | 62<br>62                  |                          | SA147-56B<br>SA147-60B   | 56<br>60                                    | R                          | R                                  | R                                  | X<br>R                         |                        | X<br>R                            | X<br>R                    | R                               | R                             | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |                                   |   | Q<br>A          |  |
| U-5<br>U-5       | 62<br>62                  | RSAU5                    | RSAU5-0.0B<br>RSAU5-0.5B | 0.0   | X                          | x                                  | х                                  | x                              |                        | x                                 | x                         | x                               | х                             | x                                  |                                  |                                      | x                                | х                                 |                     |                                   | X   |                 | Boring located to evaluate<br>pond to provide general co |
| U-5              | 62                        |                          | RSAU5-10B                | 10  | X                          | Х                                  | Х                                  | X                              |                        | Х                                 | X                         | X                               | Hold                          | Х                                  |                                  |                                      | ^                                | X                                 |                     |                                   |   |                 | GW anticipated at ~57 fee                                |
| U-5<br>U-5       | 62<br>62                  |                          | RSAU5-20B<br>RSAU5-25B   | 20<br>25                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | R<br>X                          | R<br>Hold                     | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |                                   |   | B               |  |
| U-5              | 62                        |                          | RSAU5-30B                | 30  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         | R                               | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | B               |  |
| U-5<br>U-5       | 62<br>62                  |                          | RSAU5-40B<br>RSAU5-50B   | 40  | X<br>R                     | X<br>R                             | R                                  | X<br>R                         |                        | X<br>R                            | X<br>R                    | X<br>R                          | Hold<br>R                     | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |                                   |   | В               |  |
| U-5              | 62<br>62                  |                          | RSAU5-55B<br>RSAU5-60B   | 55<br>60                                    | X<br>R                     | X                                  | X<br>R                             | X                              |                        | X                                 | X                         | X                               | X                             | X<br>R                             |                                  |                                      |                                  | Х                                 |                     |                                   |   | Q               |  |
| U-5<br>U-5       | 62                        | SA28                     | SA28-0.0B                | 0.0   | ĸ                          |                                    | ĸ                                  | ĸ                              |                        | ĸ                                 | ĸ                         | ĸ                               | R                             | ĸ                                  |                                  |                                      |                                  | R                                 |                     |                                   | X   | A               | Boring located to evaluate                               |
| U-5<br>U-5       | 62<br>62                  | -                        | SA28-0.5B<br>SA28-10B    | 0.5   | X<br>X                     | X                                  | X                                  | X<br>X                         |                        | X                                 | X                         | X<br>X                          | R<br>R                        | X<br>X                             |                                  |                                      | х                                | X                                 |                     |                                   |   | G               | center of the former pond details).                      |
| U-5              | 62                        |                          | SA28-20B                 | 20  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         | R                               | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | В               |  |
| U-5<br>U-5       | 62<br>62                  |                          | SA28-25B<br>SA28-30B     | 25<br>30                                    | X<br>R                     | X<br>R                             | R                                  | X<br>R                         |                        | X<br>R                            | X<br>R                    | X<br>R                          | R                             | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |                                   |   | B               | GW anticipated at ~57 fee                                |
| U-5              | 62                        |                          | SA28-40B                 | 40  | X                          | X                                  | X                                  | X                              |                        | X                                 | X                         | X                               | X                             | X                                  |                                  |                                      |                                  | X                                 |                     |                                   |   | G               |  |
| U-5<br>U-5       | 62<br>62                  |                          | SA28-55B<br>SA28-60B     | 55<br>60                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    | X<br>R                          | R<br>R                        | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |                                   |   | A               |  |
| U-6<br>U-6       | n/a<br>n/a                | RSAU6                    | RSAU6-0.0B<br>RSAU6-0.5B | 0.0   | x                          | X                                  | x                                  | x                              |                        | x                                 | x                         | х                               | Х                             | x                                  |                                  |                                      | х                                | X                                 |                     |                                   | Х   | G               | Boring located to evaluate<br>GW anticipated at ~55 fee  |
| U-6              | n/a                       |                          | RSAU6-10B                | 10  | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | X                               | Hold                          | Х                                  |                                  |                                      | ^                                | Х                                 |                     |                                   |   | G               | ow anticipated at -55 lee                                |
| U-6<br>U-6       | n/a<br>n/a                |                          | RSAU6-20B<br>RSAU6-25B   | 20<br>25                                    | R<br>X                     | R<br>X                             | R                                  | R<br>X                         |                        | R<br>X                            | R<br>X                    | X                               | R<br>Hold                     | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |                                   |   | B               |  |
| U-6              | n/a                       |                          | RSAU6-30B                | 30  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |                                 | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | В               |  |
| U-6<br>U-6       | n/a<br>n/a                |                          | RSAU6-40B<br>FSAU6-50B   | 40<br>50                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    | X                               | Hold<br>R                     | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |                                   |   | G<br>B          |  |
| U-6<br>U-6       | n/a<br>n/a                |                          | RSAU6-53B<br>RSAU6-60B   | 53<br>60                                    | X<br>R                     | X<br>R                             | X<br>R                             | X<br>R                         |                        | X<br>R                            | X<br>R                    | Х                               | X<br>R                        | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |                                   |   | Q<br>A          |  |
| U-7              | n/a                       | RSAU7                    | RSAU7-0.0B               | 0.0   |                            |                                    |                                    |                                |                        |                                   |                           |                                 |                               |                                    |                                  |                                      |                                  |                                   |                     |                                   | X   | A               | Boring located to evaluate                               |
| U-7<br>U-7       | n/a<br>n/a                | -                        | RSAU7-0.5B<br>RSAU7-10B  | 0.5   | X                          | X<br>X                             | X                                  | X<br>X                         |                        | X<br>X                            | X<br>X                    | X<br>X                          | X<br>Hold                     | X<br>X                             |                                  |                                      | Х                                | X<br>X                            |                     |                                   |   |                 | GW anticipated at ~56 fee                                |
| U-7              | n/a                       |                          | RSAU7-20B                | 20  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |                                 | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | В               | -  |
| U-7<br>U-7       | n/a<br>n/a                |                          | RSAU7-25B<br>RSAU7-30B   | 25<br>30                                    | X<br>R                     | X<br>R                             | R                                  | X<br>R                         |                        | X<br>R                            | X<br>R                    | X                               | Hold<br>R                     | X<br>R                             |                                  |                                      |                                  | X<br>R                            |                     |                                   |   | B               |  |
| U-7              | n/a                       | 1                        | RSAU7-40B                | 40  | Х                          | Х                                  | Х                                  | Х                              |                        | Х                                 | Х                         | х                               | Hold                          | Х                                  |                                  |                                      |                                  | Х                                 |                     |                                   |   |                 |  |
| U-7<br>U-7       | n/a<br>n/a                |                          | RSAU7-50B<br>RSAU7-54B   | 50<br>54                                    | R<br>X                     | R<br>X                             | R<br>X                             | R<br>X                         |                        | R<br>X                            | R<br>X                    | X                               | R<br>X                        | R<br>X                             |                                  |                                      |                                  | R<br>X                            |                     |                                   |   | B<br>Q          |  |
| U-7              | n/a<br>lumber of Borings: | 56                       | RSAU7-60B                | 60  | R                          | R                                  | R                                  | R                              |                        | R                                 | R                         |                                 | R                             | R                                  |                                  |                                      |                                  | R                                 |                     |                                   |   | А               |  |
| IN               | under or borings.         | 30                       |                          |   |                            |                                    |                                    |                                |                        |                                   |                           |                                 |                               |                                    |                                  |                                      |                                  |                                   |                     |                                   |   |                 |  |

Page 5 of 6

| Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions.)  |
|---|
|   |
| aluate LOU 59 (storm Sewer System). Located areally to evaluate point of exit from the Tronox site  |
| st-case scenario.<br>51 feet bgs.   |
|   |
| aluate former western pond in LOU 62 (State Industries, Inc. Site). Located within footprint and in the<br>pond to provide general coverage of pond area for potential releases (see LOU 62 summary for       |
| 58 feet bgs.  |
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|   |
|   |
|   |
| aluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint of former  |
| eral coverage of pond area for potential releases (see LOU 62 summary for details).<br>57 feet bgs.   |
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|   |
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|   |
| aluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint of former<br>eral coverage of pond area for potential releases (see LOU 62 summary for details).<br>58 feet bgs. |
| ×   |
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| aluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint of former<br>eral coverage of pond area for potential releases (see LOU 62 summary for details).                 |
| 57 feet bgs.  |
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|   |
| aluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint and in the<br>pond to provide general coverage of pond area for potential releases (see LOU 62 summary for       |
|   |
|   |
| 57 feet bgs.  |
|   |
| aluate soil for area-wide coverage and not associated with a specific LOU.  |
| 55 feet bgs.  |
|   |
|   |
|   |
|   |
|   |
| aluate soil for area-wide coverage and not associated with a specific LOU.  |
| 56 feet bgs.  |
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|                          |                   | _  |  | Laboratory                                  | CAS - P                    | Kelso, WA                          |                                    | •                              |                        | CA                                | S - Rochester             | , NY                            |                               | •                                  |                                  | CAS -                                | Houston                          | GEL Charleston,<br>SC             | STL - Denver        | Alpha<br>Analytical<br>Sparks, NV | EMSL<br>Westmont, NJ                        | Rationale                    |   |
|--------------------------|-------------------|--|--|---|----------------------------|------------------------------------|------------------------------------|--------------------------------|------------------------|-----------------------------------|---------------------------|---------------------------------|-------------------------------|------------------------------------|----------------------------------|--------------------------------------|----------------------------------|-----------------------------------|---------------------|-----------------------------------|---|------------------------------|---|
| Grid<br>Location         | LOU<br>Number     | Phase B<br>Boring<br>No.                 | Sample ID<br>Number                    | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>4.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH GRO<br>(EPA 8015B) | VOCs <sup>3.</sup><br>(EPA 8260B) | Wet<br>Chem <sup>5.</sup> | Total<br>Cyanide<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>8.</sup><br>(EPA 8082) | PCBs <sup>8.</sup><br>(EPA<br>1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup> | Organic<br>Acids <sup>12.</sup>   | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | for<br>Revision              |   |
|                          |                   |  | Boring                                 | s are orgai                                 | nized by grid              | location as s                      | hown on l                          | Plate A - Sta                  | rting point i          | s on the nor                      | hwestern m                | ost grid in A                   | rea IV (P-4                   | ) and ending                       | g with the so                    | outheaste                            | ern most                         | grid in Area IV                   | / (U-7).            |                                   |   |                              |   |
| Grid<br>Grid<br>Location | recipitate Leachi | ng Procedure<br>Phase B<br>Boring<br>No. | (SPLP) Samples:<br>Sample ID<br>Number | Sample<br>Depths<br>(ft, bgs)               | Perchlorate<br>(EPA 314.0) | Metals<br>(EPA 6020)               | Hex Cr<br>(EPA 7199)               | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH-GRO                | VOCs<br>(EPA 8260B)               | Wet<br>Chemistry          | Total<br>Cyanide                | OCPs<br>(8081A)               | SVOCs<br>(EPA 8270C)               | PCBs<br>(EPA 8082)               | PCBs<br>(EPA 8082)                   | Dioxins/<br>Furans               | Radio-<br>nuclides                | OPPs                | Organic<br>Acids                  | Asbestos<br>EPA/540/R-97/028                | Geo-<br>technical<br>Testing |   |
| Q-4                      | 4                 | RSAQ4                                    | RSAQ4-10                               | 10  | х                          | х                                  | x                                  |                                |                        | х                                 | х                         | х                               | х                             | x                                  | х                                | х                                    |                                  | x                                 | х                   | х                                 |   | х                            | Soil sample collected be<br>potential of Site-related a   |
| Q-4                      | 4                 | RSAQ4                                    | RSAQ4-32DD*                            | 32 DD*                                      | х                          | х                                  | х                                  |                                |                        | х                                 | х                         | х                               | х                             | х                                  | х                                | х                                    |                                  | х                                 | х                   | х                                 |   | х                            | Optional sample - only t<br>Contact between Qal & M<br>type: Silt.  |
| Q-4                      | 4                 | SA148                                    | SA148-10                               | 10  | х                          | х                                  | х                                  |                                |                        | х                                 | х                         | х                               | х                             | х                                  | х                                | х                                    |                                  | х                                 | x                   | х                                 |   | х                            | Soil sample collected be<br>potential of Site-related a   |
| Q-4                      | 4                 | SA148                                    | SA148-35                               | 35  | х                          | х                                  | x                                  |                                |                        | х                                 | х                         | х                               | х                             | x                                  | х                                | х                                    |                                  | х                                 | x                   | х                                 |   | х                            | Soil sample collected fror<br>leaching potential of Site-<br>MCfg1 is approximately 3<br>capillary fringe. Expected |
| R-3                      | 60                | RSAR3                                    | RSAR3-0.5                              | 0.5   | х                          | х                                  | х                                  |                                |                        | х                                 | х                         | х                               | х                             | х                                  | х                                | х                                    |                                  | х                                 | х                   | х                                 |   | х                            | Soil sample collected fro<br>(Qal) soils. Expected so   |
| R-3                      | 60                | RSAR3                                    | RSAR3-35DD*                            | 35 DD*                                      | х                          | х                                  | х                                  |                                |                        | х                                 | х                         | х                               | х                             | x                                  | х                                | х                                    |                                  | х                                 | х                   | х                                 |   | х                            | Optional sample - only t<br>Contact between Qal & M<br>soil type: Silt.   |
| U-4                      | 62                | RSAU4                                    | RSAU4-20                               | 20  | х                          | х                                  | х                                  |                                |                        | х                                 | х                         | х                               | х                             | х                                  | х                                | х                                    |                                  | х                                 | х                   | х                                 |   | х                            | Soil sample collected from<br>Site-related analytes. Ex   |
| U-4                      | 62                | RSAU4                                    | RSAU4-50                               | 50  | х                          | х                                  | х                                  |                                |                        | х                                 | х                         | х                               | х                             | x                                  | х                                | х                                    |                                  | х                                 | х                   | х                                 |   | x                            | Optional sample - only to<br>boring location. If soil typ   |
| U-5                      | 62                | RSAU5                                    | RSAU5-0.5                              | 0.5   | х                          | х                                  | х                                  |                                |                        | х                                 | х                         | х                               | х                             | х                                  | х                                | х                                    |                                  | х                                 | х                   | х                                 |   | x                            | Soil sample collected from<br>analytes from Alluvium (C   |
| U-5                      | 62                | RSAU5                                    | RSAU5-50                               | 50  | х                          | х                                  | х                                  |                                |                        | х                                 | х                         | х                               | х                             | х                                  | х                                | х                                    |                                  | х                                 | х                   | х                                 |   | x                            | Optional sample - only to<br>boring location. If soil type  |
| Number of S              | Soil Samples:     | Subtotal Sa                              | mple Count:                            |   | 239                        | 239                                | 239                                | 229                            | 0                      | 239                               | 239                       | 239                             | 103                           | 239                                | 37                               | 20                                   | 55                               | 239                               | 28                  | 28                                | 55  | 10                           |   |
|                          |                   | QA/QC Sam                                | ples:                                  |   |                            |                                    |                                    |                                |                        |                                   |                           |                                 |                               |                                    |                                  |                                      |                                  |                                   |                     |                                   |   |                              |   |
|                          |                   |  | Ouplicates (10%)                       |   | 24                         | 24                                 | 24                                 | 23                             | 0                      | 24                                | 24                        | 0                               | 11                            | 24                                 | 4                                | 2                                    | 6                                | 24                                | 3                   | 3                                 | 0   | 0                            |   |
|                          |                   | Field B                                  | llanks<br>ient Rinsate Blanks          |   | 1<br>15                    | 1<br>15                            | 1<br>15                            | <u>1</u><br>11                 | 0                      | <u>1</u><br>11                    | 1<br>15                   | 0                               | 1 5                           | 1<br>10                            | <u> </u>                         | 1<br>0                               | 1<br>15                          | 1 14                              | 1 2                 | 1 2                               | 0   | 0                            | -   |
|                          |                   |  | ank Samples                            |   | 0                          | 0                                  | 0                                  | 0                              | 0                      | 18                                | 0                         | 0                               | 0                             | 0                                  | 0                                | 0                                    | 0                                | 0                                 | 0                   | 0                                 | 0   | 0                            |   |
|                          |                   | Matrix                                   | Spike (5%)                             |   | 12                         | 12                                 | 12                                 | 12                             | 0                      | 12                                | 12                        | 0                               | 6                             | 12                                 | 2                                | 1                                    | 3                                | 12                                | 2                   | 2                                 | 0   | 0                            | ]   |
|                          |                   |  | Spike Duplicate (5%                    | <b>b</b> )                                  | 12                         | 12                                 | 12                                 | 12                             | 0                      | 12                                | 12                        | 0                               | 6                             | 12                                 | 2                                | 1                                    | 3                                | 12                                | 2                   | 2                                 | 0   | 0                            |   |
|                          |                   | Total Sampl                              | e Count:                               |   | 303                        | 303                                | 303                                | 288                            | 0                      | 317                               | 303                       | 239                             | 132                           | 298                                | 46                               | 25                                   | 83                               | 302                               | 38                  | 38                                | 55  | 10                           |   |

Notes

Sample will be collected and analyzed. Х

No sample will be collected under Phase B sampling program. Sample depth to be determined in the field where DD = sample depth (ft).

DD\*

 DD
 Sample depth to be determined in the field where DD = sample depth (tp.

 TPH-GRO
 Total petroleum hydrocarbons - Gasoline-Range Organics.

 TPH-GRO
 Total petroleum hydrocarbons - Diseel-Range Organics/Oil-Range Organics.

 SPLP
 SPLP samples will be analyzed by EPA method 1312 using two preparation methods: 1) with extraction fluid #2 (reagent water at pH 5.00± 0.05), and 2) with extraction method #3 (reagent water); per NDEP, May 6, 2008.

 1.
 The 0.5 ft bgs sample will be collected from the 0.0 to 0.6 ft bgs interval, unless the area is paved. If area is paved, samples will be collected at 0.5 feet below or from a representative depth beneath the pavement. Alternately, if an unpaved area is within a reasonable distance, the sample will be moved to the unpaved area.

 2.
 Metals analyses includes Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybednum, Nickel, Platinum, Potassium, Selenium, Silver, Sodium, Strontium, Tin, Titanium, Thagiam, Tungsten, Uranium, Vanadium, and Zinc.

Hexavalent Chromium

Samples for VOC analysis will be preserved in the field using sodium bisulfate (or DI water) and methanol preservatives per EPA Method 5035.

5. Wet chemistry parameters include: alkalinity (total, CO3, HCO3), ammonia, bromide, chlorate, chloride, conductivity, nitrate, nitrite, perchlorate, pH, phosphate (total), sulfate, surfactants (MBAs), TDS, Total Organic Carbon, and TSS.

Organochlorine Pesticides (includes analysis for hexachlorobenzene). Semi-volatile Organic Compounds

Polychlorinated biphenyls - Sample locations will be analyzed by USEPA methods 8082 and/or 1668A as indicated in table. Concrete surfaces at these locations will also include chip and/or wipe samples per EPA Region 1 SOP for Sampling Concrete in the Field (1997)A column for Aroclor PCBs (EPA 8082) was added to this table to sho 8. Polycholniated biphenyls - Sample locations will be analyzed by USE-PA methods 3022 and/or 1668A as indicated in table. Concrete suffaces at these locations will also include chip and/or wipe samples per EPA Region 1 SOP for Sampling Concrete in the Field (1997)A column for Arocior Dioxins/furnary will be analyzed by PA Method 8209 for all samples. Screening reports will be provided for 90% of the samples and full data packages for 10% of the samples. Region 1 SOP tor Sampling Concrete in the Field (1997)A column for Arocior Radionuclides consists of alpha spec reporting for isotopic thorium and isotopic uranium, and Radium-226, plus Radium-228 by beta counting (per NDEP). Organophosphorous Pesticides were added to SAP by NDEP (July 21, 2008). Organic Acid analysis includes the following analytes: 4-Chlorbenzene sulfonic acid; O,O-Diethylphosphorodithioic acid; O,O-Dimethylphosphorodithioic acid; and Phthalic acid. Soil samples for abestos analyses will be collected from a depth of 0 to 2-inches bgs. Geotechnical Tests consist of: moisture content (ASTM D-2216), grain size analysis (ASTM D-422 and C117-04), Soil Dry Bulk Density (ASTM D-2937), Grain Density (ASTM D-854), Soil-Water Filled Porosity (ASTM D-2216); Vertical Hydraulic Conductivity (ASTM D-5084/USEPA 9100).

10.

12.

13. 14.

tionale Codes

The soil sample was removed from the sampling plan because the 2008 groundwater data indicates that the water table is likely above this depth. Α

в Tronox has observe indicated, soil samples will be collected at depths 20 and 30-ft. Note that additional samples will be collected to keep vertical distances between samples to 20-ft or less.

Soil sample will be collected at this depth because the depth is one-foot below a pipeline invert. Arcolor and congener PCBs were added per NDEP (July 21, 2008). Where indicated, OCPs were removed from the sampling plan because OCPs were not created, stored, conveyed, or potentially disposed at this location. SVOC analysis was added to this boring per NDEP (July 21, 2008).

Aroclor PCB analysis (EPA 8082) was added to this boring per NDEP (July 21, 2008). TPH-DRO/ORO was added per NDEP (July 21, 2008).

Sample depth was revised so that the capillary fringe sample will be collected 2 feet above the water table. Radionuclides added where they were left off boring SA-115 per NDEP comment June 18, 2008

Organophosphorous Pesticides and Organic Acids were added to SAP by NDEP (July 21, 2008 and subsequent teleconferences).

Green-shading indicates new addition to this table. Х

Brown-shading indicates item will be removed from this table.

Table 2 Soil Sampling and Analytical Plan for Area IV

Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

Page 6 of 6

| Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions.)   |
|--|
|  |
| Location Description and Characterized Area Rationale  |
| below bottom of former AST in the northern part of LOU 4 (former Hardesty Chemical Co. Site) to evaluate leaching<br>d analytes from Alluvium (Cal) soils. Expected soil type: Sand.<br>Iy to be collected if soil type is different than at 10 ft bgs. <b>no sample will be collected within the capillary fringe</b><br>& MCfg1 is approximately 29 feet bgs. Groundwater is expected to occur at approximately 34 feet bgs. Expected soil |
| below bottom of former UST in the southern part of LOU 4 (former Hardesty Chemical Co. Site) to evaluate leaching<br>d analytes from Alluvium (Cal) soils. Expected soil type: Gravelly Sand.<br>from below bottom of former UST in the southern part of LOU 4 (former Hardesty Chemical Co. Site) to evaluate   |
| Site-related analytes from Muddy Creek Formation - First Fine-Grained Facies (MC/g1) soils. Contact between Qal a<br>siy 31 feet bgs. Groundwater anticipated to be at approximately 47 feet bgs. No soil sample will be collected within<br>cted soil type: Silt.   |
| from below LOU 60 (Acid Drain System pipeline) to evaluate leaching potential of Site-related analytes from Alluviun<br>soil type: Sand.   |
| ly to be collected if soil type is different than at 10 ft bgs.no sample will be collected within the capillary fringe<br>& MCfg1 is approximately 29 feet bgs. Groundwater is expected to occur at approximately 40 feet bgs. Expected  |
| from beneath bottom of former western pond in LOU 62 (State Industries, Inc. Site) to evaluate leaching potential of<br>Expected soil type: Gravelly Sand.   |
| Ity to be collected if Sitl/Clay of the Muddy Creek Formation - first fine-grained facies (MCfg1) is encountered at this<br>type is similar to soils at 20 feet, then no sample will be collected for SPLP analyses. Expected soil type: Sitt.   |
| from beneath bottom of former eastern pond in LOU 62 (State Industries) to evaluate leaching potential of Site-related<br>n (Qal). Expected soil type: Gravelly Sand.  |
| Iy to be collected if Sit/Clay of the Muddy Creek Formation - first fine-grained facies (MCfg1) is encountered at this<br>type is similar to soils at 20 feet, then no sample will be collected for SPLP analyses. Expected soil type: Sit.  |
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| w which samples will be analyzed for Aroclor PCBs.   |
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| lary fringe samples to make the vertical distance between samples no greater than 20 ft (sample depth rounded off to   |
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|                  |                          |                          | Laboratory :                                |                                       |              |                            | CAS<br>so, WA                      |                                    |                                |                                 |                                | bia Analytical<br>Rochester, N |                                 |                               |                                    | CAS<br>Houston, TX GEL Charleston,<br>SC STL Denver, CO Analytical<br>Sparks, NV EMSL Westmont,<br>Sparks, NV Sparks, NV |                                      |                                  |                                   |                     |   |   |                       |   |
|------------------|--------------------------|--------------------------|---|---------------------------------------|--------------|----------------------------|------------------------------------|------------------------------------|--------------------------------|---------------------------------|--------------------------------|--------------------------------|---------------------------------|-------------------------------|------------------------------------|--|--------------------------------------|----------------------------------|-----------------------------------|---------------------|---|---|-----------------------|---|
| Grid<br>Location | Phase B<br>Boring<br>No. | Sample ID<br>Number      | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Matrix<br>Spike/MSI<br>uplicate       |              | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020) | Hex Cr <sup>4.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH GRO<br>(EPA 8015B           | VOCs <sup>3.</sup>             | Wet<br>Chem <sup>5.</sup>      | Total<br>Cyanide<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>8.</sup><br>(EPA 8082)   | PCBs <sup>8.</sup><br>(EPA<br>1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup> | Sparks, NV<br>Organic<br>Acids <sup>12.</sup> | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Geotechnical<br>Tests |   |
|                  |                          |                          | Number of                                   | Container                             | s per Sample | s: 1-4                     | 4 oz Jar                           | 1 - 4                              | 4 oz Jar                       | 1- 40 ml VOA<br>vial w/ methanc | 3 VOA vials<br>(TerraCore Kit) |                                | 2 - 4 oz. Jars                  |                               |                                    |  | 1 - 4                                | oz Jar                           | 1-250 ml jar<br>(plastic)         | 1-4 oz Jar          | 1-4 oz Jar                                    | ≥1 kg<br>in plastic bag                     | 2 Brass Tubes         |   |
|                  |                          |                          |   | Borin                                 | gs are orga  | nized by grid              | location as s                      | hown on P                          | late A - Star                  | rting point is                  | on the north                   | western mos                    | at grid in Area                 | a IV (P-4) a                  | nd ending v                        | vith the sout  | theastern                            | most gri                         | d in Area IV (U-                  | -7).                |   |   |                       |   |
| P-4              | SA103                    | SA103-0.0B               | 0.0   |                                       |              |                            |                                    |                                    |                                |                                 |                                |                                |                                 |                               |                                    |  |                                      |                                  |                                   |                     |   | Х   |                       | Boring located to                         |
| P-4<br>P-4       |                          | SA103-0.5B<br>SA103-10B  | 0.5   |                                       |              | X                          | X                                  | X                                  | X                              |                                 | X                              | X                              | X                               | X<br>Hold                     | X<br>X                             |  | -                                    | X                                | X                                 |                     |   |   |                       | GW anticipated at                         |
| P-4              | 1                        | SA103-10BD               | 10 (dup)                                    |                                       |              | Х                          | Х                                  | Х                                  | Х                              |                                 | Х                              | Х                              | Х                               | Hold                          | Х                                  |  |                                      |                                  | Х                                 |                     |   |   |                       |   |
| P-4<br>P-4       |                          | SA103-25B<br>SA103-35B   | 25<br>35                                    |                                       |              | X                          | X                                  | X                                  | X                              |                                 | X                              | X                              | X                               | Hold<br>X                     | X                                  |  |                                      |                                  | X                                 |                     |   |   |                       |   |
| P-5              | RSAP5                    | RSAP5-0.0B               | 0.0   |                                       |              |                            |                                    |                                    |                                |                                 |                                |                                |                                 | ~                             |                                    |  |                                      |                                  | X                                 |                     |   | X   |                       | Boring located to                         |
| P-5<br>P-5       |                          | RSAP5-0.5B<br>RSAP5-10B  | 0.5   |                                       |              | X                          | X                                  | X                                  | X                              |                                 | X                              | X                              | X                               | X<br>Hold                     | X                                  |  |                                      | X                                | X                                 |                     |   |   |                       | GW anticipated at                         |
| P-5              |                          | RSAP5-10BD               | 10 (dup)                                    |                                       |              | X                          | X                                  | X                                  | X                              |                                 | X                              | X                              | X                               | Hold                          | X                                  |  |                                      |                                  | X                                 |                     |   |   |                       |   |
| P-5              |                          | RSAP5-25B<br>RSAP5-39B   | 25<br>39                                    |                                       |              | X                          | X<br>X                             | X                                  | X                              |                                 | X                              | X<br>X                         | X                               | Hold<br>X                     | X                                  |  |                                      |                                  | X                                 |                     |   |   |                       |   |
| P-5<br>Q-3       | RSAQ3                    | RSAQ3-0.0B               | 0.0   |                                       |              | ^                          | ^                                  | ^                                  | ^                              |                                 | ^                              | ^                              | ^                               | ^                             | ^                                  |  |                                      |                                  | ^                                 |                     |   | x   |                       | Boring located to                         |
| Q-3              |                          | RSAQ3-0.5B               | 0.5   |                                       |              | X                          | X                                  | X                                  | X                              |                                 | X                              | X                              | X                               | X                             | X                                  |  |                                      | X                                | X                                 |                     |   |   |                       | LOU 41 at probat                          |
| Q-3<br>Q-3       |                          | RSAQ3-0.5BD<br>RSAQ3-10B | 0.5 (dup)<br>10                             |                                       |              | X                          | X                                  | X                                  | X                              |                                 | X                              | X                              | X                               | X<br>Hold                     | X<br>X                             |  |                                      | X                                | X                                 |                     |   |   |                       | GW anticipated at                         |
| Q-3              |                          | RSAQ3-25B                | 25  |                                       |              | X                          | X                                  | Х                                  | X                              |                                 | X                              | X                              | X                               | Hold                          | X                                  |  |                                      |                                  | X                                 |                     |   |   |                       |   |
| Q-3              | 04400                    | RSAQ3-41B                | 41  |                                       |              | Х                          | Х                                  | Х                                  | Х                              |                                 | Х                              | Х                              | Х                               | Х                             | Х                                  |  |                                      |                                  | Х                                 |                     |   | ×   |                       | Device la sete data                       |
| Q-3<br>Q-3       | SA169                    | SA169-0.0B<br>SA169-0.5B | 0.0   |                                       |              | X                          | x                                  | x                                  | х                              |                                 | X                              | x                              | x                               |                               | x                                  |  | -                                    | X                                | X                                 |                     |   | X   |                       | Boring located to<br>(Acid Drain Syster   |
| Q-3              | 1                        | SA169-10B                | 10  |                                       |              | Х                          | Х                                  | Х                                  | Х                              |                                 | Х                              | Х                              | Х                               |                               | Х                                  |  |                                      |                                  | Х                                 |                     |   |   |                       | and adjacent to LO                        |
| Q-3<br>Q-3       |                          | SA169-25B<br>SA169-42B   | 25<br>42                                    |                                       | -            | X                          | X<br>X                             | X                                  | X                              |                                 | X                              | X                              | X                               |                               | X                                  |  |                                      |                                  | X                                 |                     |   |   |                       | detailed information<br>GW anticipated at |
| Q-3              | SA193                    | SA193-0.0B               | 0.0   |                                       |              | ~                          | ^                                  | ~                                  | ~                              |                                 | ~                              | ~                              | ~                               |                               | ~                                  |  |                                      |                                  | ^                                 |                     |   | Х   |                       | Boring located to                         |
| Q-3              | -                        | SA193-0.5B               | 0.5   |                                       |              | X                          | X                                  | Х                                  | X                              |                                 | X                              | Х                              | X                               |                               | Х                                  |  |                                      | Х                                | X                                 |                     |   |   |                       | Located in an area                        |
| Q-3<br>Q-3       | -                        | SA193-10B<br>SA193-10BD  | 10<br>10 (dup)                              |                                       |              | X                          | X                                  | X                                  | X                              |                                 | X                              | X                              | X                               |                               | X                                  |  |                                      |                                  | X                                 |                     |   |   |                       | information).<br>GW anticipated at        |
| Q-3              |                          | SA193-25B                | 25  |                                       |              | X                          | x                                  | X                                  | X                              |                                 | X                              | X                              | X                               |                               | X                                  |  |                                      |                                  | X                                 |                     |   |   |                       | orr anticipatou a                         |
| Q-3              | 0.4.044                  | SA193-42B                | 42  |                                       |              | Х                          | Х                                  | Х                                  | Х                              |                                 | Х                              | X                              | Х                               |                               | Х                                  |  |                                      |                                  | Х                                 |                     |   | ×   |                       | Device a la seta data                     |
| Q-3<br>Q-3       | SA211                    | SA211-0.0B<br>SA211-0.5B | 0.0   |                                       |              | X                          | x                                  | x                                  | х                              |                                 | X                              | x                              | x                               |                               | x                                  | x  | x                                    | x                                | x                                 | х                   | X   | X   |                       | Boring located to<br>point of entry to T  |
| Q-3              |                          | SA211-0.5B               | 0.5   | Х                                     |              | Х                          | Х                                  | Х                                  | Х                              |                                 | Х                              | Х                              | X                               |                               | Х                                  | Х  | Х                                    | Х                                | Х                                 | Х                   | Х   |   |                       | GW anticipated at                         |
| Q-3<br>Q-3       |                          | SA211-11B<br>SA211-25B   | 11<br>25                                    |                                       |              | X                          | X                                  | X                                  | X                              |                                 | X                              | X                              | X                               |                               | X<br>X                             |  |                                      |                                  | X                                 | X                   | X   |   |                       | Boring added per<br>Pipeline invert for   |
| Q-3              | -                        | SA211-23B<br>SA211-43B   | 43  |                                       |              | X                          | X                                  | X                                  | X                              |                                 | X                              | X                              | X                               |                               | X                                  | Х  | Х                                    |                                  | X                                 | Х                   | Х   |   |                       | r ipeline inventior                       |
| Q-3              | SA212                    | SA212-0.0B               | 0.0   |                                       |              |                            |                                    |                                    |                                |                                 |                                |                                |                                 |                               |                                    |  |                                      | V                                |                                   |                     |   | Х   |                       | Boring located to                         |
| Q-3<br>Q-3       |                          | SA212-0.5B<br>SA212-13B  | 0.5   |                                       |              | X                          | X<br>X                             | X                                  | X                              |                                 | X                              | X                              | X                               |                               | X                                  |  |                                      | Х                                | X                                 |                     |   |   |                       | GW anticipated at<br>Pipeline invert for  |
| Q-3              |                          | SA212-13B                | 13  |                                       |              | Х                          | Х                                  | Х                                  | Х                              |                                 | Х                              | Х                              | Х                               |                               | Х                                  |  |                                      |                                  | Х                                 |                     |   |   |                       | Boring added per                          |
| Q-3<br>Q-3       |                          | SA212-30B<br>SA212-44B   | 30<br>44                                    |                                       |              | X                          | X                                  | X                                  | X                              |                                 | X                              | X                              | X                               |                               | X<br>X                             |  |                                      |                                  | X                                 |                     |   |   |                       |   |
| Q-3<br>Q-4       | SA213                    | SA212-44B<br>SA213-0.0B  | 0.0   |                                       |              | ^                          | ^                                  | ^                                  | ^                              |                                 | ^                              | ^                              | ^                               |                               | ^                                  |  |                                      |                                  | ^                                 |                     |   | х   |                       | Boring located to                         |
| Q-4              |                          | SA213-0.5B               | 0.5   |                                       |              | X                          | X                                  | Х                                  | X                              |                                 | X                              | X                              | X                               |                               | X                                  |  |                                      | Х                                | X                                 |                     |   |   |                       | GW anticipated at                         |
| Q-4<br>Q-4       |                          | SA213-14B<br>SA213-14B   | 14<br>14                                    | x                                     |              | X                          | X                                  | X                                  | X                              |                                 | X                              | X                              | X                               |                               | X<br>X                             |  |                                      |                                  | X                                 |                     |   |   |                       | Pipeline invert for<br>Boring added per   |
| Q-4              | 1                        | SA213-30B                | 30  |                                       |              | Х                          | Х                                  | Х                                  | Х                              |                                 | Х                              | Х                              | Х                               |                               | Х                                  |  |                                      |                                  | X                                 |                     |   |   |                       | p   |
| Q-4<br>Q-4       | SA214                    | SA213-44B<br>SA214-0.0B  | 44<br>0.0                                   |                                       |              | Х                          | X                                  | Х                                  | Х                              |                                 | Х                              | Х                              | Х                               |                               | Х                                  |  |                                      |                                  | х                                 |                     |   | x   |                       | Boring located to e                       |
| Q-4              | 0/1214                   | SA214-0.5B               | 0.5   |                                       |              | х                          | х                                  | Х                                  | Х                              |                                 | Х                              | Х                              | Х                               | х                             | Х                                  |  |                                      | Х                                | Х                                 |                     |   | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~     |                       | potential worst-cas                       |
| Q-4              | -                        | SA214-15B                | 15  |                                       |              | X                          | X                                  | X                                  | X                              |                                 | X                              | X                              | X                               | X                             | X                                  |  |                                      |                                  | X                                 |                     |   |   |                       | GW anticipated at                         |
| Q-4<br>Q-4       |                          | SA214-30B<br>SA214-43B   | 30<br>43                                    |                                       |              | X                          | X                                  | X                                  | X                              |                                 | X                              | X                              | X                               | Hold<br>X                     | X                                  |  |                                      |                                  | X                                 |                     |   |   |                       | Pipeline invert for<br>Boring added per   |
| Q-4              | RSAQ4                    | RSAQ4-0.0B               | 0.0   |                                       |              |                            |                                    |                                    |                                |                                 |                                |                                |                                 |                               |                                    |  |                                      |                                  |                                   |                     |   | Х   |                       | Boring located to                         |
| Q-4<br>Q-4       | 1                        | RSAQ4-0.5B<br>RSAQ4-10B  | 0.5   |                                       |              | X                          | X                                  | X                                  | X                              |                                 | X                              | X                              | X                               | X<br>X                        | X<br>X                             |  |                                      | X                                | X                                 |                     |   |   |                       | in a low spot to ev<br>GW anticipated at  |
| Q-4              | 1                        | RSAQ4-10B                | 10  |                                       | Х            | Х                          | Х                                  | Х                                  |                                |                                 | Х                              | X                              | Х                               | Х                             | Х                                  | Х  | Х                                    |                                  | Х                                 | Х                   | Х   |   | Х                     | 10-Foot SPLP sar                          |
| Q-4<br>Q-4       |                          | RSAQ4-20B                | 20  |                                       | v            | X                          | X                                  | X                                  | Х                              |                                 | X                              | X                              | X                               | Hold                          | X                                  | v  | ~                                    |                                  | X                                 | v                   | v   |   | v                     | SPLP sample mus                           |
| Q-4<br>Q-4       | 1                        | RSAQ4-32B<br>RSAQ4-32B   | 32<br>32                                    |                                       | X            | X                          | X                                  | X                                  | x                              |                                 | X                              | X                              | X                               | X                             | X                                  | X  | X                                    | -                                | X                                 | X                   | X   |   | X                     | SPLP sample mus                           |
| Q-4              | SA84                     | SA84-0.0B                | 0.0   |                                       |              |                            |                                    |                                    |                                |                                 |                                |                                |                                 |                               |                                    |  |                                      |                                  |                                   |                     |   | Х   |                       | Boring located to                         |
| Q-4<br>Q-4       | 1                        | SA84-0.5B<br>SA84-10B    | 0.5   |                                       |              | X                          | X<br>X                             | X                                  | X                              |                                 | X                              | X                              | X                               | X                             | X                                  | +  |                                      | X                                | X                                 | Х                   | Х   |   |                       | of LOU 60 (Acid D<br>adjacent to LOU 6    |
| Q-4              | 1                        | SA84-10BD                | 10 (dup)                                    |                                       |              | Х                          | X                                  | Х                                  | Х                              |                                 | Х                              | X                              | X                               | Х                             | Х                                  |  |                                      |                                  | X                                 |                     |   | 1   |                       | GW anticipated at                         |
| Q-4              |                          | SA84-25B                 | 25  |                                       |              | X                          | X                                  | X                                  | X                              |                                 | X                              | X                              | X                               | Hold                          | X                                  |  |                                      |                                  | X                                 | v                   | v   |   |                       |   |
| Q-4<br>Q-4       | SA101                    | SA84-43B<br>SA101-0.0B   | 43  |                                       |              | Х                          | Х                                  | X                                  | Х                              | 1                               | Х                              | Х                              | X                               | X                             | Х                                  | +  | +                                    | +                                | Х                                 | Х                   | Х   | X   |                       | Boring located to a                       |
| Q-4              | 1                        | SA101-0.5B               | 0.5   |                                       |              | Х                          | Х                                  | х                                  | х                              |                                 | Х                              | х                              | Х                               | х                             | х                                  | х  | х                                    | х                                | х                                 |                     |   | L   |                       | (Former PCB Stor                          |
| Q-4<br>Q-4       | 4                        | SA101-0.5B<br>SA101-10B  | 0.5   | X                                     |              | X                          | X<br>X                             | X                                  | X                              |                                 | X                              | X                              | X                               | X<br>X                        | X<br>X                             | X  | X                                    | X                                | X                                 |                     |   |   |                       | LOU 27 consists of<br>Assessment throu    |
| Q-4<br>Q-4       | 1                        | SA101-10B<br>SA101-25B   | 25  | · · · · · · · · · · · · · · · · · · · |              | X                          | X                                  | X                                  | X                              |                                 | X                              | X                              | X                               | Hold                          | X                                  |  |                                      | 1                                | X                                 |                     | <u> </u>                                      |   |                       | releases in from L                        |
| Q-4              |                          | SA101-42B                | 42  |                                       |              | Х                          | Х                                  | Х                                  | Х                              | -                               | Х                              | X                              | X                               | X                             | Х                                  | X  | Х                                    |                                  | Х                                 |                     |   |   |                       |   |
| Q-4<br>Q-4       | SA120                    | SA120-0.0B<br>SA120-0.5B | 0.0   |                                       |              | x                          | x                                  | x                                  | x                              |                                 | x                              | x                              | x                               |                               | x                                  |  | _                                    | x                                | x                                 |                     |   | X   |                       | Boring located to<br>area-wide coverage   |
| Q-4              | 1                        | SA120-10B                | 10  |                                       |              | Х                          | Х                                  | Х                                  | Х                              |                                 | Х                              | X                              | Х                               |                               | Х                                  |  |                                      |                                  | Х                                 |                     |   |   |                       | worst case locatio                        |
| Q-4              | 4                        | SA120-25B                | 25  |                                       |              | X                          | X                                  | X                                  | X                              |                                 | X                              | X                              | X                               |                               | X                                  |  |                                      |                                  | X                                 |                     |   |   |                       | GW anticipated at                         |
| Q-4<br>Q-4       | SA121                    | SA120-43B<br>SA121-0.0B  | 43<br>0.0                                   |                                       |              | Х                          | Х                                  | X                                  | Х                              | 1                               | Х                              | Х                              | X                               |                               | Х                                  | +  | +                                    | +                                | Х                                 |                     |   | X   |                       | Boring located to e                       |
| Q-4              | 1                        | SA121-0.5B               | 0.5   |                                       |              | Х                          | Х                                  | Х                                  | Х                              |                                 | Х                              | Х                              | Х                               | Х                             | Х                                  |  |                                      | Х                                | Х                                 |                     |   |   |                       | and the boring is r                       |
| Q-4<br>Q-4       | -                        | SA121-0.5BD<br>SA121-10B | 0.5 (dup)<br>10                             |                                       |              | X                          | X                                  | X                                  | X                              |                                 | X                              | X                              | X                               | X                             | X<br>X                             |  |                                      | X                                | X                                 |                     |   |   |                       | LOU 26 and 4 at a<br>releases. GW ant     |
| Q-4              | 1                        | SA121-25B                | 25  |                                       |              | Х                          | Х                                  | Х                                  | х                              |                                 | Х                              | X                              | X                               | Hold                          | Х                                  |  |                                      |                                  | Х                                 |                     |   |   |                       | . Sicuses. Giv dill                       |
| Q-4              | 1                        | SA121-44B                | 44  |                                       |              | Х                          | Х                                  | Х                                  | Х                              |                                 | Х                              | Х                              | Х                               | Х                             | Х                                  |  |                                      |                                  | Х                                 |                     |   |   |                       |   |

Soil Sampling and Analytical Plan for Area IV Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

Page 1 of 5

| Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions.)  |
|---|
| to evaluate soils for area-wide coverage and not associated with any specific LOU.  |
| at ~37 feet bgs.  |
| to evaluate soils for area-wide coverage and not associated with any specific LOU.<br>at ~41 feet bgs.  |
| to evaluate LOU 41 (Tenant stains north of Unit 1). Random boring located within footprint of<br>able location of former Tenant stains (See LOU 41 summary for detailed information).<br>at ~43 feet bgs.   |
| to evaluate LOU 41 (Tenant stains north of Unit 1) and a pipeline segment of LOU 60<br>tem). Boring located within footprint of LOU 41 at probable location of former tenant stains<br>LOU 60 at a high risk for release location (manhole) (See LOU 41 and 60 summaries for<br>tion).  |
| at ~44 feet bgs.<br>to evaluate LOU 65a (Ebony Construction Sites) and soils north (downgradient) of Unit 1.<br>rea previously described as the location of a release (See LOU 65a summary for detailed<br>at ~44 feet bgs.   |
| to evaluate LOU 59 (storm Sewer System) and LOU 60 (acid Drain System). Located to evaluate<br>Tronox for LOU 60 piping and adjacent to LOU 59 piping at same location.<br>at ~45 feet bgs.<br>er NDEP June 18, 2008 letter.<br>or this boirng is estimated at 10 feet bgs.   |
| to evaluate LOU 60 (Acid Drain System). Located at a high risk release location (junction of multiple piping).<br>at ~46 feet bgs.<br>or this boirng is estimated at 12 feet bgs.<br>er NDEP June 18, 2008 letter.  |
| to evaluate LOU 60 (Acid Drain System). Located at a high risk release location (junction of multiple piping).<br>at -46 feet bgs.<br>or this boirng is estimated at 13 feet bgs.<br>er NDEP June 18, 2008 letter.  |
| to evaluate LOU 59 (Storm Sewer System) and LOU 60 (Acid Drain System). For LOU 60 located at a<br>case release point (junction of multiple pipes) and for general coverage of LOU 59 piping.<br>at ~45 feet bgs.   |
| or this boirng is estimated at 14 feet bgs.<br>er NDEP June 18, 2008 letter.<br>o evaluate northern area of LOU 4 (Hardesty Chemical Company Site). Random boring located<br>evaluate the western portion of this LOU for potential worst case releases.  |
| at ~34 feet bgs.<br>sample must be of Quaternary Alluvium (Qal) soils.<br>nust be of Muddy Creek soils & must be dry. If soils not dry, don't collect sample. Choose another boring.  |
| to evaluate southern area of LOU 4 (Hardesty Chemical Company Site) and a pipeline segment<br>I Drain System). Located at a high risk spot for surface releases from LOU 4 and directly<br>0 60 to evaluate potential pipeline releases.<br>at ~45 feet bgs. Pipeline invert for this boring is estimated at 8 feet bgs.  |
| to evaluate southern area of LOU 4 (Hardesty Chemical Company Site) and LOU 27<br>torage Area). Located downslope of LOU 27 to evaluate potential runoff. The surface of<br>s of concrete in good condition and this area is currently used to store old equipment.<br>ough LOU 27 would compromise containment. Boring also locate to evaluate potential surface<br>to LOU 4. Pipeline invert for this borng is estimated at 8 feet bgs. GW estimated at ~45 feet bgs. |
| o evaluate LOU 26 (Trash Storage Area) and is north (downgradient) from Unit 1 for general<br>rage. Located within the footprint of LOU 26 at a location considered to represent the<br>tion for the assessment of potential releases.<br>at ~45 feet bgs.  |
| to evaluate LOU 26 (Trash Storage Area), LOU 4 (former Hardesty Chemical Company Site),<br>s north (downgradient) of Unit 2 for general area coverage. Located within the footprint of<br>tt a location considered to represent the worst case location for the assessment of potential<br>anticipated at ~46 feet bgs.   |
|   |

|                                 | PTS<br>Santa Fe Springs,<br>CA | EMSL Westmont,<br>NJ                        | Alpha<br>Analytical<br>Sparks, NV | STL<br>Denver, CO   | GEL Charleston,<br>SC             |                                  | CAS<br>Houstor |                                  |                                    |                               |                                 | bia Analytical<br>Rochester, N |                                   |                                  |                                |                                    | CAS<br>So, WA                      |                            |                |                                 | Laboratory :                                | L                          |                          |                  |
|---------------------------------|--------------------------------|---|-----------------------------------|---------------------|-----------------------------------|----------------------------------|----------------|----------------------------------|------------------------------------|-------------------------------|---------------------------------|--------------------------------|-----------------------------------|----------------------------------|--------------------------------|------------------------------------|------------------------------------|----------------------------|----------------|---------------------------------|---|----------------------------|--------------------------|------------------|
|                                 | Geotechnical<br>Tests          | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Organic<br>Acids <sup>12.</sup>   | OPPs <sup>11.</sup> | Radio-<br>nuclides <sup>10.</sup> | Dioxins/<br>Furans <sup>9.</sup> | (EDA           | PCBs <sup>8.</sup><br>(EPA 8082) | SVOCs <sup>7.</sup><br>(EPA 8270C) | OCPs <sup>6.</sup><br>(8081A) | Total<br>Cyanide<br>(EPA 9012A) | Wet<br>Chem <sup>5.</sup>      | VOCs <sup>3.</sup><br>(EPA 8260B) | TPH GRO<br>(EPA 8015B)           | TPH-<br>DRO/ORO<br>(EPA 8015B) | Hex Cr <sup>4.</sup><br>(EPA 7199) | Metals <sup>2.</sup><br>(EPA 6020) | Perchlorate<br>(EPA 314.0) | SPLP<br>Sample | Matrix<br>Spike/MSD<br>uplicate | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Sample ID<br>Number        | Phase B<br>Boring<br>No. | Grid<br>Location |
|                                 | 2 Brass Tubes                  | <u>≥</u> 1 kg<br>in plastic bag             | 1-4 oz Jar                        | 1-4 oz Jar          | 1-250 ml jar<br>(plastic)         | z Jar                            | 1 - 4 oz       |                                  |                                    |                               | 2 - 4 oz. Jars                  |                                | 3 VOA vials<br>(TerraCore Kit)    | 1- 40 ml VOA<br>vial w/ methanol | oz Jar                         | 1 - 4                              | oz Jar                             | 1 - 4                      | er Sample:     | Containers p                    | Number of                                   |                            |                          |                  |
|                                 |                                |   |                                   | 7).                 | in Area IV (U-                    | nost grid                        | eastern m      | h the south                      | d ending wit                       | IV (P-4) ar                   | t grid in Area                  | vestern mos                    | on the northy                     | ing point is                     | ate A - Start                  | own on Pl                          | location as sh                     | ized by grid               | are organ      | Borings                         |   |                            |                          |                  |
| oring locate                    |                                | X   |                                   |                     | x                                 | х                                |                |                                  | x                                  | x                             | x                               | х                              | х                                 |                                  | х                              | x                                  | х                                  | х                          |                |                                 | 0.0   | SA138-0.0B<br>SA138-0.5B   | SA138                    | Q-4<br>Q-4       |
|                                 |                                |   |                                   |                     | Х                                 |                                  |                |                                  | Х                                  | Х                             | X                               | X                              | X                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 10  | SA138-10B                  |                          | Q-4              |
|                                 |                                |   |                                   |                     | X<br>X                            |                                  |                |                                  | X<br>X                             | X<br>Hold                     | X<br>X                          | X<br>X                         | X X                               |                                  | X<br>X                         | X<br>X                             | X                                  | X<br>X                     |                |                                 | 10 (dup)<br>30                              | SA138-10BD<br>SA138-30B    |                          | Q-4              |
|                                 |                                |   |                                   |                     | X                                 |                                  |                |                                  | X                                  | X                             | X                               | X                              | X                                 |                                  |                                | X                                  | X                                  | X                          |                |                                 | 45  | SA138-45B                  |                          | Q-4              |
| oring locate<br>egment of L     |                                | X   | x                                 | x                   | x                                 | x                                |                |                                  | x                                  | x                             | x                               | X                              | X                                 |                                  | X                              | x                                  | X                                  | X                          |                |                                 | 0.0   | SA148-0.0B<br>SA148-0.5B   | SA148                    | Q-4<br>Q-4       |
| urface relea                    |                                |   | ^                                 | ^                   | X                                 |                                  |                |                                  | X                                  | X                             | X                               | <u> </u>                       | X                                 |                                  | X                              | x                                  | X                                  | X                          |                |                                 | 10  | SA148-0.5B<br>SA148-10B    |                          | Q-4<br>Q-4       |
| 0-Foot SPL                      | X                              |   | Х                                 | Х                   | X                                 |                                  | Х              | Х                                | X                                  | X                             | X                               | X                              | X                                 |                                  | N N                            | X                                  | X                                  | X                          | Х              |                                 | 10  | SA148-10B                  |                          | Q-4              |
| W anticipat<br>PLP sampl        | x                              |   | Х                                 | х                   | X<br>X                            |                                  | х              | х                                | X<br>X                             | Hold<br>X                     | X<br>X                          | X<br>X                         | X                                 |                                  | X                              | X<br>X                             | X                                  | X<br>X                     | х              |                                 | 30<br>35                                    | SA148-30B<br>SA148-35B     |                          | Q-4<br>Q-4       |
|                                 |                                |   | Х                                 | Х                   | Х                                 |                                  |                |                                  | Х                                  | Х                             | Х                               | Х                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 45  | SA148-45B                  |                          | Q-4              |
| oring locate<br>lardesty Ch     |                                | X   |                                   |                     | Х                                 | x                                |                |                                  | x                                  | x                             | X                               | X                              | X                                 |                                  | X                              | x                                  | Х                                  | x                          |                |                                 | 0   | SA203-0.0B<br>SA203-0.5B   | SA203                    | Q-4<br>Q-4       |
| ase release                     |                                |   |                                   |                     | Х                                 |                                  |                |                                  | Х                                  | Х                             | Х                               | X                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 10  | SA203-10B                  |                          | Q-4              |
| W anticipat                     |                                |   |                                   |                     | x<br>x                            |                                  |                |                                  | X<br>X                             | Hold<br>X                     | X<br>X                          | X                              | X                                 |                                  | X<br>X                         | X<br>X                             | X X                                | X                          |                |                                 | 30<br>46                                    | SA203-30B<br>SA203-46B     |                          | Q-4<br>Q-4       |
| oring locate                    |                                | х   |                                   |                     | ^                                 |                                  |                |                                  | ^                                  | ^                             | ^                               | ^                              | ^                                 |                                  | ^                              | <u>^</u>                           | ^                                  | ^                          |                |                                 | 46  | SA203-46B<br>SA204-0.0B    | SA204                    | Q-4<br>Q-4       |
| ipeline segr                    |                                |   |                                   |                     | X                                 | Х                                |                |                                  | X                                  | X                             | X                               | X                              | X                                 |                                  | X                              | X                                  | X                                  | X                          |                |                                 | 0.5   | SA204-0.5B                 |                          | Q-4              |
| urface relea<br>oring will be   |                                |   |                                   |                     | X<br>X                            |                                  |                |                                  | X<br>X                             | X<br>X                        | X                               | X<br>X                         | X<br>X                            |                                  | X<br>X                         | X                                  | X<br>X                             | X<br>X                     |                |                                 | 10<br>10 (dup)                              | SA204-10B<br>SA204-10BD    |                          | Q-4<br>Q-4       |
|                                 |                                |   |                                   |                     | Х                                 |                                  |                |                                  | Х                                  | Hold                          | Х                               | Х                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 30  | SA204-30B                  |                          | Q-4              |
| oring locate                    |                                | х   |                                   |                     | Х                                 |                                  |                |                                  | Х                                  | Х                             | Х                               | Х                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 45<br>0                                     | SA204-45B<br>RSAQ5-0.0B    | RSAQ5                    | Q-4<br>Q-5       |
| torage Area                     |                                | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~     |                                   |                     | Х                                 | Х                                |                |                                  | Х                                  | Х                             | Х                               | Х                              | Х                                 |                                  | Х                              | х                                  | Х                                  | Х                          |                |                                 | 0.5   | RSAQ5-0.5B                 | 110/1020                 | Q-5              |
| djacent to L<br>OUs 4 and 2     |                                |   |                                   |                     | X                                 |                                  |                |                                  | X                                  | X X                           | X                               | X                              | X X                               |                                  | X X                            | X                                  | X X                                | X                          |                | V                               | 10  | RSAQ5-10B<br>RSAQ5-10B     |                          | Q-5              |
| JUS 4 and 2                     |                                |   |                                   |                     | X X                               |                                  |                |                                  | x<br>x                             | X<br>Hold                     | X                               | X<br>X                         | X X                               |                                  | XX                             | X                                  | X X                                | X<br>X                     |                | X                               | 10<br>25                                    | RSAQ5-10B<br>RSAQ5-25B     |                          | Q-5<br>Q-5       |
|                                 |                                |   |                                   |                     | Х                                 |                                  |                |                                  | Х                                  | Х                             | Х                               | Х                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 41  | RSAQ5-41B                  |                          | Q-5              |
| oring locate<br>s requested     |                                | X   |                                   |                     | X                                 | x                                |                |                                  | x                                  | х                             | x                               | ×                              | X                                 |                                  | x                              | x                                  | X                                  | X                          |                |                                 | 0   | RSA205-0.0B<br>RSA205-0.5B | SA205                    | Q-5<br>Q-5       |
| hase A com                      |                                |   |                                   |                     | Х                                 |                                  |                |                                  | Х                                  | Х                             | Х                               | X                              | X                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 10  | RSA205-10B                 |                          | Q-5              |
| W anticipat                     |                                |   |                                   |                     | X<br>X                            |                                  |                |                                  | X<br>X                             | Hold<br>X                     | X<br>X                          | X                              | X                                 |                                  | X<br>X                         | X                                  | X<br>X                             | X<br>X                     |                |                                 | 25<br>41                                    | RSA205-25B<br>RSA205-41B   |                          | Q-5<br>Q-5       |
| oring locate                    |                                | х   |                                   |                     | ^                                 |                                  |                |                                  | ^                                  | ^                             | ^                               | ^                              | ^                                 |                                  | ^                              | ^                                  | ~                                  | ^                          |                |                                 | 0.0   | SA191-0.0B                 | SA191                    | Q-5              |
| W anticipate                    |                                |   |                                   |                     | X                                 | Х                                |                |                                  | Х                                  | X                             | X                               | Х                              | X                                 |                                  | X                              | X                                  | X                                  | X                          |                |                                 | 0.5   | SA191-0.5B                 |                          | Q-5              |
|                                 |                                |   |                                   |                     | X                                 |                                  |                |                                  | X                                  | X<br>Hold                     | X<br>X                          | X<br>X                         | X                                 |                                  | X<br>X                         | X                                  | X                                  | X                          |                |                                 | 10<br>25                                    | SA191-10B<br>SA191-25B     |                          | Q-5<br>Q-5       |
|                                 |                                |   |                                   |                     | Х                                 |                                  |                |                                  | Х                                  | Х                             | Х                               | Х                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 40  | SA191-40B                  |                          | Q-5              |
| oring locate<br>and augered     |                                |   |                                   |                     | X                                 | x                                |                |                                  |                                    | x                             | x                               | x                              | X                                 |                                  | x                              | x                                  | X                                  | X                          |                |                                 | 0.0   | SA156-0.0B<br>SA156-2B     | SA156                    | Q-5<br>Q-5       |
| rill not be col                 |                                |   |                                   |                     |                                   |                                  |                |                                  |                                    |                               |                                 |                                |                                   |                                  |                                |                                    |                                    |                            |                |                                 |   |                            |                          | Q-5              |
| ample will be<br>Init 1, and fo |                                | х   |                                   |                     |                                   |                                  |                |                                  |                                    |                               |                                 |                                |                                   |                                  |                                |                                    |                                    |                            |                |                                 | 0.0   | RSAR3-0.0B                 | RSAR3                    | Q-5<br>R-3       |
| cated direct                    |                                | ~   |                                   |                     | х                                 | Х                                |                |                                  | Х                                  | Х                             | Х                               | Х                              | Х                                 |                                  | Х                              | Х                                  | х                                  | Х                          |                |                                 | 0.5   | RSAR3-0.5B                 | 110/1110                 | R-3              |
| .5-Foot SPL                     | X                              |   | Χ                                 | Х                   | X X                               |                                  | X              | X                                | X<br>X                             | X<br>Hold                     | X<br>X                          | X<br>X                         | X X                               |                                  | x                              | X<br>X                             | X X                                | X<br>X                     | X              |                                 | 0.5   | RSAR3-0.5B<br>RSAR3-10B    |                          | R-3<br>R-3       |
|                                 |                                |   |                                   |                     | X                                 |                                  |                |                                  | X                                  | Hold                          | X                               | X                              | X                                 |                                  | X X                            | X                                  | ×                                  | X                          |                |                                 | 25  | RSAR3-25B                  |                          | R-3              |
| PLP sample                      | X                              |   | Х                                 | Х                   | X                                 |                                  | Х              | Х                                | X                                  | X                             | X                               | X                              | X                                 |                                  | X                              | X                                  | X                                  | X                          | Х              |                                 | 35<br>38                                    | RSAR3-35B<br>RSAR3-38B     |                          | R-3<br>R-3       |
| oring locate                    |                                | х   |                                   |                     | Х                                 |                                  |                |                                  | Х                                  | ~                             |                                 | Х                              | X                                 |                                  | X                              | ~                                  | Х                                  | Χ                          |                |                                 | 0.0   | SA110-0.0B                 | SA110                    | R-3              |
| W anticipate                    |                                |   |                                   |                     | X                                 | Х                                |                |                                  | X                                  |                               | X                               | X                              | X                                 |                                  | X                              | X                                  | X                                  | X                          |                |                                 | 0.5   | SA110-0.5B                 |                          | R-3              |
|                                 |                                |   |                                   |                     | X<br>X                            |                                  |                |                                  | X<br>X                             |                               | X<br>X                          | <u> </u>                       | X<br>X                            |                                  | X<br>X                         | X<br>X                             | X X                                | X<br>X                     |                |                                 | 10<br>25                                    | SA110-10B<br>SA110-25B     |                          | R-3<br>R-3       |
|                                 |                                |   |                                   |                     | Х                                 |                                  |                |                                  | Х                                  |                               | X                               | X                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 37  | SA110-37B                  |                          | R-3              |
| oring locate                    |                                | Х   |                                   |                     | Х                                 |                                  |                |                                  | Х                                  |                               | Х                               | X                              | Х                                 |                                  | Х                              | х                                  | Х                                  | Х                          |                |                                 | 37 (dup)<br>0.0                             | SA110-37BD<br>SA192-0.0B   | SA192                    | R-3<br>R-3       |
| nd not asso                     |                                | ~   | Х                                 | Х                   | Х                                 | х                                | х              | х                                | Х                                  | Х                             | Х                               | Х                              | Х                                 |                                  | Х                              | х                                  | Х                                  | Х                          |                |                                 | 0.5   | SA192-0.5B                 | 0.1102                   | R-3              |
| cated in acc                    |                                |   | X                                 | X                   | X<br>X                            |                                  |                |                                  | X                                  | X<br>X                        | X                               | X                              | X<br>X                            |                                  | X<br>X                         | X                                  | X                                  | X                          |                | v                               | 10  | SA192-10B<br>SA192-10B     |                          | R-3              |
| rganic acids                    |                                |   |                                   | X                   | X                                 |                                  |                |                                  | X                                  | Hold                          | X                               | X                              | X                                 |                                  | X X                            | X                                  | X                                  | X                          |                | X                               | 10<br>25                                    | SA192-10B<br>SA192-25B     |                          | R-3<br>R-3       |
|                                 |                                |   | Х                                 | Х                   | Х                                 |                                  | Х              | Х                                | Х                                  | Х                             | Х                               | Х                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 39  | SA192-39B                  |                          | R-3              |
| oring locate<br>ocations for    |                                | X   | х                                 | х                   | х                                 | x                                | x              | x                                | x                                  | x                             | x                               | x                              | X                                 |                                  | х                              | x                                  | х                                  | х                          |                |                                 | 0.0   | SA209-0.0B<br>SA209-0.5B   | SA209                    | R-3<br>R-3       |
| W anticipat                     |                                |   | Х                                 | Х                   | Х                                 |                                  |                |                                  | Х                                  | Х                             | Х                               | Х                              | X                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 10  | SA209-10B                  |                          | R-3              |
|                                 |                                |   | Х                                 | X                   | X                                 | T                                |                |                                  | X<br>X                             | X<br>Hold                     | X<br>X                          | X                              | X                                 |                                  | <u>х</u><br>х                  | X<br>X                             | X<br>X                             | X                          |                |                                 | 10 (dup)<br>25                              | SA209-10BD<br>SA209-25B    |                          | R-3<br>R-3       |
|                                 |                                |   | X                                 | x                   | X X                               |                                  | x              | x                                |                                    | X                             | X                               | X                              | X X                               |                                  | X                              | X                                  | X X                                | X                          |                |                                 | 25<br>35                                    | SA209-35B                  |                          | R-3<br>R-3       |
| oring locate                    |                                | X   |                                   |                     | ~                                 |                                  |                |                                  |                                    |                               |                                 |                                |                                   |                                  |                                |                                    |                                    |                            |                |                                 | 0.0   | RSAR4-0.0B                 | RSAR4                    | R-4              |
| overage. Rand adjacent          |                                |   |                                   |                     | X<br>X                            | X                                |                |                                  | X<br>X                             | X<br>Hold                     | X                               | X<br>X                         | X<br>X                            |                                  | X<br>X                         | X                                  | X X                                | X<br>X                     |                |                                 | 0.5   | RSAR4-0.5B<br>RSAR4-10B    |                          | R-4<br>R-4       |
| W anticipat                     |                                |   |                                   |                     | Х                                 |                                  |                |                                  | Х                                  | Hold                          | Х                               | Х                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 10 (dup)                                    | RSAR4-10BD                 |                          | R-4              |
|                                 |                                |   |                                   |                     | X<br>X                            |                                  |                |                                  | X<br>X                             | Hold<br>X                     | X<br>X                          | X<br>X                         | X                                 |                                  | X<br>X                         | X                                  | X<br>X                             | X<br>X                     |                |                                 | 25<br>37                                    | RSAR4-25B<br>RSAR4-37B     |                          | R-4<br>R-4       |
| oring locate                    |                                | х   |                                   |                     |                                   |                                  |                |                                  |                                    |                               |                                 |                                |                                   |                                  |                                |                                    |                                    |                            |                |                                 | 0.0   | SA29-0.0B                  | SA29                     | R-4              |
| eneral cover                    |                                |   |                                   |                     | X<br>X                            | Х                                |                |                                  | X<br>X                             | X<br>X                        | X<br>X                          | X<br>X                         | X                                 |                                  | X<br>X                         | X<br>X                             | X<br>X                             | X<br>X                     |                |                                 | 0.5<br>10                                   | SA29-0.5B<br>SA29-10B      |                          | R-4<br>R-4       |
| W anticipate                    |                                |   |                                   |                     | X X                               |                                  |                |                                  | X<br>X                             | X<br>Hold                     | X                               | X                              | X X                               |                                  | X                              | X                                  | X X                                | X                          |                |                                 | 10<br>25                                    | SA29-10B<br>SA29-25B       |                          | <br>R-4          |
|                                 |                                |   |                                   |                     | Х                                 |                                  |                |                                  | Х                                  | Х                             | Х                               | Х                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 40  | SA29-40B                   |                          | R-4              |
| oring located<br>ystem) and f   |                                | X   |                                   |                     | х                                 | Х                                |                |                                  | x                                  |                               | x                               | x                              | x                                 |                                  | x                              | x                                  | X                                  | x                          |                |                                 | 0.0   | SA111-0.0B<br>SA111-0.5B   | SA111                    | R-4<br>R-4       |
| or LOU 60 pi                    |                                |   |                                   |                     | Х                                 |                                  |                |                                  | Х                                  |                               | Х                               | Х                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 10  | SA111-10B                  |                          | R-4              |
| W anticipate                    |                                |   |                                   |                     | X X                               |                                  |                |                                  | X<br>X                             |                               | X                               | X                              | X X                               |                                  | X<br>X                         | X                                  | X X                                | X X                        |                | х                               | 25<br>25                                    | SA111-25B<br>SA111-25B     |                          | <br>R-4          |

Soil Sampling and Analytical Plan for Area IV Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

Page 2 of 5

| Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions.)   |
|--|
|  |
| to evaluate northern area of LOU 4 (former Hardesty Chemical Company Site).<br>I at ~47 feet bgs.  |
|  |
| to evaluate southern area of LOU 4 (former Hardesty Chemical Company Site) and a pipeline<br>U 60 (Acid Drain System). Located on the northern edge of LOU 4 to evaluate potential<br>es and also located above LOU 60 to evaluate potential pipeline releases.  |
| sample must be of Quaternary Alluvium (Qal) soils.<br>I at -47 feet bgs.<br>nust be of Muddy Creek soils & must be dry. If soils not dry, don't collect sample. Choose another boring.   |
| to evaluate pipeline route connecting northern and southern areas of LOU 4 (former<br>nical Company Site). Located along the former pipeline route to evaluate potential worst<br>a jog in the line.   |
| i at ~48 feet bgs.   |
| to evaluate southern area of LOU 4 (former Hardesty Chemical Company Site) and a<br>nt of LOU 60 (Acid Drain System). Located to evaluate potential worst case location for  |
| si LOU 4. Also directly adjacent to LOU 60 to evaluate polential Most case location foil<br>si LOU 4. Also directly adjacent to LOU 60 to evaluate potential historical pipeline releases.<br>onverted into well M-143. GW anticipated at ~47 feet bgs.  |
|  |
| to evaluate LOU 4 (Former Hardesty Chemical Company Site), LOU 28 (Hazardous Waste<br>LOU 59 (Storm Sewer Drain), and for area-wide coverage. Random boring located directly   |
| U 59 pipeline to evaluate potential pipeline releases and for general stepout coverage for<br>GW anticipated at ~43 feet bgs.  |
|  |
| as northward stepout boring from Phase A boring SA04 (for Hex Cr) to evaluate LOU 59<br>y NDEP in comments on Phase A Investigation report and LOU 28 and 59. Located to satisfy NDEP<br>ents and to evaluate potential pipeline releases from LOU 59  |
| i at ~43 feet bgs.   |
| to evaluate LOU 28 (Hazardous Waste Storage Area)  |
| i at ~42 feet bgs.   |
|  |
| to evaluate LOU 28 (Hazardous Waste Storage Area). Containment liner will be cut and the boring will I<br>to 2-ft bgs (below original grade) to collect a soil sample, and the liner will be repaired. Deeper soil samp<br>cted with the use of powered drilling equiment to avoid further damage to the contaiment liner. No asbestos<br>collected.   |
| general area-wide coverage. Random boring<br>adjacent to LOU 60 at a high risk location (inlet). GW anticipated at ~40 feet bgs.<br>sample must be of Quaternary Alluvium (Qal) soils.   |
| nust be of Muddy Creek soils & must be dry. If soils not dry, don't collect sample. Choose another boring.   |
| to evaluate Unit 1 and for general area-wide coverage and not associated with a specific LOI<br>I at ~39 feet bgs.   |
|  |
| to evaluate LOU 59 (Storm Sewer Drain), LOU 65b (former Buckles Construction Company Site) and Unit 1<br>ated with a specific LOU. Located directly adjacent to LOU 59 pipeline to evaluate potential releases. Also<br>ssible area of LOU 65b to evaluate surface releases, and within Unit 1 for area coverage. OPPs and<br>vere added to the SAP to evaluate for potential impacts from offsite sources from the west per NDEP.<br>i at ~41 feet bgs. |
| to evaluate LOU 59 (storm Sewer System) and LOU 60 (acid Drain System). Located at high risk release<br>th LOUs (junctions and bends in piping).<br>I at ~37 feet bgs.   |
|  |
| to evaluate LOU 25 (Process Hardware Storage Area), LOU 59 (Storm Sewer System), and for Unit 2 area<br>dom during located at a low spot of LOU 25 to evaluate worst-case scenario surface releases in LOU 25<br>LOU 59 to evaluate piping releases.<br>at ~39 feet bgs.   |
| downslope of LOU 25 (Process Hardware Storage Area) and to evaluate surface runoff releases and for<br>ge of Unit 2.<br>1 at ~42 feet bgs.   |
|  |
| to evaluate LOU 25 (Process Hardware Storage Area), LOU 59 (Storm Sewer Drain), LOU 60 (Acid Drain<br>r Unit 2 area coverage. Located in the central portion of LOU 25 to evaluate surface releases, at the inlet<br>ing to evaluate surface runoff into the inlet, and near LOU 59 piping to evaluate local piping release<br>at -41 feet bgs.  |

|                  |                          |                           | Laboratory :                                | :                               |                |                            | CAS<br>Iso, WA |                                    |                                |                                 |                                | bia Analytical<br>Rochester, N |                                 |                               |                                    |   |                                      | AS<br>ton, TX                    | GEL Charleston,                         | STL<br>Denver, CO   | Alpha<br>Analytical                           | EMSL Westmont,<br>NJ                        | PTS<br>Santa Fe Springs,    |  |
|------------------|--------------------------|---------------------------|---|---------------------------------|----------------|----------------------------|----------------|------------------------------------|--------------------------------|---------------------------------|--------------------------------|--------------------------------|---------------------------------|-------------------------------|------------------------------------|---|--------------------------------------|----------------------------------|---|---------------------|---|---|-----------------------------|--|
| Grid<br>Location | Phase B<br>Boring<br>No. | Sample ID<br>Number       | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Matrix<br>Spike/MSD<br>uplicate | SPLP<br>Sample | Perchlorate<br>(EPA 314.0) |                | Hex Cr <sup>4.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B) | TPH GRO<br>(EPA 8015B           | VOCs <sup>3.</sup>             | Wet<br>Chem <sup>5.</sup>      | Total<br>Cyanide<br>(EPA 9012A) | OCPs <sup>6.</sup><br>(8081A) | SVOCs <sup>7.</sup><br>(EPA 8270C) | PCBs <sup>8.</sup><br>(EPA 8082)        | PCBs <sup>8.</sup><br>(EPA<br>1668A) | Dioxins/<br>Furans <sup>9.</sup> | SC<br>Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup> | Sparks, NV<br>Organic<br>Acids <sup>12.</sup> | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | CA<br>Geotechnical<br>Tests |  |
|                  |                          |                           | Number of                                   | f Containers                    | per Sample     | : 1-                       | 4 oz Jar       | 1 - 4                              | 4 oz Jar                       | 1- 40 ml VOA<br>vial w/ methano | 3 VOA vials<br>(TerraCore Kit) |                                | 2 - 4 oz. Jars                  |                               |                                    |   | 1 - 4                                | oz Jar                           | 1-250 ml jar<br>(plastic)               | 1-4 oz Jar          | 1-4 oz Jar                                    | ≥1 kg<br>in plastic bag                     | 2 Brass Tubes               |  |
|                  | -                        |                           |   | Boring                          | gs are orgar   |                            |                |                                    | late A - Star                  | ting point is                   | on the north                   |                                | -                               | a IV (P-4) a                  | -                                  | vith the sout                           | heastern                             | most gri                         | d in Area IV (U-                        | -7).                |   |   |                             |  |
| R-4<br>R-4       | SA190                    | SA111-39B<br>SA190-0.0B   | 39<br>0.0                                   |                                 |                | Х                          | х              | X                                  | Х                              |                                 | Х                              | Х                              | х                               |                               | X                                  |   |                                      |                                  | Х                                       |                     |   | х   |                             | Boring located to e                        |
| R-4<br>R-4       |                          | SA190-0.5B<br>SA190-10B   | 0.5<br>10                                   |                                 |                | X<br>X                     | X              | X                                  | X<br>X                         |                                 | X<br>X                         | X                              | X<br>X                          |                               | X<br>X                             |   |                                      | Х                                | X                                       |                     |   |   |                             | stepout for LOU 25<br>GW anticipated at    |
| R-4              |                          | SA190-25B                 | 25  |                                 |                | Х                          | Х              | Х                                  | Х                              |                                 | Х                              | X                              | X                               |                               | Х                                  |   |                                      |                                  | Х                                       |                     |   |   |                             | OW anticipated at                          |
| R-4<br>R-4       |                          | SA190-38B<br>SA190-38B    | 38<br>38                                    | x                               |                | X                          | X              | X                                  | X                              |                                 | X                              | X                              | X                               |                               | X                                  |   |                                      |                                  | X                                       |                     |   |   |                             |  |
| R-4              | SA191                    | SA191-0.0B                | 0.0   |                                 |                | x                          | x              | х                                  | X                              |                                 | X                              |                                | x                               | х                             | x                                  |   |                                      | x                                |   |                     |   | Х   |                             | Boring located to e                        |
| R-4<br>R-4       |                          | SA191-0.5B<br>SA191-10B   | 0.5<br>10                                   |                                 |                | X                          | X              | Х                                  | X                              |                                 | X                              | X<br>X                         | X                               | Х                             | X                                  |   |                                      | ^                                | X<br>X                                  |                     |   |   |                             | GW anticipated at                          |
| R-4<br>R-4       |                          | SA191-25B<br>SA191-40B    | 25<br>40                                    |                                 |                | X                          | X              | X                                  | X                              |                                 | X                              | X                              | X                               | Hold<br>X                     | X                                  |   |                                      |                                  | X                                       |                     |   |   |                             |  |
| R-4              |                          | SA191-40BD                | 40 (dup)                                    |                                 |                | X                          | X              | X                                  | X                              |                                 | X                              | X                              | X                               | X                             | X                                  |   |                                      |                                  | X                                       |                     |   |   |                             |  |
| R-5<br>R-5       | RSAR5                    | RSAR5-0.0B<br>RSAR5-0.5B  | 0.0   |                                 |                | x                          | x              | x                                  | х                              |                                 | x                              | x                              | x                               | x                             | x                                  |   |                                      | X                                | x                                       |                     |   | X   |                             | Boring located to e<br>(Acid Drain System  |
| R-5<br>R-5       |                          | RSAR5-10B<br>RSAR5-25B    | 10<br>25                                    |                                 |                | X<br>X                     | X<br>X         | X<br>X                             | X<br>X                         |                                 | X<br>X                         | X<br>X                         | X<br>X                          | Hold<br>Hold                  | X<br>X                             |   |                                      |                                  | X                                       |                     |   |   |                             | 59 and LOU 60 to<br>GW anticipated at      |
| R-5              |                          | RSAR5-40B                 | 40  |                                 |                | х                          | X              | Х                                  | Х                              |                                 | Х                              | х                              | х                               | Х                             | Х                                  |   |                                      |                                  | X                                       |                     |   |   |                             | GW anticipated at                          |
| R-5<br>R-5       | SA135                    | RSAR5-40B<br>SA135-0.0B   | 40  | Х                               |                | Х                          | Х              | Х                                  | Х                              |                                 | Х                              | Х                              | Х                               | Х                             | Х                                  |   |                                      |                                  | Х                                       |                     |   | х   |                             | Boring located with                        |
| R-5              | 0,1100                   | SA135-0.5B                | 0.5   |                                 |                | Х                          | х              | Х                                  | Х                              |                                 | Х                              | X                              | х                               |                               | Х                                  |   |                                      | Х                                | Х                                       |                     |   |   |                             | (conveyor and inlet                        |
| R-5<br>R-5       |                          | SA135-10B<br>SA135-10BD   | 10<br>10 (dup)                              |                                 |                | X                          | X              | X<br>X                             | X                              |                                 | X                              | X                              | X                               |                               | X                                  |   |                                      |                                  | X                                       |                     |   |   |                             | GW anticipated at                          |
| R-5<br>R-5       |                          | SA135-25B<br>SA135-37B    | 25<br>37                                    |                                 |                | X<br>X                     | X<br>X         | X<br>X                             | X                              |                                 | X<br>X                         | X<br>X                         | X<br>X                          |                               | X<br>X                             |   |                                      |                                  | X                                       |                     |   |   |                             |  |
| S-3              | RSAS3                    | RSAS3-0.0B                | 0.0   |                                 |                | ^                          | ^              |                                    | ^                              |                                 | ^                              | ^                              | ^                               |                               | ^                                  |   |                                      |                                  | ^                                       |                     |   | х   |                             | Boring located app                         |
|                  |                          | RSAS3-0.5B<br>RSAS3-0.5BD | 0.5<br>0.5 (dup)                            |                                 |                | X                          | X              | X                                  | X                              |                                 | X                              | X                              | X                               | X<br>X                        | X                                  | X                                       |                                      | X                                | X                                       | X                   | X   |   |                             | PCBs and TPH-DF<br>(WAPA) site per N       |
| S-3              |                          | RSAS3-10B                 | 10  |                                 |                | Х                          | Х              | Х                                  | Х                              |                                 | Х                              | X                              | Х                               | Hold                          | Х                                  | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |                                      |                                  | Х                                       | ~                   |   |   |                             | GW anticipated at                          |
| S-3<br>S-3       |                          | RSAS3-25B<br>RSAS3-44B    | 25<br>44                                    |                                 | -              | X                          | X              | X                                  | X                              |                                 | X                              | X<br>X                         | X                               | Hold<br>X                     | X                                  | x                                       |                                      |                                  | X                                       | х                   | X   |   |                             |  |
| S-4<br>S-4       | RSAS4                    | RSAS4-0.0B<br>RSAS4-0.5B  | 0.0   |                                 |                | x                          | x              | x                                  | x                              |                                 | ×                              | x                              | x                               | x                             | ×                                  | x                                       |                                      | X                                | x                                       |                     |   | X   |                             | Boring located to e<br>boring adiacent to  |
| S-4              |                          | RSAS4-10B                 | 10  |                                 |                | X                          | X              | X                                  | X                              |                                 | X                              | X                              | X                               | Hold                          | X                                  | X                                       |                                      |                                  | X                                       |                     |   |   |                             | and for area-wide of                       |
| S-4<br>S-4       |                          | RSAS4-30B<br>RSAS4-45B    | 30<br>45                                    |                                 |                | X<br>X                     | X<br>X         | X<br>X                             | X                              |                                 | X<br>X                         | X                              | X<br>X                          | Hold<br>Hold                  | X<br>X                             | x                                       |                                      |                                  | X                                       |                     |   |   |                             | site per NDEP. G                           |
| S-4<br>S-5       | RSAS5                    | RSAS4-45BD<br>RSAS5-0.0B  | 45 (dup)<br>0.0                             |                                 |                | Х                          | Х              | Х                                  | Х                              |                                 | Х                              | X                              | Х                               | Х                             | Х                                  | Х                                       |                                      |                                  | Х                                       |                     |   | X   |                             | Boring located 150                         |
| S-5              | NOA00                    | RSAS5-0.5B                | 0.5   |                                 |                | Х                          | Х              | Х                                  | Х                              |                                 | Х                              | Х                              | Х                               | Х                             | Х                                  | Х                                       |                                      | Х                                | Х                                       |                     |   | ~   |                             | associated with a s                        |
| S-5<br>S-5       |                          | RSAS5-10B<br>RSAS5-25B    | 10<br>25                                    |                                 |                | X                          | X              | X<br>X                             | X                              |                                 | X                              | X                              | X                               | Hold<br>Hold                  | X                                  |   |                                      |                                  | X                                       |                     |   |   |                             | SAP to evaluate fo<br>GW anticipated at    |
| S-5              |                          | RSAS5-36B                 | 36  |                                 |                | Х                          | Х              | Х                                  | Х                              |                                 | х                              | Х                              | Х                               | Х                             | Х                                  | X                                       |                                      |                                  | Х                                       |                     |   |   |                             |  |
| S-5<br>S-6       | RSAS6                    | RSAS5-36BD<br>RSAS6-0.0B  | 36 (dup)<br>0.0                             |                                 |                | Х                          | Х              | х                                  | Х                              |                                 | Х                              | Х                              | Х                               | Х                             | Х                                  | Х                                       |                                      |                                  | Х                                       |                     |   | X   |                             | Boring located 100                         |
| S-6<br>S-6       |                          | RSAS6-0.5B<br>RSAS6-10B   | 0.5<br>10                                   |                                 |                | X                          | X              | X                                  | X                              |                                 | X                              | X                              | X                               | X<br>Hold                     | X<br>X                             | Х                                       |                                      | Х                                | X                                       |                     |   |   |                             | with a specific LOL<br>NDEP.               |
| S-6              |                          | RSAS6-25B                 | 25  |                                 |                | Х                          | Х              | Х                                  | Х                              |                                 | Х                              | X                              | X                               | Hold                          | Х                                  |   |                                      |                                  | Х                                       |                     |   |   |                             | GW anticipated at                          |
| S-6<br>S-7       | RSAS7                    | RSAS6-39B<br>RSAS7-0.0B   | 39<br>0.0                                   |                                 |                | Х                          | Х              | X                                  | Х                              |                                 | Х                              | Х                              | Х                               | X                             | Х                                  | Х                                       | -                                    |                                  | Х                                       | -                   |   | х   |                             | Boring located upg                         |
| S-7<br>S-7       |                          | RSAS7-0.5B<br>RSAS7-0.5BD | 0.5<br>0.5 (dup)                            |                                 |                | X                          | X<br>X         | X                                  | X                              |                                 | X<br>X                         | X                              | X                               | X<br>X                        | X<br>X                             | X<br>X                                  |                                      | X<br>X                           | X                                       |                     |   |   |                             | and TPH-DRO/OR<br>GW anticipated at        |
| S-7              |                          | RSAS7-10B                 | 10  |                                 |                | X                          | X              | X                                  | X                              |                                 | X                              | X                              | X                               | Hold                          | Х                                  | ~                                       |                                      | ^                                | X                                       |                     |   |   |                             | GW anticipated at                          |
| S-7<br>S-7       |                          | RSAS7-25B<br>RSAS7-42B    | 25<br>42                                    |                                 |                | X                          | X              | X X                                | X                              |                                 | X                              | X                              | X                               | Hold<br>X                     | X                                  | x                                       |                                      |                                  | X                                       |                     |   |   |                             |  |
| T-3<br>T-3       | RSAT3                    | RSAT3-0.0B<br>RSAT3-0.5B  | 0.0   |                                 |                | x                          | x              | x                                  | x                              |                                 | x                              | x                              | x                               | X                             | x                                  |   |                                      | x                                | x                                       |                     |   | X   |                             | Boring located to e<br>to LOU 59 piping to |
| T-3              |                          | RSAT3-10B                 | 10  |                                 |                | Х                          | Х              | Х                                  | Х                              |                                 | Х                              | X                              | Х                               | Hold                          | Х                                  |   |                                      |                                  | Х                                       |                     |   |   |                             | GW anticipated at                          |
| T-3<br>T-3       |                          | RSAT3-10B<br>RSAT3-25B    | 10<br>25                                    | X                               |                | X<br>X                     | X              | X                                  | X                              |                                 | X                              | X                              | X                               | Hold<br>Hold                  | X<br>X                             |   |                                      |                                  | X                                       |                     |   |   |                             |  |
| T-3<br>T-3       |                          | RSAT3-40B<br>RSAT3-53B    | 40<br>53                                    |                                 |                | X<br>X                     | X              | X<br>X                             | X<br>X                         |                                 | X<br>X                         | X<br>X                         | X<br>X                          | Hold<br>X                     | X<br>X                             |   |                                      |                                  | X<br>X                                  |                     |   |   |                             |  |
| T-4              | RSAT4                    | RSAT4-0.0B                | 0.0   |                                 |                | ^                          | Х              | ^                                  | ^                              |                                 | ^                              | ^                              | ^                               | ^                             | ^                                  |   |                                      |                                  | ^                                       |                     |   | х   |                             | Boring located to e                        |
| T-4<br>T-4       |                          | RSAT4-0.5B<br>RSAT4-10B   | 0.5   |                                 |                | X                          | X              | X                                  | X                              |                                 | X                              | X                              | X                               | X<br>Hold                     | X                                  |   |                                      | X                                | X                                       |                     |   |   |                             | to LOU 59 piping to<br>GW anticipated at   |
| T-4              |                          | RAST4-25B                 | 25  |                                 |                | Х                          | Х              | Х                                  | Х                              |                                 | Х                              | Х                              | Х                               | Hold                          | Х                                  |   |                                      |                                  | Х                                       |                     |   |   |                             |  |
| T-4<br>T-4       |                          | RSAT4-40B<br>RSAT4-53B    | 40<br>53                                    |                                 |                | X                          | X<br>X         | X<br>X                             | X                              |                                 | X                              | X                              | X                               | Hold<br>X                     | X<br>X                             |   |                                      |                                  | X                                       |                     |   |   |                             |  |
| T-4<br>T-4       | SA119                    | SA119-0.0B<br>SA119-0.5B  | 0.0<br>0.5                                  |                                 |                | x                          | x              | X                                  | x                              |                                 | x                              | x                              | x                               | X                             | x                                  | x                                       | x                                    | X                                | x                                       | x                   | x   | Х   |                             | Boring located to e<br>LOU 62 (State Inde  |
| T-4              |                          | SA119-10B                 | 10  |                                 |                | Х                          | Х              | Х                                  | Х                              |                                 | Х                              | Х                              | Х                               | Х                             | Х                                  | ~                                       |                                      |                                  | Х                                       | X                   | X   |   |                             | surface impoundme                          |
| T-4<br>T-4       |                          | SA119-30B<br>SA119-48B    | 30<br>48                                    |                                 |                | X                          | X              | X                                  | X<br>X                         |                                 | X<br>X                         | X<br>X                         | X<br>X                          | Hold<br>X                     | X<br>X                             | x                                       | x                                    |                                  | X<br>X                                  | х                   | x   |   |                             | Tronox site). GW                           |
| T-5<br>T-5       | RSAT5                    | RSAT5-0.0B<br>RSAT5-0.5B  | 0.0   |                                 |                | x                          | x              | x                                  | x                              |                                 | x                              | x                              | x                               | X                             | x                                  |   |                                      | x                                | x                                       |                     |   | Х   |                             | Boring located app                         |
| T-5              |                          | RSAT5-10B                 | 10  |                                 |                | Х                          | Х              | Х                                  | Х                              |                                 | Х                              | X                              | Х                               | Hold                          | Х                                  |   |                                      |                                  | Х                                       |                     |   |   |                             | wide coverage and<br>GW anticipated at     |
| T-5<br>T-5       |                          | RSAT5-25B<br>RSAT5-40B    | 25<br>40                                    |                                 |                | X<br>X                     | X<br>X         | X<br>X                             | X<br>X                         |                                 | X<br>X                         | X<br>X                         | X<br>X                          | Hold<br>Hold                  | X<br>X                             |   |                                      |                                  | X<br>X                                  |                     |   |   |                             |  |
| T-5              | 0.4.1.5                  | RSAT5-51B                 | 51  |                                 |                | X                          | X              | X                                  | X                              |                                 | X                              | X                              | X                               | X                             | X                                  |   |                                      |                                  | X                                       |                     |   |   |                             | Device la contra                           |
| T-5<br>T-5       | SA115                    | SA115-0.0B<br>SA115-0.5B  | 0.0<br>0.5                                  |                                 |                | X                          | x              | x                                  | x                              |                                 | х                              | x                              | х                               |                               | x                                  |   |                                      | x                                | X                                       |                     |   | X   |                             | Boring located to e<br>59 piping and man   |
| T-5<br>T-5       |                          | SA115-10B<br>SA115-10Bd   | 10<br>10 (dup)                              |                                 |                | X<br>X                     | X<br>X         | X<br>X                             | X<br>X                         |                                 | X<br>X                         | X<br>X                         | X<br>X                          |                               | X<br>X                             |   |                                      |                                  | X<br>X                                  |                     |   |   |                             | GW anticipated at                          |
| T-5              |                          | SA115-25B                 | 25  |                                 |                | Х                          | Х              | Х                                  | Х                              |                                 | Х                              | Х                              | Х                               |                               | Х                                  |   |                                      |                                  | Х                                       |                     |   |   |                             |  |
| T-5<br>T-5       |                          | SA115-40B<br>SA115-51B    | 40<br>51                                    |                                 |                | X<br>X                     | X              | X                                  | X<br>X                         |                                 | X                              | X                              | X                               |                               | X                                  |   | +                                    |                                  | X                                       |                     |   |   |                             |  |
|                  |                          |                           |   |                                 |                |                            |                |                                    |                                |                                 |                                |                                |                                 |                               |                                    |   |                                      |                                  |   |                     |   |   |                             |  |

Soil Sampling and Analytical Plan for Area IV Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

Page 3 of 5

| Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions.)   |
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|  |
| to evaluate LOU 25 (Process Hardware Storage Area) and for Unit 1 area-coverage. Located as a general<br>I 25 and for general coverage of Unit 1<br>at ~40 feet bos.   |
|  |
| o evaluate Unit 2 for area coverage.<br>at ~42 feet bgs.   |
|  |
| to evaluate LOU 4 (Former Hardesty Chemical Company Site), LOU 59 (Storm Sewer System), and LOU 60<br>tem) and for Unit 3 area-wide coverage. Random boring as a step out for LOU 4. Boring adjacent to LOU<br>to evaluate potential piping releases, and for general coverage of Unit 3.<br>at ~42 feet bgs.  |
| within LOU 42 (former location of salt conveyor) to evaluate worst-case scenario release location  |
| at ~39 feet bgs.   |
| approximately 200 feet south of Unit 1 for area-wide coverage and not associated with any specific LOU.<br>-DRO/ORO added to SAP to evaluate for potential impacts from Western Area Power Administration<br>r NDEP.<br>at ~46 feet bgs.   |
| to evaluate LOU 59 (Storm Sewer System) 350 feet south of Unit 2 for area-wide coverage. Random<br>to LOU 59 bibino to evaluate ootential bibino releases, adiacent to SG46 for VOC comparison purpose<br>de coverage. PCBs and TPH-DRO/ORO added to SAP to evaluate for potential impacts from WAPA<br>GW anticipated at ~47 feet bgs.                      |
| 150 feet south of Unit 3 for area-wide coverage and north (downgradient) of WAPA Site and not<br>a specific LOU. Adjacent to SG65 for VOC comparison purposes. PCBs and TPH-DRO/ORO added to<br>for potential impacts from WAPA site per NDEP.<br>at ~38 feet bgs.   |
| 100 feet south-southeast of Tronox Administration Building for area-wide coverage and not associated<br>.OU. PCBs and TPH-DRO/ORO added to SAP to evaluate for potential impacts from WAPA site per  |
| at ~41 feet bgs.   |
| upgradient of WAPA site, for general area-wide coverage and not associated with a specific LOU. PCBs<br>ORO added to SAP to evaluate for potential impacts from WAPA site per NDEP.<br>at ~44 feet bgs.  |
|  |
| o evaluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Random boring adjacent<br>g to evaluate potential piping releases.<br>at ~55 feet bgs.  |
|  |
| o evaluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Random boring adjacent<br>g to evaluate potential piping releases<br>at ~55 feet bgs.   |
|  |
| o evaluate LOU 59 (Storm Sewer System) adjacent to former State Industries building (Building T-5) and<br>industries, Inc. Site). Located adjacent to LOU 59 piping and manhole/inlet where waste water from the<br>dments associated with LOU 62 was released to, as well as for general coverage for LOU 62 (on and off<br>GW anticipated at ~50 feet bgs. |
| approximately 200 feet west of Tronox Purchasing/Training Building to evaluate soils for general area-<br>and not associated with a specific LOU.<br>at ~53 feet bgs.  |
|  |
| to evaluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Located adjacent to LOU<br>anhole/inlet to evaluate high risk piping release locations (piping and inlet structure).<br>at ~53 feet bgs.   |
|  |

|                                      | PTS<br>Santa Fe Springs,<br>CA | EMSL Westmont,<br>NJ                        | Alpha<br>Analytical<br>Sparks, NV | STL<br>Denver, CO   | GEL Charleston,<br>SC             |                                  | CA<br>Housto                         |                                  |                                    |                               |                                 | bia Analytical<br>Rochester, N |                                   |                                  |                                |                                    | CAS<br>so, WA                      |                            |                |                                 | aboratory :                                 | L                        |                          |                  |
|--------------------------------------|--------------------------------|---|-----------------------------------|---------------------|-----------------------------------|----------------------------------|--------------------------------------|----------------------------------|------------------------------------|-------------------------------|---------------------------------|--------------------------------|-----------------------------------|----------------------------------|--------------------------------|------------------------------------|------------------------------------|----------------------------|----------------|---------------------------------|---|--------------------------|--------------------------|------------------|
|                                      | Geotechnical<br>Tests          | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Organic<br>Acids <sup>12.</sup>   | OPPs <sup>11.</sup> | Radio-<br>nuclides <sup>10.</sup> | Dioxins/<br>Furans <sup>9.</sup> | PCBs <sup>8.</sup><br>(EPA<br>1668A) | PCBs <sup>8.</sup><br>(EPA 8082) | SVOCs <sup>7.</sup><br>(EPA 8270C) | OCPs <sup>6.</sup><br>(8081A) | Total<br>Cyanide<br>(EPA 9012A) | Wet<br>Chem <sup>5.</sup>      | VOCs <sup>3.</sup><br>(EPA 8260B) | TPH GRO<br>(EPA 8015B)           | TPH-<br>DRO/ORO<br>(EPA 8015B) | Hex Cr <sup>4.</sup><br>(EPA 7199) | Metals <sup>2.</sup><br>(EPA 6020) | Perchlorate<br>(EPA 314.0) | SPLP<br>Sample | Matrix<br>Spike/MSD<br>uplicate | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Sample ID<br>Number      | Phase B<br>Boring<br>No. | Grid<br>Location |
|                                      | 2 Brass Tubes                  | ≥1 kg<br>in plastic bag                     | 1-4 oz Jar                        | 1-4 oz Jar          | 1-250 ml jar<br>(plastic)         | z Jar                            | 1 - 4 o                              |                                  |                                    |                               | 2 - 4 oz. Jars                  |                                | 3 VOA vials<br>(TerraCore Kit)    | 1- 40 ml VOA<br>vial w/ methanol | 4 oz Jar                       | 1 - 4                              | oz Jar                             | 1 - 4                      | per Sample:    | Containers p                    | Number of                                   |                          |                          |                  |
|                                      |                                |   |                                   | 7).                 | l in Area IV (U-7                 | nost grid                        | eastern r                            | th the south                     | nd ending wit                      | IV (P-4) ar                   | grid in Area                    | vestern mos                    | on the northv                     | ing point is                     | late A - Start                 | own on P                           | location as sh                     | ized by grid               | are organ      | Borings                         |   |                          |                          |                  |
| ring located to                      |                                | Х   |                                   |                     | v                                 | v                                |                                      |                                  | v                                  |                               | ~                               | v                              | v                                 |                                  | ~                              | ~                                  | X                                  | v                          |                |                                 | 0.0   | SA116-0.0B<br>SA116-0.5B | SA116                    | T-5              |
| piping for gene<br>V anticipated at  |                                |   |                                   |                     | X<br>X                            | X                                |                                      |                                  | X<br>X                             |                               | X                               | X X                            | X<br>X                            |                                  | X                              | X                                  | X                                  | X X                        |                |                                 | 10  | SA116-0.5B<br>SA116-10B  | 1                        | T-5<br>T-5       |
|                                      |                                |   |                                   |                     | X                                 |                                  |                                      |                                  | X                                  |                               | X                               | X                              | X                                 |                                  | X                              | X                                  | X                                  | X                          |                |                                 | 30  | SA116-30B                |                          | T-5              |
|                                      |                                |   |                                   | ······              | X<br>X                            |                                  |                                      |                                  | X                                  |                               | X                               | X<br>X                         | X<br>X                            |                                  | X<br>X                         | X                                  | X                                  | X<br>X                     | ·····•         | X                               | 50<br>50                                    | SA116-50B<br>SA116-50B   |                          | T-5<br>T-5       |
| ring located to                      |                                | X   |                                   |                     |                                   |                                  |                                      |                                  |                                    |                               |                                 |                                |                                   |                                  |                                |                                    |                                    |                            |                |                                 | 0.0   | RSAT6-0.0B               | RSAT6                    | T-6              |
| RO/ORO added<br>V anticipated at     |                                |   |                                   |                     | X                                 | X                                |                                      |                                  | X                                  | X<br>Hold                     | X<br>X                          | X<br>X                         | X<br>X                            |                                  | X                              | X                                  | X X                                | X<br>X                     |                |                                 | 0.5   | RSAT6-0.5B<br>RSAT6-10B  |                          | T-6<br>T-6       |
|                                      |                                |   |                                   |                     | Х                                 |                                  |                                      |                                  | X                                  | Hold                          | Х                               | X                              | X                                 |                                  | X                              | X                                  | X                                  | X                          |                |                                 | 30  | RSAT6-30B                |                          | T-6              |
| ring located to                      | E                              | х   |                                   |                     | Х                                 |                                  |                                      |                                  | Х                                  | Х                             | X                               | Х                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 49<br>0.0                                   | RSAT6-49B<br>SA118-0.0B  | SA118                    | T-6<br>T-6       |
| tential high risk                    | P                              |   |                                   |                     | X                                 | Х                                |                                      |                                  | Х                                  |                               | X                               | X                              | X                                 |                                  | X                              | Х                                  | X                                  | Х                          |                |                                 | 0.5   | SA118-0.5B               |                          | T-6              |
| V anticipated at                     |                                |   |                                   |                     | X<br>X                            |                                  |                                      |                                  | X<br>X                             |                               | X                               | <u> </u>                       | X<br>X                            |                                  | X<br>X                         | X                                  | X X                                | X                          |                |                                 | 10<br>25                                    | SA118-10B<br>SA118-25B   |                          | T-6<br>T-6       |
|                                      |                                |   |                                   |                     | Х                                 |                                  |                                      |                                  | Х                                  |                               | Х                               | Х                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 40  | SA118-40B                |                          | T-6              |
| ring located to                      | F                              | х   |                                   |                     | X                                 |                                  |                                      |                                  | Х                                  |                               | Х                               | Х                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 51<br>0.0                                   | SA118-51B<br>RSAT7-0.0B  | RSAT7                    | T-6<br>T-7       |
| LOU 59 piping                        | ti                             | ^   |                                   |                     | х                                 | Х                                |                                      | X                                | x                                  | х                             | х                               | X                              | Х                                 |                                  | х                              | x                                  | х                                  | х                          |                |                                 | 0.5   | RSAT7-0.5B               | NOAT                     | T-7              |
| pacts from WAR                       | i                              |   |                                   |                     | X                                 |                                  |                                      |                                  | X                                  | Hold                          | Х                               | X                              | X                                 |                                  | X                              | X                                  | X                                  | X                          |                |                                 | 10  | RSAT7-10B                |                          | T-7              |
| V anticipated at                     |                                |   |                                   |                     | X                                 |                                  |                                      | X                                | X<br>X                             | Hold<br>X                     | X                               | X<br>X                         | X<br>X                            |                                  | X                              | X                                  | X X                                | X<br>X                     |                |                                 | 25<br>44                                    | RSAT7-25B<br>RSAT7-44B   | 1                        | T-7<br>T-7       |
|                                      |                                |   |                                   |                     | Х                                 |                                  |                                      | Х                                | Х                                  | Х                             | Х                               | Х                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                | Х                               | 44  | RSAT7-44B                |                          | T-7              |
| ring located to<br>LOU 59 piping :   |                                | x   |                                   |                     | Х                                 | х                                |                                      | х                                | x                                  | х                             | x                               | х                              | х                                 |                                  | x                              | x                                  | х                                  | Х                          |                |                                 | 0.0   | RSAT8-0.0B<br>RSAT8-0.5B | RSAT8                    | T-8<br>T-8       |
| AP to evaluate                       |                                |   |                                   |                     | Х                                 | ~                                |                                      | ~                                | Х                                  | Hold                          | Х                               | Х                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 10  | RSAT8-10B                |                          | T-8              |
| V anticipated at                     | (                              |   |                                   | ·····               | X<br>X                            |                                  |                                      |                                  | X                                  | Hold<br>Hold                  | X                               | <u> </u>                       | X<br>X                            |                                  | X                              | X                                  | X                                  | <u> </u>                   | ·····•         |                                 | 25<br>25 (dup)                              | RSAT8-25B<br>RSAT8-25BD  |                          | T-8<br>T-8       |
|                                      |                                |   |                                   |                     | × X                               |                                  |                                      | X                                | × X                                | X                             | X                               | X                              | X                                 |                                  | X                              | X                                  | X                                  | X                          |                |                                 | 25 (dup)<br>44                              | RSAT8-44B                | 1                        | T-8              |
| ring located to                      |                                | Х   |                                   |                     |                                   |                                  |                                      |                                  |                                    |                               |                                 |                                |                                   |                                  |                                |                                    |                                    |                            |                |                                 | 0.0   | SA210-0.0B               | SA210                    | T-8              |
| her than at a wo<br>N anticipated at |                                |   |                                   |                     | X<br>X                            | X                                |                                      | X                                | X<br>X                             |                               | X                               | X                              | X<br>X                            |                                  | X                              | X                                  | X X                                | X                          |                |                                 | 0.5   | SA210-0.5B<br>SA210-10B  | 1                        | T-8<br>T-8       |
|                                      |                                |   |                                   |                     | Х                                 |                                  |                                      |                                  | Х                                  |                               | Х                               | X                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 30  | SA210-30B                | 1 1                      | T-8              |
| ring located to                      | F                              | х   |                                   |                     | Х                                 |                                  |                                      | X                                | Х                                  |                               | Х                               | X                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 49<br>0.0                                   | SA210-49B<br>RSAU4-0.0B  | RSAU4                    | T-8<br>U-4       |
| nter of the form                     | c                              | ~   |                                   |                     | х                                 | Х                                |                                      |                                  | Х                                  | Х                             | Х                               | Х                              | Х                                 |                                  | Х                              | Х                                  | х                                  | Х                          |                |                                 | 0.5   | RSAU4-0.5B               |                          | U-4              |
| tails). GW antio<br>-Foot SPLP sar   |                                |   | х                                 | х                   | X<br>X                            |                                  | ~                                    | ~                                | X<br>X                             | Hold<br>X                     | X<br>X                          | X<br>X                         | X<br>X                            |                                  | X                              | X<br>X                             | X                                  | XX                         | x              |                                 | 10<br>20                                    | RSAU4-10B<br>RSAU4-20B   |                          | U-4<br>U-4       |
| FUUL SFLF Sal                        | 2                              |   | ^                                 | ^                   | X                                 |                                  | Х                                    | X                                | X                                  | Hold                          | X                               | X                              | X                                 |                                  | Х                              | X                                  | x                                  | X                          | ^              |                                 | 20  | RSAU4-20B                |                          | U-4              |
|                                      |                                |   |                                   |                     | X                                 |                                  |                                      |                                  | Х                                  | Hold                          | X                               | X                              | X                                 |                                  | Х                              | X                                  | X                                  | Х                          |                |                                 | 40  | RSAU4-40B                | ] [                      | U-4              |
| PLP sample mus                       | XS                             |   | Х                                 | X                   | X<br>X                            |                                  | X                                    | X                                | X                                  | X                             | X<br>X                          | X<br>X                         | X                                 |                                  | X                              | X<br>X                             | X                                  | X<br>X                     | х              |                                 | 50<br>56                                    | RSAU4-50B<br>RSAU4-56B   | -                        | U-4<br>U-4       |
| ring located to                      |                                | Х   |                                   |                     |                                   |                                  |                                      |                                  |                                    |                               |                                 |                                |                                   |                                  |                                |                                    |                                    |                            |                |                                 | 0.0   | SA146-0.0B               | SA146                    | U-4              |
| nd to provide ge<br>V anticipated at |                                |   |                                   |                     | X<br>X                            | X                                |                                      |                                  | X<br>X                             |                               | X                               | X X                            | X<br>X                            |                                  | X                              | X                                  | X X                                | X<br>X                     |                |                                 | 0.5   | SA146-0.5B<br>SA146-10B  |                          | U-4<br>U-4       |
| - unitoiputou ut                     |                                |   |                                   |                     | Х                                 |                                  |                                      |                                  | Х                                  |                               | Х                               | X                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 25  | SA146-25B                |                          | U-4              |
|                                      |                                |   |                                   |                     | X<br>X                            |                                  |                                      |                                  | X                                  |                               | X                               | X                              | X<br>X                            |                                  | X                              | X                                  | X                                  | X X                        |                |                                 | 25 (dup)<br>40                              | SA146-25BD<br>SA146-40B  |                          | U-4<br>U-4       |
|                                      |                                |   |                                   |                     | X                                 |                                  |                                      |                                  | X                                  |                               | X                               | X                              | X X                               |                                  | X                              | X                                  | X                                  | X X                        |                |                                 | 55  | SA146-55B                | -                        | U-4              |
| ring located to                      |                                | Х   |                                   |                     | ×                                 | х                                |                                      |                                  | x                                  |                               | x                               | x                              | х                                 |                                  | x                              | x                                  | Х                                  | x                          |                |                                 | 0.0   | SA147-0.0B<br>SA147-0.5B | SA147                    | U-4<br>U-4       |
| nd to provide ge<br>V anticipated at |                                |   |                                   |                     | X                                 | ^                                |                                      |                                  | X                                  |                               | X                               | X                              | × X                               |                                  | X                              | X                                  | X                                  | X                          |                |                                 | 10  | SA147-0.5B<br>SA147-10B  |                          | U-4              |
|                                      |                                |   |                                   |                     | X                                 |                                  |                                      |                                  | X                                  |                               | X                               | X                              | X                                 |                                  | X                              | X                                  | X                                  | X                          |                |                                 | 25  | SA147-25B                | 1 [                      | U-4              |
|                                      |                                |   |                                   |                     | X<br>X                            |                                  |                                      |                                  | X<br>X                             |                               | X                               | X X                            | X<br>X                            |                                  | X                              | X                                  | X X                                | X X                        |                |                                 | 25 (dup)<br>40                              | SA147-25BD<br>SA147-40B  |                          | U-4<br>U-4       |
|                                      |                                |   |                                   |                     | Х                                 |                                  |                                      |                                  | Х                                  |                               | Х                               | Х                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 56  | SA147-56B                |                          | U-4              |
| ring located to<br>nd to provide g   | E                              | X   |                                   |                     | x                                 | x                                |                                      |                                  | x                                  | x                             | x                               | x                              | X                                 |                                  | x                              | x                                  | X                                  | x                          |                |                                 | 0.0   | RSAU5-0.0B<br>RSAU5-0.5B | RSAU5                    | U-5<br>U-5       |
| 5-Foot SPLP sa                       | X C                            |   | Х                                 | Х                   | X                                 | ^                                | Х                                    | X                                | X                                  | Х                             | X                               | X                              | Х                                 |                                  |                                | X                                  | Х                                  | X                          | Х              |                                 | 0.5   | RSAU5-0.5B               | 1                        | U-5              |
| V anticipated at                     | (                              |   |                                   |                     | X                                 |                                  |                                      |                                  | X<br>X                             | Hold<br>Hold                  | X<br>X                          | X X                            | X<br>X                            |                                  | X<br>X                         | X<br>X                             | X                                  | XX                         |                |                                 | 10  | RSAU5-10B<br>RSAU5-25B   |                          | U-5<br>U-5       |
|                                      |                                |   |                                   |                     | X<br>X                            |                                  |                                      |                                  | X                                  | Hold                          | X                               | X                              | × X                               |                                  | X                              | X                                  | X                                  | X                          |                |                                 | 25<br>40                                    | RSAU5-40B                |                          | U-5<br>U-5       |
| PLP sample mu                        | X S                            |   | Х                                 | Х                   | X                                 |                                  | Х                                    | Х                                | Х                                  | Х                             | Х                               | Х                              | X                                 |                                  |                                | Х                                  | X                                  | Х                          | Х              |                                 | 50  | RSAU5-50B                |                          | U-5              |
| ring located to                      | E                              | х   |                                   |                     | Х                                 |                                  |                                      |                                  | Х                                  | Х                             | X                               | Х                              | Х                                 |                                  | Х                              | X                                  | Х                                  | Х                          |                |                                 | 55<br>0.0                                   | RSAU5-55B<br>SA28-0.0B   | SA28                     | U-5<br>U-5       |
| nter of the form                     | c                              |   |                                   |                     | Х                                 | Х                                |                                      |                                  | Х                                  |                               | Х                               | Х                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 0.5   | SA28-0.5B                |                          | U-5              |
| tails). GW ant                       | c                              |   |                                   |                     | X<br>X                            |                                  |                                      |                                  | X                                  |                               | X                               | <u> </u>                       | X<br>X                            |                                  | X<br>X                         | X                                  | X                                  | <u> </u>                   |                |                                 | 10<br>10D                                   | SA28-10B<br>SA28-10B     |                          | U-5<br>U-5       |
|                                      |                                |   |                                   |                     | Х                                 |                                  |                                      |                                  | Х                                  |                               | Х                               | X                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 25  | SA28-25B                 | 1 1                      | U-5              |
|                                      |                                |   |                                   |                     | X                                 |                                  |                                      |                                  | X                                  | Х                             | X                               | X                              | X                                 |                                  | X                              | X                                  | X                                  | X                          |                |                                 | 40<br>55                                    | SA28-40B<br>SA28-55B     |                          | U-5<br>U-5       |
| ring located to                      | E                              | х   |                                   |                     | ^                                 |                                  |                                      |                                  | Х                                  |                               | ^                               | Х                              | Х                                 |                                  | Х                              | Х                                  | ^                                  | ^                          |                |                                 | 0.0   | RSAU6-0.0B               | RSAU6                    | U-5<br>U-6       |
| V anticipated at                     |                                |   |                                   |                     | X                                 | X                                |                                      |                                  | X                                  | X                             | X                               | X                              | X                                 |                                  | X                              | X                                  | X                                  | X                          |                | ~                               | 0.5   | RSAU6-0.5B               |                          | U-6              |
|                                      |                                |   |                                   |                     | X<br>X                            | Х                                |                                      |                                  | X<br>X                             | X<br>Hold                     | X<br>X                          | X X                            | X<br>X                            |                                  | X<br>X                         | X<br>X                             | X                                  | XX                         |                | Х                               | 0.5   | RSAU6-0.5B<br>RSAU6-10B  | -                        | U-6<br>U-6       |
|                                      |                                |   |                                   |                     | Х                                 |                                  |                                      |                                  | Х                                  | Hold                          | Х                               | Х                              | Х                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 25  | RSAU6-25B                | 1                        | U-6              |
|                                      |                                |   |                                   |                     | X<br>X                            |                                  |                                      |                                  | X<br>X                             | Hold<br>X                     | X                               | X                              | X<br>X                            |                                  | X<br>X                         | X                                  | X<br>X                             | XX                         |                |                                 | 40<br>53                                    | RSAU6-40B<br>RSAU6-53B   |                          | U-6<br>U-6       |
| ring located to                      |                                | Х   |                                   |                     | ^                                 |                                  |                                      |                                  | ^                                  | ~                             | ^                               |                                |                                   |                                  |                                |                                    | ^                                  | ~                          |                |                                 | 0.0   | RSAU7-0.0B               | RSAU7                    | U-7              |
| V anticipated at                     | 0                              |   |                                   |                     | X                                 | X                                |                                      |                                  | X                                  | X                             | X                               | X                              | X                                 |                                  | X                              | X                                  | X                                  | X                          |                |                                 | 0.5   | RSAU7-0.5B               |                          | U-7              |
|                                      |                                |   |                                   |                     | X<br>X                            | X                                |                                      |                                  | X<br>X                             | X<br>Hold                     | X                               | X                              | X<br>X                            |                                  | X                              | X                                  | X X                                | X X                        |                |                                 | 0.5 (dup)<br>10                             | RSAU7-0.5BD<br>RSAU7-10B |                          | U-7<br>U-7       |
|                                      |                                |   |                                   |                     | X                                 |                                  |                                      |                                  | X                                  | Hold                          | X                               | X                              | X                                 |                                  | X                              | X                                  | X                                  | X X                        |                |                                 | 25  | RSAU7-25B                | 1 1                      | U-7              |
|                                      |                                |   |                                   |                     | Х                                 |                                  |                                      |                                  | X                                  | Hold                          | Х                               | X                              | X                                 |                                  | Х                              | Х                                  | Х                                  | Х                          |                |                                 | 40  | RSAU7-40B                |                          | U-7              |

Soil Sampling and Analytical Plan for Area IV Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

Page 4 of 5

| Location Description and Characterized Area Rationale<br>(NDEP may not agree with upgradient and downgradient descriptions.)   |
|--|
| to evaluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Located adjacent to LOU  |
| neral coverage and adjacent to SG68 for VOC comparison purposes.<br>I at ~52 feet bgs.   |
| to evaluate soils for general area-wide coverage and not associated with a specific LOU. PCBs and TPH-<br>ed to SAP to evaluate for potential impacts from WAPA site per NDEP.<br>at ~51 feet bgs.   |
| to evaluate LOU 59 (Storm Sewer System). Random boring adjacent to LOU 59 piping to evaluate<br>sk piping releases.<br>at ~53 feet bgs.  |
| to evaluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Random boring adjacent<br>ig to evaluate potential piping releases. PCBs and TPH-DRO/ORO added to SAP to evaluate for potential<br>/APA site per NDEP.<br>at ~46 feet bgs.                                 |
| to evaluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Random boring adjacent<br>ag and manhole/inlet to evaluate potential releases (piping and inlet). PCBs and TPH-DRO/ORO added to<br>te for potential impacts from WAPA site per NDEP.<br>I at ~46 feet bgs. |
| to evaluate LOU 59 (storm Sewer System). Located areally to evaluate point of exit from the Tronox site  |
| at ~51 feet bgs.   |
|  |
| to evaluate former western pond in LOU 62 (State Industries, Inc. Site). Located within footprint and in the<br>rmer pond to provide general coverage of pond area for potential releases (see LOU 62 summary for<br>nticipated at ~58 feet bgs.                                       |
| sample must be of Quaternary Alluvium (Qal) soils.   |
| nust be of Muddy Creek soils & must be dry. If soils not dry, don't collect sample. Choose another boring.   |
| to evaluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint of former<br>egeneral coverage of pond area for potential releases (see LOU 62 summary for details).<br>at -57 feet bgs.   |
|  |
| to evaluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint of former<br>general coverage of pond area for potential releases (see LOU 62 summary for details).<br>at ~58 feet bgs.  |
|  |
| to evaluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint of former<br>general coverage of pond area for potential releases (see LOU 62 summary for details).<br>sample must be of Quaternary Alluvium (Qal) soils.                            |
| at ~57 feet bgs.   |
| nust be of Muddy Creek soils & must be dry. If soils not dry, don't collect sample. Choose another boring.   |
| to evaluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint and in the<br>rmer pond to provide general coverage of pond area for potential releases (see LOU 62 summary for<br>anticipated at ~57 feet bgs.                                      |
|  |
|  |
| to evaluate soil for area-wide coverage and not associated with a specific LOU.<br>I at ~55 feet bgs.  |
|  |
| to evaluate soil for area-wide coverage and not associated with a specific LOU.<br>I at ~56 feet bgs.  |
|  |

| Laboratory :                    |  |                     |   |                                 |                | CAS<br>So, WA              | Columbia Analytical Services<br>Rochester, NY |                                    |   |                        |   |                           |   |   |   | CAS<br>Houston, TX |                                      | GEL Charleston,<br>SC            | STL<br>Denver, CO                 | Alpha<br>Analytical<br>Sparks, NV | EMSL Westmont,<br>NJ            | PTS<br>Santa Fe Springs,<br>CA              |                       |   |
|---------------------------------|--|---------------------|---|---------------------------------|----------------|----------------------------|---|------------------------------------|---|------------------------|---|---------------------------|---|---|---|--------------------|--------------------------------------|----------------------------------|-----------------------------------|-----------------------------------|---------------------------------|---|-----------------------|---|
| Grid<br>Location                | Phase B<br>Boring<br>No.   | Sample ID<br>Number | Sample<br>Depths <sup>1.</sup><br>(ft, bgs) | Matrix<br>Spike/MSD<br>uplicate | SPLP<br>Sample | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup><br>(EPA 6020)            | Hex Cr <sup>4.</sup><br>(EPA 7199) | TPH-<br>DRO/ORO<br>(EPA 8015B)  | TPH GRO<br>(EPA 8015B) |   | Wet<br>Chem <sup>5.</sup> | Cham <sup>5.</sup> Cyanide (1991A) (EPA 9370C) (EPA 9993) |   |   |                    | PCBs <sup>8.</sup><br>(EPA<br>1668A) | Dioxins/<br>Furans <sup>9.</sup> | Radio-<br>nuclides <sup>10.</sup> | OPPs <sup>11.</sup>               | Organic<br>Acids <sup>12.</sup> | Asbestos <sup>13.</sup><br>EPA/540/R-97/028 | Geotechnical<br>Tests |   |
| Number of Containers per Sample |  |                     |   |                                 |                | e: 1 - 4 oz Jar            |   |                                    | 1 - 4 oz Jar 1- 40 ml VOA 3 VOA vials<br>vial w/ methanol (TerraCore Kit) |                        |   |                           |   |   |   | 1 - 4              | oz Jar                               | 1-250 ml jar<br>(plastic)        | 1-4 oz Jar                        | 1-4 oz Jar                        | <u>≥</u> 1 kg<br>in plastic bag | 2 Brass Tubes                               |                       |   |
|                                 | Borings are organized by grid location as shown on Plate A - Starting point is on the northwestern most grid in Area IV (P-4) and ending with the southeastern most grid in Area IV (U-7). |                     |   |                                 |                |                            |   |                                    |   |                        |   |                           |   |   |   |                    |                                      |                                  |                                   |                                   |                                 |   |                       |   |
| U-7                             |  | RSAU7-54B           | 54  |                                 |                | Х                          | Х   | Х                                  | Х   |                        | Х | Х                         | Х   | Х | Х |                    |                                      |                                  | Х                                 |                                   |                                 |   | l i                   | 1 |
|                                 | 56   | = Number of Borin   | ngs   |                                 |                |                            |   |                                    |   |                        |   |                           |   |   |   |                    |                                      |                                  |                                   |                                   |                                 |   |                       |   |
|                                 |  |                     |   |                                 |                |                            |   |                                    |   |                        |   |                           |   |   |   |                    |                                      |                                  |                                   |                                   |                                 |   |                       |   |

Notes: X

Sample will be collected and analyzed. No sample will be collected under Phase B sampling program.

No sample will be conlected under Phase B sampling program. DD\* Sample depth to be determined in the field where DD = sample depth (ft). TPH-GRO Total petroleum hydrocarbons - Gasoline-Range Organics. TPH-GRO Total petroleum hydrocarbons - Diesel-Range Organics. SPLP SPLP samples will be analyzed by EPA method 1312 using two preparation methods: 1) with extraction fluid #2 (reagent water at pH 5.@0.05), and 2) with extraction method #3 (reagent water); per NDEP, May 6, 2008. 1. The 0.5 ft bgs sample will be collected from the 0.0 to 0.5 ft bgs interval, unless the area is paved. If area is paved, samples will be collected at 0.5 feet below or from a representative depth beneath the pavement. Alternately, if an unpaved area is within a reasonable distance, the sample will be moved to the unpaved area. 4. Motels conjugates includes Aluminum Antimopy Areanic Barlium Berou Cadmium Chromium Crobalt Concer Iron Lead Magnesium. Manganese. Mercurv. Molyberdyum. Nickel, Platinum, Selenium, Silver, Sodium, Strontium, Tin, Titanium, Tanjaum, Tungsten, Uranium, Vanadium, and Zinc. Metals analyses includes Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Croneum, Vanadium, and Zinc.

Hexavalent Chromium

4.

Samples for VOC analysis will be preserved in the field using sodium bisulfate (or DI water) and methanol preservatives per EPA Method 5035. Wet chemistry parameters include: alkalinity (total, CQ HCO<sub>3</sub>), ammonia, bromide, chlorate, chloride, conductivity, nitrate, nitrite, perchlorate, pH, phosphate (total), sulfate, surfactants (MBAs), TDS, Total Organic Carbon, and TSS. 5.

Organochlorine Pesticides (includes analysis for hexachlorobenzene). 6.

Semi-voltative of any set of compounds Semi-voltative of any set of compounds Polychlorinated biphenyls - Sample locations will be analyzed by USEPA methods 8082 and/or 1668A as indicated in table. Concrete surfaces at these locations will also include chip and/or wipe samples per EPA Region 1 SOP for Sampling Concrete in the Field (1997b)lumn for Aroclor PCBs (EPA 8082) was added to this table to show which samples will be analyzed for Aroclor PCBs. 8.

Divinsification of the samples reduction with the data by the samples. Screening reports will be provided for 90% of the samples and full data packages for 10% of the samples. Radionuclides consists of alpha spec reporting for isotopic thorium and isotopic uranium, and Radium-226, plus Radium-228 by beta counting (per NDEP). Organophosphorous Pesticides were added to SAP by NDEP (July 21, 2008).

10.

11 12.

Organic Acid analysis includes the following analysis: 4-Chlorbenzene sulfonic acid; O,O-Diethylphosphorodithioic acid; O,O-Dimethylphosphorodithioic acid; and Phthalic acid. Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs. Geotechnical Tests consist of: moisture content (ASTM D-2216), grain size analysis (ASTM D-422 and C117-04), Soil Dry Bulk Density (ASTM D-2937), Grain Density (ASTM D-854), Soil-Water Filled Porosity (ASTM D-2216); Vertical Hydraulic Conductivity (ASTM D-5084/USEPA 9100). 13. 14.

Table 2 (Field Version)

Soil Sampling and Analytical Plan for Area IV

Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

Page 5 of 5

Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradien

| Laboratory <sup>E.</sup> |                   |                            |                                   | aboratory <sup>E.</sup> :   | CAS - Kel   | so, WA                                |                            |                      | CAS - Roches                     | ster, NY                           |                                |                                      |                                    | GEL<br>Charleston, SC                 | CAS -<br>Houston                  | STL-<br>Denver              | Alpha<br>Analytical<br>Sparks, NV  |                                      |                               |                           |  |  |  |  |  |  |  |
|--------------------------|-------------------|----------------------------|-----------------------------------|-----------------------------|---|---------------------------------------|----------------------------|----------------------|----------------------------------|------------------------------------|--------------------------------|--------------------------------------|------------------------------------|---------------------------------------|-----------------------------------|-----------------------------|------------------------------------|--------------------------------------|-------------------------------|---------------------------|--|--|--|--|--|--|--|
| Grid<br>Location         | Location<br>Area  | Monitoring<br>Well No.     | Sample ID<br>Number <sup>K.</sup> | Screen Interval<br>(ft bgs) | Soil Type<br>Expected Across<br>Screen Interval <sup>1.</sup> | Well Sampled<br>for Phase A?<br>(y/n) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup> | VOCs <sup>3.</sup><br>(EPA 8260) | Hex Cr <sup>4.</sup><br>(EPA 7199) | Wet<br>Chemistry <sup>5.</sup> | OCPs <sup>6.</sup><br>(EPA<br>8081A) | Total<br>Cyanide<br>(EPA<br>9012A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | PCBs <sup>8,L</sup><br>(EPA 8082) | Radionuclides <sup>9.</sup> | PCBs <sup>8,L</sup><br>(EPA 1668A) | OPPs <sup>10, A</sup><br>(EPA 8141A) | Organic<br>Acids <sup>B</sup> | Rationale for<br>Revision | Location Description and Rationale for Investigation   |  |  |  |  |  |  |
|                          |                   |                            | 2                                 | -                           | Well  | ls are organi                         | zed by grid                | location             | as shown                         | on Plate A                         | - Starting p                   | oint is on                           | the north                          | nwestern                              | -most grid i                      | n Area 4 (P-2) a            | nd ending v                        | with the sou                         | theastern-m                   | ost grid cover            | grid covering Area 4 (W-7).  |  |  |  |  |  |  |
| P-2                      | Parcel F          | TR-6                       | TR-6B                             | 60-80                       | MCcg1   | No                                    | х                          | Х                    | х                                | Х                                  | Х                              | Х                                    | Х                                  | Х                                     | х                                 | Х                           | х                                  | х                                    | Х                             | A, B, C, F, L             | , L Located to evaluate groundwater migrating onto Tronox from the west.   |  |  |  |  |  |  |
| P-4                      | Parcel F          | M-93                       | M-93B                             | 35.4 - 45.4                 | MCfg1   | No                                    | х                          | Х                    | x                                | х                                  | х                              | х                                    | х                                  | х                                     |                                   | х                           |                                    |                                      |                               | F                         | Located to serve as a downgradient stepout for LOUs 41 and 65; as an upgradient stepout for LOU 63; and for general Site coverage.   |  |  |  |  |  |  |
| P-5                      | IV                | M-97                       | M-97B                             | 35 - 45                     | MCfg1   | Yes                                   | х                          | х                    | x                                | Х                                  | Х                              | х                                    | х                                  | х                                     |                                   | х                           |                                    | x                                    | х                             | A, B, F,J                 | Located to serve as a downgradient stepout for LOUs 4, 26, 27, 28, 42, and 59; and for general Site coverage.  |  |  |  |  |  |  |
| Q-4                      | Parcel F          | M-92                       | M-92B                             | 34.9 - 44.9                 | MCfg1   | Yes                                   | х                          | х                    | x                                | Х                                  | х                              | х                                    | х                                  | х                                     |                                   | х                           |                                    |                                      |                               | F                         | Located to serve as a downgradient stepout for LOUs 25, 41, 59, 60, and 65; as an upgradient stepout for LOU 63; and for general Site coverage.  |  |  |  |  |  |  |
| Q-5                      | Ш                 | M-13                       | M-13B                             | 40-50                       | Qal/MCfg1   | Yes                                   | R                          | R                    | R                                | R                                  | R                              | R                                    | R                                  | R                                     |                                   | R                           |                                    |                                      |                               | D (see Area II)           | Located to serve as a downgradient stepout for LOUs 42, 59, and 60; and for general Site coverage.   |  |  |  |  |  |  |
| Q-6                      | Ш                 | M-12A                      | M-12AB                            | 28-48                       | MCfg1   | Yes                                   | R                          | R                    | R                                | R                                  | R                              | R                                    | R                                  | R                                     |                                   | R                           |                                    |                                      |                               | D (see Area II)           | Located to serve as a downgradient stepout for LOU 59 and for general Site coverage.   |  |  |  |  |  |  |
| Q-4                      | IV                | M-143                      | M-143B                            | TBD                         | Qal/MCfg1*  | new well                              | х                          | Х                    | x                                | Х                                  | х                              | Х                                    | х                                  | х                                     |                                   | х                           |                                    | x                                    | х                             | A, B, F, H                | New well to be installed; located to evaluate LOUs 4, 25, 26, 27, 28, 42, and 60; and for general Site coverage  |  |  |  |  |  |  |
| R-5                      | IV                | M-144                      | M-144B                            | TBD                         | Qal/MCfg1*  | new well                              | х                          | Х                    | x                                | Х                                  | х                              | Х                                    | х                                  | х                                     |                                   | х                           |                                    |                                      |                               | F                         | New well to be installed; located to evaluate LOU 42, and for general Site coverage.   |  |  |  |  |  |  |
| S-2                      | Parcel G          | TR-8                       | TR-8B                             | 63 - 93                     | MCcg1/MCfg2   | No                                    | х                          | Х                    | x                                | Х                                  | х                              | Х                                    | х                                  | х                                     |                                   | х                           |                                    | x                                    | х                             | A, B, I, J                | Located to serve as an upgradient stepout for LOUs 41 and 65; to evaluate possible offsite sources to the west (particularly for VOCs); and for general Site coverage.                 |  |  |  |  |  |  |
| T-7                      | IV                | M-10                       | M-10B                             | 43 - 63                     | Qal/MCfg1   | No                                    | х                          | Х                    | x                                | Х                                  | х                              | Х                                    | х                                  | х                                     |                                   | х                           |                                    |                                      |                               | F                         | Located as stepout for LOU 59; and for general Site coverage.  |  |  |  |  |  |  |
| U-4                      | IV                | TR-10                      | TR-10B                            | 80-100                      | MCfg1   | No                                    | х                          | Х                    | x                                | Х                                  | х                              | х                                    | х                                  | х                                     |                                   | х                           |                                    |                                      |                               | F                         | Located to evaluate LOU 62 and for general Site coverage.  |  |  |  |  |  |  |
| U-4                      | IV                | M-137                      | M-137B                            | TBD                         | MCcg1*  | new well                              | х                          | Х                    | x                                | х                                  | х                              | х                                    | х                                  | х                                     |                                   | х                           |                                    |                                      |                               |                           | New well to be installed; located to serve as a downgradient stepout for LOU 62 (former State Industries western pond), and for general Site coverage.                                 |  |  |  |  |  |  |
| U-5                      | IV                | M-138                      | M-138B                            | TBD                         | MCcg1*  | new well                              | х                          | х                    | x                                | х                                  | х                              | х                                    | х                                  | х                                     |                                   | х                           |                                    |                                      |                               |                           | New well to be installed; located to serve as a downgradient stepout for LOU 62 (former State Industries eastern pond) and LOU 59 (Storm Sewer System); and for general Site coverage. |  |  |  |  |  |  |
| V-7                      | Parcel H          | M-103                      | M-103B                            | 69.5 - 89.5                 | MCcg1   | No                                    | х                          | х                    | x                                | х                                  | х                              | х                                    | х                                  | х                                     |                                   | х                           |                                    |                                      |                               | F, J                      | Located to evaluate potential onsite sources in the southeastern portion of the Site and possible upgradient sources.  |  |  |  |  |  |  |
| W-1                      | Olin<br>Chemical  | H-11                       | H-11B                             | 95 - 105                    | MCcg1   | No                                    | х                          | Х                    | x                                | х                                  | х                              | х                                    | х                                  | х                                     |                                   | х                           |                                    |                                      |                               | F                         | To provide general area-wide upgradient information.   |  |  |  |  |  |  |
| W-4                      | Parcel H          | M-121                      | M-121B                            | 77 - 97                     | MCcg1   | No                                    | х                          | Х                    | x                                | Х                                  | х                              | Х                                    | Х                                  | Х                                     |                                   | х                           |                                    |                                      |                               | F, J                      | Located to evaluate upgradient (southwest) groundwater conditions on the Site.   |  |  |  |  |  |  |
| W-5                      | Parcel H          | M-118                      | M-118B                            | 138 - 158                   | MCfg2   | No                                    | х                          | х                    | x                                | х                                  | х                              | Х                                    | Х                                  | х                                     |                                   | Х                           |                                    |                                      |                               | F                         | Located to evaluate upgradient (south) groundwater conditions on the Site.   |  |  |  |  |  |  |
| W-6                      | Parcel H          | M-120                      | M-120B                            | 80 - 100                    | MCcg1   | Yes                                   | х                          | х                    | x                                | х                                  | х                              | Х                                    | Х                                  | х                                     |                                   | х                           |                                    |                                      |                               | F, G                      | Located to evaluate upgradient (south) groundwater conditions on the Site.   |  |  |  |  |  |  |
| W-7                      | Parcel H          | M-117                      | M-117B                            | 130 - 150                   | MCfg2   | No                                    | х                          | х                    | x                                | х                                  | х                              | х                                    | х                                  | х                                     |                                   | х                           |                                    |                                      |                               | F, G                      | Located to evaluate upgradient groundwater conditions on the southeast corner of the Site.   |  |  |  |  |  |  |
| QA/QC S                  | amples:           |                            |                                   |                             | Number of Fi  | eld Samples:                          | 17                         | 17                   | 17                               | 17                                 | 17                             | 17                                   | 17                                 | 17                                    | 1                                 | 17                          | 1                                  | 4                                    | 4                             | +                         |  |  |  |  |  |  |  |
|                          | Field D           | uplicates (10              | 0%)                               |                             |   |                                       | 2                          | 2                    | 2                                | 2                                  | 2                              | 2                                    | 2                                  | 2                                     | 0                                 | 2                           | 0                                  | 1                                    | 1                             | 1                         |  |  |  |  |  |  |  |
|                          | Field B<br>Equipn | nent Rinseat               | e Blanks                          |                             |   |                                       | 1<br>1                     | <u>1</u><br>1        | 1                                | 1                                  | 1                              | 1                                    | 1                                  | 1<br>1                                | 0                                 | 1                           | 0                                  | 1                                    | 1                             | -                         |  |  |  |  |  |  |  |
|                          | Trip Bla          | ank Samples                |                                   |                             |   |                                       | 0                          | 0                    | 5                                | 0                                  | 0                              | 0                                    | 0                                  | 0                                     | 0                                 | 0                           | 0                                  | 0                                    | 0                             |                           |  |  |  |  |  |  |  |
|                          |                   | Spike (5%)<br>Spike Duplic | ate (5%)                          |                             |   |                                       | 1<br>1                     | 1<br>1               | 1<br>1                           | 1<br>1                             | 1<br>1                         | 1<br>1                               | 1                                  | 1<br>1                                | 1                                 | 1                           | 1                                  | 1<br>1                               | 1<br>1                        |                           |  |  |  |  |  |  |  |
|                          |                   |                            |                                   |                             | Тс  | otal Samples:                         | 23                         | 23                   | 28                               | 23                                 | 23                             | 23                                   | 23                                 | 23                                    | 4                                 | 23                          | 4                                  | 9                                    | 9                             |                           |  |  |  |  |  |  |  |

# Groundwater Sampling and Analysis Plan for Area IV Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

Page 1 of 2

| • | for |  |
|---|-----|--|
| ) | n   |  |
|   |     |  |

|                  | Laboratory <sup>E</sup>   |                                    |                                   |                             |   |                                       | CAS - Ke                   | lso, WA                      |                                  |                                    | CAS - Roche                    | ster, NY                             |                                    |                                       | GEL<br>Charleston, SC             | CAS -<br>Houston            | STL-<br>Denver                     | Alpha<br>Analytical<br>Sparks, NV    | Rationale for                 |               |
|------------------|---|------------------------------------|-----------------------------------|-----------------------------|---|---------------------------------------|----------------------------|------------------------------|----------------------------------|------------------------------------|--------------------------------|--------------------------------------|------------------------------------|---------------------------------------|-----------------------------------|-----------------------------|------------------------------------|--------------------------------------|-------------------------------|---------------|
| Grid<br>Location | Location<br>Area  | Monitoring<br>Well No.             | Sample ID<br>Number <sup>K.</sup> | Screen Interval<br>(ft bgs) | Soil Type<br>Expected Across<br>Screen Interval <sup>1.</sup> | Well Sampled<br>for Phase A?<br>(y/n) | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup>         | VOCs <sup>3.</sup><br>(EPA 8260) | Hex Cr <sup>4.</sup><br>(EPA 7199) | Wet<br>Chemistry <sup>5.</sup> | OCPs <sup>6.</sup><br>(EPA<br>8081A) | Total<br>Cyanide<br>(EPA<br>9012A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | PCBs <sup>8,L</sup><br>(EPA 8082) | Radionuclides <sup>9.</sup> | PCBs <sup>8,L</sup><br>(EPA 1668A) | OPPs <sup>10, A</sup><br>(EPA 8141A) | Organic<br>Acids <sup>B</sup> | Revision      |
|                  |   |                                    |                                   | -                           | Wel   | ls are organi                         | zed by grid                | location                     | as shown                         | on Plate A                         | - Starting p                   | oint is on                           | the north                          | nwestern                              | -most grid i                      | n Area 4 (P-2) a            | nd ending v                        | with the sou                         | theastern-mo                  | ost grid cove |
| Notes:           |   |                                    |                                   |                             |   |                                       |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   |                                    |                                   |                             | able. Soil type inf   | erred from nea                        | arby wells and             | d geologic o                 | cross-sectio                     | on provided i                      | n the Phase A                  | Source Are                           | ea Investiga                       | ation Repo                            | rt (ENSR, 200                     | )7).                        |                                    |                                      |                               |               |
|                  |   | l be collected                     | ,                                 |                             |   |                                       |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   |                                    |                                   | sampling plan               |   |                                       |                            | l'an a sta 🗛                 |                                  |                                    |                                |                                      |                                    |                                       |                                   | al tha                      | la duuill aanaa                    |                                      |                               |               |
|                  | It is anticipated that the large majority of the flow to the well will be from the coarse-grained sediments. As such, in the cases where there are two lithologies present across the screen interval, the water sampled will represent conditions in the coarse-grained in Metals analyses includes Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Platinum, Potassium, Selenium, Silver, Sodium, Strontium, Tin, Titani |                                    |                                   |                             |   |                                       |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   |                                    |                                   |                             | alysis for naphth   |                                       | , Caumum, C                | , on on on one of the second |                                  | эрег, поп, се                      | au, maynesiu                   | n, wangan                            |                                    | iry, worydd                           |                                   | , Flatinuni, Fotass         | ium, Selemu                        | n, Silver, Sou                       | ium, Suomuum,                 | rin, manun,   |
|                  |   | t Chromium.                        | compounde                         |                             |   | a.o                                   |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
| 5.               | Complete li   | ist of wet che                     | mistry paran                      | neters are sho              | wn on Table 1. A  | II groundwater                        | samples will               | have pH m                    | easured in                       | the field.                         |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  | Complete list of wet chemistry parameters are shown on Table 1. All groundwater samples will have pH measured in the field.<br>OCPs = Organochlorine pesticides (to include analysis for hexachlorobenzene).  |                                    |                                   |                             |   |                                       |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  | SVOCs = Semi volatile organic compounds.  |                                    |                                   |                             |   |                                       |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  | Polychlorinated Biphenyls.  |                                    |                                   |                             |   |                                       |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  | Radionuclides consists of alpha spec reporting for isotopic Thorium and isotopic Uranium, and Radium-226, plus Radium-228 by beta counting (per NDEP).<br>OPPs = Organophosphorous Pesticides   |                                    |                                   |                             |   |                                       |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   | ermined when                       |                                   |                             |   |                                       |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  | Quaternary  |                                    |                                   |                             |   |                                       |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   | ek Formation                       |                                   |                             |   |                                       |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   |                                    |                                   | e-grained facio             |   |                                       |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   |                                    |                                   | e-grained faci              |   |                                       |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   |                                    |                                   |                             | wn on Table 1. A  |                                       |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   |                                    |                                   |                             | led or changed fr<br>noved from Table                         |                                       |                            |                              |                                  |                                    |                                | •                                    |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   | added per N                        |                                   |                             |   | 5 in the inay 2                       | .000 Alea IV               | WOIK FIdIT                   | originally re                    | svieweu by N                       | DEF.                           |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   |                                    |                                   | P (July 21, 200             | 08).  |                                       |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   |                                    |                                   |                             | onto Tronox from  | the west.                             |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   |                                    |                                   |                             | is not located in A   |                                       |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   |                                    |                                   |                             | sist field samplin  | g personnel in                        | shipping the               | sample cor                   | ntainers to t                    | he appropria                       | te laboratory.                 |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   |                                    |                                   | (July 21, 2008              |   |                                       | (                          | d                            |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   | ysis will be ac<br>was listed inco |                                   | e samples as                | they were inadve  | rtently left off c                    | in the Table 3             | that was re                  | eviewed by                       | NDEP.                              |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   |                                    |                                   | the name of th              | ne parcel. The pa   | rcel is a part of                     | area IV                    |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   |                                    |                                   |                             | types encountere  |                                       |                            | orina loas                   | were review                      | ved to ensur                       | e correct soil ty              | pes are lis                          | ted.                               |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   |                                    |                                   |                             | nclature to field sa  |                                       |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   |                                    |                                   | (May 6, 2008                |   |                                       |                            |                              |                                  |                                    |                                | - ,                                  |                                    |                                       |                                   |                             |                                    |                                      |                               |               |
|                  |   |                                    |                                   |                             |   |                                       |                            |                              |                                  |                                    |                                |                                      |                                    |                                       |                                   |                             |                                    |                                      |                               |               |

Page 2 of 2

for Location Description and Rationale for Investigation overing Area 4 (W-7). erval. um, Thallium, Tungsten, Uranium, Vanadium, and Zinc.

| Laboratory :     |                  |                        |                                   |                             |   |                                       |                                 |                            | AS<br>9, WA          |                                  |                                    | Columbia .<br>Ro               | Analytical<br>chester, N             |                                    | GEL<br>Charleston, SC                 | CAS<br>Houston, TX                | STL<br>Denver, CO           | Alpha<br>Analytical<br><sub>Sparks, NV</sub> |                                      |                               |
|------------------|------------------|------------------------|-----------------------------------|-----------------------------|---|---------------------------------------|---------------------------------|----------------------------|----------------------|----------------------------------|------------------------------------|--------------------------------|--------------------------------------|------------------------------------|---------------------------------------|-----------------------------------|-----------------------------|--|--------------------------------------|-------------------------------|
| Grid<br>Location | Location<br>Area | Monitoring<br>Well No. | Sample ID<br>Number <sup>K.</sup> | Screen Interval<br>(ft bgs) | Soil Type Expected<br>Across Screen<br>Interval <sup>1.</sup> | Well Sampled<br>for Phase A?<br>(y/n) | Matrix<br>Spike/MS<br>Duplicate | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup> | VOCs <sup>3.</sup><br>(EPA 8260) | Hex Cr <sup>4.</sup><br>(EPA 7199) | Wet<br>Chemistry <sup>5.</sup> | OCPs <sup>6.</sup><br>(EPA<br>8081A) | Total<br>Cyanide<br>(EPA<br>9012A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | PCBs <sup>8,L</sup><br>(EPA 8082) | Radionuclides <sup>9.</sup> | PCBs <sup>8,L</sup><br>(EPA 1668A)           | OPPs <sup>10, A</sup><br>(EPA 8141A) | Organic<br>Acids <sup>8</sup> |
|                  |                  |                        |                                   |                             | Wells   | are organize                          | ed by grid lo                   | cation as s                | hown on              | Plate A - S                      | Starting po                        | int is on the                  | northwes                             | stern-mos                          | t grid in <i>l</i>                    | Area 4 (P-2)                      | and ending wit              | h the south                                  | eastern-mo                           | st grid cover                 |
| P-2              | Parcel F         | TR-6                   | TR-6B                             | 60-80                       | MCcg1   | No                                    |                                 | х                          | Х                    | Х                                | х                                  | х                              | Х                                    | Х                                  | Х                                     | х                                 | х                           | х  | х                                    | Х                             |
| P-4              | Parcel F         | M-93                   | M-93B                             | 35.4 - 45.4                 | MCfg1   | No                                    |                                 | х                          | х                    | х                                | х                                  | х                              | х                                    | х                                  | х                                     |                                   | x                           |  |                                      |                               |
| P-5              | IV               | M-97                   | M-97B                             | 35 - 45                     | MCfg1   | Yes                                   |                                 | х                          | х                    | х                                | х                                  | х                              | х                                    | x                                  | х                                     |                                   | x                           |  | х                                    | x                             |
| Q-4              | Parcel F         | M-92                   | M-92B                             | 34.9 - 44.9                 | MCfg1   | Yes                                   |                                 | х                          | x                    | x                                | х                                  | х                              | х                                    | x                                  | x                                     |                                   | x                           |  |                                      |                               |
| Q-4              | Faiceir          | IVI-92                 | M-92B                             | 34.9 - 44.9                 | Meigi   | Tes                                   | х                               | х                          | х                    | х                                | х                                  | х                              | х                                    | х                                  | х                                     |                                   | х                           |  |                                      |                               |
| 0.4              |                  | M 440                  | M-143B                            | TBD                         | 0-1/006-4*  |                                       |                                 | x                          | х                    | х                                | х                                  | х                              | х                                    | х                                  | x                                     |                                   | х                           |  | х                                    | х                             |
| Q-4              | 4 IV M-143       | M-143BD                | TBD (dup)                         | Qal/MCfg1*                  | new well  |                                       | x                               | x                          | x                    | x                                | x                                  | x                              | x                                    | x                                  |                                       | x                                 |                             | x  | х                                    |                               |
| R-5              | IV               | M-144                  | M-144B                            | TBD                         | Qal/MCfg1*  | new well                              |                                 | x                          | х                    | х                                | х                                  | х                              | х                                    | х                                  | x                                     |                                   | x                           |  |                                      |                               |
| S-2              | Parcel G         | TR-8                   | TR-8B                             | 63 - 93                     | MCcg1/MCfg2   | No                                    |                                 | х                          | х                    | х                                | х                                  | х                              | х                                    | х                                  | х                                     |                                   | x                           |  | х                                    | х                             |
| T-7              | IV               | M-10                   | M-10B                             | 43 - 63                     | Qal/MCfg1   | No                                    |                                 | х                          | х                    | х                                | х                                  | х                              | х                                    | х                                  | х                                     |                                   | x                           |  |                                      |                               |
| U-4              | IV               | TR-10                  | TR-10B                            | 80-100                      | MCfg1   | No                                    |                                 | x                          | х                    | х                                | х                                  | х                              | х                                    | х                                  | x                                     |                                   | x                           |  |                                      |                               |
| U-4              | IV               | M-137                  | M-137B                            | TBD                         | MCcg1*  | new well                              |                                 | x                          | х                    | х                                | х                                  | х                              | х                                    | х                                  | х                                     |                                   | x                           |  |                                      |                               |
|                  |                  |                        | M-138B                            | TBD                         |   |                                       |                                 | x                          | х                    | x                                | x                                  | x                              | х                                    | х                                  | x                                     |                                   | x                           |  |                                      |                               |
| U-5              | IV               | M-138                  | M-138BD                           | TBD (dup)                   | MCcg1*  | new well                              |                                 | x                          | х                    | x                                | x                                  | x                              | x                                    | x                                  | x                                     |                                   | x                           |  |                                      |                               |
| V-7              | Parcel H         | M-103                  | M-103B                            | 69.5 - 89.5                 | MCcg1   | No                                    |                                 | х                          | х                    | х                                | х                                  | х                              | х                                    | х                                  | х                                     |                                   | x                           |  |                                      |                               |
| W-1              | Olin<br>Chemical | H-11                   | H-11B                             | 95 - 105                    | MCcg1   | No                                    |                                 | x                          | х                    | х                                | x                                  | x                              | х                                    | х                                  | х                                     |                                   | x                           |  |                                      |                               |
| W-4              | Parcel H         | M-121                  | M-121B                            | 77 - 97                     | MCcg1   | No                                    |                                 | х                          | х                    | х                                | х                                  | х                              | х                                    | х                                  | х                                     |                                   | x                           |  |                                      |                               |
| W-5              | Parcel H         | M-118                  | M-118B                            | 138 - 158                   | MCfg2   | No                                    |                                 | х                          | х                    | х                                | х                                  | х                              | х                                    | х                                  | x                                     |                                   | x                           |  |                                      |                               |
| W-6              | Parcel H         | M-120                  | M-120B                            | 80 - 100                    | MCcg1   | Yes                                   |                                 | х                          | х                    | х                                | х                                  | х                              | х                                    | х                                  | х                                     |                                   | x                           |  |                                      |                               |
| W-7              | Parcel H         | M-117                  | M-117B                            | 130 - 150                   | MCfg2   | No                                    |                                 | x                          | x                    | х                                | х                                  | х                              | х                                    | x                                  | x                                     |                                   | x                           |  |                                      |                               |
| Number           | r of Wells:      | 17                     | 1                                 | I                           | 1   |                                       | 1                               | L                          | L                    | 1                                | 1                                  | 1                              | 1                                    | L                                  | L                                     | 1                                 | 1                           | L  | 1                                    | L                             |

Notes:

\* Well completion information or boring log not available. Soil type inferred from nearby wells and geologic cross-section provided in the Phase A Source Area Investigation Report (ENSR, 2007).

X Sample will be collected and analyzed.

blank No sample collected under Phase B sampling plan.

It is anticipated that the large majority of the flow to the well will be from the coarse-grained sediments. As such, in the cases where there are two lithologies present across the screen interval, the water sampled will represent conditions in the coarse-grained interval. 1.

Metals analyses includes Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Platinum, Potassium, Selenium, Strontium, Tin, Titanium, Thallium, Tungsten, Uranium, Vanadium, and Zinc. 2.

VOCs = Volatile organic compounds (to include analysis for naphthalene). 3.

Hexavalent Chromium. 4.

## Table 3 (Field Version)

Groundwater Sampling and Analysis Plan for Area IV

Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

Page 1 of 2

|    | Location Description and Rationale for Investigation   |
|----|--|
|    |  |
| ri | ng Area 4 (W-7).   |
|    | Located to evaluate groundwater migrating onto Tronox from the west.   |
|    | Located to serve as a downgradient stepout for LOUs 41 and 65; as an upgradient stepout for LOU 63; and for general Site coverage.   |
|    | Located to serve as a downgradient stepout for LOUs 4, 26, 27, 28, 42, and 59; and for general Site coverage.  |
|    | Located to serve as a downgradient stepout for LOUs 25, 41, 59, 60, and 65; as an upgradient stepout for LOU 63; and for general Site coverage.  |
|    | This is a matrix spike / matrix spike duplicate sample. Fill one set of bottles for MS sample & second set of bottles for MSD sample. Label both sets of bottles as M-92.              |
|    | New well to be installed; located to evaluate LOUs 4, 25, 26, 27, 28, 42, and 60; and for general Site coverage  |
|    | This is a duplicate sample of M-143B.  |
|    | New well to be installed; located to evaluate LOU 42, and for general Site coverage.   |
|    | Located to serve as an upgradient stepout for LOUs 41 and 65; to evaluate possible offsite sources to the west (particularly for VOCs); and for general Site coverage.                 |
|    | Located as stepout for LOU 59; and for general Site coverage.  |
|    | Located to evaluate LOU 62 and for general Site coverage.  |
|    | New well to be installed; located to serve as a downgradient stepout for LOU 62 (former State Industries western pond), and for general Site coverage.                                 |
|    | New well to be installed; located to serve as a downgradient stepout for LOU 62 (former State Industries eastern pond) and LOU 59 (Storm Sewer System); and for general Site coverage. |
|    | This is a duplicate sample of M-138B.  |
|    | Located to evaluate potential onsite sources in the southeastern portion of the Site and possible upgradient sources.  |
|    | To provide general area-wide upgradient information.   |
|    | Located to evaluate upgradient (southwest) groundwater conditions on the Site.   |
|    | Located to evaluate upgradient (south) groundwater conditions on the Site.   |
|    | Located to evaluate upgradient (south) groundwater conditions on the Site.   |
|    | Located to evaluate upgradient groundwater conditions on the southeast corner of the Site.   |
|    |  |

| Laboratory :     |                  |                        |                                   |                             |   |                                       |                                 | CA<br>Kelso                | -                    |                                  |                                    | Columbia /<br>Roc              | Analytical<br>chester, N             | GEL<br>Charleston, SC              | CAS<br>Houston, TX                    | STL<br>Denver, CO                 | Alpha<br>Analytical<br><sub>Sparks, NV</sub> |                                    |                                      |                               |
|------------------|------------------|------------------------|-----------------------------------|-----------------------------|---|---------------------------------------|---------------------------------|----------------------------|----------------------|----------------------------------|------------------------------------|--------------------------------|--------------------------------------|------------------------------------|---------------------------------------|-----------------------------------|--|------------------------------------|--------------------------------------|-------------------------------|
| Grid<br>Location | Location<br>Area | Monitoring<br>Well No. | Sample ID<br>Number <sup>K.</sup> | Screen Interval<br>(ft bgs) | Soil Type Expected<br>Across Screen<br>Interval <sup>1.</sup> | Well Sampled<br>for Phase A?<br>(y/n) | Matrix<br>Spike/MS<br>Duplicate | Perchlorate<br>(EPA 314.0) | Metals <sup>2.</sup> | VOCs <sup>3.</sup><br>(EPA 8260) | Hex Cr <sup>4.</sup><br>(EPA 7199) | Wet<br>Chemistry <sup>5.</sup> | OCPs <sup>6.</sup><br>(EPA<br>8081A) | Total<br>Cyanide<br>(EPA<br>9012A) | SVOCs <sup>7.</sup><br>(EPA<br>8270C) | PCBs <sup>8,L</sup><br>(EPA 8082) | Radionuclides <sup>9.</sup>                  | PCBs <sup>8,L</sup><br>(EPA 1668A) | OPPs <sup>10, A</sup><br>(EPA 8141A) | Organic<br>Acids <sup>B</sup> |
|                  |                  |                        |                                   |                             | Wells   | are organize                          | d by grid lo                    | cation as s                | hown on              | Plate A - S                      | Starting poi                       | int is on the                  | northwes                             | stern-mos                          | t grid in A                           | Area 4 (P-2)                      | and ending wit                               | h the south                        | eastern-mo                           | st grid cover                 |
| 5.<br>6.<br>7.   | OCPs = O         |                        | e pesticides (                    | to include ana              | own on Table 1. Al<br>Ilysis for hexachlo                     | 0                                     | samples will h                  | ave pH meas                | sured in the         | e field.                         |                                    |                                |                                      |                                    |                                       |                                   |  |                                    |                                      |                               |
| 8.               | ,                | nated Bipheny          |                                   | o roporting for             | iactoria Thorium  | and instania I I                      | ronium and F                    | odium 226 r                | luo Podiu            | m 229 by b                       | oto ocupting                       |                                |                                      |                                    |                                       |                                   |  |                                    |                                      |                               |
| 9.<br>10.        |                  | rganophosph            |                                   |                             | isotopic Thorium  |                                       | ranium, and R                   | aulum-220, p               | nus Radiu            | 111-226 DY D                     | eta counting                       | (per NDEP).                    |                                      |                                    |                                       |                                   |  |                                    |                                      |                               |
| TBD              | To Be Dete       | ermined wher           | n well is cons                    | structed.                   |   |                                       |                                 |                            |                      |                                  |                                    |                                |                                      |                                    |                                       |                                   |  |                                    |                                      |                               |

 Qal
 Quaternary Alluvium.

 MCfg1
 Muddy Creek Formation - first fine-grained facies

 MCcg1
 Muddy Creek Formation - first coarse-grained facies

 MCfg2
 Muddy Creek Formation - second fine-grained facies

## Table 3 (Field Version) Groundwater Sampling and Analysis Plan for Area IV Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada

Page 2 of 2

#### Location Description and Rationale for Investigation

ering Area 4 (W-7).