Summary of Available Data for LOUs 43, 11, 12, and 15

Tronox Facility – Henderson, Nevada

Name of Facility:

LOU 43 - Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning
LOU 11 – Sodium Chlorate Filter Cake Holding Area
LOU 12 – Hazardous Waste Storage Area
LOU 15 – Platinum Drying Unit

Goal of Closure:

- Closure for future commercial/industrial use.

Site Investigation Area:

LOU 43 – Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning

- Size: The Unit 4 basement is approximately 200 feet by 250 feet (2.3 acres).
- Location: Southeast corner of Area II, south of the Chemstar facility.
- Current Status/Features: The Unit 4 Basement has no on-going operations. The sodium chlorate process equipment has been removed. The electrical substation and the chlorination area on the first floor (ground level) are both active and portions of Unit 4 are used for storage of empty boron trichloride cylinders, drums of intermediate boron carbide, magnesium powder, and floor sweepings [Ref. 6].

LOU 11 – Sodium Chlorate Filter Cake Holding Area

- Size: Approximately 36 feet by 18 feet.
- Location: Approximately 30 feet north of the Unit 3 Building.
- Current Status/Features: LOU 11 is currently inactive and consists of the concrete structure described below.

LOU 12 – Hazardous Waste Storage Area

- Size: Approximately 15 feet by 36 feet.
- Location: Between the northern ends of Units 3 and 4.
- Current Status/Features: LOU 12 is not active and the exact location of LOU 12 can not be identified. However, there are marks on the asphalt where a bin had been placed and this is the assumed location of the LOU.

LOU 15 – Platinum Drying Unit

- Size: The Platinum Drying Unit reportedly consisted of a 20-foot by 32-foot concrete floored containment pad with a 7-inch high 6-inch thick concrete berm.
- Location: Approximately 80 feet north of the northwest corner of Unit 4.

Summary of Available Data for LOUs 43, 11, 12, and 15

Tronox Facility – Henderson, Nevada

- Current Status/Features: LOU 15 is no longer in service and the concrete floored and bermed area has been demolished. Currently, the western end of the boron product production building covers the former location of LOU 15.

Description:

LOU 43 – Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning

- From 1945 to 1989, sodium chlorate and sodium perchlorate were produced by electrolytic processes on the first floor of Unit 4 in LOU 43. Production ceased by approximately 1998 [Ref. 4].
- Sodium chlorate and sodium perchlorate processes involved the use of sodium dichromate (hexavalent chromium) [Ref. 4].
- The Unit 4 Basement was concrete-lined and used as a sump to collect spillage and wash water [Ref. 4].
- Floor cracks and deterioration were noted (repairs were made in 1983 and 1984) in the concrete floor during decommissioning activities [Ref. 4].
- When the process was decommissioned, the process equipment (tanks, pipes, pumps, etc.) were dismantled and transported off-site for disposal or recycling [Ref. 4].
- Residual materials were managed as hazardous waste and transported to TSDF in Beatty, Nevada [Ref. 4].
- Building areas were cleaned and made available for other uses [Ref. 4].

LOU 11 – Sodium Chlorate Filter Cake Holding Area

- This area was used as a designated hazardous waste drying and storage area for waste from the sodium chlorate operations [Ref. 4].
- Damp-to-wet process filter cakes from the sodium chlorate process were transported to LOU11 where the filter cakes were dried [Ref. 4].
- Dry cakes were then taken to LOU 12 (Hazardous Waste Storage Area) to be disposed off-site [Ref. 4].
- The filter cake drying facility began operations in late 1982 [Ref. 4].
- In 1991, the pad structure was demolished and a new drying and storage area was constructed at the same location [Ref. 4].
  - Demolition rubble and underlying soil (approximately 42 tons) were managed and sent to the hazardous waste landfill in Beatty, Nevada [Ref. 4].

  - The remaining inactive facility consists of a drying area and a tank containment system that is underlain by an HDPE liner and a leak detection system [Ref. 4].
  - The concrete floor of the holding area is 18 inches above the surrounding asphalt paved area and slopes toward the rear wall [Ref. 4].
  - The three vertical walls of the holding area are constructed of concrete and are between 1-1/2 to 3 feet high [Ref. 4].
- The solution in the process filter cakes contained hexavalent chromium [Ref. 4].
- Liquids from the drying area flowed to the southwest into a 12-inch deep portable plastic containment bin [Ref. 4].
- The plastic bin was positioned within a sunken ramped and bermed concrete containment area [Ref. 4].
- The bin contents were recycled to the sodium chlorate process [Ref. 4].
- Water run-on is prevented by the elevated design of the drying area [Ref. 4].
- Water run-on to the containment area could occur due to the downward slope of the ramp towards the containment bin [Ref. 4].
- Area storm inlets are protected by 4-inch berms [Ref. 4].
- Currently there is no HDPE liner on the containment system and no tank is present [Ref. 6].

LOU 12 – Hazardous Waste Storage Area

- The Hazardous Waste Storage Area consisted of an eight-wheeled, lined, semi-dump trailer that received solid wastes from the sodium chlorate process and LOU 11 [Ref. 4].
- Solid waste was delivered to the trailer by front-end loader and by transfer from the collection bin [Refs. 1 and 4].
- The trailer was located within the sodium chlorate production containment area which has berms on the north and south ends and all storm/wash water is directed to a single sump and returned back into the process stream [Ref. 4].
- This area operated from early 1983 to approximately 1998 [Ref. 7].
- The lined and covered dump trailers transported the waste off-site, typically to U.S. Ecology in Beatty, Nevada [Ref. 4].

- Water and waste spilled in this area drained toward a recovery sump and was recycled back to the process stream [Ref. 4].

LOU 15 – Platinum Drying Unit

- LOU 15 received sodium perchlorate process by-product from cell bottoms and filter press for drying prior to shipment off-site for platinum recovery [Ref. 4]. The material was handled as a hazardous waste or hazardous material, due to the presence of sodium perchlorate.
- The Platinum Drying Unit operated from 1983 until 1993 [Refs. 1 and 4].
- The Platinum Drying Unit was demolished in 1994 and the concrete rubble and underlying soil were transported off-site to U.S. Ecology Landfill in Beatty, Nevada [Ref. 1].
- Prior to 1983, the semi-wet material was burned on-site in enclosed electric drying ovens before being shipped for off-site platinum recovery. [Ref. 4].
- The location of the drying ovens was not identified in any of the documents reviewed or by personnel interviewed.

Process Waste Streams Associated with LOU 43	Known or Potential Constituents Associated with LOU 43
Sodium chlorate production wastes	• Wet chemistry analytes • Chlorate • Hexavalent chromium • Ammonia
Sodium perchlorate production wastes	• Wet chemistry analytes • Perchlorate • Hexavalent chromium • Ammonia
Manganese dioxide production wastes	• Manganese
Boron, Boron trichloride, Boron tribromide production wastes	• Boron

Summary of Available Data for LOUs 43, 11, 12, and 15

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Process Waste Streams Associated with LOU 11	Known or Potential Constituents Associated with LOU 11
Prior to 1990 Filter cake waste from Sparkler and Durco filters [Ref. 3]	• Hexavalent chromium • Wet chemistry analytes
From 1990 to Approximately 1998 Sodium chlorate filter cake drying waste originating from the mud, brine, polishing, and sulfate filters [Ref. 3].	• Hexavalent chromium • Wet chemistry analytes
Process Waste Streams Associated with LOU 12	**Known or Potential Constituents Associated with LOU 12**
Prior to 1990 Filter cake wastes from Sparkler and Durco filters [Ref. 4]	• Hexavalent chromium • Wet chemistry analytes
From 1990 to Approximately 1998 Sodium chlorate filter cake drying waste originating from the mud, brine, polishing, and sulfate filters [Ref. 4].	• Hexavalent chromium • Wet chemistry analytes
Process Waste Streams Associated with LOU 15	**Known or Potential Constituents Associated with LOU 15**
Solution entrained in damp sodium perchlorate cell bottoms and filter press from sodium perchlorate operations in Units 4 and 5.	• Metals • Chlorate • Perchlorate • Ammonia • Hexavalent chromium • Platinum • Wet chemistry analytes

Overlapping or Adjacent LOUs: The following LOUs overlap or are adjacent to each other as shown on Figure 1:

Overlapping LOUs

- LOU 59 (Storm Sewer System) – A branch of LOU 59 runs under the east side of LOU 12. As there have been no reported releases from LOU 59, and LOU 12 was an aboveground feature, the potential for impacts to LOU 12 are minimal. Therefore, the addition of other chemical classes to the Phase B Analytical Plan for LOU 12 is not required.

Summary of Available Data for LOUs 43, 11, 12, and 15

Tronox Facility – Henderson, Nevada

- LOU 60 (Acid Drain System) – Branches of the Acid Drain System originate from and run through the northern portion of LOU 43. A portion of the system also crosses the western portion of LOU12. As there have been no reported releases from LOU 60, and LOU 12 was an aboveground feature, the potential for impacts to LOU 12 are minimal. Therefore, the addition of other chemical classes to the Phase B Analytical Plan for LOUs 43 and 12 is not required.

Adjacent LOUs

- LOUs 43, 11, 12, and 15 are all adjacent to each other and Phase B Analytical Plan for these LOUs takes into account the constituents associated the waste streams for these LOUs.
- LOU 61 (Unit 5 Basement and Old Sodium Chlorate Plant Decommissioning) is located approximately 75 feet to the east (cross-gradient) of LOU 43. Known or potential chemical classes associated with LOU 61 are consistent with those listed for LOU 43; therefore, the addition of other chemical classes to the Phase B Analytical Plan for LOUs 43, 11, 12, and 15 is not required.
- LOU 29 (Solid Waste Dumpsters) is located approximately 100 feet to the south (upgradient) of LOU 43. Due to the distance between these LOUs, the nature of the operations at LOU 29, and no reported releases, the addition of other chemical classes to the Phase B Analytical Plan for LOUs 43, 11, 12, and 15 is not required.
- LOU 59 (Storm Sewer System) – Branches of the Storm Sewer System are adjacent (cross-gradient) to LOUs 43, 11 and 15. As there have been no reported releases from LOU 59, addition of other chemical classes to the Phase B Analytical Plan for LOUs 43, 11, 12 and 15 is not required.
- LOU 60 (Acid Drain System) – Branches of the Acid Drain System are located to the east (cross-gradient) of LOU 11 and on the west (crossgradient) and north (downgradient) of LOU 15. As there have been no reported releases from LOU 60, addition of other chemical classes to the Phase B Analytical Plan for LOUs 43, 11, 12, and 15 is not required.

LOUs Potentially Affecting Soils in Other LOUs:

- Only LOUs 59 and 60 have the potential to affect LOUs 12 and 15; however, the potential for soil impacts is minimal (see discussion above).

Known Potential Chemical Classes:

- Metals
- Hexavalent chromium
- Perchlorate

Summary of Available Data for LOUs 43, 11, 12, and 15

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- Wet chemistry analytes

Known or Potential Release Mechanisms:

LOU 43 - Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning

- Potential leaks or spills from basement sumps into the underlying soil and groundwater through the concrete floor or via cracks or deterioration of the concrete floors [Ref. 4].
- Concrete sealing and repairs of basement floors were conducted in 1983 and 1984 [Ref. 4].
- In 1985, a hydrogeologic report by Kerr-McGee Chemical Corporation indicated that chromium contamination in groundwater originated from leakage of process solutions [Ref. 4]. Chlorate and perchlorate impacts to groundwater also originated from Unit 4 [Ref. 1].

LOU 11 – Sodium Chlorate Filter Cake Holding Area

- Potential infiltration to subsurface soils and groundwater from leaks in the liner or releases due to possible overtopping of berms (no releases documented).
- Incidental release in 1991, several approximately one-inch diameter pieces of waste material were observed on the asphalt adjacent to the western side of the holding area [Ref. 3].

LOU 12 – Hazardous Waste Storage Area

- No known releases documented for this LOU.
- Potential infiltration to subsurface soils and groundwater from possible spillage on to containment area during loading.
- In 1991, several small marks of filter cake were noted on the asphalt surface adjacent to the trailer and within the containment area [Ref. 4].

LOU 15 – Platinum Drying Unit

- Potential surface releases to surrounding soil (no releases documented).
- Possible infiltration through cracks in concrete to the underlying soils (no releases documented).

Summary of Available Data for LOUs 43, 11, 12, and 15

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Results of Historical Sampling:

- Downgradient monitoring wells M-11 and M-12A are tested for hexavalent chromium and perchlorate as part of periodic or routine groundwater monitoring program. Analytical results are summarized in LOUs 43, 11, 12, and 15 Table 6 (see attached) [Ref. 2].

LOU 15 – Platinum Drying Unit

- In 1993, the concrete pad was sampled for metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) using U.S. EPA Toxicity Characteristic Leaching Procedure (TCLP). With the exception of chromium, all other metals were not detected above the reporting limits (RLs), which were all below regulatory limits. Chromium was detected at 1.1 mg/L but was below the regulatory limit of 5.0 mg/L [Ref. 3].
- In 1994, soil samples from two locations (from areas with white crystalline matter) adjacent to the north and south edges of the former pad were analyzed for chromium. Total chromium results ranged from 17.9 to 50.7 mg/kg [Ref. 3].

Did Historical Samples Address Potential Release?

- Not completely. Historical borings were limited in depth and constituents, and were not representative of the full extent of the LOUs.

Summary of Phase A SAI:

<u>Soil</u>

- Phase A Investigation boring SA05 is located north (downgradient) of LOUs 11 and 12 and was specifically sampled to evaluate these LOUs [Ref. 2].
- Phase A Investigation boring SA06 is located north (downgradient) of LOU 43 and was specifically sampled to evaluate this LOU [Ref. 2].

<u>Groundwater</u>

- The closest well sampled (M-12A) is north (downgradient) of the Unit 4 Building [Ref. 2]. Well M-13 (co-located with soil boring SA05) is located west of these LOUs and is not considered representative.

Chemical classes detected in Phase A soil borings SA05 and SA06:

- Metals
- Hexavalent chromium
- Perchlorate
- Wet chemistry analytes
- SVOCs
- VOCs
- Organochlorine pesticides (SA05 only)
- Dioxins/furans

Summary of Available Data for LOUs 43, 11, 12, and 15

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- Radionuclides
- Asbestos (SA05 only)

As a result of the Phase A data, the Phase B analytical plan for samples collected from LOUs 43, 11, 12, and 15 will be expanded to include analyses for SVOCs, VOCs, organochlorine pesticides, dioxins/furans, radionuclides, and asbestos.

- Analytical results for soil and groundwater from the Phase A sampling event are summarized in LOUs 43, 11, 12, and 15 Tables 1 through 5 and LOUs 43, 11, 12, and 15 Tables 7 through 22 (see attached).

Are Phase A Sample Locations in "Worst Case" Areas?

- Not completely. Phase A borings are located downgradient of the Unit buildings; however, there are no borings located within the Unit building footprints.

Is Phase B Investigation Recommended?

- Yes

Proposed Phase B Soil Investigation/Rationale:

The Phase B investigation for LOUs 43, 11, 12, and 15 consists of collecting soil samples from the following nine locations:

- Three (3) soil borings will be drilled within LOU 43.
- Three (3) soil borings will be drilled north (downgradient) of LOUs 12, 15, and 43.
- Two (2) soil borings will be drilled west (cross-gradient) of LOUs 11 and 43.
- One (1) soil boring will be drilled south (upgradient) of LOU 43.
- All nine borings along with the analytical program to evaluate soil samples from LOUs 43, 11, 12, and 15 are listed on **Table A – Soil Sampling and Analytical Plan for LOUs 43, 11, 12, and 15.**

- Soil sample locations consist of both judgmental and randomly-placed locations.
- Judgmental sample locations:
  - Designed to evaluate soil for known or potential chemical classes associated with LOUs, based on the known process waste streams.
  - Seven (7) of the nine sample locations are judgmental locations and include soil borings SA126, SA124, SA125, SA161, SA208, SA32, and SA31.

- Random sample grid locations:
  - Designed to assess whether unknown constituents associated with the LOUs are present.
  - Two (2) of the nine sample locations are randomly-placed location RSAQ6 and RSAR6.
  - All nine borings along with the analytical program to evaluate soil samples from LOUs 43, 11, 12, and15 are listed on **Table A – Soil Sampling and Analytical Plan for LOUs 43, 11, 12, and 15.**

Proposed Phase B Constituents List for Soils:

Judgmental sample locations will be analyzed for LOU-specific constituents consisting of the following:

- Metals (Phase A list)
- Hexavalent chromium
- Perchlorate
- Wet chemistry analytes

Judgmental sample locations will also be analyzed for the following constituents for area-wide coverage purposes:

- VOCs
- SVOCs
- Organochlorine pesticides
- Radionuclides
- Dioxins/furans
- Asbestos

Random sample grid locations will be analyzed for the following full list of Phase A Site-related chemicals for LOU-specific and area-wide coverage purposes:

- Metals (Phase A list)
- Hexavalent chromium
- Perchlorate
- Wet chemistry analytes
- VOCs
- SVOCs
- TPH-DRO/ORO
- Organochlorine pesticides
- Dioxins/furans
- Radionuclides
- Asbestos

Summary of Available Data for LOUs 43, 11, 12, and 15

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Proposed Phase B Groundwater Investigation/Rationale:

The Phase B groundwater investigation of LOUs 43, 11, 12, and 15 consists of collecting groundwater samples from four (4) locations to evaluate local groundwater conditions and as part of the Site-wide evaluation of constituent trends in groundwater. LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning) and LOU 61 (Unit 5 Basement and Old Sodium Chlorate Plant Decommissioning) are known sources of perchlorate and hexavalent chromium and are being handled by the Site-wide groundwater remediation effort.

- Wells M-52 and M-12A located north (downgradient) of LOU 43 will be used to evaluate local and area-wide groundwater conditions.
- Well M-11 located northeast (downgradient) of LOU 43 will be used to evaluate local and area-wide groundwater conditions.
- Well M-10 located south (upgradient) of LOU 43, 11, 12, and 15 will be used to evaluate local and area-wide groundwater conditions.
- The four sampling wells and the analytical program to evaluate groundwater samples associated with LOUs 43, 11, 12, and 15 are listed on **Table B – Groundwater Sampling and Analytical Plan for LOUs 43, 11, 12, and 15.**

Proposed Phase B Constituents List for Groundwater:

Groundwater samples will be analyzed for the following analytes:

- Metals (Phase A list)
- Hexavalent chromium
- Perchlorate
- Wet chemistry analytes
- VOCs
- SVOCs
- Organochlorine pesticides
- Radionuclides

Proposed phase B Soil Gas Investigation/Rationale:

Soil gas samples will be collected from two (2) locations to evaluate area conditions for the presence of vapor-phase VOCs in the vadose zone.

- SG70 and SG71 are located to evaluate VOCs beneath LOU 43.
- SG40 is located to evaluate VOCs downgradient of LOU 43.
- SG69 is located to evaluate VOCs cross-gradient of LOU 43.

Details of the soil gas sampling program are contained in the NDEP-approved (March 26, 2008) Soil Gas Survey Work Plan, Tronox LLC, Henderson, Nevada, dated March 20, 2008.

Summary of Available Data for LOUs 43, 11, 12, and 15

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Proposed Phase B Constituents List for Soil Gas:

- VOCs (EPA TO-15)

References:

1. ENSR, 2005, Conceptual Site Model, Kerr-McGee Facility, Henderson, Nevada, ENSR, Camarillo, California, 04020-023-130, February 2005 and August 2005.
2. ENSR, 2007a, Phase A Source Area Investigation Results, Tronox Facility, Henderson, Nevada, September 2007.
3. ENSR, 2007b, Quarterly Performance Report for Remediation Systems, Tronox LLC, Henderson, Nevada, July-September 2007, November 2007.
4. Kerr-McGee, 1996b, Response to Letter of Understanding, Henderson, Nevada, October 1996.
5. Kleinfelder, 1993, Environmental Conditions Assessment, Kerr-McGee Chemical Corporation, Henderson, Nevada Facility, April 15, 1993 (Final).
6. ENSR, Site Visit by Sally Bilodeau, April 16, 2008.
7. Environmental Answers, Email Communication from Keith Bailey, May 22, 2008.

Summary of Available Data for LOUs 43, 11, 12, and 15

Tronox Facility – Henderson, Nevada

LOU Figure

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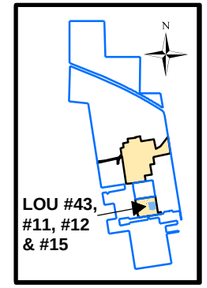

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SAMPLE LOCATIONS FOR LOU #43, #11, #12 & #15
UNIT 4 BASEMENT AND OLD CHLORATE PLANT
DECOMMISSIONING, SODIUM CHLORATE FILTER
CAKE HOLDING AREA, HAZARDOUS WASTE STORAGE
AREA & PLATINUM DRYING UNIT
Phase B Area II Source Area Investigation, Tronox Facility
Henderson, Nevada

SCALE:	DATE:	PROJECT NUMBER:
AS SHOWN	6/13/2008	04020-023-430

FIGURE NUMBER:

1

SHEET NUMBER:

X

Summary of Available Data for LOUs 43, 11, 12, and 15

Tronox Facility – Henderson, Nevada

Sampling and Analytical Plans for LOU 43, 11, 12, and 15:

Table A – Soil Sampling and Analytical Plan for LOU 43, 11, 12, and 15
Table B – Groundwater Sampling and Analytical Plan for LOU 43, 11, 12, and 15

Table A
Soil Sampling and Analytical Plan for LOUs 11, 12, 15, and 43 in Area II
Phase B Source Area Investigation Work Plan
Tronox Facility - Henderson, Nevada

Grid Location	LOU Number	Phase B Boring No.	Sample ID Number	Sample Depths[1.] (ft. bgs)	Perchlorate (EPA 314.0)	Metals (EPA 6020)	Hex Cr (EPA 7199)	TPH-DRO/ORO (EPA 8015B)	TPH-GRO (EPA 8015B)	VOCs[2.] (EPA 8260B)	Wet Chemistry[3.]	Total Cyanide (EPA 9012A)	OCPs[4.] (EPA 8081A)	SVOCs[5.] (EPA 8270C)	Radio-nuclides[6.]	Dioxins/ Furans[7.]	Asbestos[9.] EPA/540/R-97/028	Geo-technical Tests[10.]	Rationale
Borings are organized by grid location as shown on Plate A - Starting point is on the northwestern most grid in Area 2 (M-2) and ending with the southeastern most grid in Area 2 (S-7).																			
Q-5	11	SA124	SA124-0.0	0.0													X		Boring located to evaluate LOU 11 (Sodium Chlorate Filter Cake Holding Area). Located adjacent to LOU 11 pad
Q-5	11		SA124-0.5	0.5	X	X	X			X	X		X	X	X	X			at a likely runoff location to evaluate possible release runoff. Phase A boring SA05 located north (downslope) of LOU 11.
Q-5	11		SA124-10	10	X	X	X			X	X		Hold	X	X				
Q-5	11		SA124-20	20	X	X	X			X	X		Hold	X	X				
Q-5	11		SA124-30	30	X	X	X			X	X		Hold	X	X				
Q-5	11		SA124-35	35	X	X	X			X	X		X		X				
Q-6	15, 60	SA126	SA126-0.0	0.0													X		Boring located to evaluate LOU 15 (Platinum Drying Unit) and LOU 60 (Acid Drain System). Located as close as
Q-6	15, 60		SA126-0.5	0.5	X	X	X	X		X	X		X	X	X	X			possible and downslope of LOU 15 to evaluate potential surface runoff releases and adjacent to LOU 60 piping to
Q-6	15, 60		SA126-10	10	X	X	X	X		X	X		Hold	X	X				evaluate local piping releases.
Q-6	15, 60		SA126-20	20	X	X	X	X		X	X		Hold	X	X				
Q-6	15, 60		SA126-30	30	X	X	X	X		X	X		Hold	X	X				
Q-6	15, 60		SA126-35	35	X	X	X	X		X	X		X	X	X				
Q-6	43, 59, 60	RSAQ6	RSAQ6-0.0	0.0													X		Boring located nearby LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning), LOU 59 Storm
Q-6	43, 59, 60		RSAQ6-0.5	0.5	X	X	X	X		X	X		X	X	X	X			Sewer System), and LOU 60 (Acid Drain System). Located downslope of OU 43 to evaluate potential subsurface
Q-6	43, 59, 60		RSAQ6-10	10	X	X	X	X		X	X		Hold	X	X				releases and near LOU 60 piping to evaluate local piping releases.
Q-6	43, 59, 60		RSAQ6-20	20	X	X	X	X		X	X		Hold	X	X				
Q-6	43, 59, 60		RSAQ6-30	30	X	X	X	X		X	X		Hold	X	X				
Q-6	43, 59, 60		RSAQ6-35	35	X	X	X	X		X	X		X	X	X				
R-6	43	SA31	SA31-0.0	0.0													X		Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning). Located
R-6	43		SA31-0.5	0.5	X	X	X			X	X		X		X	X			upslope as a stepout for LOU 43 and colocated with SG43 to compare VOC results, and for general site coverage.
R-6	43		SA31-10	10	X	X	X			X	X		Hold		X				
R-6	43		SA31-20	20	X	X	X			X	X		Hold		X				
R-6	43		SA31-30	30	X	X	X			X	X		Hold		X				
R-6	43		SA31-35	35	X	X	X			X	X		X		X				
R-6	43, 60	SA32	SA32-0.0	0.0													X		Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning), and LOU 60
R-6	43, 60		SA32-0.5	0.5	X	X	X	X		X	X		X		X	X			(Acid DrainSystem). Located within the footprint of LOU 43 as a worst case location and also located near LOU 60
R-6	43, 60		SA32-10	10	X	X	X	X		X	X		Hold		X				piping to evaluate local piping releases near a manhole.
R-6	43, 60		SA32-20	20	X	X	X	X		X	X		Hold		X				
R-6	43, 60		SA32-30	30	X	X	X	X		X	X		Hold		X				
R-6	43, 60		SA32-35	35	X	X	X	X		X	X		X		X				
R-6	12, 59, 60	SA125	SA125-0.0	0.0													X		Boring located to evaluate LOU 12 (Hazardous Waste Storage Area), LOU 59 (Storm Sewer System), and LOU 60
R-6	12, 59, 60		SA125-0.5	0.5	X	X	X	X		X	X		X	X	X	X			(Acid DrainSystem). Located downslope of LOU 12 to evaluate surface runoff releases and adjacent to LOU 59 and 60
R-6	12, 59, 60		SA125-10	10	X	X	X	X		X	X		Hold	X	X				piping to evaluate high risk release locations (Manhole).
R-6	12, 59, 60		SA125-20	20	X	X	X	X		X	X		Hold	X	X				
R-6	12, 59, 60		SA125-30	30	X	X	X	X		X	X		Hold	X	X				
R-6	12, 59, 60		SA125-35	35	X	X	X	X		X	X		X	X	X				
R-6	43	SA161	SA161-0.0	0.0													X		Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning).
R-6	43		SA161-0.5	0.5	X	X	X			X	X		X		X	X			Colocated with SG70 to compare VOC results, and for general site coverage.
R-6	43		SA161-10	10	X	X	X			X	X		Hold		X				
R-6	43		SA161-20	20	X	X	X			X	X		Hold		X				
R-6	43		SA161-30	30	X	X	X			X	X		Hold		X				
R-6	43		SA161-35	35	X	X	X			X	X		X		X				
R-6	43	SA208	SA208-0.0	0.0													X		Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning). Located
R-6	43		SA208-0.5	0.5	X	X	X			X	X		X		X	X			in the basement footprint of LOU 43 as a worst case location to evaluate surface releases.
R-6	43		SA208-10	10	X	X	X			X	X		Hold		X				
R-6	43		SA208-20	20	X	X	X			X	X		Hold		X				
R-6	43		SA208-30	30	X	X	X			X	X		Hold		X				
R-6	43		SA208-35	35	X	X	X			X	X		X		X				
R-6	43, 59	RSAR6	RSAR6-0.0	0.0													X		Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning),
R-6	43, 59		RSAR6-0.5	0.5	X	X	X	X		X	X		X	X	X	X			and LOU 59 (Storm Sewer System) and LOU 60 (Acid Drain System). Random boring located near LOU 43 as a
R-6	43, 59		RSAR6-10	10	X	X	X	X		X	X		Hold	X	X				stepout for general coverage, adjacent to LOU 59 and 60 piping to evaluate high risk release area (junction) and for site
R-6	43, 59		RSAR6-20	20	X	X	X	X		X	X		Hold	X	X				wide coverage.
R-6	43, 59		RSAR6-30	30	X	X	X	X		X	X		Hold	X	X				
R-6	43, 59		RSAR6-35	35	X	X	X	X		X	X		X	X	X				
Number of Samples:					**45**	**45**	**45**	**25**	**0**	**45**	**45**	**0**	**18**	**24**	**45**	**9**	**9**	**0**	

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-DRO/ORO	Total petroleum hydrocarbons - Diesel-Range Organics/Oil-Range Organics.
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.	Samples for VOC analysis will be preserved in the field using sodium bisulfate (or DI water) and methanol preservatives per EPA Method 5035.
3.	Consists of wet chemistry parameters (including pH) listed on Table 1 of the Phase B Source Area Work Plan.
4.	Organochlorine Pesticides (includes analysis for hexachlorobenzene).
5.	Semi-volatile Organic Compounds
6.	Radionuclides consists of alpha spec reporting for isotopic thorium and isotopic uranium, and Radium-226, plus Radium-228 by beta counting (per NDEP).
7.	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.
8.	Polychlorinated biphenyls
9.	Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs.
10.	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).
11.	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.

Table B
Groundwater Sampling And Analysis Plan for LOUs 43, 11, 12, and 15 in Area II
Phase B Source Area Investigation Work Plan
Tronox Facility - Henderson Nevada

Grid Location	Location Area	Monitoring Well No.	Screen Interval (ft bgs)	Soil Type Expected Across Screen Interval[1]	Well Sampled for Phase A? (y/n)	Perchlorate (EPA 314.0)	Hex Cr (EPA 7199)	Metals	VOCs[2] (EPA 8260)	Wet Chemistry (a)	OCPs[3] (EPA 8081A)	SVOCs[4] (EPA 8270C)	Radionuclides[5]	Rationale
Wells are organized by grid location as shown on Plate A - Starting point is on the northwestern-most grid in Area II (L-4) and ending with the southeastern-most grid covering Area II (S-7).														
P7	IIE	M-52	34.5 - 44.5	MCfg1	no	X	X	X	X	X	X	X	X	Located to evaluate LOUs 43, 11, 12, and 15; and for general Site coverage.
Q6	II	M-12A	28 48	MCfg1	yes	X	X	X	X	X	X	X	X	Located as a downgradient stepout for LOUs 12, 15, 29, 36, 43, 59 and 60; and for general Site coverage.
Q7	IIN	M-11	33.3 - 53	Qal/MCfg1	yes	X	X	X	X	X	X	X	X	Located to serve as a downgradient stepout for LOUs 29 and 43; and for general Site coverage.
T7	IIS	M-10	43 - 63	MCcg1	no	X	X	X	X	X	X	X	X	Located to serve as an upgradient stepout for LOUs 29, 43 and segments of LOU 60 in Area II; and for general Site coverage.
				Number of Field Samples:		**4**	**4**	**4**	**4**	**4**	**4**	**4**	**4**	

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.
X	Sample will be collected and analyzed.
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	VOCs = Volatile organic compounds (to include analysis for naphthalene).
3	OCPs = Organochlorine pesticides (to include analysis for hexachlorobenzene).
4	SVOCs = Semi volatile organic compounds.
5	Radionuclides consists of alpha spec reporting for isotopic Thorium and isotopic Uranium, and Radium-226, plus Radium-228 by beta counting (per NDEP).
IIIN/E/W/S	Well located outside (north, east, west, or south) of Area II.
nr	Not recorded in the All Wells Database (June 2008).
TBD	To be determined when well is constructed
(a)	Complete list of wet chemistry parameters are shown on Table 1. All groundwater samples will have pH measured in the field.
Qal	Quaternary Alluvium
MCfg1	Muddy Creek Formation - first fine-grained facies
MCcg1	Muddy Creek Formation - first coarse-grained facies

Summary of Available Data for LOUs 43, 11, 12, and 15

Tronox Facility – Henderson, Nevada

Soil and Groundwater Characterization Data

Summary of Available Data for LOUs 43, 11, 12, and 15

Tronox Facility – Henderson, Nevada

LOU-specific analytes identified include:

- Wet chemistry analytes
- Metals (Phase A list)
- Hexavalent chromium
- Perchlorate

The tables in **BOLD** below present historical data associated with these LOU-specific analytes.

LOU 43 Table 1 – Soil Characterization Data – Wet Chemistry
LOU 43 Table 2 – Groundwater Characterization Data – Wet Chemistry
LOU 43 Table 43 Soil Characterization Data - Dioxins and Dibenzofurans
LOU 43 Table 43 – **Soil Characterization Data - Metals**
LOU 43 Table 43 – **Groundwater Characterization Data - Metals**
LOU 43 Table 6 – Groundwater Characterization Data – Routine Monitoring
LOU 43 Table 7 – Soil Characterization Data – Organochlorine Pesticides (OCPs)
LOU 43 Table 8 – Groundwater Characterization Data – Organochlorine Pesticides (OCPs)
LOU 43 Table 9 – Soil Characterization Data – Organophosphorus Pesticides (OPPs)
LOU 43 Table 10 – Groundwater Characterization Data – Organophosphorus Pesticides (OPPs)
LOU 43 Table 11 – Soil Characterization Data – PCBs
LOU 43 Table 12 – Groundwater Characterization Data – PCBs
LOU 43 Table 13 – Soil Characterization Data – Perchlorate
LOU 43 Table 14– Groundwater Characterization Data – Perchlorate
LOU 43 Table 15 – Soil Characterization Data – Radionuclides
LOU 43 Table 16 – Groundwater Characterization Data – Radionuclides
LOU 45 Table 17 – Soil Characterization Data – SVOCs
LOU 43 Table 18 – Groundwater Characterization Data – SVOCs
LOU 43 Table 19 – Soil Characterization – TPH and Fuel Alcohols
LOU 43 Table 20 – Soil Characterization – VOCs
LOU 43 Table 21 – Groundwater Characterization – VOCs
LOU 43 Table 22 – Soil Characterization – Long Asbestos Fibers in Respirable Soil Fraction
Notes for Phase A Data Tables are presented at the end of the tables.

LOU 43 Table 1
Soil Characterization Data - Wet Chemistry

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

Sampling Program		Ph A[1]	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	
Boring No.		SA6	SA6	SA6	SA6	SA6	SA6	SA7	SA7	SA7	SA7	SA7	SA7	
Sample ID		SA6-0.5	SA6-0.5D	SA6-10	SA6-20	SA6-30	SA6-35	SA7-0.5	SA7-10	SA7-10D	SA7-20	SA7-30	SA7-34	
Sample Depth (ft)		0.5	0.5	10	20	30	35	0.5	10	10	20	30	34	
Sample Date		11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006	
Wet Chemistry Parameter	**MSSL[2] mg/kg**													**Units**
Percent moisture	--	**5.8**	**13.8**	**7.6**	**7.7**	**5.0**	**32.6**	**5.3**	**5.6**	**7.1**	**7.6**	**6.3**	**23.3**	percent
Alkalinity (as CaCO3)	--	**637 J**	**352 J**	**109 J**	**131 J**	52.6 UJ	**148 J**	**68.9**	53.0 U	**70.2**	**174**	**158**	65.2 U	mg/kg
Bicarbonate	--	**2970 J**	**1410 J**	**530 J**	**690 J**	**292 J**	**387 J**	**178**	**212**	**193**	**131**	**340**	**290**	mg/kg
Total Alkalinity	--	**3610 J**	**1760 J**	**640 J**	**821 J**	**304 J**	**536 J**	**247**	**249**	**263**	**305**	**497**	**319**	mg/kg
Ammonia (as N)	--	5.3 UJ	5.8 UJ	5.4 UJ	5.4 UJ	5.3 UJ	7.4 UJ	5.3 UJ	5.3 UJ	5.4 UJ	5.4 UJ	5.3 UJ	6.5 UJ	mg/kg
Cyanide	1.37E+04	R	R	R	R	R	R	R	R	R	R	R	R	mg/kg
MBAS	--	**2.4 J**	2.2 U	2.2 U	2.2 U	2.2 U	3.1 U	4.2 U	4.4 U	4.4 U	4.4 U	4.4 U	5.0 U	mg/kg
pH (solid)	--	**9.6**	**9.5**	**8.4**	**9.0**	**8.1**	**7.9**	**8.2**	**7.9**	**8.0**	**8.3**	**8.5**	**7.6**	none
Bromide	--	2.7 U	2.9 U	2.7 U	2.7 U	26.3 U	37.1 U	**1.1 J**	**0.65 J**	2.7 U	2.7 U	2.7 U	32.6 U	mg/kg
Chlorate	--	5.3 UJ	5.8 UJ	**2.8 J-**	**3.0 J-**	**86.9 J-**	**207 J-**	**108 J+**	**138 J+**	**183 J+**	**201 J+**	**28.7 J+**	**66.2 J+**	mg/kg
Chloride	--	**5.1**	**8.5**	**9.8**	**13.9**	**77.7**	**414**	**127**	**160**	**177**	**208**	**46.7**	**95.6**	mg/kg
Nitrate (as N)	--	**0.48 J+**	**0.27 J+**	**1.6 J+**	**2.3 J+**	**19.6**	**26.5**	**8.9**	**7.0**	**5.3**	**6.1**	**0.71 J+**	**0.89 J+**	mg/kg
Nitrite	--	0.21 U	0.23 U	**0.32**	**0.93**	2.1 U	3.0 U	R	2.1 UJ	2.2 UJ	2.2 UJ	2.1 UJ	2.6 UJ	mg/kg
ortho-Phosphate	--	5.3 U	5.8 U	**3.9 J**	**1.6 J**	**79.6 J**	7.4 U	**7.2**	5.3 U	**10.6**	5.4 U	**2.8 J**	6.5 U	mg/kg
Sulfate	--	**115**	**147**	**175**	**214**	**7710**	**599**	**449 J**	**805 J**	**120 J**	**145 J**	**67.5 J**	**5380 J**	mg/kg
Total Organic Carbon	--	**9100**	**4300**	**6420**	**7220**	**900 J**	**9150**	**6780 J-**	**1950 J-**	**4480 J-**	**5000 J-**	**925 J-**	**11600 J-**	mg/kg

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.
2. U.S. EPA, Region 6, Medium Specific Screening Levels (MSSLs) for Industrial - Outdoor Worker (March, 2008).

LOU 43 Table 2
Groundwater Characterization Data - Wet Chemistry

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A[1]	Ph A	
	Well ID	M11	M12A	
	Sample ID	M11	M12A	
	Sample Date	12/06/2006	12/05/2006	
Wet Chemistry Parameters	**MCL[2] mg/L**			**Units**
Total Dissolved Solids	5.00E+02 j	**3270**	**8170**	mg/L
Total Suspended Solids	--	**15.0 J**	**57.0 J**	mg/L
Alkalinity (as CaCO3)	--	5.0 U	5.0 U	mg/L
Bicarbonate	--	**205**	**381**	mg/L
Total Alkalinity	--	**205**	**381**	mg/L
Ammonia (as N)	--	50.0 U	50.0 U	ug/L
MBAS	--	**0.20**	**0.41**	mg/L
Cyanide	2.00E-01	R	R	ug/L
pH (liquid)	--	**7.7 J**	**7.8 J**	none
Specific Conductance	--	**2360 J+**	**3660 J+**	umhos/cm
Bromide	--	25.0 U	25.0 U	mg/L
Chlorate	--	**421**	**2370**	mg/L
Chloride	2.50E+02	**239**	**1030**	mg/L
Nitrate (as N)	1.00E+01	**3.4**	**15.2**	mg/L
Nitrite	1.00E+00	**3.1**	10.0 U	mg/L
ortho-Phosphate	--	5.0 U	500 U	mg/L
Sulfate	2.50E+02 j	**1290**	**1510**	mg/L
Total Organic Carbon	--	50 U	50.0 U	mg/L

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.
2. U.S. EPA Maximum Contaminant Level (MCL) values unless noted.
(j) Secondary Drinking Water Regulation value.

LOU 43 Table 3
Soil Characterization Data - Dioxins and Dibenzofurans

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

Sampling Program		Ph A[1]	Ph A	Ph A	
Sample ID		SA6	SA6	SA7	
Sample Depth (ft)		0.5	0.5	0.5	
Sample Date		11/14/2006	11/14/2006	11/20/2006	
Chemical Name	**MSSL[2] ng/kg**				**Units**
Dioxin 8290 SCREEN Total TEQ-ENSR Calculated (a) ng/kg	--	**0.64**		**192**	ng/kg
Dioxin SW 846 8290 Total TEQ-ENSR Calculated (a) ng/kg	--			**169**	ng/kg
Dioxin 8290 SCREEN Total TEQ-ENSR Calculated (b) ng/kg	--	**0.72**		**192**	ng/kg
Dioxin SW 846 8290 Total TEQ-ENSR Calculated (b) ng/kg	--			**169**	ng/kg
1,2,3,4,6,7,8-Heptachlorodibenzofuran	--	**7.730**	**2.554**	**927.107**	ng/kg
1,2,3,4,6,7,8-Heptachlorodibenzofuran	--			**873.925 J**	ng/kg
1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	--	**1.036**	**0.461**	**85.450**	ng/kg
1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	--			**85.45**	ng/kg
1,2,3,4,7,8,9-Heptachlorodibenzofuran	--	**2.617**	**0.801**	**392.108**	ng/kg
1,2,3,4,7,8,9-Heptachlorodibenzofuran	--			**392.11**	ng/kg
1,2,3,4,7,8-Hexachlorodibenzofuran	--	**2.392**	**0.864**	**372.915**	ng/kg
1,2,3,4,7,8-Hexachlorodibenzofuran	--			**372.915**	ng/kg
1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	--	0.059 U	0.055 U	**8.841**	ng/kg
1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	--			**8.841**	ng/kg
1,2,3,6,7,8-Hexachlorodibenzofuran	--	**1.665**	**0.552**	**249.626**	ng/kg
1,2,3,6,7,8-Hexachlorodibenzofuran	--			**249.626**	ng/kg
1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	--	**0.191**	**0.140**	**19.448**	ng/kg
1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	--			**19.448**	ng/kg
1,2,3,7,8,9-Hexachlorodibenzofuran	--	**0.259**	**0.145**	**31.354**	ng/kg
1,2,3,7,8,9-Hexachlorodibenzofuran	--			**31.353**	ng/kg
1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	--	**0.256**	**0.176**	**21.698**	ng/kg
1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	--			**21.698**	ng/kg
1,2,3,7,8-Pentachlorodibenzofuran	--	**0.886**	**0.456**	**199.693**	ng/kg
1,2,3,7,8-Pentachlorodibenzofuran	--			**199.692**	ng/kg
1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	--	0.059 U	0.047 U	**16.175**	ng/kg
1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	--			**16.175**	ng/kg
2,3,4,6,7,8-Hexachlorodibenzofuran	--	**0.795**	**0.262**	**112.484**	ng/kg
2,3,4,6,7,8-Hexachlorodibenzofuran	--			**112.484**	ng/kg
2,3,4,7,8-Pentachlorodibenzofuran	--	0.279 U	**0.195**	**92.926**	ng/kg
2,3,4,7,8-Pentachlorodibenzofuran	--			**92.927**	ng/kg
2,3,7,8-Tetrachlorodibenzofuran	--	**1.724**	**0.752**	**369.233**	ng/kg
2,3,7,8-Tetrachlorodibenzofuran	--			**136.994 J**	ng/kg
2,3,7,8-Tetrachlorodibenzo-p-Dioxin	1.00E+03 h,v	0.077 U	0.059 U	**8.965**	ng/kg
2,3,7,8-Tetrachlorodibenzo-p-Dioxin	1.00E+03 h,v			**8.965**	ng/kg
Octachlorodibenzofuran	--	**20.727**	**6.640**	**2502.073**	ng/kg
Octachlorodibenzofuran	--			**2338.457 J**	ng/kg
Octachlorodibenzo-p-Dioxin	--	**6.287**	**2.965**	**191.912**	ng/kg
Octachlorodibenzo-p-Dioxin	--			**191.912**	ng/kg

LOU 43 Table 3 (continued)

Soil Characterization Data - Dioxins and Dibenzofurans

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

Sampling Program		Ph A[1]	Ph A	Ph A	
Sample ID		SA6	SA6	SA7	
Sample Depth (ft)		0.5	0.5	0.5	
Sample Date		11/14/2006	11/14/2006	11/20/2006	
Chemical Name	**MSSL[2] ng/kg**				**Units**
Tetrachlorinated Dibenzofurans, (Total)	--			**1642.861 J**	ng/kg
Total HpCDD	--			**151.421**	ng/kg
Total HpCDF	--			**1846.885 J**	ng/kg
Total HxCDD	--			**158.189**	ng/kg
Total HxCDF	--			**1786.919**	ng/kg
Total PeCDD	--			**154.674**	ng/kg
Total PeCDF	--			**1665.598**	ng/kg
Total TCDD	--			**160.412**	ng/kg

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.
2. U.S. EPA, Region 6, Medium Specific Screening Levels (MSSLs) for Industrial - Outdoor Worker (March, 2008).
(a) Calculated assuming 0 for non-detected congeners and 2006 toxic equivalency factors (TEFs).
(b) Calculated assuming 1/2 detection limit as proxy for non-detected congeners and 2006 TEFs.
(h) Dioxins and furans were expressed as 2,3,7,8- TCDD TEQ (toxic equivalents), calculated using the TEFs (Toxic Equivalency Factors) published by Van den Berg et al., 2006.
(v) USEPA. 1998. Approach for Addressing Dioxin in Soil at CERCLA and RCRA Sites. OSWER Directive 9200.4-26. April, 1998. A value of 1000 ng/kg is applicable to residential soils. The range of 5000 to 20000 ng/kg is applicable to commercial/industrial soils. The Agency for Toxic Substances and Disease Registry (ATSDR) provides a screening level of 50 ng/kg for dioxin in residential soil [http://www.atsdr.cdc.gov/substances/dioxin/policy/].

LOU 43 Table 4
Soil Characterization Data - Metals

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

Sampling Program		Ph A[1]	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	
Boring No.		SA6	SA6	SA6	SA6	SA6	SA6	SA7	SA7	SA7	SA7	SA7	SA7	
Sample ID		SA6-0.5	SA6-0.5D	SA6-10	SA6-20	SA6-30	SA6-35	SA7-0.5	SA7-10	SA7-10D	SA7-20	SA7-30	SA7-34	
Sample Depth (ft)		0.5	0.5	10	20	30	35	0.5	10	10	20	30	34	
Sample Date		11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006	
Metals	**MSSL[2] mg/kg**													**Units**
Aluminum	1.00E+05	**6160**	**6710**	**6440**	**6220**	**5800**	**12500**	**6400**	**5850**	**7100**	**6450**	**6390**	**7400**	mg/kg
Antimony	4.50E+02	**0.15 J-**	**0.15 J-**	**0.16 J-**	**0.18 J-**	**0.16 J-**	**0.27 J-**	**0.36 J-**	**0.17 J-**	**0.13 J-**	**0.15 J-**	**0.15 J-**	**0.32 J-**	mg/kg
Arsenic	2.80E+02	**2.4**	**3.1**	**3.1**	**4.0**	**4.2**	**24.4**	**5.5**	**2.5**	**2.3**	**3.3**	**4.8**	**24.3**	mg/kg
Barium	1.00E+05	**163 J+**	**149 J+**	**162 J+**	**186 J+**	**143 J+**	**40.1 J+**	**201 J+**	**147**	**166**	**149 J**	**73.6 J**	**158 J**	mg/kg
Beryllium	2.20E+03	**0.40**	**0.44**	**0.50**	**0.46**	**0.43**	**0.70**	**0.41**	**0.42**	**0.47**	**0.46**	**0.44 J-**	**0.35 J-**	mg/kg
Boron	1.00E+05	5.2 UJ	5.3 UJ	5.6 UJ	6.0 UJ	5.8 UJ	20.8 UJ	**48.6 J-**	8.7 UJ	8.2 UJ	9.3 UJ	12.3 UJ	**36.8 J-**	mg/kg
Cadmium	5.60E+02	**0.089**	**0.10**	**0.083**	**0.083**	**0.090**	**0.12**	**0.24**	**0.075**	**0.084**	**0.068**	**0.065**	**0.084**	mg/kg
Calcium	--	**24600**	**19400**	**29300**	**33600**	**25500**	**32500**	**37500**	**26400**	**20500**	**25200**	**29000**	**62700 J+**	mg/kg
Chromium (Total)	7.10E+01	**8.5**	**12.8**	**10.6**	**10.1**	**7.7**	**27.4**	**18.5 J-**	**8.2 J-**	**7.9 J-**	**8.6 J-**	**7.4 J-**	**33.8 J-**	mg/kg
Chromium-hexavalent	5.00E+02	**0.22**	**0.13 J**	0.22 U	0.22 U	0.21 U	**0.21 J**	**0.56**	0.21 U	0.22 U	0.22 U	**0.12 J**	**0.13 J**	mg/kg
Cobalt	2.10E+03	**5.4 J-**	**5.9 J-**	**5.6 J-**	**6.4 J-**	**6.3 J-**	**5.2 J-**	**8.6 J-**	**6.0 J-**	**6.2 J-**	**5.8 J-**	**5.2 J-**	**3.1 J-**	mg/kg
Copper	4.20E+04	**10.1 J-**	**12.4 J-**	**11.4 J-**	**12.0 J-**	**12.4 J-**	**12.0 J-**	**16.5 J-**	**10.4 J-**	**11.3 J-**	**12.0 J-**	**11.3 J-**	**9.5 J**	mg/kg
Iron	1.00E+05	**9600**	**11600**	**11700**	**12000**	**11200**	**12600**	**9830**	**9600**	**9830**	**10300**	**9530**	**7520**	mg/kg
Lead	8.00E+02	**7.1**	**11.5**	**7.6**	**8.1**	**7.4**	**8.3**	**32.5**	**7.4**	**7.8**	**6.7**	**6.0**	**4.4**	mg/kg
Magnesium	--	**6570 J-**	**7250 J-**	**6730 J-**	**8850 J-**	**6880 J-**	**28300 J-**	**8360 J-**	**5750**	**6310**	**8920 J-**	**8250 J-**	**19000 J-**	mg/kg
Manganese	3.50E+04	**249 J**	**271 J**	**227 J**	**301 J**	**323 J**	**195 J**	**1290**	**278**	**262**	**250**	**159**	**171 J**	mg/kg
Molybdenum	5.70E+03	**0.48 J**	**0.64**	**0.46 J**	**0.43 J**	**0.47 J**	**0.95**	**0.92**	**0.41 J**	**0.41 J**	**0.40 J**	**0.38 J**	**0.52 J**	mg/kg
Nickel	2.30E+04	**12.8 J-**	**12.6 J-**	**12.1 J-**	**11.9 J-**	**12.2 J-**	**12.5 J-**	**12.9 J-**	**11.4 J-**	**12.1 J-**	**11.8 J-**	**11.6 J-**	**9.8 J-**	mg/kg
Platinum	--	**0.012 J**	**0.018 J**	**0.018 J**	**0.016 J**	**0.015 J**	**0.022 J**	**0.077 J**	**0.014 J**	**0.016 J**	**0.014 J**	**0.012 J**	**0.014 J**	mg/kg
Potassium	--	**2100 J-**	**2200 J-**	**2030 J-**	**1220 J-**	**1050 J-**	**3180 J-**	**1910**	**1790**	**2110**	**1280**	**1340**	**2080 J-**	mg/kg
Selenium	5.70E+03	0.12 UJ	0.13 UJ	0.12 UJ	0.12 UJ	0.11 UJ	0.16 UJ	0.11 U	0.11 U	0.12 U	0.12 U	0.12 U	0.14 UJ	mg/kg
Silver	5.70E+03	**0.10 J**	**0.13 J**	**0.13 J**	**0.12 J**	**0.12 J**	**0.17 J**	**0.16 J**	**0.11 J**	**0.13 J**	**0.12 J**	**0.11 J**	**0.12 J**	mg/kg
Sodium	--	**626 J-**	**560 J-**	**581 J-**	**443 J-**	**699 J-**	**577 J-**	**763**	**314 J-**	**361 J-**	**392 J-**	**638 J-**	**533 J-**	mg/kg
Strontium	1.00E+05	**126 J+**	**101 J+**	**188 J+**	**207 J+**	**299 J+**	**159 J+**	**130 J+**	**133 J-**	**130 J-**	**171 J**	**219 J**	**2280 J**	mg/kg
Thallium	--	0.080 U	0.081 U	0.095 U	0.082 U	0.082 U	0.22 U	0.38 U	0.21 U	0.20 U	0.12 U	0.10 U	0.32 U	mg/kg
Tin	--	**0.40**	**0.55**	**0.48**	**0.46**	**0.47**	**0.64**	**0.92**	**0.43**	**0.52**	**0.43**	**0.42**	**0.39**	mg/kg
Titanium	--	**361 J**	**616 J**	**549 J**	**463 J**	**507 J**	**530 J**	**364 J+**	**379 J+**	**382 J+**	**454 J+**	**368 J+**	**444**	mg/kg
Tungsten	--	0.28 UJ	0.30 UJ	0.29 UJ	0.42 UJ	0.39 UJ	0.55 UJ	**1.4 J-**	**0.41 J-**	**0.32 J-**	**0.33 J-**	**0.30 J-**	**0.87 J-**	mg/kg
Uranium	--	**0.80**	**1.0**	**1.0**	**2.1**	**1.8**	**3.7**	**0.96**	**0.86**	**0.87**	**1.6**	**2.1**	**4.3**	mg/kg
Vanadium	5.70E+03	**21.8 J-**	**30.5 J-**	**33.8 J-**	**35.2 J-**	**34.8 J-**	**32.7 J-**	**24.1**	**23.7**	**23.5**	**29.8 J-**	**24.9 J-**	**30.1 J-**	mg/kg
Zinc	1.00E+05	**24.1 J-**	**29.6 J-**	**24.8 J-**	**23.9 J-**	**24.9 J-**	**36.1 J-**	**39.1 J-**	**21.7 J-**	**23.0 J-**	**22.3 J-**	**21.9 J-**	**20.3 J-**	mg/kg
Mercury	3.41E+02 (t)	0.0071 UJ	**0.011 J-**	0.0072 UJ	0.0072 UJ	0.007 UJ	0.0099 UJ	0.0071 U	**0.0074 J-**	**0.024 J-**	0.0072 UJ	0.0071 UJ	0.0087 UJ	mg/kg

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.
2. U.S. EPA, Region 6, Medium Specific Screening Levels (MSSLs) for Industrial - Outdoor Worker (March, 2008).
(t) Value for mercury and compounds.

LOU 43 Table 5
Groundwater Characterization Data - Metals

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

Sampling Program		Ph A[1]	Ph A	
Well ID:		M11	M12A	
Sample ID		M11-Z	M12A-Z	
Sample Depth (ft)				
Sample Date		05/11/2007	05/11/2007	
Metals	**MCL[2] ug/L**			**Unit**
Aluminum	5.00E+01 j	393 U	786 U	ug/L
Antimony	6.00E+00	25.0 U	50.0 U	ug/L
Arsenic	1.00E+01	**328**	**700**	ug/L
Barium	2.00E+03	15.2 U	24.7 U	ug/L
Beryllium	4.00E+00	4.4 U	8.8 U	ug/L
Boron	7.30E+03	**10400**	3340 U	ug/L
Cadmium	5.00E+00	2.9 U	5.7 U	ug/L
Calcium	--	**50200**	**50100**	ug/L
Chromium (Total)	1.00E+02	**3130**	**12800**	ug/L
Chromium-hexavalent	1.09E+02	**2510 J**	**14000**	ug/L
Cobalt	7.30E+02	15.7 U	31.3 U	ug/L
Copper	1.30E+03 p	12.5 U	25.0 U	ug/L
Iron	3.00E+02 j	**6310 J-**	940 UJ	ug/L
Lead	1.50E+01 u	24.6 U	49.2 U	ug/L
Magnesium	1.50E+05 a	**39300**	**19000**	ug/L
Manganese	5.00E+01 j	173 U	140 U	ug/L
Molybdenum	1.82E+02	25.0 U	**51.1 J**	ug/L
Nickel	7.30E+02	25.8 U	51.7 U	ug/L
Platinum	--	5.0 U	10.0 U	ug/L
Potassium	--	**19900**	**44400**	ug/L
Selenium	5.00E+01	50.0 U	100 U	ug/L
Silver	1.00E+02 j	10.1 U	20.3 U	ug/L
Sodium	--	**953000**	**2330000**	ug/L
Strontium	2.19E+04	**1300**	**1620**	ug/L
Thallium	2.00E+00	16.0 U	32.0 U	ug/L
Tin	2.19E+04	10.0 U	20.0 U	ug/L
Titanium	1.46E+05	19.6 U	39.1 U	ug/L
Tungsten	--	25.0 U	50.0 U	ug/L
Uranium	3.00E+01	**15.0 J**	**39.4 J**	ug/L
Vanadium	3.65E+01	**121 J**	160 UJ	ug/L
Zinc	5.00E+03 j	50.0 U	100 U	ug/L
Mercury	2.00E+00	0.11 U	0.093 U	ug/L

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.
2. U.S. EPA Maximum Contaminant Level (MCL) values unless noted.
(j) See footnote (b). Secondary Drinking Water Regulation value.
(p) The national primary drinking water regulations (b) lists a treatment technology action level of 1.3 mg/l as the MCL for Copper. Therefore, the secondary value is not used.
(u) See footnote (b). Treatment technology action level.
(a) NAC 445A.455 Secondary standards. Certain provisions of the National Primary Drinking Water Regulations are adopted by reference (NAC 445A.4525). These values are listed in the first column of this table and are therefore not listed again here. Only NAC 445A.455 Secondary standards are listed.
(b) USEPA, 2006. 2006 Edition of the Drinking Water Standards and Health Advisories. EPA 822-R-06-013. August 2006.

LOU 43 Table 6
Groundwater Characterization Data - Routine Monitoring[1]

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

Well ID	Date	Depth to water (ft)	Perchlorate mg/L	Qual	MCL[2] mg/L	Total Chromium mg/L	Qual	MCL mg/L	TDS mg/L	Qual	MCL mg/L	Nitrate (as N) mg/L	Qual	MCL mg/L	Chlorate mg/L	Qual	MCL mg/L
M-11	2/2/2006	42.69	52	d	1.80E-02 a,m	2.8	d	1.00E-01 c	3660		5.00E+02 j			1.00E+01			--
M-11	5/3/2006	43.29	43	d	1.80E-02 a,m	2.7	d	1.00E-01 c	2980		5.00E+02 j	<0.1	ud	1.00E+01	460	d	--
M-11	8/2/2006	43.50	31.4	d	1.80E-02 a,m	2.8	d	1.00E-01 c	2700		5.00E+02 j	1.3	d	1.00E+01	230	d	--
M-11	10/31/2006	43.51	33.4	d	1.80E-02 a,m	2.7	d	1.00E-01 c	3260		5.00E+02 j	3.86	d	1.00E+01	487	d	--
M-11	1/31/2007	43.50	30.6		1.80E-02 a,m	3		1.00E-01 c	3380		5.00E+02 j			1.00E+01			--
M-11	5/2/2007	43.51	25.1		1.80E-02 a,m	2.7		1.00E-01 c	3180		5.00E+02 j	3.01		1.00E+01	434		--
M-11	8/2/2007	43.82	33.9		1.80E-02 a,m	2.6		1.00E-01 c	3400		5.00E+02 j			1.00E+01			--
M-12A	2/2/2006	---	360	d	1.80E-02 a,m	13	d	1.00E-01 c	10230		5.00E+02 j			1.00E+01			--
M-12A	5/4/2006	---	340	d	1.80E-02 a,m	12	d	1.00E-01 c	8760		5.00E+02 j	<0.1	ud	1.00E+01	2600	d	--
M-12A	8/2/2006	---	312	d	1.80E-02 a,m	12	d	1.00E-01 c	5640		5.00E+02 j	13	d	1.00E+01	1260	d	--
M-12A	11/1/2006	---	288	d	1.80E-02 a,m	12	d	1.00E-01 c	7270		5.00E+02 j	14.1	d	1.00E+01	2540	d	--
M-12A	2/1/2007	---	291		1.80E-02 a,m	12		1.00E-01 c	7820		5.00E+02 j			1.00E+01			--
M-12A	5/3/2007	---	283	J	1.80E-02 a,m	12		1.00E-01 c	7910	J	5.00E+02 j	18.2	d	1.00E+01	1980	d	--
M-12A	8/1/2007	---	320		1.80E-02 a,m	13		1.00E-01 c	7890		5.00E+02 j			1.00E+01			--

Notes:
1. ENSR, 2007, Quarterly Performance Report for Remediation Systems, Tronox Facility - Henderson, Nevada, July – September 2007.
2. U.S. EPA Maximum Contaminant Level (MCL) values unless noted.
(a) NAC 445A.455 Secondary standards. Certain provisions of the National Primary Drinking Water Regulations are adopted by reference (NAC 445A.4525). These values are listed in the first column of this table and are therefore not listed again here. Only NAC 445A.455 Secondary standards are listed.
(m) Equal to the provisional action level derived by NDEP as referenced in "Defining a Perchlorate Drinking Water Standard". NDEP Bureau of Corrective Action. URL: [http://ndep.nv.gov/bca/perchlorate02_05.htm].
(j) Secondary Drinking Water Regulation value.

< = less than the reporting limit
Blank cell or --- = no data and or no qualifier
Qual = data qualifiers applied by laboratory or during data validation
TDS = Total Dissolved Solids
mg/l = milligram per liter

Laboratory Qualifiers:
d = the sample was diluted
ud = the sample was dilluted and was not detected above the sample reporting limit

Validation Qualifiers:
J = the result is an estimated quantity

LOU 43 Table 7
Soil Characterization Data - Organochlorine Pesticides (OCPs)

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A[1]	Ph A	Ph A	
	Boring No.	SA6	SA6	SA7	
	Sample ID	SA6-0.5	SA6-0.5D	SA7-0.5	
	Sample Depth (ft)	0.5	0.5	0.5	
	Sample Date	11/14/2006	11/14/2006	11/20/2006	
Organochlorine Pesticides	**MSSL[2] mg/kg**				**Unit**
4,4'-DDD	1.10E+01	0.0018 U	0.0020 U	0.0018 U	mg/kg
4,4'-DDE	7.80E+00	0.0018 U	0.0020 U	0.0018 U	mg/kg
4,4'-DDT	7.80E+00	0.0018 U	0.0020 U	0.0018 U	mg/kg
Aldrin	1.10E-01	0.0018 U	0.0020 U	0.0018 U	mg/kg
Alpha-BHC	4.00E-01	0.0018 U	0.0020 U	0.0018 U	mg/kg
Alpha-chlordane	1.40E+00 (y)	0.0018 U	0.0020 U	0.0018 U	mg/kg
Beta-BHC	1.40E+00	0.0018 U	0.0020 U	0.0018 U	mg/kg
Delta-BHC	--	0.0018 U	0.0020 U	0.0018 U	mg/kg
Dieldrin	1.20E-01	0.0018 U	0.0020 U	0.0018 U	mg/kg
Endosulfan I	4.10E+03 (aa)	0.0018 U	0.0020 U	0.0018 U	mg/kg
Endosulfan II	4.10E+03 (aa)	0.0018 U	0.0020 U	0.0018 U	mg/kg
Endosulfan Sulfate	4.10E+03 (aa)	0.0018 U	0.0020 U	0.0018 U	mg/kg
Endrin	2.10E+02	0.0018 U	0.0020 U	0.0018 U	mg/kg
Endrin Aldehyde	2.10E+02 (k)	0.0018 U	0.0020 U	0.0018 U	mg/kg
Endrin Ketone	2.10E+02 (k)	0.0018 U	0.0020 U	0.0018 U	mg/kg
Gamma-BHC (Lindane)	1.90E+00	0.0018 U	0.0020 U	0.0018 U	mg/kg
Gamma-Chlordane	1.40E+00 (y)	0.0018 U	0.0020 U	0.0018 U	mg/kg
Heptachlor	4.30E-01	0.0018 U	R	0.0018 U	mg/kg
Heptachlor Epoxide	2.10E-01	0.0018 U	0.0020 U	0.0018 U	mg/kg
Methoxychlor	3.40E+03	0.0035 UJ	0.0038 UJ	0.0035 UJ	mg/kg
Tech-Chlordane	1.40E+00	0.011 U	0.012 U	0.011 U	mg/kg
Toxaphene	1.70E+00	0.053 U	0.058 U	0.053 U	mg/kg

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.
2. U.S. EPA, Region 6, Medium Specific Screening Levels (MSSLs) for Industrial - Outdoor Worker (March, 2008).
(y) Value for chlordane (technical) used as surrogate for alpha-chlordane and gamma-chlordane based on structural similarities.
(aa) Value for endosulfan used as surrogate for endosulfan I, endosulfan II and endosulfan sulfate based on structural similarities.
(k) Value for endrin used as surrogate for endrin aldehyde and endrin ketone due to structural similarities.

LOU 43 Table 8
Groundwater Characterization Data - Organochlorine Pesticides (OCPs)

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A[1]	Ph A	
	Well ID	M11	M12A	
	Sample ID	M11	M12A	
	Sample Date	12/06/2006	12/05/2006	
Organochlorine Pesticides	**MCL[2] ug/L**	ug/L	ug/L	**Unit**
4,4'-DDD	2.80E-01	0.050 U	0.050 U	ug/L
4,4'-DDE	1.98E-01	0.050 U	0.050 U	ug/L
4,4'-DDT	1.98E-01	0.050 U	0.050 U	ug/L
Aldrin	4.00E-03	0.050 U	0.050 U	ug/L
Alpha-BHC	1.10E-02	0.050 U	0.050 U	ug/L
Alpha-chlordane	2.00E+00 (l)	0.050 U	0.050 U	ug/L
Beta-BHC	3.74E-02	0.050 U	0.050 U	ug/L
Delta-BHC	1.10E-02 (z)	0.050 U	0.050 U	ug/L
Dieldrin	4.20E-03 (z)	0.050 U	0.050 U	ug/L
Endosulfan I	2.19E+02 (aa)	0.050 U	0.050 U	ug/L
Endosulfan II	2.19E+02 (aa)	0.050 U	0.050 U	ug/L
Endosulfan Sulfate	2.19E+02 (aa)	0.050 U	0.050 U	ug/L
Endrin	2.00E+00	0.050 U	0.050 U	ug/L
Endrin Aldehyde	1.09E+01 (k)	0.050 U	0.050 U	ug/L
Endrin Ketone	1.09E+01 (k)	0.050 U	0.050 U	ug/L
Gamma-BHC (Lindane)	2.00E-01	0.050 U	0.050 U	ug/L
Gamma-Chlordane	2.00E+00 (l)	0.050 U	0.050 U	ug/L
Heptachlor	4.00E-01	0.050 U	0.050 U	ug/L
Heptachlor Epoxide	2.00E-01	0.050 U	0.050 U	ug/L
Methoxychlor	4.00E+01	0.10 U	0.10 U	ug/L
Tech-Chlordane	2.00E+00 (l)	0.50 U	0.50 U	ug/L
Toxaphene	3.00E+00	2.0 U	2.0 U	ug/L

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.
2. U.S. EPA Maximum Contaminant Level (MCL) values unless noted.
(z) Value for alpha-BHC used as surrogate for delta-BHC based on structural similarities.
(aa) Value for endosulfan used as surrogate for endosulfan I, endosulfan II and endosulfan sulfate based on structural similarities.
(k) Value for endrin used as surrogate for endrin aldehyde and endrin ketone due to structural similarities.
(l) Value for chlordane used as surrogate for alpha-chlordane, chlordane (technical) and gamma-chlordane due to structural similarities.

LOU 43 Table 9
Soil Characterization Data - Organophosphorus Pesticides (OPPs)

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

Sampling Program		Ph A[1]	Ph A	Ph A
Boring No.		SA6	SA6	SA7
Sample ID		SA6-0.5	SA6-0.5D	SA7-0.5
Sample Depth (ft)		0.5	0.5	0.5
Sample Date		11/14/2006	11/14/2006	11/20/2006
OPPs	**MSSL[2] mg/kg**	mg/kg	mg/kg	mg/kg
Azinphos-methyl	--	0.014 UJ	0.015 UJ	0.014 U
Bolstar	--	0.014 U	0.015 U	0.014 U
Chlorpyrifos	2.10E+03	0.021 U	0.023 U	0.021 U
Coumaphos	--	0.014 UJ	0.015 UJ	0.014 UJ
Demeton-O	--	0.041 U	0.045 U	0.041 U
Demeton-S	--	0.016 U	0.017 U	0.016 U
Diazinon	6.20E+02	0.023 U	0.026 U	0.023 U
Dichlorvos	6.60E+00	0.024 U	0.027 U	0.024 U
Dimethoate	--	**0.011 J**	**0.012 J**	0.023 U
Disulfoton	2.70E+01	0.051 U	0.056 U	0.051 U
EPN	--	0.014 UJ	0.015 U	0.014 U
Ethoprop	--	0.016 U	0.017 U	0.016 U
Ethyl Parathion	4.10E+03	0.019 U	0.021 U	0.019 U
Famphur	--	0.014 UJ	0.015 UJ	0.014 U
Fensulfothion	--	0.014 U	0.015 U	0.014 U
Fenthion	1.70E+02 (ff)	0.035 U	0.038 U	0.035 U
Malathion	1.40E+04	0.016 U	0.017 U	0.016 U
Merphos	--	0.032 U	0.035 U	0.032 U
Methyl parathion	1.70E+02	0.021 U	0.023 U	0.021 U
Mevinphos	--	0.016 U	0.017 U	0.016 U
Naled	1.40E+03	0.035 UJ	0.038 UJ	0.035 UJ
Phorate	--	0.021 U	0.023 U	0.021 U
Ronnel	3.40E+04	0.019 UJ	0.021 U	0.019 U
Stirphos	--	0.016 UJ	0.017 UJ	0.016 U
Sulfotep	--	0.021 U	0.023 U	0.021 U
Thionazin	--	0.019 U	0.021 U	0.019 U
Tokuthion	--	0.021 U	0.023 U	0.021 UJ
Trichloronate	--	0.021 U	0.023 U	0.021 U

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.
2. U.S. EPA, Region 6, Medium Specific Screening Levels (MSSLs) for Industrial - Outdoor Worker (March, 2008).
(ff) Value for methyl parathion used as surrogate for fenthion based on structural similarities.

LOU 43 Table 10
Groundwater Characterization Data - Organophosphorus Pesticides (OPPs)

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A[1]	Ph A
	Well ID	M11	M12A
	Sample ID	M11	M12A
	Sample Date	12/06/2006	12/05/2006
OPPs	**MCL[2] ug/L**	ug/L	ug/L
Azinphos-methyl	--	2.5 U	2.5 U
Bolstar	--	1.0 U	1.0 U
Chlorpyrifos	1.09E+02	1.0 U	1.0 U
Coumaphos	--	1.0 U	1.0 U
Demeton-O	1.46E+00 (cc)	1.0 U	1.0 U
Demeton-S	1.46E+00 (cc)	1.0 U	1.0 UJ
Diazinon	3.28E+01	1.0 U	1.0 U
Dichlorvos	2.32E-01	1.0 U	1.0 U
Dimethoate	7.30E+00	1.0 U	1.0 U
Disulfoton	1.46E+00	0.50 U	0.50 U
EPN	3.65E-01	1.2 U	1.2 U
Ethoprop	--	0.50 U	0.50 U
Ethyl Parathion	9.12E+00 (tt)	1.0 U	1.0 U
Famphur	--	1.0 U	1.0 U
Fensulfothion	--	2.5 U	2.5 U
Fenthion	9.10E+00 (ff)	2.5 U	2.5 U
Malathion	7.30E+02	1.2 U	1.2 U
Merphos	1.09E+00	5.0 U	5.0 U
Methyl parathion	9.12E+00	4.0 U	4.0 U
Mevinphos	--	6.2 U	6.2 U
Naled	7.30E+01	1.0 U	1.0 UJ
Phorate	7.30E+00	1.2 U	1.2 UJ
Ronnel	1.82E+03	10 U	10 U
Stirphos	--	3.5 U	3.5 U
Sulfotep	1.82E+01	1.5 U	1.5 U
Thionazin	--	1.0 U	1.0 U
Tokuthion	--	1.6 U	1.6 U
Trichloronate	--	0.50 U	0.50 U

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.
2. U.S. EPA Maximum Contaminant Level (MCL) values unless noted.
(cc) Value for demeton used as surrogate for demeton-o and demeton-s based on structural similarities.
(ff) Value for methyl parathion used as surrogate for fenthion based on structural similarities.
(tt) Value for parathion-methyl used as surrogate for parathion-ethyl due to structural similarities.

LOU 43 Table 11
Soil Characterization Data - PCBs

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

Sampling Program		Ph A[1]	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A
Boring ID		SA6	SA6	SA6	SA6	SA6	SA6	SA7	SA7	SA7	SA7	SA7	SA7
Sample ID		SA6-0.5	SA6-0.5D	SA6-10	SA6-20	SA6-30	SA6-35	SA7-0.5	SA7-10	SA7-10D	SA7-20	SA7-30	SA7-34
Sample Depth (ft)		0.5	0.5	10	20	30	35	0.5	10	10	20	30	34
Sample Date		11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006
PCBs	**MSSL[2] mg/kg**	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aroclor-1016	2.40E+01 (i)	0.035 U	0.038 U	0.036 U	0.036 U	0.035 U	0.049 U	0.035 U	0.035 U	0.036 U	0.036 U	0.035 U	0.043 U
Aroclor-1221	8.30E-01 (i)	0.035 U	0.038 U	0.036 U	0.036 U	0.035 U	0.049 U	0.035 U	0.035 U	0.036 U	0.036 U	0.035 U	0.043 U
Aroclor-1232	8.30E-01 (i)	0.035 U	0.038 U	0.036 U	0.036 U	0.035 U	0.049 U	0.035 U	0.035 U	0.036 U	0.036 U	0.035 U	0.043 U
Aroclor-1242	8.30E-01 (i)	0.035 U	0.038 U	0.036 U	0.036 U	0.035 U	0.049 U	0.035 U	0.035 U	0.036 U	0.036 U	0.035 U	0.043 U
Aroclor-1248	8.30E-01 (i)	0.035 U	0.038 U	0.036 U	0.036 U	0.035 U	0.049 U	0.035 U	0.035 U	0.036 U	0.036 U	0.035 U	0.043 U
Aroclor-1254	8.30E-01 (i)	0.035 U	0.038 U	0.036 U	0.036 U	0.035 U	0.049 U	0.035 U	0.035 U	0.036 U	0.036 U	0.035 U	0.043 U
Aroclor-1260	8.30E-01 (i)	0.035 U	0.038 U	0.036 U	0.036 U	0.035 U	0.049 U	0.035 U	0.035 U	0.036 U	0.036 U	0.035 U	0.043 U

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.
2. U.S. EPA, Region 6, Medium Specific Screening Levels (MSSLs) for Industrial - Outdoor Worker (March, 2008)
(i) For PCBs, the individual Aroclors were compared to the TSCA action level of 10 mg/kg, for high occupancy, restricted (non-residential) use. (40 CFR Part 761; 63 FR 35383-35474, June 29, 1998).

LOU 43 Table 12
Groundwater Characterization Data - PCBs

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A[1]	Ph A	
	Well ID	M11	M12A	
	Sample ID	M11	M12A	
	Sample Date	12/06/2006	12/05/2006	
PCBs	**MCL[2] ug/L**			**Unit**
Aroclor-1016	5.00E-01 (bb)	0.10 U	0.10 U	ug/L
Aroclor-1221	5.00E-01 (bb)	0.10 U	0.10 U	ug/L
Aroclor-1232	5.00E-01 (bb)	0.10 U	0.10 U	ug/L
Aroclor-1242	5.00E-01 (bb)	0.10 U	0.10 U	ug/L
Aroclor-1248	5.00E-01 (bb)	0.10 U	0.10 U	ug/L
Aroclor-1254	5.00E-01 (bb)	0.10 U	0.10 U	ug/L
Aroclor-1260	5.00E-01 (bb)	0.10 U	0.10 U	ug/L

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.
2. U.S. EPA Maximum Contaminant Level (MCL) values unless noted.
(bb) Value for total PCBs.

LOU 43 Table 13
Soil Characterization Data - Perchlorate

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

Boring ID	Sample ID	Sample Depth (ft)	Sample Date	Perchlorate ug/kg	MSSL[1] ug/kg	Sampling Program
SA6	SA6-0.5	0.5	11/14/2006	**239**	7.95E+05	Ph A[2]
	SA6-0.5D	0.5	11/14/2006	**426**	7.95E+05	Ph A
	SA6-10	10	11/14/2006	**2320**	7.95E+05	Ph A
	SA6-20	20	11/14/2006	**3020**	7.95E+05	Ph A
	SA6-30	30	11/14/2006	**5340**	7.95E+05	Ph A
	SA6-35	35	11/14/2006	**54100**	7.95E+05	Ph A
SA7	SA7-0.5	0.5	11/20/2006	**34300 J**	7.95E+05	Ph A
	SA7-10	10	11/20/2006	**109000 J**	7.95E+05	Ph A
	SA7-10D	10	11/20/2006	**113000 J**	7.95E+05	Ph A
	SA7-20	20	11/20/2006	**12800 J**	7.95E+05	Ph A
	SA7-30	30	11/20/2006	**8690 J**	7.95E+05	Ph A
	SA7-34	34	11/20/2006	**31700 J**	7.95E+05	Ph A

Notes:
1. U.S. EPA, Region 6, Medium Specific Screening Levels (MSSLs) for Industrial - Outdoor Worker (March, 2008).
2. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.

LOU 43 Table 14
Groundwater Characterization Data - Perchlorate

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

Well ID Number	Sample ID	Sample Date	Perchlorate ug/L	MCL[1] ug/L	Sampling Program
M11	M11	12/06/2006	**32500 J+**	1.80E+01 a,(m)	Ph A[2]
M11D	M11D	12/06/2006	**32400 J+**	1.80E+01 a,(m)	Ph A
M12A	M12A	12/05/2006	**323000 J+**	1.80E+01 a,(m)	Ph A

Notes:
1. U.S. EPA Maximum Contaminant Level (MCL) values unless noted.
2. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.
(a) NAC 445A.455 Secondary standards. Certain provisions of the National Primary Drinking Water Regulations are adopted by reference (NAC 445A.4525). These values are listed in the first column of this table and are therefore not listed again here. Only NAC 445A.455 Secondary standards are listed.
(m) Equal to the provisional action level derived by NDEP as referenced in "Defining a Perchlorate Drinking Water Standard". NDEP Bureau of Corrective Action. URL [http://ndep.nv.gov/bca/perchlorate02_05.htm].

LOU 43 Table 15
Soil Characterization Data - Radionuclides

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

				Ra-226	Ra-228	Th-228	Th-230	Th-232	U-233/234	U-235/236	U-238	
				(gamma)	(gamma)	(TH MOD)	(TH MOD)	(TH MOD)	(U MOD)	(U MOD)	(U MOD)	
				pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	
Boring ID Number	**Sample ID**	**Sample Depth (ft)**	**Date**									**Sampling Program**
SA-6	SA6-0.5	0.5	11/14/2006	**1.18 J**	**1.87**							Ph A[1]
	SA6-0.5D	0.5	11/14/2006	**1.32 J**	**1.89**							Ph A
	SA6-10	10	11/14/2006	**1.07 J**	**1.8**	**0.601 J**	**0.619 JB**	**0.668 J**	**0.787**	**0.0165 J**	**0.483 J**	Ph A
	SA6-20	20	11/14/2006	**1.21 J**	**1.63**							Ph A
	SA6-30	30	11/14/2006	**1.49 J**	**1.94**							Ph A
	SA6-35	35	11/14/2006	**2.1**	1.1 U							Ph A
SA-7	SA7-0.5	0.5	11/20/2006	**1.12 J-**	**1.83 J-**							Ph A
	SA7-10	10	11/20/2006	**1.02 J-**	**1.9 J-**							Ph A
	SA7-10D	10	11/20/2006	**0.939 J-**	**1.77 J-**							Ph A
	SA7-20	20	11/20/2006	**1.28 J-**	**1.57 J-**	**0.488 J**	**0.775 J**	**0.618 J**	**0.652 J+**	0.0145 U	**0.493 J**	Ph A
	SA7-30	30	11/20/2006	**1.79 J-**	**1.78 J-**							Ph A
	SA7-34	34	11/20/2006	**7.49 J-**	**0.805 J-**							Ph A

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.

LOU 43 Table 16
Groundwater Characterization Data - Radionuclides

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

			Ra-226	Ra-228	Th-228	Th-230	Th-232	U-233/234	U-235/236	U-238	
			pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	
Well ID Number	**Sample ID**	**Date**									**Sampling Program**
M11	M11-Z	05/11/2007	0.332 U	**1.23 B**							Ph A[1]
M12A	M12A-Z	05/11/2007	**0.601 J**	**1.45**							Ph A

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.

LOU 43 Table 17
Soil Characterization Data - SVOC

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

		Sampling Program	Ph A[1]	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A
		Boring No.	SA6	SA6	SA6	SA6	SA6	SA6	SA7	SA7	SA7	SA7	SA7	SA7
		Sample ID	SA6-0.5	SA6-0.5D	SA6-10	SA6-20	SA6-30	SA6-35	SA7-0.5	SA7-10	SA7-10D	SA7-20	SA7-30	SA7-34
		Sample Depth (ft)	0.5	0.5	10	20	30	35	0.5	10	10	20	30	34
		Sample Date	11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006
SVOC	**MSSL[2] ug/kg**	**Analytical Method**	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
1,4-Dioxane	1.70E+05	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	70 U	350 U	360 U	360 U	350 U	430 U
2-Methylnaphthalene	2.10E+05 (jj)	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
2-Methylnaphthalene	2.10E+05 (jj)	SIM	7.0 U	7.7 U					7.0 U					
Acenaphthene	3.30E+07	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Acenaphthene	3.30E+07	SIM	7.0 U	7.7 U					7.0 U					
Acenaphthylene	3.30E+07 (pp)	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Acenaphthylene	3.30E+07 (pp)	SIM	7.0 U	7.7 U					7.0 U					
Anthracene	1.00E+08	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Anthracene	1.00E+08	SIM	7.0 U	7.7 U					7.0 U					
Benz(a)anthracene	2.30E+03	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Benz(a)anthracene	2.30E+03	SIM	7.0 U	7.7 U					7.0 U					
Benzo(a)pyrene	2.30E+02	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Benzo(a)pyrene	2.30E+02	SIM	7.0 U	7.7 U					7.0 U					
Benzo(b)fluoranthene	2.30E+03	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Benzo(b)fluoranthene	2.30E+03	SIM	7.0 U	7.7 U					7.0 U					
Benzo(g,h,i)perylene	3.20E+07 (w)	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Benzo(g,h,i)perylene	3.20E+07 (w)	SIM	7.0 U	7.7 U					7.0 U					
Benzo(k)fluoranthene	2.30E+04	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Benzo(k)fluoranthene	2.30E+04	SIM	7.0 U	7.7 U					7.0 U					
bis(2-Ethylhexyl)phthalate	1.40E+05	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Butyl benzyl phthalate	2.40E+05	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Chrysene	2.30E+05	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Chrysene	2.30E+05	SIM	7.0 U	7.7 U					7.0 U					
Dibenz(a,h)anthracene	2.30E+02	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Dibenz(a,h)anthracene	2.30E+02	SIM	7.0 U	7.7 U					7.0 U					
Diethyl phthalate	1.00E+08	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Dimethyl phthalate	1.00E+08	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Di-N-Butyl phthalate	6.80E+07	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Di-N-Octyl phthalate	--	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Fluoranthene	2.40E+07	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Fluoranthene	2.40E+07	SIM	7.0 U	7.7 U					7.0 U					
Fluorene	2.60E+07	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Fluorene	2.60E+07	SIM	7.0 U	7.7 U					7.0 U					
Hexachlorobenzene	1.20E+03	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Hexachlorobenzene	1.20E+03	SIM	7.0 U	7.7 U					7.0 U					
Indeno(1,2,3-cd)pyrene	2.30E+03	non-SIM	350 UJ	380 UJ	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Indeno(1,2,3-cd)pyrene	2.30E+03	SIM	7.0 U	7.7 U					7.0 U					
Naphthalene	2.10E+05	non-SIM	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U

LOU 43 Table 17 (continued)
Soil Characterization Data - SVOC

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

Sampling Program			Ph A[1]	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A
Boring No.			SA6	SA6	SA6	SA6	SA6	SA6	SA7	SA7	SA7	SA7	SA7	SA7
Sample ID			SA6-0.5	SA6-0.5D	SA6-10	SA6-20	SA6-30	SA6-35	SA7-0.5	SA7-10	SA7-10D	SA7-20	SA7-30	SA7-34
Sample Depth (ft)			0.5	0.5	10	20	30	35	0.5	10	10	20	30	34
Sample Date			11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006
SVOC	**MSSL[2] ug/kg**	**Analytical Method**	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Naphthalene	2.10E+05	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Naphthalene	2.10E+05	SIM	7.0 U	7.7 U					7.0 U					
Nitrobenzene	1.10E+05	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Octachlorostyrene	--	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Phenanthrene	1.00E+08 (n)	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Phenanthrene	1.00E+08 (n)	SIM	7.0 U	7.7 U					7.0 U					
Pyrene	3.20E+07	non-SIM	350 U	380 U	360 U	360 U	350 U	490 U	350 U	350 U	360 U	360 U	350 U	430 U
Pyrene	3.20E+07	SIM	7.0 U	7.7 U					7.0 U					
Pyridine	6.80E+05	non-SIM	1700 U	1900 U	1700 U	1700 U	1700 U	2400 U	1700 U	1700 U	1700 U	1700 U	1700 U	2100 U

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.
2. U.S. EPA, Region 6, Medium Specific Screening Levels (MSSLs) for Industrial - Outdoor Worker (March, 2008).
(jj) Value for naphthalene used as surrogate for 2-methylnaphthalene based on structural similarities.
(pp) Value for acenaphthene used as surrogate for acenapthylene based on structural similarities.
(w) Value for pyrene used as surrogate for benzo(g,h,i)perylene based on structural similarities.
(n) Value for anthracene used as surrogate for phenanthrene due to structural similarities.

LOU 43 Table 18
Groundwater Characterization Data - SVOCs

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

		Sampling Program	Ph A[1]	Ph A
		Well No.	M11	M12A
		Sample ID	M11	M12A
		Sample Date	12/06/2006	12/05/2006
SVOCs	**Analytic Method**	**MCL[2] ug/L**	ug/L	ug/L
1,4-Dioxane	non-SIM	6.11E+00	10 U	10 U
2-Methylnaphthalene	non-SIM	6.20E+00 (jj)	10 U	10 U
2-Methylnaphthalene	SIM	6.20E+00 (jj)		
Acenaphthene	non-SIM	3.65E+02	10 U	10 U
Acenaphthene	SIM	3.65E+02		
Acenaphthylene	non-SIM	3.65E+02 (pp)	10 U	10 U
Acenaphthylene	SIM	3.65E+02 (pp)		
Anthracene	non-SIM	1.83E+03	10 U	10 U
Anthracene	SIM	1.83E+03		
Benz(a)anthracene	non-SIM	9.21E-02	10 U	10 U
Benz(a)anthracene	SIM	9.21E-02		
Benzo(a)pyrene	non-SIM	2.00E-01	10 U	10 U
Benzo(a)pyrene	SIM	2.00E-01		
Benzo(b)fluoranthene	non-SIM	9.21E-02	10 U	10 U
Benzo(b)fluoranthene	SIM	9.21E-02		
Benzo(g,h,i)perylene	non-SIM	1.83E+02 (w)	10 U	10 U
Benzo(g,h,i)perylene	SIM	1.83E+02 (w)		
Benzo(k)fluoranthene	non-SIM	9.21E-01	10 U	10 U
Benzo(k)fluoranthene	SIM	9.21E-01		
bis(2-Ethylhexyl)phthalate	non-SIM	6.00E+00	10 U	10 U
Butyl benzyl phthalate	non-SIM	7.30E+03	10 U	10 U
Chrysene	non-SIM	9.21E+00	10 U	10 U
Chrysene	SIM	9.21E+00		
Dibenz(a,h)anthracene	non-SIM	9.21E-03	10 U	10 U
Dibenz(a,h)anthracene	SIM	9.21E-03		
Diethyl phthalate	non-SIM	2.92E+04	10 U	10 U
Dimethyl phthalate	non-SIM	3.65E+05	10 U	10 U
Di-N-Butyl phthalate	non-SIM	3.65E+03	10 U	10 U
Di-N-Octyl phthalate	non-SIM	1.46E+03	10 U	10 U
Fluoranthene	non-SIM	1.46E+03	10 U	10 U
Fluoranthene	SIM	1.46E+03		
Fluorene	non-SIM	2.43E+02	10 U	10 U
Fluorene	SIM	2.43E+02		
Hexachlorobenzene	non-SIM	1.00E+00	10 U	10 U
Hexachlorobenzene	SIM	1.00E+00		
Indeno(1,2,3-cd)pyrene	non-SIM	9.21E-02	10 UJ	10 U
Indeno(1,2,3-cd)pyrene	SIM	9.21E-02		
Naphthalene	non-SIM	6.20E+00	5.0 U	5.0 U
Naphthalene	non-SIM	6.20E+00	10 UJ	10 U
Naphthalene	SIM	6.20E+00		
Nitrobenzene	non-SIM	3.40E+00	10 U	10 U
Octachlorostyrene	non-SIM	--	10 U	10 U

LOU 43 Table 18 (continued)
Groundwater Characterization Data - SVOCs

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

		Sampling Program	Ph A[1]	Ph A
		Well No.	M11	M12A
		Sample ID	M11	M12A
		Sample Date	12/06/2006	12/05/2006
SVOCs	**Analytic Method**	**MCL[2] ug/L**	ug/L	ug/L
Phenanthrene	non-SIM	1.80E+03 (n)	10 U	10 U
Phenanthrene	SIM	1.80E+03 (n)		
Pyrene	non-SIM	1.83E+02	10 U	10 U
Pyrene	SIM	1.83E+02		
Pyridine	non-SIM	3.65E+01	20 U	20 U

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.
2. U.S. EPA Maximum Contaminant Level (MCL) values unless noted.
(jj) Value for naphthalene used as surrogate for 2-methylnaphthalene based on structural similarities.
(pp) Value for acenaphthene used as surrogate for acenapthylene based on structural similarities.
(w) Value for pyrene used as surrogate for benzo(g,h,i)perylene based on structural similarities.
(n) Value for anthracene used as surrogate for phenanthrene due to structural similarities.

LOU 43 Table 19
Soil Characterization Data - TPH and Fuel Alcohols

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

				Fuel Alcohols			Total Petroleum Hydrocarbons			
				Ethanol	Ethylene glycol	Methanol	TPH - ORO	TPH - DRO	TPH - GRO	
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
			MSSL[1] mg/kg	--	1.00E+05	1.00E+05	1.00E+02 vv	1.00E+02 vv	1.00E+02 vv	
Boring No.	**Sample ID.**	**Sample Depth (ft)**	**Sample Date**							**Sampling Program**
SA6	SA6-0.5	0.5	11/14/2006	53 UJ	69 UJ	53 UJ	27 U	27 U	0.11 U	Ph A[2]
	SA6-0.5D	0.5	11/14/2006	58 UJ	75 UJ	58 UJ	29 U	29 U	0.12 U	Ph A
	SA6-10	10	11/14/2006	54 UJ	108 UJ	54 UJ	27 U	27 U	0.11 U	Ph A
	SA6-20	20	11/14/2006	54 UJ	85 UJ	54 UJ	27 U	27 U	0.11 U	Ph A
	SA6-30	30	11/14/2006	53 UJ	98 UJ	53 UJ	26 U	26 U	0.11 U	Ph A
	SA6-35	35	11/14/2006	74 UJ	112 UJ	74 UJ	37 U	37 U	0.15 U	Ph A
SA7	SA7-0.5	0.5	11/20/2006				**26**	26 UJ	0.11 UJ	Ph A
	SA7-10	10	11/20/2006				26 U	26 U	0.11 UJ	Ph A
	SA7-10D	10	11/20/2006				27 U	27 U	0.11 UJ	Ph A
	SA7-20	20	11/20/2006				27 U	27 U	0.11 UJ	Ph A
	SA7-30	30	11/20/2006				27 U	27 U	0.11 UJ	Ph A
	SA7-34	34	11/20/2006				33 U	33 U	0.13 UJ	Ph A

Notes:
1. U.S. EPA, Region 6, Medium Specific Screening Levels (MSSLs) for Industrial - Outdoor Worker (March, 2008).
2. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.
(w) Value for pyrene used as surrogate for benzo(g,h,i)perylene based on structural similarities.

LOU 43 Table 20
Soil Characterization Data - VOCs

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A[1]	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A
	Boring No.	SA6	SA6	SA6	SA6	SA6	SA6	SA7	SA7	SA7	SA7	SA7	SA7
	Sample ID	SA6-0.5	SA6-0.5D	SA6-10	SA6-20	SA6-30	SA6-35	SA7-0.5	SA7-10	SA7-10D	SA7-20	SA7-30	SA7-34
	Sample Depth (ft)	0.5	0.5	10	20	30	35	0.5	10	10	20	30	34
	Sample Date	11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006
VOCs	**MSSL[2] ug/kg**	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Naphthalene	2.10E+05	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
1,1,1,2-Tetrachloroethane	7.60E+03	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
1,1,1-Trichloroethane	1.40E+06	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	**0.54 J**	5.4 U	5.4 U	**0.37 J**	6.5 U
1,1,2,2-Tetrachloroethane	9.70E+02	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
1,1,2-Trichloroethane	2.10E+03	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
1,1-Dichloroethane	2.30E+06	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	**1.9 J**	5.4 U	5.4 U	**1.4 J**	6.5 U
1,1-Dichloroethene	4.70E+05	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
1,1-Dichloropropene	1.75E+03 (gg)	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
1,2,3-Trichlorobenzene	2.60E+05 (hh)	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
1,2,3-Trichloropropane	1.60E+03	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
1,2,4-Trichlorobenzene	2.60E+05	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
1,2,4-Trimethylbenzene	2.20E+05	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
1,2-Dibromo-3-chloropropane	2.00E+01	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
1,2-Dichlorobenzene	3.70E+05	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
1,2-Dichloroethane	8.40E+02	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
1,2-Dichloropropane	8.50E+02	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
1,3,5-Trimethylbenzene	7.80E+04	5.3 UJ	5.8 UJ	5.4 UJ	5.4 UJ	5.3 UJ	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
1,3-Dichlorobenzene	1.40E+05	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
1,3-Dichloropropane	4.10E+05	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
1,4-Dichlorobenzene	8.10E+03	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	**0.32 J**	5.4 U	5.3 U	6.5 U
2,2-Dichloropropane	8.50E+02 (ii)	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
2-Butanone	3.40E+07	11 U	12 U	11 U	11 U	11 U	15 U	11 U	11 U	11 U	11 U	11 U	13 U
2-Chlorotoluene	5.10E+05	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
2-Hexanone	1.72E+07 (nn)	11 UJ	12 UJ	11 UJ	11 UJ	11 UJ	15 UJ	11 UJ	11 UJ	11 UJ	11 UJ	11 UJ	13 UJ
2-Methoxy-2-methyl-butane	--	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
4-Chlorotoluene	5.10E+05 (ww)	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
4-Isopropyltoluene	--	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
4-Methyl-2-pentanone	1.70E+07	11 U	12 U	11 U	11 U	11 U	15 U	11 UJ	11 UJ	11 UJ	11 UJ	11 UJ	13 UJ
Acetone	6.00E+07	11 U	12 UJ	11 U	11 U	11 U	15 U	**4.5 J**	**6.1 J**	11 U	11 U	**21**	**6.6 J**
Benzene	1.60E+03	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Bromobenzene	1.20E+05	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Bromochloromethane	1.75E+03 (qq)	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Bromodichloromethane	2.60E+03	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Bromoform	2.40E+05	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Bromomethane	1.50E+04	11 U	12 U	11 U	11 U	11 U	15 U	11 UJ	11 UJ	11 UJ	11 UJ	11 UJ	13 UJ
Carbon tetrachloride	5.80E+02	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Chlorobenzene	5.00E+05	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Chloroethane	7.20E+03	5.3 UJ	5.8 UJ	5.4 UJ	5.4 UJ	5.3 UJ	7.4 UJ	5.3 UJ	5.3 UJ	5.4 UJ	5.4 UJ	5.3 UJ	6.5 UJ
Chloroform	5.80E+02	5.3 U	5.8 U	**0.50 J**	5.4 U	5.3 U	**28**	5.3 U	**0.40 J**	**0.51 J**	**1.5 J**	**1.9 J**	**20**
Chloromethane	1.70E+05	5.3 UJ	5.8 UJ	5.4 UJ	5.4 UJ	5.3 UJ	7.4 UJ	5.3 UJ	5.3 UJ	5.4 UJ	5.4 UJ	5.3 UJ	6.5 UJ
cis-1,2-Dichloroethene	1.60E+05	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
cis-1,3-Dichloropropene	1.75E+03 (gg)	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U

LOU 43 Table 20
Soil Characterization Data - VOCs

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A[1]	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A
	Boring No.	SA6	SA6	SA6	SA6	SA6	SA6	SA7	SA7	SA7	SA7	SA7	SA7
	Sample ID	SA6-0.5	SA6-0.5D	SA6-10	SA6-20	SA6-30	SA6-35	SA7-0.5	SA7-10	SA7-10D	SA7-20	SA7-30	SA7-34
	Sample Depth (ft)	0.5	0.5	10	20	30	35	0.5	10	10	20	30	34
	Sample Date	11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/14/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006	11/20/2006
VOCs	**MSSL[2] ug/kg**	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dibromochloromethane	2.60E+03	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Dibromomethane	5.90E+05 (xx)	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Dichlorodifluoromethane	3.40E+05	5.3 UJ	5.8 UJ	5.4 UJ	5.4 UJ	5.3 UJ	7.4 UJ	5.3 UJ	5.3 UJ	5.4 UJ	5.4 UJ	5.3 UJ	6.5 UJ
Ethyl t-butyl ether	7.90E+04 (kk)	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Ethylbenzene	2.30E+05	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Ethylene dibromide	7.00E+01	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Hexachlorobutadiene	2.50E+04	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	**1.4 J**
isopropyl ether	--	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Isopropylbenzene	5.80E+05	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Methyl tert butyl ether	7.90E+04	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Methylene chloride	2.20E+04	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 UJ	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
N-Butylbenzene	2.40E+05	5.3 UJ	5.8 UJ	5.4 UJ	5.4 UJ	5.3 UJ	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
N-Propylbenzene	2.40E+05	5.3 UJ	5.8 UJ	5.4 UJ	5.4 UJ	5.3 UJ	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
sec-Butylbenzene	2.20E+05	5.3 UJ	5.8 UJ	5.4 UJ	5.4 UJ	5.3 UJ	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Styrene	1.70E+06	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
t-Butyl alcohol	--	11 UJ	12 UJ	11 UJ	11 UJ	11 UJ	15 UJ	11 UJ	11 UJ	11 UJ	11 UJ	11 UJ	13 UJ
tert-Butylbenzene	3.90E+05	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Tetrachloroethene	1.70E+03	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	**2.1 J**
Toluene	5.20E+05	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	**0.36 J**	**0.58 J**	**0.31 J**	**0.31 J**	**0.45 J**	**0.37 J**
trans-1,2-Dichloroethylene	2.00E+05	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
trans-1,3-Dichloropropene	1.75E+03 (gg)	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Trichloroethene	1.00E+02	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	6.5 U
Trichlorofluoromethane	1.40E+06	5.3 UJ	5.8 UJ	5.4 UJ	5.4 UJ	5.3 UJ	7.4 UJ	5.3 UJ	5.3 UJ	5.4 UJ	5.4 UJ	5.3 UJ	6.5 UJ
Vinylchloride	8.60E+02	5.3 U	5.8 U	5.4 U	5.4 U	5.3 U	7.4 U	5.3 UJ	5.3 UJ	5.4 UJ	5.4 UJ	5.3 UJ	6.5 UJ
Xylene (Total)	2.10E+05	11 U	12 U	11 U	11 U	11 U	15 U	11 U	11 U	11 U	11 U	11 U	13 U

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.
2. U.S. EPA, Region 6, Medium Specific Screening Levels (MSSLs) for Industrial - Outdoor Worker (March, 2008).
(gg) Value for 1,3-dichloropropene used as surrogate for 1,1-dichloropropene, cis-1,3-dichloropropene and trans-1,3-dichloropropene based on structural similarities.
(hh) Value for 1,2,4-trichlorobenzene used as surrogate for 1,2,3-trichlorobenzene based on structural similarities.
(ii) Value for 1,2-dichloropropane used as surrogate for 2,2-dichloropropane based on structural similarities.
(nn) Value for methyl isobutyl ketone used as surrogate for 2-hexanone based on structural similarities.
(ww) Value for 2-chlorotoluene used as surrogate for 4-chlorotoluene based on structural similarities.
(qq) Value for bromodichloromethane used as surrogate for bromochloromethane due to structural similarities.
(xx) Value for methylene bromide used as surrogate for dibromomethane based on structural similarities.
(kk) Value for methyl tertbutyl ether (MTBE) used as surrogate for ethyl-tert-butyl ether (ETBE) based on structural similarities.

LOU 43 Table 21
Groundwater Characterization Data - VOCs

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

	Sampling Program		Ph A[1]	Ph A
	Well ID		M11	M12A
	Sample ID		M11	M12A
	Sample Date		12/06/2006	12/05/2006
VOCs	**MCL[2] ug/L**		ug/L	ug/L
Naphthalene	6.20E+00		5.0 U	5.0 U
1,1,1,2-Tetrachloroethane	4.32E-01		5.0 U	5.0 U
1,1,1-Trichloroethane	2.00E+02		5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	5.00E+00		5.0 U	5.0 U
1,1,2-Trichloroethane	5.00E+00		5.0 U	5.0 U
1,1-Dichloroethane	8.11E+02		5.0 U	5.0 U
1,1-Dichloroethene	7.00E+00		5.0 U	5.0 U
1,1-Dichloropropene	3.95E-01	gg	5.0 U	5.0 U
1,2,3-Trichlorobenzene	7.16E+00	hh	5.0 U	5.0 U
1,2,3-Trichloropropane	5.60E-03		5.0 U	5.0 U
1,2,4-Trichlorobenzene	7.00E+01		5.0 U	5.0 U
1,2,4-Trimethylbenzene	1.23E+01		5.0 U	5.0 U
1,2-Dibromo-3-chloropropane	2.00E-01		5.0 U	5.0 UJ
1,2-Dichlorobenzene	6.00E+02		5.0 U	5.0 U
1,2-Dichloroethane	5.00E+00		5.0 U	5.0 U
1,2-Dichloropropane	5.00E+00		5.0 U	5.0 U
1,3,5-Trimethylbenzene	1.23E+01		5.0 U	5.0 U
1,3-Dichlorobenzene	1.83E+02		5.0 U	5.0 U
1,3-Dichloropropane	1.22E+02		5.0 U	5.0 U
1,4-Dichlorobenzene	7.50E+01		5.0 U	5.0 U
2,2-Dichloropropane	1.65E-01	ii	5.0 U	5.0 U
2-Butanone	6.97E+03		10 U	10 U
2-Chlorotoluene	1.22E+02		5.0 U	5.0 U
2-Hexanone	2.00E+03	nn	10 UJ	10 U
2-Methoxy-2-methyl-butane	--		5.0 UJ	5.0 U
4-Chlorotoluene	1.22E+02	ww	5.0 U	5.0 U
4-Isopropyltoluene	--		5.0 U	5.0 U
4-Methyl-2-pentanone	1.99E+03		10 UJ	10 UJ
Acetone	5.48E+03		10 U	10 U
Benzene	5.00E+00		5.0 U	5.0 U
Bromobenzene	2.03E+01		5.0 U	5.0 U
Bromochloromethane	1.81E-01	qq	5.0 U	5.0 U
Bromodichloromethane	8.00E+01	r	5.0 U	5.0 U
Bromoform	8.00E+01	r	5.0 U	5.0 U
Bromomethane	8.66E+00		10 U	10 UJ
Carbon tetrachloride	5.00E+00		5.0 U	5.0 U
Chlorobenzene	1.00E+02	o	5.0 U	5.0 U
Chloroethane	4.64E+00		5.0 U	5.0 U
Chloroform	8.00E+01	r	**130**	**1600 J+**
Chloromethane	1.58E+02		5.0 U	5.0 U
cis-1,2-Dichloroethene	7.00E+01		5.0 U	5.0 U
cis-1,3-Dichloropropene	3.95E-01	gg	5.0 U	5.0 U
Dibromochloromethane	8.00E+01	r	5.0 U	5.0 U
Dibromomethane	6.08E+01	xx	5.0 U	5.0 U
Dichlorodifluoromethane	3.95E+02		5.0 UJ	5.0 U
Ethyl t-butyl ether	1.10E+01	kk	5.0 UJ	5.0 U
Ethylbenzene	7.00E+02		5.0 U	5.0 U
Ethylene dibromide	--		5.0 U	5.0 U

LOU 43 Table 21 (continued)
Groundwater Characterization Data - VOCs

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A[1]	Ph A
	Well ID	M11	M12A
	Sample ID	M11	M12A
	Sample Date	12/06/2006	12/05/2006
VOCs	**MCL[2] ug/L**	ug/L	ug/L
Hexachlorobutadiene	8.62E-01	5.0 U	5.0 U
isopropyl ether	--	5.0 UJ	5.0 U
Isopropylbenzene	6.58E+02	5.0 U	5.0 U
Methyl tert butyl ether	2.00E+01 a,uu	5.0 U	5.0 U
Methylene chloride	5.00E+00	5.0 UJ	5.0 U
N-Butylbenzene	2.43E+02	5.0 U	5.0 U
N-Propylbenzene	2.43E+02	5.0 U	5.0 U
sec-Butylbenzene	2.43E+02	5.0 U	5.0 U
Styrene	1.00E+02	5.0 U	5.0 U
t-Butyl alcohol	--	10 UJ	10 UJ
tert-Butylbenzene	2.43E+02	5.0 U	5.0 U
Tetrachloroethene	5.00E+00	5.0 U	**0.93 J**
Toluene	1.00E+03	5.0 U	5.0 U
trans-1,2-Dichloroethylene	1.00E+02	5.0 U	5.0 U
trans-1,3-Dichloropropene	--	5.0 U	5.0 U
Trichloroethene	5.00E+00	5.0 U	5.0 U
Trichlorofluoromethane	--	5.0 U	5.0 U
Vinylchloride	2.00E+00	5.0 U	5.0 U
Xylene (Total)	1.00E+04	10 UJ	10 U

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.
2. U.S. EPA Maximum Contaminant Level (MCL) values unless noted.
(gg) Value for 1,3-dichloropropene used as surrogate for 1,1-dichloropropene, cis-1,3-dichloropropene and trans-1,3-dichloropropene based on structural similarities.
(hh) Value for 1,2,4-trichlorobenzene used as surrogate for 1,2,3-trichlorobenzene based on structural similarities.
(ii) Value for 1,2-dichloropropane used as surrogate for 2,2-dichloropropane based on structural similarities.
(nn) Value for methyl isobutyl ketone used as surrogate for 2-hexanone based on structural similarities.
(ww) Value for 2-chlorotoluene used as surrogate for 4-chlorotoluene based on structural similarities.
(qq) Value for bromodichloromethane used as surrogate for bromochloromethane due to structural similarities.
(o) See footnote (b). Listed under synonym monochlorobenzene.
(xx) Value for methylene bromide used as surrogate for dibromomethane based on structural similarities.
(kk) Value for methyl tertbutyl ether (MTBE) used as surrogate for ethyl-tert-butyl ether (ETBE) based on structural similarities.
(a) NAC 445A.455 Secondary standards. Certain provisions of the National Primary Drinking Water Regulations are adopted by reference (NAC 445A.4525). These values are listed in the first column of this table and are therefore not listed again here. Only NAC 445A.455 Secondary standards are listed.
(uu) NDEP, 1998. Oxygenated Fuel Corrective Action Guidance. Draft. October, 12 1998. URL [http://ndep.nv.gov/bca/mtbe_doc.htm].

LOU 43 Table 22
Soil Characterization Data - Long Asbestos Fibers in Respirable Soil Fraction

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

No.	Sample ID	Sample Date	Long Amphibole Protocol Structures	Long Amphibole Protocol Structures	Long Chrysotile Protocol Structures	Long Chrysotile Protocol Structures	Sampling Program
			s/gPM10	(structures/samples)	s/gPM10	(structures/samples)	
SA6	SA6	12/07/2006	2846000 U	0	2846000 U	0	Ph A[1]
SA7	SA7	12/07/2006	2988000 U	0	**2990000**	1	Ph A

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility, Henderson, Nevada, September 2007.

LOU 43 Table 23
Notes for Phase A Data Tables

Unit 4 & 5 Basements
Tronox Facility - Henderson, Nevada

Blank	Not analyzed.
Bold	Bold values are constituents detected above the laboratory sample quantitation limit.
Gray	Grayed out values are non-detected values with the laboratory sample quantitation limits shown.
B	The result may be a false positive totally attributable to blank contamination.
D	Dissolved Metals.
DO	Dissolved Oxygen.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J-	The result is an estimated quantity and the result may be biased low.
J+	The result is an estimated quantity and the result may be biased high.
J+	The result is an estimated quantity and the result may be biased high.
JB	The result may be biased high partially attributable to blank contamination.
JK	The result is an estimated maximum possible concentration.
R	The result was rejected and unusable due to serious data deficiencies. The presence or absence of the analyte cannot be verified.
S	Soluable metals
T	Total Metals.
U	The analyte was analyzed for, but was not detected above the laboratory sample quantitation limit.
UJ	The analyte was not detected above the laboratory sample quantitation limit and the limit is approximate.
mg/kg	Milligrams per kilogram.
mg/L	Milligrams per liter.
ml/min	Milliliters per minute.
ng/kg	Nanogram per kilogram.
nm	Not measured.
NTUs	Nephelometric Turbidity Units.
ORP	Oxidation-reduction potential.
pCi/g	PicoCuries per gram.
pci/L	PicoCuries per liter.
s/gPM10	Revised protocol structures per gram PM10 fraction dust.
TEF	Toxic Equivalency Factor.
TEQ	Toxic Equivalent Concentration
ug/kg	Micrograms per kilogram.
ug/L	Micrograms per liter.
umhos/cm	MicroSiemens per centimeter.
L	Sample ID suffix indicating the sample was collected using low low-flow pumping rates (100-150 ml/min).
F	Sample ID suffix indicating the sample was collected using low-flow pumping rates (150-480 ml/min) and field filtered.
Z	Sample ID suffix indicating the sample was collected using low-flow pumping rates (150-480 ml/min).
*	No analytical data is available for this sample due to a laboratory error.
(a)	Calculated assuming 0 for non-detected congeners and 2006 toxic equivalency factors (TEFs).
(b)	Calculated assuming 1/2 detection limit as proxy for non-detected congeners and 2006 TEFs.
--	Not established