Summary of Available Data for LOU 58
AP Plant Area New D-1 Building Washdown
Tronox Facility – Henderson, Nevada

Name of Facility:

Ammonium Perchlorate (AP) Plant Area New D-1 Building Washdown

Goal of Closure:

- Continuation of current use – regulatory closure not presently requested.

Site Investigation Area:

- Size: Approximately 150 feet by 50 feet (0.2 acre).
- Location: Central portion of the Site, south of Pond GW-11.
- Current Status/Features: The New D-1 Building currently houses part of the perchlorate treatment unit and is overlapped by the southwest portion of LOU 32.

Description:

- The AP Plant Area New D-1 Building (LOU 58) was used for dry material handling, mixing, and blending of AP.
- It replaced the Old D-1 Building in January 1989 [Ref. 3].
- The New D-1 Building operations ceased in July 1989 after approximately six months [Ref. 3].
- The small amount of AP that fell to the floor was swept up and the building was washed down on an infrequent basis [Ref. 3].
- AP dust was cleaned up using a dust collection unit; AP on floors was collected by sweeping and infrequent washdown [Ref. 3].
- Washdown water drained to the asphalt pad surrounding the New D-1 Building [Ref. 3].
- Since 2001, the New D-1 Building has been used to house part of the perchlorate treatment unit.

Process Waste Streams Associated with LOU 58	Known or Potential Constituents Associated with LOU 58
Wash water from the cleaning of AP dust from the floor [Ref 2].	• Ammonium perchlorate • Wet chemistry analytes
Process Waste Streams Associated with Chromium and Perchlorate Groundwater Remediation Unit (LOU 32)	
Filtered non-hazardous solid biomass containing negligible amounts of perchlorate [Ref. 2]	• Perchlorate

Summary of Available Data for LOU 58
AP Plant Area New D-1 Building Washdown
Tronox Facility – Henderson, Nevada

Overlapping or Adjacent LOUs:

The following LOUs overlap or are adjacent to LOU 58:

Overlapping LOUs

- LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit) – Overlaps the southeastern portion of LOU 58.

Adjacent LOUs

- LOU 55 (Area Affected by July 1990 Fire) – Located east (crossgradient) of LOU 58.
- LOU 56 (AP Plant Area Old Building D-1 Washdown) – Located south (downgradient) of LOU 58.
- LOU 31 (Drum Recycling Area) – Located southeast (crossgradient) of LOU 58.
- Known or potential chemical classes that are associated with adjacent or overlapping LOUs are consistent with those listed for LOU 58; therefore, no additional chemical classes have been added to the Phase B Analytical Plan for LOU 58.
- For detailed information on these LOUs, please refer to the specific LOU data package.

LOUs Potentially Affecting Soils in LOU 58:

- LOU 56 – AP Plant area Old Building D-1 Washdown: Formally used for dry material handing, mixing, and blending of AP. AP dust was cleaned up by sweeping and infrequent washing of the floor; therefore, washwater containing AP could have potentially flowed downgradient to LOU 58. Known or potential chemical classes associated with LOU 56 are consistent with those listed for LOU 58; therefore, no additional chemical classes have been added to the analytical plan for LOU 58.
- For further information please refer to the LOU 58 data package.

Known or Potential Chemical Classes:

- Perchlorate
- Wet chemistry analytes

Known or Potential Release Mechanisms:

- No known releases documented for this LOU.
- Possible impacts to surrounding soils from surface releases.
  - AP in wash water from infrequent washing of the floor; wash water drained to the surrounding asphalt pad [Ref. 3].

Results of Historical Sampling:

- No historical sampling is known to have been conducted.

Summary of Available Data for LOU 58
AP Plant Area New D-1 Building Washdown
Tronox Facility – Henderson, Nevada

Did Historical Samples Address Potential Release?

- No

Summary of Phase A SAI:

Soil:

- None specifically within this LOU. Closest boring (SA19) is approximately 50 feet to the south (upgradient) and was in part sampled to evaluate this LOU [Ref. 1].

Groundwater:

- None specifically within this LOU. Closest well sampled (I-AR) is approximately 200 feet to the south (upgradient) and was in part sampled to evaluate this LOU [Ref. 1].

Chemical classes detected in Phase A soil boring SA19:

- Metals
- Perchlorate
- Wet chemistry analytes
- VOCs
- Dioxins/furans
- Radionuclides
- Asbestos

As a result of the Phase A data, the Phase B analytical plan for samples collected from LOU 58 will be expanded to include analyses for metals, perchlorate, VOCs, dioxins/furans, radionuclides, and asbestos.

- Analytical results for soil and groundwater from the Phase A sampling event are summarized: LOU 58 Tables 1 through 21 (see attached) [Ref. 1].

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

- No

Is Phase B Investigation Recommended?

- Yes

Proposed Phase B Soil Investigation/Rationale:

- The Phase B investigation of LOU 58 consists of collecting soil samples from two (2) locations:
  - one (1) boring will be drilled approximately 30 feet east of the LOU; and
  - one (1) boring will be drilled approximately 10 feet north of the LOU.
  - Both borings along with the analytical program to evaluate soil samples from LOU 58 are listed on **Table A – Soil Sampling and Analytical Plan for LOU 58.**
- Soil sample locations consist of both judgmental and randomly placed locations.

randomly placed locations.

- Judgmental sample locations:
  - Designed to evaluate soil for known or potential chemical classes associated with LOU 58, based on the known process waste streams;
  - One (1) sample location (SA74) is a Judgmental location.
- Random sample locations:
  - Are designed to assess whether unknown constituents associated with LOU 58 are present.
  - One (1) sample location (RSAL5) is a randomly-placed location.

Proposed Phase B Constituents List for Soils:

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

- Perchlorate
- Wet chemistry analytes

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

- Metals (Phase A list)
- Hexavalent chromium
- VOCs
- Dioxins/furans
- Radionuclides
- Asbestos

Random sample 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

Proposed Phase B Groundwater Investigation/Rationale:

The Phase B groundwater investigation of LOU 58 consists of collecting groundwater samples from one location to evaluate local groundwater conditions and as part of the Site-wide evaluation of constituent trends in groundwater.

- One (1) well (I-B) will be sampled north

- One (1) well (I-AR) will be sampled south (upgradient) from LOU 58.
- Both wells along with the analytical program to evaluate groundwater samples associated with LOU 58 are listed on **Table B – Groundwater Sampling and Analytical Plan for LOU 58.**

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:

- None proposed specifically for this LOU.

Proposed Phase B Constituents List for Soil Gas:

- NA

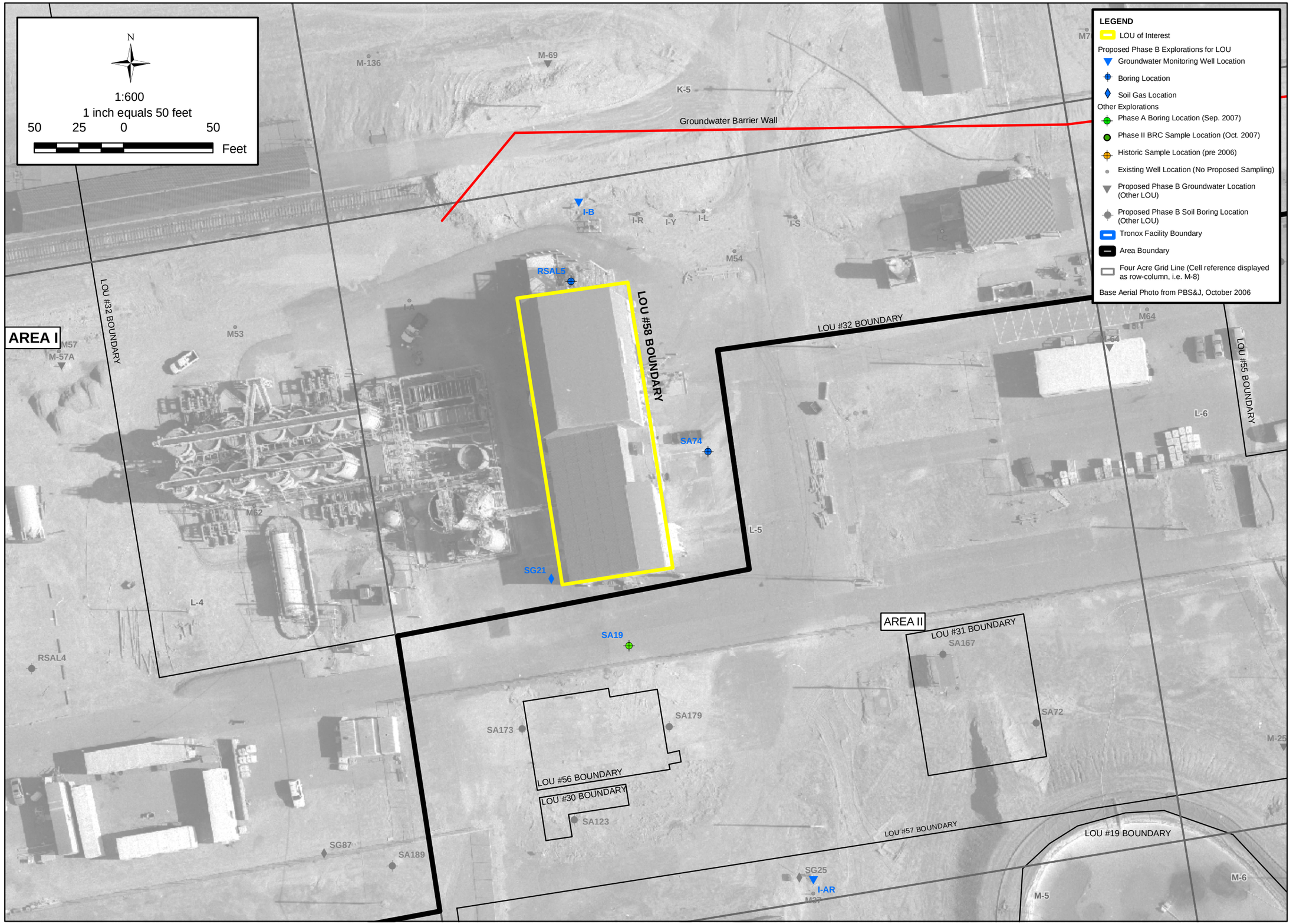
References:

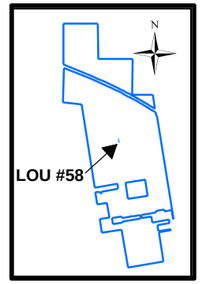
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility, Henderson, Nevada, September 2007.
2. Environmental Answers, Keith Bailey, email communication, March 10, 2008.
3. Kleinfelder, 1993, Environmental Conditions Assessment, Kerr-McGee Chemical Corporation, Henderson, Nevada Facility, April 15, 1993 (Final).

Summary of Available Data for LOU 58
AP Plant Area New D-1 Building Washdown
Tronox Facility – Henderson, Nevada

LOU Map

J:\TronoxGIS\mxd\Phase_B_WorkPlan\LOUs\lou-58.mxd





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SAMPLE LOCATIONS FOR LOU #58
AP PLANT AREA NEW BUILDING D-1

Phase B Source Area Investigation
Tronox Facility
Henderson, Nevada

SCALE:	DATE:	PROJECT NUMBER:
AS SHOWN	4/2/2008	04020-023-430

FIGURE NUMBER:

1

SHEET NUMBER:

X

Summary of Available Data for LOU 58
AP Plant Area New D-1 Building Washdown
Tronox Facility – Henderson, Nevada

Sampling and Analytical Plans for LOU 58:

Table A – Soil Analytical Plan for LOU 58
Table B – Groundwater Analytical Plan for LOU 58

Table A
Soil Sampling and Analytical Plan for LOU 58
Phase B Source Area Investigation Work Plan
Tronox Facility - Henderson, Nevada

Grid Location	LOU Number	Phase B Boring No.	Sample ID Number	Sample Depths (ft, bgs)	Perchlorate (EPA 314.0)	Metals (EPA 6020)	Hex Cr (EPA 7199)	TPH-DRO/ORO (EPA 8015B)	TPH-GRO (EPA 8015B)	VOCs [1.] (EPA 8260B)	Wet Chemistry [2.]	OCPs [3.] (8081A)	SVOCs [4.] (EPA 8270C)	Radio-nuclides [5.]	Dioxins/ Furans [6.]	Formal-dehyde Titrant (EPA 8315A)	Asbestos EPA/540/R-97/028	Location Description and Characterized Area Rationale
Borings are organized by grid location (L-5) as shown on Plate A																		
L-5	32, 58	SA74	SA74-0.0	0.0													X	Boring located adjacent to new D-1 bldg. to evaluate LOU 58 (AP Plant Area New Building D-1 Washdown) and to evaluate LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit).
L-5	32, 58		SA74-0.5	0.5	X	X	X	X		X	X		X	X	X			
L-5	32, 58		SA74-10	10	X	X	X	X		X	X		X	X				
L-5	32, 58		SA74-20	20	X	X	X	X		X	X		X	X				
L-5	32, 58		SA74-25	25	X	X	X	X		X	X		X	X				
L-5	32, 58	RSAL5	RSAL5-0.0	0.0													X	Boring located to evaluate LOU 58 (AP Plant Area New Building D-1 Washdown) and to evaluate LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit).
L-5	32, 58		RSAL5-0.5	0.5	X	X	X	X		X	X	X	X	X	X			
L-5	32, 58		RSAL5-10	10	X	X	X	X		X	X	Hold	X	X				
L-5	32, 58		RSAL5-20	20	X	X	X	X		X	X		X	X				
L-5	32, 58		RSAL5-25	25	X	X	X	X		X	X		X	X				
Number of Borings:		**63**																
Number of Samples:					**8**	**8**	**8**	**8**	**0**	**8**	**8**	**1**	**8**	**8**	**2**	**0**	**2**	

Notes:

X Sample will be collected and analyzed.
No sample collected under Phase B sampling program.
TPH-DRO/ORO Total petroleum hydrocarbons - Diesel-Range Organics/Oil-Range Organics.
1. Samples for VOC analysis will be preserved in the field using sodium bisulfate (or DI water) and methanol preservatives per EPA Method 5035.
2. Includes wet chemistry parameters listed on Table 1 of the Phase B Source Area Work Plan.
3. Organochlorine Pesticides (includes analysis for hexachlorobenzene).
4. Semi-volatile Organic Compounds
5. Radionuclides consists of alpha spec reporting for Thorium-230/232, Uranium 234/235, Uranium-238, and beta spec for Radium-226/228 (per NDEP).
6. Dioxins/furans: 90% will be tested by immunoassay, 10% analyzed by HRGC/HRMS in the laboratory.
7. Polychlorinated biphenyls

Table B
Groundwater Sampling and Analysis Plan for LOU 58
Phase B Source Area Investigation Area I Work Plan
Tronox Facility - Henderson, Nevada

Grid Location	Location Area	Monitoring Well No.	Screen Interval (ft bgs)	Well Sampled for Phase A? (y/n)	Perchlorate (EPA 314.0)	Hex Cr (EPA 7199)	Metals	VOCs1 (EPA 8260)	Wet Chemistry2	OCPs3 (EPA 8081A)	SVOCs4 (EPA 8270C)	Radio-nuclides5	Rationale
Wells are organized by grid location (L-5) as shown on Plate A													
L-5	1	I-B	17.8 - 42.5	no	X	X	X	X	X	X	X	X	Located as a downgradient stepout for LOU 56 and LOU 58; as an upgradient stepout for LOU 57, and for general site coverage.
Number of Field Samples:					1	1	1	1	1	1	1	1	

Notes:

X	Sample will be collected and analyzed.
1	Volatile organic compounds- samples for VOC analysis will be preserved in the field using sodium bisulfate(or DI water) and methanol preservatives per EPA method 5035
2	Includes wet chemistry parameters listed on table 1. of the Phase B Source Area Work Plan.
3	Organochlorine pesticides(includes analysis for hexachlorobenzene).
4	Semi-volitile organic compounds
5	Radionuclides consists of alpha spec reporting for Thorium-230/232, Uranium 234/235, Uranium-238, and beta spec for Radium-226/228 (per NDEP)

Summary of Available Data for LOU 58
AP Plant Area New D-1 Building Washdown
Tronox Facility – Henderson, Nevada

Soil and Groundwater Characterization Data

Summary of Available Data for LOU 58
AP Plant Area New D-1 Building Washdown
Tronox Facility – Henderson, Nevada

LOU-specific analytes identified include:

- Wet chemistry analytes
- Dioxins/furans
- Metals
- Organochlorine pesticides
- Perchlorate
- Radionuclides
- VOCs
- Asbestos

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

LOU 58 Table 1 – Soil Characterization Data – Wet Chemistry
LOU 58 Table 2 – Groundwater Characterization Data – Wet Chemistry
LOU 58 Table 3 – Soil Characterization Data – Dioxins and Dibenzofurans
LOU 58 Table 4 – Soil Characterization Data – Metals
LOU 58 Table 5 – Groundwater Characterization Data – Metals
LOU 58 Table 6 – Groundwater Characterization Data – Routine Monitoring
LOU 58 Table 7 – Soil Characterization Data – Organochlorine Pesticides (OCP)
LOU 58 Table 8 – Groundwater Characterization Data – Organochlorine Pesticides (OCP)
LOU 58 Table 9 – Soil Characterization Data – Organophosphorus Pesticides (OPPs)
LOU 58 Table 10 – Soil Characterization Data – Organophosphorus Pesticides (OPPs)
LOU 58 Table 11 – Soil Characterization Data – PCBs
LOU 58 Table 12 – Groundwater Characterization Data – PCBs
LOU 58 Table 13 – Soil Characterization Data – Perchlorate
LOU 58 Table 14 – Groundwater Characterization Data – Perchlorate
LOU 58 Table 15 – Soil and Groundwater Characterization Data – Radionuclides
LOU 58 Table 16 – Groundwater Characterization Data – Radionuclides
LOU 58 Table 17 – Soil Characterization Data – SVOC
LOU 58 Table 18 – Groundwater Characterization Data – SVOC
LOU 58 Table 19 – Soil Characterization Data – VOCs
LOU 58 Table 20 – Groundwater Characteristic Data – VOCs
LOU 58 Table 21 – Soil Characterization Data - Long Asbestos Fibers in Respirable Soil Fraction

Notes for all tables presented at the end of the tables.

LOU 58 Table 1
Soil Characterization Data - Wet Chemistry

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

Sampling Program		Ph A[1]	Ph A	Ph A	Ph A	
Boring No.		SA19	SA19	SA19	SA19	
Sample ID		SA19-0.5	SA19-10	SA19-20	SA19-25	
Sample Depth (ft)		0.5	10	20	25	
Sample Date		11/16/2006	11/16/2006	11/16/2006	11/16/2006	
Wet Chemistry Parameter	**PRG[2] mg/kg**					**Units**
Percent moisture	--	**9.4**	**8.5**	**8.8**	**13.9**	percent
Alkalinity (as CaCO3)	--	55.2 U	**97.2**	54.8 U	58.1 U	mg/kg
Bicarbonate	--	**184**	**486**	**583**	**181**	mg/kg
Total Alkalinity	--	**196**	**583**	**606**	**219**	mg/kg
Ammonia (as N)	--	5.5 UJ	5.5 UJ	5.5 UJ	5.8 UJ	mg/kg
Cyanide	1.20E+04	R	R	R	R	mg/kg
MBAS	--	4.7 U	4.5 U	4.4 U	4.4 U	mg/kg
pH (solid)	--	**8.1**	**8.8**	**8.2**	**8.0**	none
Bromide	--	2.8 UJ	2.7 UJ	2.7 UJ	2.9 UJ	mg/kg
Chlorate	--	**18.4 J-**	5.5 UJ	5.5 UJ	5.8 UJ	mg/kg
Chloride	--	**11.8 J-**	**6.1 J-**	**3.8 J-**	**8.5 J-**	mg/kg
Nitrate (as N)	--	**61.8 J+**	**4.9 J+**	**10.3 J+**	**1.0 J+**	mg/kg
Nitrite	--	**0.31 J-**	**0.33 J-**	**0.78 J-**	0.23 UJ	mg/kg
ortho-Phosphate	--	55.2 U	5.5 U	5.5 U	5.8 U	mg/kg
Sulfate	--	**16.4 J+**	**22.1 J+**	**8160**	**961**	mg/kg
Total Organic Carbon	--	**8000 J-**	**11100 J-**	**4200 J-**	**6300 J-**	mg/kg

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility, Henderson, Nevada, September 2007.
2. U.S. EPA, Region 9, Preliminary Remediation Goals (PRGs) for industrial soil (October, 2004).

LOU 58 Table 2
Groundwater Characterization Data - Wet Chemistry

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A[1]	
	Well ID	IAR	
	Sample ID	IAR	
	Sample Date	12/01/2006	
Wet Chemistry Parameters	**MCL[2] ug/L**		**Units**
Total Dissolved Solids	5.00E+05 j	**7870**	mg/L
Total Suspended Solids	--	**18 J**	mg/L
Alkalinity (as CaCO3)	--	5.0 U	mg/L
Bicarbonate	--	**172 J+**	mg/L
Total Alkalinity	--	**172 J**	mg/L
Ammonia (as N)	--	**507000**	ug/L
MBAS	--	**2.3**	mg/L
Cyanide	2.00E+02	R	ug/L
pH (liquid)	--	**7.4 J**	none
Specific Conductance	--	**4470**	umhos/cm
Bromide	--	25.0 U	mg/L
Chlorate	--	**46.8**	mg/L
Chloride	2.50E+05	**518**	mg/L
Nitrate (as N)	1.00E+04	**283**	mg/L
Nitrite	1.00E+03	**138**	mg/L
ortho-Phosphate	--	5.0 U	mg/L
Sulfate	2.50E+05 j	**1250**	mg/L
Total Organic Carbon	--	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 58 Table 3
Soil Characterization Data - Dioxins and Dibenzofurans

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

			Sampling Program	Ph A[1]
			Boring No.	SA19
			Sample ID	SA19-0.5
			Sample Depth (ft)	0.5
			Sample Date	11/16/2006
chemical_name:	**Method**	**Unit**	**PRG[2] mg/kg**	
Dioxin 8290 SCREEN Total TEQ-ENSR Calculated (a) ng/kg		ng/kg	--	**288**
Dioxin SW 846 8290 Total TEQ-ENSR Calculated (a) ng/kg		ng/kg	--	**268**
Dioxin 8290 SCREEN Total TEQ-ENSR Calculated (b) ng/kg		ng/kg	--	**288**
Dioxin SW 846 8290 Total TEQ-ENSR Calculated (b) ng/kg		ng/kg	--	**268**
1,2,3,4,6,7,8-Heptachlorodibenzofuran	8290 Screen	ng/kg	--	**1676.277**
1,2,3,4,6,7,8-Heptachlorodibenzofuran	SW 846 8290	ng/kg	--	**1580.034 J**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	8290 Screen	ng/kg	--	**145.429**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	SW 846 8290	ng/kg	--	**145.429**
1,2,3,4,7,8,9-Heptachlorodibenzofuran	8290 Screen	ng/kg	--	**779.803**
1,2,3,4,7,8,9-Heptachlorodibenzofuran	SW 846 8290	ng/kg	--	**831.444 J**
1,2,3,4,7,8-Hexachlorodibenzofuran	8290 Screen	ng/kg	--	**669.437**
1,2,3,4,7,8-Hexachlorodibenzofuran	SW 846 8290	ng/kg	--	**652.232 J**
1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	8290 Screen	ng/kg	--	**17.947**
1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	SW 846 8290	ng/kg	--	**17.947**
1,2,3,6,7,8-Hexachlorodibenzofuran	8290 Screen	ng/kg	--	**425.764**
1,2,3,6,7,8-Hexachlorodibenzofuran	SW 846 8290	ng/kg	--	**425.762**
1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	8290 Screen	ng/kg	--	**32.612**
1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	SW 846 8290	ng/kg	--	**32.612**
1,2,3,7,8,9-Hexachlorodibenzofuran	8290 Screen	ng/kg	--	**52.982**
1,2,3,7,8,9-Hexachlorodibenzofuran	SW 846 8290	ng/kg	--	**52.981**
1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	8290 Screen	ng/kg	--	**37.309**
1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	SW 846 8290	ng/kg	--	**37.309**
1,2,3,7,8-Pentachlorodibenzofuran	8290 Screen	ng/kg	--	**314.427**
1,2,3,7,8-Pentachlorodibenzofuran	SW 846 8290	ng/kg	--	**314.428**
1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	8290 Screen	ng/kg	--	**24.099**
1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	SW 846 8290	ng/kg	--	**24.099**
2,3,4,6,7,8-Hexachlorodibenzofuran	8290 Screen	ng/kg	--	**216.800**
2,3,4,6,7,8-Hexachlorodibenzofuran	SW 846 8290	ng/kg	--	**216.799**
2,3,4,7,8-Pentachlorodibenzofuran	8290 Screen	ng/kg	--	**128.464**
2,3,4,7,8-Pentachlorodibenzofuran	SW 846 8290	ng/kg	--	**128.463**
2,3,7,8-Tetrachlorodibenzofuran	8290 Screen	ng/kg	--	**357.802**
2,3,7,8-Tetrachlorodibenzofuran	SW 846 8290	ng/kg	--	**181.098 J**
2,3,7,8-Tetrachlorodibenzo-p-Dioxin	8290 Screen	ng/kg	1.00E+04 h,v	**7.426**
2,3,7,8-Tetrachlorodibenzo-p-Dioxin	SW 846 8290	ng/kg	1.00E+04 h,v	**7.426**
Octachlorodibenzofuran	8290 Screen	ng/kg	--	**4873.315**
Octachlorodibenzofuran	SW 846 8290	ng/kg	--	**4379.503 J**
Octachlorodibenzo-p-Dioxin	8290 Screen	ng/kg	--	**157.307**

LOU 58 Table 3 (continued)
Soil Characterization Data - Dioxins and Dibenzofurans

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

			Sampling Program	Ph A[1]
			Boring No.	SA19
			Sample ID	SA19-0.5
			Sample Depth (ft)	0.5
			Sample Date	11/16/2006
chemical_name:	**Method**	**Unit**	**PRG[2] mg/kg**	
Octachlorodibenzo-p-Dioxin	SW 846 8290	ng/kg	--	157.306 U
Tetrachlorinated Dibenzofurans, (Total)	SW 846 8290	ng/kg	--	**2089.117 J**
Total HpCDD	SW 846 8290	ng/kg	--	**228.544**
Total HpCDF	SW 846 8290	ng/kg	--	**3521.881 J**
Total HxCDD	SW 846 8290	ng/kg	--	**260.194**
Total HxCDF	SW 846 8290	ng/kg	--	**2886.323 J**
Total PeCDD	SW 846 8290	ng/kg	--	**229.389**
Total PeCDF	SW 846 8290	ng/kg	--	**2623.048**
Total TCDD	SW 846 8290	ng/kg	--	**205.418**

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility, Henderson, Nevada, September 2007.
(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. Midpoint of the range of 0.005 to 0.02 mg/kg for commercial/industrial soils.

LOU 58 Table 4
Soil Characterization Data - Metals

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A[1]	Ph A	Ph A	Ph A	
	Boring No.	SA19	SA19	SA19	SA19	
	Sample ID	SA19-0.5	SA19-10	SA19-20	SA19-25	
	Sample Depth (ft)	0.5	10	20	25	
	Sample Date	11/16/2006	11/16/2006	11/16/2006	11/16/2006	
Metals	**PRG[2] mg/kg**					**Units**
Aluminum	9.21E+05 (oo)	**7090**	**6620**	**6020**	**6280**	mg/kg
Antimony	4.09E+02	**0.17 J-**	**0.15 J-**	**0.16 J-**	**0.12 J-**	mg/kg
Arsenic	1.59E+00	**2.2**	**3.9**	**14.7**	**16.0**	mg/kg
Barium	6.66E+04	**150 J**	**145 J**	**131 J**	**105**	mg/kg
Beryllium	1.94E+03	**0.46**	**0.44**	**0.38**	**0.33**	mg/kg
Boron	2.00E+05 (oo)	**2.8 J-**	**4.1 J-**	**10.2 J-**	**10.0 J**	mg/kg
Cadmium	4.50E+02	**0.094**	**0.065**	**0.073**	**0.073**	mg/kg
Calcium	--	**15000**	**25900**	**25200**	**44000**	mg/kg
Chromium (Total)	4.48E+02	**10.3 J-**	**8.4 J-**	**9.3 J-**	**14.0**	mg/kg
Chromium-hexavalent	6.40E+01	0.22 U	**9.0**	**0.11 J**	**0.18 J**	mg/kg
Cobalt	1.92E+03	**6.2 J-**	**5.0 J-**	**3.3 J-**	**3.3**	mg/kg
Copper	4.09E+04	**12.4 J-**	**10.7 J-**	**7.1 J-**	**6.9 J-**	mg/kg
Iron	3.00E+05 (oo)	**11800**	**9700**	**6940**	**7120**	mg/kg
Lead	8.00E+02	**9.0**	**6.8**	**5.3**	**5.2**	mg/kg
Magnesium	--	**6680 J-**	**9230 J-**	**7870 J-**	**18600**	mg/kg
Manganese	1.95E+04	**275**	**180**	**148**	**154**	mg/kg
Molybdenum	5.11E+03	**0.45 J**	**0.41 J**	**0.44 J**	**0.66**	mg/kg
Nickel	2.04E+04	**12.7 J-**	**11.0 J-**	**8.6 J-**	**8.6 J-**	mg/kg
Platinum	--	**0.013 J**	**0.013 J**	**0.012 J**	0.012 U	mg/kg
Potassium	--	**1900**	**1630**	**1970**	**1780**	mg/kg
Selenium	5.11E+03	0.12 U	0.12 U	0.12 U	0.13 U	mg/kg
Silver	5.11E+03	**0.14 J**	**0.12 J**	**0.11 J**	**0.11 J**	mg/kg
Sodium	--	**214 J-**	**302 J-**	**324 J-**	**466**	mg/kg
Strontium	6.12E+05 (oo)	**84.3 J**	**160 J**	**739 J**	**178 J-**	mg/kg
Thallium	6.75E+01	**0.098 J**	**0.077 J**	**0.082 J**	0.081 U	mg/kg
Tin	6.12E+05 (oo)	**0.51**	**0.47**	**0.39**	**0.38**	mg/kg
Titanium	3.80E+06 (oo)	**529 J+**	**464 J+**	**326 J+**	**366 J+**	mg/kg
Tungsten	--	**0.24 J-**	**0.28 J-**	**0.56 J-**	**0.36 J-**	mg/kg
Uranium	2.04E+02	**0.85**	**1.4**	**2.5**	**2.3**	mg/kg
Vanadium	1.02E+03	**30.9 J-**	**30.5 J-**	**30.5 J-**	**22.7**	mg/kg
Zinc	3.10E+05 (oo)	**24.9 J-**	**21.6 J-**	17.9 UJ	16.6 UJ	mg/kg
Mercury	3.10E+02 (t)	0.010 U	0.0073 UJ	0.0095 U	0.0078 UJ	mg/kg

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility, Henderson, Nevada, September 2007.
2. U.S. EPA, Region 9, Preliminary Remediation Goals (PRGs) for industrial soil (October, 2004).
(oo) PRG is based on maximum (1E+05 mg/kg). Therefore, the risk-based value provided in the electronic backup to the PRG table was used.
(t) Value for mercury and compounds.

LOU 58 Table 5
Groundwater Characterization Data - Metals

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

Sampling Program		Ph A[1]	
Well ID:		IAR	
Sample ID		IAR-Z	
Sample Date		05/08/2007	
Metals	**MCL[2] ug/L**		**Unit**
Aluminum	5.00E+01 j	7.9 U	ug/L
Antimony	6.00E+00	**1.1**	ug/L
Arsenic	1.00E+01	**110**	ug/L
Barium	2.00E+03	**36.3**	ug/L
Beryllium	4.00E+00	1.8 U	ug/L
Boron	7.30E+03 c	**2980**	ug/L
Cadmium	5.00E+00	**0.10 J**	ug/L
Calcium	--	**540000**	ug/L
Chromium (Total)	1.00E+02	**291 J-**	ug/L
Chromium-hexavalent	1.09E+02 c	**302 J**	ug/L
Cobalt	7.30E+02 c	**0.94 J-**	ug/L
Copper	1.30E+03 p	2.7 U	ug/L
Iron	3.00E+02 j	188 UJ	ug/L
Lead	1.50E+01 u	0.49 U	ug/L
Magnesium	1.50E+05 a	**248000**	ug/L
Manganese	5.00E+01 j	29.8 U	ug/L
Molybdenum	1.82E+02 c	**26.8**	ug/L
Nickel	7.30E+02 c	10.3 UJ	ug/L
Platinum	--	**1.1**	ug/L
Potassium	--	**34800**	ug/L
Selenium	5.00E+01	1.0 U	ug/L
Silver	1.00E+02 j	0.20 U	ug/L
Sodium	--	**918000**	ug/L
Strontium	2.19E+04 c	**8820**	ug/L
Thallium	2.00E+00	0.71 U	ug/L
Tin	2.19E+04 c	0.20 U	ug/L
Titanium	1.46E+05 c	4.2 U	ug/L
Tungsten	--	0.82 UJ	ug/L
Uranium	3.00E+01	**37.5 J+**	ug/L
Vanadium	3.65E+01 c	32.0 U	ug/L
Zinc	5.00E+03 j	40.2 UJ	ug/L
Mercury	2.00E+00	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) Secondary Drinking Water Regulation value.
(c) Equal to the USEPA Region 9 Preliminary Remediation Goals (PRGs) for tapwater (October, 2004).
(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.

LOU 58 Table 6
Groundwater Characterization Data - Routine Monitoring[1]

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

Well ID	Date	Depth to water (ft)	Perchlorate mg/L	Qual	MCL[2] ug/L	Total Chromium mg/L	Qual	MCL[2] ug/L	TDS mg/L	MCL[2] ug/L
I-AR	2/2/2006	27.04	2800	d	1.80E+01 a,m	0.023	d	1.00E+02		5.00E+05 j
I-AR	5/2/2006	28.10	2800	d	1.80E+01 a,m	<0.01	ud	1.00E+02	5830	5.00E+05 j
I-AR	8/1/2006	28.64	2630	d	1.80E+01 a,m	0.058	d	1.00E+02	5090	5.00E+05 j
I-AR	1/30/2007	28.78	3120		1.80E+01 a,m	0.14		1.00E+02	5940	5.00E+05 j
I-AR	5/1/2007	42.33	3670		1.80E+01 a,m	0.53		1.00E+02	6850	5.00E+05 j
I-AR	7/31/2007	41.99	4020		1.80E+01 a,m	0.49		1.00E+02	6850	5.00E+05 j
I-B	1/31/2006	30.61	2100	d	1.80E+01 a,m	0.33	d	1.00E+02		5.00E+05 j
I-B	5/2/2006	30.40	3000	d	1.80E+01 a,m	0.38	d	1.00E+02	5740	5.00E+05 j
I-B	8/1/2006	31.18	2270	d	1.80E+01 a,m	0.26	d	1.00E+02	5980	5.00E+05 j
I-B	10/31/2006	32.91	1720	d	1.80E+01 a,m	0.14		1.00E+02	5860	5.00E+05 j
I-B	1/30/2007	34.29	1280		1.80E+01 a,m	0.15		1.00E+02	5230	5.00E+05 j
I-B	5/1/2007	35.51	900		1.80E+01 a,m	0.15		1.00E+02	5120	5.00E+05 j
I-B	7/31/2007	36.22	1150		1.80E+01 a,m	0.22		1.00E+02	4930	5.00E+05 j
I-L	1/31/2006	28.33	1700	d	1.80E+01 a,m	1.3	d	1.00E+02		5.00E+05 j
I-L	5/2/2006	27.39	1500	d	1.80E+01 a,m	1.1	d	1.00E+02	6650	5.00E+05 j
I-L	8/1/2006	29.68	1200	d	1.80E+01 a,m	1	d	1.00E+02	5560	5.00E+05 j
I-L	10/31/2006	30.82	1940	d	1.80E+01 a,m	0.77		1.00E+02	6680	5.00E+05 j
I-L	1/30/2007	35.67	1900		1.80E+01 a,m	0.66		1.00E+02	6820	5.00E+05 j
I-L	5/1/2007	35.23	1780		1.80E+01 a,m	0.67		1.00E+02	6850	5.00E+05 j
I-L	7/31/2007	32.02	2160		1.80E+01 a,m	0.8		1.00E+02	6740	5.00E+05 j
I-R	1/31/2006	32.37	2800	d	1.80E+01 a,m	0.87	d	1.00E+02		5.00E+05 j
I-R	5/2/2006	32.54	2300	d	1.80E+01 a,m	0.96	d	1.00E+02	6490	5.00E+05 j
I-R	8/1/2006	33.79	2030	d	1.80E+01 a,m	0.82	d	1.00E+02	5720	5.00E+05 j
I-R	10/31/2006	34.22	2880	d	1.80E+01 a,m	0.55		1.00E+02	7760	5.00E+05 j
I-R	1/30/2007	35.39	2560		1.80E+01 a,m	0.4		1.00E+02	8210	5.00E+05 j
I-R	5/1/2007	36.46	2480		1.80E+01 a,m	0.37		1.00E+02	7980	5.00E+05 j
I-R	7/31/2007	35.39	3060		1.80E+01 a,m	0.44		1.00E+02	7430	5.00E+05 j

Notes:
1. ENSR, 2007, Quarterly Performance Report for Remediation Systems, Tronox LLC, Henderson, Nevada, July-September 2007, November 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
u = the analyte was not detected above the sample reporting limit
ud = the sample was dilluted and was not detected above the sample reporting limit

LOU 58 Table 7
Soil Characterization Data - Organochlorine Pesticides (OCP)

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A[1]	
	Boring No.	SA19	
	Sample ID	SA19-0.5	
	Sample Depth (ft)	0.5	
	Sample Date	11/16/2006	
Organochlorine Pesticides	**PRG[2] mg/kg**		**Unit**
4,4'-DDD	9.95E+00	0.0019 U	mg/kg
4,4'-DDE	7.02E+00	0.0019 U	mg/kg
4,4'-DDT	7.02E+00	0.0019 U	mg/kg
Aldrin	1.00E-01	0.0019 U	mg/kg
Alpha-BHC	3.59E-01 (bbb)	0.0019 U	mg/kg
Alpha-chlordane	6.47E+00 (y)	0.0019 U	mg/kg
Beta-BHC	1.26E+00 (bbb)	0.0019 U	mg/kg
Delta-BHC	3.59E-01 (z)	0.0019 U	mg/kg
Dieldrin	1.10E-01	0.0019 U	mg/kg
Endosulfan I	3.70E+03 (aa)	0.0019 U	mg/kg
Endosulfan II	3.70E+03 (aa)	0.0019 U	mg/kg
Endosulfan Sulfate	3.70E+03 (aa)	0.0019 U	mg/kg
Endrin	1.85E+02	0.0019 U	mg/kg
Endrin Aldehyde	1.85E+02 (k)	0.0019 U	mg/kg
Endrin Ketone	1.85E+02 (k)	0.0019 U	mg/kg
Gamma-BHC (Lindane)	1.74E+00 (bbb)	0.0019 U	mg/kg
Gamma-Chlordane	6.47E+00 (y)	0.0019 U	mg/kg
Heptachlor	3.83E-01	0.0019 U	mg/kg
Heptachlor Epoxide	1.89E-01	0.0019 U	mg/kg
Methoxychlor	3.08E+03	0.0036 U	mg/kg
Tech-Chlordane	6.47E+00	0.011 U	mg/kg
Toxaphene	1.57E+00	0.055 U	mg/kg

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility, Henderson, Nevada, September 2007.
2. U.S. EPA, Region 9, Preliminary Remediation Goals (PRGs) for industrial soil (October, 2004).
(bbb) BHC listed as HCH in the PRG table.
(y) Value for chlordane (technical) used as surrogate for alpha-chlordane and gamma-chlordane based on structural similarities.
(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.

LOU 58 Table 8
Groundwater Characterization Data - Organochlorine Pesticides (OCP)

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

	Sampling Program		Ph A[1]	
	Well ID		IAR	
	Sample ID		IAR	
	Sample Date		12/01/2006	
Organochlorine Pesticides	**MCL[2] ug/L**			**Unit**
4,4'-DDD	2.80E-01	c	0.050 U	ug/L
4,4'-DDE	1.98E-01	c	0.050 U	ug/L
4,4'-DDT	1.98E-01	c	0.050 U	ug/L
Aldrin	4.00E-03	c	0.050 U	ug/L
Alpha-BHC	1.10E-02	c, (bbb)	0.050 U	ug/L
Alpha-chlordane	2.00E+00	(l)	0.050 U	ug/L
Beta-BHC	3.74E-02	c, (bbb)	0.050 U	ug/L
Delta-BHC	1.10E-02	c, (z)	0.050 U	ug/L
Dieldrin	4.20E-03	c, (z)	0.050 U	ug/L
Endosulfan I	2.19E+02	c, (aa)	0.050 U	ug/L
Endosulfan II	2.19E+02	c, (aa)	0.050 U	ug/L
Endosulfan Sulfate	2.19E+02	c, (aa)	0.050 U	ug/L
Endrin	2.00E+00		0.050 U	ug/L
Endrin Aldehyde	1.09E+01	c, (k)	0.050 U	ug/L
Endrin Ketone	1.09E+01	c, (k)	0.050 U	ug/L
Gamma-BHC (Lindane)	2.00E-01		0.050 U	ug/L
Gamma-Chlordane	2.00E+00	(l)	0.050 U	ug/L
Heptachlor	4.00E-01		0.050 U	ug/L
Heptachlor Epoxide	2.00E-01		0.050 U	ug/L
Methoxychlor	4.00E+01		0.10 U	ug/L
Tech-Chlordane	2.00E+00	(l)	0.50 U	ug/L
Toxaphene	3.00E+00		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.
(c) Equal to the USEPA Region 9 Preliminary Remediation Goals (PRGs) for tapwater (October, 2004).
(bbb) BHC listed as HCH in the PRG table.
(l) Value for chlordane used as surrogate for alpha-chlordane, chlordane (technical) and gamma-chlordane due to structural similarities.
(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.

LOU 58 Table 9
Soil Characterization Data - Organophosphorus Pesticides (OPPs)

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

Sampling Program		Ph A[1]	
Boring No.		SA19	
Sample ID		SA19-0.5	
Sample Depth (ft)		0.5	
Sample Date		11/16/2006	
OPPs	**PRG[2] mg/kg**		**Unit**
Azinphos-methyl	--	0.014 UJ	mg/kg
Bolstar	--	0.014 U	mg/kg
Chlorpyrifos	1.85E+03	0.022 U	mg/kg
Coumaphos	--	0.014 UJ	mg/kg
Demeton-O	2.46E+01 (cc)	0.043 U	mg/kg
Demeton-S	2.46E+01 (cc)	0.017 U	mg/kg
Diazinon	5.54E+02	0.024 U	mg/kg
Dichlorvos	5.94E+00	0.025 U	mg/kg
Dimethoate	1.23E+02	0.024 UJ	mg/kg
Disulfoton	2.46E+01	0.053 U	mg/kg
EPN	6.16E+00	0.014 UJ	mg/kg
Ethoprop	--	0.017 U	mg/kg
Ethyl Parathion	1.54E+02 (tt)	0.020 U	mg/kg
Famphur	--	0.014 UJ	mg/kg
Fensulfothion	--	0.014 U	mg/kg
Fenthion	1.50E+02 (ff)	0.036 U	mg/kg
Malathion	1.23E+04	0.017 U	mg/kg
Merphos	1.85E+01	0.033 U	mg/kg
Methyl parathion	1.54E+02	0.022 U	mg/kg
Mevinphos	--	0.017 U	mg/kg
Naled	1.23E+03	0.036 UJ	mg/kg
Phorate	1.23E+02	0.022 U	mg/kg
Ronnel	3.08E+04	0.020 UJ	mg/kg
Stirphos	--	0.017 UJ	mg/kg
Sulfotep	3.08E+02	0.022 U	mg/kg
Thionazin	--	0.020 U	mg/kg
Tokuthion	--	0.022 U	mg/kg
Trichloronate	--	0.022 U	mg/kg

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility, Henderson, Nevada, September 2007.
2. U.S. EPA, Region 9, Preliminary Remediation Goals (PRGs) for industrial soil (October, 2004).
(cc) Value for demeton used as surrogate for demeton-o and demeton-s based on structural similarities.
(tt) Value for parathion-methyl used as surrogate for parathion-ethyl due to structural similarities.
(ff) Value for methyl parathion used as surrogate for fenthion based on structural similarities.

LOU 58 Table 10
Groundwater Characterization Data - Organophosphorus Pesticides (OPPs)

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A[1]	
	Well ID	IAR	
	Sample ID	IAR	
	Sample Date	12/01/2006	
OPPs	**MCL[2] ug/L**		**Unit**
Azinphos-methyl	--	2.5 UJ	ug/L
Bolstar	--	1.0 U	ug/L
Chlorpyrifos	1.09E+02 c	1.0 U	ug/L
Coumaphos	--	1.0 U	ug/L
Demeton-O	1.46E+00 c,(cc)	1.0 U	ug/L
Demeton-S	1.46E+00 c,(cc)	1.0 U	ug/L
Diazinon	3.28E+01	1.0 U	ug/L
Dichlorvos	2.32E-01	1.0 U	ug/L
Dimethoate	7.30E+00	1.0 U	ug/L
Disulfoton	1.46E+00	0.50 U	ug/L
EPN	3.65E-01	1.2 U	ug/L
Ethoprop	--	0.50 U	ug/L
Ethyl Parathion	9.12E+00 c,(tt)	1.0 U	ug/L
Famphur	--	1.0 U	ug/L
Fensulfothion	--	2.5 U	ug/L
Fenthion	9.10E+00 c,(ff)	2.5 U	ug/L
Malathion	7.30E+02	1.2 U	ug/L
Merphos	1.09E+00	5.0 U	ug/L
Methyl parathion	9.12E+00	4.0 U	ug/L
Mevinphos	--	6.2 U	ug/L
Naled	7.30E+01	1.0 UJ	ug/L
Phorate	7.30E+00	1.2 U	ug/L
Ronnel	1.82E+03	10 U	ug/L
Stirphos	--	3.5 U	ug/L
Sulfotep	1.82E+01	1.5 U	ug/L
Thionazin	--	1.0 U	ug/L
Tokuthion	--	1.6 U	ug/L
Trichloronate	--	0.50 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.
(c) Equal to the USEPA Region 9 Preliminary Remediation Goals (PRGs) for tapwater (October, 2004).
(cc) Value for demeton used as surrogate for demeton-o and demeton-s based on structural similarities.
(tt) Value for parathion-methyl used as surrogate for parathion-ethyl due to structural similarities.
(ff) Value for methyl parathion used as surrogate for fenthion based on structural similarities.

LOU 58 Table 11
Soil Characterization Data - PCBs

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

Sampling Program		Ph A[1]	Ph A	Ph A	Ph A	
Boring ID		SA19	SA19	SA19	SA19	
Sample ID		SA19-0.5	SA19-10	SA19-20	SA19-25	
Sample Depth (ft)		0.5	10	20	25	
Sample Date		11/16/2006	11/16/2006	11/16/2006	11/16/2006	
PCBs	**PRG[2] mg/kg**					**Unit**
Aroclor-1016	1.00E+01 (i)	0.036 U	0.036 U	0.036 U	0.038 U	mg/kg
Aroclor-1221	1.00E+01 (i)	0.036 U	0.036 U	0.036 U	0.038 U	mg/kg
Aroclor-1232	1.00E+01 (i)	0.036 U	0.036 U	0.036 U	0.038 U	mg/kg
Aroclor-1242	1.00E+01 (i)	0.036 U	0.036 U	0.036 U	0.038 U	mg/kg
Aroclor-1248	1.00E+01 (i)	0.036 U	0.036 U	0.036 U	0.038 U	mg/kg
Aroclor-1254	1.00E+01 (i)	0.036 U	0.036 U	0.036 U	0.038 U	mg/kg
Aroclor-1260	1.00E+01 (i)	0.036 U	0.036 U	0.036 U	0.038 U	mg/kg

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility, Henderson, Nevada, September 2007.
2. U.S. EPA, Region 9, Preliminary Remediation Goals (PRGs) for industrial soil (October, 2004).
(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 58 Table 12
Groundwater Characterization Data - PCBs

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A[1]	
	Well ID	IAR	
	Sample ID	IAR	
	Sample Date	12/01/2006	
PCBs	**MCL[2] ug/L**		**Unit**
Aroclor-1016	5.00E-01 (bb)	0.10 U	ug/L
Aroclor-1221	5.00E-01 (bb)	0.10 U	ug/L
Aroclor-1232	5.00E-01 (bb)	0.10 U	ug/L
Aroclor-1242	5.00E-01 (bb)	0.10 U	ug/L
Aroclor-1248	5.00E-01 (bb)	0.10 U	ug/L
Aroclor-1254	5.00E-01 (bb)	0.10 U	ug/L
Aroclor-1260	5.00E-01 (bb)	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 58 Table 13
Soil Characterization Data - Perchlorate

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

Boring ID	Sample ID	Sample Depth (ft)	Sample Date	Perchlorate ug/kg	PRG[1] mg/kg	Sampling Program
SA19	SA19-0.5	0.5	11/16/2006	**217000**	1.00E+02	Ph A[2]
	SA19-10	10	11/16/2006	**67700**	1.00E+02	Ph A
	SA19-20	20	11/16/2006	**86100**	1.00E+02	Ph A
	SA19-25	25	11/16/2006	**47200**	1.00E+02	Ph A

Notes:
1. U.S. EPA, Region 9, Preliminary Remediation Goals (PRGs) for industrial soil (October, 2004).
2. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility, Henderson, Nevada, September 2007.

LOU 58 Table 14
Groundwater Characterization Data - Perchlorate

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

Well ID Number	Sample ID	Sample Date	Perchlorate	Units	MCL[2] ug/L	Sampling Program
IAR	IAR	12/01/2006	**4160000**	ug/L	1.80E+01 a,(m)	Ph A[1]

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 58 Table 15
Soil Characterization Data - Radionuclides

AP Plant Area New Building D-1 Washdown
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	
			PRG[2]	2.60E-02	1.50E-01	2.55E-01	2.02E+01	1.90E+01	3.24E+01	3.98E-01	1.80E+00	
Boring ID Number	**Sample ID**	**Sample Depth (ft)**	**Date**									**Sampling Program**
SA 19	SA19-0.5	0.5	11/16/2006	**1.16 J-**	**2 J-**							Ph A[1]
	SA19-10	10	11/16/2006	**1.43 J-**	**1.63 J-**							Ph A
	SA19-20	20	11/16/2006	**1.76 J-**	**1.7 J-**							Ph A
	SA19-25	25	11/16/2006	**1.57 J-**	**1.38 J-**							Ph A

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility, Henderson, Nevada, September 2007.
2. USEPA, 2004. Radionuclide Toxicity and Preliminary Remediation Goals (PRGs) for Superfund. http://epa-prgs.ornl.gov/radionuclides/download.shtml. August 4, 2004. Soil values are the outdoor worker values; water values are the tapwater values. For radionuclides with decay chains, the PRG for the decay chain was used.

LOU 58 Table 16
Groundwater Characterization Data - Radionuclides

AP Plant Area New Building D-1 Washdown
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	
		TW PRG 1,2	8.16E-04	4.58E-02	1.59E-01	5.23E-01	4.71E-01	6.74E-01	6.63E-01	5.47E-01	
Well ID Number	**Sample ID**	**Date**									**Sampling Program**
IAR	IAR-Z	05/08/2007	**1.67 J**	**1.30 B**							Ph A[1]

Notes:
1. Equal to the USEPA Region 9 Preliminary Remediation Goals (PRGs) for tapwater (October, 2004).
2. USEPA, 2004. Radionuclide Toxicity and Preliminary Remediation Goals (PRGs) for Superfund. http://epa-prgs.ornl.gov/radionuclides/download.shtml. August 4, 2004. Soil values are the outdoor worker values; water values are the tapwater values. For radionuclides with decay chains, the PRG for the decay chain was used.
3. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility, Henderson, Nevada, September 2007.

LOU 58 Table 17
Soil Characterization Data - SVOC

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

		Sampling Program	Ph A[1]	Ph A	Ph A	Ph A
		Boring No.	SA 19	SA 19	SA 19	SA 19
		Sample ID	SA19-0.5	SA19-10	SA19-20	SA19-25
		Sample Depth (ft)	0.5	10	20	25
		Sample Date	11/16/2006	11/16/2006	11/16/2006	11/16/2006
SVOC	**Analytical Method**	**PRG[2] mg/kg**	ug/kg	ug/kg	ug/kg	ug/kg
1,4-Dioxane	non-SIM	1.57E+02	360 U	360 U	360 U	380 U
2-Methylnaphthalene	non-SIM	1.88E+02 (jj)	360 U	360 U	360 U	380 U
2-Methylnaphthalene	SIM	1.88E+02 (jj)				
Acenaphthene	non-SIM	2.92E+04	360 U	360 U	360 U	380 U
Acenaphthene	SIM	2.92E+04				
Acenaphthylene	non-SIM	2.92E+04 (pp)	360 U	360 U	360 U	380 U
Acenaphthylene	SIM	2.92E+04 (pp)				
Anthracene	non-SIM	2.40E+05 (oo)	360 U	360 U	360 U	380 U
Anthracene	SIM	2.40E+05 (oo)				
Benz(a)anthracene	non-SIM	2.11E+00	360 U	360 U	360 U	380 U
Benz(a)anthracene	SIM	2.11E+00				
Benzo(a)pyrene	non-SIM	2.11E-01	360 U	360 U	360 U	380 U
Benzo(a)pyrene	SIM	2.11E-01				
Benzo(b)fluoranthene	non-SIM	2.11E+00	360 U	360 U	360 U	380 U
Benzo(b)fluoranthene	SIM	2.11E+00				
Benzo(g,h,i)perylene	non-SIM	2.91E+04 (w)	360 U	360 U	360 U	380 U
Benzo(g,h,i)perylene	SIM	2.91E+04 (w)				
Benzo(k)fluoranthene	non-SIM	2.11E+01	360 U	360 U	360 U	380 U
Benzo(k)fluoranthene	SIM	2.11E+01				
bis(2-Ethylhexyl)phthalate	non-SIM	1.23E+02	360 U	360 U	360 U	380 U
Butyl benzyl phthalate	non-SIM	1.23E+05 (oo)	360 U	360 U	360 U	380 U
Chrysene	non-SIM	2.11E+02	360 U	360 U	360 U	380 U
Chrysene	SIM	2.11E+02				
Dibenz(a,h)anthracene	non-SIM	2.11E-01	360 U	360 U	360 U	380 U
Dibenz(a,h)anthracene	SIM	2.11E-01				
Diethyl phthalate	non-SIM	4.92E+05 (oo)	360 U	360 U	360 U	380 U
Dimethyl phthalate	non-SIM	6.16E+06 (oo)	360 U	360 U	360 U	380 U
Di-N-Butyl phthalate	non-SIM	6.16E+04	360 U	360 U	360 U	380 U
Di-N-Octyl phthalate	non-SIM	2.46E+04	360 U	360 U	360 U	380 U
Fluoranthene	non-SIM	2.20E+04	360 U	360 U	360 U	380 U
Fluoranthene	SIM	2.20E+04				
Fluorene	non-SIM	2.63E+04	360 U	360 U	360 U	380 U
Fluorene	SIM	2.63E+04				
Hexachlorobenzene	non-SIM	1.08E+00	360 U	360 U	360 U	380 U
Hexachlorobenzene	SIM	1.08E+00				
Indeno(1,2,3-cd)pyrene	non-SIM	2.11E+00	360 U	360 U	360 U	380 U
Indeno(1,2,3-cd)pyrene	SIM	2.11E+00				
Naphthalene	non-SIM	1.88E+02	5.5 U	5.5 U	5.5 U	5.8 U
Naphthalene	non-SIM	1.88E+02	360 U	360 U	360 U	380 U
Naphthalene	SIM	1.88E+02				
Nitrobenzene	non-SIM	1.03E+02	360 U	360 U	360 U	380 U

LOU 58 Table 17 (continued)
Soil Characterization Data - SVOC

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

		Sampling Program	Ph A[1]	Ph A	Ph A	Ph A
		Boring No.	SA 19	SA 19	SA 19	SA 19
		Sample ID	SA19-0.5	SA19-10	SA19-20	SA19-25
		Sample Depth (ft)	0.5	10	20	25
		Sample Date	11/16/2006	11/16/2006	11/16/2006	11/16/2006
SVOC	**Analytical Method**	**PRG[2] mg/kg**	ug/kg	ug/kg	ug/kg	ug/kg
Octachlorostyrene	non-SIM	--	360 U	360 U	360 U	380 U
Phenanthrene	non-SIM	2.40E+05 (n)	360 U	360 U	360 U	380 U
Phenanthrene	SIM	2.40E+05 (n)				
Pyrene	non-SIM	2.91E+04	360 U	360 U	360 U	380 U
Pyrene	SIM	2.91E+04				
Pyridine	non-SIM	6.16E+02	1800 U	1700 U	1800 U	1900 U

Notes:
1. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility, Henderson, Nevada, September 2007.
2. U.S. EPA, Region 9, Preliminary Remediation Goals (PRGs) for industrial soil (October, 2004).
(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.
(oo) PRG is based on maximum (1E+05 mg/kg). Therefore, the risk-based value provided in the electronic backup to the PRG table was used.
(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 58 Table 18
Groundwater Characterization Data - SVOC

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

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

LOU 58 Table 18 (continued)
Groundwater Characterization Data - SVOC

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

		Sampling Program	Ph A[1]
		Well No.	IAR
		Sample ID	IAR
		Sample Date	12/01/2006
SVOCs	**Analytic Method**	**MCL[2] ug/L**	ug/L
Phenanthrene	non-SIM	1.80E+03 (n)	10 U
Phenanthrene	SIM	1.80E+03 (n)	
Pyrene	non-SIM	1.83E+02 c	10 U
Pyrene	SIM	1.83E+02 c	
Pyridine	non-SIM	3.65E+01 c	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.
(c) Equal to the USEPA Region 9 Preliminary Remediation Goals (PRGs) for tapwater (October, 2004).
(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 58 Table 19
Soil Characterization Data - VOCs

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A[1]	Ph A	Ph A	Ph A
	Boring No.	SA 19	SA 19	SA 19	SA 19
	Sample ID	SA19-0.5	SA19-10	SA19-20	SA19-25
	Sample Depth (ft)	0.5	10	20	25
	Sample Date	11/16/2006	11/16/2006	11/16/2006	11/16/2006
VOCs	**PRG[2] mg/kg**	ug/kg	ug/kg	ug/kg	ug/kg
Naphthalene	1.88E+02	5.5 U	5.5 U	5.5 U	5.8 U
1,1,1,2-Tetrachloroethane	7.28E+00	5.5 U	5.5 U	5.5 U	5.8 U
1,1,1-Trichloroethane	6.90E+03 (mm)	5.5 U	5.5 U	5.5 U	5.8 U
1,1,2,2-Tetrachloroethane	9.29E-01	5.5 U	5.5 U	5.5 U	5.8 U
1,1,2-Trichloroethane	1.61E+00	5.5 U	5.5 U	5.5 U	5.8 U
1,1-Dichloroethane	1.74E+03	5.5 U	5.5 U	5.5 U	5.8 U
1,1-Dichloroethene	4.13E+02	5.5 U	5.5 U	5.5 U	5.8 U
1,1-Dichloropropene	1.76E+00 (gg)	5.5 U	5.5 U	5.5 U	5.8 U
1,2,3-Trichlorobenzene	2.16E+02 (hh)	5.5 U	5.5 U	5.5 U	5.8 U
1,2,3-Trichloropropane	7.60E-02 (yy)	5.5 U	5.5 U	5.5 U	5.8 U
1,2,4-Trichlorobenzene	2.16E+02	5.5 U	5.5 U	5.5 U	5.8 U
1,2,4-Trimethylbenzene	1.70E+02	5.5 U	5.5 U	5.5 U	5.8 U
1,2-Dibromo-3-chloropropane	2.02E+00	5.5 U	5.5 U	5.5 U	5.8 U
1,2-Dichlorobenzene	4.00E+03 (mm)	5.5 U	5.5 U	5.5 U	5.8 U
1,2-Dichloroethane	6.03E-01	5.5 U	5.5 U	5.5 U	**3.2 J**
1,2-Dichloropropane	7.42E-01	5.5 U	5.5 U	5.5 U	5.8 U
1,3,5-Trimethylbenzene	6.97E+01	5.5 U	5.5 U	5.5 U	5.8 U
1,3-Dichlorobenzene	2.10E+03 (mm)	5.5 U	5.5 U	5.5 U	5.8 U
1,3-Dichloropropane	3.61E+02	5.5 U	5.5 U	5.5 U	5.8 U
1,4-Dichlorobenzene	7.87E+00	**17**	**15**	**15**	5.8 U
2,2-Dichloropropane	7.42E-01 (ii)	5.5 U	5.5 U	5.5 U	5.8 U
2-Butanone	1.13E+05	11 U	11 U	11 U	12 U
2-Chlorotoluene	5.60E+02	5.5 U	5.5 U	5.5 U	5.8 U
2-Hexanone	4.70E+04 (nn)	11 UJ	11 UJ	11 UJ	12 UJ
2-Methoxy-2-methyl-butane	--	5.5 U	5.5 U	5.5 U	5.8 U
4-Chlorotoluene	5.60E+02 (ww)	5.5 U	5.5 U	5.5 U	5.8 U
4-Isopropyltoluene	--	5.5 U	5.5 U	5.5 U	5.8 U
4-Methyl-2-pentanone	4.70E+04	11 U	11 U	11 U	12 U
Acetone	5.43E+04	11 U	11 U	22 U	24 UJ
Benzene	1.41E+00	5.5 U	5.5 U	5.5 U	5.8 U
Bromobenzene	9.22E+01	5.5 U	5.5 U	5.5 U	5.8 U
Bromochloromethane	1.83E+00 (qq)	5.5 U	5.5 U	5.5 U	5.8 U
Bromodichloromethane	1.83E+00	5.5 U	5.5 U	5.5 U	5.8 U
Bromoform	2.18E+02	5.5 U	5.5 U	5.5 U	5.8 U
Bromomethane	1.31E+01	11 UJ	11 UJ	11 UJ	12 UJ
Carbon tetrachloride	5.49E-01	5.5 U	5.5 U	5.5 U	5.8 U
Chlorobenzene	5.30E+02	5.5 U	5.5 U	5.5 U	5.8 U
Chloroethane	6.49E+00	5.5 UJ	5.5 UJ	5.5 UJ	5.8 UJ
Chloroform	4.70E-01	5.5 U	5.5 U	5.5 U	5.8 U
Chloromethane	1.56E+02	5.5 UJ	5.5 UJ	5.5 UJ	5.8 UJ
cis-1,2-Dichloroethene	1.46E+02	5.5 U	5.5 U	5.5 U	5.8 U
cis-1,3-Dichloropropene	1.76E+00 (gg)	5.5 U	5.5 U	5.5 U	5.8 U
Dibromochloromethane	2.55E+00	5.5 U	5.5 U	5.5 U	5.8 U
Dibromomethane	2.34E+02 (xx)	5.5 U	5.5 U	5.5 U	5.8 U
Dichlorodifluoromethane	3.08E+02	5.5 UJ	5.5 UJ	5.5 UJ	5.8 UJ

LOU 58 Table 19 (continued)
Soil Characterization Data - VOCs

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A[1]	Ph A	Ph A	Ph A
	Boring No.	SA 19	SA 19	SA 19	SA 19
	Sample ID	SA19-0.5	SA19-10	SA19-20	SA19-25
	Sample Depth (ft)	0.5	10	20	25
	Sample Date	11/16/2006	11/16/2006	11/16/2006	11/16/2006
VOCs	**PRG[2] mg/kg**	ug/kg	ug/kg	ug/kg	ug/kg
Ethyl t-butyl ether	3.64E+01 (kk)	5.5 U	5.5 U	5.5 U	5.8 U
Ethylbenzene	7.40E+03 (mm)	5.5 U	5.5 U	5.5 U	5.8 U
Ethylene dibromide	7.30E-02	5.5 U	5.5 U	5.5 U	5.8 U
Hexachlorobutadiene	2.21E+01	5.5 U	5.5 U	5.5 U	5.8 U
isopropyl ether	--	5.5 U	5.5 U	5.5 U	5.8 U
Isopropylbenzene	2.00E+03 (zz)	5.5 U	5.5 U	5.5 U	5.8 U
Methyl tert butyl ether	3.64E+01	5.5 U	5.5 U	5.5 U	5.8 U
Methylene chloride	2.05E+01	5.5 U	5.5 U	**10**	**4.4 J**
N-Butylbenzene	2.19E+03 (mm)	5.5 UJ	5.5 UJ	5.5 UJ	5.8 UJ
N-Propylbenzene	2.19E+03 (mm)	5.5 UJ	5.5 UJ	5.5 UJ	5.8 UJ
sec-Butylbenzene	1.63E+03 (mm)	5.5 UJ	5.5 UJ	5.5 UJ	5.8 UJ
Styrene	1.80E+04 (mm)	5.5 U	5.5 U	5.5 U	5.8 U
t-Butyl alcohol	--	11 UJ	11 UJ	11 UJ	11 UJ
tert-Butylbenzene	1.97E+03 (mm)	5.5 U	5.5 U	5.5 U	5.8 U
Tetrachloroethene	1.31E+00	5.5 U	5.5 U	5.5 U	5.8 U
Toluene	2.20E+03 (mm)	5.5 U	5.5 U	5.5 U	5.8 U
trans-1,2-Dichloroethylene	--	5.5 U	5.5 U	5.5 U	5.8 U
trans-1,3-Dichloropropene	1.76E+00 (gg)	5.5 U	5.5 U	5.5 U	5.8 U
Trichloroethene	1.15E-01	5.5 U	5.5 U	5.5 U	5.8 U
Trichlorofluoromethane	1.28E+03 (mm)	5.5 UJ	5.5 UJ	5.5 UJ	5.8 UJ
Vinylchloride	7.46E-01	5.5 U	5.5 U	5.5 U	5.8 U
Xylene (Total)	9.00E+02 (mm)	11 U	11 U	11 U	12 U

Notes:
1. ENSR, 2005, Conceptual Site Model, Kerr-McGee Facility, Henderson, Nevada, ENSR, Camarillo, California, 04020-023-130, February 2005 and August 2005.
2. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility - Henderson, Nevada, September 2007.
3. U.S. EPA, Region 9, Preliminary Remediation Goals (PRGs) for industrial soil (October, 2004).
(mm) PRG is based on the soil saturation limit. Therefore, the risk-based value provided in the electronic backup to the PRG table was used.
(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
(yy) PRG table (c) lists both cancer and non-cancer endpoint-based values. The cancer endpoint-based values were selected, as the cancer endpoint-based values are lower than the noncancer endpoint-based values.
(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.
(zz) Isopropyl benzene is listed as cumene (isopropylbenzene) in the PRG table.

LOU 58 Table 20
Groundwater Characteristic Data - VOCs

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A[1]
	Well ID	IAR
	Sample ID	IAR
	Sample Date	12/01/2006
VOCs	**MCL[2] ug/L**	ug/L
Naphthalene	6.20E+00 c	5.0 U
1,1,1,2-Tetrachloroethane	4.32E-01 c	5.0 U
1,1,1-Trichloroethane	2.00E+02	5.0 U
1,1,2,2-Tetrachloroethane	5.00E+00	5.0 U
1,1,2-Trichloroethane	5.00E+00	5.0 U
1,1-Dichloroethane	8.11E+02 c	5.0 U
1,1-Dichloroethene	7.00E+00	5.0 U
1,1-Dichloropropene	3.95E-01 c,gg	5.0 U
1,2,3-Trichlorobenzene	7.16E+00 c,hh	5.0 U
1,2,3-Trichloropropane	5.60E-03 c,yy	5.0 U
1,2,4-Trichlorobenzene	7.00E+01	5.0 U
1,2,4-Trimethylbenzene	1.23E+01	5.0 U
1,2-Dibromo-3-chloropropane	2.00E-01	5.0 U
1,2-Dichlorobenzene	6.00E+02	**0.49 J**
1,2-Dichloroethane	5.00E+00	5.0 U
1,2-Dichloropropane	5.00E+00	5.0 U
1,3,5-Trimethylbenzene	1.23E+01 c	5.0 U
1,3-Dichlorobenzene	1.83E+02 c	5.0 U
1,3-Dichloropropane	1.22E+02 c	5.0 U
1,4-Dichlorobenzene	7.50E+01	5.0 U
2,2-Dichloropropane	1.65E-01 c,ii	5.0 U
2-Butanone	6.97E+03 c	10 U
2-Chlorotoluene	1.22E+02 c	5.0 U
2-Hexanone	2.00E+03 c,nn	10 UJ
2-Methoxy-2-methyl-butane	--	5.0 U
4-Chlorotoluene	1.22E+02 c,ww	5.0 U
4-Isopropyltoluene	--	5.0 U
4-Methyl-2-pentanone	1.99E+03 c	10 U
Acetone	5.48E+03 c	10 U
Benzene	5.00E+00	5.0 U
Bromobenzene	2.03E+01 c	5.0 U
Bromochloromethane	1.81E-01 c,qq	5.0 U
Bromodichloromethane	8.00E+01 r	5.0 U
Bromoform	8.00E+01 r	5.0 U
Bromomethane	8.66E+00 c	**0.92 J**
Carbon tetrachloride	5.00E+00	5.0 U
Chlorobenzene	1.00E+02 c,o	5.0 U
Chloroethane	4.64E+00	5.0 UJ
Chloroform	8.00E+01 r	**21**
Chloromethane	1.58E+02 c	**2.7 J**
cis-1,2-Dichloroethene	7.00E+01	5.0 U
cis-1,3-Dichloropropene	3.95E-01 c,gg	5.0 U
Dibromochloromethane	8.00E+01 r	5.0 U
Dibromomethane	6.08E+01 c,xx	5.0 U
Dichlorodifluoromethane	3.95E+02 c	5.0 UJ
Ethyl t-butyl ether	1.10E+01 c,kk	5.0 U
Ethylbenzene	7.00E+02	5.0 U
Ethylene dibromide	--	5.0 U
Hexachlorobutadiene	8.62E-01 c	5.0 U

LOU 58 Table 20 (continued)
Groundwater Characteristic Data - VOCs

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A[1]
	Well ID	IAR
	Sample ID	IAR
	Sample Date	12/01/2006
VOCs	**MCL[2] ug/L**	ug/L
isopropyl ether	--	5.0 U
Isopropylbenzene	6.58E+02 c,zz	5.0 U
Methyl tert butyl ether	2.00E+01 a,uu	5.0 U
Methylene chloride	5.00E+00	5.0 U
N-Butylbenzene	2.43E+02 c	5.0 U
N-Propylbenzene	2.43E+02 c	5.0 U
sec-Butylbenzene	2.43E+02 c	5.0 U
Styrene	1.00E+02	R
t-Butyl alcohol	--	10 UJ
tert-Butylbenzene	2.43E+02 c	5.0 U
Tetrachloroethene	5.00E+00	5.0 U
Toluene	1.00E+03	5.0 U
trans-1,2-Dichloroethylene	1.00E+02	5.0 U
trans-1,3-Dichloropropene	--	5.0 U
Trichloroethene	5.00E+00	5.0 U
Trichlorofluoromethane	--	5.0 UJ
Vinylchloride	2.00E+00	5.0 UJ
Xylene (Total)	1.00E+04	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.
(yy) PRG table (c) lists both cancer and non-cancer endpoint-based values. The cancer endpoint-based values were selected, as the cancer endpoint-based values are lower than the noncancer endpoint-based values.
(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.
(zz) Isopropyl benzene is listed as cumene (isopropylbenzene) in the PRG table.
(uu) NDEP, 1998. Oxygenated Fuel Corrective Action Guidance. Draft. October, 12 1998. URL [http://ndep.nv.gov/bca/mtbe_doc.htm].

LOU 58 Table 21
Soil Characterization Data - Long Asbestos Fibers in Respirable Soil Fraction

AP Plant Area New Building D-1 Washdown
Tronox Facility - Henderson, Nevada

			Long Amphibole Protocol Structures	**Long Amphibole Protocol Structures**	Long Chrysotile Protocol Structures	**Long Chrysotile Protocol Structures**	**Sampling Program**
No.	**Sample ID**	**Sample Date**	s/gPM10	(structures/samples)	s/gPM10	(structures/samples)	
SA19	SA19	12/07/2006	**10100000**	**3**	**10100000**	**3**	Ph A[1]

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

Notes for Phase A Data Tables

AP Plant Area New Building D-1 Washdown
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.
--	PRG not established