Name of Facility:	LOU 62 – State Industries, Inc. Site including Impoundments and Catch Basin
Goal of Closure:	Closure for future commercial/industrial use.
Site Investigation Area:	<ul> <li>Size: Approximately 480 feet by 200 feet (2.2 acres).</li> <li>Western surface impoundment (SI) was circular and was approximately 130 feet in diameter [Ref. 4].</li> <li>Eastern SI was rectangular and was approximately 150 feet by approximately 250 feet [Ref. 4].</li> <li>Location: Southern portion of the Site, approximately 1,200 feet south of Units 2 and 3.</li> <li>Current Status/Features: LOU 62, which included two surface impoundments (SIs), is no longer active. Currently, the western portion of the LOU has a concrete surface and the eastern portion has a soil surface.</li> </ul>
Description:	<ul> <li>LOU 62 consists of two surface impoundments that received spent pickling process wastes (for solar evaporation) generated during the manufacture of water heaters [Ref. 4].</li> <li>The SIs received approximately 35,000 gallons per month [Ref. 4].</li> <li>Wastes included spent sulphuric acid, borax, soda ash, phosphates, and TURCO II H.T.C soap, and spent cyanide [Ref. 4].</li> <li>Spent cyanide wastes were typically mixed with calcium hypochlorate to destroy cyanide prior to discharge. On June 21, 1971 un-neutralized cyanide waste was discharged to the Beta Ditch.</li> <li>Discharges to the eastern and western SIs occurred between June 1974 and December 1988 [Ref. 4].</li> <li>Prior to June 1, 1974, approximately 35,000 gallons per month of waste strange ware discharged to the Acid Drain</li> </ul>
	<ul> <li>Month of waste streams were discharged to the Acid Drain System (LOU 60) [Ref. 4].</li> <li>The SIs were constructed with PVC bottoms and reinforced butyl rubber side walls [Ref. 4].</li> <li>One of the SIs (records do not state which one) is known to have leaked on three separate occasions between June 7 and December 10, 1974 [Ref. 4].</li> <li>Discharges to the Acid Drain System were conducted in order to access and repair leaks in the SI liner [Ref. 4].</li> <li>Discharges to the Acid Drain System were through a connection in the southwest corner of Building T-5 (State Industries, Inc. warehouse).</li> </ul>

- Due to the high flow rates during the pond pump-out operation, discharges to the Acid Drain System overflowed to the sanitary sewer [Ref.3].
- Discharges to the sanitary sewer via the Acid Drain System occurred on at least three occasions in 1974 to facilitate repairs to the leaking liner [Ref. 4].
- In 1983, a 20,000-square-foot warehouse was constructed over the westernmost SI [Ref. 4]. No records were found that described the method of abandonment of this impoundment [Ref. 4].
- The eastern SI was filled with soil in December 1988 [Ref 3]. The liner was apparently left in place. The contents of the pond were mixed with soil until the material solidified in place [Ref. 4].
  - Prior to closure of the eastern SI, sludge samples were collected and analyzed and as a result sludge was managed as non-hazardous industrial waste based on EP Toxicity Analysis [Ref. 4].
- Additional lease areas to State Industries, Inc. included portions of Unit 1 (used to store water heaters) and Buildings T-4, T-5, and T-8 [Ref. 4].
- State Industries, Inc. operated from 1969 to late 1988 and manufactured and stored hot water heaters [Ref. 4].

Process Waste Streams Associated with	Known or Potential Constituents Associated
LOU 62	with LOU 62
Pickling process wastewater discharged to Eastern and Western SIs and on occasion process wastewater was conveyed to Beta Ditch through the Acid Drain System (LOU 60) and the Storm Sewer System (LOU 59) [Ref 3].	<ul> <li>Spent sulfuric acid</li> <li>Borax</li> <li>Soda ash</li> <li>Phosphate chemicals</li> <li>Spent cyanide</li> <li>TURCO II HTC Soap</li> <li>Metals at detectable concentration (iron, total chromium, barium)</li> <li>pH of discharges typically &gt;2, but periods of discharge pH of 1.</li> </ul>
Process Waste Streams Associated with the	Known or Potential Constituents Associated
State Industries Manufacturing Warehouse	with the State Industries Manufacturing
and Storage Area	Warehouse and Storage Area
Potential leftover lubricants or wastewater containing lubricant constituents [Ref. 4].	<ul><li>Metals</li><li>TPH</li></ul>

Process Waste Streams Associate State Industries Manufacturing W and Storage Area	d with the Known or Potential Constituents Associated with the State Industries Manufacturing Warehouse and Storage Area
Potential leftover paint and paint thir wastewater containing paint constitu [Ref. 4].	ner or ents • Lead • Metals • VOC • SVOC
Overlapping or Adjacent LOUs:	<ul> <li>The following LOUs overlap or are adjacent to LOU 62: <u>Overlapping LOUs</u> <ul> <li>None</li> </ul> </li> <li>Adjacent LOUS</li> <li>LOU 59 (Storm Sewer System) – A branch of the Storm Sewer System runs in an east-west direction about 150 feet north (downgradient) of LOU 62.</li> </ul> <li>LOU 59 is downgradient to LOU 62 and no releases are known to have occurred from LOU 59; therefore, LOU 59 is not considered to affect LOU 62. As a result, the addition of other chemical classes to the Phase B Analytical Plan for LOU 62 is not required.</li> <li>For detailed information on LOU 59 listed above, please refer to the LOU 59 data package.</li>
Other LOUs Potentially Affecting Soils in LOU 62:	• None
Known or Potential Chemical Classes:	<ul> <li>Metals</li> <li>Cyanide</li> <li>Wet chemistry analytes</li> <li>VOCs</li> <li>SVOCs</li> <li>TPH</li> </ul>
Known or Potential Release Mechanisms:	<ul> <li>Potential infiltration to subsurface soils and groundwater.</li> <li>Possible impacts to surrounding soils from surface releases.</li> <li>Process waste discharge to the Acid Drain System through a connection in the southwest corner of Building T-5 (State Industries, Inc. warehouse) [Ref. 4].</li> <li>Acidic waste discharge to catch basin and subsequent neutralization [Ref. 4].</li> </ul>

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- One of the SIs (records do not state which one) is known to have leaked on three separate occasions between June 7 and December 10, 1974 [Ref. 4].
- During the liner repair, the ponds were drained to the Acid Drain System; however, due to the high pump rates the system overflowed to the sanitary sewer [Ref. 4].
- In 1980, State Industries, Inc. informed the EPA of a ripped liner on one of the ponds (SI not identified) [Ref. 4].

#### **Results of Historical Sampling:**

- Prior to closure of the eastern SI, sludge samples were collected and analyzed. The EP Toxicity test detected non-hazardous concentrations of arsenic, lead, nickel, and selenium. The sludge was handled as non-hazardous waste based on the results [Ref. 4].
- The 1995 and 1996 assessments of the SIs by Western Technologies identified metals and VOCs in the soil [Ref. 4].
- Wells TR-9 and TR-10 are sampled as part of the routine groundwater monitoring program. These wells are sampled for perchlorate, manganese, pH, electrical conductivity, hexavalent chromium, and total chromium [Ref. 2].
- Analytical results are summarized on LOU 62 Tables 22 and 23 a through 23d (see attached).

Did Historical Samples Address Potential Release?

• No. Historical borings were limited in depth. The constituents were tested and were not representative of the full extent of the LOU.

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Summary of Phase A SAI:	Soil
	<ul> <li>Boring SA02 is located within LOU 62 (but not within either SI) and was specifically sampled to evaluate this LOU [Ref. 1].</li> </ul>
	<u>Groundwater</u>
	<ul> <li>Groundwater grab sample (GWSA02) was collected from Phase A boring SA02, and was specifically sampled to evaluate this LOU [Ref. 1].</li> </ul>
	Chemical classes detected in Phase A soil boring SA02:
	Metals
	Perchlorate
	<ul> <li>Wet chemistry analytes</li> <li>VOCs</li> </ul>
	Dioxins/furans
	Radionuclides
	As a result of the Phase A data, the Phase B analytical plan for samples collected from LOU 62 will be expanded to include analyses for perchlorate, dioxins/furans, and radionuclides.
	<ul> <li>Analytical results for soil and groundwater from the Phase A sampling event are summarized in LOU 62 Tables 1 through 21 [Ref. 1] (see attached).</li> </ul>
Are Phase A Sample Locations in "Worst Case" Areas?	<ul> <li>No. Sample locations are located cross-gradient of the SIs. Sample locations are also located too far west to be pertinent to any releases from the LOU 62 SIs.</li> </ul>
Is Phase B Investigation Recommended?	• Yes
Proposed Phase B Soil Investigation/Rationale:	<ul> <li>The Phase B Source Area Investigation for LOU 62 consists of collecting soil samples from six locations: <ul> <li>Three (3) borings will be drilled in the eastern SI;</li> <li>Two (2) borings will be drilled in the western SI;</li> <li>One (1) boring will be drilled in the southwest corner of the T-5 building (State Industries Manufacturing Warehouse).</li> <li>All six borings along with the analytical program to evaluate soil samples from LOU 62 are listed in Table A – Soil Sampling and Analytical Plan for LOU 62.</li> </ul> </li> <li>Soil sample locations consist of both judgmental and randomly placed locations: <ul> <li>Designed to evaluate soil for known or potential expendence</li> </ul> </li> </ul>

the known process waste streams.

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- Two (2) sample locations (SA28 and SA146) in the eastern SI, one (1) sample location (SA147) in the western SI, and one (1) sample location (SA119) in the southwest corner of the T-5 Building are judgmental locations.
- Random sample locations:
  - Designed to assess whether unknown constituents associated with LOU 62 are present.
  - One (1) sample location (RSAU5) in the eastern SI and one (1) sample location (RSAU4) are randomly placed locations.

#### 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)
- Cyanide
- Wet chemistry analytes
- VOCs
- SVOCs
- TPH-DRO/ORO

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

- Hexavalent chromium
- Perchlorate
- Organochlorine pesticides
- Dioxins/furans
- Radionuclides
- Asbestos

Random sample grid locations will be analyzed for the following list of Phase A Site-related chemicals for 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:	<ul> <li>The Phase B groundwater investigation of LOU 62 consists of collecting groundwater samples from three locations to evaluate local groundwater conditions and as a part of the Site-wide evaluation of constituent trends in groundwater.</li> <li>One (1) well (TR-10) within the boundaries of LOU 62 will be sampled.</li> <li>Two (2) wells (M-137 and M-138) north (downgradient) of LOU 62 will be sampled.</li> <li>All three wells along with the analytical program to evaluate groundwater in the vicinity of LOU 62 are listed in Table B – Groundwater Sampling and Analytical Plan for LOU 62.</li> </ul>
Proposed Phase B Constituents List for Groundwater:	<ul> <li>Groundwater samples will be analyzed for following analytes:</li> <li>Metals (Phase A List)</li> <li>Cyanide</li> <li>Wet chemistry analytes</li> <li>VOCs</li> <li>SVOCs</li> <li>Organochlorine pesticides</li> <li>Hexavalent chromium</li> <li>Perchlorate</li> <li>Radionuclides</li> </ul>
Proposed Phase B Soil Gas Investigation/Rationale:	<ul> <li>Three (3) soil gas sample will be collected to evaluate area conditions for the presence of vapor-phase VOCs in the vadose zone.</li> <li>SG47 will be located nearby Phase A boring SA02 to investigate the former SIs as potential sources and to assess VOCs from a groundwater source as indicated by Phase A sample GWSA02.</li> <li>SG66 and SG67 will be located within the former eastern pond to investigate LOU 62 as a potential VOC source.</li> <li>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.</li> </ul>
Proposed Phase B Constituents List for Soil Gas:	• VOCs (EPA TO-15)
References:	<ol> <li>ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility, Henderson, Nevada, September 2007.</li> <li>ENSR, 2005, Conceptual Site Model, Kerr-McGee Facility, Henderson, Nevada, ENSR, Camarillo, California, 04020- 023-130, February 2005 and August 2005.</li> </ol>

- 3. Kerr-McGee, 1996b, Response to Letter of Understanding, Henderson, Nevada, October 1996.
- 4. Kleinfelder, 1993, Environmental Conditions Assessment, Kerr-McGee Chemical Corporation, Henderson, Nevada Facility, April 15, 1993 (Final).

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# Summary of Available Data for LOU 62 State Industries, Inc. Site Tronox Facility – Henderson, Nevada

LOU Figure



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Summary of Available Data for LOU 62 State Industries, Inc. Site Tronox Facility – Henderson, Nevada

# Sampling and Analytical Plans for LOU 62:

Table A – Soil Sampling and Analytical Plan for LOU 62 Table B – Groundwater Sampling and Analytical Plan for LOU 62

Description         Description <thdescription< th=""> <thdescription< th=""></thdescription<></thdescription<>	Grid Location	LOU Number	Phase B Boring No.	Sample ID Number	Sample Depths <sup>1.</sup> (ft, bgs)	Perchlorate (EPA 314.0)	Metals (EPA 6020)	Hex Cr (EPA 7199	TPH- DRO/ORO (EPA 8015B)	VOCs <sup>2.</sup> (EPA 8260B)	Wet Chemistry <sup>3.</sup>	Total Cyanide (EPA 9012A)	OCPs <sup>4</sup> (8081A)	SVOCs <sup>5</sup> (EPA 8270C)	Radio- nuclides	Dioxins/ Furans <sup>7</sup>	(EPA 166	Asbestos <sup>9</sup> EPA/540/R- 97/028	Geo- technical Tests <sup>10.</sup>	Location Description and Characterized Area Rationale
1       1       2       1								Borin	gs are org	anized b	y grid locatio	on as snowi	n on Pla	te A - Sta	rting poi	nt is on g	gria 1-6	and ending	point on gr	
The set of the	T-6	59, 62	SA119	SA119-0.0	0.0		~~~~	~	~	~~~~~		~						X		Boring located to evaluate LOU 59 (Storm Sewer System) adjacent to former State Industries building (Building
1       1	1-6 T.6	59,62		SA119-0.5	0.5	×	X	X	X	X	×	×	X Hold	X		X			-	1-5) and LOU 62 (State Industries, Inc. Site).
1       1	T-6	59,62		SA119-10	20	x x	Ŷ	X	X	x	x	x	Hold	X	X					
141       1	T-6	59, 62		SA119-30	30	X	X	X	X	X	X	X	Hold	X	X					ne de la constante de la const
Li       ····································	T-6	59, 62		SA119-40	40	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х					
1       1 <td1< td=""> <td1< td=""> <td1< td=""></td1<></td1<></td1<>	U-4	62	RSAU4	RSAU4-0.0	0.0													X		Boring located to evaluate former western pond in LOU 62 (State Industries, Inc. Site).
Image:	U-4	62		RSAU4-0.5	0.5	X	X	X	X	X	X	X	X	X	X	X				
Image: Note of the second o	U-4	62		RSAU4-10 RSAU4-20	20	x	X	x	X	x	x	X	Hold	X	x					
1       0	U-4	62		RSAU4-30	30	X	X	X	X	X	X	X	Hold	X	X					ne de la constante de la const
	U-4	62		RSAU4-40	40	Х	Х	Х	Х	Х	X	Х	Hold	Х	Х					
List       Bit       Bit       Bit       X       X       X       X       X       X       X       Note         US       Bit       Bit       Bit       X <td>U-4</td> <td>62</td> <td></td> <td>RSAU4-50</td> <td>50</td> <td>X</td> <td>Х</td> <td>Х</td> <td>X</td> <td>Х</td> <td>X</td> <td>X</td> <td>Hold</td> <td>Х</td> <td>Х</td> <td></td> <td></td> <td></td> <td></td> <td></td>	U-4	62		RSAU4-50	50	X	Х	Х	X	Х	X	X	Hold	Х	Х					
UN       UN <th< td=""><td>U-4</td><td>62</td><td>0.4.40</td><td>RSAU4-60</td><td>60</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>X</td><td>X</td><td>Х</td><td>Х</td><td></td><td></td><td>X</td><td></td><td></td></th<>	U-4	62	0.4.40	RSAU4-60	60	Х	Х	Х	Х	Х	Х	X	X	Х	Х			X		
Image: Note of the state o	U-4	62	SA146	SA146-0.0	0.0	×	Y	Y	Y	×	×	Y	Y	×	Y	×		×		Boring located to evaluate former eastern pond in LOU 62 (State Industries, Inc. Site).
Image: Note of the control of the c	U-4	62		SA140-0.5	10	x	X	X	X	X	x	x	Hold	X	X	^				
Und       G2       StateSol       Sol       X       <	U-4	62		SA146-20	20	X	X	X	X	X	X	X	Hold	X	X					
U-4       C2       Status       Status <t< td=""><td>U-4</td><td>62</td><td></td><td>SA146-30</td><td>30</td><td>X</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Hold</td><td>Х</td><td>Х</td><td></td><td></td><td></td><td></td><td></td></t<>	U-4	62		SA146-30	30	X	Х	Х	Х	Х	Х	Х	Hold	Х	Х					
Und         Object         State	U-4	62		SA146-40	40	X	X	X	X	Х	X	X	Hold	X	X					me de la constante de la consta
Ust         Ust         Other         V	U-4	62		SA146-50	50	X	X	X	X	X	X	X	Hold	X	X					
UN         UN<	0-4	62	SA1/7	SA146-60 SA147-0.0	60	×	X	X	X	X	~	X	X	X	X			×		Boring located to evaluate former western pond in LOLL62 (State Industries, Inc. Site)
Und       U	U-4	62	0/(14/	SA147-0.5	0.5	X	Х	х	Х	X	X	Х	X	Х	X	X	-	~		
04       62       64 <td< td=""><td>U-4</td><td>62</td><td></td><td>SA147-10</td><td>10</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Hold</td><td>Х</td><td>Х</td><td></td><td></td><td></td><td></td><td></td></td<>	U-4	62		SA147-10	10	Х	Х	Х	Х	Х	Х	Х	Hold	Х	Х					
U-4       02       94/100       02       94/100       00	U-4	62		SA147-20	20	Х	Х	Х	Х	Х	X	Х	Hold	Х	Х					
U-4       Edit       Static 20       S	U-4	62		SA147-30	30	X	X	X	X	X	X	Х	Hold	X	X					
US       US <th< td=""><td>U-4</td><td>62</td><td></td><td>SA147-40</td><td>40</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>Hold</td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td></th<>	U-4	62		SA147-40	40	X	X	X	X	X	X	X	Hold	X	X					
US         UZ         PSULP2         PSULP2         Q         <	0-4	62		SA147-50 SA147-60	50 60	×	X	X	X	×	x	X	Hold	X	×					
U-5       -02	U-5	62	RSAU5	RSAU5-0.0	0.0	~	~	~	~	~	~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~	X				Х		Boring located to evaluate former eastern pond in LOU 62 (State Industries, Inc. Site).
U.5       G2       RSAUE 10       10       X <t< td=""><td>U-5</td><td>62</td><td></td><td>RSAU5-0.5</td><td>0.5</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>X</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td></td><td></td><td></td><td></td></t<>	U-5	62		RSAU5-0.5	0.5	Х	Х	Х	Х	Х	X	Х	Х	Х	Х	Х				
U-5       C2       RSAU5-00       20       X <t< td=""><td>U-5</td><td>62</td><td></td><td>RSAU5-10</td><td>10</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Hold</td><td>Х</td><td>Х</td><td></td><td></td><td></td><td></td><td></td></t<>	U-5	62		RSAU5-10	10	Х	Х	Х	Х	Х	Х	Х	Hold	Х	Х					
0.3       0.2       0.4       0	U-5	62		RSAU5-20	20	X	X	X	X	X	X	X	Hold	X	X					
US         S2         RSAUS-90         X0         X <th< td=""><td>U-5</td><td>62</td><td></td><td>RSAU5-30 RSAU5-40</td><td>30 40</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>Hold</td><td>X</td><td>X</td><td>-</td><td></td><td></td><td></td><td>na di seconda di second</td></th<>	U-5	62		RSAU5-30 RSAU5-40	30 40	X	X	X	X	X	X	X	Hold	X	X	-				na di seconda di second
U-5         62         Number of Samples:         Nu	U-5	62		RSAU5-50	50	x	X	X	X	X	x	x	Hold	X	X				-	···
U-5       62       SA28       SA28-0.5       0.5       X	U-5	62		RSAU5-60	60	X	X	X	X	X	X	X	X	X	X					
U-5       62       SA28-10       0.5       X <t< td=""><td>U-5</td><td>62</td><td>SA28</td><td>SA28-0.0</td><td>0.0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Х</td><td></td><td>Boring located to evaluate former eastern pond in LOU 62 (State Industries, Inc. Site).</td></t<>	U-5	62	SA28	SA28-0.0	0.0													Х		Boring located to evaluate former eastern pond in LOU 62 (State Industries, Inc. Site).
U-5       62       SA28-10       10       x <td< td=""><td>U-5</td><td>62</td><td></td><td>SA28-0.5</td><td>0.5</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>Х</td><td></td><td></td><td></td><td></td></td<>	U-5	62		SA28-0.5	0.5	X	X	X	X	X	X	X	X	X	X	Х				
U-3         Dz         Struggy 2         20         A         <	U-5	62		SA28-10	10	X	X	X	X	X	X	X	Hold	X	X					
U-5       62       SA28-60       60       X <th< td=""><td>U-5</td><td>62</td><td></td><td>SA28-30</td><td>30</td><td>X</td><td>X</td><td>X</td><td>X</td><td>x</td><td>x</td><td>X</td><td>Hold</td><td>X</td><td>x</td><td></td><td></td><td></td><td></td><td></td></th<>	U-5	62		SA28-30	30	X	X	X	X	x	x	X	Hold	X	x					
U-5         62         SA28-60         60         X <th< td=""><td>U-5</td><td>62</td><td></td><td>SA28-40</td><td>40</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>Hold</td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td></th<>	U-5	62		SA28-40	40	X	X	X	X	X	X	X	Hold	X	X					
U-5       62       SA28-60       60       x <th< td=""><td>U-5</td><td>62</td><td></td><td>SA28-50</td><td>50</td><td>X</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Hold</td><td>Х</td><td>Х</td><td></td><td></td><td></td><td></td><td></td></th<>	U-5	62		SA28-50	50	X	Х	Х	Х	Х	Х	Х	Hold	Х	Х					
Number of Borngs:       6         Number of Samples:       40 </td <td>U-5</td> <td>62</td> <td></td> <td>SA28-60</td> <td>60</td> <td>Х</td> <td></td> <td></td> <td></td> <td></td> <td></td>	U-5	62		SA28-60	60	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х					
Number of Samples.       40       4	N	lumber of Borings:	6			40	40	40	40	40	40	40	10	40	40	6	0	6	0	
Notes:         X       Sample will be collected and analyzed.         No sample collected under Phase B sampling program.         TPH-DROVOR0       Total petroleum hydrocarbons - Diesel-Range Organics/Oil-Range Organics.         1.       If area is paved, samples will be collected at 0.5 feet below, or 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 Thorium-230/232, Uranium 234/235, Uranium-238, and beta spec for Radium-226/228 (per NDEP).         7.       Dixxins/furans: 90% will be tested by immunoassay, 10% analyzed by HRGC/HRMS in the laboratory.         8.       Polychlorinated biphenyls         9.       Soil samples for absets analyses will be collected from a depth of 0 to 2-inches bgs.         10.       Geetechnical Tests consist of: mositure conductivity (ASTM D-5084/USEPA e100)	N	umber of Samples:				40	40	40	40	40	40	40	12	40	40	6	U	6	U	
<ul> <li>X Sample will be collected and analyzed. No sample collected under Phase B sampling program.</li> <li>TPH-DROROF</li> <li>Total petroleum hydrocarbors - Dissel-Range Organics/Oil-Range Organics.</li> <li>If area is paved, samples will be collected at 0.5 feet below, or if an unpaved area is within a reasonable distance, the sample will be moved to the unpaved area.</li> <li>Samples for VOC analysis will be preserved in the field using sodium bistufate (or DI water) and methanol preservatives per EPA Method 5035.</li> <li>Consists of wet chemistry parameters (including pH) listed on Table 1 of the Phase B Source Area Work Plan.</li> <li>Organochlorine Pesticides (includes analysis for hexachlorobenzene).</li> <li>Semi-volatile Organic Compounds</li> <li>Radionucides consists of alpha spec reporting for Thorium-230/232, Uranium-234, and beta spec for Radium-226/228 (per NDEP).</li> <li>Dioxins/furans: 90% will be tested by immunoassay, 10% analyzed by HRGC/HRMS in the laboratory.</li> <li>Polychlorinated biphenyls</li> <li>Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs.</li> <li>Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs.</li> <li>Geotechnical Tests consists of impisture content (ASTM D-2216), grain size analysis (ASTM D-2216). Vertical Hydraulic Conductivity (ASTM D-2016). Vertical Hydraulic Conductivity (ASTM D-2016). Vertical Hydraulic Conductivity (ASTM D-2016). Vertical Hydraulic Conductivity (ASTM D-2016).</li> </ul>	Notes:																			
No sample collected under Phase B sampling program.         TPH-DROVORD       Total petroleum hydrocarbons - Diesel-Range Organics/Oil-Range Organics.         1       If area is paved, samples will be collected at 0.5 feet below, or 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.       Organochorine Pesticides (includes analysis for hexachlorobenzene).         5.       Semi-volatile Organic Compounds         6.       Radionuclides consists of alpha spec reporting for Thorium-230/232, Uranium 234/235, Uranium-238, and beta spec for Radium-226/228 (per NDEP).         7.       Dioxins/furans: 90% will be toseted by immunoassay, 10% analyzed by HRGC/HRMS in the laboratory.         8.       Polychlorinated biphenyls         9.       Soil samples for asbestos analyses will be collected of 10 to 2-inches bgs.         10.       Geotechnical Tests consist of implure construct (ASTM D-2216); Vertical Hydraulic Conductivity (ASTM D-2937). Grain Density (ASTM D-2937). Grain Density (ASTM D-2916); Vertical Hydraulic Conductivity (ASTM D-5084/LISEPA 9100)	Х	Sample will be colle	cted and ana	lyzed.																
<ul> <li>TPH-DROVORO Total petroleum hydrocarbons - Diesel-Range Organics/Oil-Range Organics.</li> <li>If area is paved, samples will be collected at 0.5 feet below, or if an unpaved area is within a reasonable distance, the sample will be moved to the unpaved area.</li> <li>Samples for VOC analysis will be preserved in the field using sodium bisulfate (or DI water) and methanol preservatives per EPA Method 5035.</li> <li>Consists of wet chemistry parameters (including pH) listed on Table 1 of the Phase B Source Area Work Plan.</li> <li>Organochlorine Pesticides (includes analysis for hexachlorobenzene).</li> <li>Semi-volatile Organic Compounds</li> <li>Radionuclides consists of alpha spec reporting for Thorium-230/232, Uranium 234/235, Uranium-238, and beta spec for Radium-226/228 (per NDEP).</li> <li>Dioxins/furans: 90% will be tested by immunoassay, 10% analyzed by HRGC/HRMS in the laboratory.</li> <li>Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs.</li> <li>Geotechnical Tests consist of rashes consist of alpha p.2216). yertical Hydraulic Conductivity (ASTM D-5084/USEPA 9100)</li> </ul>		No sample collected	d under Phas	e B sampling pro	gram.															
<ol> <li>If area is paved, samples will be collected at 0.5 feet below, or if an unpaved area is within a reasonable distance, the sample will be moved to the unpaved area.</li> <li>Samples for VOC analysis will be preserved in the field using sodium bisulfate (or DI water) and methanol preservatives per EPA Method 5035.</li> <li>Consists of wet chemistry parameters (includes analysis for hexachlorobenzene).</li> <li>Organochlorine Pesticides (includes analysis for hexachlorobenzene).</li> <li>Semi-volatile Organic Compounds</li> <li>Radionuclides consists of alpha spec reporting for Thorium-230/232, Uranium-238, and beta spec for Radium-226/228 (per NDEP).</li> <li>Dioxins/furans: 90% will be tested by immunoassay, 10% analyzed by HRGC/HRMS in the laboratory.</li> <li>Polychlorinated biphenyls</li> <li>Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs.</li> <li>Geotechnical Tests consist of: moisture content (ASTM D-2216), grain size analysis (ASTM D-2237), Grain Density (ASTM D-2937), Grain Density (ASTM D-2937), Grain Density (ASTM D-2216); Vertical Hydraulic Conductivity (ASTM D-5084/LISEPA 9100)</li> </ol>	TPH-DRO/ORO	Total petroleum hyd	rocarbons - I	Diesel-Range Org	anics/Oil-Ra	nge Organics.														
<ol> <li>Samples for VOC analysis will be preserved in the heldo stary solution bisurate (or Dr water) and mentation preservatives per EPA Method 5033.</li> <li>Consists of wet chemistry parameters (includes analysis for hexachlorobenzene).</li> <li>Organochlorine Pesticides (includes analysis for hexachlorobenzene).</li> <li>Semi-volatile Organic Compounds</li> <li>Radionuclides consists of alpha spec reporting for Thorium-230/232, Uranium 234/235, Uranium-238, and beta spec for Radium-226/228 (per NDEP).</li> <li>Dioxins/furans: 90% will be tested by immunoassay, 10% analyzed by HRGC/HRMS in the laboratory.</li> <li>Polychlorinated biphenyls</li> <li>Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs.</li> <li>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)</li> </ol>	1.	If area is paved, sai	nples will be	collected at 0.5 fe	et below, or	if an unpaved	area is wit	hin a reas	onable distar	nce, the sa	ample will be m	oved to the u	npaved a	rea.						
<ul> <li>4. Organochlorine Pesticides (includes analysis for hexachlorobenzene).</li> <li>5. Semi-volatile Organic Compounds</li> <li>6. Radionuclides consists of alpha spec reporting for Thorium-230/232, Uranium 234/235, Uranium-238, and beta spec for Radium-226/228 (per NDEP).</li> <li>7. Dioxins/furans: 90% will be tested by immunoassay, 10% analyzed by HRGC/HRMS in the laboratory.</li> <li>8. Polychlorinated biphenyls</li> <li>9. Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs.</li> <li>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-854, Soil-Water Filled Porosity (ASTM D-2216); Vertical Hydraulic Conductivity (ASTM D-5084/USEPA 9100)</li> </ul>	2.	Consists of wet che	mistry naram	eters (including n	H) listed on T	Table 1 of the	e (or Di wa Phase B Si	liter) and n	Work Plan	servatives	per EPA Meth	00 5035.								
<ol> <li>Semi-volatile Organic Compounds</li> <li>Radionuclides consists of alpha spec reporting for Thorium-230/232, Uranium 234/235, Uranium-238, and beta spec for Radium-226/228 (per NDEP).</li> <li>Dioxins/furans: 90% will be tested by immunoassay, 10% analyzed by HRGC/HRMS in the laboratory.</li> <li>Polychlorinated biphenyls</li> <li>Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs.</li> <li>Geotechnical Tests consist of: moisture content (ASTM D-2216), grain size analysis (ASTM D-422 and C117-04). Soil Dry Bulk Density (ASTM D-854, Soil-Water Filled Porosity (ASTM D-2216); Vertical Hydraulic Conductivity (ASTM D-5084/LISEPA 9100)</li> </ol>	4.	Organochlorine Pes	ticides (inclu	des analvsis for h	exachlorobe	nzene).														
<ul> <li>6. Radionuclides consists of alpha spec reporting for Thorium-230/232, Uranium 234/235, Uranium-238, and beta spec for Radium-226/228 (per NDEP).</li> <li>7. Dioxins/furans: 90% will be tested by immunoassay, 10% analyzed by HRGC/HRMS in the laboratory.</li> <li>8. Polychlorinated biphenyls</li> <li>9. Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs.</li> <li>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/LISEPA 9100)</li> </ul>	5.	Semi-volatile Organ	ic Compound	ds		/ -														
<ol> <li>7. Dioxins/furans: 90% will be tested by immunoassay, 10% analyzed by HRGC/HRMS in the laboratory.</li> <li>8. Polychlorinated biphenyls</li> <li>9. Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs.</li> <li>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/LISEPA 9100)</li> </ol>	6.	Radionuclides cons	ists of alpha	spec reporting for	Thorium-230	0/232, Uraniun	n 234/235,	Uranium-2	238, and beta	a spec for	Radium-226/2	28 (per NDEF	°).							
<ul> <li>8. Polychlorinated biphenyls</li> <li>9. Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs.</li> <li>10. Geotechnical Tests consist of: moisture conductivity (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/LISEPA 9100)</li> </ul>	7.	Dioxins/furans: 90%	will be teste	d by immunoassa	ay, 10% analy	yzed by HRGC	C/HRMS in	the labora	tory.											
9. Soil samples for aspestos analyses will be collected from a depth of 0 to 2-incres bgs. 10. Geotechnical Tests consist of: moisture content (ASTM D-2216), grain size analysis (ASTM D-422 and C117-04). Soil Drv 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)	8.	Polychlorinated bipl	nenyls		d from a d-	oth of 0 to 0 in	ahaa haa													
	9. 10	Geotechnical Tests	consist of n	noisture content (	a nom a dep ASTM D-221	6), grain size :	ones ogs. analvsis (A	STM D-42	2 and C117-	.04) Soil I	)rv Bulk Densit	v (ASTM D-20	937) Gra	in Density	ASTM D-	354 Soil-V	Water Fill	ed Porosity (A	STM D-2216	: Vertical Hydraulic Conductivity (ASTM D-5084/USEPA 9100)

Grid Location	Location Area	Monitoring Well No.	Sample ID Number	Screen Interval (ft bgs)	Soil Type Expected Across Screen Interval <sup>1.</sup>	Well Sampled for Phase A? (y/n)	Perchlorate (EPA 314.0)	Hex Cr (EPA 7199)	Metals	VOCs <sup>2.</sup> (EPA 8260)	Wet Chemistry (a)	Total Cyanide (EPA 9012A)	OCPs <sup>3.</sup> (EPA 8081A)	SVOCs <sup>4.</sup> (EPA 8270C)	Radio- nuclides <sup>5.</sup>	
					We	lls are orgai	nized by gri	d location	as shown	on Plate A	- Staring p	point is o	n <mark>grid U</mark> -4	and end	ing point	on grid U-5.
U-4	١V	TR-10	TR-10	80-100	MCcg1	no	x	x	х	x	х		x	x	х	Located to evalu
U-4	IV	M-137	M-137	TBD	TBD	new well	х	x	х	x	x	х	x	x	х	New well to be i State Industries
U-5	١V	M-138	M-138	TBD	TBD	new well	х	x	х	x	x	Х	x	x	х	Located to serve pond) and for ge
					Number of Fig	eld Samples:	3	3	3	3	3	2	3	3	3	

Notes:

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 Thorium-230/232, Uranium 234/235, Uranium-238, and beta spec for Radium-226/228 (per NDEP).

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

TBD To be determined when well is constructed

MCfg1 Muddy Creek Formation - first fine-grained facies

MCcg1 Muddy Creek Formation - first coarse-grained facies

MCfg2 Muddy Creek Formation - second fine-grained facies

#### Rationale

uate LOU 62 and for general Site coverage.

installed; located to serve as a downgradient stepout for LOU 62 (former swestern pond), and for general Site coverage.

re as a downgradient stepout for LOU 62 (former State Industries eastern eneral Site coverage.

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# Summary of Available Data for LOU 62 State Industries, Inc. Site Tronox Facility – Henderson, Nevada

Soil and Groundwater Characterization Data

Tronox Facility – Henderson, Nevada

LOU-specific analytes identified include:

- Metals
- Cyanide
- Wet chemistry analytes
- SVOCs
- VOCs
- TPH-DRO/ORO

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

LOU 62 Table 1 – Soil Characterization Data – Wet Chemistry LOU 62 Table 2 – Groundwater Characterization Data – Wet Chemistry LOU 62 Table 3 - Soil Characterization Data - Dioxins and Dibenzofurans LOU 62 Table 4 - Soil Characterization Data - Metals LOU 62 Table 5 - Groundwater Characterization Data - Metals LOU 62 Table 6 – Soil Characterization Data – Organochlorine Pesticides (OCPs) LOU 62 Table 7 – Groundwater Characterization Data – Organochlorine Pesticides (OCPs) LOU 62 Table 8 – Soil Characterization Data – Organophosphorus Pesticides (OPPs) LOU 62 Table 9 - Groundwater Characterization Data - Organophosphorus Pesticides (OPPs) LOU 62 Table 10 - Soil Characterization Data - PCBs LOU 62 Table 11 – Groundwater Characterization Data – PCBs LOU 62 Table 12 - Soil Characterization Data - Perchlorate LOU 62 Table 13 - Groundwater Characterization Data - Perchlorate LOU 62 Table 14 - Soil Characterization Data - Radionuclides LOU 62 Table 15 - Groundwater Characterization Data - Radionuclides LOU 62 Table 16 - Soil Characterization Data - SVOCs LOU 62 Table 17 – Groundwater Characterization Data – SVOCs LOU 62 Table 18 - Soil Characteristic Data - TPH and Fuel Alcohols LOU 62 Table 19 - Soil Characterization Data - VOCs LOU 62 Table 20 - Groundwater Characterization Data - VOCs LOU 62 Table 21 - Soil Characterization Data - Long Asbestos Fibers in Respirable Soil Fraction LOU 62 Table 22 - Summary of Historical Groundwater Analytical Data LOU 62 Tables 23a through 23d - Summary of Historical Soil Analytical Data Notes for Phase A Data Tables are included at the end of the tables

# LOU 62 Table 1 Soil Characterization Data - Wet Chemistry

Sampl	Ph A <sup>1</sup>	Ph A							
	Boring No.	SA2							
	Sample ID	SA2-0.5	SA2-10	SA2-20	SA2-30	SA2-40	SA2-50	SA2-60	
Samp	ie Depth (ft)	0.5	10	20	30	40	50	60	
	Sample Date	11/03/2006	11/03/2006	11/03/2006	11/06/2006	11/06/2006	11/06/2006	11/06/2006	
Wet Chemistry Parameter									Unito
	mg/kg								Units
Percent moisture		6.0	19.4	14.7	15.3	33.1	32.1	18.4	percent
Alkalinity (as CaCO3)		140	251	281	274	166	73.6 U	61.3 U	mg/kg
Bicarbonate		505	2190	2700	978	521	73.6 U	136	mg/kg
Total Alkalinity		645	2440	2980	1250	687	74.4	136	mg/kg
Ammonia (as N)		5.3 U	6.2 U	5.9 U	5.9 U	5.7 J	1.0 J	0.80 J	mg/kg
Cyanide	1.37E+04	0.53 U	0.62 U	0.59 U	0.59 U	0.75 U	0.74 U	0.61 U	mg/kg
MBAS		4.8 U	4.8 U	4.8 U	5.5 U	4.9 U	5.3 U	5.9 U	mg/kg
pH (solid)		10	11.2	10.7	8.7	8.7	8.3	9.2	none
Bromide		2.7 U	3.1 U	2.9 U	3.0 U	2.6 J	1.7 J	3.1 U	mg/kg
Chlorate		5.3 UJ	6.2 UJ	5.9 UJ	1.4 J-	7.1 J-	8.9 J-	6.1 UJ	mg/kg
Chloride		2.1 U	29.7	4.4	24.7	795	689	14.6	mg/kg
Nitrate (as N)		0.18 J	3.3 J	0.21 J	2.8 J	13.6 J	5.6 J	0.85 J+	mg/kg
Nitrite		0.21 U	R	0.089 J-	R	0.17 J	5.4 J-	0.90	mg/kg
ortho-Phosphate		5.3 U	6.2 U	5.9 U	5.9 U	6.2 J	2.4 J	6.1 U	mg/kg
Sulfate		5.4	705	66.3	7330	691	277	99.3	mg/kg
Total Organic Carbon		7700	15100	9200	19800	6550	500 J	600 J	mg/kg

### State Industries Inc. Site Tronox Facility - Henderson, Nevada

### 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 62 Table 2 Groundwater Characterization Data - Wet Chemistry

State Industries Inc. Site
Tronox Facility - Henderson, Nevada

Sam	Ph A <sup>1</sup>		
	SA2		
	GWSA2		
	11/06/2006		
Wet Chemistry Parameters	MCL <sup>2</sup>		Unite
wet onemistry rarameters	ug/L···		Units
Total Dissolved Solids	5.00E+05 j	1660	mg/L
Total Suspended Solids		29400	mg/L
Alkalinity (as CaCO3)		5.0 U	mg/L
Bicarbonate		106	mg/L
Total Alkalinity		106	mg/L
Ammonia (as N)		50.0 U	ug/L
MBAS		0.20 U	mg/L
Cyanide	2.00E+02	5.0 UJ	ug/L
pH (liquid)		7.9 J	none
Specific Conductance		2260	umhos/cm
Bromide		0.65	mg/L
Chlorate		4.0 J	mg/L
Chloride	2.50E+05	170	mg/L
Nitrate (as N)	1.00E+04	5.4	mg/L
Nitrite	1.00E+03	0.020 U	mg/L
ortho-Phosphate		0.5 U	mg/L
Sulfate	2.50E+05 j	913	mg/L
Total Organic Carbon		4.1 J-	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.

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### LOU 62 Table 3 Soil Characterization Data - Dioxins and Dibenzofurans

# State Industries Inc. Site Tronox Facility - Henderson, Nevada

		Sam	pling Program	Ph A <sup>1</sup>
			Boring No.	SA2
			Sample ID	SA2-0.5
		Sar	nple Depth (ft)	0.5
			Sample Date	11/03/2006
chemical_name:	Method	Unit	MSSL <sup>2</sup>	
Diavia 8200 COREEN Tatal TEO ENGR			mg/кg	
Coloulated (a) parka		ng/kg		2.57
Diavin SW 846 8200 Tatal TEO ENSP				
Coloulated (a) pa/ka		ng/kg	[	
Diavin 8200 SCREEN Total TEO-ENSR				
Coloulated (b) pa/ka		ng/kg		2.58
Diavin SW 846 8200 Tatal TEO ENSP				
Coloulated (b) palka		ng/kg		
1.2.2.4.6.7.9. Hontophoradibonzofuran	9200 Saraan	na/ka		7 995
	SW 946 9200	ng/kg		7.020
1,2,3,4,6,7,6-rieplacifiorodiberizorurari	8000 Saroon			2 070
1,2,3,4,6,7,8 Heptachlorodiberizo-p-Dioxin	0290 Screen	ng/kg		3.219
1,2,3,4,6,7,8-Heptachlorodiberizo-p-Dioxin	SVV 040 0290	ng/kg		0.075
	6290 Screen	ng/kg		3.275
	0000 Saroon	ng/kg		4 700
1,2,3,4,7,8-Hexachiorodibenzoluran	81M 846 8200	ng/kg		4./92
1,2,3,4,7,6-Hexachlorodibenzo p Diovin	577 640 6290	<u> </u>		0.000
1,2,3,4,7,8-Hexachiorodibenzo-p-Dioxin	0290 Screen	ng/kg	~ <b>.</b>	0.090
1,2,3,4,7,8-Hexachiorodibenzofuson	5VV 846 8290	ng/kg		0.001
1,2,3,6,7,8-Hexachiorodibenzoluran	8290 Screen	ng/kg		2.001
1,2,3,6,7,8-Hexachiorodibenzofuran	500 846 8290	ng/kg		0.000
1,2,3,6,7,8-Hexachiorodibenzo-p-Dioxin	8290 Screen	ng/kg		0.328
1,2,3,6,7,8-Mexachiorodibenzo-p-Dioxin	SVV 846 8290	ng/kg		
1,2,3,7,8,9-Hexachiorodibenzofuran	8290 Screen	ng/kg		0.289
1,2,3,7,8,9-Hexachiorodibenzoturan	SW 846 8290	ng/kg		
1,2,3,7,8,9-Hexachiorodibenzo-p-Dioxin	8290 Screen	ng/kg		0.324
1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	SW 846 8290	ng/kg		
1,2,3,7,8-Pentachlorodibenzofuran	8290 Screen	ng/kg		3.224
1,2,3,7,8-Pentachlorodibenzofuran	SW 846 8290	ng/kg	** **	
1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	8290 Screen	ng/kg		0.177
1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	SW 846 8290	ng/kg		
2,3,4,6,7,8-Hexachlorodibenzoturan	8290 Screen	ng/kg		1.635
2,3,4,6,7,8-Hexachlorodibenzoturan	SW 846 8290	ng/kg		
2,3,4,7,8-Pentachlorodibenzofuran	8290 Screen	ng/kg		1.575
2,3,4,7,8-Pentachlorodibenzofuran	SW 846 8290	ng/kg		
2,3,7,8-Tetrachlorodibenzofuran	8290 Screen	ng/kg		6.586
2,3,7,8-Tetrachlorodibenzofuran	SW 846 8290	ng/kg		
2,3,7,8-Tetrachlorodibenzo-p-Dioxin	8290 Screen	ng/kg	1.80E-05 h,v	0.023 U
2,3,7,8-Tetrachlorodibenzo-p-Dioxin	SW 846 8290	ng/kg	1.80E-05 h,v	
Octachlorodibenzofuran	8290 Screen	ng/kg		20.138
Octachlorodibenzofuran	SW 846 8290	ng/kg		
Octachlorodibenzo-p-Dioxin	8290 Screen	ng/kg		17.723

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# LOU 62 Table 3 (continued) Soil Characterization Data - Dioxins and Dibenzofurans

#### State Industries Inc. Site Tronox Facility - Henderson, Nevada

	· · · · · · · ·	Sam	pling Program	Ph A <sup>1</sup>							
Borina No.											
Sample ID											
Sample Depth (ft)											
Sample Date											
chemical name:	Method	Unit	MSSL <sup>2</sup>								
	Wethou	Unit	mg/kg								
Octachlorodibenzo-p-Dioxin	SW 846 8290	ng/kg									
Tetrachlorinated Dibenzofurans, (Total)	SW 846 8290	ng/kg									
Total HpCDD	SW 846 8290	ng/kg									
Total HpCDF	SW 846 8290	ng/kg									
Total HxCDD	SW 846 8290	ng/kg									
Total HxCDF	SW 846 8290	ng/kg									
Total PeCDD	SW 846 8290	ng/kg									
Total PeCDF	SW 846 8290	ng/kg									
Total TCDD	SW 846 8290	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 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 62 Table 4 Soil Characterization Data - Metals

# State Industries Inc. Site Tronox Facility - Henderson, Nevada

Sampling Program		Ph A <sup>1</sup>	Ph A						
	Boring No.	SA2	SA2	SA2	SA2	SA2	SA2	SA2	
	Sample ID	SA2-0.5	SA2-10	SA2-20	SA2-30	SA2-40	SA2-50	SA2-60	
Sa	ample Depth (ft)	0.5	10	20	30	40	50	60	
	Sample Date	11/03/2006	11/03/2006	11/03/2006	11/06/2006	11/06/2006	11/06/2006	11/06/2006	
Motolo	MSSL <sup>2</sup>								Unito
MICLAIS	mg/kg								Units
Aluminum	1.00E+05	5510 J	6510 J	5110 J	7410 J	16000 J	13200 J	10200 J	mg/kg
Antimony	4.50E+02	0.14 J-	0.15 J-	0.14 J-	0.12 J-	0.21 J-	0.23 J-	0.13 J-	mg/kg
Arsenic	2.80E+02	1.8	3.5	4.0	23.5	18.9	26.8	10.6	mg/kg
Barium	1.00E+05	136 J	113 J	110 J	452 J	84.2 J	101 J	118 J	mg/kg
Beryllium	2.20E+03	0.40	0.44	0.41	0.40	0.75	0.62	0.43	mg/kg
Boron	1.00E+05	3.1 UJ	6.3 UJ	6.4 UJ	20.6 J-	29.6 J-	22.7 J-	11.1 UJ	mg/kg
Cadmium	5.60E+02	0.10	0.062	0.11	0.14	0.084	0.069 J	0.046 J	mg/kg
Calcium	<b></b> ·	14700 J	19000 J	39900 J	138000	4620	3830	4560	mg/kg
Chromium (Total)	7.10E+01	6.5 J-	7.6 J-	6.7 J-	16.1 J-	20.2 J-	20.9 J-	19.2 J-	mg/kg
Chromium-hexavalent	5.00E+02	0.21 U	0.25 U	0.23 U	0.24 U	0.30 U	0.29 U	0.25 U	mg/kg
Cobalt	2.10E+03	6.4 J-	6.4 J-	6.3 J-	3.6 J-	5.9 J-	6.1 J-	5.5 J-	mg/kg
Copper	4.20E+04	15.2 J	12.6 J	10.0 J	8.9 J	13.9 J	12.8 J	12.4 J	mg/kg
Iron	1.00E+05	11300 J	10700 J	10800 J	6990 J	13500 J	12800 J	10900 J	mg/kg
Lead	8.00E+02	112	7.0	6.8	5.4	10.7	9.0	6.8	mg/kg
Magnesium		6320 J-	9330 J-	5080 J-	13900 J-	20100 J-	17500 J-	14200 J-	mg/kg
Manganese	3.50E+04	325 J+	305 J+	404 J+	185 J+	250 J+	196 J+	160 J+	mg/kg
Molybdenum	5.70E+03	0.54	0.49 J	0.80	0.86 J	0.93	0.67 J	0.70	mg/kg
Nickel	2.30E+04	12.9 J	12.6 J	12.1 J	11.5 J	20.9 J	17.5 J	20.2 J	mg/kg
Platinum		0.011 U	0.012 U	0.012 U	0.017 J	0.021 J	0.018 J	0.012 U	mg/kg
Potassium		1580 J	1190 J	1350 J	1660 J	3940 J	3220 J	2300 J	mg/kg
Selenium	5.70E+03	0.12 U	0.13 U	0.13 U	0.13 U	0.16 U	0.16 U	0.13 U	mg/kg
Silver	5.70E+03	0.11 J	0.092 J	0.088 J	0.12 J	0.18 J	0.23 J	0.15 J	mg/kg
Sodium		414 J-	517 J-	580 J-	1060 J-	1690 J-	1030 J-	1020 J-	mg/kg
Strontium	1.00E+05	116 J	224 J	171 J	266 J	124 J	110 J	104 J	mg/kg
Thallium		0.12 U	0.091 U	0.16 U	0.15 J	0.26 J	0.21 J	0.17 J	mg/kg
Tin		0.47	0.41	0.39	0.44	0.79	0.67	0.56	mg/kg
Titanium		437 J	380 J	332 J	403 J	616 J	616 J	645 J	mg/kg

#### LOU 62 Table 4 (continued) Soil Characterization Data - Metals

Sai	npling Program	Ph A <sup>1</sup>	Ph A						
	Boring No.	SA2	SA2	SA2	SA2	SA2	SA2	SA2	
	Sample ID	SA2-0.5	SA2-10	SA2-20	SA2-30	SA2-40	SA2-50	SA2-60	
Sa	ample Depth (ft)	0.5	10	20	30	40	50	60	
	Sample Date	11/03/2006	11/03/2006	11/03/2006	11/06/2006	11/06/2006	11/06/2006	11/06/2006	
Motale	MSSL <sup>2</sup>								Unito
Mictals	mg/kg								onns
Tungsten		0.31 J-	0.44 J-	0.47 J-	0.77 J-	0.43 J-	0.46 J-	0.27 J-	mg/kg
Uranium		0.68	1.6	1.1	3.5	1.9	1.7	1.2	mg/kg
Vanadium	5.70E+03	26.6 J-	28.5 J-	24.3 J-	27.4 J-	36.1 J-	38.6 J-	30.2 J-	mg/kg
Zinc	1.00E+05	27.8 J-	26.5 J-	22.6 J-	22.1 UJ	37.7 J-	33.0 J-	34.3 J-	mg/kg
Mercury	3.41E+02 (t)	0.0071 U	0.0091 J	0.0078 UJ	0.0079 U	0.010 U	0.0098 U	0.0082 U	mg/kg

### State Industries Inc. Site Tronox Facility - Henderson, Nevada

#### 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).

(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 (t) Value for mercury and compounds.

#### LOU 62 Table 5 Groundwater Characterization Data - Metals

#### State Industries Inc. Site Tronox Facility - Henderson, Nevada

	Sampling Pro	ogram	PhA <sup>1</sup>	
	W	/eli ID:	SA2	
	Sam	ple ID	GWSA2	
	Sample	e Date	11/06/2006	
Metalo	MCL <sup>2</sup>			1 Jun it
wetars	ug/L			Unit
Aluminum	5.00E+01	j	13.6 J	ug/L
Antimony	6.00E+00		0.52 J-	ug/L
Arsenic	1.00E+01		223	ug/L
Barium	2.00E+03		28.9	ug/L
Beryllium	4.00E+00		0.088 UJ	ug/L
Boron	7.30E+03	С	2740 J-	ug/L
Cadmium	5.00E+00		0.23 J	ug/L.
Calcium			87600 J	ug/L
Chromium (Total)	1.00E+02		18.8 J-	ug/L
Chromium-hexavalent	1.09E+02	С	25.3 J	ug/L
Cobalt	7.30E+02	С	4.0 J-	ug/L
Copper	1.30E+03	р	3.6 J-	ug/L
lron	3.00E+02	j	9.4 UJ	ug/L
Lead	1.50E+01	ų	9.8 U	ug/L
Magnesium	1.50E+05	а	38000 J	ug/L
Manganese	5.00E+01	j	18.7 J+	ug/L
Molybdenum	1.82E+02	С	97.9	ug/L
Nickel	7.30E+02	С	3.7 J	ug/L
Platinum			0.10 U	ug/L
Potassium			7240 J-	ug/L
Selenium	5.00E+01		3.5 J	ug/L
Silver	1.00E+02	j	0.20 U	ug/L
Sodium			368000 J	ug/L
Strontium	2.19E+04	с	1430 J+	ug/L
Thallium	2.00E+00		6.4 U	ug/L
Tin	2.19E+04	с	0.20 UJ	ug/L
Titanium	1.46E+05	С	4.6 J	ug/L
Tungsten			6.2 J-	ug/L
Uranium	3.00E+01		9.5 J	ug/L
Vanadium	3.65E+01	С	54.5 J-	ug/L
Zinc	5.00E+03	j	20.0 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.

### LOU 62 Table 6 Soil Characterization Data - Organochlorine Pesticides (OCP)

### State Industries Inc. Site Tronox Facility - Henderson, Nevada

Frank and the second se					
	Sampling Program			Ph A	
	Boring No.	SA2	SA2	SA2	
	Sample ID	SA2-0.5	SA2-20	SA2-30	
	Sample Depth (ft)	0.5	20	30	
	Sample Date	11/03/2006	11/03/2006	11/06/2006	
Ourses alklasing Destinides	MSSL <sup>2</sup>				
Organochiorine Pesticides	mg/kg				Unit
4,4'-DDD	1.10E+01	0.0018 U	0.0020 U	0.0020 U	mg/kg
4,4'-DDE	7.80E+00	0.0018 U	0.0020 U	0.0020 U	mg/kg
4,4'-DDT	7.80E+00	0.0018 U	0.0020 U	0.0020 U	mg/kg
Aldrin	1.10E-01	0.0018 U	0.0020 U	0.0020 U	mg/kg
Alpha-BHC	4.00E-01 (bbb)	0.0018 U	0.0020 U	0.0020 U	mg/kg
Alpha-chlordane	1.40E+00 (y)	0.0018 U	0.0020 U	0.0020 U	mg/kg
Beta-BHC	1.40E+00 (bbb)	0.0018 U	0.0020 U	0.0020 U	mg/kg
Delta-BHC	4.00E-01 (z)	0.0018 U	0.0020 U	0.0020 U	mg/kg
Dieldrin	1.20E-01	0.0018 U	0.0020 U	0.0020 U	mg/kg
Endosulfan I	4.10E+03 (aa)	0.0018 U	0.0020 U	0.0020 U	mg/kg
Endosulfan II	4.10E+03 (aa)	0.0018 U	0.0020 U	0.0020 U	mg/kg
Endosulfan Sulfate	4.10E+03 (aa)	0.0018 U	0.0020 U	0.0020 U	mg/kg
Endrin	2.10E+02	0.0018 U	0.0020 U	0.0020 U	mg/kg
Endrin Aldehyde	2.10E+02 (k)	0.0018 U	0.0020 U	0.0020 U	mg/kg
Endrin Ketone	2.10E+02 (k)	0.0018 U	0.0020 U	0.0020 U	mg/kg
Gamma-BHC (Lindane)	1.90E+00 (bbb)	0.0018 U	0.0020 U	0.0020 U	mg/kg
Gamma-Chlordane	1.40E+00 (y)	0.0018 U	0.0020 U	0.0020 U	mg/kg
Heptachlor	4.30E-01	0.0018 U	0.0020 U	0.0020 U	mg/kg
Heptachlor Epoxide	2.10E-01	0.0018 U	0.0020 U	0.0020 U	mg/kg
Methoxychlor	3.40E+03	0.0035 U	0.0039 U	0.0039 U	mg/kg
Tech-Chlordane	1.40E+00	0.011 U	0.012 U	0.012 U	mg/kg
Toxaphene	1.70E+00	0.053 U	0.059 U	0.059 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).

(k) Value for endrin used as surrogate for endrin aldehyde and endrin ketone due

(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

(bbb) BHC listed as HCH in the PRG table.

### LOU 62 Table 7 Groundwater Characterization Data - Organochlorine Pesticides (OCP)

### State Industries Inc. Site Tronox Facility - Henderson, Nevada

	Sampling F	Program	Ph A <sup>1</sup>	
		Well ID	SA2	
	Sa	mple ID	GWSA2	······································
	Sam	ple Date	11/06/2006	
Organochlorine Pesticides	МС	L <sup>2</sup>		Linit
organocinorine resticides	ug/	Ľ		Unit
4,4'-DDD	2.80E-01	С	0.050 U	ug/L
4,4'-DDE	1.98E-01	С	0.050 U	ug/L
4,4'-DDT	1.98E-01	С	0.050 U	ug/L
Aldrin	4.00E-03	С	0.050 U	ug/L
Alpha-BHC	1.10E-02	c, (bbb)	0.050 U	ug/L
Alpha-chlordane	2.00E+00	(I)	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	(I)	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 UJ	ug/L
Tech-Chlordane	2.00E+00	(1)	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.

(I) 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 62 Table 8 Soil Characterization Data - Organophosphorus Pesticides (OPPs)

State Industries Inc. Site
Tronox Facility - Henderson, Nevada

Sam	Ph A <sup>1</sup>		
	Boring No.	SA2	
	Sample ID	SA2-0.5	
Sa	mple Depth (ft)	0.5	
	Sample Date	11/03/2006	
OPPe	MSSL <sup>2</sup>		Unit
0173	mg/kg		One
Azinphos-methyl		0.014 U	mg/kg
Bolstar		0.014 U	mg/kg
Chlorpyrifos	2.10E+03	0.021 U	mg/kg
Coumaphos		0.014 U	mg/kg
Demeton-O		0.041 UJ	mg/kg
Demeton-S		0.016 UJ	mg/kg
Diazinon	6.20E+02	🐃 0.023 UJ	mg/kg
Dichlorvos	6.60E+00	0.024 U	mg/kg
Dimethoate		0.023 U	mg/kg
Disulfoton	2.70E+01	0.051 U	mg/kg
EPN		0.014 UJ	mg/kg
Ethoprop		0.016 U	mg/kg
Ethyl Parathion	4.10E+03	0.019 U	mg/kg
Famphur		0.014 U	mg/kg
Fensulfothion		0.014 U	mg/kg
Fenthion	1.70E+02 (ff)	0.035 U	mg/kg
Malathion	1.40E+04	0.016 U	mg/kg
Merphos		0.032 U	mg/kg
Methyl parathion	1.70E+02	0.021 U	mg/kg
Mevinphos		0.016 U	mg/kg
Naled	1.40E+03	0.035 UJ	mg/kg
Phorate		0.021 U	mg/kg
Ronnel	3.40E+04	0.019 UJ	mg/kg
Stirphos		0.016 U	mg/kg
Sulfotep		0.021 U	mg/kg
Thionazin		0.019 U	mg/kg
Tokuthion	**	0.021 U	mg/kg
Trichloronate		0.021 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).

(ff) Value for methyl parathion used as surrogate for fenthion based on structural similarities.

# LOU 62 Table 9 Groundwater Characterization Data - Organophosphorus Pesticides (OPPs)

### State Industries Inc. Site Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A <sup>1</sup>	
	Well ID	SA2	
······································	Sample ID	GWSA2	
	Sample Date	11/06/2006	
OPPs	MCL <sup>2</sup>		Unit
	ug/L		
Azinphos-methyl		2.5 U	ug/L
Bolstar	**	1.0 U	ug/L
Chlorpyrifos	1.09E+02 c	1.0 U	ug/L
Coumaphos	er 100	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 UJ	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 UJ	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	u_ '	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 62 Table 10 Soil Characterization Data - PCBs

Samp	ling Program	Ph A <sup>1</sup>	Ph A	PhA					
	Boring ID	SA2	SA2	SA2	SA2	SA2	SA2	SA2	
	Sample ID	SA2-0.5	SA2-10	SA2-20	SA2-30	SA2-40	SA2-50	SA2-60	
Sam	ple Depth (ft)	0.5	10	20	30	40	50	60	
	Sample Date	11/03/2006	11/03/2006	11/03/2006	11/06/2006	11/06/2006	11/06/2006	11/06/2006	
PCBs	MSSL <sup>2</sup>								Unit
r 003	mg/kg								Unit
Arocior-1016	2.40E+01 (i)	0.035 U	0.041 U	0.039 U	0.039 U	0.049 U	0.049 U	0.040 U	mg/kg
Aroclor-1221	8.30E-01 (i)	0.035 U	0.041 U	0.039 U	0.039 U	0.049 U	0.049 Ü	0.040 U	mg/kg
Aroclor-1232	8.30E-01 (i)	0.035 U	0.041 U	0.039 U	0.039 U	0.049 U	0.049 U	0.040 U	.mg/kg
Aroclor-1242	8.30E-01 (i)	0.035 U	0.041 U	0.039 U	0.039 U	0.049 U	0.049 U	0.040 U	mg/kg
Aroclor-1248	8.30E-01 (i)	0.035 U	0.041 U	0.039 U	0.039 U	0.049 U	0.049 U	0.040 U	mg/kg
Aroclor-1254	8.30E-01 (i)	0.035 U	0.041 U	0.039 U	0.039 U	0.049 U	0.049 U	0.040 U	mg/kg
Aroclor-1260	8.30E-01 (i)	0.035 U	0.041 U	0.039 U	0.039 U	0.049 U	0.049 U	0.040 U	mg/kg

### State Industries Inc. Site Tronox Facility - Henderson, Nevada

#### 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 62 Table 11 Groundwater Characterization Data - PCBs

	Sampling Program	Ph A <sup>1</sup>	
	Well ID	SA2	···· ···
	Sample ID	GWSA2	
	Sample Date	11/06/2006	
DCRo	MCL <sup>2</sup>		Linit
PCDS	ug/L		Unit
Aroclor-1016	5.00E-01 (bb)	0.10 UJ	ug/L
Aroclor-1221	5.00E-01 (bb)	0.10 UJ	ug/L
Aroclor-1232	5.00E-01 (bb)	0.10 UJ	ug/L
Aroclor-1242	5.00E-01 (bb)	0.10 UJ	ug/L
Aroclor-1248	5.00E-01 (bb)	0.10 UJ	ug/L
Aroclor-1254	5.00E-01 (bb)	0.10 UJ	ug/L
Aroclor-1260	5.00E-01 (bb)	0.10 UJ	ug/L

# State Industries Inc. Site Tronox Facility - Henderson, Nevada

#### 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.

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## LOU 62 Table 12 Soil Characterization Data - Perchlorate

### State Industries Inc. Site Tronox Facility - Henderson, Nevada

Boring ID	Sample ID	Sample Depth (ft)	Sample Date	Perchlorate ug/kg	MSSL <sup>1</sup> mg/kg	Sampling Program
SA2	SA2-0.5	0.5	11/03/2006	35.7 J	7.95E+02	Ph A <sup>2</sup>
SA2	SA2-10	10	11/03/2006	451	7.95E+02	Ph A
SA2	SA2-20	20	11/03/2006	77.8	7.95E+02	Ph A
SA2	SA2-30	30	11/06/2006	655	7.95E+02	Ph A
SA2	SA2-40	40	11/06/2006	2270	7.95E+02	Ph A
SA2	SA2-50	50	11/06/2006	406	7.95E+02	Ph A
SA2	SA2-60	60	11/06/2006	49.0 U	7.95E+02	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.

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### LOU 62 Table 13 Groundwater Characterization Data - Perchlorate

Tonox Facility - Henderson, Nevada								
Well ID Number	Sample ID	Sample Date	Perchlorate	Units	MCL <sup>1</sup> ug/L	Sampling Program		
SA2	GWSA2	11/06/2006	393	ug/L	1.80E+01 a,(m)	Ph A <sup>2</sup>		

# State Industries Inc. Site Tronox Facility - Henderson, Nevada

#### 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 62 Table 14 Soil Characterization Data - Radionuclides

# State Industries Inc. Site 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 <sup>1</sup>	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	Some ID	Sample	Dete									Sampling
Number	Sample ID	Depth (ft)	Date									Program
SA2	SA2-0.5	0.5	11/03/2006	1.02 J	1.97	1.12	0.798 J	0.994 J	0.26 J	0.035 J-	0.196 J	Ph A <sup>2</sup>
SA2	SA2-10	10	11/03/2006	1.17 J	1.56							Ph A
SA2	SA2-20	20	11/03/2006	1.15 J	1.95							Ph A
SA2	SA2-30	30	11/06/2006	3.39	1.01 U							Ph A
SA2	SA2-40	40	11/06/2006	1.34 J	1.72							Ph A
SA2	SA2-50	50	11/06/2006	1.3 J	1.39							Ph A
SA2	SA2-60	60	11/06/2006	2.64	1.54							Ph A

#### Notes:

1. 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.

2. ENSR, 2007, Phase A Source Area Investigation Results, Tronox Facility, Henderson, Nevada, September 2007.

#### LOU 62 Table 15 Groundwater Characterization Data - Radionuclides

			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 <sup>1,2</sup>	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
SA2	GWSA2	11/06/2006	10.9 J-	5.82 J-	8.15	13	9.14	15.5	0.348 J+	11.2	Ph A <sup>3</sup>

# State Industries Inc. Site Tronox Facility - Henderson, Nevada

#### 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 62 Table 16 Soil Characterization Data - SVOCs

### State Industries Inc. Site Tronox Facility - Henderson, Nevada

	San	npling Program	Ph A <sup>1</sup>	Ph A					
		Boring No.	SA 2	SA 2	SA 2	SA 2	SA 2	SA 2	SA 2
		Sample ID	SA2-0.5	SA2-10	SA2-20	SA2-30	SA2-40	SA2-50	SA2-60
	Sa	mple Depth (ft)	0.5	10	20	30	40	50	60
		Sample Date	11/03/2006	11/03/2006	11/03/2006	11/06/2006	11/06/2006	11/06/2006	11/06/2006
svoc	Analytical	MSSL <sup>2</sup>	ua/ka	ua/ka	ua/ka	ua/ka	ua/ka	ua/ka	ua/ka
· · · · ·	Method	mg/kg	49/19	ugi kg		ugang	uging	ug/ng	ughtg
1,4-Dioxane	non-SIM	1.70E+02	70 U	410 U	390 U	390 U	490 U	490 U	400 U
2-Methylnaphthalene	non-SIM	2.10E+02 (jj)	350 U	410 U	390 U	390 U	490 U	490 U	400 U
2-Methylnaphthalene	SIM	2.10E+02 (jj)	7.0 U						
Acenaphthene	non-SIM	3.30E+04	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Acenaphthene	SIM	3.30E+04	7.0 U						
Acenaphthylene	non-SIM	3.30E+04 (pp)	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Acenaphthylene	SIM	3.30E+04 (pp)	7.0 U						
Anthracene	non-SIM	1.00E+05	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Anthracene	SIM	1.00E+05	7.0 U						
Benz(a)anthracene	non-SIM	2.30E+00	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Benz(a)anthracene	SIM	2.30E+00	7.0 U						
Benzo(a)pyrene	non-SIM	2.30E-01	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Benzo(a)pyrene	SIM	2.30E-01	7.0 U						
Benzo(b)fluoranthene	non-SIM	2.30E+00	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Benzo(b)fluoranthene	SIM	2.30E+00	7.0 U						
Benzo(g,h,i)perylene	non-SIM	3.20E+04 (w)	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Benzo(g,h,i)perylene	SIM	3.20E+04 (w)	7.0 U						
Benzo(k)fluoranthene	non-SIM	2.30E+01	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Benzo(k)fluoranthene	SIM	2.30E+01	7.0 U						
bis(2-Ethylhexyl)phthalate	non-SIM	1.40E+02	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Butyl benzyl phthalate	non-SIM	2.40E+02	350 U	410 U	390 U 🗄	390 U	490 U	490 U	400 U
Chrysene	non-SIM	2.30E+02	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Chrysene	SIM	2.30E+02	7.0 U						
Dibenz(a,h)anthracene	non-SIM	2.30E-01	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Dibenz(a,h)anthracene	SIM	2.30E-01	7.0 U						
Diethyl phthalate	non-SIM	1.00E+05	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Dimethyl phthalate	non-SIM	1.00E+05	350 U	410 U	390 U	390 U	490 U	490 U	400 U

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#### LOU 62 Table 16 (continued) Soil Characterization Data - SVOCs

#### State Industries Inc. Site Tronox Facility - Henderson, Nevada

	Sampling Program			Ph A					
		Boring No.	SA 2						
		Sample ID	SA2-0.5	SA2-10	SA2-20	SA2-30	SA2-40	SA2-50	SA2-60
	Sa	mple Depth (ft)	0.5	10	20	30	40	50	60
		Sample Date	11/03/2006	11/03/2006	11/03/2006	11/06/2006	11/06/2006	11/06/2006	11/06/2006
svoc	Analytical	MSSL <sup>2</sup>	ug/kg	ua/ka		ualka	ualka		had the
5700	Method	mg/kg	ug/kg	uy/ky	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Di-N-Butyl phthalate	non-SIM	6.80E+04	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Di-N-Octyl phthalate	non-SIM		350 U	410 U	390 U	390 U	490 U	490 U	400 U
Fluoranthene	non-SIM	2.40E+04	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Fluoranthene	SIM	2.40E+04	7.0 U						
Fluorene	non-SIM	2.60E+04	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Fluorene	SIM	2.60E+04	7.0 U						
Hexachlorobenzene	non-SIM	1.20E+00	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Hexachlorobenzene	SIM	1.20E+00	7.0 U						
Indeno(1,2,3-cd)pyrene	non-SIM	2.30E+00	. 350 U	410 U	390 U	390 U	490 U	490 U	400 U
Indeno(1,2,3-cd)pyrene	SIM	2.30E+00	7.0 U						
Naphthalene	non-SIM	2.10E+02	5.3 U	6.2 U	5.9 U	5.9 U	7.5 U	7.4 U	6.1 U
Naphthalene	non-SIM	2.10E+02	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Naphthalene	SIM	2.10E+02	7.0 U						
Nitrobenzene	non-SIM	1.10E+02	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Octachlorostyrene	non-SIM		350 U	410 U	390 U	390 U	490 U	490 U	400 U
Phenanthrene	non-SIM	1.00E+05 (n)	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Phenanthrene	SIM	1.00E+05 (n)	7.0 U						
Pyrene	non-SIM	3.20E+04	350 U	410 U	390 U	390 U	490 U	490 U	400 U
Pyrene	SIM	3.20E+04	7.0 U						
Pyridine	non-SIM	6.80E+02	1700 U	2000 U	1900 U	1900 U	2400 U	2400 U	2000 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 62 Table 17 Groundwater Characterization Data - SVOCs

# State Industries Inc. Site Tronox Facility - Henderson, Nevada

	Ph A <sup>1</sup>		
		Well No.	SA2
		Sample ID	GWSA2
		Sample Date	11/06/2006
SVOCe	Analytic	MCL <sup>2</sup>	ua/l
07003	Method	ug/L	ug/L
1,4-Dioxane	non-SIM	6.11E+00 c	10 UJ
2-Methylnaphthalene	non-SIM	6.20E+00 c,(jj)	10 UJ
2-Methylnaphthalene	SIM	6.20E+00 c,(jj)	
Acenaphthene	non-SIM	3.65E+02 c	10 UJ
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 UJ
Anthracene	SIM	1.83E+03 c	
Benz(a)anthracene	non-SIM	9.21E-02 c	10 UJ
Benz(a)anthracene	SIM	9.21E-02 c	
Benzo(a)pyrene	non-SIM	2.00E-01	10 UJ
Benzo(a)pyrene	SIM	2.00E-01	
Benzo(b)fluoranthene	non-SIM	9.21E-02 c	10 UJ
Benzo(b)fluoranthene	SIM	9.21E-02 c	
Benzo(g,h,i)perylene	non-SIM	1.83E+02 c,(w)	10 UJ
Benzo(g,h,i)perylene	SIM	1.83E+02 c,(w)	
Benzo(k)fluoranthene	non-SIM	9.21E-01 c	10 UJ
Benzo(k)fluoranthene	SIM	9.21E-01 c	
bis(2-Ethylhexyl)phthalate	non-SIM	6.00E+00	17 J
Butyl benzyl phthalate	non-SIM	7.30E+03 c	10 UJ
Chrysene	non-SIM	9.21E+00 c	10 UJ
Chrysene	SIM	9.21E+00 c	
Dibenz(a,h)anthracene	non-SIM	9.21E-03 c	10 UJ
Dibenz(a,h)anthracene	SIM	9.21E-03 c	
Diethyl phthalate	non-SIM	2.92E+04 c	10 UJ
Dimethyl phthalate	non-SIM	3.65E+05 c	10 UJ
Di-N-Butyl phthalate	non-SIM	3.65E+03 c	1.0 J
Di-N-Octyl phthalate	non-SIM	1,46E+03 c	10 UJ
Fluoranthene	non-SIM	1.46E+03 c	10 UJ
Fluoranthene	SIM	1.46E+03 c	
Fluorene	non-SIM	2.43E+02 c	10 UJ
Fluorene	SIM	2.43E+02 c	
Hexachlorobenzene	non-SIM	1.00E+00	10 UJ
Hexachlorobenzene	SIM	1.00E+00	
Indeno(1,2,3-cd)pyrene	non-SIM	9.21E-02 c	10 UJ
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 UJ
Naphthalene	SIM	6.20E+00 c	
Nitrobenzene	non-SIM	3.40E+00 c	10 UJ
Octachlorostyrene	non-SIM	C	10 UJ

### LOU 62 Table 17 (continued) Groundwater Characterization Data - SVOCs

#### State Industries Inc. Site Tronox Facility - Henderson, Nevada

· · · · · · ·	Ph A <sup>1</sup>		
	. SA2		
	GWSA2		
	11/06/2006		
EVOC-	Analytic	MCL <sup>2</sup>	ua/l
50005	Method	ug/L	ug/∟
Phenanthrene	non-SIM	1.80E+03 (n)	10 UJ
Phenanthrene	SIM	1.80E+03 (n)	
Pyrene	non-SIM	1.83E+02 c	10 UJ
Pyrene	SIM	1.83E+02 c	
Pyridine	non-SIM	3.65E+01 c	20 UJ

#### 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 27 Table 18 Soil Characteristic Data - TPH and Fuel Alcohols

					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 <sup>1</sup> mg/kg		1.00E+05	1.00E+05	1.00E+02 w	1.00E+02 w	1.00E+02 w		
Boring No.	Sample ID.	Sample Depth (ft)	Sample Date							Sampling Program	
SA 2	SA2-0.5	0.5	11/03/2006				27 U	27 U	0.11 U	Ph A <sup>2</sup>	
SA 2	SA2-10	10	11/03/2006				31 U	31 U	0.12 U	Ph A	
SA 2	SA2-20	20	11/03/2006				29 U	29 U	0.12 U	Ph A	
SA 2	SA2-30	30	11/06/2006				30 U	30 U	0.12 U	Ph A	
SA 2	SA2-40	40	11/06/2006				37 U	37 U	0.15 U	Ph A	
SA 2	SA2-50	50	11/06/2006				37 U	37 U	0.15 U	Ph A	
SA 2	SA2-60	60	11/06/2006				31 U	31 U	0.12 U	Ph A	

# State Industries Inc. Site Tronox Facility - Henderson, Nevada

# 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.

(vv) Nevada Administrative Code 445A.2272. Contamination of soil: Establishment of action levels. NAC 445A.2272.1.b.

#### LOU 62 Table 19 Soil Characterization Data - VOCs

#### State Industries Inc. Site Tronox Facility - Henderson, Nevada

Sa	ampling Program	Ph A <sup>1</sup>	Ph A	Ph A	Ph A	Ph A	Ph A	Ph A
	Boring No.	SA 2	SA 2	SA 2	SA 2	SA 2	SA 2	SA 2
	Sample ID	SA2-0.5	SA2-10	SA2-20	SA2-30	SA2-40	SA2-50	SA2-60
	Sample Depth (ft)	0.5	10	20	30	40	50	60
	Sample Date	11/03/2006	11/03/2006	11/03/2006	11/06/2006	11/06/2006	11/06/2006	11/06/2006
VOCs	MSSL <sup>2</sup>	ua/ka	ua/ka	ua/ka	ua/ka	ua/ka	11/00/2000	ua/ka
	mg/kg				-33	-5.5	ug/ilg	uging
Naphthalene	2.10E+02	5.30	6.2 U	5.9 U	5.9 U	7.5 U	7.4 U	6.1 U
1,1,1,2-1 etrachloroethane	7.60E+00	5.30	6.2 U	5.9 U	5.9 U	7.5 U	7.4 U	<u>6.1 U</u>
1,1,1-I richloroethane	1.40E+03	<u>5.3 U</u>	6.2 U	5.9 U	5.9 U	7.5 U	7.4 U	6.1 U
1,1,2,2-1 etrachioroethane	9.70E-01	5.30	<u>6.2 U</u>	5.9 U	5.9 U	7.5 U	7.4 U	6.1 U
1,1,2-1 richloroethane	2.10E+00	5.30	6.2 U	5.9 U	<u>5.9 U</u>	7.5 U	7.4 U	6.1 U
1,1-Dichloroethane	2.30E+03	5.30	6.2 U	<u>5.9 U</u>	5.9 U	7.5 U	7.4 U	6.1 U
	4.70E+02	5.30	6.2 U	5.90	5.9 U	7.5 U	7.4 U	<u>6.1 U</u>
1,1-Dichloropropene	1.75E+00 (gg)	5.30	6.2 U	<u>5.9 U</u>	5.9 U	7.5 U	7.4 U	6.1 U
1,2,3-1 richlorobenzene	2.60E+02 (nn)	5.30	6.2 U	5.9 U	5,90	7.5 U	7.4 U	6.1 U
1,2,3-Trichloropropane	1.60E+00	5.30	6,20	5.9 U	5.9 U	7.5 U	7.4 U	6.1 U
1,2,4-1 richlorobenzene	2.60E+02	5.3 U	6.20	<u> </u>	<u>5,9 U</u>	7.5 U	7.4 U	6.1 U
1,2,4-1 nmetnyidenzene	2.20E+02	5.30	6.20	5.9 U	5.9 U	7.5 U	7.4 U	6.1 U
1,2-Dibromo-3-chioropropane	2.00E-02	5.30	6.20	5.90	5.90	7.5 U	7.4 U	6.1 U
1,2-Dichlorobenzene	3.70E+02	5.30	6.20	5.90	5.90	7.5 U	7.4 U	6.1 U
1,2-Dichloroethane	8.402-01	5.30	6,20	5.90	<u>5.9 U</u>	7.5 U	7.4 U	<u>6.1 U</u>
1,2-Dichloropropane	8.501-01	5.30	6.2 U	<u>5.9 U</u>	<u>5.9 U</u>	7.5 U	7.4 U	6.1 U
1,3,5-1 nmethylbenzene	7.800-00	5.30	6.2 0	<u>5.90</u>	5.90	7.5 U	7.4 U	6.1 U
1,3-Dichlorobenzene	1.40E+02	5.30	6.2 U	<u> </u>	<u>5.9 U</u>	7.5 U	7.4 U	6.1 U
1.3-Dichloropropane	4.10E+02	5.30	6.20	<u>5.9 U</u>	5.9 U	7.5 U	7.4 U	<u>6.1 U</u>
1,4-Dichloropenzene	8.10E+00	5.30	6.20	<u>5.9 U</u>	1.3 J	2.2 J	<u>1.5 J</u>	1.2 J
2 Putenone		<u> </u>	6.20	5.90	5.90	7.50	<u> </u>	6.10
2 Chlorotoluono	3.40E+04	<u> </u>	120	120	120	15 U	<u>15 U</u>	12 U
	5.10E+02	5.30	6.2 0	5.90	5.90	<u></u>		6.1 U
2-riexanone	1.72E+04 (III)	<u> 11 UJ</u>	12 UJ	12 03	12 UJ	15 UJ	<u>15 UJ</u>	12 UJ
4 Chlorotoluono	5 10 E 10 (1141)	5.30	6.2 U	5.90	5.90	7.50	7.4 U	<u> </u>
	5.10E+02 (WW)	5.30	0.20	5.90	5.90	7.50	7.40	<u>6.1 U</u>
4-Isopropyiloidene	1 705 04	5.3 U	0.2 0	5.90	5.90	7.50		6.1 U
	1.70E+04	11.1	12 U	12 0	120	<u> </u>	15.0	12 U
Bonzono	1.605.00	5.211		5011	<u> </u>	<u> </u>	15.0	120
Bromobonzono	1.000-+00	 5.0	0.2 0	5.90	5.90	7.50	7.40	<u> </u>
Bromochloromothano	1.202+02	5.30	6.20	5.90	5.90	7.50	7.40	<u>6.1 U</u>
Bromodichloromethane	2.605+00	531	6211	5.90	5,90	7.50	7.40	6.1 U
Bromoform	2.000+00	531	6211	5.90	5.90	7.50	7.40	<u> </u>
Bromomethane	1.50E+01	11	1211	1211	1011	15.11	15.0	<u> </u>
Carbon tetrachloride	5.80E-01	531	6211	5011	5011	7511		120
Chlorobenzene	5.00E+02	5311	6211	5.90	5.90	7.50	7.40	0.10
Chloroethane	7 20E+00	5311	62111	5.90	5.90	7,50	7.40	
Chloroform	5.80E-01	5311	6211	5.900	5.900	7.5 00	7.4 05	6411
Chloromethane	1 70E+02	53111	6211	5.90	5.90	7.50	7.40	61111
cis-1.2-Dichloroethene	1.60E+02	5311	6211	5.900	5.9 00	7.5 05	7.4 00	6111
cis-1.3-Dichloropropene	1.75E+00 (aa)	5311	6211	5011	5011	7511	7,40	6111
Dibromochloromethane	2.60F+00	5311	6211	5011	501	751	7.40	<u>0.10</u> 6.111
Dibromomethane	5 90E+02 (vv)	5311	6211	5011	5011	7,50	7 4 0	0.1 U 6 1 I I
Dichlorodifluoromethane	3 40F+02 (AA)	53111	62111	50111	5011	7511	7.40	0.1 U
Ethyl t-butyl ether	7 90F+01 (kk)	5311	6211	5.800	5.903	7.5 UJ	7.4 UJ	0,1 UJ
Ethylhenzene	2 30F±02	531	6211	5.90	5.90	7.50	7.40	0.1 U
Ethylene dibromide	7 00E-02	5311	6211	5.30	5.90	7.50	7 4 0	0.1 U
Hexachlorobutadiene	2 50E+01	5311	6211	5011	5011	7.50	7 / 11	0.1U 6.1U
		0.00	0.2.0	0.00	2.20	1.50	7.4 U	0.1 U

#### LOU 62 Table 19 (continued) Soil Characterization Data - VOCs

#### State Industries Inc. Site Tronox Facility - Henderson, Nevada

S	ampling Program	Ph A <sup>1</sup>	Ph A					
	Boring No.	SA 2	SA 2	SA 2	SA 2	SA 2	SA 2	SA 2
	Sample ID	SA2-0.5	SA2-10	SA2-20	SA2-30	SA2-40	SA2-50	SA2-60
	Sample Depth (ft)	0.5	10	20	30	40	50	60
	Sample Date	11/03/2006	11/03/2006	11/03/2006	11/06/2006	11/06/2006	11/06/2006	11/06/2006
VOCe	MSSL <sup>2</sup>	ua/ka	ua/ka	ua/ka	ualka	ua/ka	halka	ualka
1003	mg/kg	ug/kg	uy/ky	ug/kg	uy/ky	uy/ky	ug/kg	uy/kg
isopropyl ether		5.3 U	6.2 U	5.9 U	5.9 U	7.5 U	7.4 U	6.1 Ų
Isopropylbenzene	5.80E+02 (zz)	5.3 U	6.2 U	5.9 U	5.9 U	7.5 U	7.4 U	6.1 U
Methyl tert butyl ether	7.90E+01	5,3 U	6.2 U	5.9 U	5.9 U	7.5 U	7.4 U	6.1 U
Methylene chloride	2.20E+01	5.3 U	6.2 U	5.9 U	5.9 U	7.5 U	7.4 U	6.1 U
N-Butylbenzene	2.40E+02	5.3 U	6.2 U	5.9 U	5.9 U	7.5 U	7.4 U	6.1 U
N-Propylbenzene	2.40E+02	5.3 U	6.2 U	5.9 U	5.9 U	7.5 U	7.4 U	6.1 U
sec-Butylbenzene	2.20E+02	5.3 U	6.2 U	5.9 U	5.9 U	7.5 U	7.4 U	6.1 U
Styrene	1.70E+03	5.3 U	6.2 U	5.9 U	5.9 U	7.5 U	7.4 U	6.1 U
t-Butyl alcohol		11 UJ	12 UJ	12 UJ	12 UJ	15 UJ	15 UJ	12 UJ
tert-Butylbenzene	3.90E+02	5.3 U	6.2 U	5.9 U	5.9 U	7.5 U	7.4 U	6.1 U
Tetrachloroethene	1.70E+00	5.3 U	6.2 U	5.9 U	5.9 U	7.5 U	7.4 U	6.1 U
Toluene	5.20E+02	5.3 U	6.2 U	5.9 U	5.9 U	7.5 U	7.4 U	6.1 U
trans-1,2-Dichloroethylene	2.00E+02	5.3 U	6.2 U	5.9 U	5.9 U	7.5 U	7.4 U	6,1 U
trans-1,3-Dichloropropene	1.75E+00 (gg)	5.3 U	6.2 U	5.9 U	5.9 U	7.5 U	7.4 U	6.1 U
Trichloroethene	1.00E-01	5.3 U	6.2 U	5.9 U	5.9 U	6.5 J	1.7 J	4.3 J
Trichlorofluoromethane	1.40E+03	5.3 UJ	6.2 UJ	5.9 UJ	5.9 UJ	7.5 UJ	7.4 UJ	6.1 UJ
Vinylchloride	8.60E-01	5.3 U	6.2 U	5.9 U	5.9 U	7.5 U	7.4 U	6.1 U
Xylene (Total)	2.10E+02	11 U	12 U	12 U	12 U	15 U	15 U	12 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.

(zz) Isopropyl benzene is listed as cumene (isopropylbenzene) in the MSSL table.

#### LOU 62 Table 20 Groundwater Characteristic Data - VOCs

#### State Industries Inc. Site Tronox Facility - Henderson, Nevada

:	Sampling Progra	am Ph A <sup>1</sup>
	Well	ID GWSA2
	Sample	ID GWSA2
-	Sample Da	ate 11/06/2006
NOOs	MCL <sup>2</sup>	
vocs	ua/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,g	1g 5.0 U
1,2,3-Trichlorobenzene	7.16E+00 c,h	nh 5.0 U
1.2.3-Trichloropropane	5.60E-03 c,y	v 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	5.0 U
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,r	in 10 UJ
2-Methoxv-2-methyl-butane		5.0 U
4-Chlorotoluene	1.22E+02 c.v	vw 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.c	ia 5.0 U
Bromodichloromethane	8.00E+01 r	5.0 U
Bromoform	8.00E+01 r	5.0 U
Bromomethane	8.66E+00 c	10 U
Carbon tetrachloride	5.00E+00	5.0 U
Chlorobenzene	1.00E+02 c.c	5.0 U
Chloroethane	4.64E+00	5.0 UJ
Chloroform	8.00E+01 r	5.0 U
Chloromethane	1.58E+02 c	5.0 UJ
cis-1.2-Dichloroethene	7.00E+01	5.0 U
cis-1.3-Dichloropropene	3.95E-01 c.c	ia 5.0 U
Dibromochloromethane	8.00E+01 r	5,0 U
Dibromomethane	6.08E+01 c.x	x 5.0 U
Dichlorodifluoromethane	3.95E+02 c	5.0 UJ
Ethvi t-butvi ether	1.10E+01 c.k	(k 5.0 U
Fthvlbenzene	7.00E+02	5.0 U
Ethylene dibromide		5.0 U
Hexachlorobutadiene	8.62E-01 c	5.0 U

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#### LOU 62 Table 20 (continued) Groundwater Characteristic Data - VOCs

#### State Industries Inc. Site Tronox Facility - Henderson, Nevada

	Sampling Program	Ph A <sup>1</sup>
	Well ID	GWSA2
	Sample ID	GWSA2
	Sample Date	11/06/2006
VOCe	MCL <sup>2</sup>	ua/l
*003	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	5.0 U
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 U
trans-1,2-Dichloroethylene	1.00E+02	5.0 U
trans-1,3-Dichloropropene		5.0 U
Trichloroethene	5.00E+00	8.6
Trichlorofluoromethane		5.0 UJ
Vinylchloride	2.00E+00	5.0 U
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 62 Table 21 Soil Characterization Data - Long Asbestos Fibers in Respirable Soil Fraction

			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)	
SA2	SA2	12/07/2006	2989000 U	0	2989000 U	0	Ph A <sup>1</sup>

# State Industries Inc. Site Tronox Facility - Henderson, Nevada

#### Notes:

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

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#### LOU 62 Table 22 Summary of Historical Groundwater Analytical Data

#### State Industries Inc. Site Tronox Facility - Henderson, Nevada

#### **Groundwater Characterization for Perchlorate**

5	ample Date	1/13/00	2/2/01	2/25/02	2/19/03	2/3/04	2/18/05	2/2/06	3/20/06	1/17-18/07
	Units	ug/L								
We	II TR-9	24	<4	7.7	4.7	5.3	7.6	5.5	<4	<4
Nam	e TR-10	1190	1200	1100	1000	1000	1000	880	920	1200
	MCL <sup>1</sup> (ug/L)	1.80E+01 a,m								

WELL #	Sample Date	Total Depth (ft bgs)	Depth to Water (ft TOC)	Mn (ppm)	pH (Lab)	EC (Lab, µmho/cm)	Cr <sub>+6</sub> (ppm)	Cr-total (ppm)	ClO₄ (ppm)	LAB
TR-9	10/9/99	250.00	60.50	0.04	7.8	1,378			<0.004	MW
TR-10	10/9/99	100.00	57.35	0.01	7.9	2,190			1.12	MW

#### Notes:

Labs:

µmho/cm = micromhos per centimeter ppm = parts per million

ft bgs = feet below ground surface

ft TOC = feet from Top of Casing

ND = Not determined

ND<0.15 = Not determined, not detected above the designated detection limit, i.e. 0.15

---- = Either no data was obtained or was not analyzed for the respective constituent.

CIO4 by IC by Montgomery-Watson Laboratories

1. U.S. EPA Maximum Contaminant Level (MCL) values unless noted.

2. Difference between Anion Sum and Cation Sum. Acceptance criteria of up to +/- 2% for Anion Sum between 3 and 10 and up to +/- 5% for Anion Sum between 10 and 800

EC: Electrical Conductivity

Mn = Manganese $ClO_4$ : Perchlorate

Cr<sup>+6</sup>: Hexavalent Chromium Cr-total: Total Chromium

		MW	Montgomery Watson
KMC	Kerr-McGee Corporation	NEL	Nevada Environmental Laboratory
KMCLLC	Kerr-McGee Corporation, LLC	SNWA	Southern Nevada Water Authority
KMG	Kerr-McGee		

Source: Kerr-McGee Chemical LLC Company, Mother-hen Database.

mg/I = milligrams/liter

#### LOU 62 Table 23a Summary of Historical Soil Analytical Data

#### State Industries Inc. Site Tronox Facility - Henderson, Nevada

Sample Matrix: Soil Sample Analysis by: Atlas Chemical Testing Laboratories, Las Vegas Nevada Samples taken from Pond Area

Boring/ Sample Number	Date	Sample Depth (ft bgs)	Sodium (%)	Sulfate (%)	Total Available Water Soluble Sodium Sulfate (%)	рН
B1*	11/8/1995	2	0.01	0.02	0.03	8.6
	11/8/1995	5	0.02	0.04	0.06	9.2
	11/8/1995	9	0.03	0.04	0.06	8.4
B2*	11/8/1995	3	0.02	0.03	0.05	8.5
	11/8/1995	6	0.03	0.04	0.06	8.9
	11/8/1995	9	0.03	0.03	0.05	8.5
	11/8/1995	14	0.03	0.04	0.06	8.5
B3	11/8/1995	3	0.08	0.91	0.24	8.48
	11/8/1995	5	0.08	0.88	0.25	6.29
	11/8/1995	4	0.1	0.92	0.31	5.85
	11/8/1995	7	0.07	0.86	0.22	7.28
	11/8/1995	14	0.07	0.93	0.22	7.5
B4	11/8/1995	2	0.11	1.05	0.33	7.77
	11/8/1995	4	0.09	0.96	0.29	6.49
	11/8/1995	6	0.03	0.12	0.09	8.34
	11/8/1995	9	0.02	0.03	0.05	8.53
	11/8/1995	14	0.02	0.03	0.05	8.84
B5	11/8/1995	2	0.13	1.39	0.42	7.96
	11/8/1995	5	0.08	1.05	0.25	8.03
	11/8/1995	7	0.03	0.18	0.1	8.41
B6	11/8/1995	3	0.02	0.05	0.06	8.74
	11/8/1995	7	0.03	0.11	0.08	8.66
B7	11/8/1995	2	0.03	1.08	0.1	4.35
	11/8/1995	4	0.03	0.84	0.09	5.2
	11/8/1995	6	0.03	0.95	0.08	3,61

#### Notes:

As\* = Arsenic, EPA Method 7060A Co = Cobalt

Ba = Barium

Be = Beryllium Cr = Chromium Cu = Copper Hg\* = Mercury, EPA Method 7471A Pb\* = Lead, EPA Method 7420 Mo = Molybdenum Zn = 2Ni - Nickel Ag = Silver V = Vanadium

Zn = Zinc

VOCs = Volatile organic compounds

ND = Not determined

-- = Data was detected below the Reporting limit. J = Estimated quantitation due to a probable matrix effect.

1, 1, 1-TCA = 1, 1, 1-Trichloroethane (TCA)

TCE = Trichloroethene (TCE) PCE = Tetrachloroethene (PCE) µg/kg = micrograms per kilogram mg/kg = milligrams per kilogram

\* Refer to Plate A for location of borings

Metals analyzed at 1:500 dilution due to matrix effect (As, Cr, Cu, Mo, Ni, V, Zn)

Water Soluble Salt Analysis in Soil 1:5 (soil:water) Aqueous Extraction, ASTM D 1428, D 516.

**NOTE:** As indicated on analysis, the results for each constituent denote the percentage of that analyte, soluble in water at a 1:5 (soil: water) extraction ratio, which is present in the soil. Sodium was determined by flame photometry, sulfate turbidimetrically, and sodium sulfate by calculation.

**Sources:** (1) ETEC, 1995, Geotechnical Investigation Report, Administration/ Office Building Between Lake Mead Drive and KMCC Plant Henderson, Nevada, November 20, 1995.

(2) Western Technologies, 1996a, Subsurface Soil Evaluation Former Evaporative Ponds Sites, Former State Industries Facility, BMI Industrial Complex, Henderson, Nevada; On behalf of State Industries, Inc., February 20, 1996.
(3) Kerr-McGee, 1996b, Response to LOU Comments.

#### LOU 62 Table 23b Summary of Historical Soil Analytical Data

#### State Industries Inc. Site Tronox Facility - Henderson, Nevada

Sample Matrix: Soil Samples taken by State Industries, expired holding times.

Sample Analysis by: Nevada Environmental Laboratory, Las Vegas, Nevada

Samples taken from Rectangular and Circular Evaporative Pond Areas (Samples BR and BC, respectively). Background sample taken (BB-1).

Sample Number	Date	Depth (ft bgs)		CAM 17 METALS (mg/kg). EPA Method 6010										<b>pH</b> EPA Method 150.0		
			As*	Ba	Be	Cr	Co	Cu	Pb *	Hg*	Мо	Ni	Ag	۷	Zn	
BR-1-4	1/3/1996	4	3.6	170	0.47	11	8.3	11	15	<0.1	1.8	11	<0.75	23	26	6.64
BR-2-4	1/3/1996	4	3.4	210	<0.25	20	13	6.7	15	0.21	7.5	11	<5	10	81	2.79
BR-3-3.5	1/3/1996	3.5	3.2	150	0.28	54	13	13	16	<0.1	6.8	16	<0.75	20	83	3.19
BR-4-3.5	1/3/1996	3.5	3.0	120	0.52	10	20	13	<12.5	<0.1	<5	18	<0.75	23	95	3.92
BR-5-3.5	1/3/1996	3.5	4.0	280	<0.25	18	14	<5	27	0.23	15	11	5.4	8	60	2.57
BR-6-3.5	1/3/1996	3.5	3.7	190	0.43	27	13	14	31	0.16	9.9	<20	<0.75	24	71	7.03
BR-6-5	1/3/1996	5	2.4	230	0.62	7.4	7.6	12	<12.5	<0.1	<5	12	<0.75	22	26	8.38
BR-7-3.5	1/3/1996	3.5	2.2	140	0.54	6.7	7.4	11	<12.5	<0.1	<5	11	<0.75	20	26	7.92
BR-8-3	1/3/1996	3	2.7	120	0.3	23	11	25	15	<0.1	<5	12	<0.75	20	70	3.78
BR-8-4	1/3/1996	4	3.0	30	0.73	8.3	34	11	<12.5	<0.1	<5	28	<0.75	24	100	7.1
BR-9-4	1/3/1996	4	3.3	170	0.38	26	18	12	21	<0.1	5.9	22	<0.75	21	66	5.12
BC-1-5	1/3/1996	5	2.4	180	0.57	10	11	14	16	<0.1	<0.5	17	<0.75	22	43	7.97
BC-1-10	1/3/1996	10	4.8	90	<0.25	37	5.7	25	14	<0.1	6.2	7.4	<0.75	21	23	4.45
BC-2-10	1/3/1996	10	3.4	150	0.54	8.2	8.8	11	<12.5	<0.1	< 0.5	13	<0.75	22	26	7.59
BC-3-8.5	1/4/1996	8.5	7.6	63	0.52	110	7.2	29	15	<0.1	<5	12	<0.75	36	50	7.01
BC-4-7	1/4/1996	7	4.0	440	<0.25	20	58	42	21	0.13	2.6	120	<0.75	19	260	7.67
BB-1-5*	1/4/1996	5	2.9	160	0.59	6.7	7.4	12	<12.5	<0.1	<5	11	<0.75	19	26	8.75
	ReportingLimit 1				0.25	0.5	0.5	5	12.5	0.1	5	2	0.75	2.5	5	NA

#### Notes:

As\* = Arsenic, EPA Method 7060A Cr = Chromium Ba = Barium Co = CobaltBe = Beryllium Cu = Copper

Hg\* = Mercury, EPA Method 7471A Pb\* = Lead, EPA Method 7420 Mo = Molvbdenum

Ni - Nickel Aa = SilverV = Vanadium

VOCs = Volatile organic compounds

-- = Data was detected below the Reporting limit. J = Estimated quantitation due to a probable matrix effect.

ND = Not determined

PCE = Tetrachloroethene (PCE)

1, 1, 1-TCA = 1, 1, 1-Trichloroethane (TCA) µg/kg = micrograms per kilogram TCE = Trichloroethene (TCE)

mg/kg = milligrams per kilogram

\* Refer to Plate A for location of borings

Metals analyzed at 1:500 dilution due to matrix effect (As, Cr, Cu, Mo, Ni, V, Zn)

Water Soluble Salt Analysis in Soil 1:5 (soil:water) Aqueous Extraction, ASTM D 1428, D 516.

NOTE: As indicated on analysis, the results for each constituent denote the percentage of that analyte, soluble in water at a 1:5 (soil: water) extraction ratio, which is present in the soil. Sodium was determined by flame photometry, sulfate turbidimetrically, and sodium sulfate by calculation.

Sources: (1) ETEC, 1995, Geotechnical Investigation Report, Administration/ Office Building Between Lake Mead Drive and KMCC Plant Henderson, Nevada, November 20, 1995.

(2) ENSR, February 2005, Site Conceptual Model, Kerr-McGee Facility, Henderson, Nevada, Document Number 04020-023-100.

(3) Kerr-McGee, 1996b, Response to LOU Comments.

(4) Western Technologies, 1996a, Subsurface Soil Evaluation Former Evaporative Ponds Sites, Former State Industries Facility, BMI Industrial Complex, Henderson, Nevada; On behalf of State Industries, Inc., February 20, 1996.

#### LOU 62 Table 23c Summary of Historical Soil Analytical Data

#### State Industries Inc. Site Tronox Facility - Henderson, Nevada

Sample Matrix: Soil Samples taken by State Industries, expired holding times.

Sample Analysis by: Nevada Environmental Laboratory, Las Vegas, Nevada

Samples taken from Rectangular and Circular Evaporative Pond Areas (Samples BR and BC, respectively). Background sample taken (BB-1).

Sample Number	Date	Depth (ft bgs)				VOCs (µg/kg)	EPA Metho	d 8260A				
			Acetone	2-Butanone	Ethylbenzene	2-Hexanone	PCE	Toluene	TCE	m, p-Xylene	o-Xylene	All Others
BR-1-4	1/3/1996	4	<25	<25	<5	<25	28 J	<5	<5	<5	<5	ND
BR-2-4	1/3/1996	4	360	30	<5	<25	130J	<5	10	27J	20J	ND
BR-3-3.5	1/3/1996	3.5	<25	<25	<5	<25	130J	<5	5J	6J	8J	ND
BR-4-3.5	1/3/1996	3.5	<25	<25	<5	<25	<5	<5	\$5	<5	<5	ND
BR-5-3.5	1/3/1996	3.5	99J	<25	10J	<25	230J	6J	14J	57J	32J	ND
BR-6-3.5	1/3/1996	3.5	<25	<25	<5	<25	<5	7J	<5	<b>~</b> 5	<5	ND
BR-6-5	1/3/1996	5	<25	<25	<5	<25	<5	<5	<5	÷5 >	<5	ND
BR-7-3.5	1/3/1996	3.5	<25	<25	<5	<25	<5	<5	<5	<5	<5	ND
BR-8-3	1/3/1996	3	<25	27	<5	44	8J	<5	<5	<5	<5	ND
BR-8-4	1/3/1996	4	<25	<25	<5	<25	<5	<5	<5	<5 <	<5	ND
BR-9-4	1/3/1996	4	<25	<25	<5	<25	<5	<5	<5	<5	<5	ND
BC-1-5	1/3/1996	5	<25	<25	<5	<25	<5	<5	<5	<5	<5	ND
BC-1-10	1/3/1996	10	<25	<25	<5	<25	<5	<5	<5	<5	<5	ND
BC-2-10	1/3/1996	10	<25	<25	<5	<25	<5	<5	<5	<5	<5	ND
BC-3-8.5	1/4/1996	8.5	<25	<25	<5	<25	<5	<5	<5	5	<5	ND
BC-4-7	1/4/1996	7	<25	<25	<5	<25	9J	<5	<5	<del>\</del> 5	<5	ND
BB-1-5*	1/4/1996	5	<25	<25	<5	<25	<5	<5	<5	<5	<5	ND
	Reporting Limit		25	25	5	25	5	5	5	5	5	varied

#### LOU 62 Table 23c (continued) Summary of Historical Soil Analytical Data

State Industries Inc. Site Tronox Facility - Henderson, Nevada

#### Notes:

As* = Arsenic, EPA Method 7060/	<sup>△</sup> Co = Cobalt	Mo = Molybdenum	Zn = Zinc			
Ba = Barium	Cu = Copper	Ni - Nickel	' = Data was detected below the Reporting limit.			
Be = Beryllium	Hg* = Mercury, EPA Method 7471A	Ag = Silver	J = Estimated quantitation due to a probable matrix effect.			
Cr = Chromium	Pb* = Lead, EPA Method 7420	V = Vanadium	µg/kg = micrograms per kilogram			
mg/kg = milligrams per kilogram		1, 1, 1-TCA = 1, 1, 1-Trichloroet	hane (TCA)			
VOCs = Volatile organic compour	nds	TCE = Trichloroethene (TCE)				
ND = Not determined * Befer to Plate A for location of b	orinas	PCE = Tetrachloroethene (PCE	)			
	0111130					

Metals analyzed at 1:500 dilution due to matrix effect (As, Cr, Cu, Mo, Ni, V, Zn) Sources: (1) Western Technologies, 1996a, Subsurface Soil Evaluation Former Evaporative Ponds Sites, Former State Industries Facility, BMI Industrial Complex, Henderson, Nevada; On behalf of State Industries, Inc., February 20, 1996. (2) Kerr-McGee, 1996b, Response to LOU Comments.

* Analytes and detection	on limits for VOC's th	at were non-detect (µa/ka):	1			
Analyte	Reporting Limit (RL)	Analyte	RL	Analyte	RL	· · · ·
Acetone	1200	1, 1-Dichloroethane (1,1-D	120	1,1,2,2-Tetrachloroethane	120	
Benzene	120	1,2-Dichloroethane (1,2-DC	120	Toluene	120	
Bromodichloromethane	120	1, 1-Dichloroethene (1,1-D	120	1,1,1-Trichloroethane (1,1,	120	
Bromoform	120	cis-1,2-Dichloroethene	120	1,1,2-Trichloroethane	120	
Bromomethane	120	trans-1,2-Dichloroethene	120	Trichloroethene (TCE)	120	
2-Butanone	620	1,2-Dichloropropane	120	Vinyl Acetate	120	
Carbon Disulfide	120	cis-1,3-Dichloropropene	120	Vinyl Chloride	120	
Carbon Tetrachloride	120	trans-1,3-Dichloropropene	120	m, p-Xylene	120	
Chlorobenzene	120	Ethyl benzene	120	o-Xylene	120	
Chloroethane	120	2-Hexanone	620	1,3-Dichlorobenzene	120	
Chloroform	120	Methylene Chloride	620	1,4-Dichlorobenzene	120	
Chioromethane	120	4-Methyl-2-Pentanone	620	1,2-Dichlorobenzene	120	
2-Chloroethylvinyl ether	120	Styrene	120			
Dibromochloromethane	120	Tetrachloroethene (PCE)	120			

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#### LOU 62 Table 23d Summary of Historical Soil Analytical Data

#### State Industries Inc. Site Tronox Facility - Henderson, Nevada

Sample Matrix: Soil Samples (taken by KMCC) are splits of samples taken by State Industries (above) with expired holding times. Sample Analysis by: Southwest Laboratories of Oklahoma, Broken Arrow, Oklahoma

Samples taken from Pond Area

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	-		SVOCs (µg	<b>/kg)</b> EPA 8270					,	VOCs (µg	/kg) EPA M	ethod 8240	)			
Boring/ Sample Number	Date	All	Methylene Chlorida	Acetone	1, 1-Dichloroethene	1, 1-Dichloroethane	Chloroform	2-Butanone	1, 1, 1- Trichloroethane (TCA)	Trichloroethene (TCE)	2-Hexanone	Tetrachloroethene (PCE)	Toluene	Ethylbenzene	Xylene (total)	All Others
Volatile # 2	1/3/1996	ND	6J	130	<7	<7	<7	17	8	54	<14	22	3 J	2 J	15	NĎ
Volatile # 3	1/3/1996	ND	8	210	2J	3J	1J	240	120	66	<12	140	3 J	<6	12	ND
Volatile # 3-D	1/3/1996	ND	5 J	140	1	2	<7	120	62	26	<12	64	2 J	<6	6	ND
Volatile # 4	1/3/1996	ND	6	48	<6	<6	<6	68	15	52 ·	94	29	2J	<6	4 J	ND
Volatile # 4-D	1/3/1996	ND	7	34	<6	<6	<6	40	16	48	64	43	3 J	<6	7	ND
Volatile # 5	1/3/1996	ND	9	92	<7	2 J	<7	<14	71	73	<14	72	5 J	5 J	37	ND
Volatile # 5-D	1/3/1996	ND	9	89	<7	2 J	<7	<14	66	42	<14	89	5 J	6 J	45	ND
Quan	titation Limit	various	6	12	6 (or 7)	6 (or 7)	6 (or 7)	14	6	6	12 (or 14)	6	6	6	6	varied

#### Notes:

Carbon Disulfide

< = not detected	above the respective	PQL.		VOCs = Volatile organic compounds					
J = Estimated Va	lue: Concentration be	low limit of quantitation		µg/kg = micrograms per kilogram					
Source: Internal	Correspondence, Ker	rr-McGee Chemical LLC Facility, Februa	y 20, 1996.	ND = Not determined					
* Analytes and o	letection limits for g	roundwater VOC's that were non-dete	ct (µg/kg):						
Analyte I	Reporting Limit (RL)	Analyte R	LAnalyte	RL	Analyte	RL	Analyte		
Chloromethane	14	1, 1-Dichloroethene	7 Carbon Tetrachloride	7	1,1,2-Trichloroethane	7	Tetrachloroethene (PCE)		
Bromomethane	14	1,1-Dichloroethane	7 Bromodichioromethane	14	Benzene	7	Toluene		
Vinyl Chloride	14	1,2-Dichloroethene	7 1,1,2,2-Tetrachloroethane	7	cis-1,3-Dichloropropene	7	Chlorobenzene		
Chloroethane	14	Chloroform	7 1,2-Dichloropropane	7	2-Chloroethylvinyl ether	14	Ethyl benzene		
Methylene Chlori	de 7	1,2-Dichloroethane	7 trans-1,3-Dichloropropene	7	Bromoform	7	Styrene		
Acetone	14	2-Butanone 1	4 Trichloroethene (TCE)	7	2-Hexanone	14	Total Xylenes		

7 Dibromochloromethane

#### \* Analytes and detection limits for groundwater SVOC's that were non-detect (µg/kg):

7 1,1,1-Trichloroethane

Analytes and detection limit	is for gi	roundwater SYUC's that were t	ion-dete	ct (µg/kg):					
Analyte	RL	Analyte	RL	Analyte	RL	Analyte	RL	Analyte	RL
Phenol	330	Isophorone	330	Dibenzofuran	330	Anthracene	330	2-Nitroaniline	330
Bis (2-chloroethyl) ether	330	2-Nitrophenol	330	2,4-Dinitrotoluene	330	Di-n-butyl phthalate	330	Dimethyl phthalate	330
2-Chlorophenol	330	2,4-Dimethylphenol	330	2,6-Dinitrotoluene	330	Fluoranthene	330	Acenaphthylene	330
1,3-Dichlorobenzene	330	Benzoic Acid	1600	Diethyl phthalate	330	Pyrene	330	3-Nitroaniline	330
1,4-Dichlorobenzene	330	Bis (2-chloroethoxy) methane	330	4-Chlorophenyl phenyl ether	330	Butylbenzylphthalate	330	Bis (2-ethylhexyl) phthalate	330
Benzyl alcohol	330	2,4-Dichlorophenol	1600	Fluorene	330	3,3-Dichlorobenzidine	660	Chrysene	330
1,2-Dichlorobenzene	330	1,2,4-Trichlorobenzene	1600	4-Nitroaniline	1600	Benz (a) anthracene	330	Di-n-octyl phthalate	330
2-Methylphenol	330	Naphthalene	330	4,6-Dinitro-2-methylphenol	1600	4-Chloro-3-methylphenol	330	Benzo (b) fluoranthene	330
Bis (2-chloroisopropyl) ether	330	4-Chloroaniline	330	N-Nitrosodimethylamine	330	2-Methylnaphthalene	330	Benzo (k) fluoranthene	330
4-Methylphenol	330	Hexachlorobutadiene	330	4-Bromophenyl phenyl ether	330	Hexachlorocyclopentadiene	330	Benzo (a) pyrene	330
N-Nitroso-di-N-propylamine	330	Acenaphthene	330	Hexachlorobenzene	330	2,4,6-Trichlorophenol	330	Indeno (1,2,3-c,d) pýrene	330
Hexachloroethane	330	2,4-Dinitrophenol	330	Pentachlorophenol	1600	2,4,5-Trichlorophenol	330	Dibenzo (a,h) anthracene	330
Nitrobenzene	330	4-Nitrophenol	330	Phenanthrene	- 330	2-Chloronaphthalene	330	Benzo (g,h,l) pervlene	330

7 4-Methyl-2-Pentanone

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#### Notes for Phase A Data Tables

#### State Industries Inc. Site Tronox Facility - Henderson, Nevada

Blank Bold Gray B D DO J J- J+ JB JK R S T U	Not analyzed. Bold values are constituents detected above the laboratory sample quantitation limit. Grayed out values are non-detected values with the laboratory sample quantitation limits shown. The result may be a false positive totally attributable to blank contamination. Dissolved Metals Dissolved Oxygen The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample. The result is an estimated quantity and the result may be biased low. The result is an estimated quantity and the result may be biased low. The result is an estimated quantity and the result may be biased low. The result is an estimated quantity and the result may be biased high. The result is an estimated quantity and the result may be biased high. The result is an estimated quantity and the result may be biased high. The result is an estimated quantity and the result may be biased high. The result was rejected and unusable due to serious data deficiencies. The presence or absence of the analyte cannot be verified. Soluable metals Total Metals 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 mg/L ml/min ng/kg nm NTUs ORP pCi/g pci/L s/gPM10 TEF TEQ ug/kg ug/L umhos/cm	Milligrams per kilogram. Milligrams per lite. Milliliters per minute Nanogram per kilogram Not measured. Nephelometric Turbidity Units Oxidation-reduction potential PicoCuries per gram PicoCuries per gram PicoCuries per liter Revised protocol structures per gram PM10 fraction dust. Toxic Equivalency Factor Toxic Equivalent Concentration Micrograms per kilogram Micrograms per liter
L	Sample ID suffix indicating the sample was collected using low low-flow pumping rates (100-150 ml/min). $_{ m +}$
F Z * (a) (b)	Sample ID suffix indicating the sample was collected using low-flow pumping rates (150-480 ml/min) and field filtered. 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. Calculated assuming 0 for non-detected congeners and 2006 toxic equivalency factors (TEFs). Calculated assuming 1/2 detection limit as proxy for non-detected congeners and 2006 TEFs.

-- MSSL or PRG not established