

Appendix B

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



Area I

				Laboratory	y :	CAS - K	elso, WA					CAS - Ro	chester, NY				CAS - H	louston	GEL Charleston, SC	STL- Denver	Alpha Analytical	EMSL Westmont, NJ	Rationale	
Grid Location	LOU Number	Boring No.	Sample ID Number, (note "B" for Phase B)	Sample Depths ^{1.} (ft, bgs)	Perchlorate (EPA 314.0)		Hex Cr ^{4.} (EPA 7199)	TPH- DRO/ORO (EPA 8015B)	TPH-GRO (EPA 8015B)		Wet Chem ^{5.}	Total Cyanide (EPA	Formal- dehyde (EPA 8315A)	OCPs ^{6.} (8081A)	SVOCs ^{7.} (EPA 8270C)	PCBs ^{10.} (EPA 8082)	PCBs ^{10.} (EPA 1668)	Dioxins/ Furans ^{9.}	Radio- nuclides ^{8.}	OPPs ^{13.}	Sparks, NV Organic Acids ^{14.}	Asbestos 11. EPA/540/R-	for removal of samples from SAP	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient designations).
			, ,	(), 3,		Bo	orings are o	organized by	grid locati	on as show	wn on Plate A	9012A) A - Starting	point is on	the northv	vestern most	grid in Area	1 (H-3) and	ending wit	th the south	eastern mo	l ost grid in A	97/028 rea I (O-4).		
H-3	1, 10	RSAH3	RSAH3-0.0	0.0			-		-							-		_			_	X		Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and as an
H-3 H-3	1, 10 1, 10	-	RSAH3-0.5B RSAH3-10B	0.5	X X	X	X	X		X X	X X	X X		X Hold	X X			X	X	X	X		F,L L	eastward step-out to LOU 10 (Former Onsite Hazardous Waste Landfill). GW anticipated at ~34 feet bgs; MCfg ~129 feet bgs.
H-3 H-3	1, 10	-	RSAH3-20B RSAH3-30B	20 30	X	X	X	X		X	X	Х		Hold	X				X				B,D,L B	
H-3	1, 10		RSAH3-32B	32	X	X	X	X		X	X	Х		Х	X				X	Х	X		B,D,F,L	
I-2 I-2	1, 10 1, 10	RSAI2	RSAI2-0.0 RSAI2-0.5B	0.0	x	x	x	x		x	х	X		x	x			x	x			X	L	Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and as an eastward step-out to LOU 10 (Former Onsite Hazardous Waste Landfill).
I-2 I-2	1, 10 1, 10	-	RSAI2-10B RSAI2-20B	10 20	X	X	X X	X		X	X	X X		Hold Hold	X				X X				L B.D.L	GW anticipated at ~33 feet bgs; MCfg ~32 feet bgs.
I-2	1, 10	-	RSAI2-30B	30	R	R	R	R		R	R				R				R				В	
I-2 I-3	1, 10 1	RSAI3	RSAI2-31B RSAI3-0.0	31 0.0	X	Х	Х	Х		Х	Х	Х		Х	Х				Х			X	B,D,L	Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and for
I-3 I-3	1	~	RSAI3-0.5B RSAI3-10B	0.5	X	X X	X X	X X		X	X	X X		X Hold	X X			Х	X X				L	general site coverage GW anticipated at ~34 feet bgs; MCfg ~32 feet bgs.
I-3	1	-	RSAI3-20B	20	X	X	X	X		X	X	x		Hold	X				X				B,D,L	ov anticipated at ~34 teet bys, worg ~32 teet bys.
I-3 I-3	1	-	RSAI3-25B RSAI3-32B	25 32	R X	R X	R X	R X		R X	R X	х		x	R X				R X				B,D,L	
I-3	1, 32	SA201	SA201-0.0 SA201-0.5B	0.0	x		x	x		X	Y	x		D	X			x	x			X	E,L	Boring located on the north berm of the GW-11 Pond to evaluate LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit) and LOU 1 (former Trade Effluent
I-3 I-3	1, 32 1, 32		SA201-10B	0.5 10	X	X X	X	X		Х	X X	X X		R	Х			^	X				E,L	Settling Ponds) and for general site coverage.
I-3 I-3	1, 32 1, 32		SA201-20B SA201-25B	20 25	R	R	R R	R		R	R				R				R R				B	GW anticipated at ~30 feet bgs; MCfg ~31 feet bgs.
I-3 I-4	1, 32 1, 32	RSAI4	SA201-28B RSAI4-0.0	28 0.0	Х	Х	Х	Х		Х	Х	Х			Х				Х			X	B,E,L	Boring located on the north berm of the GW-11 Pond to evaluate LOU 32 (Chromium
1-4	1, 32	. KSAI4	RSAI4-0.5B	0.5	X	Х	х	Х		Х	Х	Х		Х	Х			Х	Х			^	L	and Perchlorate Groundwater Remediation Unit) and LOU 1 (former Trade
I-4 I-4	1, 32	-	RSAI4-10B RSAI4-20B	10 20	X	X	X	X		X X	X X	X X		Hold	X				X				L B.D.L	Effluent Settling Ponds) and for general Site coverage GW anticipated at ~34 feet bgs; MCfg ~23 feet bgs.
-4 -4	1, 32 1, 32		RSAI4-30B RSAI4-32B	30 32	R	R	R	R X		R X	R	X		~	R X				R X				B,D,L	
I-5	1, 32	RSAI5	RSAI5-0.0	0.0	^	^	^	^		^	^	^		^	^				^			X		Boring located on the north berm of the GW-11 Pond to evaluate LOU 32 (Chromium
I-5 I-5	1, 32 1, 32	-	RSAI5-0.5B RSAI5-10B	0.5	X	X	X	X		X	X	X X		X Hold	X			X	X				L	and Perchlorate Groundwater Remediation Unit) and LOU 1 (former Trade Effluent Settling Ponds) and for general Site coverage.
I-5	1, 32	~	RSAI5-20B	20	R	R	R	R		R	R				R				R				B,D,L	GW anticipated at ~30 feet bgs; MCfg ~23 feet bgs.
I-5 I-5	1, 32 1, 32		RSAI5-28B RSAI5-30B	28 30	R	R	R	R		X R	R	X			R				X R				B,D,L B	
I-7 I-7	1, 22, 23, 32 1, 22, 23, 32	RSAI7	RSAI7-0.0 8 RSAI7-0.5B	0.0	x	x	x	X		X	X	X		x	x	NS	NS	X	X			Х	K.L.P	Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOUs 22 & 23 (Ponds WC-West & WC-East), and LOU 32 (Chromium and Perchlorate
I-7 I-7	1, 22, 23, 32 1, 22, 23, 32	-	RSAI7-10B RSAI7-20B	10	X	X	X	X		X	X	Х		Hold	X	NS NS	NS NS		Х				K,L,P K,L,P	Groundwater Remediation Unit).
I-7	1, 22, 23, 32	-	RSAI7-30B	20 30	X	X	X X	X		X	X X	X X		X	X	NS	NS NS		X X				K,L,P K,L,P	GW encountered at 33 feet bgs; MCfg ~23 feet bgs.
J-2 J-2	1, 10 1, 10	RSAJ2	RSAJ2-0.0 RSAJ2-0.5B	0.0	x	X	x	X		x	X	X		X	x			x	x			X	L	Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 10 (Former Onsite Hazardous Landfill) and to investigate potential offsite VOC sources.
J-2 J-2	1, 10 1, 10	-	RSAJ2-10B RSAJ2-20B	10 20	X	X	X X	X		X X	X	X X		X Hold	X X				X				D,L B,D,L	GW anticipated at ~35 feet bgs.
J-2	1, 10		RSAJ2-30B	30	R	R	R	R		R	R			Tiold	R				R				В	
J-2 J-3	1, 10 1	RSAJ3	RSAJ2-33B RSAJ3-0.0	33 0.0	X	Х	Х	Х		Х	Х	Х		Х	Х				Х			X	B,D,L	Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and for
J-3 J-3	1	_	RSAJ3-0.5B RSAJ3-10B	0.5	X X	X X	X X	X X		X X	X	X X		X X	X			Х	X X	X X	X		F,L D,F,L	general site coverage. GW anticipated at ~35 feet bgs; MCfg ~31 feet bgs.
J-3	1		RSAJ3-20B	20	R	R	R	R		R	R	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	R				R		~		В	
J-3 J-3	1		RSAJ3-29B RSAJ3-30B	29 30	R	R	R	R		R	R	X		X	R				R	X	X		B,D,F,L B	
J-3 J-3	1, 32 1, 32	SA202	SA202-0.0 SA202-0.5B	0.0 0.5		x	x	X		X	X	X		R	X			X	X			X	E,L	Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit), and for general
J-3	1, 32		SA202-10B	10	X	X	X	X		Х	X	X		R	X			·····	X				E,L	Site coverage.
J-3 J-3	1, 32 1, 32		SA202-20B SA202-28B	20 28	R X	R X	R X	R X		R X	X	x			R X				R X				B B,E,L	GW anticipated at ~31 feet bgs.
J-3 J-3	1, 32 1, 60	SA206	SA202-30B SA206-0.0	30 0.0	R	R	R	R		R	R				R				R			X	A G	Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and LOU 60
J-3	1, 60	-	SA206-0.5B	0.5	X	X	X	X		X	X	X			X			Х	X			~	G,L	(former Acid Drain System), and for general Site coverage.
J-3 J-3	1, 60 1, 60	-	SA206-10B SA206-25B	10 25	X X	X X	X X	X X		X X	X X	X X			X X				X X				G,L B,G,L	GW anticipated at ~30 feet bgs; MCfg ~28 feet bgs.
J-3 J-5	1, 60 1, 22, 32	RSAJ5	SA206-37B RSAJ5-0.0	37 0.0	Х	Х	Х	Х		Х	Х	Х			Х				Х			X	B,G,L	Boring located east of GW-11 Pond to evaluate LOU 32 (Chromium and Perchlorate
J-5	1, 22, 32	-	RSAJ5-0.5B	0.5	X	X	X	X		X	X	X		X	X			Х	X					Groundwater Remediation Unit) and LOU 1 (former Trade Effluent Settling Ponds),
J-5 J-5	1, 22, 32 1, 22, 32		RSAJ5-10B RSAJ5-19B	10 19	X X	X X	X X	X X		X X	X X	X X		Hold X	X X				X X				B,D,L	as an upgradient boring to evaluate LOU 22 (Pond WC-West and Associated Piping), and for general Site coverage.
J-5 J-5	1, 22, 32 1, 22, 32	-	RSAJ5-20B RSAJ5-25B	20 25	R	R R	R R	R R		R R	R R				R R				R R				B A	GW anticipated at ~39 feet bgs; MCfg ~26 feet bgs.
J-6 J-6	1, 22, 32 1, 22, 32	RSAJ6	RSAJ6-0.0 RSAJ6-0.5B	0.0				X		v	X			X	X			X	x			X		Boring located east of GW-11 Pond to evaluate LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit) and LOU 1 (former Trade Effluent Settling Ponds),
J-6	1, 22, 32		RSAJ6-10B	10	X	X	X	Х		X X	X			Hold	Х			^	Х					as an upgradient boring to evaluate LOU 22 (Pond WC-West and Associated
J-6 J-6	1, 22, 32 1, 22, 32		RSAJ6-19B RSAJ6-20B	19 20	R	X R	X R	X R		X R	X R			Х	X R				X R					Piping), and for general Site coverage. GW anticipated at ~21 feet bgs.
J-6 J-6	1, 22, 32 22, 23	SA127	RSAJ6-30B SA127-0.0	30 0.0	R	R	R	R		Ř	R				R				R			X	A	Boring located to evaluate white crusty surface soil east of the pump house
J-6	22, 23		SA127-0.5B	0.5	X	X	X	X		X	X			R	X			Х	X				E	between LOUs 22 and 23 (Ponds WC-West and WC-East).
J-6	22, 23 22, 23		SA127-10B SA127-20B	10 20	X	X	X	X		X X	X X			R	X X				X X				E B,E	GW anticipated at ~21 feet bgs; MCfg ~26 feet bgs.

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

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

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

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

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

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

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

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

				Laboratory :	:	CAS - K	(elso, WA					CAS - Re	ochester, NY				CAS - H	louston	GEL Charleston, SC	STL- Denver	Alpha Analytical	EMSL Westmont, NJ	Rationale	
Grid Location	LOU Number	Boring No.	명 Sample ID	Sample Depths ^{1.}	Perchlorate (EPA 314.0)		Hex Cr ^{4.}	TPH- DRO/ORO	TPH-GRO (EPA 8015B)	VOCs ^{3.}	Wet	Total Cyanide	Formal- dehyde (EPA	OCPs ^{6.}	SVOCs 7.	PCBs ^{10.}	PCBs ^{10.}	Dioxins/ Furans ^{9.}	Radio- nuclides ^{8.}	OPPs ^{13.}	Sparks, NV Organic Acids ^{14.}	Asbestos	for removal of samples from SAP	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient designations).
		NO.	៉ី 🖉 "B" for Phase B)	(ft, bgs)		(EPA 6020)	(EPA 7199)	(EPA 8015B)		. ,	Chem ^{5.}	(EPA 9012A)	8315A)	(8081A)	(EPA 8270C)	(EPA 8082)	(EPA 1668)				Acids	EPA/540/R- 97/028	0.0.01/1	
O-3 O-3	35 35		SA57-0.5B SA57-10B	0.5 10	X X	X X	X X	X X	X X	X X	X X	X X		X Hold	X X	X X	X X	X	X X				C,D,G,K,L	Dumping Site) and potential offsite VOC sources from the west. PCBs and TPH-GRO were detected in Phase A soil boring SA09.
O-3 O-3	35 35		SA57-20B SA57-30B	20 30	X	X X	X X	X	X X	X X	X	X		Hold X	X X	X	X X		X X				C,D,G,K,L C,D,G,K,L	GW encountered at 32 feet bgs; MCfg ~21 feet bgs.
O-3	35	0.1.100	SA57-40B	40	R	R	R	R	R	R	R	~~~~		R	R	R	R		R			X	K	No soil sample was collected at this depth because groundwater was encountered here.
O-3 O-3	64 64	SA180	SA180-0.0 SA180-0.5B	0.0	x	x	x	x		X	X	X		X	x	X	x	X	x			X	K C,K,L	Boring located to evaluate soil stain in northern portion of LOU 64 (Koch Materials Company Site).
0-3 0-3	64 64		SA180-10B SA180-20B	10 20	X	X	X X	X X		X X	X	X X		Hold Hold	X X	X	X X		X X				C,D,K,L C,D,K,L	GW encountered at 34.5 feet bgs; MCfg ~22 feet bgs.
0-3	64		Φ SA180-30B	30	Х	X	Х	X		Х	Х	X		Hold	Х	X	Х		X				C,D,K,L	
0-3 0-3	64 64	SA181	SA180-40B SA181-0.0	40 0.0	R	ĸ	R	R		R	R			ĸ	R	R	R		ĸ			X	K K	No soil sample was collected at this depth because groundwater was encountered here. Boring located to evaluate soil stain in northern portion of LOU 64 (Koch
0-3 0-3	<u>64</u> 64		SA181-0.5B ∞ SA181-10B	0.5	X X	X X	X X	X		X X	X X	X X		X Hold	X X	NS NS	NS NS	Х	X X				D,K,L,P D,K,L,P	Materials Company Site). GW was encountered at 40 feet bgs; MCfg ~21 feet bgs.
O-3	64		SA181-20B	20	Х	Х	Х	Х		Х	Х	Х		Hold	Х	NS	NS		X				D,K,L,P	
O-3 O-3	64 64		SA181-30B SA181-35B	30 35	X	X	X	X		X	X X	X		Hold X	X	NS NS	NS NS		X X		· · · · · · · · · · · · · · · · · · ·		D,K,L,P D,K,L,P	
0-3 0-3	64 64	RSAO3	SA181-37B RSA03-0.0	37 0.0	R	R	R	R		R	R			R	R				R			X	К	No soil sample was collected at this depth because groundwater was encountered here. Boring located to evaluate soil stain in northern portion of LOU 64 (Koch
0-3	64	KSA03	RSA03-0.5B	0.5	х	х	Х	Х		Х	Х	х		Х	х	Х		Х	Х				C,L	Materials Company Site).
0-3 0-3	64 64		RSA03-10B RSA03-20B	10 20	X	X	X	X		X X	X X	X		Hold Hold	X X				X				L D,L	GW anticipated at ~33 feet bgs; MCfg ~22 feet bgs.
0-3 0-3	64 64		RSA03-30B RSA03-31B	30 31	R X	R X	R X	R X		R X	R X	×		X	R X	v			R X				B B,C,D,L	
0-3	64		RSA03-37B	37	R	R	R	R		R	R	^		^	R	^			R				A A	
O-3 O-3	60, 64	SA176	SA176-0.0 SA176-0.5B	0.0	x	x	x	x		X	X	×		×	X			x	x	X	x	X	F,L	Boring located to evaluate LOU 60 (Acid Drain System) pipelines and LOU 64 (Koch Materials Company Site).
0-3	60, 64		SA176-10B	10	X	X	X	X		X	X	X		X	Х				X	X	X		D,F,L	Groundwater anticipated at 39 feet bgs; MCfg ~22 feet bgs.
O-3 O-3	60,64 60, 64		SA176-25B SA176-37B	25 37	X	X	X X	X		X	X	X		Hold X	X X				X X	X	X		B,D,L B,D,F,L	
O-3 O-3	n/a n/a	SA207	SA207-0.0 SA207-0.5B	0.0	×	×	×	X		X	X	X		X	X	NS	NS	X	X			X	K D,G,K,L,P	Boring located to evaluate area between LOU 35 (Truck Emptying/Dumping Site) and LOU 64 (Koch Materials Company Site).
O-3	n/a		8 SA207-10B	10	X	X	X	Х		X	X	Х		Hold	Х	NS	NŚ		X				D,G,K,L,P	
O-3 O-3	n/a n/a		SA207-20B SA207-30B	20 30	X	X	X	X		X X	X X	X		Hold Hold	X	NS NS	NS NS		X X				D,G,K,L,P D,G,K,L,P	
O-3 O-3	n/a n/a		SA207-37B SA207-42B	37 42	X	X	X R	X		X	X	Х		X	X	NS R	NS R		X				D,G,K,L,P G,K	No soil sample was collected at this depth because groundwater was encountered here.
0-4	64	SA46	SA46-0.0	0.0	ĸ	ĸ	ĸ	ĸ		ĸ	ĸ			ĸ	ĸ	ĸ	ĸ		ĸ			Х	К	Boring located to evaluate LOU 64 (Koch Materials Company Site) OCPs added to
0-4 0-4	64 64		SA46-0.5B ∞ SA46-10B	0.5	X	X	X	X		X	X X	X		X Hold	X X	NS NS	NS NS	X	X				D,K,L,P D,K,L,P	SA46 at the request of NDEP in comments to the Phase A report. GW encountered at 35.5 feet bgs; MCfg ~23 feet bgs.
O-4	64		SA46-20B	20	Х	Х	Х	Х		Х	Х	X		Hold	Х	NS	NS		Х				D,K,L,P	
0-4 0-4	64 64		SA46-30B SA46-31B	30 31	X	X	X	X		X X	X X	X X		Hold X	X	NS NS	NS NS		X X				D,K,L,P D,K,L,P	
<u>0-4</u> 0-4	64 64	SA47	SA46-35B SA47-0.0	35 0.0	R	R	R	R		R	R			R	R	R	R		R			X	к к	No soil sample was collected at this depth because groundwater was encountered here. Boring located to evaluate LOU 64 (Koch Materials Company Site).
O-4	64	0/11	SA47-0.5B	0.5	X	х	х	X		Х	Х	X		Х	Х	NS	NS	х	Х			~	D,K,L,P	GW encountered at 40 feet bgs; MCfg ~20 feet bgs.
0-4 0-4	<u>64</u> 64		SA47-10B SA47-20B	10 20	X	X	X	X		X X	X X	X		Hold Hold	X X	NS NS	NS NS		X X				D,K,L,P D,K,L,P	
0-4 0-4	64 64		SA47-30B SA47-33B	30 33	X X	X X	X X	X X		X X	X X	X X		Hold	X X	NS NS	NS NS		X X				D,K,L,P D,K,L,P	
O-4	64		SA47-35B	35	R	R	R	R		R	R	^		R	R	R	R		R				K	No soil sample was collected at this depth because groundwater was encountered here.
0-4 0-4	<u>64</u> 64	SA55	SA55-0.0 SA55-0.5B	0.0	x	x	x	x		X	X	x		R				x	x			X	E,L	Located as a downgradient boring to LOU 64 (Koch Materials Company Site) as a step-out to LOU 35 (Truck Emptying/Dumping Site) to investigate for VOCs from
0-4 0-4	64 64		SA55-10B	10 20	X	X	X	X		X	X	X		R	X				X				E,L B	potential offsite sources to the west, and for general Site coverage.
0-4	64		SA55-20B SA55-25B	20	X	X	X	X		X	X	Х			X				к Х				B,E,L	GW anticipated at ~37 feet bgs; MCfg ~23 feet bgs.
0-4 0-4	64 64		SA55-30B SA55-35B	30 35	R X	R X	R X	R X		R X	R X	x			R X				R X				B B,E,L	
0-4	64	RSAO4	RSA04-0.0	0.0												V		~~~~~				Х	K	Boring located to evaluate LOU 64 (Koch Materials Company Site). GW encountered at 41 feet bqs: MCfq -23 feet bqs.
0-4 0-4	64 64		RSA04-0.5B RSA04-10B	0.5 10	X X	X X	X	X X		X X	X	X X		X Hold	X X	X X	X X	X	X X				C,K,L	us vv encountered at 41 feet bgs; Mutg ~23 feet bgs.
0-4 0-4	64 64		RSA04-20B RSA04-30B	20 30	X X	X X	X X	X X		X X	X X	X X		Hold Hold	X X	X	X X		X X				C,D,K,L C,D,K,L	
0-4	64		RSA04-36B	36	X	X	X	X		X	X	X		X	X	X	X		X				C,D,K,L	
0-4 0-4	60, 64 60, 64	SA182	SA182-0.0 SA182-0.5B	0.0	x	x	x	x		x	X	x		X	x			x	х	X	x	X	F,L	Boring located to evaluate soil stain in northern portion of LOU 64 (Koch Materials Company Site) and LOU 60 (Acid Drain System).
0-4 0-4	60, 64 60, 64		SA182-10B SA182-20B	10 20	X	X	X	X		X	X	X		X	X				X	X	X			GW anticipated at ~40 feet bgs; MCfg ~23 feet bgs.
O-4	60, 64		SA182-25B	25	X	X	X	Х		X	Х	X		Hold	Х				X				B,D,L	
0-4 0-4	60, 64 60, 64		SA182-30B SA182-37B	30 37	R	R	R	R		R	R				R				R				B	
0-4	60, 64	84400	SA182-38B	38	X	X	X	X		X	X	X		Х	X				Х	Х	X	v	B,D,F,L	Paring legited to evolute coil stein is nothing a string of OLIO4 46 of March 19
0-4 0-4	64 64	SA183	SA183-0.0 SA183-0.5B	0.0 0.5	x	x	x	x		x	x	X		Х	x	NS	NS	x	х			X		Boring located to evaluate soil stain in northern portion of LOU 64 (Koch Materials Company Site).
0-4 0-4	64 64		SA183-10B SA183-20B	10 20	X X	X X	X X	X X		X X	X X	X X		Hold Hold	X X	NS NS	NS NS		X X				D,K,L,P D,K,L,P	GW encountered at ~37.5 feet bgs; MCfg ~20 feet bgs.
O-4	64		SA183-30B	30	Х	Х	Х	Х		Х	Х	Х		Hold	Х	NS	NS		Х				D,K,L,P	
0-4 0-4	64 64		SA183-33B SA183-37B	33 37	X R	X R	X R	X R		X R	X R	X NS		X NS	X NS	NS	NS		X NS				D,K,L,P K	No soil sample was collected at this depth because groundwater was encountered here.
Total #:	Borings:				253	253	253	243	26	253	253	223	8	201	248	34	32	65	253	27	27	65	0	
Synthetic P	ecipitate Lea	ching Proc	edure (SPLP) Samples ¹¹		_																			

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

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

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

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

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

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

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

Table 2 Soil Sampling and Analytical Plan for Area I

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

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

12/17/2008, 6:21 PM

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

Table 2 (Field Team Version)

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

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

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

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

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

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

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

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

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

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

Х Sample will be collected and analyzed.

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

Sample for asbestos analysis was collected in June 2008.

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

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

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

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

NS Not sampled.

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

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

4. Hexavalent Chromium

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

Organochlorine Pesticides (includes analysis for hexachlorobenzene). 6.

7. Semi-volatile Organic Compounds

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

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

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

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

13. Organophosphorous Pesticides

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

15.

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

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

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

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

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

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

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

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

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

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

Table 3

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

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Location Description and Rationale for Investigation
ng Area I (O-4).
ew monitoring well to serve as a downgradient stepout for LOUs 35 and 64; as an upgradient stepout for LOUs 39, 52, nd 57; and for general Site coverage. Well was installed in June 2008 but not yet sampled for Phase B.
ten, Uranium, Vanadium, Zinc

	tical	Alpha Analytica Sparks, N	STL Denver, CO	CAS Houston, TX		GEL Charleston			ervices	Analytical S ochester, NY				ation Area Weil No. Sample DNO. (if big) Arcses Screen (for Phase P Phase P W) Depaired P W P Phase P Phase P W P Phase P												
Location Description and Rationale for Investigation		Organic Acids ^F	OPPs ^{10, F} (8141A)	PCBs ^{8, E} EPA 1668A)	ides ^{9.} (Radionucli	PCBs ^{8, E} (EPA 8082)	SVOCs ^{7.} (EPA 8270C)	OCPs ^{6.} (EPA 8081A)	Total Cyanide J. (EPA 9012A)	Wet Chemistry ^{5.}	Hex Cr ^{4.} (EPA 7199)	VOCs ^{3.} (EPA 8260)	Metals ^{2.}		Spike/MS	Phase A?	Sampled (for Phase	Expected Across Screen		Sample ID No. ^A	•		Grid Location		
covering Area I (O-4).	grid co	-most gri	utheastern	vith the so	ding w) and end	ea I (A-3)	rid in Ar	-most g	rthwesterr	on the no	g point is	Starting	Plate A -	is shown on	location a	l by grid	organized	Wells are							
Serves as a stepout, generally upgradient for LOU 67 (Delbert Madsen Site), for general Site coverage ar Parcel A.		Х	х			Х		Х	Х	х	х	Х	Х	Х	х		No	6/18/2008	Qal *	TD = 41.1 ft	H-48B	H-48	Parcel A	A-3		
Located to evaluate LOU 67; as general Site coverage; and to evaluate downgradient from Area I.	Loc	Х	х			х		х	Х	х	х	х	х	Х	х		Vaa	6/19/2009		15 - 55	PC-40B	DC 40	Dorool A	۸.E		
This is a duplicate sample of PC-40B.	Thi	Х	х			х		х	Х	х	х	х	Х	Х	Х		165	0/10/2000	Qai	15 - 55 (dup)	PC-40BD	FC-40	FaicerA	A-5		
Located to evaluate LOU 67; as general Site coverage; and to evaluate downgradient from Area I.	Loo					х		х	Х	х	х	х	Х	Х	Х		No	6/24/2008	Qal *	TD = 49 ft	H-49AB	H-49A	Parcel A	B-3		
Located for general Site coverage and to evaluate downgradient from Area I.	Loc					Х		Х	Х	Х	Х	Х	Х	Х	Х		No	6/23/2008	Qal *	TD = 59 ft	MC-62B	MC-62	Parcel A	D-3		
Located to serve as a lateral stepout for M-95 for general Site coverage; and to evaluate downgradient fro	Loc					Х		Х	Х	Х	Х	Х	Х	Х	Х		No	6/23/2008	Qal	15 -35	PC-72B	PC-72	Parcel B	D-4		
Located to evaluate potential offsite sources to the west; for general Site coverage downgradient from Are	Loc	Х	х			х		х	Х	х	х	х	х	х	Х		Yes	6/25/2008	Qal *	TD = 35.33 ft	MC-45B	MC-45	Parcel D	E-1		
Located for general Site coverage and to evaluate downgradient from Area I.	Loc					х		х	Х	х	х	х	х	х	Х		No	6/20/2008	Qal *	TD = 41.78 ft	MC-65B	MC-65	Parcel A	E-3		
Located for general Site coverage and to evaluate downgradient from Area I.	Loo					х		х	Х	х	х	х	Х	х	Х		No	6/20/2008	Qal *	TD = 47.52 ft	MC-66B	MC-66	Parcel A	E-3		
Located to evaluate LOU 68 and as a lateral stepout for well M-95 and to evaluate BRC Parcels B and I.	Loo	х	х			х		Х	Х	х	х	Х	х	х	Х		No	6/24/2008	Qal/MCfg1	5 - 35	M-44B	M-44	Parcel B	E-5		
Located to evaluate LOU 68; BRC Parcels B and I and the downgradient area of the Site.	Loo					х		Х	Х	х	х	Х	х	х	Х		No	6/25/2008	Qal	12 - 22	M-94B	M-94	Parcel I	E-6		
Located to evaluate LOU 68; BRC Parcel B; and the downgradient area of the Site.	Loo					х		Х	Х	х	х	х	Х	х	Х		Vec	6/24/2008	Oal	12 - 22	M-95B	M-95	Parcel I	E-6		
This is a matrix spike / matrix spike duplicate sample. Fill one set of bottles for MS sample & second set of for MSD sample. Label both sets of bottles as M-95B.						х		х	Х	х	х	х	х	х	Х	х	163	0/24/2000	Qai	12 - 22	M-95B	101-95	T alcert	L-0		
Located to evaluate LOU 68; BRC Parcel B; and the downgradient area of the Site.	Loc					Х		Х	Х	х	х	Х	Х	х	Х		No	7/9/2008	Qal	10.5 - 20.5	M-96B	M-96	Parcel I	E-7		
Located to evaluate potential offsite sources to the west; for general Site coverage downgradient from Are	Loo					х		х	Х	х	х	х	х	х	х		No	6/25/2008	Qal *	20 - 40	MC-53B	MC-53	Parcel D	F-2		
Located to serve as a downgradient stepout for LOU 68; to evaluate downgradient areas; and for general coverage.						x		х	х	х	х	х	х	х	х		No	6/20/2008	Qal	16.8 - 41.8	PC-37B	PC-37	Parcel B	F-4		
Located offsite to the west for general Site coverage; to evaluate potential offsite sources to the west; and evaluate BRC Parcels C and E.						х		х	х	х	х	х	х	х	Х		No		Qal *	TD = 44.25 ft	MC-3B	MC-3	Olin	G-1		
Located to evaluate potential offsite sources to the west; for general Site coverage; and to evaluate down from Area I.						х		х	Х	х	х	х	х	х	Х		No		Qal *	TD = 40 ft	MC-94B	MC-94	Parcel D	G-2		
Located to evaluate potential offsite sources to the west; for general Site coverage; and to evaluate down from Area I.						х		х	х	х	х	х	х	х	Х		No	6/25/2008	Qal *	TD = 42 ft	MC-97B	MC-97	Parcel E	G-2		
Located to evaluate potential offsite sources to the west; for general Site coverage downgradient from Are	Loc					х		х	х	х	х	х	х	х	х		No		Qal *	TD = 23 ft	MC-55B	MC-55	Parcel D	G-3		
Serves as a close stepout downgradient for LOU 1 and LOU 10; for general Site coverage; and to evalua offsite sources to the west.						х		х	Х	х	Х	х	х	х	Х		No		MCfg1 *	TD = 51 ft	H-28AB	H-28A	Parcel C	H-2		
Located to serve as a downgradient stepout for LOU 10; to evaluate potential offsite sources to the west; general Site coverage; and to evaluate BRC Parcels C and E. This was a dry well - no water sample colle 2008.	ger					х		х	х	х	х	х	х	х	Х		No	6/25/2008	Qal *	TD = 34 ft	MC-32B	MC-32	Parcel C	H-2		
Located as a downgradient stepout for LOU 1 and LOU 10; to evaluate possible offsite sources to the wes general Site coverage.		х	х	х		х	х	х	х	х	х	х	х	х	х		No	6/27/2008	Qal/MCfg1	26.8 - 41.5	M-6AB	M-6A	I	H-2		
Located as a downgradient stepout for LOU 1and LOU 10; to evaluate possible offsite sources to the wes general Site coverage.		х	х	х		х	х	х	х	х	х	х	х	х	Х		Yes	6/26/2008	Qal/MCfg1	25.5 - 50.5	M-7BB	M-7B	I	H-3		
Located to evaluate potential offsite sources to the west; for general Site coverage downgradient from Are	Loo					х		х	х	х	Х	х	х	х	х		No		Qal *	TD = 32.58 ft	MC-59B	MC-59	Parcel D	H-3		
Located to serve as a upgradient stepout for LOU 68; as a downgradient stepout for LOU 1; to evaluate B C and D; and for general Site coverage.		x	x			x		х	х	х	х	x	x	x	Х		No	6/25/2008	Qal	9.4 - 37.4	M-23B	M-23	Parcel D	H-6		
This is a duplicate sample of M-23B.	Thi	x	х			х		Х	Х	Х	Х	x	х	х	Х					9.4 - 37.4 (dup)	M-23BD					
Located to evaluate LOU 69 and to evaluate BRC Parcels B and J.	Loo					х		Х	Х	х	Х	х	Х	Х	Х		Yes	7/9/2008	Qal/MCfg1	6.1 - 36.1	M-48B	M-48	Parcel J	H-8		
Located to evaluate LOU 1 and for general Site coverage.	Loc					х		х	Х	х	Х	х	х	х	Х		Yes		Qal	19 - 29	M-98B	M-98	I	I-4		
Located to evaluate LOU 1; as a downgradient stepout for LOUs 22, 23, and 32; as an upgradient stepoul 69; and for general Site coverage.						х		х	Х	х	х	х	х	x	Х		No		Qal	16 - 31	M-99B	M-99	I	I-5		
Located to evaluate LOU 1; as a downgradient stepout for LOUs 22, 23, and 32; as an upgradient stepou 69; and for general Site coverage.						х		х	Х	Х	Х	х	х	х	х		No		Qal	19 - 29	M-100B	M-100	I	I-6		
Located to evaluate LOU 1; as a downgradient stepout for LOUs 22, 23, and 32; as an upgradient stepou 69; and for general Site coverage.						х		х	х	х	Х	х	х	х	х		No		Qal	17 - 27	M-101B	M-101	1	I-7		

Table 3 (Field Version)

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

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

Table 3 (Field Version)

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

Page 2 of 3

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

							Lal	boratory :	CAS Kelso, V				Columbia R		GEL Charleston, SC	CAS Houston, TX	STL Denver, CO	Alpha Analytical Sparks, NV				
Grid Location	Location Area	Monitoring Well No.	Sample ID No. ^A	Screen Interval (ft bgs)	Soil Type Expected Across Screen Interval ^{1,B}	Date Sampled (for Phase B)	Well Sampled for Phase A? (y/n)	Matrix Spike/MS Duplicate	Perchlorate (EPA 314.0)	Metals ^{2.}	VOCs ^{3.} (EPA 8260)	Hex Cr ^{4.} (EPA 7199)	Wet Chemistry ^{5.}	Total Cyanide J. (EPA 9012A)	OCPs ^{6.} (EPA 8081A)	SVOCs ^{7.} (EPA 8270C)	PCBs ^{8, E} (EPA 8082)	Radionuclides ^{9.}	PCBs ^{8, E} (EPA 1668A)	OPPs ^{10, F} (8141A)	Organic Acids ^F	
					Wells are o	organized	d by grid	location	as shown on	Plate A	- Starting	point is	on the no	orthwestern	n-most g	rid in Ar	ea I (A-3)	and ending	g with the so	outheastern	-most grid	coverin
M-1	Olin	H-38	H-38B	25 - 50	Qal*		No		х	х	х	х	х	х	х	х		х				To evaluate Site covera
M-2	I	TR-4	TR-4B	124.5 - 144.5	MCfg1	7/9/2008	No		х	х	х	х	Х	х	х	х	х	х	х	х	х	Located to for VOCs);
M-3	1	M-125	M-125B	35-50	MCfg1		No		х	х	х	х	х	x	х	х	х	х	х	х	х	New monito sources fro B.
			M-125B	35-50		MCfg1		х	x	х	х	х	х	х	х	х	х	х	х	х	х	This is a ma for MSD sa
M-8	I	M-39	M-39B	24.9 - 39.9	Qal/MCfg1	7/8/2008	Yes		х	х	Х	Х	х	х	х	х		х		х	х	Located to
N-4	I	M-142	M-142B	30-45	MCfg1		No		х	х	х	х	х	х	х	х		х		х	х	New monito Maintenanc
0-2		M-123	M-123B	34-51	MCfa1	7/11/2008	No		х	х	х	х	х	х	х	х	х	x	x	x	х	New monito offsite source location. W
0-2	I	101-123	M-123BD	MCfg1 7/11/2008 23BD 34-51 (dup)	NO		х	х	х	х	х	х	х	х	х	х	х	х	х	This is a du		
0-4	I	M-124	M-124B	34-49	MCfg1	7/11/2008	No		x	х	х	х	х	x	х	х		х				New monito stepout for I
O-4	I	M-128	M-128B	40-55	MCfg1		No		х	х	х	х	х	х	х	х		х				New monito 52, and 57;
Numbe	er of Wells:	64	<u>I</u>	1	<u>I</u>	I	1	1	1	I	L		1	1	1		I	1	1	1	1	<u> </u>

Number of Wells:

otes:

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

No sample collected under Phase B sampling plan. blank

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

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

Hexavalent Chromium. 4.

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

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

7. SVOCs = Semi volatile organic compounds.

8. Polychlorinated Biphenyls.

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

OPPs = Organophosphorous Pesticides 10.

TBD To Be Determined when well is constructed.

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

Qal Quaternary Alluvium.

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

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

MCfg1 Muddy Creek Formation - first fine-grained facies.

Table 3 (Field Version)

Groundwater Sampling and Analysis Plan for Area I

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

Page 3 of 3

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



Area II

Left Num Reft Burg		Rationale	EMSL Westmont, NJ	Alpha Analytical Sparks, NV	STL- Denver	GEL - Charleston, SC	louston	CAS - H				ster	CAS - Roches	I				Kelso	: CAS	boratory K.	Laborator				
1 1 0.77 0.78 0	(NI			Organic	OPPs ^{11.}			(EPA				L.	Chemistry			DRO/ORO				Depths ^{1.}			LOU Number		
Image Image <t< th=""><th></th><th>stern most grid</th><th>ith the southeas</th><th>and ending w</th><th>ea II (M-2) a</th><th>rid in Are</th><th>rn most g</th><th>orthweste</th><th>is on the n</th><th>rting point</th><th>te A - Sta</th><th>shown on Pla</th><th>location as</th><th>ed by grid</th><th>are organiz</th><th>Borings a</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>		stern most grid	ith the southeas	and ending w	ea II (M-2) a	rid in Are	rn most g	orthweste	is on the n	rting point	te A - Sta	shown on Pla	location as	ed by grid	are organiz	Borings a									
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Image: Problem in the state of the	Ow estimated at -51 leet bgs.			-						-		^													
Image Image <th< td=""><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Х</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>29</td><td></td><td></td><td></td><td>L-5</td></th<>	4											Х								29				L-5	
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1 1		E.L	^			X	X				R	X	X	X			X	×	×			- SA125			
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Li Sol							Х																		
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Lie 6 6 5 5 7	Boring located to evaluate LOL	D,L,L,O	х	1		~						~	~	~			~	~	~			SA179			
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Lie B7											R														
Lie Gr Solution Soluti		B,E,L,S	x	-		X						X	X	X			X	X	X			SA73			
Lie DT SU 200 SD R R R L R R R L R R R L R R R R R L R R R R		L,Z	~ ~	X	Х	Х	Х				Х	Х	Х	Х			Х	х	х			0,110			
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M-3 5 Sector Sector N X <	Boring located to evaluate LOL		Х																			SA66	-		
M3 S Select02 20 R							Х																		
M3 5 SA66-38 28 X <	GW estimated at ~30 feet bgs.			X	X				X			X													
M-3 5 SA66-308 40 R <th< td=""><td>-</td><td></td><td></td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td><u> </u></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>~</td><td></td><td></td></th<>	-			X	X						<u> </u>	X										~			
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M-2 5 SA67-08 0.5 R <th< td=""><td>Desire la seta data sus lusta LOI</td><td></td><td></td><td></td><td></td><td>R</td><td></td><td></td><td></td><td>R</td><td>R</td><td></td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td></td><td></td><td>0407</td><td>5</td><td></td></th<>	Desire la seta data sus lusta LOI					R				R	R		R	R	R	R	R	R	R			0407	5		
M2 5 SA67-108 10 R		N (See Area I)	ĸ			R	R			R	R		R	R	R	R	R	R	R			. SA67			
M-2 5 SA67-30B 30 R <th< td=""><td></td><td></td><td></td><td></td><td></td><td>R</td><td></td><td></td><td></td><td>R</td><td>R</td><td></td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>10</td><td>SA67-10B</td><td></td><td>5</td><td>M-2</td></th<>						R				R	R		R	R	R	R	R	R	R	10	SA67-10B		5	M-2	
M-2 5 SAB7-408 40 R <th< td=""><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td></th<>	-																					-			
M4 5 SA128 SA128-00B 0.0 M-4 5 SA128-05B 0.5 X X X X X X X X M-4 5 M-4 5 SA128-05B 0.5 X X X X X X X X X X X X W.2 Boing located to evaluate 100 M-4 5 SA128-05B 0.5 X X X X X X X X X W.2 Boing located to evaluate 100 Wetwint 100 Wetwi	-							-														-		M-2 M-2	
M-4 5 SA128-02B 0.5 X <	Boring located to evaluate LOI		х								N			IX.	IX.		IX.					SA128			
M-4 5 SA128-20B 20 R </td <td>Diversion Ditch to evaluate inflo</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Х</td> <td></td> <td>SA128-0.5B</td> <td></td> <td></td> <td></td>	Diversion Ditch to evaluate inflo						Х														SA128-0.5B				
M-4 5 SA128-20B 29 X </td <td>GW estimated at ~31 feet bgs.</td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	GW estimated at ~31 feet bgs.			X	X			X	X						X										
M4 5 SA128-30B 30 R <th< td=""><td>-</td><td></td><td></td><td>X</td><td>X</td><td></td><td></td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td></th<>	-			X	X			X	X						X							-			
M-5 52,57 SA65-0.6B 0.0 Image: constraint of the second	1	A				R				R	R	R	R	R		R	R	R	R	30	SA128-30B			M-4	
M-5 52,57 SA65-0.58 0.5 X X X X X X X X X X Lines). Located within LOU 52 M-5 52,57 SA65-08 10 X X X X R X X X E,L Lines). Located within LOU 52 M-5 52,57 SA65-08 10 X X X X R X <td>Dering logated to surflust 1 Of</td> <td>A</td> <td>v</td> <td></td> <td></td> <td>R</td> <td></td> <td></td> <td></td> <td>R</td> <td>R</td> <td>R</td> <td>R</td> <td>R</td> <td></td> <td>R</td> <td>R</td> <td>R</td> <td>R</td> <td></td> <td></td> <td>8405</td> <td></td> <td></td>	Dering logated to surflust 1 Of	A	v			R				R	R	R	R	R		R	R	R	R			8405			
M-5 52, 57 SA65-10B 10 X		FI	X			×	x			x	R	x	×	×			×	x	×			SA65			
M-5 52,57 SA65-20B 20 X X X X X X R X N N E,L GW estimated at -33 feet bgs. M-5 52,57 SA65-30B 30 R							<u>^</u>															-			
M-5 52,57 SA65-31B 31 X	GW estimated at ~33 feet bgs.											X	х	Х			Х		Х		SA65-20B		52, 57	M-5	
M-5 52,57 SA65-35B 35 R	4										R	v													
M-5 57 SA70 SA70-0.0B 0.0 Image: Constraint of the state of the st	1										R											-			
M-5 57 SA70-10B 10 X <t< td=""><td></td><td></td><td>х</td><td>l</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.0</td><td>SA70-0.0B</td><td>SA70</td><td>57</td><td>M-5</td></t<>			х	l																0.0	SA70-0.0B	SA70	57	M-5	
M-5 5,57 SA70-20B 20 R R R R R R R R R GW estimated at ~32 feet bgs. M-5 57 SA70-30B 30 X X X X X X X X R X X X B GW estimated at ~32 feet bgs.							Х																		
M-5 57 SA70-30B 30 X X X X X X X X X X X X X X X X X X												Х			X	Х									
M-5 5,57 SA70-35B 35 R R R R R R R R R A R A A A A A A A A	orr countated at ~52 reet bys.							-				Х			Х	Х						-			
	<u>I</u>					R											R	R					5, 57	M-5	

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

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

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

Location Description and Characterized Area Rationale DEP may not agree with upgradient and downgradient descriptions)
LET (AD Direct Toron for Lines to Ordinary Objects Deserves AD
J 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Located in a low area near existing LOU 57 piping and as an upslope stepout from LOU 5.
J 5 (Beta Ditch), LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant ted in a low spot within LOU 5 to evaluate potential impacts associated with historic
J 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Randomly located as an upslope stepout for LOU 5 and general coverage for LOU 57.
Js 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer Lines), LOU 57 (AP
a Chorate Process, AP Plant SIs and Transfer Lines), and LOU 50 (Acid Drain System). n of LOU 16 and 17 for worst case coverage, near LOU 60 to evaluate possible piping rage of LOU 57.
J 5 (Beta Ditch), LOU 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer 4). Located in a low spot downslope of LOU 16 and 17. Upslope of LOU 5 to evaluate m LOUs 5, 16, and 17.
J 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer general coverage of LOU 57 and for site wide coverage.
Js 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer Lines) and LOU 57 dium Chlorate Process, AP Plant SIs and Transfer Lines). Located in a low spot evaluate worst case conditions and for general coverage of LOU 57.
J 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer Lines), LOU 57 (AP n Chlorate Process, AP Plant SIs and Transfer Lines), and LOU 60 (Acid Drain System). n of LOU 16 and 17 to evaluate worst case conditions and for general coverage of LOU 57
rmer conveyance flume to evaluate underlying soils for potential impacts from historical on ground surface (0 feet bgs). GW estimated at ~29 feet bgs.
J 18 (Pond AP-4), and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process,
5) Located in a low spot in the bottom of LOU 18 to evaluate worst case conditions and 7.
U 5 (Beta Ditch) and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, sp). Located in the bottom of LOU 5 to evaluate potential impacts from historic discharges I coverage of LOU 57.
J 20 (Pond C-1 and Associated Piping) and LOU 5 (Beta Ditch). Located in bottom of
aluate upstream tributary releases and potiential overflow releases from LOU 20.
J 22 (Pond WC-West Associated Piping), LOU 23 (Pond WC-East Associated Piping), r Lines to Sodium Chlorate Process, AP Plant SIs and Transfer Lines). To evaluate g releases and for general stepout coverage of LOU 57.

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

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

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

Laborato					CAS -	Kelso				C	CAS - Roches	ster				CAS - H	louston	GEL - Charleston, SC	STL- Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale	
Grid Location	LOU Number	Boring No.	Sample ID Number	Sample Depths ^{1.} (ft. bgs)	Perchlorate (EPA 314.0)	Metals ^{2.} (EPA 6020)	Hex Cr ^{3.} (EPA 7199)	TPH- DRO/ORO (EPA 8015B)	TPH-GRO (EPA 8015B)	VOCs ^{4.} (EPA 8260B)	Wet Chemistry Analytes ^{5.}	Total Cyanide L. (EPA 9012A)	OCPs ^{6.} (8081A)	SVOCs ^{7.} (EPA 8270C)	PCBs ^{8.} (EPA 8082)	PCBs ^{8.} (EPA 1668A)	Dioxins/ Furans ^{9.}	Radio- nuclides ^{10.}	OPPs ^{11.}	Organic Acids ^{12.}	Asbestos ^{13.} EPA/540/R-97/028	for Revision	(ND
								Borings a	re organiz	ed by grid	location as	shown on Plat	te A - Star	ting point	is on the n	orthweste	rn most g	rid in Are	a II (M-2)	and ending w	ith the southea	stern most grid	in Area II (S-7).
O-4	n/a	SA54	SA54-0.0B	0.0																	Х		Boring located to evaluate gene
0-4	n/a		SA54-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				E,L	GW estimated at ~33 feet bgs.
<u> </u>	n/a n/a	-	SA54-10B SA54-20B	10 20	X	X	X	X		X	X	X	R R	X				X				E,L B,E,L	
0-4	n/a		SA54-30B	30	R	R	R	R		R	R		R	R				R				B	
0-4	n/a		SA54-31B	31	X	Х	Х	X		Х	Х	Х	_	Х				Х				B,E,L	
0-4 0-5	n/a 45, 59, 60	SA41	SA54-37B SA41-0.0B	37 0.0	R	R	R	R		R	R		R	R				R			X	A	Boring located to evaluate LOU
0-5	45, 59, 60	041	SA41-0.5B	0.5	х	х	Х	х		Х	Х	х	R	Х		-	х	х			^	E,L	System). Located on the perime
O-5	45, 59, 60		SA41-10B	10	R	R	R	R		R	R		R	R				R				J	for historic details) and between
0-5	45, 59, 60		SA41-12B	12	X	X	X	X		X	X	Х	R	X				X				E,J,L	LOU 60 pipeline invert occurs at
O-5 O-5	45, 59, 60 45, 59, 60		SA41-20B SA41-25B	20 25	R X	R X	R X	R X		R X	R X	x	R	R X				R X				B B,E,L	GW estimated at ~40 feet bgs.
O-5	45, 59, 60		SA41-30B	30	R	R	R	R		R	R		R	R				R				B	
O-5	45, 59, 60		SA41-38B	38	Х	Х	Х	Х		Х	Х	Х		Х				Х				B,E,L	
O-5 O-5	45, 59, 60 45	SA44	SA41-40B SA44-0.0B	40	R	R	R	R		R	R		R	R				R			X	A	Boring located to evaluate LOU
0-5	45	3744	SA44-0.5B	0.0	X	Х	Х	х		х	Х	х	R	Х			х	Х			^	E,L	aboveground storage tank to ev
O-5	45		SA44-10B	10	X	X	X	X		X	X	X	R	X				X				E,L	GW estimated at ~44 feet bgs.
O-5	45		SA44-20B	20	R	R	R	R		R	R		R	R				R				В	
O-5 O-5	45 45		SA44-25B SA44-30B	25 30	X R	X R	R	X R		X R	X R	X	R	R				X R				B,E,L B	
0-5	45		SA44-40B	40	R	R	R	R		R	R		R	R				R		·		В	
O-5	45		SA44-42B	42	Х	Х	Х	Х		Х	Х	Х		Х				Х				B,E,L	1
O-5	45, 60	SA45	SA45-0.0B	0.0									_								Х		Boring located to evaluate LOU
O-5 O-5	45, 60 45, 60	-	SA45-0.5B SA45-10B	0.5	X	X	X	X		X	X	X	R R	X			X	X				E,L J,E,L	of a former tank to evaluate pote location.
0-5	45, 60		SA45-20B	20	R	R	R	R		R	R	~	R	R				R				B	LOU 60 pipeline invert occurs a
O-5	45, 60		SA45-25B	25	Х	Х	Х	Х		Х	Х	Х		Х				Х				B,E,L	GW estimated at ~38 feet bgs.
0-5	45, 60		SA45-30B	30	R	R	R	R		R	R		R	R				R				B	
O-5 O-5	45, 60 45, 60		SA45-36B SA45-40B	36 40	X R	X R	R	X R		X R	R	X	R	R		· · · · · ·		R				B,E,L A	
O-5	8,60	SA106	SA106-0.0B	0.0	IX.	IX.		IX.		IX.											Х	, A	Boring located to evaluate LOU
O-5	8, 60		SA106-0.5B	0.5	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х			Х	Х	Х	Х		L,Q,Z	of pond where historic boring SI
O-5 O-5	8,60 8,60	-	SA106-12B SA106-20B	12 20	X	X	X	X	X	X	X	X	X Hold	X				X	X	Х		J,L,Q B,L,Q	GW estimated at~37 feet bgs.
0-5 0-5	8,60	-	SA106-20B SA106-35B	35	X	× X	× ×	X	X	X	X	X	X	X				X	X	X		B,L,Q,Z	LOU 60 pipeline invert occurs a
0-5	8,60	SA50	SA50-0.0B	0.0																	Х	-1-1-1-1	Boring located as a westward st
0-5	8,60		SA50-0.5B	0.5	X	X	X	X	Х	X	X	X	R	X			X	X				E,L,W,bb	site conditions and possible ove
O-5 O-5	8, 60 8, 60		SA50-10B SA50-12B	10 12	R X	R X	R X	R X	X	R X	R X	X	R	R				R		· · · · ·		J E,J,L,W	from LOU 60 (former Acid Drain LOU 60 pipeline invert (bottom of
0-5	8,60		SA50-20B	20	R	R	R	R	~	R	R	~~~~~	R	R				R				В	GW estimated at ~38 feet bgs.
O-5	8, 60		SA50-25B	25	Х	Х	Х	Х	Х	Х	Х	Х		Х				Х				B,E,L,W	
O-5 O-5	8,60 8,60		SA50-30B SA50-36B	30 36	R X	R X	R X	R X	x	R X	R X	X	R	R				R X				B,E,L,W,bb	
0-5 0-5	7, 8, 9	SA53	SA50-36B SA53-0.0B	0.0	^	^	^	^	^	^	^	^		^				^			X	D,E,L,VV,DD	Boring located to evaluate LOU
O-5	7, 8, 9		SA53-0.5B	0.5	X	X	Х	Х	Х	Х	Х	X	R	Х			Х	Х				E,L,W	Facilities), and LOU 9 (New P-2
0-5	7, 8, 9		SA53-10B	10	X	X	X	X	Х	X	X	X	R	X				X				E,L,W	evaluate potential overflow surface
O-5 O-5	7, 8, 9 7, 8, 9	-	SA53-20B SA53-25B	20 25	R X	R X	R X	R X	X	R X	R X	X	R	R				R X				B,E,L,W	GW estimated at ~34 feet bgs.
0-5	7, 8, 9		SA53-30B	30	R	R	R	R	~	R	R	·····	R	R				R				В	1
O-5	7, 8, 9		SA53-32B	32	Х	Х	Х	Х	X	Х	Х	X		Х				Х				B,E,L,W	
O-5 O-5	7	SA102	SA102-0.0B SA102-0.5B	0.0	x	x	x	X	X	×	×	X	R	x							X	E,L,W	Boring located to evaluate LOU Located at a lowspot in bottom
0-5 0-5	7	-	SA102-0.5B SA102-10B	10	X	X	X	X	X	X	X	X	R	X			^	X				E,L,W	GW estimated at ~32 feet bgs.
O-5	7		SA102-20B	20	R	R	R			R	R		R	R				R				В	
O-5 O-5	7	64400	SA102-30B	30	Х	Х	Х	Х	Х	Х	Х	Х		Х				Х			~	B,E,L,W	Boring located to evaluate LOU
O-5 O-5	7	SA109	SA109-0.0B SA109-0.5B	0.0	X	X	x	x	x	x	x	Х		X			x	x			Х	G,Q Q,W	Boring located to evaluate LOU sidewall where soil staining was
O-5	7	-	SA109-10B	10	X	X	X	X	X	X	X	X		X			·····	X				Q,W Q,W	GW estimated at ~36 feet bgs.
O-5	7	_	SA109-25B	25	Х	Х	Х	Х	Х	Х	Х	Х		Х				Х				B,Q,W	
O-5 O-5	7 7	SA114	SA109-34B SA114-0.0B	34 0.0	Х	Х	Х	Х	Х	Х	Х	X		Х				Х			X	B,Q,W G,Q	Boring located to evaluate LOU
0-5 0-5	7	- 3ATT4	SA114-0.0B SA114-0.5B	0.0	Х	X	X	Х	Х	X	X	Х		X			x	X			^	Q,W	where white encrustations were
O-5	7		SA114-10B	10	Х	Х	Х	Х	Х	Х	Х	Х		Х				Х				B,Q,W	GW estimated at ~32 feet bgs.
O-5	7	0.4.1-5	SA114-30B	30	Х	Х	Х	Х	Х	Х	Х	Х		Х				Х				B,Q,W	
O-5 O-5	45 45	SA153	SA153-0.0B SA153-0.5B	0.0	x	x	x	x		х	x	Х	R	x			x	x			X	E,L	Boring located to evaluate LOU tank to evaluate subsurface rele
0-5	45	-	SA153-0.5B SA153-10B	10	X	X	X	X		X	X	X	R	x			^	X				E,L	GW estimated at ~40 feet bgs.
O-5	45		SA153-20B	20	R	R	R	R		R	R		R	R				R				В	
0-5	45		SA153-25B	25	X	X	X	X		X	X	X		X				X				B,E,L	
O-5 O-5	45 45	-	SA153-30B SA153-38B	30 38	R X	R X	R X	R X		R X	R X	Х	R	R				R X				B,E,L	
0-0	40		0/100-000	00	~	~	~	^		~	~	^		~				~	1	1			

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

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

			Lab	oratory K. :	CAS -	- Kelso				c	AS - Roches	ter				CAS - H	ouston	GEL - Charleston, SC	STL- Denver	Alpha Analytical	EMSL Westmont, NJ	Rationale	ray
Grid Location	LOU Number	Boring No.	Sample ID Number	Sample Depths ^{1.} (ft. bgs)	Perchlorate (EPA 314.0)	Metals ^{2.} (EPA 6020)	Hex Cr ^{3.} (EPA 7199)	TPH- DRO/ORO (EPA 8015B)	TPH-GRO (EPA 8015B) (E		Wet Chemistry Analytes ^{5.}	Total Cyanide L. (EPA 9012A)	OCPs ^{6.} (8081A)	SVOCs ^{7.} (EPA 8270C)	PCBs ^{8.} (EPA 8082)	PCBs ^{8.} (EPA 1668A)	Dioxins/ Furans ^{9.}	Radio- nuclides ^{10.}	OPPs ^{11.}	Sparks, NV Organic Acids ^{12.}	Asbestos ^{13.} EPA/540/R-97/028	for Revision	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
	-							Borings a	are organized	l by grid	location as	shown on Plat	e A - Start	ing point i	s on the n	orthwester	rn most g	rid in Area	a II (M-2) a	and ending w	ith the southeas	tern most grid	in Area II (S-7).
O-5	45	SA172	SA172-0.0B	0.0									-								Х	_	Boring located to evaluate LOU 45 (Diesel Storage Tanks) potential releases.
0-5	45	-	SA172-0.5B	0.5	X	X	X	X	·	<u> </u>	X	X	R	X X			X	X				E,L	Located beneath the footprint of a aboveground storage tank to evaluate subsurface releases (See LOU 45
O-5 O-5	45 45, 59	-	SA172-10B SA172-20B	10 20	X	R	R	X		R	X R	Х	R	X R				X R				E,LB	summary for historical data). GW estimated at ~41 feet bgs.
O-5	45	-	SA172-25B	25	x	X	X	X	· · · · · · · · · · · · · · · · · · ·	X	X	X		X				X				B,E,L	
O-5	45, 59	-	SA172-30B	30	R	R	R	R		R	R		R	R				R				В	
0-5	45, 59		SA172-35B	35	R X	R	R	R		R	R	······	R	R				R				B	
O-5 O-5	45 45	RSA05	SA172-39B RSAO5-0.0B	39 0.0	~	Х	Х	Х		Х	Х	Х		Х				Х			X	B,E,L	Boring located to evaluate LOU 45 (Diesel Storage Tanks). Randomly located within LOU 45 to evaluate possible
0-5	45		RSA05-0.5B	0.5	X	Х	Х	Х		X	Х	Х	Х	Х			Х	Х				E,L	surface runoff releases and to evaluate site wide conditions.
O-5	45	-	RSAO5-10B	10	X	X	Х	Х		Х	Х	Х	Hold	Х				Х				E,L	GW estimated at ~43 feet bgs.
O-5 O-5	45 45	-	RSAO5-20B RSAO5-25B	20	R	R X	R X	R		R	R X	X	R Hold	R X				R X				B,E,L	
0-5	45	-	RSA05-25B RSA05-30B	25 30	R	R	R	R	· · · · · · · · · · · · · · · · · · ·	R	R	···· ^	R	R				R				B,E,L	
O-5	45	-	RSAO5-35B	35	R	R	R	R		R	R		R	R				R				B	
O-5	45		RSAO5-41B	41	Х	Х	Х	Х		Х	Х	Х	Х	Х				Х				B,E,L	
0-5	45	SA185	SA185-0.0B	0.0	v	x	~	~		X	x	X	P	x			x	x			Х	E.L	Boring located to evaluate LOU 45 (Diesel Storage Tanks), System). Located on the perimeter of the former
0-5 0-5	45	-	SA185-0.5B SA185-10B	0.5	X X	X		X	·		X X	X X	R	X			^	X X				E,L E,L	aboveground storage tank to evaluate potential releases (see text for historic details). GW estimated at ~43 feet bgs.
0-5	45		SA185-20B	20	R	R	R	R		R	R		R	R				R				В	
O-5	45	-	SA185-25B	25	X	Х	Х	Х		X	X	X		X				X				B,E,L	
0-5	45	-	SA185-30B	30	R	R	R	R	· · · · · · · · · · · · · · · · · · ·	R	R		R	R				R				B	
O-5 O-5	45 45		SA185-35B SA185-41B	35 41	к Х	X	X	K X		X	X	X	ĸ	X				X				B,E,L	
0-5	45	SA186	SA186-0.0B	0.0	X	X	~	A		~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~		~				~			Х	_,_,_	Boring located to evaluate LOU 45 (Diesel Storage Tanks), System). Located on the perimeter of the former
O-5	45	-	SA186-0.5B	0.5	Х	Х	Х	Х		Х	Х	Х	R	Х			Х	Х				E,L	aboveground storage tank to evaluate potential releases (see text for historic details).
0-5	45	-	SA186-10B	10	X	X	X	X		X	X	X	R	X				X R				E,L	GW estimated at ~39 feet bgs.
O-5 O-5	45 45	-	SA186-20B SA186-25B	20 25	X	R X	R X	к Х		R X	R X	X	R	K X				X				B,E,L	
0-5	45	-	SA186-30B	30	R	R	R	R		R	R	~	R	R				R				B	
O-5	45	-	SA186-35B	35	R	R	R	R		R	R		R	R				R				В	
0-5	45	0.1.107	SA186-37B	37	Х	Х	Х	Х		Х	Х	Х		Х				Х			X	B,E,L	
O-5 O-5	45, 59 45, 59	SA187	SA187-0.0B SA187-0.5B	0.0	x	х	x	×		X	x	X	P	x			X	x			Х	E,L	Boring located to evaluate LOU 45 (Diesel Storage Tanks) and LOU 59 (Storm Sewer System). Located on the perimeter of the former aboveground storage tank area to evaluate potential releases (see text for historic details).
0-5	45, 59	-	SA187-10B	10	X	X	X	X X	·	X	X	X	R	X				X				E,L	GW estimated at ~41 feet bgs.
O-5	45, 59		SA187-20B	20	R	R	R	R		R	R		R	R				R				В	
0-5	45, 59	-	SA187-25B SA187-30B	25	X	R	X	X		<u> </u>	<u>X</u>	X		R				R				B,E,L	
O-5 O-5	45, 59 45, 59		SA187-30B	30 35	R	R	R	R		R	R		R	R				R				B	
O-5	45, 59		SA187-39B	39	X	X	Х	X		X	X	X		X				X				B,E,L	
O-5	45	SA188	SA188-0.0B	0.0									-								Х		Boring located to evaluate LOU 45 (Diesel Storage Tanks) and LOU 59 (Storm Sewer System), and LOU 60 (Acid Drain
O-5 O-5	45 45	-	SA188-0.5B SA188-10B	0.5	X	X	X	X		X	X	X	R	X			Х	X X				E,L E,J,L	System). Located beneath the footprint of an aboveground storage tank to evaluate subsurface releases (See LOU 45 summary for historical data).
0-5	45, 59, 60	-	SA188-20B	20	R	R	R	R			R	^	R	R				R				B	GW estimated at ~39 feet bgs.
O-5	45		SA188-25B	25	X	X	Х	Х		X	Х	X		X				X				B,E,L	
0-5	45, 59, 60	-	SA188-30B	30	R	R	R	R		R	R		R	R				R				В	
O-5 O-5	45, 59, 60 45	-	SA188-35B SA188-37B	35 37	X	R	R	R X		R	R	×	ĸ	R				R X				B,E,L	
O-6	45	SA40	SA40-0.0B	0.0	~	~	~	~		~	~	~		~				~			Х	2,2,2	Boring located to evaluate LOU 45 (Diesel Storage Tanks), LOU 59 (Storm Sewer System), and LOU 60 Acid Drain
O-6	45	-	SA40-0.5B	0.5	Х	Х	Х	Х		Х	Х	Х	R	Х			Х	Х				E,L	System). Located on the perimeter of the former aboveground storage tank to evaluate potential releases (see text
0-6	45	-	SA40-10B	10	X	X	X	X		X	X	X	R	X				X				J	for historic details) and between LOUs 59 and 60 to evaluate possible piping releases.
O-6 O-6	45, 59, 60 45	-	SA40-20B SA40-25B	20 25	X	R X	R X	K X		R X	R X	×	ĸ	R X				R X				B,E,L	GW estimated at ~43 feet bgs.
O-6	45, 59, 60	-	SA40-30B	30	R	R	R	R		R	R		R	R				R				B	
O-6	45, 59, 60		SA40-40B	40	R	R	R	R		R	R		R	R				R				В	
0-6	45	84.40	SA40-41B	41 0.0	Х	Х	Х	Х		Х	Х	Х		Х				X			v	B,E,L	Boring located to evaluate LOU 45 (Diesel Storage Tanks). Located at a low spot within the footprint of former
O-6 O-6	45 45	SA42	SA42-0.0B SA42-0.5B	0.0	X	X	X	x		x	x	X	R	x			X	х			X	E,L	boring located to evaluate LOU 45 (Diesel Storage Tanks). Located at a low spot within the tootprint of former aboveground storage tank to evaluate potential releases.
O-6	45	1	SA42-10B	10	X	X	X	X		X	X	X	R	Х				Х				E,L	GW estimated at ~40 feet bgs.
O-6	45	-	SA42-20B	20	R	R	R	R		R	R		R	R				R				В	
0-6	45	-	SA42-25B SA42-30B	25	X	R	R	X		X R	R	X	P	X				X R				B,E,L B	
O-6 O-6	45 45	-	SA42-30B SA42-38B	30 38	X	X	X	X		<u>к</u> Х	X	X	R.	X				X				B	
O-6	45		SA42-40B	40	R	R	R	R		R	R		R	R				R				B,E,L	
0-6	45	SA43	SA43-0.0B	0.0									-					~~~~			Х		Boring located to evaluate LOU 45 (Diesel Storage Tanks), LOU 59 (Storm Sewer System), and LOU 60 Acid Drain
0-6 0-6	45 45	-	SA43-0.5B SA43-10B	0.5	X X	X X	X X	X		X X	X X		R	X X			X	X X				E E	System). Located on the perimeter of the former aboveground storage tank to evaluate potential releases (see text for historic details) and between LOUs 59 and 60 to evaluate possible piping releases.
O-6	45		SA43-10B SA43-20B	20	R	R	R	R		R	R		R	R				R				B	GW estimated at ~45 feet bgs.
O-6	45		SA43-25B	25	X	X	X	X		Х	Х			Х				Х				E	
O-6	45		SA43-30B	30	R	R	R	R		R R	R		R	R				R				B	
0-6 0-6	45 45	-	SA43-40B SA43-43B	40 43	X	X	X	X		<u></u> Х	R X		ĸ	X				R X				<u>В.Е</u>	
	10		0.1.0 400	.0	~	~		~ ~			~											2,2	

			Lat	ooratory K.	: CAS	- Kelso				(CAS - Roches	ster				CAS - H	louston	GEL - Charleston, SC	STL- Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale	
Grid Location	LOU Number	Boring No.	Sample ID Number	Sample Depths ^{1.} (ft. bgs)	Perchlorate (EPA 314.0)	Metals ^{2.} (EPA 6020)	Hex Cr ^{3.} (EPA 7199)	TPH- DRO/ORO (EPA 8015B)	TPH-GRO (EPA 8015B)	VOCs ^{4.} (EPA 8260B)	Wet Chemistry Analytes ^{5.}	Total Cyanide L. (EPA 9012A)	OCPs ^{6.} (8081A)	SVOCs ^{7.} (EPA 8270C)	PCBs ^{8.} (EPA 8082)	PCBs ^{8.} (EPA 1668A)	Dioxins/ Furans ^{9.}	Radio- nuclides ^{10.}	OPPs ^{11.}	Organic Acids ^{12.}	Asbestos ^{13.} EPA/540/R-97/028	for Revision	(ND
	-							Borings a	re organiz	ed by grid	location as	shown on Plat	te A - Star	ting point i	is on the n	orthweste	rn most g	grid in Are	a II (M-2)	and ending w	ith the southea	stern most grid	
O-6 O-6	14 14	SA51	SA51-0.0B SA51-0.5B	0.0	x	x	x	X	X	x	x		R	x			x	X			X	E,W	Boring located to evaluate LOU bottom of LOU 14 to evaluate w
0-6	14		SA51-0.5B	10	X	X	X	X	X	X	X		R	X				X				E,W	GW estimated at ~38 feet bgs.
0-6	14 14		SA51-20B	20	R	R X	R X	R	× ×	R	R		R	R X				R X				B	
O-6 O-6	14		SA51-25B SA51-30B	25 30	X R	R	R	X R	X	X R	R		R	R				R				B,E,W B	-
O-6	14		SA51-36B	36	Х	Х	Х	Х	Х	Х	Х			Х				Х				B,E,W	
O-6 O-6	13 13	RSAO6	RSAO6-0.0B RSAO6-0.5B	0.0	х	х	х	х	х	x	х		х	x			x	x			X	W	Boring located to evaluate LOU worst case conditions and site v
O-6	13		RSAO6-10B	10	Х	Х	Х	Х	X	Х	Х		Hold	Х				Х				W	GW estimated at ~36 feet bgs.
O-6 O-6	13 13		RSAO6-20B RSAO6-30B	20 30	R	X R	X R	X R		X R	R		Hold R	R				X R				B,W B	-
O-6	13		RSAO6-34B	34	X	Х	X	X	Х	X	X		Х	X				Х				B,W	j
0-6	13	64200	RSA06-35B	35 0.0	R	R	R	R		R	R		R	R				R				A	Baring logated to evolute LOU
O-6 O-6	9	SA200	SA200-0.0B SA200-0.5B	0.0	X	Х	х	Х	Х	х	х		R	X			X	х			Х	E,W	Boring located to evaluate LOU to evaluate worst case condition
O-6	9		SA200-10B	10	Х	Х	Х	Х	Х	Х	Х		R	Х				Х				E,W	GW estimated at ~33 feet bgs.
O-6 O-6	9		SA200-20B SA200-30B	20 30	R	X R	R	X R	X	X R	R		R R	R				R				B,E,W B	4
O-6	9		SA200-30B	31	X	X	X	X	Х	X	X		IX.	X				X				B,E,W	
P-5	59,60	SA117	SA117-0.0B	0.0		V								· · · · · · · · · · · · · · · · · · ·			·····		·····		X	G,Q	Boring located to evaluate LOU
P-5 P-5	59, 60 59, 60		SA117-0.5B SA117-9B	0.5 9	X	X	X	X		X	X	X	X	X X			X	X	X	X		L,Q,Z J,L,Q,Z	possible piping releases and for LOU 60 pipeline invert occurs a
P-5	59, 60		SA117-25B	25	Х	Х	Х	Х		Х	Х	Х	Hold	Х				Х				B,L,Q	
P-5 Q-5	59, 60 11	SA124	SA117-41B SA124-0.0B	41 0.0	Х	Х	Х	Х		Х	Х	Х	Х	Х				Х	X	Х	Х	B,L,Q,Z	Boring located to evaluate LOU
Q-5	11	04124	SA124-0.5B	0.5	Х	Х	Х			Х	Х	Х	R	Х			Х	Х			^	E,L	at a likely runoff location to eval
Q-5	11		SA124-10B	10	X R	X	X R			X	X	X	R R	X R				X				E,L	GW estimated at ~44 feet bgs.
Q-5 Q-5	11 11		SA124-20B SA124-25B	20 25	X	R X	X			R X	X	X	ĸ	X				R X				B,E,L	-
Q-5	11		SA124-30B	30	R	R	R			R	R		R	R				R				В	1
Q-5 Q-5	11 11		SA124-35B SA124-42B	35 42	R X	R X	R X			R X	R X	×	R	R X				R X				B,E,L	-
Q-5	59	RSAQ5	RSAQ5-0.0B	0.0																	Х	0,2,2	Boring located to evaluate LOU
Q-5 Q-5	59 59		RSAQ5-0.5B RSAQ5-10B	0.5	X	X X	X	X X		X	X	X	X	X			X	X				L	_possible piping releases and for GW estimated at ~43 feet bgs.
Q-5	59		RSAQ5-10B	20	R	R	R	R		R	R	^	R	R				R				B	Gw estimated at ~45 leet bys.
Q-5	59		RSAQ5-25B	25	X	X	Х	X		X	X	X	Hold	X				X				B,L	1
Q-5 Q-5	59 59		RSAQ5-30B RSAQ5-35B	30 35	R	R R	R R	R R		R R	R		R R	R				R				B	-
Q-5	59		RSAQ5-41B	41	Х	Х	Х	Х		Х	Х	Х	Х	Х				Х				B,L	
Q-6 Q-6	12, 59, 60 12, 59, 60	SA125	SA125-0.0B SA125-0.5B	0.0	x	х	x	х		x	x	Х	R	x			x	x			X	E,L	Boring located to evaluate LOU (Acid DrainSystem). Located do
Q-6	12, 59, 60		SA125-10B	10	X	Х	Х	X		Х	Х	X	R	Х				Х				E,L	piping to evaluate high risk release
R-6	12, 59, 60		SA125-20B	20	R	R	R X	R		R X	R X	×	R	R				R X				B	LOU 60 pipeline invert occurs a
Q-6 R-6	12, 59, 60 12, 59, 60		SA125-25B SA125-30B	25 30	R	X R	R	X R		R	R	X	R	R				R				B,E,L B	GW estimated at ~41 feet bgs.
R-6	12, 59, 60		SA125-35B	35	R	R	R	R		R	R		R	R				R				B	1
Q-6 Q-6	12, 59, 60 15, 60	SA126	SA125-39B SA126-0.0B	39 0.0	Х	Х	Х	X		X	Х	Х		Х				Х			X	B,E,L	Boring located to evaluate LOU
Q-6	15, 60		SA126-0.5B	0.5	Х	Х	Х	Х		Х	Х	Х	R	Х			Х	Х				E,H,L,bb	possible and downslope of LOU
Q-6 Q-6	15, 60 15, 60	-	SA126-10B SA126-18B	10 18	X	X	X	X		X	X	X	R	X				X				E,H,L E,H,J,L	_evaluate local piping releases. LOU 60 pipeline invert occurs a
Q-6	15, 60		SA126-20B	20	R	R	R	R		R	R	^	R	R				R				В	GW estimated at ~42 feet bgs.
Q-6 Q-6	15,60		SA126-25B	25	X R	X	X	X R		X	X R	X	R	X R				X R				B,E,H,L	
Q-6	15, 60 15, 60		SA126-30B SA126-35B	30 35	R	R R	R R	R		R R	R		R	R				R				B	-
Q-6	15, 60		SA126-40B	40	X	X	X	X		X	X	Х		X			****	X				B,E,H,L,bb	1
Q-6 Q-6	59 59	SA136	SA136-0.0B SA136-0.5B	0.0	X	x	x	X		x	X		x	×			X	x	x	x	X	Q,W,Z	Boring located to evaluate for p GW estimated at ~42 feet bgs.
Q-6	59		SA136-10B	10	Х	X	Х	X		Х	X		Х	X			^	Х	X	x		Q,W,Z	leer bys.
Q-6 Q-6	59 59		SA136-25B SA136-40B	25 40	X	X X	X	X		X X	X		Hold X	X				X X	X	X		B,Q,W B,Q,W,Z	-
Q-6	43, 59, 60	RSAQ6	RSAQ6-0.0B	40		^	^	^		^	^		~	^				^	^	^	X	D,Q,VV,Z	Boring located nearby LOU 43
Q-6	43, 59, 60		RSAQ6-0.5B	0.5	X	X	X	X		X	X	X	X	X			Х	X				L,bb	Sewer System), and LOU 60 (A
Q-6 Q-6	43, 59, 60 43, 59, 60		RSAQ6-10B RSAQ6-20B	10 20	X R	X R	X R	X R		X R	X R	X	Hold R	X R				X R				L B	releases and near LOU 60 pipir LOU 60 pipeline invert occurs a
Q-6	43, 59, 60		RSAQ6-25B	25	Х	Х	Х	Х		Х	Х	X	Hold	Х				Х				B,L	GW estimated at ~40 feet bgs.
Q-6 Q-6	43, 59, 60 43, 59, 60		RSAQ6-30B RSAQ6-35B	30 35	R R	R R	R R	R R		R R	R		R R	R R				R R				B B	4
Q-0	43, 59, 60	1	NSAQ0-35B	35	ĸ	Л	К	К		R	ĸ		Л	ĸ				ĸ				D	4

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

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

			Lat	boratory K. :	CAS -	- Kelso					CAS - Roches	ter				CAS - H	louston	GEL - Charleston, SC	STL- Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale	
Grid Location	LOU Number	Boring No.	Sample ID Number	Sample Depths ^{1.} (ft. bgs)	Perchlorate (EPA 314.0)	Metals ^{2.} (EPA 6020)	Hex Cr ^{3.} (EPA 7199)	TPH- DRO/ORO (EPA 8015B)	TPH-GRO (EPA 8015B)		Wet Chemistry Analytes ^{5.}	Total Cyanide L. (EPA 9012A)	OCPs ^{6.} (8081A)	SVOCs ^{7.} (EPA 8270C)	PCBs ^{8.} (EPA 8082)	PCBs ^{8.} (EPA 1668A)	Dioxins/ Furans ^{9.}	Radio- nuclides ^{10.}	OPPs ^{11.}	Organic Acids ^{12.}	Asbestos ^{13.} EPA/540/R-97/028	for Revision	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
								Borings a	are organize		l location as	shown on Pla	te A - Star	ting point i	s on the n	orthwester	rn most gi		a II (M-2) a	and ending w	ith the southeas	of transmission has been used by transmission of the transmission of the	in Area II (S-7).
Q-6 R-5	43, 59, 60 36	SA133	RSAQ6-38B SA133-0.0B	38 0.0	X	Х	Х	Х		Х	X	X	Х	Х				Х			Х	B,L,bb	Boring located to evaluate LOU 36 (Former Satellite Accumulation Point, Unit 3, Maintenance Shop). Located in
R-5	36	0/1100	SA133-0.5B	0.5	Х	Х	Х	Х		Х	Х	Х	R		Х		х	Х			~	E,L,P,U	damaged pavement area within LOU 36 to evaluate worst case location of surface releases.
R-5 R-5	36 36		SA133-10B SA133-20B	10 20	X	X	X	X	· · · ·	X X	X	X X	R					X X				E,L,U B,E,L,U	GW estimated at ~33 feet bgs.
R-5 R-5	36		SA133-20B SA133-30B	30	R	R	R	R		R	R	^	R					R				B,E,L,U	Borehole for SA133 will be converted into monitoring well M-146.
R-5	36		SA133-31B SA133-35B	31	X	X	X	X		X	X	Х	R		Х			X R				B,E,L,P,U	
R-5 R-6	36 59, 60	SA30	SA30-0.0B	35 0.0	ĸ	ĸ	R	ĸ		ĸ	ĸ		к					ĸ			Х	A	Boring located to evaluate LOU 59 (Storm Sewer System) and LOU 60 (Acid 'Drain System). Located near LOU 59
R-6	59, 60		SA30-0.5B	0.5	Х	Х	Х	Х		Х	Х	Х	R	Х			Х	Х				E,L	and 60 piping to evaluate possible local piping releases and for general site coverage in Unit Buildings area.
R-6 R-6	59, 60 59, 60		SA30-9B SA30-10B	9 10	R	R	R	R		R	R	X	R	R				R				E,L B	LOU 60 pipeline invert occurs at approximately 8 feet bgs. GW estimated at ~40 feet bgs.
R-6	59,60		SA30-20B	20	R	R	R	R		R	R		R	R				R				B	
R-6 R-6	59, 60 59, 60	-	SA30-25B SA30-30B	25 30	X	X	R	X		X	X	X	D	X R				X R				B,E,L B	
R-6	59, 60		SA30-35B	35	R	R	R	R		R	R		R	R				R				B	
R-6	59,60	8404	SA30-38B	38	Х	Х	Х	Х		Х	Х	Х		Х				Х			V	B,E,L	Paring logitid to avaluate LOLL 42 (Upit 4 Decompany and Old California Objects Decomprised and a second
R-6 R-6	43 43	SA31	SA31-0.0B SA31-0.5B	0.0	x	X	x			X	x		R	X			x	x			X	E,P,V	Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning). Located upslope as a stepout for LOU 43 and co-located with SG43 to compare VOC results, and for general site coverage.
R-6	43	-	SA31-10B	10	X	Х	Х			X	Х		R	Х				Х				E,V	GW estimated at ~34 feet bgs.
R-6 R-6	43 43		SA31-20B SA31-30B	20	X	X	R			X	X R		R R	X				R				B,E,V V	
R-6	43		SA31-30B SA31-32B	32	X	X	X			X	X			X				X				B,E,P,V	
R-6	43	0400	SA31-35B	35	R	R	R			R	R		R					R			V	A	
R-6 R-6	43, 60 43, 60	SA32	SA32-0.0B SA32-0.5B	0.0	X	X	x	X		X	X	Х	R	X			x	X			X	E,L,V	Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning), and LOU 60 (Acid DrainSystem). Located within the footprint of LOU 43 as a worst case location and also located near LOU 60
R-6	43, 60		SA32-9B	9	X	Х	Х	Х		Х	Х	X	R	Х				X				E,J,L,V	piping to evaluate local piping releases near a manhole.
R-6 R-6	43, 60 43, 60		SA32-10B SA32-20B	10 20	R	R	R	R		R	R		R					R				B	LOU 60 pipeline invert occurs at approximately 8 feet bgs. GW estimated at ~39 feet bgs.
R-6	43, 60		SA32-25B	25	X	X	X	X		X	X	Х		Х				X				B,E,L,V	
R-6 R-6	43,60		SA32-30B	30	R	R	R	R		R	R		R					R				B	
R-6	43, 60 43, 60		SA32-35B SA32-37B	35 37	к Х	X	X	X		X	X	х	ĸ	X				X				B,E,L,V	
R-6	43	SA161	SA161-0.0B	0.0																	Х		Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning).
R-6 R-6	43 43		SA161-0.5B SA161-10B	0.5	X X	X	X X				X X	X X	R	X			X	XX				E,L,V E,L,V	Co-located with SG70 to compare VOC results, and for general site coverage. GW estimated at ~39 feet bgs.
R-6	43		SA161-20B	20	R	R	R			R	R	~ ~	R	~				R				В	
R-6 R-6	43 43		SA161-25B SA161-30B	25	X	X R	R			X	R	X	R	X				X R				B,E,L,V	
R-6	43	-	SA161-30B SA161-35B	30 35	R	R	R			R	R		R					R				B	
R-6	43	0.4.000	SA161-37B	37	Х	Х	Х			Х	Х	Х		Х				Х			, , , , , , , , , , , , , , , , , , ,	B,E,L,V	
R-6 R-6	43 43	SA208	SA208-0.0B SA208-0.5B	0.0	х	Х	х	Х		X	X		R	Х			х	X			X	E,F,V,W	Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning). Located in the basement footprint of LOU 43 as a worst case location to evaluate surface releases.
R-6	43	1	SA208-10B	10	X	X	Х	X		X	Х		R	X				Х				E,F,V,W	GW estimated at ~39 feet bgs.
R-6 R-6	43 43		SA208-20B SA208-25B	20 25	R	R	R	X		R	R		R	X				R				B,E,F,V,W	-
R-6	43		SA208-30B	30	R	R	R	~		R	R		R	~				R				B,E,F,V,VV	
R-6 R-6	43 43		SA208-35B SA208-37B	35 37	R	R	R	Y		R	R		R	Y				R X				B,E,F,V,W	
R-6	43, 59, 60	RSAR6	RSAR6-0.0B	0.0	~	~	~			~	~			~				~			Х	D, E, I , V, VV	Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning),
R-6	43, 59, 60		RSAR6-0.5B	0.5	X	X	X	X		X	X	X	X	X			Х	X				L	and LOU 59 (Storm Sever System) and LOU 60 (Acid Drain System). Random boring located near LOU 43 as a
R-6 R-6	43, 59, 60 43, 59, 60		RSAR6-9B RSAR6-10B	9 10	X R	X R	R	R		R	R	X	Hold R	X R				X R				J,L J	stepout for general coverage, adjacent to LOU 59 and 60 piping to evaluate for potential releases and for area-wide coverage.
R-6	43, 59, 60		RSAR6-20B	20	R	R	R	R		R	R		R	R				R				B	LOU 60 pipeline invert occurs at approximately 8 feet bgs.
R-6 R-6	43, 59, 60 43, 59, 60	-	RSAR6-25B RSAR6-30B	25 30	X R	R	R	R		R	R	X	Hold R	R				X R				B,L B	_GW estimated at ~39 feet bgs.
R-6	43, 59, 60		RSAR6-35B	35	R	R	R	R		R	R		R	R				R				В	
R-6 S-7	43, 59, 60 29, WAPA	SA122	RSAR6-37B SA122-0.0B	37 0.0	X	Х	Х	Х		Х	Х	Х	Х	Х				X			X	B,L	Boring located to evaluate LOU 29 (Solid Waste Dumpsters). Located within the footprint of LOU 29 at an area
S-7	29, WAPA 29, WAPA	54122	SA122-0.0B SA122-0.5B	0.0	х	Х	X	Х		X	X		R		X		x	X			^	E,P,W	between the two active dumpsters and to evaluate for potential impacts from nearby WAPA site to the south.
S-7	29, WAPA]	SA122-10B	10	X	X	Х	X		X	X		R					X				É,W	GW estimated at ~33 feet bgs.
S-7 S-7	29, WAPA 29, WAPA	-	SA122-20B SA122-31B	20 31	X X	X	X X	X X		X X	X				X			X X				B,E,S,W B,E,P,S,W	-
S-7	29, WAPA	SA170	SA170-0.0B	0.0																	X	, , ,	Boring located to evaluate LOU 29 (Solid Waste Dumpsters). Located within the footprint of LOU 29 at a
S-7 S-7	29, WAPA 29, WAPA	-	SA170-0.5B SA170-10B	0.5	X	X	X	X		X X	X		R		X		X	X				E,P,W E.W	stained area to evaluate visible surface release area and to evaluate for potential impacts from nearby WAPA site to the.
S-7	29, WAPA		SA170-20B	20	X	X	X	X	· · · · ·	X	X							X				B,E,S,W	GW estimated at ~33 feet bgs.
S-7	29, WAPA ber of Borings:	87	SA170-31B	31	Х	Х	Х	Х		Х	Х				Х			Х				B,E,P,S,W	
NUN	inel of polluds:	6/																					

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

Notes:

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

Х Sample will be collected and analyzed.

No sample collected under Phase B sampling program.

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

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

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

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

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

3. Hexavalent Chromiun

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

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

6. Organochlorine Pesticides (includes analysis for hexachlorobenzene).

7 Semi-volatile Organic Compounds

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

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

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

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

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

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

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

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

ational Code:

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

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

Α

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

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

Table 2

Soil Sampling and Analytical Plan for Area II

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

Location Description and Characterized Area Rationale IDEP may not agree with upgradient and downgradient descriptions)
utheast corner of LOU 55 (Area Affected by July 1990 Fire) to evaluate leaching potential of Site-related
5. Expected soil type: Gravelly Sand. lected if soil type is different than at 10 ft bgs; no sample will be collected within the capillary fringe Contact nately 36 feet bgs. Groundwater is expected to occur at approximately 30 feet bgs. Expected soil type:
LOU 5 (Beta Ditch) at the confluence of the Stauffer Extension and the out-flow from LOU 59 (Storm Sewer ential of Site-related analytes. Expected soil type: Sand.
lected if soil type is different than at 10 ft bgs; no sample will be collected within the capillary fringe Contact nately 30 feet bgs. Groundwater is expected to occur at approximately 31 feet bgs. Expected soil type: Sand.
LOU 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer Lines) to evaluate leaching potential of Site- tal) soils. Expected soil type: Gravelly Sand.
lected if soil type is different than at 10 ft bgs; no sample will be collected within the capillary fringe Contact nately 26 feet bgs. Groundwater is expected to occur at approximately 23 feet bgs. Expected soil type:
oundaries of LOU 7 (Old P-2 Pond and Associated Conveyance Facilities) to evaluate leaching potential of Site- rpe: Gravelly Sand.
lected if soil type is different than at 10 ft bgs; no sample will be collected within the capillary fringe Contact nately 39 feet bgs. Groundwater is expected to occur at approximately 32 feet bgs. Expected soil type:
U 43 (Old Sodium Plant Decommissioning and Unit-4 Basement) to evaluate leaching potential of Site-related nd with caliche lens.
lected if soil type is different than at 10 ft bgs; no sample will be collected within the capillary fringe Contact nately 33 feet bgs. Groundwater is expected to occur at approximately 40 feet bgs. Expected soil type: Sand.

			La	boratory K.	CAS -	- Kelso					CAS - Roche	ster				CAS - I	Houston	GEL - Charleston, SC	STL- Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale	
Grid Location	LOU Number	Boring No.	Sample ID Number	Sample Depths ^{1.} (ft. bgs)	Perchlorate (EPA 314.0)	Metals ^{2.} (EPA 6020)	Hex Cr ^{3.} (EPA 7199)		TPH-GRO (EPA 8015B)		Wet Chemistry Analytes ^{5.}	Total Cyanide L. (EPA 9012A)	OCPs ^{6.} (8081A)	SVOCs ^{7.} (EPA 8270C)	PCBs ^{8.} (EPA 8082)		Dioxins/ Furans ^{9.}	Radio- nuclides ^{10.}	OPPs ^{11.}	Organic Acids ^{12.}	Asbestos ^{13.} EPA/540/R-97/028	for Revision	(NDEP
								Borings a	re organiz	ed by grid	l location as	shown on Pla	te A - Star	ting point is	s on the n	orthweste	ern most g	grid in Are	a II (M-2) a	and ending w	ith the southeas	stern most grid	in Area II (S-7).
E	OCP analysis wa																						
F	PCB analyses (both Aroclor and congener PCBs) were requested by NDEP (July 21, 2008) at this location, but Tronox proposes not to analyze soil for PCBs (both 8082 and 1668A) for the following reasons: 1) Creation of congener PCBs require high operating temperatures (400 to 700 degrees Celsius) whereas Tronox production associated with electrical transformer spills and transformer spills															us) whereas Tronox production proce							
	associated with electrical transformer spills and transformers were not associated with this area. New boring added by NDEP (July 21, 2008).																						
G		lew boring added by NDEP (July 21, 2008).																					
н		New boring added by NDEP (July 21, 2008). Platinum analysis was added to this sample by NDEP (July 21, 2008) Soil sample will be collected at this depth because the depth is one-foot below pipeline invert.																					
J	Soil sample will b	e collected a	at this depth bec	ause the dep	th is one-foot b	elow pipeline in	vert.																
к	Laboratory inform	nation was ac	dded to Table 2	to assist field	sampling perso	onnel in shippin	g the sample	e containers to	the appropri	iate laborate	ory.												
L	Cyanide analysis	was added t	to this borning b	y the NDEP (July 21, 2008)																		
N	Boring was remo	ved from the	table because i	it is not locate	d in Area II.																		
Р	Aroclor and cong	ener PCBs w	vere added per	NDEP (July 2	1, 2008).																		
Q	Analysis selected	for this addi	itional boring are	e consistent v	ith the LOU pa	cket for the rep	resented LO	U(s)															
S	Soil boring was e	xtended to g	roundwater, per	r NDEP (July	21, 2008).																		
U	NDEP requested	(July 21, 200	08) that 1,4-diox	kane be adde	d. 1,4-Dioxane	is a standard a	nalyte in the	SVOC analysis	S.														
v	SVOC analysis w	as added to	this boring by N	IDEP (July 21	, 2008).																		
w	TPH-DRO/ORO	(and/or TPH-	GRO) was adde	ed to this bori	ng by NDEP (Ju	uly 21, 2008).																	
z	OPPs and OAs v	vere added to	o this boring by	Tronox for ge	neral coverage	and to evaluate	the potentia	al transport of th	nese constitu	uents by wi	nd and ground	dwater.											
bb	OPPs and OAs f	or this boring	were requested	d by NDEP (J	uly 21, 2008); h	owever, Tronox	proposes n	ot to sample th	is boring be	cause it is le	ocated in an a	rea considered n	ot to have b	een potentia	ally impacted	d by migrati	on of off-sit	te sources t	o the west.				

Table 2 Soil Sampling and Analytical Plan for Area II Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 10 of 10

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

				L	_aboratory :	CAS -	Kelso				(CAS - Roches	ter				CAS - I	Houston	GEL - Charleston, SC	STL- Denver	Alpha Analytical Sparks, NV	EMSL Westmont	PTS Santa Fe Springs, CA	
Grid Location	Boring No.	Sample ID Number	Sample Depths ^{1.} (ft. bgs)	Matrix Spike/MS Duplicate	SPLP Sample	Perchlorate (EPA 314.0)	Metals ^{2.} (EPA 6020)	Hex Cr ^{3.} (EPA 7199)	TPH- DRO/ORO (EPA 8015B)	TPH-GRO (EPA 8015B)		Wet Chemistry Analytes ^{5.}	Total Cyanide L. (EPA 9012A)	OCPs ^{6.} (8081A)	SVOCs ^{7.} (EPA 8270C)	PCBs ^{8.} (EPA 8082)	PCBs ^{8.} (EPA 1668A)	Dioxins/ Furans ^{9.}		OPPs ^{11.}	Organic Acids ^{12.}	Asbestos ^{13.} EPA/540/R-97/028	Geotechnical Tests	
				Number of C	containers :	1 - 4 oz	jar			1- 40 ml VOA vial w/ methanol	3 VOA vials (TerraCore Kit)		3 - 4 oz. Jars				1 - 4 c	oz. Jar	1-250 ml jar (plastic)	1-4 oz Jar	1-4 oz Jar	<u>≥</u> 1 kg in plastic bag	2 brass tubes	
	0.1-0			1	r	1	1	Borin	gs are orgar	nized by gr	id location	as shown o	n Plate A - Sta	rting poir	nt is on the	e northwes	tern mos	st grid in	Area II (M	-2) and en	ding with th	ne southeastern	most grid in A	
L-5 L-5	SA72	SA72-0.0B SA72-0.5B	0.0			X	x				X	X	x					X	x			X		Boring located to evalua Boring is in drum storage
L-5		SA72-10B	10			Х	Х	Х			Х	Х	Х						Х					GW estimated at ~31 fee
L-5 L-5	64400	SA72-29B	29 0.0			Х	Х	Х			Х	Х	Х						Х			x	-	Boring located to evalua
L-5 L-5	SA123	SA123-0.0B SA123-0.5B	0.0			X	X				Х	x	x					X	X			·····		Old D-1 Building Wash-I
L-5	-	SA123-10B	10			Х	Х	Х			Х	Х	Х						Х					Process, AP Plant SI's a
L-5	-	SA123-27B	27			X	Х	X			X	Х	X					-	X					stepout for LOU 56 and GW estimated at ~29 fe
L-5	SA167	SA167-0.0B	0.0																			Х		Boring located to evalua
L-5		SA167-0.5B	0.5			X	Х	X			X	X	X					Х	Х					downslope of LOU 56. I
L-5 L-5	-	SA167-10B SA167-10BD	10 10 (dup)			X	X X	X X			X	X	X			+			X X					GW estimated at ~ 30 fe
L-5	_	SA167-28B	28			X	X	X			X	X	X					-	X					-
L-5	SA173	SA173-0.0B	0.0																			Х		Boring located to evaluate
L-5 L-5	-	SA173-0.5B SA173-0.5BD	0.5 0.5 (dup)			X	X X	X X			X	X	X					X	X					evaluate potiential runof GW estimated at ~31 fe
L-5		SA173-10B	10			X	x				X	X	X					^	x					
L-5		SA173-29B	29			Х	Х	Х			Х	Х	Х						Х					
L-5 L-5	SA179	SA179-0.0B SA179-0.5B	0.0			×	X	x			x	X	x					x	X			X		Boring located to evaluate boundary to evaluate po
L-5		SA179-0.5B	0.5	Х		X	X	Х			X	X	X					X	X					storage area.
L-5	-	SA179-10B	10			<u>X</u>	X	<u> </u>			X	X	X						X					GW estimated at ~31 fe
L-5 L-6	SA73	SA179-29B SA73-0.0B	29 0.0			Х	Х	Х			Х	X	Х			-						х		Boring located to evalua
L-6		SA73-0.5B	0.5			Х	Х	Х			Х	Х	Х	Х				Х	Х	Х	Х			Process, AP Plant SIs a
L-6 L-6	-	SA73-10B SA73-28B	10 28			X	X	X			X	X	X	Hold X					X	x	x			GW estimated at ~30 fe
L-6	RSAL6	RSAL6-0.0B	0.0			<u>^</u>	^	^			^	^	^	^					^	^	~	х		Boring located to evaluate
L-6	_	RSAL6-0.5B	0.5			X	Х	Х	Х		Х	Х		Х	Х			Х	Х					Phase A boring SA20 lo
L-6 L-6	-	RSAL6-0.5B RSAL6-10B	0.5 10		Х	X	X	X	X		X	X X		X Hold	X			-	X				X	SPLP sample must be c
L-6	-	RSAL6-28B	28			X	X	X	X		X	X		X	X				X					
L-6	04404	RSAL6-28B	28		Х	Х	Х	Х	Х		Х	Х		Х	Х				Х			×	Х	SPLP sample must be o
L-8 L-8	SA131	SA131-0.0B SA131-0.5B	0.0			x	X	X	X	X	Х	x	x	X	X	X	X	x	X	Х	х	X		Boring located to evaluate for potential impacts from
L-8	-	SA131-0.5BD	0.5 (dup)			Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	X	Х	Х	Х			GW estimated at ~29 fe
L-8 L-8	-	SA131-10B SA131-27B	10 27			X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			-
M-3	SA66	SA66-0.0B	0.0			^	^	^	^	^	^	^	^	^	^	^	^		^	^	~	х		Boring located to evalua
M-3	_	SA66-0.5B	0.5			Х	Х	Х	Х	Х	Х	Х	X	Х	Х	Х		Х	Х	Х	Х			sources to the west. Als
M-3 M-3	-	SA66-0.5BD SA66-10B	0.5 (dup) 10			X X	X	X X	X X	X	X	X	X	X	X	X		X	X	X	X			GW estimated at ~30 fe
M-3		SA66-28B	28			X	X	X	X	X	X	X	X	~	X	^			X	X	X			-
M-4	SA128	SA128-0.0B	0.0														~			Y		Х		Boring located to evalua
M-4 M-4		SA128-0.5B SA128-10B	0.5			X	X X	X X	X	X X	X	X	X	X	X	X	X	X	X	X	X X			_Diversion Ditch to evalua GW estimated at ~31 fe
M-4		SA128-10B	10		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		Х	Х	Х		Х	SPLP sample must be c
M-4 M-4	-	SA128-29B	29 29 DD*		~	X	X	X X	X	X	X	X	X	X	X	X	X		X	X	X X			" CDI Discomple must be a
M-5	SA65	SA128-29B SA65-0.0B	0.0		Х	^	^	^	Х	Х	Х	Х	Х	^	Х	^	X		^	Х	X	х	Х	SPLP sample must be of Boring located to evaluate
M-5		SA65-0.5B	0.5			X	Х	Х			Х	Х	Х		Х			Х	Х					Lines). Located within
M-5 M-5		SA65-10B SA65-20B	10 20			X X	X X	X			X	X	X		X X			-	X					_LOU 57. GW estimated at ~33 fe
M-5	-	SA65-31B	31			X	X	X			X	X	X		X				X					
M-5	SA70	SA70-0.0B	0.0																			Х		Boring located to evaluate
M-5 M-5	-	SA70-0.5B SA70-10B	0.5			X	X	X	X	X	X	X	X		X			X	X					Transfer Lines to Sodiul
M-5	-	SA70-30B	30			x	X		X	X	X	X	X		X			~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	X					GW estimated at ~32 fe
M-5	SA104	SA104-0.0B	0.0			~	x	~	x	~	x	X	x		~			~	~			X		Boring located to evaluate
M-5 M-5	-	SA104-0.5B SA104-10B	0.5			X	X	X	X	X	X	X	X		X			X	X				<u> </u>	Plant SIs and Transfer I GW estimated at ~32 fe
M-5		SA104-10BD	10 (dup)			Х	Х	Х	Х	Х	Х	Х	Х		Х				Х					
M-5	\$4400	SA104-30B	30 0.0			Х	Х	Х	Х	Х	Х	Х	Х		Х				Х			~	<u> </u>	Boring located to evalua
M-5 M-5	SA129	SA129-0.0B SA129-0.5B	0.0			Х	x	X	X	X	x	X	Х	x	x	x		x	x	X	x	X		Boring located to evaluate Sls and Transfer Lines).
M-5	1	SA129-0.5BD	0.5 (dup)			Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		X	Х	Х	Х			discharges into Beta Dit
M-5 M-5	-	SA129-10B SA129-29B	10 29			X	X	X X	X	X	X	X	X X	X X	X X	X			X	X X	X X			GW estimated at ~31 fe
M-5 M-5	RSAM5	RSAM5-0.0B	0.0		1	^	^	^	^	^	^	^	^		<u>^</u>		<u> </u>	+	^	^	^	Х		Boring located to evaluate
M-5		RSAM5-0.5B	0.5			X	Х	X	X	X	Х	X	X	X	X			X	X					Plant SIs and Transfer L
M-5	-	RSAM5-0.5BD RSAM5-10B	0.5 (dup) 10			X	X	X	X	X	X	X	X	X Hold	X			X	X					GW estimated at ~30 fe
M-5						- · · ·	x	X	X	×	X	X	x	1 1010	X				X					-

Table 2 (Field Version) Soil Sampling and Analytical Plan for Area II Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 1 of 7

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

				L	aboratory :	CAS - I	Kelso				(CAS - Rochest	ter				CAS - I	Houston	GEL - Charleston, SC	STL- Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	PTS Santa Fe Springs, CA	
Grid Location	Boring No.	Sample ID Number	Sample Depths ^{1.} (ft. bgs)	Matrix Spike/MS Duplicate	SPLP Sample	Perchlorate (EPA 314.0)	Metals ^{2.} (EPA 6020)	Hex Cr ^{3.} (EPA 7199)	TPH- DRO/ORO (EPA 8015B)	TPH-GRO (EPA 8015B)		Wet Chemistry Analytes ^{5.}	Total Cyanide L. (EPA 9012A)	OCPs ^{6.} (8081A)	SVOCs ^{7.} (EPA 8270C)	PCBs ^{8.} (EPA 8082)	PCBs ^{8.} (EPA 1668A)	Dioxins/ Furans ^{9.}	Radio- nuclides ^{10.}	OPPs ^{11.}	Organic Acids ^{12.}	Asbestos ^{13.} EPA/540/R-97/028	Geotechnical Tests	
				Number of C	Containers :	1 - 4 oz j	ar		-	1- 40 ml VOA vial w/ methanol	(TerraCore Kit)		3 - 4 oz. Jars				1 - 4 c		1-250 ml jar (plastic)	1-4 oz Jar	1-4 oz Jar	<u>≥</u> 1 kg in plastic bag	2 brass tubes	
14.0	0464	0404.0.00	0.0	1	1			Borin	gs are organ	nized by gri	id location	as shown o	n Plate A - Sta	rting poin	nt is on the	e northwes	tern mos	st grid in	Area II (M·	-2) and er	nding with th	e southeastern	most grid in A	
M-6 M-6	SA64	SA64-0.0B SA64-0.5B	0.0			×	X	X	x		X	X	X		x			x	x			X		Boring located to evaluated to evaluate Plant Transfer Lines to States 1 and 1
M-6		SA64-10B	10			X	X	X	X		X	X	X		X				X					Located in a low spot of
M-6		SA64-10B	10		Х	X	X	X	X		X	X	X		X				X				X	releases, and for genera
M-6 M-6		SA64-21B SA64-21B	21 21 DD*		x	X	X X	X	X		X	X	X		X				X				X	10-Foot SPLP sample m 21-Foot SPLP sample m
101-0		3A04-21B	2100		^	·····	^	^	^		^	<u>^</u>	^		^				^				^	another boring.
M-6	SA175	SA175-0.0B	0.0																			Х		Boring located to evaluate
M-6		SA175-0.5B	0.5			X	X	X	X	X	X	X	X		X			Х	X					Lines), and LOU 18 (Por
M-6 M-6		SA175-10B SA175-28B	10 28			X	X X	X X	X X	X X	X	X	× ×		X				X					potential overflow releas GW estimated at ~30 fee
		0,1110 200		-		~~~~~~	~~~~~	·····	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		~~~~~	<u>````````````````````````````````</u>	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~											
M-6	RSAM6	RSAM6-0.0B	0.0																			Х		Boring located to evalua
M-6 M-6		RSAM6-0.5B RSAM6-10B	0.5			X	X	X	X		X	X	X	X Hold	X			X	X					Lines). Randomly locate GW estimated at ~30 fee
M-6		RSAM6-28B	28			^ X	X	X	x		X	x	x	X	X				X					
M-6		RSAM6-28BD	28 (dup)			Х	Х	Х	Х		Х	Х	Х	Х	Х				Х					
M-6	SA197	SA197-0.0B	0.0																			Х		Boring located to evaluat
M-6 M-6		SA197-0.5B SA197-10B	0.5			X X	X X	X X			X	X	X		X			X	X X					(AP Plant Transfer Lines of bottom of LOU 16 and
M-6		SA197-10BD	10 (dup)			X	X	X			X	X	X		X			-	X					GW estimated at ~23 fee
M-6		SA197-21B	21			Х	Х	Х			Х	Х	Х		Х				Х					
M-6	SA198	SA198-0.0B	0.0			~ ~ ~	V		Y		× ×		×		v			V				X		Boring located to evaluate
M-6 M-6		SA198-0.5B SA198-10B	0.5			X	X X	X X	X		X	X	X		X			X	X					Plant Transfer Lines to S Located in a low spot of
M-6		SA198-27B	27			X	X	X	X		X	X	X		X				X					and adjacent to the LOU
																								releases. LOU 60 flum
M-7 M-7	SA63	SA63-0.0B SA63-0.5B	0.0			X	x	X			x	x	x					x	X			X		Boring located to evaluat AP Plant SIs and Transference
M-7		SA63-10B	10			x	X	X			X	X	x					^	X					for general coverage of I
M-7		SA63-10B	10	Х		Х	Х	Х			Х	Х	Х						Х					GW estimated at ~25 fee
M-7	0400	SA63-23B	23			X	Х	Х	-		Х	Х	Х						Х			×		Desire la cata data avalua
M-7 M-7	SA86	SA86-0.0B SA86-0.5B	0.0			x	X	X	X	X	Х	X	x	X	x	Х		X	x	X	X	X		Boring located to evaluated AP Plant SIs and Transference
M-7		SA86-10B	10			X	X	X	X	X	X	X	X	X	X	X			X	X	X			into Beta Ditch and for g
M-7		SA86-10BD	10 (dup)			X	Х	Х	X	Х	Х	X	X	Х	Х	Х			Х	Х	X			GW estimated at ~30 fee
M-7 M-7	SA92	SA86-28B SA92-0.0B	28 0.0			х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х			х	Х	Х	х		Boring located to evalua
M-7	3A92	SA92-0.5B	0.5			X	X	X	X	X	Х	X	x	Х	X	Х		Х	X	X	x	^		Eastern Diversion Ditche
M-7		SA92-10B	10			Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х			Х	Х	Х			GW estimated at ~33 fee
M-7		SA92-10B	10	X		X	X	X	X	X	X	X	X	X	X	X			X	Х	X			
M-7 M-7		SA92-20B SA92-31B	20 31			X	X X	X	X	X	X	X	X	Hold X	X	X			X	X	X			-
M-7	SA155	SA155-0.0B	0.0																			Х		Boring located to evalua
M-7		SA155-0.5B	0.5			X	X	X	X	X	X	X	X		X			Х	X					and LOU 57 (AP Plant T
M-7 M-7		SA155-10B SA155-30B	10 30			X	X X	X	X	X	X	X	X		X			-	X					potential LOU 22 and 23 GW estimated at ~32 fee
M-7	RSAM7	RSAM7-0.0B	0.0	1	1		~ ~				~			1		1	1	1		1	1	Х	1	Boring located to evaluat
M-7		RSAM7-0.5B	0.5			X	X	X	X	X	X	X	X	X	X			Х	X					AP Plant SIs and Transf
M-7 M-7		RSAM7-10B RSAM7-10BD	10 10 (dup)		l	X	X	X	X	X	X	X	X	Hold Hold	X			I	X					coverage for LOU 57, an GW estimated at ~30 fee
M-7		RSAM7-10BD RSAM7-28B	28			X	X X	X X	X X	X	X	X	X	X	X				X					Svv countated at ~30 let
M-8	SA62	SA62-0.0B	0.0																			Х		Boring located to evalua
M-8 M-8		SA62-0.5B SA62-0.5BD	0.5			X X	X	X X	X		X	X						X	X					inflow piping outlet to ev GW estimated at ~26 fee
M-8 M-8		SA62-0.5BD SA62-10B	0.5 (dup) 10			X	X X	X	X		X	X				-		~	X			1		Gvv estimated at ~26 fee
M-8		SA62-24B	24			x	X	X	X		X	X							X					1
M-8	SA71	SA71-0.0B	0.0																			Х		Boring located to evalua
M-8 M-8		SA71-0.5B SA71-10B	0.5			X	X X	X	X	X	X	X	X		X	-		Х	X					possible overflow release of SA71.
M-8		SA71-10B SA71-25B	25			x	X	X	X	X	X	X	x		X			-	X					GW estimated at ~38 fee
M-8		SA71-36B	36			X	X	X	X	X	X	X	X		X				X					
M-8	SA144	SA144-0.0B	0.0				v	~	~		V											X		Boring located to evaluate
M-8 M-8		SA144-0.5B SA144-10B	0.5			X	X X	X	X	X	X X	X X	X X		X			х	X					possible overflow releas of LOU 20 for worst case
M-8		SA144-10BD	10 (dup)			x	X	X	X	X	X	X	x		X			1	X			1		GW estimated at ~30 fee
M-8		SA144-28B	28			Х	Х	Х	Х	Х	Х	Х	Х		Х				Х					
M-8	SA145	SA145-0.0B	0.0			~	v		~	l	~	· · · · · ·	·									X		Boring located to evaluat
M-8 M-8		SA145-0.5B SA145-0.5B	0.5	x		X	X X	X X	X X		X	X						X	X					inlet pipe for worst case GW estimated at ~26 fee
M-8		SA145-10B	10			X	X	Х	X		X	Х			1				Х					
M-8		SA145-24B	24			Х	Х	Х	Х		Х	Х							Х					

Table 2 (Field Version) Soil Sampling and Analytical Plan for Area II Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 2 of 7

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

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

Table 2 (Field Version) Soil Sampling and Analytical Plan for Area II Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 3 of 7

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

				I	Laboratory :	CAS -	Kelso					CAS - Roches	ter				CAS - Hous	ston	GEL - Charleston, SC	STL- Denver	Alpha Analytical Sparks, NV	EMSL Westmont NJ	PTS ' Santa Fe Springs, CA	
Grid Location	Boring No.	Sample ID Number	Sample Depths ^{1.} (ft. bgs)	Matrix Spike/MS Duplicate	SPLP Sample	Perchlorate (EPA 314.0)	Metals ^{2.} (EPA 6020)	Hex Cr ^{3.} (EPA 7199)	TPH- DRO/ORO (EPA 8015B)	TPH-GRO (EPA 8015B)		Wet Chemistry Analytes ^{5.}	Total Cyanide L. (EPA 9012A)	OCPs ^{6.} (8081A)	SVOCs ^{7.} (EPA 8270C)	PCBs ^{8.} (EPA 8082)		oxins/ rans ^{9.}	Radio- nuclides ^{10.}	OPPs ^{11.}	Organic Acids ^{12.}	Asbestos ^{13.} EPA/540/R-97/028	Geotechnical Tests	
	Number of Containers :			1 - 4 oz jar				1- 40 ml VOA vial w/ methanol	3 VOA vials (TerraCore Kit)		3 - 4 oz. Jars	•			1 - 4 oz. Jar		1-250 ml jar (plastic)	1-4 oz Jar	1-4 oz Jar	<u>≥</u> 1 kg in plastic bag	2 brass tubes			
			T	1				Borin	gs are orgar	nized by gr	id location	as shown o	on Plate A - Sta	rting poir	nt is on the	e northwes	stern most gr	id in A	rea II (M∙	2) and er	nding with th	e southeastern	most grid in A	
N-7 N-7	SA107	SA107-0.0B SA107-0.5B	0.0			X	x	x	x	x	x	X	X	x	×	x	x	х	x	×	x	X		Boring located to evaluate potential impacts from h
N-7		SA107-10B	10			X	X	X	X	X	X	X	X	X	X	X	X	~	X	X	X			GW estimated at ~31 fe
N-7		SA107-10BD	10 (dup)			X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			
N-7 N-7	RSAN7	SA107-29B RSAN7-0.0B	29 0.0			Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		Х	Х	Х	х		Boring located to evaluate
N-7	NOAN	RSAN7-0.5B	0.5			Х	Х	Х	Х	Х	Х	Х	X	х	X			Х	Х			~~~~~		Associated Piping), and
N-7		RSAN7-10B	10			X	X	X	X	Х	X	X	X	Hold	X				X					Diversion Ditch of LOU
N-7 N-7		RSAN7-25B RSAN7-38B	25 38			X	X	X	X	X	X	X	X	Hold X	X				X					releases from LOUs 22 GW estimated at ~40 fe
N-8	SA61	SA61-0.0B	0.0			~	~	A	X	~	~	X	~	~	~				~			Х		Boring located to evaluate
N-8		SA61-0.5B	0.5			X	х	Х		Х	Х	Х						Х	Х					outfall piping to evaluat
N-8 N-8		SA61-10B SA61-30B	10 30			X	X X	X		X	X	X							<u> </u>					overflow releases. GW estimated at ~32 fe
N-8	SA158	SA158-0.0B	0.0			^	^	^		^	^	^							^			х		Boring located to evalua
N-8		SA158-0.5B	0.5			Х	Х	Х	Х	Х	Х	Х	Х		Х			Х	Х					outfall piping to evaluat
N-8 N-8		SA158-10B SA158-20B	10 20			X	X	X	X	X	X	X X	X X		X X				X X					overflow releases.
N-8		SA158-20B SA158-31B	31			X	X	X	X	X	X	X	X		X				X					_GW estimated at ~33 fe
O-4	SA54	SA54-0.0B	0.0																			Х		Boring located to evaluate
0-4		SA54-0.5B	0.5			X	X	X	X		X	X	X		X			Х	X					GW estimated at ~33 fe
<u> </u>		SA54-10B SA54-20B	10 20			X	X	X	X		X	X	X X		X				X X					
0-4		SA54-31B	31			X	X	X	X		X	X	X		X				X					_
0-4	0.1.11	SA54-31B	31	Х		Х	Х	Х	Х		Х	Х	X		Х				Х			~		
O-5 O-5	SA41	SA41-0.0B SA41-0.5B	0.0			x	X	X	x		x	X	X		x			х	X			X		Boring located to evaluate System). Located on the
0-5		SA41-12B	12			X	X	X	X		X	X	X		X			~	X					for historic details) and
O-5		SA41-25B	25			X	X	X	X		X	X	X		X				X					LOU 60 pipeline invert
O-5 O-5	SA44	SA41-38B SA44-0.0B	38 0.0			X	Х	Х	Х		Х	Х	Х		Х		1 1		Х		1	Х		GW estimated at ~40 fe Boring located to evaluate
0-5	0/111	SA44-0.5B	0.5			X	Х	Х	Х		Х	Х	Х		X			Х	Х			~~~~~~		aboveground storage ta
O-5		SA44-10B	10			X	X	X	X		X	X	X		X				X					GW estimated at ~44 fe
O-5 O-5		SA44-25B SA44-42B	25 42			X	X	X	X		X	X	X		X				X X					-
O-5	SA45	SA45-0.0B	0.0			~	~	A	X		~	X	~		~				~			Х		Boring located to evaluate
O-5		SA45-0.5B	0.5			X	х	Х	Х		Х	Х	Х		Х			Х	Х					of a former tank to eval
0-5 0-5		SA45-0.5BD SA45-10B	0.5 (dup) 10			X	X	X	X		X	X	X X		X X	-		Х	X X					_location. LOU 60 pipel GW estimated at ~38 fe
O-5		SA45-25B	25			X	X	X	X		X	X	X		X				X					
0-5		SA45-36B	36			X	Х	Х	Х		Х	Х	Х		Х				Х					
O-5 O-5	SA106	SA106-0.0B SA106-0.5B	0.0			×	x	x	X	x	x	x	X	x	x			х	X	x	X	X		Boring located to evaluated to evaluate of pond where historic b
0-5		SA106-0.5B	0.5	Х		X	X	X	X	X	X	X	X	X	X			X	X	X	X			GW estimated at~37 fe
O-5		SA106-12B	12			X	X	X	X	X	X	X	X	X	X				X	Х	Х			LOU 60 pipeline invert
O-5 O-5		SA106-20B SA106-35B	20 35			X	X	X	X	X	X	X	X	Hold X	X				X X	x	X	-		
0-5 0-5	SA50	SA50-0.0B	0.0			^	~							~	^				~		^	Х	1	Boring located as a we
0-5		SA50-0.5B	0.5			X	X	X	X	X	X	X	X		X			Х	X					site conditions and pos
O-5 O-5		SA50-12B SA50-12BD	12 12 (dup)		+	X	X	X	X	X	X	X	X		X	+	<u>↓</u>		X	·	+		<u> </u>	from LOU 60 (former A LOU 60 pipeline invert
O-5		SA50-25B	25			x	X	X	X	X	X	X	x		X				Х					GW estimated at ~38 fe
0-5	0450	SA50-36B	36			X	Х	Х	Х	Х	Х	Х	Х		Х				Х			~		Design langt 11
O-5 O-5	SA53	SA53-0.0B SA53-0.5B	0.0		+	X	x	X	x	х	х	X	X		x	+	<u>├</u>	х	X	·		X		Boring located to evaluated Facilities), and LOU 9 (
O-5		SA53-10B	10			Х	Х	Х	Х	Х	Х	Х	Х		Х				Х					evaluate potential over
0-5		SA53-25B	25			X	X	X	X	X	X	X	X		X				X					GW estimated at ~34 fe
O-5 O-5	SA102	SA53-32B SA102-0.0B	32 0.0	1	+	Х	Х	Х	Х	Х	Х	Х	Х		Х	+	+		Х	<u> </u>	+	x	1	Boring located to evaluate
O-5	0.1102	SA102-0.5B	0.5			X	Х	Х	Х	Х	х	Х	X		Х			Х	Х					Located at a lowspot in
O-5		SA102-10B	10			X	X	X	X	X	X	X	X		X				X					GW estimated at ~32 fe
O-5 O-5		SA102-10B SA102-30B	10 30		X	X	X	X	X	X	X	X	X		X				X				X	10-Foot SPLP sample r
O-5		SA102-30B	30 DD*		Х	X	X	X	X	X	X	X	X		X								Х	SPLP sample must be
O-5	SA109	SA109-0.0B	0.0																			Х		Boring located to evalu
O-5 O-5		SA109-0.5B SA109-10B	0.5			X	X	X	X	X	X	X	X		X			Х	X X				-	sidewall where soil stai GW estimated at ~36 fe
0-5 0-5		SA109-10B SA109-25B	25			x	X	X	X	X	X	X	x		X				X			-		
O-5		SA109-34B	34			Х	Х	Х	Х	Х	Х	Х	Х		Х				Х					1
O-5 O-5	SA114	SA114-0.0B SA114-0.5B	0.0			X	x	×	x	x	x	x	x		x			x	X			X		Boring located to evaluated where white encrustation
0-5		SA114-0.5BD	0.5 0.5 (dup)			X	X	X	X	X	X	X	X		X			X	X					GW estimated at ~32 fe
O-5		SA114-10B	10			Х	Х	Х	Х	Х	Х	Х	Х		X				Х					
O-5		SA114-30B	30	1	1	Х	Х	Х	Х	Х	Х	Х	Х		Х	1			Х		1			

Table 2 (Field Version) Soil Sampling and Analytical Plan for Area II Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 4 of 7

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

Laboratory		CAS-	Kelso		CAS - Rochester										GEL - Charleston, SC	STL- Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	PTS ' Santa Fe Springs, CA							
Grid Location	Boring No.	Sample ID Number	Sample Depths ^{1.} (ft. bgs)	Matrix SPLP Spike/MS Sample Duplicate	Perchlorate (EPA 314.0)	Metals ^{2.} (EPA 6020)	Hex Cr ^{3.} (EPA 7199)	TPH- DRO/ORO (EPA 8015B)	TPH-GRO (EPA 8015B)	VOCs ^{4.} (EPA 8260B)	Wet Chemistry Analytes ^{5.}	Total Cyanide ∟ (EPA 9012A)	OCPs ^{6.} (8081A)	SVOCs ^{7.} (EPA 8270C)	PCBs ^{8.} (EPA 8082)		Dioxins/ Furans ^{9.}	Radio- nuclides ¹⁰	OPPs ^{11.}	Organic Acids ^{12.}	Asbestos ^{13.} EPA/540/R-97/028	Geotechnical Tests	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)			
				Number of Containers :	1 - 4 oz j	ar			1- 40 ml VOA vial w/ methanol	3 VOA vials (TerraCore Kit)		3 - 4 oz. Jars				1 - 4 oz.	. Jar	1-250 ml ja (plastic)	^{ir} 1-4 oz Jar	1-4 oz Jar	<u>≥</u> 1 kg in plastic bag	2 brass tubes				
			r		-		Boring	gs are organ	nized by gri	d location	as shown or	Plate A - Sta	arting poin	t is on the	e northwest	tern most	grid in A	rea II (N	I-2) and en	nding with the	e southeastern	most grid in A				
O-5 O-5	SA153	SA153-0.0B SA153-0.5B	0.0		x	X	×	×		x	x	x		x			X	X			X		Boring located to evaluate LOU 45 (Diesel Storage Tanks). Located beneath the footprint of a aboveground storage tank to evaluate subsurface releases (See LOU 45 summary for historical data).			
0-5		SA153-0.5B	10		X	X	X	X		X X	X	X		X									GW estimated at ~40 feet bgs.			
O-5		SA153-25B	25		X	Х	Х	Х		Х	Х	Х		Х				Х								
O-5 O-5	SA172	SA153-38B SA172-0.0B	38 0.0		X	Х	Х	Х		Х	Х	X		Х				Х			х		Boring located to evaluate LOU 45 (Diesel Storage Tanks) potential releases.			
0-5	0ATT2	SA172-0.5B	0.5		X	Х	Х	Х		Х	Х	Х		Х			X	X			~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~		Located beneath the footprint of a aboveground storage tank to evaluate subsurface releases (See LOU 45			
0-5		SA172-10B	10		X	X	Х	X		Х	Х	X		Х				Х					summary for historical data).			
O-5 O-5		SA172-25B SA172-39B	25 39		X	X	X	X		X	X	X X		X				X X					GW estimated at ~41 feet bgs.			
0-5 0-5	RSAO5	RSA05-0.0B	0.0		^	^	^	^		~	^	~		^				~			х		Boring located to evaluate LOU 45 (Diesel Storage Tanks). Randomly located within LOU 45 to evaluate possible			
O-5		RSAO5-0.5B	0.5		Х	Х	Х	Х		Х	Х	Х	Х	Х			Х	Х					surface runoff releases and to evaluate site wide conditions.			
0-5 0-5		RSAO5-10B RSAO5-25B	10		X	X	X	X		X	X	X	Hold Hold	X				<u> </u>					GW estimated at ~43 feet bgs.			
0-5		RSA05-25B RSA05-41B	25 41		X	X	X	X		X	X	X	X	X				X					1			
0-5	SA185	SA185-0.0B	0.0																1		Х		Boring located to evaluate LOU 45 (Diesel Storage Tanks), System). Located on the perimeter of the former			
0-5		SA185-0.5B	0.5		X	X	X	X		X	X	X		X			X	X					aboveground storage tank to evaluate potential releases (see text for historic details).			
O-5 O-5		SA185-10B SA185-10B	10 10	X	X	X	X	X		X	X	X		X				X	-				GW estimated at ~43 feet bgs.			
O-5		SA185-25B	25		X	X	X	X		Х	X	X		Х				Х								
0-5	04:55	SA185-41B	41		Х	Х	Х	Х		Х	Х	Х		Х				Х								
O-5 O-5	SA186	SA186-0.0B SA186-0.5B	0.0		×	×	x	×		x	x			X			X	X			Х		Boring located to evaluate LOU 45 (Diesel Storage Tanks), System). Located on the perimeter of the former aboveground storage tank to evaluate potential releases (see text for historic details).			
0-5		SA186-10B	10		X	X	X	X		X	X	X		X				X					GW estimated at ~39 feet bgs.			
0-5		SA186-25B	25		Х	Х	Х	X		Х	Х	Х		Х				Х								
0-5	SA187	SA186-37B	37		х	Х	Х	х		Х	Х	Х		Х				Х			×					
0-5 0-5	5A187	SA187-0.0B SA187-0.5B	0.0		×	X	X	×		X	X	×		X			X	X			X		Boring located to evaluate LOU 45 (Diesel Storage Tanks) and LOU 59 (Storm Sewer System). Located on the perimeter of the former aboveground storage tank area to evaluate potential releases (see text for historic details).			
0-5		SA187-10B	10		X	X	X	X		X	X	X		X				X					GW estimated at ~41 feet bgs.			
0-5		SA187-25B	25		X	X	X	X		X	X	X		X				X								
O-5 O-5	SA188	SA187-39B SA188-0.0B	39 0.0		X	Х	Х	Х		Х	Х	Х		Х				Х			x		Boring located to evaluate LOU 45 (Diesel Storage Tanks) and LOU 59 (Storm Sewer System), and LOU 60 (Acid Drain			
0-5	0/1100	SA188-0.5B	0.5		Х	х	X	х		Х	х	Х		Х			Х	Х			~~~~~		System). Located beneath the footprint of an aboveground storage tank to evaluate subsurface releases (See LOU 45			
O-5		SA188-10B	10		X	X	Х	Х		Х	Х	X		Х				Х					summary for historical data).			
O-5 O-5		SA188-25B SA188-37B	25 37		X	X X	X	X		X	X	X X		X				X X					GW estimated at ~39 feet bgs.			
0-6	SA40	SA40-0.0B	0.0		^	^	^	^		~	^	^		^				~		1	х		Boring located to evaluate LOU 45 (Diesel Storage Tanks), LOU 59 (Storm Sewer System), and LOU 60 Acid Drain			
O-6		SA40-0.5B	0.5		Х	Х	Х	Х		Х	Х	Х		Х			Х	Х					System). Located on the perimeter of the former aboveground storage tank to evaluate potential releases (see text			
O-6 O-6		SA40-10B SA40-25B	10 25		X	X	X	X		X	X	X		X				X X					for historic details) and between LOUs 59 and 60 to evaluate possible piping releases. GW estimated at ~43 feet bgs.			
0-6		SA40-23B SA40-41B	41		x	X	x	x		X	x	<u>X</u>		X				X					Gw estimated at ~45 feet bys.			
0-6		SA40-41B	41	Х	Х	Х	Х	Х		Х	Х	Х		Х				Х								
0-6	SA42	SA42-0.0B	0.0		X	x	x	×		x	x	x		X			x	Х			X		Boring located to evaluate LOU 45 (Diesel Storage Tanks). Located at a low spot within the footprint of former			
0-6 0-6		SA42-0.5B SA42-10B	0.5		X	X	X	X		X	X	X X		X X			^	X 	-				aboveground storage tank to evaluate potential releases. GW estimated at ~40 feet bgs.			
0-6		SA42-10BD	10 (dup)		X	X	Х	Х		Х	Х	X		X				Х								
0-6		SA42-25B	25		X	X	X	X		X	X	X X	· · · · · · · · · · · · · · · · · · ·	X				X					4			
O-6 O-6	SA43	SA42-38B SA43-0.0B	38 0.0		Х	Х	X	Х		Х	Х	X		Х				Х	1		х		Boring located to evaluate LOU 45 (Diesel Storage Tanks), LOU 59 (Storm Sewer System), and LOU 60 Acid Drain			
O-6	0.140	SA43-0.5B	0.5		X	Х	Х	Х		Х	Х			Х			Х	Х					System). Located on the perimeter of the former aboveground storage tank to evaluate potential releases (see text			
0-6		SA43-0.5BD	0.5 (dup)		X	X	X	X		X	X			X			Х	X					for historic details) and between LOUs 59 and 60 to evaluate possible piping releases.			
0-6 0-6		SA43-10B SA43-25B	10 25	<u>├</u>	X	X X	X	X		X	X			X X				<u> </u>					GW estimated at ~45 feet bgs.			
0-6		SA43-23B SA43-43B	43	<u> </u>	X	X	X	X		X	X			X				<u>x</u>					1			
O-6	SA51	SA51-0.0B	0.0																		Х		Boring located to evaluate LOU 14 (Pond P-1 and Associated Conveyance Piping). Located in a low spot in the			
0-6 0-6		SA51-0.5B SA51-10B	0.5		X	X X	X X	X X	X	X	X X			X X			X	X 					bottom of LOU 14 to evaluate worst case conditions. GW estimated at ~38 feet bgs.			
0-6		SA51-10B SA51-10BD	10 (dup)		X	X	X	X	X	X	X		1	X				x	+							
0-6		SA51-25B	25		X	Х	Х	Х	Х	Х	Х			Х				Х								
0-6	RSAO6	SA51-36B RSAO6-0.0B	36 0.0		X	Х	Х	Х	Х	Х	Х			Х				Х	-		х		Boring located to evaluate LOU 13 (Pond S-1). Random boring in a lowspot in the bottom of LOU 13 to evaluate			
0-6 0-6	RSAUG	RSA06-0.0B RSA06-0.5B	0.0		x	Х	x	x	X	x	х		x	x			x	X			^		Boring located to evaluate LOU 13 (Pond S-1). Random boring in a lowspot in the bottom of LOU 13 to evaluate worst case conditions and site wide conditions.			
0-6		RSAO6-10B	10 20		X	Х	X	X	X	Х	X		Hold	Х				Х					GW estimated at ~36 feet bgs.			
0-6		RSAO6-20B			X	X	X	X		X	X		Hold	X				X								
0-6 0-6		RSAO6-34B RSAO6-34B	34 34	x	X	X X	X	X	X X	X	X X		X X	X X				<u> </u>					4			
0-6	SA200	SA200-0.0B	0.0			^		^	~		~		^					~			х		Boring located to evaluate LOU 9 (New P-2 Pond and Associated Piping). Located in a lowspot in the bottom of LOU 9			
O-6		SA200-0.5B	0.5		X	Х	X	X	X	X	Х			X			Х	Х					to evaluate worst case conditions.			
0-6		SA200-10B SA200-20B	10		X X	X	X	X	X	X	X			X				<u> </u>					GW estimated at ~33 feet bgs.			
0-6 0-6		SA200-20B SA200-31B	20 31		X	X	X	x	X	X	X			X X				X X					1			
0-6		SA200-31BD	31 (dup)		Х	Х	Х	Х	Х	Х	Х		1	Х				X	1				1			

Table 2 (Field Version) Soil Sampling and Analytical Plan for Area II Phase B Source Area Investigation Work Plan Tronox Facility - Henderson, Nevada Page 5 of 7

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

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

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

Notes

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

X Sample will be collected and analyzed.

No sample collected under Phase B sampling program.

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

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

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

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

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

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

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

6. Organochlorine Pesticides (includes analysis for hexachlorobenzene).

7. Semi-volatile Organic Compounds

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

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

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

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

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

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

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

 Table 2 (Field Version)

 Soil Sampling and Analytical Plan for Area II

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

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

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

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

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

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

Notes:

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

blank No sample collected under Phase B sampling plan.

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

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

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

4. Hexavalent Chromium.

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

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

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

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

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						La	aboratory ^{E.} :	CAS - Ke	elso, WA			CAS - Roch	nester, NY			GEL - Charleston, SC	STL- Denver	Alpha Analytical	
Grid Location	Location Area	Monitoring Well No.	Sample ID No. ^A	Screen Interval (ft bgs)	Soil Type Expected Across Screen Interval ^{1.}	Well Sampled for Phase A? (y/n)	Matrix Spike/MS Duplicate	Perchlorate (EPA 314.0)	Metals ^{2.}	VOCs ^{3.} (EPA 8260)	Hex Cr ^{4.} (EPA 7199)	Wet Chemistry ^{5.}	Total Cyanide ^{F.} (EPA 9012A)	OCPs ^{6.} (EPA 8081A)	SVOCs ^{7.} (EPA 8270C)	Radionuclides ^{9.}	OPPs ^{10.} (8141A)	Organic Acids	Lo
				Wells	are organize	ed by grid lo	ocation as	shown on I	Plate A - S	Starting po	oint is on t	the north	western-m	ost grid	in Area	II (L-5) and	ending w	ith the sou	heastern-most grid
7.	SVOCs = S	Semi volatile o	organic com	pounds.	•		•	•		•	•	•	•		•	•	•	•	•
8.	Polychlorin	nated Bipheny	ls.																
9.	Radionucli	des consists o	of alpha spec	c reporting for is	sotopic Thorium	and isotopic U	Jranium, and F	Radium-226, pl	lus Radium-	-228 by beta	counting (pe	er NDEP).							
10.		rganophospho																	
IIIN/E/W/S	Well locat	ed outside (no	orth, east, we	est, or south) of	Area II.														
TBD	To Be Dete	ermined when	well is cons	structed.															
TD	Total Dept	h of the well d	etermined b	y Site-wide rou	tine groundwate	r monitoring.													
nr	Not record	ed in Tronox o	database (so	creen intervals t	to be acquired fr	om BMI where	possible or d	etermined by c	downhole ca	mera).									
Qal	Quaternary	y Alluvium.																	
MCfg1	Muddy Cre	ek Formation	- first fine-g	rained facies															
				e-grained facies															

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

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

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Location Description and Rationale for Investigation

rid covering Area II (R-5).



Area III

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

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

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

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

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

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

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

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

Green-shading indicates new addition to this table. Х

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

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

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

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

3. Hexavalent Chromium

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

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

Organochlorine Pesticides (includes analysis for hexachlorobenzene).

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

10.

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

04020-023-430 - Phase B

Table 2

Soil Sampling and Analysis Plan - Area III

Phase B Source Area Investigation Work Plan

Tronox Facility - Henderson, Nevada

4 of 5

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

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

Table 2

Soil Sampling and Analysis Plan - Area III

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

5 of 5

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

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

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

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

1 of 3

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

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

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

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2 of 3

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

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

Notes

Sample will be collected and analyzed. Х

No sample will be collected under Phase B sampling program.

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

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

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

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

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

Organochlorine Pesticides (includes analysis for hexachlorobenzene). 6.

Semi-volatile Organic Compounds

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

10. 11.

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

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

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

#

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

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

Phase B Source Area Investigation Work Plan

TIONOX	гасши	- Hend	ierson,	nevaua

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

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

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

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

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

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

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

Notes:

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

blank No sample collected under Phase B sampling plan.

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

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

4 Hexavalent Chromium

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

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

7 SVOCs = Semi-volatile organic compounds.

Polychlorinated Biphenyls. 8.

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

10. OPPs = Organophosphorous Pesticides

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

TBD To be determined when well is constructed.

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

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

Qal Quaternary Alluvium.

Muddy Creek Formation - first fine-grained facies. MCfg1

MCcg1 Muddy Creek Formation - first coarse-grained facies

Location Description and Rationale for Investigation

covering Area III (R-8).

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

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

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

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

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

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

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

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

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

is is a duplicate sample of M-141B.

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

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

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

is is a duplicate sample of M-11B.

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

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

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

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

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



Area IV

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

Page 1 of 6

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

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

Page 2 of 6

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

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

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

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

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

				Laboratory	y CAS-	Kelso, WA				C/	S - Rocheste	r, NY				CAS -	Houston	GEL Charleston, SC	STL - Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Patianala	
Grid Location	LOU Number	Phase B Boring No.	Sample ID Number	Sample Depths ^{1.} (ft, bgs)	Perchlorate (EPA 314.0)	Metals ^{2.} (EPA 6020)	Hex Cr ^{4.} (EPA 7199)	TPH- DRO/ORO (EPA 8015B)	TPH GRO (EPA 8015B)	VOCs ^{3.} (EPA 8260B)	Wet Chem ^{5.}	Total Cyanide (EPA 9012A)	OCPs ^{6.} (8081A)	SVOCs ^{7.} (EPA 8270C)	PCBs ^{8.} (EPA 8082)	PCBs ^{8.} (EPA 1668A)	Dioxins/ Furans ^{9.}	Radio- nuclides ^{10.}	OPPs ^{11.}	Organic Acids ^{12.}	Asbestos ^{13.} EPA/540/R-97/028	Rationale for Revision	(
			Boring	is are orga	nized by grid	d location as s	hown on I	Plate A - Sta	rting point is	s on the nor	thwestern m	ost grid in A	rea IV (P-4) and ending	g with the s	outheaste	ern most	grid in Area IV	/ (U-7).				
T-8 T-8	59 59	SA210	SA210-0.0B SA210-0.5B	0.0	v	v	×	×		v	v	×		v	×		v	×			Х	L	Boring located to evaluate rather than at a worst-cas
T-8	59		SA210-10B	10	X	X	X X	X X		X	X X	X X		X X	Х		Х	X X				L	GW anticipated at ~51 fee
T-8 T-8	59 59	-	SA210-30B SA210-49B	30 49	X	X	X	X X		X	X X	X		X	x			X X				L,Q	
U-4	62	RSAU4	RSAU4-0.0B	0.0											~						Х	L,Q	Boring located to evaluate
U-4 U-4	62 62		RSAU4-0.5B RSAU4-10B	0.5	X X	X	X	X X		X	X	X X	X Hold	X X		-	Х	X					center of the former pond details).
U-4	62		RSAU4-20B	20	R	R	R	R		R	R	R	R	R				R				B	GW anticipated at ~58 fee
U-4 U-4	62 62		RSAU4-25B RSAU4-30B	25 30	X R	X R	X R	X R		X R	X R	X R	Hold R	X R				X R				B	
U-4 U-4	62 62		RSAU4-40B RSAU4-50B	40 50	X R	X R	X R	X R		X R	X R	X	Hold R	X R				X R				В	
U-4	62		RSAU4-56B	56	Х	Х	Х	Х		Х	Х	X	Х	Х				Х				Q	
U-4 U-4	62 62	SA146	RSAU4-60B SA146-0.0B	60 0.0	R	R	R	R		R	R	R	R	R				R			X	A	Boring located to evaluate
U-4 U-4	62 62		SA146-0.5B SA146-10B	0.5	X	X	X	X X		X	X X	X	R	X			х	X X				G	pond to provide general c
U-4	62		SA146-20B	20	X R	X R	X R	R		X R	R	X R	R R	X R				R				B	GW anticipated at ~57 fee
U-4 U-4	62 62		SA146-25B SA146-30B	25 30	X R	X R	X R	X R		X R	X R	X R	R	X R				X R				B	
U-4	62		SA146-40B	40	Х	Х	Х	Х		Х	Х	Х	R	Х				Х				G	
U-4 U-4	62 62		SA146-50B SA146-55B	50 55	R X	R X	R X	R X		R X	R X	R X	R	R X				R X				B Q	
U-4	62	01117	SA146-60B	60	R	R	R	R		R	R	R	R	R				R			×	A	Desire la sete das sus huste
U-4 U-4	62 62	SA147	SA147-0.0B SA147-0.5B	0.0	х	х	х	х		х	х	х	R	х			х	Х			X	G	Boring located to evaluate pond to provide general of
U-4 U-4	62 62		SA147-10B SA147-20B	10 20	X R	X R	X R	X R		X R	X R	X R	R R	X R				X R				G B	GW anticipated at ~58 fee
U-4	62		SA147-25B	25	Х	Х	Х	Х		Х	Х	Х		Х				Х				В	
U-4 U-4	62 62		SA147-30B SA147-40B	30 40	R X	R X	R X	R X		R X	R X	R X	R R	R X				R X				B G	
U-4	62		SA147-50B	50 56	R	R	R	R		R	R	R	R	R				R				B Q	
U-4 U-4	62 62		SA147-56B SA147-60B	60	X R	X R	X R	X R		X R	X R	X R	R	X R				X R				A	
U-5 U-5	62 62	RSAU5	RSAU5-0.0B RSAU5-0.5B	0.0	x	х	x	x		х	x	х	x	x			х	x			X		Boring located to evaluate pond to provide general c
U-5	62		RSAU5-10B	10	Х	Х	Х	Х		Х	Х	Х	Hold	Х			~	Х					GW anticipated at ~57 fee
U-5 U-5	62 62		RSAU5-20B RSAU5-25B	20 25	R X	R X	R X	R X		R X	R X	R X	R Hold	R X				R X				B	
U-5 U-5	62 62	-	RSAU5-30B RSAU5-40B	30 40	R X	R X	R X	R X		R X	R X	R X	R Hold	R X				R X				В	
U-5	62		RSAU5-50B	50	R	R	R	R		R	R	R	R	R				R				В	
U-5 U-5	62 62	-	RSAU5-55B RSAU5-60B	55 60	R	X R	X R	X R		X	X R	R	X R	X R				X R				Q A	
U-5	62	SA28	SA28-0.0B	0.0				X		×							V				x		Boring located to evaluate
U-5 U-5	62 62	-	SA28-0.5B SA28-10B	0.5	X	X X	X X	X X		X X	X X	X X	R R	X X			Х	X X				G G	center of the former pond details).
U-5 U-5	62 62		SA28-20B SA28-25B	20 25	R X	R X	R X	R X		R X	R X	R X	R	R X				R X				B	
U-5	62		SA28-30B	30	R	R	R	R		R	R	R	R	R				R				B	GW anticipated at ~57 fee
U-5 U-5	62 62		SA28-40B SA28-55B	40	X	X	X	X X		X	X X	X	X R	X X		-		X				G Q	
U-5	62	DOALIO	SA28-60B	60	R	R	R	R		R	R	R	R	R				R				A	Boring located to evaluate
U-6 U-6	n/a n/a	RSAU6	RSAU6-0.0B RSAU6-0.5B	0.0	х	Х	х	х		х	х	Х	х	х			х	Х			Х	G	GW anticipated at ~55 fee
U-6 U-6	n/a n/a		RSAU6-10B RSAU6-20B	10 20	X R	X R	X R	X R		X R	X R	Х	Hold R	X R				X R				G	
U-6	n/a		RSAU6-25B	25	Х	Х	Х	Х		Х	Х	Х	Hold	Х				Х				В	
U-6 U-6	n/a n/a		RSAU6-30B RSAU6-40B	30 40	R X	R X	R X	R X		R X	R X	Х	R Hold	R X				R X				B G	
U-6	n/a		FSAU6-50B	50	R	R	R	R		R	R		R	R				R				B	
U-6 U-6	n/a n/a		RSAU6-53B RSAU6-60B	53 60	X R	X R	X R	X R		X R	X R	X	X R	X R				X R				Q A	
U-7 U-7	n/a n/a	RSAU7	RSAU7-0.0B RSAU7-0.5B	0.0	x	Х	Х	x		х	x	х	x	x			х	X			Х		Boring located to evaluate GW anticipated at ~56 fee
U-7	n/a	1	RSAU7-10B	10	Х	Х	Х	Х		Х	Х	X	Hold	Х				Х				-	
U-7 U-7	n/a n/a		RSAU7-20B RSAU7-25B	20 25	R X	R X	R X	R X		R X	R X	X	R Hold	R X				R X				B	
U-7 U-7	n/a	1	RSAU7-30B RSAU7-40B	30 40	R X	R X	R X	R X		R X	R X		R Hold	R X				R X				В	
U-7	n/a n/a		RSAU7-50B	50	R	R	R	R		R	R	X	R	R				R				В	
U-7 U-7	n/a n/a		RSAU7-54B RSAU7-60B	54 60	X R	X R	X R	X R		X R	X R	Х	X R	X R				X R				Q A	
	lumber of Borings:	56																					

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Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions.)
aluate LOU 59 (storm Sewer System). Located areally to evaluate point of exit from the Tronox site
st-case scenario. 51 feet bgs.
aluate former western pond in LOU 62 (State Industries, Inc. Site). Located within footprint and in the pond to provide general coverage of pond area for potential releases (see LOU 62 summary for
58 feet bgs.
aluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint of former
eral coverage of pond area for potential releases (see LOU 62 summary for details). 57 feet bgs.
aluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint of former eral coverage of pond area for potential releases (see LOU 62 summary for details).
58 feet bgs.
aluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint of former eral coverage of pond area for potential releases (see LOU 62 summary for details). 57 feet bgs.
×
aluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint and in the
pond to provide general coverage of pond area for potential releases (see LOU 62 summary for
57 feet bgs.
aluate soil for area-wide coverage and not associated with a specific LOU. 55 feet bgs.
aluate soil for area-wide coverage and not associated with a specific LOU.
56 feet bgs.

		_		Laboratory	CAS - P	Kelso, WA				CA	S - Rochester	, NY				CAS -	Houston	GEL Charleston, SC	STL - Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale	
Grid Location	LOU Number	Phase B Boring No.	Sample ID Number	Sample Depths ^{1.} (ft, bgs)	Perchlorate (EPA 314.0)	Metals ^{2.} (EPA 6020)	Hex Cr ^{4.} (EPA 7199)	TPH- DRO/ORO (EPA 8015B)	TPH GRO (EPA 8015B)	VOCs ^{3.} (EPA 8260B)	Wet Chem ^{5.}	Total Cyanide (EPA 9012A)	OCPs ^{6.} (8081A)	SVOCs ^{7.} (EPA 8270C)	PCBs ^{8.} (EPA 8082)	PCBs ^{8.} (EPA 1668A)	Dioxins/ Furans ^{9.}	Radio- nuclides ^{10.}	OPPs ^{11.}	Organic Acids ^{12.}	Asbestos ^{13.} EPA/540/R-97/028	for Revision	
			Boring	s are orgai	nized by grid	location as s	hown on l	Plate A - Sta	rting point i	s on the nor	hwestern m	ost grid in A	rea IV (P-4) and ending	g with the so	outheaste	ern most	grid in Area IV	/ (U-7).				
Grid Grid Location	recipitate Leachi	ng Procedure Phase B Boring No.	(SPLP) Samples: Sample ID Number	Sample Depths (ft, bgs)	Perchlorate (EPA 314.0)	Metals (EPA 6020)	Hex Cr (EPA 7199)	TPH- DRO/ORO (EPA 8015B)	TPH-GRO	VOCs (EPA 8260B)	Wet Chemistry	Total Cyanide	OCPs (8081A)	SVOCs (EPA 8270C)	PCBs (EPA 8082)	PCBs (EPA 8082)	Dioxins/ Furans	Radio- nuclides	OPPs	Organic Acids	Asbestos EPA/540/R-97/028	Geo- technical Testing	
Q-4	4	RSAQ4	RSAQ4-10	10	х	х	x			х	х	х	х	x	х	х		x	х	х		х	Soil sample collected be potential of Site-related a
Q-4	4	RSAQ4	RSAQ4-32DD*	32 DD*	х	х	х			х	х	х	х	х	х	х		х	х	х		х	Optional sample - only t Contact between Qal & M type: Silt.
Q-4	4	SA148	SA148-10	10	х	х	х			х	х	х	х	х	х	х		х	x	х		х	Soil sample collected be potential of Site-related a
Q-4	4	SA148	SA148-35	35	х	х	x			х	х	х	х	x	х	х		х	x	х		х	Soil sample collected fror leaching potential of Site- MCfg1 is approximately 3 capillary fringe. Expected
R-3	60	RSAR3	RSAR3-0.5	0.5	х	х	х			х	х	х	х	х	х	х		х	х	х		х	Soil sample collected fro (Qal) soils. Expected so
R-3	60	RSAR3	RSAR3-35DD*	35 DD*	х	х	х			х	х	х	х	x	х	х		х	х	х		х	Optional sample - only t Contact between Qal & M soil type: Silt.
U-4	62	RSAU4	RSAU4-20	20	х	х	х			х	х	х	х	х	х	х		х	х	х		х	Soil sample collected from Site-related analytes. Ex
U-4	62	RSAU4	RSAU4-50	50	х	х	х			х	х	х	х	x	х	х		х	х	х		x	Optional sample - only to boring location. If soil typ
U-5	62	RSAU5	RSAU5-0.5	0.5	х	х	х			х	х	х	х	х	х	х		х	х	х		x	Soil sample collected from analytes from Alluvium (C
U-5	62	RSAU5	RSAU5-50	50	х	х	х			х	х	х	х	х	х	х		х	х	х		x	Optional sample - only to boring location. If soil type
Number of S	Soil Samples:	Subtotal Sa	mple Count:		239	239	239	229	0	239	239	239	103	239	37	20	55	239	28	28	55	10	
		QA/QC Sam	ples:																				
			Ouplicates (10%)		24	24	24	23	0	24	24	0	11	24	4	2	6	24	3	3	0	0	
		Field B	llanks ient Rinsate Blanks		1 15	1 15	1 15	<u>1</u> 11	0	<u>1</u> 11	1 15	0	1 5	1 10	<u> </u>	1 0	1 15	1 14	1 2	1 2	0	0	-
			ank Samples		0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	
		Matrix	Spike (5%)		12	12	12	12	0	12	12	0	6	12	2	1	3	12	2	2	0	0]
			Spike Duplicate (5%	b)	12	12	12	12	0	12	12	0	6	12	2	1	3	12	2	2	0	0	
		Total Sampl	e Count:		303	303	303	288	0	317	303	239	132	298	46	25	83	302	38	38	55	10	

Notes

Sample will be collected and analyzed. Х

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

DD*

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

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

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

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

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

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

Hexavalent Chromium

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

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

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

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

10.

12.

13. 14.

tionale Codes

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

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

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

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

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

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

Green-shading indicates new addition to this table. Х

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

Table 2 Soil Sampling and Analytical Plan for Area IV

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

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Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions.)
Location Description and Characterized Area Rationale
below bottom of former AST in the northern part of LOU 4 (former Hardesty Chemical Co. Site) to evaluate leaching d analytes from Alluvium (Cal) soils. Expected soil type: Sand. Iy to be collected if soil type is different than at 10 ft bgs. no sample will be collected within the capillary fringe & MCfg1 is approximately 29 feet bgs. Groundwater is expected to occur at approximately 34 feet bgs. Expected soil
below bottom of former UST in the southern part of LOU 4 (former Hardesty Chemical Co. Site) to evaluate leaching d analytes from Alluvium (Cal) soils. Expected soil type: Gravelly Sand. from below bottom of former UST in the southern part of LOU 4 (former Hardesty Chemical Co. Site) to evaluate
Site-related analytes from Muddy Creek Formation - First Fine-Grained Facies (MC/g1) soils. Contact between Qal a siy 31 feet bgs. Groundwater anticipated to be at approximately 47 feet bgs. No soil sample will be collected within cted soil type: Silt.
from below LOU 60 (Acid Drain System pipeline) to evaluate leaching potential of Site-related analytes from Alluviun soil type: Sand.
ly to be collected if soil type is different than at 10 ft bgs.no sample will be collected within the capillary fringe & MCfg1 is approximately 29 feet bgs. Groundwater is expected to occur at approximately 40 feet bgs. Expected
from beneath bottom of former western pond in LOU 62 (State Industries, Inc. Site) to evaluate leaching potential of Expected soil type: Gravelly Sand.
Ity to be collected if Sitl/Clay of the Muddy Creek Formation - first fine-grained facies (MCfg1) is encountered at this type is similar to soils at 20 feet, then no sample will be collected for SPLP analyses. Expected soil type: Sitt.
from beneath bottom of former eastern pond in LOU 62 (State Industries) to evaluate leaching potential of Site-related n (Qal). Expected soil type: Gravelly Sand.
Iy to be collected if Sit/Clay of the Muddy Creek Formation - first fine-grained facies (MCfg1) is encountered at this type is similar to soils at 20 feet, then no sample will be collected for SPLP analyses. Expected soil type: Sit.
w which samples will be analyzed for Aroclor PCBs.
lary fringe samples to make the vertical distance between samples no greater than 20 ft (sample depth rounded off to

			Laboratory :				CAS so, WA					bia Analytical Rochester, N		S CAS Houston, TX CAS Houston, TX CA Houston, TX CA										
Grid Location	Phase B Boring No.	Sample ID Number	Sample Depths ^{1.} (ft, bgs)	Matrix Spike/MSI uplicate		Perchlorate (EPA 314.0)	Metals ^{2.} (EPA 6020)	Hex Cr ^{4.} (EPA 7199)	TPH- DRO/ORO (EPA 8015B)	TPH GRO (EPA 8015B	VOCs ^{3.}	Wet Chem ^{5.}	Total Cyanide (EPA 9012A)	OCPs ^{6.} (8081A)	SVOCs ^{7.} (EPA 8270C)	PCBs ^{8.} (EPA 8082)	PCBs ^{8.} (EPA 1668A)	Dioxins/ Furans ^{9.}	Radio- nuclides ^{10.}	OPPs ^{11.}	Sparks, NV Organic Acids ^{12.}	Asbestos ^{13.} EPA/540/R-97/028	Geotechnical Tests	
			Number of	Container	s per Sample	s: 1-4	4 oz Jar	1 - 4	4 oz Jar	1- 40 ml VOA vial w/ methanc	3 VOA vials (TerraCore Kit)		2 - 4 oz. Jars				1 - 4	oz Jar	1-250 ml jar (plastic)	1-4 oz Jar	1-4 oz Jar	≥1 kg in plastic bag	2 Brass Tubes	
				Borin	gs are orga	nized by grid	location as s	hown on P	late A - Star	rting point is	on the north	western mos	at grid in Area	a IV (P-4) a	nd ending v	vith the sout	theastern	most gri	d in Area IV (U-	-7).				
P-4	SA103	SA103-0.0B	0.0																			Х		Boring located to
P-4 P-4		SA103-0.5B SA103-10B	0.5			X	X	X	X		X	X	X	X Hold	X X		-	X	X					GW anticipated at
P-4	1	SA103-10BD	10 (dup)			Х	Х	Х	Х		Х	Х	Х	Hold	Х				Х					
P-4 P-4		SA103-25B SA103-35B	25 35			X	X	X	X		X	X	X	Hold X	X				X					
P-5	RSAP5	RSAP5-0.0B	0.0											~					X			X		Boring located to
P-5 P-5		RSAP5-0.5B RSAP5-10B	0.5			X	X	X	X		X	X	X	X Hold	X			X	X					GW anticipated at
P-5		RSAP5-10BD	10 (dup)			X	X	X	X		X	X	X	Hold	X				X					
P-5	-	RSAP5-25B RSAP5-39B	25 39			X	X X	X	X		X	X X	X	Hold X	X				X					
P-5 Q-3	RSAQ3	RSAQ3-0.0B	0.0			^	^	^	^		^	^	^	^	^				^			x		Boring located to
Q-3		RSAQ3-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					LOU 41 at probat
Q-3 Q-3		RSAQ3-0.5BD RSAQ3-10B	0.5 (dup) 10			X	X	X	X		X	X	X	X Hold	X X			X	X					GW anticipated at
Q-3		RSAQ3-25B	25			X	X	Х	X		X	X	X	Hold	X				X					
Q-3	04400	RSAQ3-41B	41			Х	Х	Х	Х		Х	Х	Х	Х	Х				Х			×		Device la sete data
Q-3 Q-3	SA169	SA169-0.0B SA169-0.5B	0.0			X	x	x	x		X	x	x		x		-	X	X			X		Boring located to (Acid Drain Syster
Q-3	1	SA169-10B	10			Х	Х	Х	Х		Х	Х	Х		Х				Х					and adjacent to LO
Q-3 Q-3		SA169-25B SA169-42B	25 42		-	X	X	X	X		X	X	X		X				X					detailed information GW anticipated at
Q-3	SA193	SA193-0.0B	0.0			~	^	~	~		~	~	~		~				^			Х		Boring located to
Q-3	-	SA193-0.5B	0.5			X	X	Х	X		X	Х	X		Х			Х	X					Located in an area
Q-3 Q-3	-	SA193-10B SA193-10BD	10 10 (dup)			X	X	X	X		X	X	X		X				X					information). GW anticipated at
Q-3		SA193-25B	25			X	x	X	X		X	X	X		X				X					orr anticipatou a
Q-3	0.4.044	SA193-42B	42			Х	Х	Х	Х		Х	X	Х		Х				Х			×		Device a la seta data
Q-3 Q-3	SA211	SA211-0.0B SA211-0.5B	0.0			X	x	x	x		X	x	x		x	x	x	x	x	х	X	X		Boring located to point of entry to T
Q-3		SA211-0.5B	0.5	Х		Х	Х	Х	Х		Х	Х	X		Х	Х	Х	Х	Х	Х	Х			GW anticipated at
Q-3 Q-3		SA211-11B SA211-25B	11 25			X	X	X	X		X	X	X		X X				X	X	X			Boring added per Pipeline invert for
Q-3	-	SA211-23B SA211-43B	43			X	X	X	X		X	X	X		X	Х	Х		X	Х	Х			r ipeline inventior
Q-3	SA212	SA212-0.0B	0.0															V				Х		Boring located to
Q-3 Q-3		SA212-0.5B SA212-13B	0.5			X	X X	X	X		X	X	X		X			Х	X					GW anticipated at Pipeline invert for
Q-3		SA212-13B	13			Х	Х	Х	Х		Х	Х	Х		Х				х					Boring added per
Q-3 Q-3		SA212-30B SA212-44B	30 44			X	X	X	X		X	X	X		X X				X					
Q-3 Q-4	SA213	SA212-44B SA213-0.0B	0.0			^	^	^	^		^	^	^		^				^			х		Boring located to
Q-4		SA213-0.5B	0.5			X	X	Х	X		X	X	X		X			Х	X					GW anticipated at
Q-4 Q-4		SA213-14B SA213-14B	14 14	x		X	X	X	X		X	X	X		X X				X					Pipeline invert for Boring added per
Q-4	1	SA213-30B	30			Х	Х	Х	Х		Х	Х	Х		Х				X					p
Q-4 Q-4	SA214	SA213-44B SA214-0.0B	44 0.0			Х	X	Х	Х		Х	Х	Х		Х		-		х			x		Boring located to e
Q-4	0/1214	SA214-0.5B	0.5			х	х	Х	Х		Х	Х	Х	х	Х			Х	Х			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		potential worst-cas
Q-4	-	SA214-15B	15			X	X	X	X		X	X	X	X	X				X					GW anticipated at
Q-4 Q-4		SA214-30B SA214-43B	30 43			X	X	X	X		X	X	X	Hold X	X				X					Pipeline invert for Boring added per
Q-4	RSAQ4	RSAQ4-0.0B	0.0																			Х		Boring located to
Q-4 Q-4	1	RSAQ4-0.5B RSAQ4-10B	0.5			X	X	X	X		X	X	X	X X	X X			X	X					in a low spot to ev GW anticipated at
Q-4	1	RSAQ4-10B	10		Х	Х	Х	Х			Х	X	Х	Х	Х	Х	Х		Х	Х	Х		Х	10-Foot SPLP sar
Q-4 Q-4		RSAQ4-20B	20		v	X	X	X	Х		X	X	X	Hold	X	v	~		X	v	v		v	SPLP sample mus
Q-4 Q-4	1	RSAQ4-32B RSAQ4-32B	32 32		X	X	X	X	x		X	X	X	X	X	X	X	-	X	X	X		X	SPLP sample mus
Q-4	SA84	SA84-0.0B	0.0																			Х		Boring located to
Q-4 Q-4	1	SA84-0.5B SA84-10B	0.5			X	X X	X	X		X	X	X	X	X	+		X	X	Х	Х			of LOU 60 (Acid D adjacent to LOU 6
Q-4	1	SA84-10BD	10 (dup)			Х	X	Х	Х		Х	X	X	Х	Х				X			1		GW anticipated at
Q-4		SA84-25B	25			X	X	X	X		X	X	X	Hold	X				X	v	v			
Q-4 Q-4	SA101	SA84-43B SA101-0.0B	43			Х	Х	X	Х	1	Х	Х	X	X	Х	+	+	+	Х	Х	Х	X		Boring located to a
Q-4	1	SA101-0.5B	0.5			Х	Х	х	х		Х	х	Х	х	х	х	х	х	х			L		(Former PCB Stor
Q-4 Q-4	4	SA101-0.5B SA101-10B	0.5	X		X	X X	X	X		X	X	X	X X	X X	X	X	X	X					LOU 27 consists of Assessment throu
Q-4 Q-4	1	SA101-10B SA101-25B	25	· · · · · · · · · · · · · · · · · · ·		X	X	X	X		X	X	X	Hold	X			1	X		<u> </u>			releases in from L
Q-4		SA101-42B	42			Х	Х	Х	Х	-	Х	X	X	X	Х	X	Х		Х					
Q-4 Q-4	SA120	SA120-0.0B SA120-0.5B	0.0			x	x	x	x		x	x	x		x		_	x	x			X		Boring located to area-wide coverage
Q-4	1	SA120-10B	10			Х	Х	Х	Х		Х	X	Х		Х				Х					worst case locatio
Q-4	4	SA120-25B	25			X	X	X	X		X	X	X		X				X					GW anticipated at
Q-4 Q-4	SA121	SA120-43B SA121-0.0B	43 0.0			Х	Х	X	Х	1	Х	Х	X		Х	+	+	+	Х			X		Boring located to e
Q-4	1	SA121-0.5B	0.5			Х	Х	Х	Х		Х	Х	Х	Х	Х			Х	Х					and the boring is r
Q-4 Q-4	-	SA121-0.5BD SA121-10B	0.5 (dup) 10			X	X	X	X		X	X	X	X	X			X	X					LOU 26 and 4 at a releases. GW ant
Q-4	1	SA121-25B	25			Х	Х	Х	х		Х	X	X	Hold	Х				Х					. Sicuses. Giv dill
Q-4	1	SA121-44B	44			Х	Х	Х	Х		Х	Х	Х	Х	Х				Х					

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

Page 1 of 5

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

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

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

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

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

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

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

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

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

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

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

Notes: X

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

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

Hexavalent Chromium

4.

Samples for VOC analysis will be preserved in the field using sodium bisulfate (or DI water) and methanol preservatives per EPA Method 5035. Wet chemistry parameters include: alkalinity (total, CQ HCO₃), ammonia, bromide, chlorate, chloride, conductivity, nitrate, nitrite, perchlorate, pH, phosphate (total), sulfate, surfactants (MBAs), TDS, Total Organic Carbon, and TSS. 5.

Organochlorine Pesticides (includes analysis for hexachlorobenzene). 6.

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

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

10.

11 12.

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

Table 2 (Field Version)

Soil Sampling and Analytical Plan for Area IV

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

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

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

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

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•	for	
)	n	

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

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

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

Notes:

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

X Sample will be collected and analyzed.

blank No sample collected under Phase B sampling plan.

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

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

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

Hexavalent Chromium. 4.

Table 3 (Field Version)

Groundwater Sampling and Analysis Plan for Area IV

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

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

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

 Qal
 Quaternary Alluvium.

 MCfg1
 Muddy Creek Formation - first fine-grained facies

 MCcg1
 Muddy Creek Formation - first coarse-grained facies

 MCfg2
 Muddy Creek Formation - second fine-grained facies

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

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Location Description and Rationale for Investigation

ering Area 4 (W-7).