Appendix B

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

Area I

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

					Laboratory :	CAS - Kelso, WA				CAS - Rochester, NY								CAS - Houston		GEL Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale for removal of samples from SAP	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient designations).
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		
Borings are organized by grid location as shown on Plate A - Starting point is on the northwestern most grid in Area 1 (H-3) and ending with the southeastern most grid in Area I (O-4).																									
H-3	1, 10	RSAH3		RSAH3-0.0	0.0																		X		
H-3	1, 10			RSAH3-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X	X	X		F,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).
H-3	1, 10			RSAH3-10B	10	X	X	X	X		X	X	X		Hold	X				X				L	GW anticipated at ~34 feet bgs; MCfg ~129 feet bgs.
H-3	1, 10			RSAH3-20B	20	X	X	X	X		X	X	X		Hold	X				X				B,D,L	
H-3	1, 10			RSAH3-30B	30	R	R	R	R		R	R				R				R				B	
H-3	1, 10			RSAH3-32B	32	X	X	X	X		X	X	X		X	X				X	X	X		B,D,F,L	
I-2	1, 10	RSAI2		RSAI2-0.0	0.0																		X		
I-2	1, 10			RSAI2-0.5B	0.5	X	X	X	X		X	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	1, 10			RSAI2-10B	10	X	X	X	X		X	X	X		Hold	X				X				L	GW anticipated at ~33 feet bgs; MCfg ~32 feet bgs.
I-2	1, 10			RSAI2-20B	20	X	X	X	X		X	X	X		Hold	X				X				B,D,L	
I-2	1, 10			RSAI2-30B	30	R	R	R	R		R	R				R				R				B	
I-2	1, 10			RSAI2-31B	31	X	X	X	X		X	X	X		X	X				X				B,D,L	
I-3	1	RSAI3		RSAI3-0.0	0.0																		X		
I-3	1			RSAI3-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X				L	Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and for general site coverage
I-3	1			RSAI3-10B	10	X	X	X	X		X	X	X		Hold	X				X				L	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	
I-3	1			RSAI3-25B	25	R	R	R	R		R	R				R				R				B	
I-3	1			RSAI3-32B	32	X	X	X	X		X	X	X		X	X				X				B,D,L	
I-3	1, 32	SA201		SA201-0.0	0.0																		X		
I-3	1, 32			SA201-0.5B	0.5	X	X	X	X		X	X	X		R	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	1, 32			SA201-10B	10	X	X	X	X		X	X	X		R	X				X				E,L	Settling Ponds) and for general site coverage.
I-3	1, 32			SA201-20B	20	R	R	R	R		R	R				R				R				B	GW anticipated at ~30 feet bgs; MCfg ~31 feet bgs.
I-3	1, 32			SA201-25B	25	R	R	R	R		R	R				R				R				B	
I-3	1, 32			SA201-28B	28	X	X	X	X		X	X	X			X				X				B,E,L	
I-4	1, 32	RSAI4		RSAI4-0.0	0.0																		X		
I-4	1, 32			RSAI4-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X				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
I-4	1, 32			RSAI4-10B	10	X	X	X	X		X	X	X		Hold	X				X				L	Effluent Settling Ponds) and for general Site coverage
I-4	1, 32			RSAI4-20B	20	X	X	X	X		X	X	X		Hold	X				X				B,D,L	GW anticipated at ~34 feet bgs; MCfg ~23 feet bgs.
I-4	1, 32			RSAI4-30B	30	R	R	R	R		R	R				R				R				B	
I-4	1, 32			RSAI4-32B	32	X	X	X	X		X	X	X		X	X				X				B,D,L	
I-5	1, 32	RSAI5		RSAI5-0.0	0.0																		X		
I-5	1, 32			RSAI5-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X				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-5	1, 32			RSAI5-10B	10	X	X	X	X		X	X	X		Hold	X				X				L	Settling Ponds) and for general Site coverage.
I-5	1, 32			RSAI5-20B	20	R	R	R	R		R	R				R				R				B	GW anticipated at ~30 feet bgs; MCfg ~23 feet bgs.
I-5	1, 32			RSAI5-28B	28	X	X	X	X		X	X	X		X	X				X				B,D,L	
I-5	1, 32			RSAI5-30B	30	R	R	R	R		R	R				R				R				B	
I-7	1, 22, 23, 32	RSAI7	7/11/08	RSAI7-0.0	0.0																		X		
I-7	1, 22, 23, 32			RSAI7-0.5B	0.5	X	X	X	X		X	X	X		X	X	NS	NS	X	X				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	1, 22, 23, 32			RSAI7-10B	10	X	X	X	X		X	X	X		Hold	X	NS	NS		X				K,L,P	Groundwater Remediation Unit).
I-7	1, 22, 23, 32			RSAI7-20B	20	X	X	X	X		X	X	X		Hold	X	NS	NS		X				K,L,P	GW encountered at 33 feet bgs; MCfg ~23 feet bgs.
I-7	1, 22, 23, 32			RSAI7-30B	30	X	X	X	X		X	X	X		X	X	NS	NS		X				K,L,P	
J-2	1, 10	RSAJ2		RSAJ2-0.0	0.0																		X		
J-2	1, 10			RSAJ2-0.5B	0.5	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	1, 10			RSAJ2-10B	10	X	X	X	X		X	X	X		X	X				X				D,L	GW anticipated at ~35 feet bgs.
J-2	1, 10			RSAJ2-20B	20	X	X	X	X		X	X	X		Hold	X				X				B,D,L	
J-2	1, 10			RSAJ2-30B	30	R	R	R	R		R	R				R				R				B	
J-2	1, 10			RSAJ2-33B	33	X	X	X	X		X	X	X		X	X				X				B,D,L	
J-3	1	RSAJ3		RSAJ3-0.0	0.0																		X		
J-3	1			RSAJ3-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X	X	X		F,L	Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and for general site coverage.
J-3	1			RSAJ3-10B	10	X	X	X	X		X	X	X		X	X				X	X	X		D,F,L	GW anticipated at ~35 feet bgs; MCfg ~31 feet bgs.
J-3	1			RSAJ3-20B	20	R	R	R	R		R	R				R				R				B	
J-3	1			RSAJ3-29B	29	X	X	X	X		X	X	X		X	X				X	X	X		B,D,F,L	
J-3	1			RSAJ3-30B	30	R	R	R	R		R	R				R				R				B	
J-3	1, 32	SA202		SA202-0.0	0.0																		X		
J-3	1, 32			SA202-0.5B	0.5	X	X	X	X		X	X	X		R	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		X	X	X		R	X				X				E,L	Site coverage.
J-3	1, 32			SA202-20B	20	R	R	R	R		R	R				R				R				B	GW anticipated at ~31 feet bgs.
J-3	1, 32			SA202-28B	28	X	X	X	X		X	X	X			X				X				B,E,L	
J-3	1, 32			SA202-30B	30	R	R	R	R		R	R				R				R				A	
J-3	1, 60	SA206		SA206-0.0	0.0																		X	G	
J-3	1, 60			SA206-0.5B	0.5	X	X	X	X		X	X	X			X			X	X				G,L	Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and LOU 60 (former Acid Drain System), and for general Site coverage.
J-3	1, 60			SA206-10B	10	X	X	X	X		X	X	X			X				X				G,L	GW anticipated at ~30 feet bgs; MCfg ~28 feet bgs.
J-3	1, 60			SA206-25B	25	X	X	X	X		X	X	X			X				X				B,G,L	
J-3	1, 60			SA206-37B	37	X	X	X	X		X	X	X			X				X				B,G,L	
J-5	1, 22, 32	RSAJ5		RSAJ5-0.0	0.0																		X		
J-5	1, 22, 32			RSAJ5-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X				L	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-5	1, 22, 32			RSAJ5-10B	10	X	X	X	X		X	X	X		Hold	X				X				L	as an upgradient boring to evaluate LOU 22 (Pond WC-West and Associated
J-5	1, 22, 32			RSAJ5-19B	19	X	X	X	X		X	X	X		X	X				X				B,D,L	Piping), and for general Site coverage.
J-5	1, 22, 32			RSAJ5-20B	20	R	R	R	R		R	R				R				R				B	GW anticipated at ~39 feet bgs; MCfg ~26 feet bgs.
J-5	1, 22, 32			RSAJ5-25B	25	R	R	R	R		R	R				R				R				A	
J-6	1, 22, 32	RSAJ6		RSAJ6-0.0	0.0																		X		
J-6	1, 22, 32			RSAJ6-0.5B	0.5	X	X	X	X		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	X		X	X			Hold	X				X					as an upgradient boring to evaluate LOU 22 (Pond WC-West and Associated
J-6	1, 22, 32			RSAJ6-19B	19	X	X	X	X		X	X			X	X				X				B,D	Piping), and for general Site coverage.
J-6	1, 22, 32			RSAJ6-20B	20	R	R	R	R		R	R				R				R				B	GW anticipated at ~21 feet bgs.
J-6	1, 22, 32			RSAJ6-30B	30	R	R	R	R		R	R				R				R				A	
J-6	22, 23	SA127		SA127-0.0	0.0																		X		
J-6	22, 23			SA127-0.5B	0.5	X	X	X	X		X	X			R	X			X	X				E	Boring located to **evaluate white crusty surface** soil east of the pump house between LOUs 22 and 23 (Ponds WC-West and WC-East).
J-6	22, 23			SA127-10B	10	X	X	X	X		X	X			R	X				X				E	GW anticipated at ~21 feet bgs; MCfg ~26 feet bgs.
J-6	22, 23			SA127-20B	20	X	X	X	X		X	X				X				X				B,E	

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

					Laboratory :	CAS - Kelso, WA				CAS - Rochester, NY								CAS - Houston		GEL Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale for removal of samples from SAP	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient designations).
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		
J-6	22, 23			SA127-32B	32	X	X	X	X		X	X				X				X				B,E	
J-7	1, 23, 32	RSAJ7	7/9/08	RSAJ7-0.0	0.0																		X	K,Z	Boring located east of GW-11 Pond to evaluate LOU 32 (Chromium and Perchlorate
J-7	1, 23, 32			RSAJ7-0.5B	0.5	X	X	X	X		X	X	X		X	X	NS	NS	X	X				K,M,P	Groundwater Remediation Unit) and LOU 1 (former Trade Effluent Settling Ponds),
J-7	1, 23, 32			RSAJ7-10B	10	X	X	X	X		X	X	X		Hold	X	NS	NS		X				K,M,P	as an upgradient boring to evaluate LOU 23 (Pond WC-East and Associated
J-7	1, 23, 32			RSAJ7-20B	20	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,M,P	Piping), and for general Site coverage.
J-7	1, 23, 32			RSAJ7-30B	30	X	X	X	X		X	X	X		X	X	NS	NS		X				D,K,M,P	GW encountered at 23 feet bgs; MCfg ~26 feet bgs.
J-8	1, 32	SA79		SA79-0.0	0.0	R	R	R			R	R								R			R	H	SA-79 was removed at the request of NDEP.
J-8	1, 32			SA79-0.5	0.5	R	R	R			R	R			R				R	R					
J-8	1, 32			SA79-10	10	R	R	R			R	R			R					R					
J-8	1, 32			SA79-20	20	R	R	R			R	R								R					
J-8	1, 32			SA79-25	25	R	R	R			R	R								R					
J-8	1, 22, 23, 32	RSAJ8	7/10/08	RSAJ8-0.0	0.0																		X	K	Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOUs 22
J-8	1, 22, 23, 32			RSAJ8-0.5B	0.5	X	X	X	X		X	X			X	X	NS	NS	X	X				K,P	& 23 (Ponds WC-West & WC-East), and LOU 32 (Chromium and Perchlorate
J-8	1, 22, 23, 32			RSAJ8-10B	10	X	X	X	X		X	X			Hold	X	NS	NS		X				K,P	Groundwater Remediation Unit), and for general Site coverage.
J-8	1, 22, 23, 32			RSAJ8-20B	20	X	X	X	X		X	X			Hold	X	NS	NS		X				D,K,P	GW encountered at 36 feet bgs; MCfg ~26 feet bgs.
J-8	1, 22, 23, 32			RSAJ8-30B	30	X	X	X	X		X	X			Hold	X	NS	NS		X				D,K,P	
J-8	1, 22, 23, 32			RSAJ8-33B	33	X	X	X	X		X	X			X	X	NS	NS		X				D,K,P	
K-2	2	SA152		SA152-0.0	0.0																		X		Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling
K-2	2			SA152-0.5B	0.5	X	X	X	X		X	X	X		R	X			X	X				E,L	Ponds) as a step-out boring to SA18 as requested by NDEP in
K-2	2			SA152-10B	10	X	X	X	X		X	X	X		R	X				X				E,L	comments to the Phase A report.
K-2	2			SA152-20B	20	X	X	X	X		X	X	X			X				X				B,E,L	GW anticipated at ~36 feet bgs; MCfg ~31 feet bgs.
K-2	2			SA152-34B	34	X	X	X	X		X	X	X			X				X				B,E,L	
K-2	2	RSAK2	7/11/08	RSAK2-0.0	0.0																		X	K	Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling
K-2	2			RSAK2-0.5B	0.5	X	X	X	X		X	X	X		X	X	NS	NS	X	X				K,P	Ponds) and to evaluate potential offsite VOC source to the west.
K-2	2			RSAK2-10B	10	X	X	X	X		X	X	X		Hold	X	NS	NS		X				K,M,P	GW encountered at 40.5 feet bgs; MCfg ~30 feet bgs.
K-2	2			RSAK2-20B	20	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,M,P	
K-2	2			RSAK2-25B	25	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,M,P	
K-2	2			RSAK2-30B	30	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,M,P	
K-2	2			RSAK3-35B	35	X	X	X	X		X	X	X		X	X	NS	NS		X				D,K,M,P	
K-3	1, 2, 32	SA88		SA88-0.0	0.0																		X		Boring located north (downgradient) of LOU 2 (Open Area South of Trade Effluent
K-3	1, 2, 32			SA88-0.5B	0.5	X	X	X	X		X	X	X		R	X			X	X				E,L	Settling Ponds) and south (upgradient) of LOU 1 (former Trade Effluent Settling
K-3	1, 2, 32			SA88-10B	10	X	X	X	X		X	X	X		R	X				X				E,L	Ponds), and LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit),
K-3	1, 2, 32			SA88-20B	20	X	X	X	X		X	X	X			X				X				B,E,L	and for general Site coverage.
K-3	1, 2, 32			SA88-30B	30	R	R	R	R		R	R				R				R				B	GW anticipated at ~34 feet bgs; MCfg ~31 feet bgs.
K-3	1, 2, 32			SA88-32B	32	X	X	X	X		X	X	X			X				X				B,E,L	
K-3	1, 32	RSAK3		RSAK3-0.0	0.0																		X		Boring located on the northern berm GW-11 Pond to evaluate LOU 1 (former Trade
K-3	1, 32			RSAK3-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X					Effluent Ponds) and LOU 32 (Chromium and Perchlorate Groundwater Remediation
K-3	1, 32			RSAK3-10B	10	X	X	X	X		X	X	X		Hold	X				X					Unit).
K-3	1, 32			RSAK3-20B	20	X	X	X	X		X	X	X		Hold	X				X				B,D	GW anticipated at ~33 feet bgs; MCfg ~34 feet bgs.
K-3	1, 32			RSAK3-30B	30	R	R	R	R		R	R				R				R				B	
K-3	1, 32			RSAK3-31B	31	X	X	X	X		X	X	X		X	X				X				B,D	
K-3	2, 32, 60	SA134		SA134-0.0	0.0																		X		Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling
K-3	2, 32, 60			SA134-0.5B	0.5	X	X	X	X		X	X	X		R	X			X	X				E,L	Ponds), LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit),
K-3	2, 32, 60			SA134-10B	10	X	X	X	X		X	X	X		R	X				X				E,L	and LOU 60 (former Acid Drain System).
K-3	2, 32, 60			SA134-20B	20	X	X	X	X		X	X	X			X				X				B,E,L	GW anticipated at ~33 feet bgs; MCfg ~31 feet bgs.
K-3	2, 32, 60			SA134-30B	30	R	R	R	R		R	R				R				R				B	
K-3	2, 32, 60			SA134-31B	31	X	X	X	X		X	X	X			X				X				B,E,L	
K-4	1, 2, 32	RSAK4		RSAK4-0.0	0.0																		X		Boring located to evaluate LOU 32 (Chromium and Perchlorate Groundwater
K-4	1, 2, 32			RSAK4-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X				L	Remediation Unit) and as an upgradient boring to LOU 1(former Trade Effluent
K-4	1, 2, 32			RSAK4-10B	10	X	X	X	X		X	X	X		Hold	X				X				L	Settling Ponds) and LOU 2 (Open Area South of Trade Effluent Settling Ponds).
K-4	1, 2, 32			RSAK4-20B	20	X	X	X	X		X	X	X		Hold	X				X				B,D,L	GW anticipated at ~33 feet bgs; MCfg ~26 feet bgs.
K-4	1, 2, 32			RSAK4-30B	30	R	R	R	R		R	R				R				R				B	
K-4	1, 2, 32			RSAK4-31B	31	X	X	X	X		X	X	X		X	X				X				B,D,L	
K-5	1, 32	RSAK5		RSAK5-0.0	0.0																		X		Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds) and
K-5	1, 32			RSAK5-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X				L	LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit).
K-5	1, 32			RSAK5-10B	10	X	X	X	X		X	X	X		Hold	X				X				L	GW anticipated at ~24 feet bgs; MCfg ~26 feet bgs.
K-5	1, 32			RSAK5-20B	20	R	R	R	R		R	R				R				R				B	
K-5	1, 32			RSAK5-22B	22	X	X	X	X		X	X	X		X	X				X				B,D,L	
K-5	1, 32			RSAK5-30B	30	R	R	R	R		R	R				R				R				A	
K-6	1, 32	SA76		SA76-0.0	0.0																		X		Boring located north of groundwater recharge trenches to evaluate LOU 1 (former
K-6	1, 32			SA76-0.5B	0.5	X	X	X	X		X	X			R	X			X	X				E	Trade Effluent Settling Ponds) and LOU 32 (Chromium and Perchlorate Groundwater
K-6	1, 32			SA76-10B	10	X	X	X	X		X	X			R	X				X				E	Remediation Unit).
K-6	1, 32			SA76-20B	20	X	X	X	X		X	X				X				X				B,E	GW anticipated at ~22 feet bgs; MCfg ~26 feet bgs.
K-6	1, 32			SA76-25B	25	R	R	R	R		R	R				R				R				A	
K-6	1, 32	RSAK6		RSAK6-0.0	0.0																		X	Z	Boring located south of groundwater recharge trenches to evaluate LOU 1 (former
K-6	1, 32			RSAK6-0.5B	0.5	X	X	X	X		X	X			X	X			X	X					Trade Effluent Settling Ponds) and LOU 32 (Chromium and Perchlorate Groundwater
K-6	1, 32			RSAK6-10B	10	X	X	X	X		X	X			Hold	X				X					Remediation Unit).
K-6	1, 32			RSAK6-20B	20	R	R	R	R		R	R				R				R				B	GW anticipated at ~26 feet bgs; MCfg ~26 feet bgs.
K-6	1, 32			RSAK6-24B	24	X	X	X	X		X	X			X	X				X				B,D	
K-6	1, 32			RSAK6-30B	30	R	R	R	R		R	R				R				R				A	
K-7	1, 22, 23, 32	RSAK7	7/10/08	RSAK7-0.0	0.0																		X	K	Boring located to evaluate LOU 1 (former Trade Effluent Settling Ponds), LOU 32
K-7	1, 22, 23, 32			RSAK7-0.5B	0.5	X	X	X	X		X	X	X		X	X	NS	NS	X	X				K,M,P	(Chromium and Perchlorate Groundwater Remediation Unit), and pipelines
K-7	1, 22, 23, 32			RSAK7-10B	10	X	X	X	X		X	X	X		Hold	X	NS	NS		X				K,M,P	associated with LOUs 22 and 23 (Ponds WC-West & WC-East).
K-7	1, 22, 23, 32			RSAK7-24B	24	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,M,P	GW encountered at ~32 feet bgs; MCfg ~26 feet bgs.
K-7	1, 22, 23, 32			RSAK7-27B	27	X	X	X	X		X	X	X		X	X	NS	NS		X				D,K,M,P	
K-8	1, 32	RSAK8		RSAK8-0.0	0.0																		X		Boring located to evaluate LOU 32 (Chromium and Perchlorate Groundwater Unit)
K-8	1, 32			RSAK8-0.5B	0.5	X	X	X	X		X	X			X	X			X	X					Remediation and as upgradient location to LOU 1 (former Trade Effluent Settling
K-8	1, 32			RSAK8-10B	10	X	X	X	X		X	X			Hold	X				X					Ponds), and for general Site coverage.
K-8	1, 32			RSAK8-20B	20	R	R	R	R		R	R			R	R				R				B	GW anticipated at ~28 feet bgs; MCfg ~26 feet bgs.
K-8	1, 32			RSAK8-27B	27	X	X	X	X		X	X			X	X				X				B	
L-2	2	RSAL2		RSAL2-0.0	0.0																		X	K	Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling
L-2	2			RSAL2-0.5B	0.5	X	X	X	X		X	X	X		X	X	NS	NS	X	X				K,M,P	Ponds).

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

					Laboratory :	CAS - Kelso, WA				CAS - Rochester, NY								CAS - Houston		GEL Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale for removal of samples from SAP	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient designations).
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		
L-2	2		7/11/08	RSAL2-10B	10	X	X	X	X		X	X	X		Hold	X	NS	NS		X				K,M,P	GW encountered at 44 feet bgs; MCfg ~30 feet bgs.
L-2	2			RSAL2-20B	20	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,M,P	
L-2	2			RSAL2-30B	30	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,M,P	
L-2	2			RSAL2-37B	37	X	X	X	X		X	X	X		X	X	NS	NS		X				D,K,M,P	
L-2	2			RSAL2-40B	40	R	R	R	R		R	R			R	R				R					No sample was collected at this depth because groundwater was encountered here.
L-3	2, 32, 60	SA82		SA82-0.0	0.0																		X		Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling
L-3	2, 32, 60			SA82-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X	X	X		F,I,O	Ponds), LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit),
L-3	2, 32, 60			SA82-10B	10	X	X	X	X		X	X	X		X	X				X	X	X		E,F,I,O	and the pipelines associated with LOU 60 (Acid Drain System).
L-3	2, 32, 60			SA82-20B	20	R	R	R			R	R								R				B	GW anticipated at ~31 feet bgs; MCfg ~ 30 feet bgs.
L-3	2, 32, 60			SA82-29B	29	X	X	X	X		X	X	X		X	X				X	X	X		B,E,F,I,O	
L-3	2, 32, 60			SA82-30B	30	R	R	R			R	R								R				A	
L-3	2	RSAL3		RSAL3-0.0	0.0																		X		Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling
L-3	2			RSAL3-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X				L	Ponds).
L-3	2			RSAL3-10B	10	X	X	X	X		X	X	X		Hold	X				X				L	GW anticipated at ~32 feet bgs; MCfg ~ 29 feet bgs.
L-3	2			RSAL3-20B	20	R	R	R	R		R	R				R				R				B	
L-3	2			RSAL3-30B	30	X	X	X	X		X	X	X		X	X				X				B,L	
L-4	32, 60	SA189		SA189-0.0	0.0																		X		Boring located to evaluate LOU 60 (Acid Drain System) pipeline/flume route and
L-4	32, 60			SA189-0.5B	0.5	X	X	X	X		X	X	X		R	X			X	X				E,L	LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit).
L-4	32, 60			SA189-10B	10	X	X	X	X		X	X	X		R	X				X				E,L	GW anticipated at ~31 feet bgs; MCfg ~ 29 feet bgs.
L-4	32, 60			SA189-29B	29	X	X	X	X		X	X	X			X				X				B,L,P	
L-4	2, 32, 60	RSAL4		RSAL4-0.0	0.0																		X		Boring located to evaluate LOU 60 (Acid Drain System) pipeline/flume route and
L-4	2, 32, 60			RSAL4-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X				L,P	as a step-out to LOU 32 (Chromium and Perchlorate Groundwater Remediation
L-4	2, 32, 60			RSAL4-10B	10	X	X	X	X		X	X	X		Hold	X				X				L,P	Unit) and LOU 2 (Open Area South of Trade Effluent Settling Ponds).
L-4	2, 32, 60			RSAL4-20B	20	R	R	R	R		R	R				R				R				B	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	
L-4	2, 32, 60			RSAL4-28B	28	X	X	X	X		X	X	X		X	X				X				B,L,P	
L-5	32, 58	SA74		SA74-0.0	0.0																		X		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			X	X				D,L	New Building D-1 Washdown) and LOU 32 (Chromium and Perchlorate
L-5	32, 58			SA74-10B	10	X	X	X	X		X	X	X			X				X				D,L	Groundwater Remediation Unit).
L-5	32, 58			SA74-20B	20	R	R	R	R		R	R				R				R				B	GW anticipated at ~31 feet bgs; MCfg ~ 26 feet bgs.
L-5	32, 58			SA74-25B	25	R	R	R	R		R	R				R				R				B	
L-5	32, 58			SA74-29B	29	X	X	X	X		X	X	X			X				X				B,D,L	
L-5	32, 58	RSAL5		RSAL5-0.0	0.0																		X		Boring located to evaluate LOU 58 (AP Plant Area New Building D-1 Washdown)
L-5	32, 58			RSAL5-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X				D,L	and LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit).
L-5	32, 58			RSAL5-10B	10	X	X	X	X		X	X	X		Hold	X				X				D,L	GW anticipated at ~32 feet bgs; MCfg ~26 feet bgs.
L-5	32, 58			RSAL5-20B	20	R	R	R	R		R	R				R				R				B	
L-5	32, 58			RSAL5-25B	25	R	R	R	R		R	R				R				R				B	
L-5	32, 58			RSAL5-30B	30	X	X	X	X		X	X	X		X	X				X				B,D,L	
L-7	22, 23	RSAL7		RSAL7-0.0	0.0																		X		Boring located to evaluate pipeline associated with LOUs 22 and 23 (Ponds
L-7	22, 23			RSAL7-0.5B	0.5	X	X	X	X		X	X			X	X			X	X					WC-West & WC-East), and for general Site coverage.
L-7	22, 23			RSAL7-10B	10	X	X	X	X		X	X			Hold	X				X					GW anticipated at ~29 feet bgs; MCfg ~33 feet bgs.
L-7	22, 23			RSAL7-27B	27	X	X	X	X		X	X			X	X				X				B	
L-7	32	SA75		SA75-0.0	0.0																		X		Boring located to evaluate LOU 32 (Chromium and Perchlorate Groundwater
L-7	32			SA75-0.5B	0.5	X	X	X	X		X	X			R	X			X	X				E	Remediation Unit).
L-7	32			SA75-10B	10	X	X	X	X		X	X			R	X				X				E	GW anticipated at ~30 feet bgs; MCfg ~26 feet bgs.
L-7	32			SA75-20B	20	R	R	R	R		R	R				R				R				B	
L-7	32			SA75-24B	24	R	R	R	R		R	R				R				R				B	
L-7	32			SA75-28B	28	X	X	X	X		X	X				X				X				B,E	
L-8	5	RSAL8		RSAL8-0.0	0.0																		X		Boring located north of LOU 5(Beta Ditch) along Timet boundary as a downgradient
L-8	5			RSAL8-0.5B	0.5	X	X	X	X		X	X			X	X			X	X					boring to LOU 5 (Beta Ditch) and for general Site coverage.
L-8	5			RSAL8-10B	10	X	X	X	X		X	X			Hold	X				X					GW anticipated at ~30 feet bgs; MCfg ~33 feet bgs.
L-8	5			RSAL8-20B	20	R	R	R	R		R	R				R				R				B	
L-8	5			RSAL8-28B	28	X	X	X	X		X	X			X	X				X				B, D	
L-8	5			RSAL8-30B	30	R	R	R	R		R	R				R				R				A	
M-2	2	RSAM2		RSAM2-0.0	0.0																		X		Boring located north of LOU 5 (Beta Ditch) along Olin (Pioneer) boundary to evaluate
M-2	2			RSAM2-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X	X	X			potential VOC sources from the west, as a step-out boring for LOU 2 (Open
M-2	2			RSAM2-10B	10	X	X	X	X		X	X	X		X	X				X	X	X		E, F	Area South of Trade Effluent Settling Ponds), and for general Site coverage.
M-2	2			RSAM2-20B	20	X	X	X	X		X	X	X		Hold	X				X				E	GW anticipated at ~37 feet bgs; MCfg ~26 feet bgs.
M-2	2			RSAM2-30B	30	R	R	R	R		R	R				R				R				B	
M-2	2			RSAM2-35B	35	X	X	X	X		X	X	X		X	X				X	X	X		E, F	
M-2	5	SA67		SA67-0.0	0.0																		X		Boring located south of LOU 5 (Beta Ditch) and to evaluate potential VOC sources
M-2	5		7/7/08	SA67-0.5B	0.5	X	X	X			X	X	X		X	X	NS	NS	X	X				K,P	from the west.
M-2	5			SA67-10B	10	X	X	X			X	X	X		Hold	X	NS	NS		X				K	GW encountered at 38 feet bgs; MCfg ~26 feet bgs.
M-2	5			SA67-20B	20	X	X	X			X	X	X		Hold	X	NS	NS		X				D,K	
M-2	5			SA67-25B	25	X	X	X			X	X	X		Hold	X	NS	NS		X				D,K	
M-2	5			SA67-30B	30	X	X	X			X	X	X		Hold	X	NS	NS		X				D,K	
M-2	5			SA67-35B	35	X	X	X			X	X	X		X	X	NS	NS		X				D,K,P	
M-3	2	SA100		SA100-0.0	0.0																		X		Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling
M-3	2			SA100-0.5B	0.5	X	X	X	X		X	X	X		R	X			X	X				E,L	Ponds) and to evaluate potential VOC sources from the west.
M-3	2			SA100-10B	10	X	X	X	X		X	X	X		R	X				X				E,L	GW anticipated at ~32 feet bgs; MCfg ~25 feet bgs.
M-3	2			SA100-20B	20	R	R	R	R		R	R				R				R				B	
M-3	2			SA100-30B	30	X	X	X	X		X	X	X			X				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	2			RSAM3-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X	X	X		F,L	Ponds).
M-3	2			RSAM3-10B	10	X	X	X	X		X	X	X		Hold	X				X				L	GW anticipated at ~32 feet bgs; MCfg ~25 feet bgs.
M-3	2			RSAM3-20B	20	R	R	R	R		R	R				R				R				B	
M-3	2			RSAM3-30B	30	X	X	X	X		X	X	X		X	X				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	2			SA69-0.5B	0.5	X	X	X	X		X	X	X		R	X			X	X				E,I,L	South of Trade Effluent Settling Ponds) and to investigate for potential offsite VOC
M-4	2			SA69-10B	10	X	X	X	X		X	X	X		R	X				X				E,I,L	sources from the west.
M-4	2			SA69-20B	20	R	R	R			R	R				R				R				B	GW anticipated at ~31 feet bgs; MCfg ~24 feet bgs.
M-4	2			SA69-29B	29	X	X	X	X		X	X	X			X				X				B,E,I,L	

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

					Laboratory :	CAS - Kelso, WA				CAS - Rochester, NY								CAS - Houston		GEL Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale for removal of samples from SAP	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient designations).
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		
M-4	2			SA69-30B	30	R	R	R			R	R				R				R				A	
M-4	2	RSAM4		RSAM4-0.0	0.0																		X		Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling
M-4	2			RSAM4-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X				L	Ponds) and for general Site coverage.
M-4	2			RSAM4-10B	10	X	X	X	X		X	X	X		Hold	X				X				L	GW anticipated at ~32 feet bgs; MCfg ~24 feet bgs.
M-4	2			RSAM4-20B	20	R	R	R	R		R	R				R				R				B	
M-4	2			RSAM4-30B	30	X	X	X	X		X	X	X		X	X				X				B,D,L	
M-3	5	SA66		SA66-0.0	0.0																		R	H (Area II)	Boring located in LOU 5 (Beta Ditch) to evaluate the Beta Ditch and for general
M-3	5			SA66-0.5B	0.5	R	R	R	R		R	R			R				R	R					Site coverage.
M-3	5			SA66-10B	10	R	R	R	R		R	R			R					R					GW anticipated at ~39 feet bgs; MCfg ~23 feet bgs.
M-3	5			SA66-20B	20	R	R	R	R		R	R								R					Soil boring can be found in Area II
M-3	5			SA66-30B	30	R	R	R	R		R	R								R					Soil sample for asbestos analysis was collected in June 2008.
M-3	5			SA66-35B	35	R	R	R	R		R	R								R					
N-2	35	SA56		SA56-0.0	0.0																		X		Boring located along western Site boundary to evaluate LOU 35 (former Truck
N-2	35			SA56-0.5B	0.5	X	X	X	X	X	X	X	X		R	X	X	X	X	X				C,E,L	Emptying/Dumping Site) and potential offsite VOC sources from the west. PCBs
N-2	35			SA56-10B	10	X	X	X	X	X	X	X	X		R	X								E,L	and TPH-G were detected in Phase A SA09.
N-2	35			SA56-20B	20	R	R	R	R	R	R	R				R								B	GW anticipated at ~39 feet bgs; MCfg ~23 feet bgs.
N-2	35			SA56-25B	25	X	X	X	X	X	X	X	X			X								B,E,L	
N-2	35			SA56-30B	30	R	R	R	R	R	R	R				R								B	
N-2	35			SA56-37B	37	X	X	X	X	X	X	X	X			X	X	X						B,C,E,L	
N-2	35			SA56-40B	40	R	R	R	R	R	R	R				R								A	
N-2	n/a	RSAN2		RSAN2-0.0	0.0																		X	K	Boring located along western Site boundary north of LOU 35 (Truck Emptying
N-2	n/a			RSAN2-0.5B	0.5	X	X	X	X		X	X	X		X	X	X	X	X	X				C,K,M	/Dumping Site) to evaluate potential offsite VOC sources
N-2	n/a			RSAN2-10B	10	X	X	X	X		X	X	X		Hold	X	X	X		X				C,K,M	from the west, and for general Site coverage.
N-2	n/a			RSAN2-25B	25	X	X	X	X		X	X	X		Hold	X	X	X		X				C,D,K,M	GW encountered at 41 feet bgs; MCfg ~22 feet bgs.
N-2	n/a			RSAN2-30B	30	X	X	X	X		X	X	X		Hold	X	X	X		X				C,D,K,M	
N-2	n/a			RSAN2-35B	35	X	X	X	X		X	X	X		X	X	X	X		X				C,D,K,M	
N-2	n/a		7/8/08	RSAN2-40B	40	R	R	R	R		R	R				R	R	R		R					No soil sample was collected at this depth because groundwater was encountered here.
N-3	54	SA85		SA85-0.0	0.0																		X		Boring located northwest of AP Lab building to evaluate LOU 54 (AP Plant Area
N-3	54			SA85-0.5B	0.5	X	X	X			X	X	X	X	X	X			X	X	X	X		F,L	Change House/Laboratory Septic Tank). Dilute formaldehyde titrant was used in
N-3	54			SA85-10B	10	X	X	X			X	X	X	X	Hold	X				X				L	LOU 38 (Former Satellite Accumulation Point, AP Laboratory) and possibly
N-3	54			SA85-20B	20	X	X	X			X	X	X	X	Hold	X				X				D,L	discharged to LOU 54 .
N-3	54			SA85-30B	30	R	R	R			R	R		R		R				R				B	GW anticipated at ~35 feet bgs; MCfg ~24 feet bgs.
N-3	54			SA85-33B	33	X	X	X			X	X	X	X	X	X				X	X	X		B,D,F,L	
N-3	54			SA85-35B	35	R	R	R			R	R		R		R				R				A	
N-3	38	RSAN3		RSAN3-0.0	0.0																		X		Boring located to evaluate LOU 38 (Former Satellite Accumulation Point, AP
N-3	38			RSAN3-0.5B	0.5	X	X	X	X		X	X	X	X	X	X			X	X				L	Laboratory). Dilute formaldehyde titrant was used in the
N-3	38			RSAN3-10B	10	X	X	X	X		X	X	X	X	Hold	X				X				L	AP Laboratory.
N-3	38			RSAN3-20B	20	X	X	X	X		X	X	X	X	Hold	X				X				D,L	GW anticipated at ~34 feet bgs; MCfg ~22 feet bgs.
N-3	38			RSAN3-30B	30	R	R	R	R		R	R		R		R				R				B	
N-3	38			RSAN3-32B	32	X	X	X	X		X	X	X	X	X	X				X				B,D,L	
N-3	38			RSAN3-40B	40	R	R	R	R		R	R		R		R				R				A	
N-4	39	SA87		SA87-0.0	0.0																		X	K	Boring located at the southeast corner of the AP Maintenance Shop building to
N-4	39			SA87-0.5B	0.5	X	X	X	X		X	X	X		X		NS	NS	X	X				D,K,L,P	evaluate LOU 39 (Satellite Accumulation Point, AP Maintenance Shop).
N-4	39			SA87-10B	10	X	X	X	X		X	X	X		Hold		NS	NS		X				D,K,L	
N-4	39			SA87-20B	20	X	X	X	X		X	X	X		Hold		NS	NS		X				D,K,L	GW encountered at 32 feet bgs; MCfg ~21 feet bgs.
N-4	39			SA87-25B	25	X	X	X	X		X	X	X		Hold		NS	NS		X				D,K,L	
N-4	39			SA87-30B	30	X	X	X	X		X	X	X		X		NS	NS		X				D,K,L,P	
N-4	39		6/25/08	SA87-40B	40	R	R	R	R		R	R			R					R				K	No soil sample was collected at this depth because groundwater was encountered here.
N-4	39	RSAN4		RSAN4-0.0	0.0																		X		Boring located to evaluate former drum storage area in LOU 39 (Satellite
N-4	39			RSAN4-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X				L	Accumulation Point, AP Maintenance Shop) and for general Site coverage.
N-4	39			RSAN4-10B	10	X	X	X	X		X	X	X		Hold	X				X				L	GW anticipated at ~33 feet bgs; MCfg ~21 feet bgs.
N-4	39			RSAN4-20B	20	X	X	X	X		X	X	X		Hold	X				X				D,L	
N-4	39			RSAN4-30B	30	R	R	R	R		R	R				R				R				B	
N-4	39			RSAN4-31B	31	X	X	X	X		X	X	X		X	X				X				B,D,L	
N-4	39			RSAN4-40B	40	R	R	R	R		R	R				R				R				A	
O-2	35	RSAO2		RSAO2-0.0	0.0																		X	K	Boring located along western boundary of Site to evaluate LOU 35 (Truck
O-2	35			RSAO2-0.5B	0.5	X	X	X	X	X	X	X	X		X	X	X	X	X	X				C,K,L	Emptying/Dumping Site) and potential offsite VOC sources from the west. PCBs
O-2	35			RSAO2-10B	10	X	X	X	X	X	X	X	X		Hold	X	X	X		X				C,K,L	and TPH-GRO were detected in Phase A soil boring SA09.
O-2	35			RSAO2-20B	20	X	X	X	X	X	X	X	X		Hold	X	X	X		X				C,D,K,L	GW encountered at 37.5 feet bgs; MCfg ~20 feet bgs.
O-2	35			RSAO2-30B	30	X	X	X	X	X	X	X	X		Hold	X	X	X		X				C,D,K,L	
O-2	35			RSAO2-33B	33	X	X	X	X	X	X	X	X		X	X	X	X		X				C,D,K,L	
O-2	35		7/9/08	RSAO2-40B	40	R	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.
O-2	n/a	SA35		SA35-0.0	0.0																		X	G	Boring located along western Site boundary to evaluate potential offsite VOC sources
O-2	n/a			SA35-0.5B	0.5	X	X	X	X	X	X	X	X		X	X			X	X	X	X		F,G,L	from the west. PCBs and TPH-GRO were detected in Phase A soil boring SA09.
O-2	n/a			SA35-10B	10	X	X	X	X	X	X	X	X		X	X				X	X	X		F,G,L	GW anticipated at ~34 feet bgs; MCfg ~20 feet bgs.
O-2	n/a			SA35-20B	20	X	X	X	X	X	X	X	X		Hold	X				X				B,F,G,L	
O-2	n/a			SA35-32B	32	X	X	X	X	X	X	X	X		X	X				X	X	X		B,F,G,L	
O-2	35, 60	SA166		SA166-0.0	0.0																		X		Boring located along western Site boundary to evaluate LOU 35 (Truck Emptying/
O-2	35, 60			SA166-0.5B	0.5	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		C,D,F,L	Dumping Site), LOU 60 (Acid Drain System), and potential offsite VOC sources
O-2	35, 60			SA166-10B	10	X	X	X	X	X	X	X	X		X	X				X	X	X		F,L	from the west.
O-2	35, 60			SA166-20B	20	X	X	X	X	X	X	X	X		Hold	X				X				D,L	GW anticipated at ~33 feet bgs; MCfg ~31 feet bgs.
O-2	35, 60			SA166-30B	30	R	R	R	R	R	R	R				R				R				B	
O-2	35, 60			SA166-31B	31	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X		B,C,D,F,L	
O-2	35, 60			SA166-40B	40	R	R	R	R	R	R	R				R				R				A	
O-3	35	SA48		SA48-0.0	0.0																		X	K	Boring located along western Site boundary to evaluate LOU 35 (Truck Emptying/
O-3	35			SA48-0.5B	0.5	X	X	X	X	X	X	X	X		X	X	X	X	X	X				C,K,L	Dumping Site) and potential offsite VOC sources from the west. PCBs and TPH-GRO
O-3	35			SA48-10B	10	X	X	X	X	X	X	X	X		Hold	X	X	X		X				C,D,K,L	were detected in Phase A soil boring SA09.
O-3	35			SA48-20B	20	X	X	X	X	X	X	X	X		Hold	X	X	X		X				C,D,K,L	GW encountered at 39.5 feet bgs; MCfg ~29 feet bgs.
O-3	35			SA48-30B	30	X	X	X	X	X	X	X	X		Hold	X	X	X		X				C,D,K,L	
O-3	35			SA48-35B	35	X	X	X	X	X	X	X	X		X	X	X	X		X				C,D,K,L	
O-3	35		7/10/08	SA48-37B	37	R	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.
O-3	35	SA57		SA57-0.0	0.0																		X	G,K	Boring added along western Site boundary to evaluate LOU 35 (Truck Emptying/

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

Laboratory :						CAS - Kelso, WA				CAS - Rochester, NY								CAS - Houston		GEL Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale for removal of samples from SAP	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient designations).
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		
O-3	35		6/26/08	SA57-0.5B	0.5	X	X	X	X	X	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
O-3	35			SA57-10B	10	X	X	X	X	X	X	X	X		Hold	X	X	X		X				C,D,G,K,L	were detected in Phase A soil boring SA09.
O-3	35			SA57-20B	20	X	X	X	X	X	X	X	X		Hold	X	X	X		X				C,D,G,K,L	GW encountered at 32 feet bgs; MCfg ~21 feet bgs.
O-3	35			SA57-30B	30	X	X	X	X	X	X	X	X		X	X	X	X		X				C,D,G,K,L	
O-3	35			SA57-40B	40	R	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.
O-3	64	SA180	6/26/08	SA180-0.0	0.0																		X	K	Boring located to evaluate soil stain in northern portion of LOU 64 (Koch
O-3	64			SA180-0.5B	0.5	X	X	X	X		X	X	X		X	X	X	X	X	X				C,K,L	Materials Company Site).
O-3	64			SA180-10B	10	X	X	X	X		X	X	X		Hold	X	X	X		X				C,D,K,L	GW encountered at 34.5 feet bgs; MCfg ~22 feet bgs.
O-3	64			SA180-20B	20	X	X	X	X		X	X	X		Hold	X	X	X		X				C,D,K,L	
O-3	64			SA180-30B	30	X	X	X	X		X	X	X		Hold	X	X	X		X				C,D,K,L	
O-3	64			SA180-40B	40	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.
O-3	64	SA181	7/2/08	SA181-0.0	0.0																		X	K	Boring located to evaluate soil stain in northern portion of LOU 64 (Koch
O-3	64			SA181-0.5B	0.5	X	X	X	X		X	X	X		X	X	NS	NS	X	X				D,K,L,P	Materials Company Site).
O-3	64			SA181-10B	10	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,L,P	GW was encountered at 40 feet bgs; MCfg ~21 feet bgs.
O-3	64			SA181-20B	20	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,L,P	
O-3	64			SA181-30B	30	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,L,P	
O-3	64			SA181-35B	35	X	X	X	X		X	X	X		X	X	NS	NS		X				D,K,L,P	
O-3	64			SA181-37B	37	R	R	R	R		R	R			R	R				R				K	No soil sample was collected at this depth because groundwater was encountered here.
O-3	64	RSAO3		RSA03-0.0	0.0																		X		Boring located to evaluate soil stain in northern portion of LOU 64 (Koch
O-3	64			RSA03-0.5B	0.5	X	X	X	X		X	X	X		X	X	X		X	X				C,L	Materials Company Site).
O-3	64			RSA03-10B	10	X	X	X	X		X	X	X		Hold	X				X				L	GW anticipated at ~33 feet bgs; MCfg ~22 feet bgs.
O-3	64			RSA03-20B	20	X	X	X	X		X	X	X		Hold	X				X				D,L	
O-3	64			RSA03-30B	30	R	R	R	R		R	R				R				R				B	
O-3	64			RSA03-31B	31	X	X	X	X		X	X	X		X	X	X			X				B,C,D,L	
O-3	64			RSA03-37B	37	R	R	R	R		R	R				R				R				A	
O-3	60, 64	SA176		SA176-0.0	0.0																		X		Boring located to evaluate LOU 60 (Acid Drain System) pipelines and LOU 64 (Koch
O-3	60, 64			SA176-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X	X	X		F,L	Materials Company Site).
O-3	60, 64			SA176-10B	10	X	X	X	X		X	X	X		X	X				X	X	X		D,F,L	Groundwater anticipated at 39 feet bgs; MCfg ~22 feet bgs.
O-3	60,64			SA176-25B	25	X	X	X	X		X	X	X		Hold	X				X				B,D,L	
O-3	60, 64			SA176-37B	37	X	X	X	X		X	X	X		X	X				X	X	X		B,D,F,L	
O-3	n/a	SA207	6/30/08	SA207-0.0	0.0																		X	K	Boring located to evaluate area between LOU 35 (Truck Emptying/Dumping Site) and
O-3	n/a			SA207-0.5B	0.5	X	X	X	X		X	X	X		X	X	NS	NS	X	X				D,G,K,L,P	LOU 64 (Koch Materials Company Site).
O-3	n/a			SA207-10B	10	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,G,K,L,P	GW encountered at 45 feet bgs; MCfg ~22 feet bgs.
O-3	n/a			SA207-20B	20	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,G,K,L,P	
O-3	n/a			SA207-30B	30	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,G,K,L,P	
O-3	n/a			SA207-37B	37	X	X	X	X		X	X	X		X	X	NS	NS		X				D,G,K,L,P	
O-3	n/a			SA207-42B	42	R	R	R	R		R	R			R	R	R	R		R				G,K	No soil sample was collected at this depth because groundwater was encountered here.
O-4	64	SA46	7/9/08	SA46-0.0	0.0																		X	K	Boring located to evaluate LOU 64 (Koch Materials Company Site) OCPs added to
O-4	64			SA46-0.5B	0.5	X	X	X	X		X	X	X		X	X	NS	NS	X	X				D,K,L,P	SA46 at the request of NDEP in comments to the Phase A report.
O-4	64			SA46-10B	10	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,L,P	GW encountered at 35.5 feet bgs; MCfg ~23 feet bgs.
O-4	64			SA46-20B	20	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,L,P	
O-4	64			SA46-30B	30	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,L,P	
O-4	64			SA46-31B	31	X	X	X	X		X	X	X		X	X	NS	NS		X				D,K,L,P	
O-4	64			SA46-35B	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.
O-4	64	SA47	7/7/08	SA47-0.0	0.0																		X	K	Boring located to evaluate LOU 64 (Koch Materials Company Site).
O-4	64			SA47-0.5B	0.5	X	X	X	X		X	X	X		X	X	NS	NS	X	X				D,K,L,P	GW encountered at 40 feet bgs; MCfg ~20 feet bgs.
O-4	64			SA47-10B	10	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,L,P	
O-4	64			SA47-20B	20	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,L,P	
O-4	64			SA47-30B	30	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,L,P	
O-4	64			SA47-33B	33	X	X	X	X		X	X	X		X	X	NS	NS		X				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.
O-4	64	SA55		SA55-0.0	0.0																		X		Located as a downgradient boring to LOU 64 (Koch Materials Company Site) as a
O-4	64			SA55-0.5B	0.5	X	X	X	X		X	X	X		R	X			X	X				E,L	step-out to LOU 35 (Truck Emptying/Dumping Site) to investigate for VOCs from
O-4	64			SA55-10B	10	X	X	X	X		X	X	X		R	X				X				E,L	potential offsite sources to the west, and for general Site coverage.
O-4	64			SA55-20B	20	R	R	R	R		R	R				R				R				B	GW anticipated at ~37 feet bgs; MCfg ~23 feet bgs.
O-4	64			SA55-25B	25	X	X	X	X		X	X	X			X				X				B,E,L	
O-4	64			SA55-30B	30	R	R	R	R		R	R				R				R				B	
O-4	64			SA55-35B	35	X	X	X	X		X	X	X			X				X				B,E,L	
O-4	64	RSAO4	7/9/08	RSA04-0.0	0.0																		X	K	Boring located to evaluate LOU 64 (Koch Materials Company Site).
O-4	64			RSA04-0.5B	0.5	X	X	X	X		X	X	X		X	X	X	X	X	X				C,K,L	GW encountered at 41 feet bgs; MCfg ~23 feet bgs.
O-4	64			RSA04-10B	10	X	X	X	X		X	X	X		Hold	X	X	X		X				C,K,L	
O-4	64			RSA04-20B	20	X	X	X	X		X	X	X		Hold	X	X	X		X				C,D,K,L	
O-4	64			RSA04-30B	30	X	X	X	X		X	X	X		Hold	X	X	X		X				C,D,K,L	
O-4	64			RSA04-36B	36	X	X	X	X		X	X	X		X	X	X	X		X				C,D,K,L	
O-4	60, 64	SA182		SA182-0.0	0.0																		X		Boring located to evaluate soil stain in northern portion of LOU 64 (Koch Materials
O-4	60, 64			SA182-0.5B	0.5	X	X	X	X		X	X	X		X	X			X	X	X	X		F,L	Company Site) and LOU 60 (Acid Drain System).
O-4	60, 64			SA182-10B	10	X	X	X	X		X	X	X		X	X				X	X	X		F,D,L	GW anticipated at ~40 feet bgs; MCfg ~23 feet bgs.
O-4	60, 64			SA182-20B	20	R	R	R	R		R	R				R				R				B	
O-4	60, 64			SA182-25B	25	X	X	X	X		X	X	X		Hold	X				X				B,D,L	
O-4	60, 64			SA182-30B	30	R	R	R	R		R	R				R				R				B	
O-4	60, 64			SA182-37B	37	R	R	R	R		R	R				R				R				B	
O-4	60, 64			SA182-38B	38	X	X	X	X		X	X	X		X	X				X	X	X		B,D,F,L	
O-4	64	SA183	7/8/08	SA183-0.0	0.0																		X	K	Boring located to evaluate soil stain in northern portion of LOU 64 (Koch Materials
O-4	64			SA183-0.5B	0.5	X	X	X	X		X	X	X		X	X	NS	NS	X	X				D,K,L,P	Company Site).
O-4	64			SA183-10B	10	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,L,P	GW encountered at ~37.5 feet bgs; MCfg ~20 feet bgs.
O-4	64			SA183-20B	20	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,L,P	
O-4	64			SA183-30B	30	X	X	X	X		X	X	X		Hold	X	NS	NS		X				D,K,L,P	
O-4	64			SA183-33B	33	X	X	X	X		X	X	X		X	X	NS	NS		X				D,K,L,P	
O-4	64			SA183-37B	37	R	R	R	R		R	R	NS		NS	NS				R				K	No soil sample was collected at this depth because groundwater was encountered here.
Total #:	Borings:	65				253	253	253	243	26	253	253	223	8	201	248	34	32	65	253	27	27	65	0		
Synthetic Precipitate Leaching Procedure (SPLP) Samples[11]:																									

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

					Laboratory :	CAS - Kelso, WA				CAS - Rochester, NY								CAS - Houston		GEL Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale for removal of samples from SAP	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient designations).
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		
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)	Formaldehyde (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	Location Description and Characterized Area Rationale
J-3	1, 32	RSAJ3		RSAJ3-10B	10	X	X	X	X		X	X	X		X	X				X	X	X		X	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.
J-3	1, 32	RSAJ3		RSAJ3-DDB	DD* = depth (ft)	X	X	X	X		X	X	X		X	X				X	X	X		X	**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.
I-7	22, 23	RSAI7	7/8/08	RSAI7-10B	10	X	X	X	X		X	X	X		X	X				X				X	Soil sample collected from the northern portion of of LOU 1 (former Trade Effluent Settling Ponds), LOUs 22 & 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 (Qal) soils. Expected soil type: Gravelly Sand.
I-7	22, 23	RSAI7	7/8/08	RSAI7-DDB	30	X	X	X	X		X	X	X		X	X	X	X		X				X	**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.
M-3	2	RSAM3		RSAM3-10B	10	X	X	X	X		X	X	X		Hold	X				X				X	Soil sample collected below LOU 2 (Open Area South of Trade Effluent Settling Ponds) to evaluate leaching potential of Site-related analytes. Expected soil type: Sand.
M-3	2	RSAM3		RSAM3-30B	30	X	X	X	X		X	X	X		X	X				X	X	X		X	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: Silt.
N-2	35	SA56		SA56-10B	10	X	X	X	X	X	X	X	X			X				X				X	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.
N-2	35	SA56		SA56-30B	37	X	X	X	X	X	X	X	X			X	X	X		X				X	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 Facies (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: Silt.
O-2	35, 60	SA166		SA166-10B	10	X	X	X	X	X	X	X	X		X	X				X	X	X		X	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.
O-2	35, 60	SA166		SA166-35B	31	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X		X	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 (MCfg1) soils. Contact between Qal and MCfg1 is approximately 32 feet bgs. Groundwater anticipated to be at approximately 33 feet bgs. No soil sample will be collected within capillary fringe. Expected soil type: Silt.
O-4	64	SA182		SA182-10B	10	X	X	X	X		X	X	X		X	X				X	X	X		X	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.
O-4	64	SA182		SA182-30B	38	X	X	X	X		X	X	X		X	X				X	X	X		X	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 (MCfg1) soils. Contact between Qal and MCfg1 is approximately 20 feet bgs. Groundwater anticipated to be at approximately 40 feet bgs. No soil sample will be collected within capillary fringe. Expected soil type: Sandy Silt.
Field Samples:						265	265	265	255	30	265	265	235	8	116	260	34	32	65	265	27	27	65	12	
	QA/QC Samples:																								
	Field Duplicates (10%)					27	27	27	26	3	27	27	24	1	12	26	4	4	7	27	3	3	0	0	
	Field Blanks					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	
	Equipment Rinsate Blanks					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	
	Trip Blank Samples					0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Matrix Spike (5%)					14	14	14	14	2	14	14	14	0	6	14	2	2	4	14	2	2	0	0	
	Matrix Spike Duplicate (5%)					14	14	14	14	2	14	14	14	0	6	14	2	2	4	14	2	2	0	0	
Total Sample Count:						**322**	**322**	**322**	**311**	**39**	**332**	**322**	**289**	**12**	**142**	**316**	**44**	**42**	**82**	**322**	**36**	**36**	**65**	**12**	

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.
	Blank cell indicates no sample collected under Phase B sampling program.
X	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.
TPH-DRO/ORO	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, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybednum, Nickel, Platinum, Potassium, Selenium, Silver, Sodium, Strontium, Tin, Titanium, Thallium, Tungsten, Uranium, Vanadium, 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, HCO_3), 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
8.	Radionuclides consists of alpha spec reporting for isotopic thorium and isotopic uranium, and Radium-226, plus Radium-228 by beta counting (per NDEP).
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.	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).
11.	Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs.
12.	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.	Organophosphorous Pesticides
14.	Organic Acid analysis includes the following analytes: 4-Chlorbenzene sulfonic acid; Benzenesulfonic acid; O,O-Diethylphosphorodithioic acid; O,O-Dimethylphosphorodithioic acid; and Phthalic acid.

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

					Laboratory :	CAS - Kelso, WA				CAS - Rochester, NY								CAS - Houston		GEL Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale for removal of samples from SAP	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient designations).
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		
15.		Asbestos samples are to be collected from 0-2 inches bgs.																						
X		Green-shading indicates items that have been added or changed from Table 2 in the June 2008 Area I Work Plan originally reviewed by NDEP.																						
R		"R" indicates that soil sample, location, or depth has been removed and will not be analyzed for the specific analyte class, per communication with NDEP (September 8, 2008)																						

Rationale Codes

A	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.
B	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). 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.
C	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)
E	OCP analysis was removed from boring sampling plan per TRX errata submittal (December 19, 2008)
F	Organophosphorus Pesticides (OPP) and Organic Acids (OA) analyses were added per NDEP (July 21, 2008)
G	Additional boring added per NDEP (May 6, 2008). Sampling plan for boring is consistent with represented LOU packages
H	Boring removed from sampling plan.
I	TPH-DRO/ORO and/or TPH-GRO added per NDEP (May 6,2008)
J	PCB Aroclor or Aroclor and congener analyses were removed from boring sampling plan per TRX erratta submittal (December 19, 2008)
K	Boring already advanced and sampled
L	Cyanide analysis added to boring sampling plan per NDEP (July 21, 2008)
M	Cyanide analysis added by TRX
N	Depth extended to capillary fringe per NDEP (May 6, 2008)
O	SVOC analysis was added to boring sampling plan per NDEP (May 6, 2008)
P	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 (Field Team Version)
Soil Sampling and Analytical Plan for Area I

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

							Laboratory	CAS - Kelso, WA		CAS - Rochester, NY										CAS - Houston		GEL Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	PTS Santa Fe Springs, CA	
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	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient designations).
			Number of containers per sample					1 - 4 oz jar		1 - 4 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 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 1 (H-3) and ending with the southeastern most grid in Area I (O-4).																											
H-3	RSAH3		RSAH3-0.0	0.0																					X		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.
H-3			RSAH3-0.5B	0.5				X	X	X	X		X	X	X		X	X			X	X	X	X			
H-3			RSAH3-0.5BD	0.5 (dup)				X	X	X	X		X	X	X		X	X			X	X	X	X			
H-3			RSAH3-10B	10				X	X	X	X		X	X	X		Hold	X				X					
H-3			RSAH3-20B	20				X	X	X	X		X	X	X		Hold	X				X					
H-3			RSAH3-32B	32				X	X	X	X		X	X	X		X	X				X	X	X			
I-2	RSAI2		RSAI2-0.0	0.0																					X		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.
I-2			RSAI2-0.5B	0.5				X	X	X	X		X	X	X		X	X			X	X					
I-2			RSAI2-10B	10				X	X	X	X		X	X	X		Hold	X				X					
I-2			RSAI2-10BD	10 (dup)				X	X	X	X		X	X	X		Hold	X				X					
I-2			RSAI2-20B	20				X	X	X	X		X	X	X		Hold	X				X					
I-2			RSAI2-31B	31				X	X	X	X		X	X	X		X	X				X					
I-3	RSAI3		RSAI3-0.0	0.0																					X		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.
I-3			RSAI3-0.5B	0.5				X	X	X	X		X	X	X		X	X			X	X					
I-3			RSAI3-10B	10				X	X	X	X		X	X	X		Hold	X				X					
I-3			RSAI3-20B	20				X	X	X	X		X	X	X		Hold	X				X					
I-3			RSAI3-32B	32				X	X	X	X		X	X	X		X	X				X					
I-3	SA201		SA201-0.0	0.0																					X		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.
I-3			SA201-0.5B	0.5				X	X	X	X		X	X	X			X			X	X					
I-3			SA201-10B	10				X	X	X	X		X	X	X			X				X					
I-3			SA201-28B	28				X	X	X	X		X	X	X			X				X					
I-3			SA201-28BD	28 (dup)				X	X	X	X		X	X	X			X				X					
I-4	RSAI4		RSAI4-0.0	0.0																					X		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 ~34 feet bgs; MCfg ~23 feet bgs.
I-4			RSAI4-0.5B	0.5				X	X	X	X		X	X	X		X	X			X	X					
I-4			RSAI4-10B	10				X	X	X	X		X	X	X		Hold	X				X					
I-4			RSAI4-10B	10	X			X	X	X	X		X	X	X		Hold	X				X					
I-4			RSAI4-20B	20				X	X	X	X		X	X	X		Hold	X				X					
I-4			RSAI4-32B	32				X	X	X	X		X	X	X		X	X				X					
I-5	RSAI5		RSAI5-0.0	0.0																					X		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.
I-5			RSAI5-0.5B	0.5				X	X	X	X		X	X	X		X	X			X	X					
I-5			RSAI5-10B	10				X	X	X	X		X	X	X		Hold	X				X					
I-5			RSAI5-10BD	10 (dup)				X	X	X	X		X	X	X		Hold	X				X					
I-5			RSAI5-28B	28				X	X	X	X		X	X	X		X	X				X					
I-7	RSAI7	7/11/08	RSAI7-0.0	0.0																					X		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.
I-7			RSAI7-0.5B	0.5				X	X	X	X		X	X	X		X	X	NS	NS	X	X					
I-7			RSAI7-10B	10				X	X	X	X		X	X	X		Hold	X	NS	NS		X					
I-7			RSAI7-10B	10		X		X	X	X	X		X	X	X		X	X	NS	NS		X				X	
I-7			RSAI7-20B	20				X	X	X	X		X	X	X		Hold	X	NS	NS		X					
I-7			RSAI7-30B	30				X	X	X	X		X	X	X		X	X	NS	NS		X					
I-7			RSAI7-30B	30		X		X	X	X	X		X	X	X		X	X	NS	NS		X				X	
J-2	RSAJ2		RSAJ2-0.0	0.0																					X		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; MCfg ~31 feet bgs.
J-2			RSAJ2-0.5B	0.5				X	X	X	X		X	X	X		X	X			X	X					
J-2			RSAJ2-10B	10				X	X	X	X		X	X	X		X	X				X					
J-2			RSAJ2-20B	20				X	X	X	X		X	X	X		Hold	X				X					
J-2			RSAJ2-33B	33				X	X	X	X		X	X	X		X	X				X					
J-2			RSAJ2-33BD	33 (dup)				X	X	X	X		X	X	X		X	X				X					
J-3	RSAJ3		RSAJ3-0.0	0.0																					X		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.
J-3			RSAJ3-0.5B	0.5				X	X	X	X		X	X	X		X	X			X	X	X	X			
J-3			RSAJ3-10B	10				X	X	X	X		X	X	X		X	X				X	X	X			
J-3			RSAJ3-10B	10		X		X	X	X	X		X	X	X		X	X				X	X	X		X	
J-3			RSAJ3-29B	29				X	X	X	X		X	X	X		X	X				X	X	X			
J-3			RSAJ3-29DDB	29		X		X	X	X	X		X	X	X		X	X				X	X	X		X	
J-3	SA202		SA202-0.0	0.0																					X		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.
J-3			SA202-0.5B	0.5				X	X	X	X		X	X	X			X			X	X					
J-3			SA202-10B	10				X	X	X	X		X	X	X			X				X					
J-3			SA202-28B	28				X	X	X	X		X	X	X			X				X					
J-3	SA206		SA206-0.0	0.0																					X		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.
J-3			SA206-0.5B	0.5				X	X	X	X		X	X	X			X			X	X					
J-3			SA206-10B	10				X	X	X	X		X	X	X			X				X					
J-3			SA206-25B	25				X	X	X	X		X	X	X			X				X					
J-3			SA206-37B	37				X	X	X	X		X	X	X			X				X					
J-3			SA206-37B	37	X			X	X	X	X		X	X	X			X				X					
J-5	RSAJ5		RSAJ5-0.0	0.0																					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), 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.
J-5			RSAJ5-0.5B	0.5				X	X	X	X		X	X	X		X	X			X	X					
J-5			RSAJ5-10B	10				X	X	X	X		X	X	X		Hold	X				X					
J-5			RSAJ5-19B	19				X	X	X	X		X	X	X		X	X				X					
J-5			RSAJ5-19BD	19 (dup)				X	X	X	X		X	X	X		X	X				X					
J-6	RSAJ6		RSAJ6-0.0	0.0																					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), 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
J-6			RSAJ6-0.5B	0.5				X	X	X	X		X	X			X	X			X	X					
J-6			RSAJ6-10B	10				X	X	X	X		X	X			Hold	X				X					
J-6			RSAJ6-19B	19				X	X	X	X		X	X			X	X				X					
J-6	SA127		SA127-0.0	0.0																					X		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.
J-6			SA127-0.5B	0.5				X	X	X	X		X	X				X			X	X					
J-6			SA127-0.5B	0.5	X			X	X	X	X		X	X				X			X	X					
J-6			SA127-10B	10				X	X	X	X		X	X				X				X					
J-6			SA127-20B	20				X	X	X	X		X	X				X				X					
J-6			SA127-32B	32				X	X	X	X		X	X				X				X					

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

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

							Laboratory		CAS - Kelso, WA		CAS - Rochester, NY										CAS - Houston		GEL Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	PTS Santa Fe Springs, CA	
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	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient designations).
			Number of containers per sample				1 - 4 oz jar		1 - 4 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 bag	2 brass tubes	
J-7	RSAJ7	7/9/08	RSAJ7-0.0	0.0																				X		
J-7			RSAJ7-0.5B	0.5			X	X	X	X		X	X	X		X	X	NS	NS	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), as an upgradient boring to evaluate LOU 23 (Pond WC-East and Associated Piping), and for general Site coverage. GW encountered at 23 feet bgs; MCfg ~26 feet bgs.
J-7			RSAJ7-10B	10			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
J-7			RSAJ7-20B	20			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
J-7			RSAJ7-30B	30			X	X	X	X		X	X	X		X	X	NS	NS		X					
J-8	RSAJ8	7/10/08	RSAJ8-0.0	0.0																				X		
J-8			RSAJ8-0.5B	0.5			X	X	X	X		X	X			X	X	NS	NS	X	X					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. GW encountered at 36 feet bgs; MCfg ~26 feet bgs.
J-8			RSAJ8-10B	10			X	X	X	X		X	X			Hold	X	NS	NS		X					
J-8			RSAJ8-20B	20			X	X	X	X		X	X			Hold	X	NS	NS		X					
J-8			RSAJ8-30B	30			X	X	X	X		X	X			Hold	X	NS	NS		X					
J-8			RSAJ8-33B	33			X	X	X	X		X	X			X	X	NS	NS		X					
K-2	SA152		SA152-0.0	0.0																				X		
K-2			SA152-0.5B	0.5			X	X	X	X		X	X	X			X			X	X					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. GW anticipated at ~36 feet bgs; MCfg ~31 feet bgs.
K-2			SA152-0.5BD	0.5 (dup)			X	X	X	X		X	X	X			X			X	X					
K-2			SA152-10B	10			X	X	X	X		X	X	X			X				X					
K-2			SA152-20B	20			X	X	X	X		X	X	X			X				X					
K-2			SA152-34B	34			X	X	X	X		X	X	X			X				X					
K-2	RSAK2	7/11/08	RSAK2-0.0	0.0																				X		
K-2			RSAK2-0.5B	0.5			X	X	X	X		X	X	X		X	X	NS	NS	X	X					Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling Ponds) and to evaluate potential offsite VOC source to the west. GW encountered at 40.5 feet bgs; MCfg ~30 feet bgs.
K-2			RSAK2-10B	10			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
K-2			RSAK2-20B	20			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
K-2			RSAK2-20BD	20 (dup)			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
K-2			RSAK2-25B	25			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
K-2			RSAK2-30B	30			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
K-2			RSAK3-35B	35			X	X	X	X		X	X	X		X	X	NS	NS		X					
K-3	SA88		SA88-0.0	0.0																				X		
K-3			SA88-0.5B	0.5			X	X	X	X		X	X	X			X			X	X					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), and for general Site coverage. GW anticipated at ~34 feet bgs; MCfg ~31 feet bgs.
K-3			SA88-10B	10			X	X	X	X		X	X	X			X				X					
K-3			SA88-20B	20			X	X	X	X		X	X	X			X				X					
K-3			SA88-32B	32			X	X	X	X		X	X	X			X				X					
K-3	RSAK3		RSAK3-0.0	0.0																				X		
K-3			RSAK3-0.5B	0.5			X	X	X	X		X	X	X		X	X			X	X					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.
K-3			RSAK3-10B	10			X	X	X	X		X	X	X		Hold	X				X					
K-3			RSAK3-20B	20			X	X	X	X		X	X	X		Hold	X				X					
K-3			RSAK3-31B	31			X	X	X	X		X	X	X		X	X				X					
K-3	SA134		SA134-0.0	0.0																				X		
K-3			SA134-0.5B	0.5			X	X	X	X		X	X	X			X			X	X					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). GW anticipated at ~33 feet bgs; MCfg ~31 feet bgs.
K-3			SA134-10B	10			X	X	X	X		X	X	X			X				X					
K-3			SA134-20B	20			X	X	X	X		X	X	X			X				X					
K-3			SA134-31B	31			X	X	X	X		X	X	X			X				X					
K-3			SA134-31BD	31 (dup)			X	X	X	X		X	X	X			X				X					
K-4	RSAK4		RSAK4-0.0	0.0																				X		
K-4			RSAK4-0.5B	0.5			X	X	X	X		X	X	X		X	X			X	X					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). GW anticipated at ~33 feet bgs; MCfg ~26 feet bgs.
K-4			RSAK4-0.5BD	0.5 (dup)			X	X	X	X		X	X	X		X	X			X	X					
K-4			RSAK4-10B	10			X	X	X	X		X	X	X		Hold	X				X					
K-4			RSAK4-20B	20			X	X	X	X		X	X	X		Hold	X				X					
K-4			RSAK4-31B	31			X	X	X	X		X	X	X		X	X				X					
K-5	RSAK5		RSAK5-0.0	0.0																				X		
K-5			RSAK5-0.5B	0.5			X	X	X	X		X	X	X		X	X			X	X					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.
K-5			RSAK5-10B	10			X	X	X	X		X	X	X		Hold	X				X					
K-5			RSAK5-22B	22			X	X	X	X		X	X	X		X	X				X					
K-5			RSAK5-22B	22	X		X	X	X	X		X	X	X		X	X				X					
K-6	SA76		SA76-0.0	0.0																				X		
K-6			SA76-0.5B	0.5			X	X	X	X		X	X				X			X	X					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.
K-6			SA76-0.5BD	0.5 (dup)			X	X	X	X		X	X				X			X	X					
K-6			SA76-10B	10			X	X	X	X		X	X				X				X					
K-6			SA76-20B	20			X	X	X	X		X	X				X				X					
K-6	RSAK6		RSAK6-0.0	0.0																				X		
K-6			RSAK6-0.5B	0.5			X	X	X	X		X	X			X	X			X	X					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.
K-6			RSAK6-10B	10			X	X	X	X		X	X			Hold	X				X					
K-6			RSAK6-24B	24			X	X	X	X		X	X			X	X				X					
K-7	RSAK7	7/10/08	RSAK7-0.0	0.0																				X		
K-7			RSAK7-0.5B	0.5			X	X	X	X		X	X	X		X	X	NS	NS	X	X					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.
K-7			RSAK7-10B	10			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
K-7			RSAK7-10BD	10 (dup)			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
K-7			RSAK7-24B	24			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
K-7			RSAK7-27B	27			X	X	X	X		X	X	X		X	X	NS	NS		X					
K-8	RSAK8		RSAK8-0.0	0.0																				X		
K-8			RSAK8-0.5B	0.5			X	X	X	X		X	X			X	X			X	X					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.
K-8			RSAK8-10B	10			X	X	X	X		X	X			Hold	X				X					
K-8			RSAK8-27B	27			X	X	X	X		X	X			X	X				X					
K-8			RSAK8-27BD	27 (dup)			X	X	X	X		X	X			X	X				X					
L-2	RSAL2	7/11/08	RSAL2-0.0	0.0																				X		
L-2			RSAL2-0.5B	0.5			X	X	X	X		X	X	X		X	X	NS	NS	X	X					Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling Ponds). GW encountered at 44 feet bgs; MCfg ~30 feet bgs.
L-2			RSAL2-0.5B	0.5	X		X	X	X	X		X	X	X		X	X	NS	NS	X	X					
L-2			RSAL2-10B	10			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
L-2			RSAL2-20B	20			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
L-2			RSAL2-20BD	20 (dup)			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
L-2			RSAL2-30B	30			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
L-2			RSAL2-37B	37			X	X	X	X		X	X	X		X	X	NS	NS		X					

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

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

							Laboratory	CAS - Kelso, WA		CAS - Rochester, NY											CAS - Houston		GEL Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	PTS Santa Fe Springs, CA	
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	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient designations).
			Number of containers per sample				1 - 4 oz jar		1 - 4 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 bag	2 brass tubes	
L-3	SA82		SA82-0.0	0.0																				X		Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling
L-3			SA82-0.5B	0.5			X	X	X	X		X	X	X		X	X			X	X	X	X			Ponds), LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit),
L-3			SA82-0.5B	0.5	X		X	X	X	X		X	X	X		X	X			X	X	X	X			and the pipelines associated with LOU 60 (Acid Drain System).
L-3			SA82-10B	10			X	X	X	X		X	X	X		X	X				X	X	X			GW anticipated at ~31 feet bgs; MCfg ~ 30 feet bgs.
L-3			SA82-29B	29			X	X	X	X		X	X	X		X	X				X	X	X			
L-3	RSAL3		RSAL3-0.0	0.0																				X		Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling
L-3			RSAL3-0.5B	0.5			X	X	X	X		X	X	X		X	X			X	X					Ponds).
L-3			RSAL3-10B	10			X	X	X	X		X	X	X		Hold	X				X					GW anticipated at ~32 feet bgs; MCfg ~ 29 feet bgs.
L-3			RSAL3-30B	30			X	X	X	X		X	X	X		X	X				X					
L-4	SA189		SA189-0.0	0.0																				X		Boring located to evaluate LOU 60 (Acid Drain System) pipeline/flume route and
L-4			SA189-0.5B	0.5			X	X	X	X		X	X	X			X			X	X					LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit).
L-4			SA189-10B	10			X	X	X	X		X	X	X			X				X					GW anticipated at ~31 feet bgs; MCfg ~ 29 feet bgs.
L-4			SA189-29B	29			X	X	X	X		X	X	X			X				X					
L-4	RSAL4		RSAL4-0.0	0.0																				X		Boring located to evaluate LOU 60 (Acid Drain System) pipeline/flume route and
L-4			RSAL4-0.5B	0.5			X	X	X	X		X	X	X		X	X			X	X					as a step-out to LOU 32 (Chromium and Perchlorate Groundwater Remediation
L-4			RSAL4-0.5BD	0.5 (dup)			X	X	X	X		X	X	X		X	X			X	X					Unit) and LOU 2 (Open Area South of Trade Effluent Settling Ponds).
L-4			RSAL4-10B	10			X	X	X	X		X	X	X		Hold	X				X					GW anticipated at ~30 feet bgs; MCfg ~ 30 feet bgs.
L-4			RSAL4-28B	28			X	X	X	X		X	X	X		X	X				X					
L-5	SA74		SA74-0.0	0.0																				X		Boring located adjacent to new D-1 building to evaluate LOU 58 (AP Plant Area
L-5			SA74-0.5B	0.5			X	X	X	X		X	X	X			X			X	X					New Building D-1 Washdown) and LOU 32 (Chromium and Perchlorate
L-5			SA74-0.5BD	0.5 (dup)			X	X	X	X		X	X	X			X			X	X					Groundwater Remediation Unit).
L-5			SA74-10B	10			X	X	X	X		X	X	X			X				X					GW anticipated at ~31 feet bgs; MCfg ~ 26 feet bgs.
L-5			SA74-29B	29			X	X	X	X		X	X	X			X				X					
L-5	RSAL5		RSAL5-0.0	0.0																				X		Boring located to evaluate LOU 58 (AP Plant Area New Building D-1 Washdown)
L-5			RSAL5-0.5B	0.5			X	X	X	X		X	X	X		X	X			X	X					and LOU 32 (Chromium and Perchlorate Groundwater Remediation Unit).
L-5			RSAL5-0.5B	0.5	X		X	X	X	X		X	X	X		X	X			X	X					GW anticipated at ~32 feet bgs; MCfg ~26 feet bgs.
L-5			RSAL5-10B	10			X	X	X	X		X	X	X		Hold	X				X					
L-5			RSAL5-30B	30			X	X	X	X		X	X	X		X	X				X					
L-7	RSAL7		RSAL7-0.0	0.0																				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			X	X					WC-West & WC-East), and for general Site coverage.
L-7			RSAL7-10B	10			X	X	X	X		X	X			Hold	X				X					GW anticipated at ~29 feet bgs; MCfg ~33 feet bgs.
L-7			RSAL7-10B	10	X		X	X	X	X		X	X			Hold	X				X					
L-7			RSAL7-27B	27			X	X	X	X		X	X			X	X				X					
L-7	SA75		SA75-0.0	0.0																				X		Boring located to evaluate LOU 32 (Chromium and Perchlorate Groundwater
L-7			SA75-0.5B	0.5			X	X	X	X		X	X				X			X	X					Remediation Unit).
L-7			SA75-10B	10			X	X	X	X		X	X				X				X					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	RSAL8		RSAL8-0.0	0.0																				X		Boring located north of LOU 5(Beta Ditch) along Timet boundary as a downgradient
L-8			RSAL8-0.5B	0.5			X	X	X	X		X	X			X	X			X	X					boring to LOU 5 (Beta Ditch) and for general Site coverage.
L-8			RSAL8-0.5B	0.5	X		X	X	X	X		X	X			X	X			X	X					GW anticipated at ~30 feet bgs; MCfg ~33 feet bgs.
L-8			RSAL8-10B	10			X	X	X	X		X	X			Hold	X				X					
L-8			RSAL8-28B	28			X	X	X	X		X	X			X	X				X					
M-2	RSAM2		RSAM2-0.0	0.0																				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			X	X	X	X			potential VOC sources from the west, as a step-out boring for LOU 2 (Open
M-2			RSAM2-10B	10			X	X	X	X		X	X	X		X	X				X	X	X			Area South of Trade Effluent Settling Ponds), and for general Site coverage.
M-2			RSAM2-20B	20			X	X	X	X		X	X	X		Hold	X				X					GW anticipated at ~37 feet bgs; MCfg ~26 feet bgs.
M-2			RSAM2-20BD	20 (dup)			X	X	X	X		X	X	X		Hold	X				X					
M-2			RSAM2-35B	35			X	X	X	X		X	X	X		X	X				X	X	X			
M-2	SA67	7/7/08	SA67-0.0	0.0																				X		Boring located south of LOU 5 (Beta Ditch) and to evaluate potential VOC sources
M-2			SA67-0.5B	0.5			X	X	X			X	X	X		X	X	NS	NS	X	X					from the west.
M-2			SA67-10B	10			X	X	X			X	X	X		Hold	X	NS	NS		X					GW encountered at 38 feet bgs; MCfg ~26 feet bgs.
M-2			SA67-20B	20			X	X	X			X	X	X		Hold	X	NS	NS		X					
M-2			SA67-25B	25			X	X	X			X	X	X		Hold	X	NS	NS		X					
M-2			SA67-30B	30			X	X	X			X	X	X		Hold	X	NS	NS		X					
M-2			SA67-35B	35			X	X	X			X	X	X		X	X	NS	NS		X					
M-3	SA100		SA100-0.0	0.0																				X		Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling
M-3			SA100-0.5B	0.5			X	X	X	X		X	X	X			X			X	X					Ponds) and to evaluate potential VOC sources from the west.
M-3			SA100-10B	10			X	X	X	X		X	X	X			X				X					GW anticipated at ~32 feet bgs; MCfg ~25 feet bgs.
M-3			SA100-30B	30			X	X	X	X		X	X	X			X				X					
M-3	RSAM3		RSAM3-0.0	0.0																				X		Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling
M-3			RSAM3-0.5B	0.5			X	X	X	X		X	X	X		X	X			X	X	X	X			Ponds).
M-3			RSAM3-10B	10			X	X	X	X		X	X	X		Hold	X				X					GW anticipated at ~32 feet bgs; MCfg ~25 feet bgs.
M-3			RSAM3-10B	10	X		X	X	X	X		X	X	X		Hold	X				X				X	SPLP sample must be of Quaternary Alluvium (Qal) soils.
M-3			RSAM3-30B	30			X	X	X	X		X	X	X		X	X				X	X	X			
M-3			RSAM3-30B	30	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.
M-4	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			SA69-0.5B	0.5			X	X	X	X		X	X	X			X			X	X					South of Trade Effluent Settling Ponds) and to investigate for potential offsite VOC
M-4			SA69-10B	10			X	X	X	X		X	X	X			X				X					sources from the west.
M-4			SA69-29B	29			X	X	X	X		X	X	X			X				X					GW anticipated at ~31 feet bgs; MCfg ~24 feet bgs.
M-4	RSAM4		RSAM4-0.0	0.0																				X		Boring located to evaluate LOU 2 (Open Area South of Trade Effluent Settling
M-4			RSAM4-0.5B	0.5			X	X	X	X		X	X	X		X	X			X	X					Ponds) and for general Site coverage.
M-4			RSAM4-10B	10			X	X	X	X		X	X	X		Hold	X				X					GW anticipated at ~32 feet bgs; MCfg ~24 feet bgs.
M-4			RSAM4-30B	30			X	X	X	X		X	X	X		X	X				X					
N-2	SA56		SA56-0.0	0.0																				X		Boring located along western Site boundary to evaluate LOU 35 (former Truck
N-2			SA56-0.5B	0.5			X	X	X	X	X	X	X	X			X	X	X	X	X					Emptying/Dumping Site) and potential offsite VOC sources from the west. PCBs
N-2			SA56-10B	10			X	X	X	X	X	X	X	X			X				X					and TPH-G were detected in Phase A SA09.
N-2			SA56-10B	10	X		X	X	X	X	X	X	X	X			X				X				X	SPLP sample must be of Quaternary Alluvium (Qal) soils.
N-2			SA56-25B	25			X	X	X	X	X	X	X	X			X				X					GW anticipated at ~39 feet bgs; MCfg ~23 feet bgs.
N-2			SA56-37B	37			X	X	X	X	X	X	X	X			X	X	X		X					
N-2			SA56-37B	37		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.

						Laboratory	CAS - Kelso, WA		CAS - Rochester, NY										CAS - Houston		GEL Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	PTS Santa Fe Springs, CA	
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	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient designations).
			Number of containers per sample				1 - 4 oz jar		1 - 4 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 bag	2 brass tubes	
N-2	RSAN2	7/8/08	RSAN2-0.0	0.0																				X		Boring located along western Site boundary north of LOU 35 (Truck Emptying /Dumping Site) to evaluate potential offsite VOC sources from the west, and for general Site coverage. GW encountered at 41 feet bgs; MCfg ~22 feet bgs.
N-2			RSAN2-0.5B	0.5			X	X	X	X		X	X	X		X	X	X	X	X	X					
N-2			RSAN2-10B	10			X	X	X	X		X	X	X		Hold	X	X	X		X					
N-2			RSAN2-25B	25			X	X	X	X		X	X	X		Hold	X	X	X		X					
N-2			RSAN2-30B	30			X	X	X	X		X	X	X		Hold	X	X	X		X					
N-2			RSAN2-30BD	30 (dup)			X	X	X	X		X	X	X		Hold	X	X	X		X					
N-2			RSAN2-35B	35			X	X	X	X		X	X	X		X	X	X	X		X					
N-3	SA85		SA85-0.0	0.0																				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 LOU 38 (Former Satellite Accumulation Point, AP Laboratory) and possibly discharged to LOU 54 . GW anticipated at ~35 feet bgs; MCfg ~24 feet bgs.
N-3			SA85-0.5B	0.5			X	X	X			X	X	X	X	X	X			X	X	X	X			
N-3			SA85-10B	10			X	X	X			X	X	X	X	Hold	X				X					
N-3			SA85-10B	10	X		X	X	X			X	X	X	X	Hold	X				X					
N-3			SA85-20B	20			X	X	X			X	X	X	X	Hold	X				X					
N-3			SA85-33B	33			X	X	X			X	X	X	X	X	X				X	X	X			
N-3	RSAN3		RSAN3-0.0	0.0																				X		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.
N-3			RSAN3-0.5B	0.5			X	X	X	X		X	X	X	X	X	X			X	X					
N-3			RSAN3-10B	10			X	X	X	X		X	X	X	X	Hold	X				X					
N-3			RSAN3-20B	20			X	X	X	X		X	X	X	X	Hold	X				X					
N-3			RSAN3-20BD	20 (dup)			X	X	X	X		X	X	X	X	Hold	X				X					
N-3			RSAN3-32B	32			X	X	X	X		X	X	X	X	X	X				X					
N-4	SA87		SA87-0.0	0.0																				X		Boring located at the southeast corner of the AP Maintenance Shop building to evaluate LOU 39 (Satellite Accumulation Point, AP Maintenance Shop). GW encountered at 32 feet bgs; MCfg ~21 feet bgs.
N-4		6/25/08	SA87-0.5B	0.5			X	X	X	X		X	X	X		X		NS	NS	X	X					
N-4			SA87-10B	10			X	X	X	X		X	X	X		Hold		NS	NS		X					
N-4			SA87-10B	10	X		X	X	X	X		X	X	X		Hold		NS	NS		X					
N-4			SA87-20B	20			X	X	X	X		X	X	X		Hold		NS	NS		X					
N-4			SA87-25B	25			X	X	X	X		X	X	X		Hold		NS	NS		X					
N-4			SA87-30B	30			X	X	X	X		X	X	X		X		NS	NS		X					
N-4	RSAN4		RSAN4-0.0	0.0																				X		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.
N-4			RSAN4-0.5B	0.5			X	X	X	X		X	X	X		X	X			X	X					
N-4			RSAN4-10B	10			X	X	X	X		X	X	X		Hold	X				X					
N-4			RSAN4-10BD	10 (dup)			X	X	X	X		X	X	X		Hold	X				X					
N-4			RSAN4-20B	20			X	X	X	X		X	X	X		Hold	X				X					
N-4			RSAN4-31B	31			X	X	X	X		X	X	X		X	X				X					
O-2	RSAO2		RSAO2-0.0	0.0																				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 and TPH-GRO were detected in Phase A soil boring SA09. GW encountered at 37.5 feet bgs; MCfg ~20 feet bgs.
O-2		7/9/08	RSAO2-0.5B	0.5			X	X	X	X	X	X	X	X		X	X	X	X	X	X					
O-2			RSAO2-10B	10			X	X	X	X	X	X	X	X		Hold	X	X	X		X					
O-2			RSAO2-20B	20			X	X	X	X	X	X	X	X		Hold	X	X	X		X					
O-2			RSAO2-20BD	20 (dup)			X	X	X	X	X	X	X	X		Hold	X	X	X		X					
O-2			RSAO2-30B	30			X	X	X	X	X	X	X	X		Hold	X	X	X		X					
O-2			RSAO2-33B	33			X	X	X	X	X	X	X	X		X	X	X	X		X					
O-2	SA35		SA35-0.0	0.0																				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. GW anticipated at ~34 feet bgs; MCfg ~20 feet bgs.
O-2			SA35-0.5B	0.5			X	X	X	X	X	X	X	X		X	X			X	X	X	X			
O-2			SA35-10B	10			X	X	X	X	X	X	X	X		X	X				X	X	X			
O-2			SA35-20B	20			X	X	X	X	X	X	X	X		Hold	X				X					
O-2			SA35-32B	32			X	X	X	X	X	X	X	X		X	X				X	X	X			
O-2			SA35-32BD	32 (dup)			X	X	X	X	X	X	X	X		X	X				X	X	X			
O-2	SA166		SA166-0.0	0.0																				X		Boring located along western Site boundary to evaluate LOU 35 (Truck Emptying/Dumping Site), LOU 60 (Acid Drain System), and potential offsite VOC sources from the west. SPLP sample must be of Quaternary Alluvium (Qal) soils. GW anticipated at ~33 feet bgs; MCfg ~31 feet bgs.
O-2			SA166-0.5B	0.5			X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
O-2			SA166-10B	10			X	X	X	X	X	X	X	X		X	X				X	X	X			
O-2			SA166-10B	10	X		X	X	X	X	X	X	X	X		X	X				X	X	X		X	
O-2			SA166-20B	20			X	X	X	X	X	X	X	X		Hold	X				X					
O-2			SA166-31B	31			X	X	X	X	X	X	X	X		X	X	X	X		X	X	X			
O-2			SA166-31B	31	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.
O-3	SA48		SA48-0.0	0.0																				X		Boring located along western Site boundary to evaluate LOU 35 (Truck Emptying/Dumping Site) and potential offsite VOC sources from the west. PCBs and TPH-GRO were detected in Phase A soil boring SA09. GW encountered at 39.5 feet bgs; MCfg ~29 feet bgs.
O-3		7/10/08	SA48-0.5B	0.5			X	X	X	X	X	X	X	X		X	X	X	X	X	X					
O-3			SA48-10B	10			X	X	X	X	X	X	X	X		Hold	X	X	X		X					
O-3			SA48-20B	20			X	X	X	X	X	X	X	X		Hold	X	X	X		X					
O-3			SA48-30B	30			X	X	X	X	X	X	X	X		Hold	X	X	X		X					
O-3			SA48-35B	35			X	X	X	X	X	X	X	X		X	X	X	X		X					
O-3	SA57		SA57-0.0	0.0																				X		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 were detected in Phase A soil boring SA09. GW encountered at 32 feet bgs; MCfg ~21 feet bgs.
O-3		6/26/08	SA57-0.5B	0.5			X	X	X	X	X	X	X	X		X	X	X	X	X	X					
O-3			SA57-10B	10			X	X	X	X	X	X	X	X		Hold	X	X	X		X					
O-3			SA57-10BD	10 (dup)			X	X	X	X	X	X	X	X		Hold	X	X	X		X					
O-3			SA57-20B	20			X	X	X	X	X	X	X	X		Hold	X	X	X		X					
O-3			SA57-30B	30			X	X	X	X	X	X	X	X		X	X	X	X		X					
O-3	SA180		SA180-0.0	0.0																				X		Boring located to evaluate soil stain in northern portion of LOU 64 (Koch Materials Company Site). GW encountered at 34.5 feet bgs; MCfg ~22 feet bgs.
O-3		6/26/08	SA180-0.5B	0.5			X	X	X	X		X	X	X		X	X	X	X	X	X					
O-3			SA180-0.5BD	0.5 (dup)			X	X	X	X		X	X	X		X	X	X	X	X	X					
O-3			SA180-10B	10			X	X	X	X		X	X	X		Hold	X	X	X		X					
O-3			SA180-10B	10	X		X	X	X	X		X	X	X		Hold	X	X	X		X					
O-3			SA180-20B	20			X	X	X	X		X	X	X		Hold	X	X	X		X					
O-3			SA180-30B	30			X	X	X	X		X	X	X		Hold	X	X	X		X					
O-3	SA181		SA181-0.0	0.0																				X		Boring located to evaluate soil stain in northern portion of LOU 64 (Koch Materials Company Site). GW was encountered at 40 feet bgs; MCfg ~21 feet bgs.
O-3		7/2/08	SA181-0.5B	0.5			X	X	X	X		X	X	X		X	X	NS	NS	X	X					
O-3			SA181-10B	10			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
O-3			SA181-20B	20			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
O-3			SA181-30B	30			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
O-3			SA181-35B	35			X	X	X	X		X	X	X		X	X	NS	NS		X					
O-3	RSAO3		RSA03-0.0	0.0																				X		Boring located to evaluate soil stain in northern portion of LOU 64 (Koch Materials Company Site). GW anticipated at ~33 feet bgs; MCfg ~22 feet bgs.
O-3			RSA03-0.5B	0.5			X	X	X	X		X	X	X		X	X	X			X					
O-3			RSA03-10B	10			X	X	X	X		X	X	X		Hold	X				X					
O-3			RSA03-20B	20			X	X	X	X		X	X	X		Hold	X				X					
O-3			RSA03-20BD	20 (dup)			X	X	X	X		X	X	X		Hold	X				X					
O-3			RSA03-31B	31			X	X	X	X		X	X	X		X	X	X			X					

							Laboratory		CAS - Kelso, WA		CAS - Rochester, NY										CAS - Houston		GEL Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	PTS Santa Fe Springs, CA	
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	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient designations).
			Number of containers per sample				1 - 4 oz jar		1 - 4 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 bag	2 brass tubes	
O-3	SA176		SA176-0.0	0.0																					X		
O-3			SA176-0.5B	0.5			X	X	X	X		X	X	X		X	X			X	X	X	X			Boring located to evaluate LOU 60 (Acid Drain System) pipelines and LOU 64 (Koch Materials Company Site).
O-3			SA176-10B	10			X	X	X	X		X	X	X		X	X				X	X	X			Groundwater anticipated at 39 feet bgs; MCfg ~22 feet bgs.
O-3			SA176-25B	25			X	X	X	X		X	X	X		Hold	X				X					
O-3			SA176-37BD	37 (dup)			X	X	X	X		X	X	X		X	X				X	X	X			
O-3			SA176-37B	37			X	X	X	X		X	X	X		X	X				X	X	X			
O-3	SA207		SA207-0.0	0.0																				X		
O-3			SA207-0.5B	0.5			X	X	X	X		X	X	X		X	X	NS	NS	X	X					Boring located to evaluate area between LOU 35 (Truck Emptying/Dumping Site) and LOU 64 (Koch Materials Company Site).
O-3		6/30/08	SA207-0.5B	0.5	X		X	X	X	X		X	X	X		X	X	NS	NS	X	X					GW encountered at 45 feet bgs; MCfg ~22 feet bgs.
O-3			SA207-10B	10			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
O-3			SA207-20B	20			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
O-3			SA207-30B	30			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
O-3			SA207-37B	37			X	X	X	X		X	X	X		X	X	NS	NS		X					
O-4	SA46		SA46-0.0	0.0																				X		
O-4			SA46-0.5B	0.5			X	X	X	X		X	X	X		X	X	NS	NS	X	X					SA46 at the request of NDEP in comments to the Phase A report.
O-4		7/9/08	SA46-10B	10			X	X	X	X		X	X	X		Hold	X	NS	NS		X					GW encountered at 35.5 feet bgs; MCfg ~23 feet bgs.
O-4			SA46-20B	20			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
O-4			SA46-30B	30			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
O-4			SA46-30BD	30 (dup)			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
O-4			SA46-31B	31			X	X	X	X		X	X	X		X	X	NS	NS		X					
O-4	SA47		SA47-0.0	0.0																				X		
O-4			SA47-0.5B	0.5			X	X	X	X		X	X	X		X	X	NS	NS	X	X					Boring located to evaluate LOU 64 (Koch Materials Company Site). GW encountered at 40 feet bgs; MCfg ~20 feet bgs.
O-4		7/7/08	SA47-10B	10			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
O-4			SA47-20B	20			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
O-4			SA47-30B	30			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
O-4			SA47-33B	33			X	X	X	X		X	X	X		X	X	NS	NS		X					
O-4	SA55		SA55-0.0	0.0																				X		
O-4			SA55-0.5B	0.5			X	X	X	X		X	X	X			X			X	X					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.
O-4			SA55-10B	10			X	X	X	X		X	X	X			X				X					
O-4			SA55-25B	25			X	X	X	X		X	X	X			X				X					
O-4			SA55-25B	25	X		X	X	X	X		X	X	X			X				X					
O-4			SA55-35B	35			X	X	X	X		X	X	X			X				X					
O-4	RSAO4		RSA04-0.0	0.0																				X		
O-4			RSA04-0.5B	0.5			X	X	X	X		X	X	X		X	X	X	X	X	X					Boring located to evaluate LOU 64 (Koch Materials Company Site). GW encountered at 41 feet bgs; MCfg ~23 feet bgs.
O-4		7/9/08	RSA04-10B	10			X	X	X	X		X	X	X		Hold	X	X	X		X					
O-4			RSA04-20B	20			X	X	X	X		X	X	X		Hold	X	X	X		X					
O-4			RSA04-30B	30			X	X	X	X		X	X	X		Hold	X	X	X		X					
O-4			RSA04-36B	36			X	X	X	X		X	X	X		X	X	X	X		X					
O-4	SA182		SA182-0.0	0.0																				X		
O-4			SA182-0.5B	0.5			X	X	X	X		X	X	X		X	X			X	X	X	X			Boring located to evaluate soil stain in northern portion of LOU 64 (Koch Materials Company Site) and LOU 60 (Acid Drain System).
O-4			SA182-10B	10			X	X	X	X		X	X	X		X	X				X	X	X			GW anticipated at ~40 feet bgs; MCfg ~23 feet bgs.
O-4			SA182-10B	10	X		X	X	X	X		X	X	X		X	X				X	X	X		X	SPLP sample must be of Quaternary Alluvium (Qal) soils.
O-4			SA182-25B	25			X	X	X	X		X	X	X		Hold	X				X					
O-4			SA182-38B	38			X	X	X	X		X	X	X		X	X				X	X	X			
O-4			SA182-38B	38	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.
O-4	SA183		SA183-0.0	0.0																				X		
O-4			SA183-0.5B	0.5			X	X	X	X		X	X	X		X	X	NS	NS	X	X					Boring located to evaluate soil stain in northern portion of LOU 64 (Koch Materials Company Site).
O-4		7/8/08	SA183-10B	10			X	X	X	X		X	X	X		Hold	X	NS	NS		X					GW encountered at ~37.5 feet bgs; MCfg ~20 feet bgs.
O-4			SA183-10BD	10 (dup)			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
O-4			SA183-20B	20			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
O-4			SA183-30B	30			X	X	X	X		X	X	X		Hold	X	NS	NS		X					
O-4			SA183-33B	33			X	X	X	X		X	X	X		X	X	NS	NS		X					

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.
	Blank cell indicates no sample collected under Phase B sampling program.
X	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.
TPH-DRO/OI	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, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybednum, Nickel, Platinum, Potassium, Selenium, Silver, Sodium, Strontium, Tin, Titanium, Thallium, Tungsten, Uranium, Vanadium, 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, HCO_3), 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
8.	Radionuclides consists of alpha spec reporting for isotopic thorium and isotopic uranium, and Radium-226, plus Radium-228 by beta counting (per NDEP).
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.	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).
11.	Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs.
12.	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.	Organophosphorous Pesticides
14.	Organic Acid analysis includes the following analytes: 4-Chlorbenzene sulfonic acid; Benzenesulfonic acid; O,O-Diethylphosphorodithioic acid; O,O-Dimethylphosphorodithioic acid; and Phthalic acid.
15.	Asbestos samples are to be collected from 0-2 inches bgs.

Table 3
Groundwater Sampling and Analysis Plan for Area I
Phase B Source Area Investigation Work Plan
Tronox Facility - Henderson, Nevada

Laboratory [D]:								CAS Kelso, WA		Columbia Analytical Services Rochester, NY							GEL Charleston, SC	CAS Houston, TX	STL Denver, CO	Alpha Analytical Sparks, NV	Rationale for Revision	Location Description and Rationale for Investigation
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]		
Wells are organized by grid location as shown on Plate A - Starting point is on the northwestern-most grid in Area I (A-3) and ending with the southeastern-most grid covering Area I (O-4).																						
A-3	Parcel A	H-48	H-48B	TD = 41.1 ft	Qal *	6/18/2008	No	X	X	X	X	X	X	X	X		X		X	X	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	X	X	X	X	X	X	X	X		X		X	X	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	X	X	X	X	X	X	X	X		X				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	X	X	X	X	X	X	X	X		X				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	X	X	X	X	X	X	X	X		X				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	X	X	X	X	X	X	X	X		X		X	X	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	X	X	X	X	X	X	X	X		X				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	X	X	X	X	X	X	X	X		X				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	X	X	X	X	X	X	X	X		X		X	X	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	X	X	X	X	X	X	X	X		X				N	Located to evaluate LOU 68; BRC Parcels B and I and the downgradient area of the Site.
E-6	Parcel I	M-95	M-95B	12 - 22	Qal	6/24/2008	Yes	X	X	X	X	X	X	X	X		X				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	X	X	X	X	X	X	X	X		X				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	X	X	X	X	X	X	X	X		X				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	X	X	X	X	X	X	X	X		X				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	X	X	X	X	X	X	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	X	X	X	X	X	X	X	X		X				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	X	X	X	X	X	X	X	X		X				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	X	X	X	X	X	X	X	X		X				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	X	X	X	X	X	X	X	X		X				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	X	X	X	X	X	X	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	X	X	X	X	X	X	X	X	X	X	X	X	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	X	X	X	X	X	X	X	X	X	X	X	X	X	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	X	X	X	X	X	X	X	X		X				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	X	X	X	X	X	X	X	X		X		X	X	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	X	X	X	X	X	X	X	X		X				N	Located to evaluate LOU 69 and to evaluate BRC Parcels B and J.
I-4	I	M-98	M-98B	19 - 29	Qal		Yes	X	X	X	X	X	X	X	X		X					Located to evaluate LOU 1 and for general Site coverage.
I-5	I	M-99	M-99B	16 - 31	Qal		No	X	X	X	X	X	X	X	X		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.
I-6	I	M-100	M-100B	19 - 29	Qal		No	X	X	X	X	X	X	X	X		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.
I-7	I	M-101	M-101B	17 - 27	Qal		No	X	X	X	X	X	X	X	X		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.
J-2	BRC	AA-BW-02	AA-BW-02B	33 - 53	MCfg1 *		No	X	X	X	X	X	X	X	X		X					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	X	X	X	X	X	X	X	X		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	X	X	X	X	X	X	X	X	X	X	X	X	X	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.

Table 3
Groundwater Sampling and Analysis Plan for Area I
Phase B Source Area Investigation Work Plan
Tronox Facility - Henderson, Nevada

								CAS Kelso, WA		Columbia Analytical Services Rochester, 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 are organized by grid location as shown on Plate A - Starting point is on the northwestern-most grid in Area I (A-3) and ending with the southeastern-most grid covering Area I (O-4).																						
K-2	I	TR-2	TR-2B	144.5 - 174.5	MCfg1	7/8/2008	No	X	X	X	X	X	X	X	X	X	X	X	X	X	E, F	To evaluate for SRCs in upper Muddy Creek Fm.
K-3	I	MW-16	MW-16B	24.7 - 39.7	MCfg1	6/26/2008	No	X	X	X	X	X	X	X	X		X					New monitoring well to evaluate SRCs in upper Muddy Creek from offsite sources from west.
K-5	I	M-69	M-69B	19.9 - 39.3	Qal/MCfg1	7/8/2008	No	X	X	X	X	X	X	X	X		X					Located to evaluate LOU 32 and to evaluate the western end of the Groundwater Barrier Wall.
K-5	I	M-79	M-79B	10.8 - 35.4	Qal/MCfg1	6/29/2008	No	X	X	X	X	X	X	X	X		X					Located to evaluate LOU 1; LOU 32 and the western end of the Groundwater Injection Trenches; and for general Site coverage.
K-6	I	M-83	M-83B	10.8-40.3	Qal/MCfg1		No	X	X	X	X	X	X	X	X		X		X	X	F	Located to evaluate LOU 32 and the Groundwater Injection Area; as an upgradient stepout for LOU 1, and LOUs 22 and 23; and for general Site coverage.
K-6	I	M-84	M-84B	11.8 - 34.1	Qal/MCfg1	6/29/2008	No	X	X	X	X	X	X	X	X		X					Located to evaluate LOU 32 and the Groundwater Injection Trench area; as an upgradient stepout for LOU 1 and LOUs 22 and 23; and for general Site coverage.
K-7	I	M-86	M-86B	11.3 -40.9	Qal/MCfg1		No	X	X	X	X	X	X	X	X		X				G	Located to evaluate LOU 32 and the Groundwater Injection Trench area; as an upgradient stepout for LOU 1, LOUs 22 and 23; and for general Site coverage.
K-8	I	M-88	M-88B	7.3 - 36.8	Qal/MCfg1	6/25/2008	No	X	X	X	X	X	X	X	X		X					Located to serve as an upgradient stepout for LOU 1; as a downgradient stepout for LOU 32; to evaluate possible offsite sources to the east; and for general Site coverage.
K-9	I	M-129	M-129B	20 - 40	MCfg1		No	X	X	X	X	X	X	X	X		X				H	Located to evaluate the eastern end of the barrier wall. Well was drilled and installed in March 2008.
K-9	TIMET	CLD1-R	CLD1-RB	25 -35	Qal/MCfg1	7/10/2008	No	X	X	X	X	X	X	X	X		X					Serves as a close stepout downgradient of LOU 5 (Beta Ditch) and general Site coverage. Located on Timet.
L-2	I	M-127	M-127B	35-50	MCfg1		No	X	X	X	X	X	X	X	X	X	X	X	X	X	E, F, H	New monitoring well located to evaluate LOU 2; to evaluate potential offsite sources to the west; and for general Site coverage. Well was drilled and installed in June 2008, but not yet sampled for Phase B.
L-3	I	M-126	M-126B	19.7 - 39.7	MCfg1	6/29/2008	No	X	X	X	X	X	X	X	X		X					New monitoring well located to serve as an up- to crossgradient stepout for LOU 2; to evaluate potential offsite sources from the west; and for general Site coverage.
L-4	I	M-14A	M-14AB	20 - 40	MCfg1	6/30/2008	No	X	X	X	X	X	X	X	X		X					Located as an upgradient stepout for LOUs 30, 56, and 58; as a downgradient well for LOU 39; and for general Site coverage.
L-4	I	M-57A	M-57AB	20 - 40	MCfg1	6/27/2008	No	X	X	X	X	X	X	X	X		X					Located to serve as an upgradient stepout for LOU 32; to evaluate the west end of the Groundwater Barrier Wall; and for general Site coverage.
L-5	I	I-B	I-BB	17.8 - 42.5	Qal/MCfg1	7/8/2008	No	X	X	X	X	X	X	X	X		X					Located as a downgradient stepout for LOU 56 and LOU 58; as an upgradient stepout for LOU 57, and for general Site coverage.
L-6	I	M-55	M-55B	14.6 - 44.6	Qal/MCfg1	7/1/2008	Yes	X	X	X	X	X	X	X	X		X					Located just upgradient of the groundwater barrier wall; to evaluate LOU 32; to serve as a downgradient stepout for LOUs 19, 31, and 55 and for general Site coverage.
L-6	I	M-65	M-65B	14.4 - 39	Qal/MCfg1	7/2/2008	No	X	X	X	X	X	X	X	X		X					Located to serve as an upgradient stepout for LOU 32; as a downgradient stepout for LOU 57; and for general Site coverage.
L-6	I	M-78	M-78B	21.5 - 41.5	Qal/MCfg1		No	X	X	X	X	X	X	X	X		X					Located to evaluate LOU 32; as a downgradient stepout for LOU 55; and for general Site coverage.
L-8	I	M-61	M-61B	9.3 - 38.8	Qal/MCfg1	6/26/2008	No	X	X	X	X	X	X	X	X		X					Located to evaluate LOU 32 and the eastern end of the Groundwater Barrier Wall.
L-8	I	M-67	M-67B	7.8 - 37.8	Qal/MCfg1	6/27/2008	No	X	X	X	X	X	X	X	X		X					Located to serve as an upgradient stepout for LOU 32 and for general Site coverage.
L-8	I	M-68	M-68B	11.2 - 39.8	Qal/MCfg1	6/27/2008	No	X	X	X	X	X	X	X	X		X					Located to serve as a downgradient stepout for LOU 5 and 20; as an upgradient stepout for LOU 32; as an evaluation of the east end of the Groundwater Barrier Wall; and for general Site coverage.
L-9	TIMET	CLD2-R	CLD2-RB	20 - 40.27	Qal	7/10/2008	No	X	X	X	X	X	X	X	X		X				O	Serves as a close stepout downgradient of LOU 5; and a further downgradient stepout for LOU 20 (Pond C-1 and Associated Piping), and for general Site coverage. Located on Timet.
L-9	I	M-130	M-130B	20 - 40	MCfg1		No	X	X	X	X	X	X	X	X		X				H	Located to evaluate LOU 5 and the eastern end of the barrier wall. Well was installed in March 2008 but not yet sampled for Phase B.
L-10	TIMET	CLD3-R	CLD3-RB	nr	MCfg1*	7/10/2008	No	X	X	X	X	X	X	X	X		X				O	Located to evaluate LOU 67; as general Site coverage; and to evaluate downgradient from Area I. Located on Timet.
M-1	Olin	H-38	H-38B	25 - 50	Qal*		No	X	X	X	X	X	X	X	X		X					To evaluate possible offsite sources from the west, as an upgradient stepout to LOU 5 (Beta Ditch) and for general Site coverage. Depth of screen will be confirmed in the field.
M-2	I	TR-4	TR-4B	124.5 - 144.5	MCfg1	7/9/2008	No	X	X	X	X	X	X	X	X	X	X	X	X	X	E, F	Located to serve as a downgradient stepout for LOU 5; to evaluate possible offsite sources to the west (particularly for VOCs); and for general Site coverage.
M-3	I	M-125	M-125B	35-50	MCfg1		No	X	X	X	X	X	X	X	X	X	X	X	X	X	E, H, M, F	New monitoring well located to serve as a downgradient stepout for LOUs 5 and 54; to evaluate potential offsite sources from the west; and for general Site coverage. Well was installed in June 2008 but not yet sampled for Phase B.
M-8	I	M-39	M-39B	24.9 - 39.9	Qal/MCfg1	7/8/2008	Yes	X	X	X	X	X	X	X	X		X		X	X	F	Located to serve as a downgradient stepout for LOUs 5, 18, 20, and 21; and for general Site coverage.
N-4	I	M-142	M-142B	30-45	MCfg1		No	X	X	X	X	X	X	X	X		X		X	X	F, H	New monitoring well constructed in borehole for SA87 to evaluate LOU 39 (Satellite Accumulation Point, AP Maintenance Shop). Well was installed in June 2008 but not yet sampled for Phase B.
O-2	I	M-123	M-123B	34-51	MCfg1	7/11/2008	No	X	X	X	X	X	X	X	X	X	X	X	X	X	E, F, H, M	New monitoring well located to evaluate LOU 35; as an upgradient stepout for LOUs 38 and 54; to evaluate potential offsite sources to the west; and for general Site coverage. PCB analysis for groundwater requested by NDEP at this location. Well was installed in June 2008 but not yet sampled for Phase B.
O-4	I	M-124	M-124B	34-49	MCfg1	7/11/2008	No	X	X	X	X	X	X	X	X		X				H	New monitoring well located to evaluate LOU 64; serve as a downgradient stepout for LOU 63; as an upgradient stepout for LOU 39; and for general Site coverage. Well was installed in June 2008 but not yet sampled for Phase B.

Table 3
Groundwater Sampling and Analysis Plan for Area I
Phase B Source Area Investigation Work Plan
Tronox Facility - Henderson, Nevada

Laboratory [D]:								CAS Kelso, WA		Columbia Analytical Services Rochester, NY							GEL Charleston, SC	CAS Houston, TX	STL Denver, CO	Alpha Analytical Sparks, NV	Rationale for Revision	Location Description and Rationale for Investigation
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]		
Wells are organized by grid location as shown on Plate A - Starting point is on the northwestern-most grid in Area I (A-3) and ending with the southeastern-most grid covering Area I (O-4).																						
O-4	I	M-128	M-128B	40-55	MCfg1		No	X	X	X	X	X	X	X	X		X				H	New monitoring well to serve as a downgradient stepout for LOUs 35 and 64; as an upgradient stepout for LOUs 39, 52, and 57; and for general Site coverage. Well was installed in June 2008 but not yet sampled for Phase B.
							Number of Field Samples:	**64**	**64**	**64**	**64**	**64**	**64**	**64**	**64**	**8**	**64**	**8**	**16**	**16**		
QA/QC Samples:																						
			Field Duplicates (10%)					7	7	7	7	7	7	7	7	1	7	0	2	2		
			Field Blanks					1	1	1	1	1	1	1	1	1	1	0	1	1		
			Equipment Rinseate Blanks					3	3	3	3	3	3	3	3	0	3	0	1	1		
			Trip Blank Samples					0	0	14	0	0	0	0	0	0	0	0	0	0		
			Matrix Spike (5%)					4	4	4	4	3	3	4	3	1	4	0	1	4		
			Matrix Spike Duplicate (5%)					4	4	4	4	3	3	4	3	1	4	0	1	4		
							Total Samples:	**83**	**83**	**97**	**83**	**81**	**81**	**83**	**81**	**12**	**83**	**8**	**22**	**28**		

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 screen interval information from BMI.
X	Sample will be collected and analyzed.
blank	No sample collected under Phase B sampling plan.
1.	It is anticipated that the large majority of the flow to the well will be from the coarse-grained sediments. As such, in the cases where there are two lithologies present across the screen interval, the water sampled will represent conditions in the coarse-grained interval.
2.	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, Zinc
3.	VOCs = Volatile organic compounds (to include analysis for naphthalene).
4.	Hexavalent Chromium.
5.	Complete list of wet chemistry parameters is shown on Table 1. All groundwater samples will have pH measured in the field.
6.	OCPs = Organochlorine pesticides (to include analysis for hexachlorobenzene).
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).
10.	OPPs = Organophosphorous Pesticides
TBD	To Be Determined when well is constructed.
nr	Not recorded in Tronox database (screen intervals to be acquired from BMI).
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.
X	Green-shading indicates items that have been added or changed from Table 3 in the April 2008 Area I Work Plan originally reviewed by NDEP.
A	Sample ID was added to convey sample ID nomenclature to field sampling team ("B" suffix denotes sample is associated with Phase B).
B	Soil type column was added to conform with NDEP request.
D	Laboratory information was added to assist field sampling personnel in shipping the sample containers to the appropriate laboratory.
E	PCB columns were added per NDEP (May 6, 2008).
F	OPPs and Organic Acids were added per NDEP (July 21, 2008).
G	Well was added to Table 3 per NDEP (May 6 , 2008).
H	Screen interval was added to Table 3 after this well was drilled and installed in July 2008.
J	Column was added by Tronox because it was unclear in previous tables that cyanide will be analyzed in all proposed wells. Cyanide is conducted as part of the Wet Chemistry analysis.
K	For screen intervals marked as "TD=", total well depth is given where screen interval is not known. A downhole camera will be used to determine actual screen intervals.
M	Based on Phase A results, these locations were selected for PCB sampling.
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 (Field Version)
Groundwater Sampling and Analysis Plan for Area I
Phase B Source Area Investigation Work Plan
Tronox Facility - Henderson, Nevada

									Laboratory :	CAS Kelso, WA	Columbia Analytical Services Rochester, 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)	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]	Location Description and Rationale for Investigation
Wells are organized by grid location as shown on Plate A - Starting point is on the northwestern-most grid in Area I (A-3) and ending with the southeastern-most grid covering Area I (O-4).																						
A-3	Parcel A	H-48	H-48B	TD = 41.1 ft	Qal *	6/18/2008	No		X	X	X	X	X	X	X	X		X		X	X	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		X	X	X	X	X	X	X	X		X		X	X	Located to evaluate LOU 67; as general Site coverage; and to evaluate downgradient from Area I.
			PC-40BD	15 - 55 (dup)					X	X	X	X	X	X	X	X		X		X	X	This is a duplicate sample of PC-40B.
B-3	Parcel A	H-49A	H-49AB	TD = 49 ft	Qal *	6/24/2008	No		X	X	X	X	X	X	X	X		X				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		X	X	X	X	X	X	X	X		X				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		X	X	X	X	X	X	X	X		X				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		X	X	X	X	X	X	X	X		X		X	X	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		X	X	X	X	X	X	X	X		X				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		X	X	X	X	X	X	X	X		X				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		X	X	X	X	X	X	X	X		X		X	X	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		X	X	X	X	X	X	X	X		X				Located to evaluate LOU 68; BRC Parcels B and I and the downgradient area of the Site.
E-6	Parcel I	M-95	M-95B	12 - 22	Qal	6/24/2008	Yes		X	X	X	X	X	X	X	X		X				Located to evaluate LOU 68; BRC Parcel B; and the downgradient area of the Site.
			M-95B	12 - 22				X	X	X	X	X	X	X	X	X		X				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-95B.
E-7	Parcel I	M-96	M-96B	10.5 - 20.5	Qal	7/9/2008	No		X	X	X	X	X	X	X	X		X				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		X	X	X	X	X	X	X	X		X				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		X	X	X	X	X	X	X	X		X				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		X	X	X	X	X	X	X	X		X				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		X	X	X	X	X	X	X	X		X				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		X	X	X	X	X	X	X	X		X				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		X	X	X	X	X	X	X	X		X				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		X	X	X	X	X	X	X	X		X				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	X	X	X	X	X	X	X		X				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 Ju 2008.
H-2	I	M-6A	M-6AB	26.8 - 41.5	Qal/MCfg1	6/27/2008	No		X	X	X	X	X	X	X	X	X	X	X	X	X	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		X	X	X	X	X	X	X	X	X	X	X	X	X	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		X	X	X	X	X	X	X	X		X				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		X	X	X	X	X	X	X	X		X		X	X	Located to serve as a upgradient stepout for LOU 68; as a downgradient stepout for LOU 1; to evaluate BRC Parcel C and D; and for general Site coverage.
			M-23BD	9.4 - 37.4 (dup)					X	X	X	X	X	X	X	X		X		X	X	This is a duplicate sample of M-23B.
H-8	Parcel J	M-48	M-48B	6.1 - 36.1	Qal/MCfg1	7/9/2008	Yes		X	X	X	X	X	X	X	X		X				Located to evaluate LOU 69 and to evaluate BRC Parcels B and J.
I-4	I	M-98	M-98B	19 - 29	Qal		Yes		X	X	X	X	X	X	X	X		X				Located to evaluate LOU 1 and for general Site coverage.
I-5	I	M-99	M-99B	16 - 31	Qal		No		X	X	X	X	X	X	X	X		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.
I-6	I	M-100	M-100B	19 - 29	Qal		No		X	X	X	X	X	X	X	X		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.
I-7	I	M-101	M-101B	17 - 27	Qal		No		X	X	X	X	X	X	X	X		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.

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Groundwater Sampling and Analysis Plan for Area I
Phase B Source Area Investigation Work Plan
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									Laboratory :	CAS Kelso, WA		Columbia Analytical Services Rochester, 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)	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]	Location Description and Rationale for Investigation
Wells are organized by grid location as shown on Plate A - Starting point is on the northwestern-most grid in Area I (A-3) and ending with the southeastern-most grid covering Area I (O-4).																						
J-2	BRC	AA-BW-02	AA-BW-02B	33 - 53	MCfg1 *		No		X	X	X	X	X	X	X	X		X				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		X	X	X	X	X	X	X	X		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		X	X	X	X	X	X	X	X	X	X	X	X	X	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.
K-2	I	TR-2	TR-2B	144.5 - 174.5	MCfg1	7/8/2008	No		X	X	X	X	X	X	X	X	X	X	X	X	X	To evaluate for SRCs in upper Muddy Creek Fm.
K-3	I	MW-16	MW-16B	24.7 - 39.7	MCfg1	6/26/2008	No		X	X	X	X	X	X	X	X		X				New monitoring well to evaluate SRCs in upper Muddy Creek from offsite sources from west.
			MW-16B	24.7 - 39.7				X	X	X	X	X	X	X	X	X		X				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 MW-16B.
K-5	I	M-69	M-69B	19.9 - 39.3	Qal/MCfg1	7/8/2008	No		X	X	X	X	X	X	X	X		X				Located to evaluate LOU 32 and to evaluate the western end of the Groundwater Barrier Wall.
K-5	I	M-79	M-79B	10.8 - 35.4	Qal/MCfg1	6/29/2008	No		X	X	X	X	X	X	X	X		X				Located to evaluate LOU 1; LOU 32 and the western end of the Groundwater Injection Trenches; and for general Site coverage.
K-6	I	M-83	M-83B	10.8-40.3	Qal/MCfg1		No		X	X	X	X	X	X	X	X		X		X	X	Located to evaluate LOU 32 and the Groundwater Injection Area; as an upgradient stepout for LOU 1, and LOUs 22 and 23; and for general Site coverage.
K-6	I	M-84	M-84B	11.8 - 34.1	Qal/MCfg1	6/29/2008	No		X	X	X	X	X	X	X	X		X				Located to evaluate LOU 32 and the Groundwater Injection Trench area; as an upgradient stepout for LOU 1 and LOUs 22 and 23; and for general Site coverage.
K-7	I	M-86	M-86B	11.3 -40.9	Qal/MCfg1		No		X	X	X	X	X	X	X	X		X				Located to evaluate LOU 32 and the Groundwater Injection Trench area; as an upgradient stepout for LOU 1, LOUs 22 and 23; and for general Site coverage.
K-8	I	M-88	M-88B	7.3 - 36.8	Qal/MCfg1	6/25/2008	No		X	X	X	X	X	X	X	X		X				Located to serve as an upgradient stepout for LOU 1; as a downgradient stepout for LOU 32; to evaluate possible offsite sources to the east; and for general Site coverage.
K-9	I	M-129	M-129B	20 - 40	MCfg1		No		X	X	X	X	X	X	X	X		X				Located to evaluate the eastern end of the barrier wall. Well was drilled and installed in March 2008.
K-9	TIMET	CLD1-R	CLD1-RB	25 -35	Qal/MCfg1	7/10/2008	No		X	X	X	X	X	X	X	X		X				Serves as a close stepout downgradient of LOU 5 (Beta Ditch) and general Site coverage. Located on Timet.
L-2	I	M-127	M-127B	35-50	MCfg1		No		X	X	X	X	X	X	X	X	X	X	X	X	X	New monitoring well located to evaluate LOU 2; to evaluate potential offsite sources to the west; and for general Site coverage. Well was drilled and installed in June 2008, but not yet sampled for Phase B.
L-3	I	M-126	M-126B	19.7 - 39.7	MCfg1	6/29/2008	No		X	X	X	X	X	X	X	X		X				New monitoring well located to serve as an up- to crossgradient stepout for LOU 2; to evaluate potential offsite sources from the west; and for general Site coverage.
			M-126BD	19.7-39.7 (dup)					X	X	X	X	X	X	X	X		X				This is a duplicate sample of M-126B.
L-4	I	M-14A	M-14AB	20 - 40	MCfg1	6/30/2008	No		X	X	X	X	X	X	X	X		X				Located as an upgradient stepout for LOUs 30, 56, and 58; as a downgradient well for LOU 39; and for general Site coverage.
L-4	I	M-57A	M-57AB	20 - 40	MCfg1	6/27/2008	No		X	X	X	X	X	X	X	X		X				Located to serve as an upgradient stepout for LOU 32; to evaluate the west end of the Groundwater Barrier Wall; and for general Site coverage.
			M-57ABD	20 - 40 (dup)					X	X	X	X	X	X	X	X		X				This is a duplicate sample of M-57AB.
L-5	I	I-B	I-BB	17.8 - 42.5	Qal/MCfg1	7/8/2008	No		X	X	X	X	X	X	X	X		X				Located as a downgradient stepout for LOU 56 and LOU 58; as an upgradient stepout for LOU 57, and for general Site coverage.
L-6	I	M-55	M-55B	14.6 - 44.6	Qal/MCfg1	7/1/2008	Yes		X	X	X	X	X	X	X	X		X				Located just upgradient of the groundwater barrier wall; to evaluate LOU 32; to serve as a downgradient stepout for LOUs 19, 31, and 55 and for general Site coverage.
L-6	I	M-65	M-65B	14.4 - 39	Qal/MCfg1	7/2/2008	No		X	X	X	X	X	X	X	X		X				Located to serve as an upgradient stepout for LOU 32; as a downgradient stepout for LOU 57; and for general Site coverage.
			M-65BD	14.4 - 39 (dup)					X	X	X	X	X	X	X	X		X				This is a duplicate sample of M-65B.
L-6	I	M-78	M-78B	21.5 - 41.5	Qal/MCfg1		No		X	X	X	X	X	X	X	X		X				Located to evaluate LOU 32; as a downgradient stepout for LOU 55; and for general Site coverage.
L-8	I	M-61	M-61B	9.3 - 38.8	Qal/MCfg1	6/26/2008	No		X	X	X	X	X	X	X	X		X				Located to evaluate LOU 32 and the eastern end of the Groundwater Barrier Wall.
L-8	I	M-67	M-67B	7.8 - 37.8	Qal/MCfg1	6/27/2008	No		X	X	X	X	X	X	X	X		X				Located to serve as an upgradient stepout for LOU 32 and for general Site coverage.
			M-67BD	7.8 - 37.8 (dup)					X	X	X	X	X	X	X	X		X				This is a duplicate of M-67B.
			M-67B	7.8 - 37.8				X	X	X	X	X	X	X	X	X		X				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-67B.
L-8	I	M-68	M-68B	11.2 - 39.8	Qal/MCfg1	6/27/2008	No		X	X	X	X	X	X	X	X		X				Located to serve as a downgradient stepout for LOU 5 and 20; as an upgradient stepout for LOU 32; as an evaluation of the east end of the Groundwater Barrier Wall; and for general Site coverage.
L-9	TIMET	CLD2-R	CLD2-RB	20 - 40.27	Qal	7/10/2008	No		X	X	X	X	X	X	X	X		X				Serves as a close stepout downgradient of LOU 5; and a further downgradient stepout for LOU 20 (Pond C-1 and Associated Piping), and for general Site coverage. Located on Timet.
L-9	I	M-130	M-130B	20 - 40	MCfg1		No		X	X	X	X	X	X	X	X		X				Located to evaluate LOU 5 and the eastern end of the barrier wall. Well was installed in March 2008 but not yet sampled for Phase B.
L-10	TIMET	CLD3-R	CLD3-RB	nr	MCfg1*	7/10/2008	No		X	X	X	X	X	X	X	X		X				Located to evaluate LOU 67; as general Site coverage; and to evaluate downgradient from Area I. Located on Timet.

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

									Laboratory :	CAS Kelso, WA	Columbia Analytical Services Rochester, 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)	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]	Location Description and Rationale for Investigation
Wells are organized by grid location as shown on Plate A - Starting point is on the northwestern-most grid in Area I (A-3) and ending with the southeastern-most grid covering Area I (O-4).																						
M-1	Olin	H-38	H-38B	25 - 50	Qal*		No		X	X	X	X	X	X	X	X		X				To evaluate possible offsite sources from the west, as an upgradient stepout to LOU 5 (Beta Ditch) and for general Site coverage. Depth of screen will be confirmed in the field.
M-2	I	TR-4	TR-4B	124.5 - 144.5	MCfg1	7/9/2008	No		X	X	X	X	X	X	X	X	X	X	X	X	X	Located to serve as a downgradient stepout for LOU 5; to evaluate possible offsite sources to the west (particularly for VOCs); and for general Site coverage.
M-3	I	M-125	M-125B	35-50	MCfg1		No		X	X	X	X	X	X	X	X	X	X	X	X	X	New monitoring well located to serve as a downgradient stepout for LOUs 5 and 54; to evaluate potential offsite sources from the west; and for general Site coverage. Well was installed in June 2008 but not yet sampled for Phase B.
			M-125B	35-50				X	X	X	X	X	X	X	X	X	X	X	X	X	X	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-125B.
M-8	I	M-39	M-39B	24.9 - 39.9	Qal/MCfg1	7/8/2008	Yes		X	X	X	X	X	X	X	X		X		X	X	Located to serve as a downgradient stepout for LOUs 5, 18, 20, and 21; and for general Site coverage.
N-4	I	M-142	M-142B	30-45	MCfg1		No		X	X	X	X	X	X	X	X		X		X	X	New monitoring well constructed in borehole for SA87 to evaluate LOU 39 (Satellite Accumulation Point, AP Maintenance Shop). Well was installed in June 2008 but not yet sampled for Phase B.
O-2	I	M-123	M-123B	34-51	MCfg1	7/11/2008	No		X	X	X	X	X	X	X	X	X	X	X	X	X	New monitoring well located to evaluate LOU 35; as an upgradient stepout for LOUs 38 and 54; to evaluate potential offsite sources to the west; and for general Site coverage. PCB analysis for groundwater requested by NDEP at this location. Well was installed in June 2008 but not yet sampled for Phase B.
			M-123BD	34-51 (dup)					X	X	X	X	X	X	X	X	X	X	X	X	X	This is a duplicate sample of M-123B.
O-4	I	M-124	M-124B	34-49	MCfg1	7/11/2008	No		X	X	X	X	X	X	X	X		X				New monitoring well located to evaluate LOU 64; serve as a downgradient stepout for LOU 63; as an upgradient stepout for LOU 39; and for general Site coverage. Well was installed in June 2008 but not yet sampled for Phase B
O-4	I	M-128	M-128B	40-55	MCfg1		No		X	X	X	X	X	X	X	X		X				New monitoring well to serve as a downgradient stepout for LOUs 35 and 64; as an upgradient stepout for LOUs 39-52, and 57; and for general Site coverage. Well was installed in June 2008 but not yet sampled for Phase B.

Number of Wells: 64

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 screen interval information from BMI.
X	Sample will be collected and analyzed.
blank	No sample collected under Phase B sampling plan.
1.	It is anticipated that the large majority of the flow to the well will be from the coarse-grained sediments. As such, in the cases where there are two lithologies present across the screen interval, the water sampled will represent conditions in the coarse-grained interval.
2.	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, Zinc
3.	VOCs = Volatile organic compounds (to include analysis for naphthalene).
4.	Hexavalent Chromium.
5.	Complete list of wet chemistry parameters is shown on Table 1. All groundwater samples will have pH measured in the field.
6.	OCPs = Organochlorine pesticides (to include analysis for hexachlorobenzene).
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).
10.	OPPs = Organophosphorous Pesticides
TBD	To Be Determined when well is constructed.
nr	Not recorded in Tronox database (screen intervals to be acquired from BMI).
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.

Area II

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

Laboratory K. :					CAS - Kelso		CAS - Rochester									CAS - Houston		GEL - Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale for Revision	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
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		
Borings are organized by grid location as shown on Plate A - Starting point is on the northwestern most grid in Area II (M-2) and ending with the southeastern most grid in Area II (S-7).																							
L-5	19, 31	SA72	SA72-0.0B	0.0																	X		Boring located to evaluate LOU 31 (Drum Crushing & Recycling Area) and as a down gradient boring for LOU 19 (Pond AP-5).
L-5	19, 31		SA72-0.5B	0.5	X	X	X			X	X	X	R				X	X				E,L	Boring is in drum storage area of LOU 31 and in an accessible low area down slope of LOU 19 to evaluate potential releases.
L-5	19, 31		SA72-10B	10	X	X	X			X	X	X	R					X				E,L	GW estimated at ~31 feet bgs.
L-5	19, 31		SA72-20B	20	R	R	R			R	R		R					R				B	
L-5	19, 31		SA72-29B	29	X	X	X			X	X	X						X				B,E,L	
L-5	19, 31		SA72-30B	30	R	R	R			R	R		R					R				A	
L-5	30, 56, 57	SA123	SA123-0.0B	0.0																	X		Boring located to evaluate LOU 30 (AP Area Pad 35), LOU 56 (AP Plant Area
L-5	30, 56, 57		SA123-0.5B	0.5	X	X	X			X	X	X	R				X	X				E,L	Old D-1 Building Wash-Down), and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate
L-5	30, 56, 57		SA123-10B	10	X	X	X			X	X	X	R					X				E,L	Process, AP Plant SI's and Transfer Lines). Located at logical runoff point for releases from LOU 30 pad as an upslope
L-5	30, 56, 57		SA123-20B	20	R	R	R			R	R		R					R				B	stepout for LOU 56 and downslope stepout for LOU 57.
L-5	30, 56, 57		SA123-27B	27	X	X	X			X	X	X						X				B,E,L	GW estimated at ~29 feet bgs
L-5	30, 56, 57		SA123-30B	30	R	R	R			R	R		R					R				A	
L-5	30, 56, 57		SA123-40B	40	R	R	R			R	R		R					R				A	
L-5	31	SA167	SA167-0.0B	0.0																	X		Boring located to evaluate LOU 31 (Drum Crushing and Recycling Area). Located at former drum crusher location and
L-5	31		SA167-0.5B	0.5	X	X	X			X	X	X	R				X	X				E,L	downslope of LOU 56. Phase A boring SA19 is located downslope of the drum storage area.
L-5	31		SA167-10B	10	X	X	X			X	X	X	R					X				E,L	GW estimated at ~ 30 feet bgs.
L-5	31		SA167-28B	28	X	X	X			X	X	X						X				B,E,L,S	
L-5	56	SA173	SA173-0.0B	0.0																	X		Boring located to evaluate LOU 56 (AP Plant Area Old D-1 Building Wash-Down). Located adjacent to LOU 56 bourndary to
L-5	56		SA173-0.5B	0.5	X	X	X			X	X	X	R				X	X				E,L	evaluate potential runoff releases to the west. Phase A boring SA19 is located downslope of the drum storage area.
L-5	56		SA173-10B	10	X	X	X			X	X	X	R					X				E,L	GW estimated at ~31 feet bgs.
L-5	56		SA173-29B	29	X	X	X			X	X	X						X				B,E,L,S	
L-5	56	SA179	SA179-0.0B	0.0																	X		Boring located to evaluate LOU 56 (AP Plant Area Old D-1 Building Wash-Down). Located adjacent to the LOU 56
L-5	56		SA179-0.5B	0.5	X	X	X			X	X	X	R				X	X				E,L	boundary to evaluate potiential runoff releases to the east. Phase A boring SA19 is located downslope of the drum
L-5	56		SA179-10B	10	X	X	X			X	X	X	R					X				E,L	storage area.
L-5	56		SA179-29B	29	X	X	X			X	X	X						X				B,E,L,S	GW estimated at ~31 feet bgs.
L-6	57	SA73	SA73-0.0B	0.0																	X		Boring located to evaluate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate
L-6	57		SA73-0.5B	0.5	X	X	X			X	X	X	X				X	X	X	X		L,Z	Process, AP Plant SIs and Transfer Lines). Located as a downslope stepout to the north of LOU 57 for area wide coverage.
L-6	57		SA73-10B	10	X	X	X			X	X	X	Hold					X				L	GW estimated at ~30 feet bgs.
L-6	57		SA73-20B	20	R	R	R			R	R		R					R				B	
L-6	57		SA73-25B	25	R	R	R			R	R		R					R				B	
L-6	57		SA73-28B	28	X	X	X			X	X	X	X					X	X	X		B,L,Z	
L-6	55	RSAL6	RSAL6-0.0B	0.0																	X		Boring located to evaluate LOU 55 (Area Affected by July 1990 Fire). Random location within the LOU to evaluate area wide issues.
L-6	55		RSAL6-0.5B	0.5	X	X	X	X		X	X		X	X			X	X					Phase A boring SA20 located in the northwest protion of LOU 55.
L-6	55		RSAL6-10B	10	X	X	X	X		X	X		Hold	X				X					GW estimated at ~30 feet bgs.
L-6	55		RSAL6-20B	20	R	R	R	R		R	R		R	R				R				B	
L-6	55		RSAL6-20B	25	R	R	R	R		R	R		R	R				R				B	
L-6	55		RSAL6-28B	28	X	X	X	X		X	X		X	X				X					
L-8	5	SA131	SA131-0.0B	0.0																	X		Boring located to evaluate LOU 5 (Beta Ditch). Located in ditch bottom near downstream end of the Beta Ditch to evaluate
L-8	5		SA131-0.5B	0.5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		P,W,Z	for potential impacts from historic discharges into Beta Ditch..
L-8	5		SA131-10B	10	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		P,W,Z	GW estimated at ~29 feet bgs.
L-8	5		SA131-20B	20	R	R	R	R	R	R	R	R	R	R				R				B	
L-8	5		SA131-27B	27	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		B,P,W,Z	
L-8	5		SA131-30B	30	R	R	R	R	R	R	R	R	R	R				R				A	
L-8	5		SA131-35B	35	R	R	R	R	R	R	R	R	R	R				R				A	
M-3	5	SA66	SA66-0.0B	0.0																	X		Boring located to evaluate LOU 5 (Beta Ditch). Located in the western ditch bottom to evaluate potential impacts from off-site sources
M-3	5		SA66-0.5B	0.5	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		L,P,Z	sources to the west. Also, a point of comparison for discharge to the downstream Western Diversion Ditch.
M-3	5		SA66-10B	10	X	X	X	X	X	X	X	X	X	X	X			X	X	X		L,P,Z	GW estimated at ~30 feet bgs.
M-3	5		SA66-20B	20	R	R	R	R	R	R	R		R	R				R				B	
M-3	5		SA66-28B	28	X	X	X	X	X	X	X	X		X				X	X	X		B,L,P,Z	
M-3	5		SA66-30B	30	R	R	R	R	R	R	R		R	R				R				A	
M-3	5		SA66-40B	40	R	R	R	R	R	R	R		R	R				R				A	
M-2	5	SA67	SA67-0.0B	0.0																	R	N (See Area I)	Boring located to evaluate LOU 5 (Beta Ditch). Located on the south bank to evaluate possible overflow releases from
M-2	5		SA67-0.5B	0.5	R	R	R	R	R	R	R		R	R			R	R					Beta Ditch and possible run-on from areas to the south.
M-2	5		SA67-10B	10	R	R	R	R	R	R	R		R	R				R					
M-2	5		SA67-20B	20	R	R	R	R	R	R	R		R	R				R					
M-2	5		SA67-30B	30	R	R	R	R	R	R	R		R	R				R					
M-2	5		SA67-40B	40	R	R	R	R	R	R	R		R	R				R					
M-4	5	SA128	SA128-0.0B	0.0																	X		Boring located to evaluate LOU 5 (Beta Ditch). Located in the LOU 5 ditch bottom just downstream from the Western
M-4	5		SA128-0.5B	0.5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		W,Z	Diversion Ditch to evaluate inflow from the western and southwestern parts of Tronox and off-site facilities to the west.
M-4	5		SA128-10B	10	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		W,Z	GW estimated at ~31 feet bgs.
M-4	5		SA128-20B	20	R	R	R	R		R	R	R	R	R				R				B	
M-4	5		SA128-29B	29	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		B,W,Z	
M-4	5		SA128-30B	30	R	R	R	R		R	R	R	R	R				R				A	
M-4	5		SA128-35B	35	R	R	R	R		R	R	R	R	R				R				A	
M-5	52, 57	SA65	SA65-0.0B	0.0																	X		Boring located to evaluate LOU 52 (AP Plant Screening Building, Dryer Building Process, AP Plant SIs and Transfer
M-5	52, 57		SA65-0.5B	0.5	X	X	X			X	X	X	R	X			X	X				E,L	Lines). Located within LOU 52 in damaged pavement area to evaluate potiential releases and for general coverage of
M-5	52, 57		SA65-10B	10	X	X	X			X	X	X	R	X				X				E,L	LOU 57.
M-5	52, 57		SA65-20B	20	X	X	X			X	X	X	R	X				X				E,L	GW estimated at ~33 feet bgs.
M-5	52, 57		SA65-30B	30	R	R	R			R	R		R	R				R				B	
M-5	52, 57		SA65-31B	31	X	X	X			X	X	X		X				X				B,E,L	
M-5	52, 57		SA65-35B	35	R	R	R			R	R		R	R				R				A	
M-5	57	SA70	SA70-0.0B	0.0																	X		Boring located to evaluate LOU 57 (AP Plant Transfer and Associated Piping) and LOU 57 (AP Plant
M-5	57		SA70-0.5B	0.5	X	X	X	X	X	X	X	X	R	X			X	X				E,L,W,bb	Transfer Lines to Sodium Chlorate Lines to Sodium Chlorate Process, AP Plant SIs and Transfer Lines). Located for
M-5	57		SA70-10B	10	X	X	X	X	X	X	X	X	R	X				X				E,L,W	general coverage of LOU 57 and as a downslope stepout for possible releases from LOU 5.
M-5	5, 57		SA70-20B	20	R	R	R			R	R		R	R				R				B	GW estimated at ~32 feet bgs.
M-5	57		SA70-30B	30	X	X	X	X	X	X	X	X	R	X				X				B,E,L,W,bb	
M-5	5, 57		SA70-35B	35	R	R	R			R	R		R	R				R				A	

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

			Laboratory K. :		CAS - Kelso		CAS - Rochester									CAS - Houston		GEL - Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale for Revision	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
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		
Borings are organized by grid location as shown on Plate A - Starting point is on the northwestern most grid in Area II (M-2) and ending with the southeastern most grid in Area II (S-7).																							
M-5	57	SA104	SA104-0.0B	0.0																	X		Boring located to evaluate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP
M-5	57		SA104-0.5B	0.5	X	X	X	X	X	X	X	X	R	X			X	X				E,L,W,bb	Plant SIs and Transfer Lines). Located in a low area near existing LOU 57 piping and as an upslope stepout from LOU 5.
M-5	57		SA104-10B	10	X	X	X	X	X	X	X	X	R	X				X				E,L,W	GW estimated at ~32 feet bgs.
M-5	5, 57		SA104-20B	20	R	R	R			R	R		R	R				R				B	
M-5	57		SA104-30B	30	X	X	X	X	X	X	X	X	R	X				X				B,E,L,W,bb	
M-5	5, 57		SA104-35B	35	R	R	R			R	R		R	R				R				A	
M-5	5, 57	SA129	SA129-0.0B	0.0																	X		Boring located to evaluate LOU 5 (Beta Ditch), LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant
M-5	5, 57		SA129-0.5B	0.5	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		P,W,Z	SIs and Transfer Lines). Located in a low spot within LOU 5 to evaluate potential impacts associated with historic
M-5	5, 57		SA129-10B	10	X	X	X	X	X	X	X	X	X	X	X			X	X	X		P,W,Z	discharges into Beta Ditch.
M-5	5, 57		SA129-20B	20	R	R	R	R		R	R	R	R	R				R				B	GW estimated at ~31 feet bgs.
M-5	5, 57		SA129-29B	29	X	X	X	X	X	X	X	X	X	X	X			X	X	X		B,P,W,Z	
M-5	5, 57		SA129-30B	30	R	R	R	R		R	R	R	R	R				R				A	
M-5	5, 57		SA129-35B	35	R	R	R	R		R	R	R	R	R				R				A	
M-5	57	RSAM5	RSAM5-0.0B	0.0																	X		Boring located to evaluateLOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP
M-5	57		RSAM5-0.5B	0.5	X	X	X	X	X	X	X	X	X	X			X	X				L,W	Plant SIs and Transfer Lines). Randomly located as an upslope stepout for LOU 5 and general coverage for LOU 57.
M-5	57		RSAM5-10B	10	X	X	X	X	X	X	X	X	Hold	X				X				L,W	GW estimated at ~30 feet bgs.
M-5	5, 57		RSAM5-20B	20	R	R	R	R		R	R		R	R				R				B	
M-5	57		RSAM5-28B	28	X	X	X	X	X	X	X	X	X	X				X				B,L,W	
M-5	5, 57		RSAM5-30B	30	R	R	R	R		R	R		R	R				R				A	
M-5	5, 57		RSAM5-35B	35	R	R	R	R		R	R		R	R				R				A	
M-6	16, 17, 57, 60	SA64	SA64-0.0B	0.0																	X		Boring located to evaluate LOUs 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer Lines), LOU 57 (AP
M-6	16, 17, 57, 60		SA64-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				E,L,W	Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer Lines), and LOU 60 (Acid Drain System).
M-6	16, 17, 57, 60		SA64-10B	10	X	X	X	X		X	X	X	R	X				X				E,L,W	Located in a low spot of bottom of LOU 16 and 17 for worst case coverage, near LOU 60 to evaluate possible piping
M-6	16, 17, 57, 60		SA64-20B	20	R	R	R			R	R		R	R				R				B	releases, and for general coverage of LOU 57.
M-6	16, 17, 57, 60		SA64-21B	21	X	X	X	X		X	X	X		X				X				B,E,L,W	GW estimated at ~23 feet bgs.
M-6	16, 17, 57, 60		SA64-30B	30	R	R	R			R	R		R	R				R				A	
M-6	5, 16,17, 18	SA175	SA175-0.0B	0.0																	X		Boring located to evaluate LOU 5 (Beta Ditch), LOU 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer
M-6	5, 16,17, 18		SA175-0.5B	0.5	X	X	X	X	X	X	X	X	R	X			X	X				E,L,W,bb	Lines), and LOU 18 (Pond AP-4). Located in a low spot downslope of LOU 16 and 17. Upslope of LOU 5 to evaluate
M-6	5, 16,17, 18		SA175-10B	10	X	X	X	X	X	X	X	X	R	X				X				E,L,W	potential overflow releases from LOUs 5, 16, and 17.
M-6	5, 16,17, 18		SA175-20B	20	R	R	R			R	R		R	R				R				B	GW estimated at ~30 feet bgs.
M-6	5, 16,17, 18		SA175-28B	28	X	X	X	X	X	X	X	X		X				X				B,E,L,W,bb	
M-6	5, 16,17, 18		SA175-30B	30	R	R	R			R	R		R	R				R				A	
M-6	57	RSAM6	RSAM6-0.0B	0.0																	X		Boring located to evaluate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer
M-6	57		RSAM6-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X				L	Lines). Randomly located for general coverage of LOU 57 and for site wide coverage.
M-6	57		RSAM6-10B	10	X	X	X	X		X	X	X	Hold	X				X				L	GW estimated at ~30 feet bgs.
M-6	57		RSAM6-20B	20	R	R	R	R		R	R		R	R				R				B	
M-6	57		RSAM6-28B	28	X	X	X	X		X	X	X	X	X				X				B,L	
M-6	57		RSAM6-30B	30	R	R	R	R		R	R		R	R				R				A	
M-6	57		RSAM6-35B	35	R	R	R	R		R	R		R	R				R				A	
M-6	16, 17, 57	SA197	SA197-0.0B	0.0																	X		Boring located to evaluate LOUs 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer Lines) and LOU 57
M-6	16, 17, 57		SA197-0.5B	0.5	X	X	X			X	X	X	R	X			X	X				E,L	(AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer Lines). Located in a low spot
M-6	16, 17, 57		SA197-10B	10	X	X	X			X	X	X	R	X				X				E,L	of bottom of LOU 16 and 17 to evaluate worst case conditions and for general coverage of LOU 57.
M-6	16, 17, 57		SA197-20B	20	R	R	R			R	R		R	R				R				B	GW estimated at ~23 feet bgs.
M-6	16, 17, 57		SA197-21B	21	X	X	X			X	X	X		X				X				B,E,L	
M-6	16, 17, 57		SA197-30B	30	R	R	R			R	R		R	R				R				A	
M-6	16, 17, 57		SA197-35B	35	R	R	R			R	R		R	R				R				A	
M-6	16, 17, 57, 60	SA198	SA198-0.0B	0.0																	X		Boring located to evaluate LOU 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer Lines), LOU 57 (AP
M-6	16, 17, 57, 60		SA198-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				E,L,W	Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer Lines), and LOU 60 (Acid Drain System).
M-6	16, 17, 57, 60		SA198-10B	10	X	X	X	X		X	X	X	R	X				X				E,L,W	Located in a low spot of bottom of LOU 16 and 17 to evaluate worst case conditions and for general coverage of LOU 57
M-6	16, 17, 57, 60		SA198-20B	20	R	R	R			R	R		R	R				R				B	and adjacent to the LOU 60 former conveyance flume to evaluate underlying soils for potential impacts from historical
M-6	16, 17, 57, 60		SA198-27B	27	X	X	X	X		X	X	X		X				X				B,E,L,W	releases. LOU 60 flume was on ground surface (0 feet bgs). GW estimated at ~29 feet bgs.
M-6	16, 17, 57, 60		SA198-30B	30	R	R	R			R	R		R	R				R				A	
M-6	16, 17, 57, 60		SA198-35B	35	R	R	R			R	R		R	R				R				A	
M-7	18, 57	SA63	SA63-0.0B	0.0																	X		Boring located to evaluate LOU 18 (Pond AP-4), and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process,
M-7	18, 57		SA63-0.5B	0.5	X	X	X			X	X	X	R				X	X				E,L	AP Plant SIs and Transfer Lines). Located in a low spot in the bottom of LOU 18 to evaluate worst case conditions and
M-7	18, 57		SA63-10B	10	X	X	X			X	X	X	R					X				E,L	for general coverage of LOU 57.
M-7	18, 57		SA63-20B	20	R	R	R			R	R		R					R				B	GW estimated at ~25 feet bgs.
M-7	18, 57		SA63-23B	23	X	X	X			X	X	X						X				B,E,L	
M-7	18, 57		SA63-30B	30	R	R	R			R	R		R					R				A	
M-7	5, 57	SA86	SA86-0.0B	0.0																	X		Boring located to evaluate LOU 5 (Beta Ditch) and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process,
M-7	5, 57		SA86-0.5B	0.5	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		P,W,Z	AP Plant SIs and Transfer Lines). Located in the bottom of LOU 5 to evaluate potential impacts from historic discharges
M-7	5, 57		SA86-10B	10	X	X	X	X	X	X	X	X	X	X	X			X	X	X		P,W,Z	into Beta Ditch and for general coverage of LOU 57.
M-7	5, 57		SA86-20B	20	R	R	R	R		R	R	R	R	R				R				B	GW estimated at ~30 feet bgs.
M-7	5, 57		SA86-25B	25	R	R	R	R		R	R	R	R	R				R				B	
M-7	5, 57		SA86-28B	28	X	X	X	X	X	X	X	X	X	X	X			X	X	X		B,P,W,Z	
M-7	5, 20	SA92	SA92-0.0B	0.0																	X		Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping) and LOU 5 (Beta Ditch). Located in bottom of
M-7	5, 20		SA92-0.5B	0.5	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		L,P,W,Z	Eastern Diversion Ditche to evaluate upstream tributary releases and potiential overflow releases from LOU 20.
M-7	5, 20		SA92-10B	10	X	X	X	X	X	X	X	X	X	X	X			X	X	X		L,P,W,Z	GW estimated at ~33 feet bgs.
M-7	5, 20		SA92-20B	20	X	X	X	X	X	X	X	X	Hold	X				X				B,L,P,W,Z	
M-7	5, 20		SA92-30B	30	R	R	R	R		R	R		R	R				R				B	
M-7	5, 20		SA92-31B	31	X	X	X	X	X	X	X	X	X	X	X			X	X	X		B,L,P,W,Z	
M-7	22, 23, 57	SA155	SA155-0.0B	0.0																	X		Boring located to evaluate LOU 22 (Pond WC-West Associated Piping), LOU 23 (Pond WC-East Associated Piping),
M-7	22, 23, 57		SA155-0.5B	0.5	X	X	X	X	X	X	X	X	R	X			X	X				E,L,V,W,bb	and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer Lines). To evaluate
M-7	22, 23, 57		SA155-10B	10	X	X	X	X	X	X	X	X	R	X				X				E,L,V,W,bb	potential LOU 22 and 23 piping releases and for general stepout coverage of LOU 57.
M-7	22, 23, 57		SA155-30B	30	X	X	X	X	X	X	X	X		X				X				B,E,L,S,V,W,bb	GW estimated at ~32 feet bgs.

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

			Laboratory K. :		CAS - Kelso		CAS - Rochester									CAS - Houston		GEL - Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale for Revision	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
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		
Borings are organized by grid location as shown on Plate A - Starting point is on the northwestern most grid in Area II (M-2) and ending with the southeastern most grid 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	5, 57		RSAM7-0.5B	0.5	X	X	X	X	X	X	X	X	X	X			X	X				L,W	AP Plant SIs and Transfer Lines). Randomly located to provide downslope overflow releases from LOU 5, general
M-7	5, 57		RSAM7-10B	10	X	X	X	X	X	X	X	X	Hold	X				X				L,W	coverage for LOU 57, and for site wide coverage.
M-7	5, 57		RSAM7-20B	20	R	R	R	R		R	R		R	R				R				B	GW estimated at ~30 feet bgs.
M-7	5, 57		RSAM7-28B	28	X	X	X	X	X	X	X	X	X	X				X				B,L,W	
M-7	5, 57		RSAM7-30B	30	R	R	R	R		R	R		R	R				R				A	
M-7	5, 57		RSAM7-35B	35	R	R	R	R		R	R		R	R				R				A	
M-8	20	SA62	SA62-0.0B	0.0																	X		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	20		SA62-0.5B	0.5	X	X	X	X		X	X		R				X	X				E,F	inflow piping outlet to evaluate worst case conditions.
M-8	20		SA62-10B	10	X	X	X	X		X	X		R					X				E,F	GW estimated at ~26 feet bgs.
M-8	20		SA62-20B	20	R	R	R	R		R	R		R					R				B	
M-8	20		SA62-22B	22	R	R	R	R		R	R		R					R				B	
M-8	20		SA62-24B	24	X	X	X	X		X	X							X				B,E,F	
M-8	20	SA71	SA71-0.0B	0.0																	X		Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping). Located to evaluate
M-8	20		SA71-0.5B	0.5	X	X	X	X	X	X	X	X	R	X			X	X				E,F,L,V,W,bb	possible overflow releases from historical LOU 5 Beta Ditch and overflows from lou 20; both LOUs are upslope
M-8	20		SA71-10B	10	X	X	X	X	X	X	X	X	R	X				X				E,F,L,V,W	of SA71.
M-8	5, 20		SA71-20B	20	R	R	R			R	R		R					R				B	GW estimated at ~38 feet bgs.
M-8	5, 20		SA71-22B	22	R	R	R			R	R		R					R				B	
M-8	20		SA71-25B	25	X	X	X	X	X	X	X	X		X				X				B,E,F,L,V,W	
M-8	20		SA71-36B	36	X	X	X	X	X	X	X	X		X				X				B,E,F,L,V,W,bb	
M-8	20	SA144	SA144-0.0B	0.0																	X		Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping). Located to evaluate
M-8	20		SA144-0.5B	0.5	X	X	X	X	X	X	X	X	R	X			X	X				E,F,L,V,W	possible overflow releases from historical LOU 5 (before LOU 20 was constructed) and a low spot in bottom
M-8	20		SA144-10B	10	X	X	X	X	X	X	X	X	R	X				X				E,F,L,V,W	of LOU 20 for worst case conditions.
M-8	5, 20		SA144-20B	20	R	R	R	R		R	R		R					R				B	GW estimated at ~30 feet bgs.
M-8	5, 20		SA144-22B	22	R	R	R	R		R	R		R					R				B	
M-8	20		SA144-28B	28	X	X	X	X	X	X	X	X		X				X				B,E,F,L,V,W	
M-8	20	SA145	SA145-0.0B	0.0																	X		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				X	X				E,F	inlet pipe for worst case conditions in LOU 20.
M-8	20		SA145-10B	10	X	X	X	X		X	X		R					X				E,F	GW estimated at ~26 feet bgs.
M-8	20		SA145-20B	20	R	R	R	R		R	R		R					R				B	
M-8	20		SA145-22B	22	R	R	R	R		R	R		R					R				B	
M-8	20		SA145-24B	24	X	X	X	X		X	X							X				B,E,F	
M-8	20	RSAM8	RSAM8-0.0B	0.0																	X		Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping). Randomly located to evaluate possible overflow
M-8	20		RSAM8-0.5B	0.5	X	X	X	X	X	X	X	X	X	X			X	X				F,L,W	releases from LOU 20 and for site wide coverage.
M-8	20		RSAM8-10B	10	X	X	X	X	X	X	X	X	Hold	X				X				F,L,W	GW estimated at ~33 feet bgs.
M-8	20		RSAM8-20B	20	X	X	X	X	X	X	X	X	Hold	X				X				F,L,W	
M-8	20		RSAM8-30B	30	R	R	R	R		R	R		R	R				R				B	
M-8	20		RSAM8-31B	31	X	X	X	X	X	X	X	X	X	X				X				B,L,F,W	
M-8	20		RSAM8-35B	35	R	R	R	R		R	R		R	R				R				A	
N-4	5	SA165	SA165-0.0B	0.0																	X		Boring located to evaluate LOU 5 (Beta Ditch). Located in the bottom of the ditch to evaluate for potential impacts from
N-4	5		SA165-0.5B	0.5	X	X	X	X		X	X	X	X	X	X		X	X	X	X		L,Z	storm sewer outfall into the Western Diversion Ditch segment of Beta Ditch.
N-4	5		SA165-10B	10	X	X	X	X		X	X	X	X	X	X			X	X	X		L,Z	GW estimated at ~30 feet bgs.
N-4	5		SA165-20B	20	R	R	R	R		R	R		R	R				R				B	
N-4	5		SA165-28B	28	X	X	X	X		X	X	X	X	X	X			X	X	X		B,L,Z	
N-4	5		SA165-30B	30	R	R	R	R		R	R		R	R				R				A	
N-4	5		SA165-35B	35	R	R	R	R		R	R		R	R				R				A	
N-5	57	SA58	SA58-0.0B	0.0																	X		Boring located to evaluate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer
N-5	57		SA58-0.5B	0.5	X	X	X			X	X	X	X	X			X	X	X	X		L,Z	Lines). Located as an upslope stepout for general coverage of LOU 57.
N-5	57		SA58-10B	10	X	X	X			X	X	X	Hold	X				X				L,Z	GW estimated at ~30 feet bgs.
N-5	57		SA58-20B	20	R	R	R			R	R		R	R				R				B	
N-5	57		SA58-28B	28	X	X	X			X	X	X	X	X				X	X	X		B,L,Z	
N-5	57		SA58-30B	30	R	R	R			R	R		R	R				R				A	
N-5	57		SA58-35B	35	R	R	R			R	R		R	R				R				A	
N-5	57	SA94	SA94-0.0B	0.0																	X		Boring located to evaluate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer
N-5	57		SA94-0.5B	0.5	X	X	X			X	X	X	R	X			X	X				E,L	Lines). Located to evaluate potential releases from historical piping releases associated with LOU 57.
N-5	57		SA94-10B	10	X	X	X			X	X	X	R	X				X				E,L	GW estimated at ~31 feet bgs.
N-5	57		SA94-20B	20	R	R	R			R	R		R	R				R				B	
N-5	57		SA94-29B	29	X	X	X			X	X	X		X				X				B,E,L	
N-5	57		SA94-30B	30	R	R	R			R	R		R	R				R				A	
N-5	57		SA94-35B	35	R	R	R			R	R		R	R				R				A	
N-5	57	SA113	SA113-0.0B	0.0																	X		Boring located to evaluate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer
N-5	57		SA113-0.5B	0.5	X	X	X			X	X	X	R	X			X	X				E,L	Lines). Located adjacent to LOU 57 associated pipeline to evaluate potential releases.
N-5	57		SA113-10B	10	X	X	X			X	X	X	R	X				X				E,L	GW estimated at ~32 feet bgs.
N-5	57		SA113-20B	20	R	R	R			R	R		R					R				B	
N-5	57		SA113-30B	30	X	X	X			X	X	X	R	X				X				B,E,L	
N-5	57		SA113-35B	35	R	R	R			R	R		R					R				A	
N-5	NA	RSAN5	RSAN5-0.0B	0.0																	X		Boring located to evaluate general site wide subsurface soil conditions; not associated with a specific LOU.
N-5	NA		RSAN5-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					GW estimated at ~35 feet bgs.
N-5	NA		RSAN5-10B	10	X	X	X	X		X	X	X	Hold	X				X				L	
N-5	NA		RSAN5-20B	20	X	X	X	X		X	X	X	Hold	X				X				L	
N-5	NA		RSAN5-30B	30	R	R	R	R		R	R		R	R				R				B	
N-5	NA		RSAN5-33B	33	X	X	X	X		X	X	X	X	X				X				B,L	
N-5	NA		RSAN5-35B	35	R	R	R	R		R	R		R	R				R				A	
N-6	57	SA196	SA196-0.0B	0.0																	X		Boring located to evaluate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer
N-6	57		SA196-0.5B	0.5	X	X	X			X	X	X	R	X			X	X				E,L	Lines). Located along associated piping for LOU 57 and as an upslope stepout to LOU 57.
N-6	57		SA196-10B	10	X	X	X			X	X	X	R	X				X				E,L	GW estimated at ~31 feet bgs.
N-6	57		SA196-29B	29	X	X	X			X	X	X		X				X				B,E,L,S	

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

Laboratory K. :					CAS - Kelso		CAS - Rochester									CAS - Houston		GEL - Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale for Revision	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
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		
Borings are organized by grid location as shown on Plate A - Starting point is on the northwestern most grid in Area II (M-2) and ending with the southeastern most grid in Area II (S-7).																							
N-6	53, 57	SA60	SA60-0.0B	0.0																	X		Boring located to evaluate LOU 53 (AP Plant Area Tank Farm) and LOU 57 (AP Plant Transfer Lines to Sodium
N-6	53, 57		SA60-0.5B	0.5	X	X	X			X	X	X	R	X			X	X				E,L	Chlorate Process, AP Plant SI's and Transfer Lines). Located at a low spot at location of former tanks in LOU 53
N-6	53, 57		SA60-10B	10	X	X	X			X	X	X	R	X				X				E,L	(see LOU 53 summary for historical source) to evaluate worst case conditions, and for general coverage of LOU 57.
N-6	53, 57		SA60-20B	20	X	X	X			X	X	X	R	X				X				E,L	GW estimated at ~35 feet bgs.
N-6	53, 57		SA60-30B	30	R	R	R			R	R		R	R				R				B	
N-6	53, 57		SA60-33B	33	X	X	X			X	X	X		X				X				B,E,L	
N-6	53, 57		SA60-35B	35	R	R	R			R	R		R	R				R				A	
N-6	53, 57	SA105	SA105-0.0B	0.0																	X		Boring located to evaluate LOU 53 (AP Plant Area Tank Farm) and LOU 57 (AP Plant Transfer Lines to Sodium
N-6	53, 57		SA105-0.5B	0.5	X	X	X	X		X	X	X	R				X	X				E,L	Chlorate Process, AP Plant SI's and Transfer Lines). Located at a low spot at location of former tanks in LOU 53
N-6	53, 57		SA105-10B	10	X	X	X	X		X	X	X	R					X				E,L	(see LOU 53 summary for historical source) to evaluate worst case conditions, and for general coverage of LOU 57.
N-6	53, 57		SA105-20B	20	X	X	X	X		X	X	X	R					X				E,L	GW estimated at ~33 feet bgs.
N-6	53, 57		SA105-30B	30	R	R	R	R		R	R		R					R				B	
N-6	53, 57		SA105-31B	31	X	X	X	X		X	X	X						X				B,E,L	
N-6	53, 57		SA105-37B	37	R	R	R	R		R	R		R					R				A	
N-6	NA	SA150	SA150-0.0B	0.0																	X		Boring located to evaluate general Site-wide conditions, is not associated with a specific LOU.
N-6	NA		SA150-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				E	GW estimated at ~32 feet bgs.
N-6	NA		SA150-10B	10	X	X	X	X		X	X	X	R	X				X				E	
N-6	NA		SA150-20B	20	R	R	R	R		R	R	R	R	R				R				B	
N-6	NA		SA150-30B	30	X	X	X	X		X	X	X	R	X				X				B,E	
N-6	NA		SA150-35B	35	R	R	R	R		R	R	R	R	R				R				A	
N-6	NA	RSAN6	RSAN6-0.0B	0.0																	X		Boring located to evaluate general Site-wide conditions. Randomly located boring not associated with a specific LOU.
N-6	NA		RSAN6-0.5B	0.5	X	X	X	X		X	X		X	X			X	X					GW estimated at ~35 feet bgs.
N-6	NA		RSAN6-10B	10	X	X	X	X		X	X		Hold	X				X					
N-6	NA		RSAN6-20B	20	X	X	X	X		X	X		Hold	X				X				B	
N-6	NA		RSAN6-30B	30	R	R	R	R		R	R		R	R				R				B	
N-6	NA		RSAN6-33B	33	X	X	X	X		X	X		X	X				X				B	
N-6	NA		RSAN6-35B	35	R	R	R	R		R	R		R	R				R				A	
N-6	20	SA151	SA151-0.0B	0.0																	X		Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping). Located along LOU 20 piping to evaluate
N-6	20		SA151-0.5B	0.5	X	X	X	X		X	X		R	X			X	X				E,F	potential releases.
N-6	20		SA151-10B	10	X	X	X	X		X	X		R	X				X				E,F	GW estimated at ~41 feet bgs.
N-6	20		SA151-25B	25	X	X	X	X		X	X			X				X				B,E,F,S	
N-6	20		SA151-39B	39	X	X	X	X		X	X			X				X				B,E,F,S	
N-7	5, 57	SA49	SA49-0.0B	0.0																	X		Boring located to evaluate LOU 5 (Beta Ditch) and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process,
N-7	5, 57		SA49-0.5B	0.5	X	X	X	X	X	X	X	X	R	X			X	X				E,L,V,W,bb	AP Plant SIs and Transfer Lines). Located as a downslope stepout for LOU 5 to evaluate potential overflows releases
N-7	5, 57		SA49-10B	10	X	X	X	X	X	X	X	X	R	X				X				E,L,V,W	and for general coverage of LOU 57.
N-7	5, 57		SA49-20B	20	X	X	X	X	X	X	X	X	R	X				X				E,L,V,W	GW estimated at ~34 feet bgs.
N-7	5, 57		SA49-30B	30	R	R	R			R	R		R					R				B	
N-7	5, 57		SA49-32B	32	X	X	X	X	X	X	X	X		X				X				B,E,L,V,W,bb	
N-7	5, 57		SA49-35B	35	R	R	R			R	R		R					R				A	
N-7	5, 60	SA154	SA154-0.0B	0.0																	X		Boring located to evaluate LOU 5 (Beta Ditch) and LOU 60 (Acid Drain System) conveyance route. Located in the bottom
N-7	5, 60		SA154-0.5B	0.5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		L,P,W,Z	of the Eastern Diversion ditch of LOU 5 to evaluate underlying soil for potential impacts from historical upstream tributary
N-7	5, 60		SA154-10B	10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		L,P,W,Z	source flows into Beta Ditch. The former segment of LOU 60 conveyance system consisted of a flume that was situated
N-7	5, 60		SA154-20B	20	X	X	X	X	X	X	X	X	R	X				X				B,L,P,W	on the ground surface (0 feet bgs).
N-7	5		SA154-30B	30	R	R	R	R		R	R		R	R				R				B	GW estimated at ~35 feet bgs.
N-7	5, 60		SA154-33B	33	X	X	X	X	X	X	X	X	X	X	X			X	X	X		B,L,P,W,Z	
N-7	5		SA154-40B	40	R	R	R	R		R	R		R	R				R				A	
N-7	5	SA107	SA107-0.0B	0.0																	X		Boring located to evaluate LOU 5 (Beta Ditch). Located in the bottom of the Eastern Diversion Ditch to evaluate
N-7	5		SA107-0.5B	0.5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		L,P,W,Z	potential impacts from historical upstream tributary source flows into Beta Ditch.
N-7	5		SA107-10B	10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		L,P,W,Z	GW estimated at ~31 feet bgs.
N-7	5		SA107-20B	20	R	R	R			R	R		R	R				R				B	
N-7	5		SA107-29B	29	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		B,L,P,W,Z	
N-7	5		SA107-30B	30	R	R	R			R	R		R	R				R				A	
N-7	5		SA107-40B	40	R	R	R			R	R		R	R				R				A	
N-7	5, 20, 22, 23	RSAN7	RSAN7-0.0B	0.0																	X		Boring located to evaluate LOU 5 (Beta Ditch), LOU 20 (Pond C-1 and Associated Piping), LOU 22 (Pond WC-West
N-7	5, 20, 22, 23		RSAN7-0.5B	0.5	X	X	X	X	X	X	X	X	X	X			X	X				F,L,W,bb	Associated Piping), and LOU 23 (Pond WC-East Associated Piping). Randomly located in a low spot of the Eastern
N-7	5, 20, 22, 23		RSAN7-10B	10	X	X	X	X	X	X	X	X	Hold	X				X				F,L,W	Diversion Ditch of LOU 5 to evaluate possible releases and overflow runoff from LOU 20. Also to evaluate potential
N-7	5, 20, 22, 23		RSAN7-20B	20	R	R	R	R		R	R		R	R				R				B	releases from LOUs 22 and 23 piping.
N-7	5, 20, 22, 23		RSAN7-25B	25	X	X	X	X	X	X	X	X	Hold	X				X				B,F,L,W	GW estimated at ~40 feet bgs.
N-7	5, 20, 22, 23		RSAN7-30B	30	R	R	R	R		R	R		R	R				R				B	
N-7	5, 20, 22, 23		RSAN7-35B	35	R	R	R	R		R	R		R	R				R				B	
N-7	5, 20, 22, 23		RSAN7-38B	38	X	X	X	X	X	X	X	X	X	X				X				B,F,L,W,bb	
N-8	20	SA61	SA61-0.0B	0.0																	X		Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping). Located adjacent to a sharp bend in LOU 20
N-8	20		SA61-0.5B	0.5	X	X	X		X	X	X		R				X	X				E,F	outfall piping to evaluate possible pipeline releases and upslope of LOU 20 to evaluate
N-8	20		SA61-10B	10	X	X	X		X	X	X		R					X				E,F	overflow releases.
N-8	20		SA61-20B	20	R	R	R	R		R	R		R					R				B,E,F	GW estimated at ~32 feet bgs.
N-8	20		SA61-30B	30	X	X	X		X	X	X		R					X				B,E,F	
N-8	5, 20	SA158	SA158-0.0B	0.0																	X		Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping). Located adjacent to a sharp bend in LOU 20
N-8	5, 20		SA158-0.5B	0.5	X	X	X	X	X	X	X	X	R	X			X	X				E,F,L,V,W,bb	outfall piping to evaluate possible pipeline releases and upslope of LOU 20 to evaluate
N-8	5, 20		SA158-10B	10	X	X	X	X	X	X	X	X	R	X				X				E,F,L,V,W	overflow releases.
N-8	5, 20		SA158-20B	20	X	X	X	X	X	X	X	X	R	X				X				B,E,F,L,V,W	GW estimated at ~33 feet bgs.
N-8	5, 20		SA158-30B	30	R	R	R	R		R	R		R					R				B	
N-8	5, 20		SA158-31B	31	X	X	X	X	X	X	X	X		X				X				B,E,F,L,S,V,W,bb	

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Laboratory K. :					CAS - Kelso		CAS - Rochester									CAS - Houston		GEL - Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale for Revision	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
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		
Borings are organized by grid location as shown on Plate A - Starting point is on the northwestern most grid in Area II (M-2) and ending with the southeastern most grid in Area II (S-7).																							
O-4	n/a	SA54	SA54-0.0B	0.0																	X		Boring located to evaluate general site wide subsurface soil conditions and not associated with a specific LOU.
O-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.
O-4	n/a		SA54-10B	10	X	X	X	X		X	X	X	R	X				X				E,L	
O-4	n/a		SA54-20B	20	X	X	X	X		X	X	X	R	X				X				B,E,L	
O-4	n/a		SA54-30B	30	R	R	R	R		R	R		R	R				R				B	
O-4	n/a		SA54-31B	31	X	X	X	X		X	X	X		X				X				B,E,L	
O-4	n/a		SA54-37B	37	R	R	R	R		R	R		R	R				R				A	
O-5	45, 59, 60	SA41	SA41-0.0B	0.0																	X		Boring located to evaluate LOU 45 (Diesel Storage Tanks), LOU 59 (Storm Sewer System), and LOU 60 Acid Drain
O-5	45, 59, 60		SA41-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				E,L	System). Located on the perimeter of the former aboveground storage tank to evaluate potential releases (see text
O-5	45, 59, 60		SA41-10B	10	R	R	R	R		R	R		R	R				R				J	for historic details) and between LOUs 59 and 60 to evaluate possible piping releases.
O-5	45, 59, 60		SA41-12B	12	X	X	X	X		X	X	X	R	X				X				E,J,L	LOU 60 pipeline invert occurs at approximately 11 feet bgs.
O-5	45, 59, 60		SA41-20B	20	R	R	R	R		R	R		R	R				R				B	GW estimated at ~40 feet bgs.
O-5	45, 59, 60		SA41-25B	25	X	X	X	X		X	X	X		X				X				B,E,L	
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	X	X	X	X		X	X	X		X				X				B,E,L	
O-5	45, 59, 60		SA41-40B	40	R	R	R	R		R	R		R	R				R				A	
O-5	45	SA44	SA44-0.0B	0.0																	X		Boring located to evaluate LOU 45 (Diesel Storage Tanks), System). Located on the perimeter of the former
O-5	45		SA44-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				E,L	aboveground storage tank to evaluate potential releases (see text for historic details).
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				B	
O-5	45		SA44-25B	25	X	X	X	X		X	X	X		X				X				B,E,L	
O-5	45		SA44-30B	30	R	R	R	R		R	R		R	R				R				B	
O-5	45		SA44-40B	40	R	R	R	R		R	R		R	R				R				B	
O-5	45		SA44-42B	42	X	X	X	X		X	X	X		X				X				B,E,L	
O-5	45, 60	SA45	SA45-0.0B	0.0																	X		Boring located to evaluate LOU 45 (Diesel Storage Tanks) and LOU 60 (Acid Drain System). Located within the footprint
O-5	45, 60		SA45-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				E,L	of a former tank to evaluate potential subsurface releases and near LOU 60 manhole which is a high risk release
O-5	45, 60		SA45-10B	10	X	X	X	X		X	X	X	R	X				X				J,E,L	location.
O-5	45, 60		SA45-20B	20	R	R	R	R		R	R		R	R				R				B	LOU 60 pipeline invert occurs at approximately 9 feet bgs.
O-5	45, 60		SA45-25B	25	X	X	X	X		X	X	X		X				X				B,E,L	GW estimated at ~38 feet bgs.
O-5	45, 60		SA45-30B	30	R	R	R	R		R	R		R	R				R				B	
O-5	45, 60		SA45-36B	36	X	X	X	X		X	X	X		X				X				B,E,L	
O-5	45, 60		SA45-40B	40	R	R	R	R		R	R		R	R				R				A	
O-5	8, 60	SA106	SA106-0.0B	0.0																	X		Boring located to evaluate LOU 8 (Old P-3 Pond and Associated Conveyance Facilities) to further evaluate north edge
O-5	8, 60		SA106-0.5B	0.5	X	X	X	X	X	X	X	X	X	X			X	X	X	X		L,Q,Z	of pond where historic boring SB2-8 was drilled & sampled. New boring added per NDEP July 21, 2008).
O-5	8, 60		SA106-12B	12	X	X	X	X	X	X	X	X	X	X				X	X	X		J,L,Q	GW estimated at~37 feet bgs.
O-5	8, 60		SA106-20B	20	X	X	X	X	X	X	X	X	Hold	X				X				B,L,Q	LOU 60 pipeline invert occurs at approximately 11 ft bgs.
O-5	8, 60		SA106-35B	35	X	X	X	X	X	X	X	X	X	X				X	X	X		B,L,Q,Z	
O-5	8, 60	SA50	SA50-0.0B	0.0																	X		Boring located as a westward step out to LOU 8 (Old P-3 Pond and Associated Conveyance Facilities). For general
O-5	8, 60		SA50-0.5B	0.5	X	X	X	X	X	X	X	X	R	X			X	X				E,L,W,bb	site conditions and possible overflow release of surface runoff. Boring will also serve to evaluate for potential impacts
O-5	8, 60		SA50-10B	10	R	R	R	R		R	R		R	R				R				J	from LOU 60 (former Acid Drain System).
O-5	8, 60		SA50-12B	12	X	X	X	X	X	X	X	X		X				X				E,J,L,W	LOU 60 pipeline invert (bottom of pipeline) occurs at approx 11 feet bgs.
O-5	8, 60		SA50-20B	20	R	R	R	R		R	R		R	R				R				B	GW estimated at ~38 feet bgs.
O-5	8, 60		SA50-25B	25	X	X	X	X	X	X	X	X		X				X				B,E,L,W	
O-5	8, 60		SA50-30B	30	R	R	R	R		R	R		R	R				R				B	
O-5	8, 60		SA50-36B	36	X	X	X	X	X	X	X	X		X				X				B,E,L,W,bb	
O-5	7, 8, 9	SA53	SA53-0.0B	0.0																	X		Boring located to evaluate LOU 7 (Old P-2 Pond and Associated Conveyance Pond and Associated Conveyance
O-5	7, 8, 9		SA53-0.5B	0.5	X	X	X	X	X	X	X	X	R	X			X	X				E,L,W	Facilities), and LOU 9 (New P-2 Pond and Associated Piping). Located downslope between all three LOUs to
O-5	7, 8, 9		SA53-10B	10	X	X	X	X	X	X	X	X	R	X				X				E,L,W	evaluate potential overflow surface runoff releases.
O-5	7, 8, 9		SA53-20B	20	R	R	R	R		R	R		R	R				R				B	GW estimated at ~34 feet bgs.
O-5	7, 8, 9		SA53-25B	25	X	X	X	X	X	X	X	X		X				X				B,E,L,W	
O-5	7, 8, 9		SA53-30B	30	R	R	R	R		R	R		R	R				R				B	
O-5	7, 8, 9		SA53-32B	32	X	X	X	X	X	X	X	X		X				X				B,E,L,W	
O-5	7	SA102	SA102-0.0B	0.0																	X		Boring located to evaluate LOU 7 (Old P-2 Pond and Associated Conveyance Facilities) and LOU 8 (Old P-3 Facilities).
O-5	7		SA102-0.5B	0.5	X	X	X	X	X	X	X	X	R	X			X	X				E,L,W	Located at a lowspot in bottom of LOU 7 for worst case evaluation.
O-5	7		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				B	
O-5	7		SA102-30B	30	X	X	X	X	X	X	X	X		X				X				B,E,L,W	
O-5	7	SA109	SA109-0.0B	0.0																	X	G,Q	Boring located to evaluate LOU 7 (Old P-2 Pond and Associated Conveyance Facilities) in area near western
O-5	7		SA109-0.5B	0.5	X	X	X	X	X	X	X	X		X			X	X				Q,W	sidewall where soil staining was noted in 1991 observations. New boring added per NDEP (July 21, 2008).
O-5	7		SA109-10B	10	X	X	X	X	X	X	X	X		X				X				Q,W	GW estimated at ~36 feet bgs.
O-5	7		SA109-25B	25	X	X	X	X	X	X	X	X		X				X				B,Q,W	
O-5	7		SA109-34B	34	X	X	X	X	X	X	X	X		X				X				B,Q,W	
O-5	7	SA114	SA114-0.0B	0.0																	X	G,Q	Boring located to evaluate LOU 7 (Old P-2 Pond and Associated Conveyance Facilities) to evaluate pond floor area
O-5	7		SA114-0.5B	0.5	X	X	X	X	X	X	X	X		X			X	X				Q,W	where white encrustations were noted in 1991 observations. New boring added per NDEP (July 21, 2008).
O-5	7		SA114-10B	10	X	X	X	X	X	X	X	X		X				X				B,Q,W	GW estimated at ~32 feet bgs.
O-5	7		SA114-30B	30	X	X	X	X	X	X	X	X		X				X				B,Q,W	
O-5	45	SA153	SA153-0.0B	0.0																	X		Boring located to evaluate LOU 45 (Diesel Storage Tanks). Located beneath the footprint of a aboveground storage
O-5	45		SA153-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				E,L	tank to evaluate subsurface releases (See LOU 45 summary for historical data).
O-5	45		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				B	
O-5	45		SA153-25B	25	X	X	X	X		X	X	X		X				X				B,E,L	
O-5	45		SA153-30B	30	R	R	R	R		R	R		R	R				R				B	
O-5	45		SA153-38B	38	X	X	X	X		X	X	X		X				X				B,E,L	

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

Laboratory K. :					CAS - Kelso		CAS - Rochester									CAS - Houston		GEL - Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale for Revision	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
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		
Borings are organized by grid location as shown on Plate A - Starting point is on the northwestern most grid in Area II (M-2) and ending with the southeastern most grid in Area II (S-7).																							
O-5	45	SA172	SA172-0.0B	0.0																	X		Boring located to evaluate LOU 45 (Diesel Storage Tanks) potential releases.
O-5	45		SA172-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				E,L	Located beneath the footprint of a aboveground storage tank to evaluate subsurface releases (See LOU 45
O-5	45		SA172-10B	10	X	X	X	X		X	X	X	R	X				X				E,L	summary for historical data).
O-5	45, 59		SA172-20B	20	R	R	R	R		R	R		R	R				R				B	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				B	
O-5	45, 59		SA172-35B	35	R	R	R	R		R	R		R	R				R				B	
O-5	45		SA172-39B	39	X	X	X	X		X	X	X		X				X				B,E,L	
O-5	45	RSAO5	RSAO5-0.0B	0.0																	X		Boring located to evaluate LOU 45 (Diesel Storage Tanks). Randomly located within LOU 45 to evaluate possible
O-5	45		RSAO5-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X				E,L	surface runoff releases and to evaluate site wide conditions.
O-5	45		RSAO5-10B	10	X	X	X	X		X	X	X	Hold	X				X				E,L	GW estimated at ~43 feet bgs.
O-5	45		RSAO5-20B	20	R	R	R	R		R	R		R	R				R				B	
O-5	45		RSAO5-25B	25	X	X	X	X		X	X	X	Hold	X				X				B,E,L	
O-5	45		RSAO5-30B	30	R	R	R	R		R	R		R	R				R				B	
O-5	45		RSAO5-35B	35	R	R	R	R		R	R		R	R				R				B	
O-5	45		RSAO5-41B	41	X	X	X	X		X	X	X	X	X				X				B,E,L	
O-5	45	SA185	SA185-0.0B	0.0																	X		Boring located to evaluate LOU 45 (Diesel Storage Tanks), System). Located on the perimeter of the former
O-5	45		SA185-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				E,L	aboveground storage tank to evaluate potential releases (see text for historic details).
O-5	45		SA185-10B	10	X	X	X	X		X	X	X	R	X				X				E,L	GW estimated at ~43 feet bgs.
O-5	45		SA185-20B	20	R	R	R	R		R	R		R	R				R				B	
O-5	45		SA185-25B	25	X	X	X	X		X	X	X		X				X				B,E,L	
O-5	45		SA185-30B	30	R	R	R	R		R	R		R	R				R				B	
O-5	45		SA185-35B	35	R	R	R	R		R	R		R	R				R				B	
O-5	45		SA185-41B	41	X	X	X	X		X	X	X		X				X				B,E,L	
O-5	45	SA186	SA186-0.0B	0.0																	X		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	X	X	X	X		X	X	X	R	X			X	X				E,L	aboveground storage tank to evaluate potential releases (see text for historic details).
O-5	45		SA186-10B	10	X	X	X	X		X	X	X	R	X				X				E,L	GW estimated at ~39 feet bgs.
O-5	45		SA186-20B	20	R	R	R	R		R	R		R	R				R				B	
O-5	45		SA186-25B	25	X	X	X	X		X	X	X		X				X				B,E,L	
O-5	45		SA186-30B	30	R	R	R	R		R	R		R	R				R				B	
O-5	45		SA186-35B	35	R	R	R	R		R	R		R	R				R				B	
O-5	45		SA186-37B	37	X	X	X	X		X	X	X		X				X				B,E,L	
O-5	45, 59	SA187	SA187-0.0B	0.0																	X		Boring located to evaluate LOU 45 (Diesel Storage Tanks) and LOU 59 (Storm Sewer System). Located on the
O-5	45, 59		SA187-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				E,L	perimeter of the former aboveground storage tank area to evaluate potential releases (see text for historic details).
O-5	45, 59		SA187-10B	10	X	X	X	X		X	X	X	R	X				X				E,L	GW estimated at ~41 feet bgs.
O-5	45, 59		SA187-20B	20	R	R	R	R		R	R		R	R				R				B	
O-5	45, 59		SA187-25B	25	X	X	X	X		X	X	X		X				X				B,E,L	
O-5	45, 59		SA187-30B	30	R	R	R	R		R	R		R	R				R				B	
O-5	45, 59		SA187-35B	35	R	R	R	R		R	R		R	R				R				B	
O-5	45, 59		SA187-39B	39	X	X	X	X		X	X	X		X				X				B,E,L	
O-5	45	SA188	SA188-0.0B	0.0																	X		Boring located to evaluate LOU 45 (Diesel Storage Tanks) and LOU 59 (Storm Sewer System), and LOU 60 (Acid Drain
O-5	45		SA188-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				E,L	System). Located beneath the footprint of an aboveground storage tank to evaluate subsurface releases (See LOU 45
O-5	45		SA188-10B	10	X	X	X	X		X	X	X	R	X				X				E,J,L	summary for historical data).
O-5	45, 59, 60		SA188-20B	20	R	R	R	R		R	R		R	R				R				B	GW estimated at ~39 feet bgs.
O-5	45		SA188-25B	25	X	X	X	X		X	X	X		X				X				B,E,L	
O-5	45, 59, 60		SA188-30B	30	R	R	R	R		R	R		R	R				R				B	
O-5	45, 59, 60		SA188-35B	35	R	R	R	R		R	R		R	R				R				B	
O-5	45		SA188-37B	37	X	X	X	X		X	X	X		X				X				B,E,L	
O-6	45	SA40	SA40-0.0B	0.0																	X		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	X	X	X	X		X	X	X	R	X			X	X				E,L	System). Located on the perimeter of the former aboveground storage tank to evaluate potential releases (see text
O-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	45, 59, 60		SA40-20B	20	R	R	R	R		R	R		R	R				R				B	
O-6	45		SA40-25B	25	X	X	X	X		X	X	X		X				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				B	
O-6	45		SA40-41B	41	X	X	X	X		X	X	X		X				X				B,E,L	
O-6	45	SA42	SA42-0.0B	0.0																	X		Boring located to evaluate LOU 45 (Diesel Storage Tanks). Located at a low spot within the footprint of former
O-6	45		SA42-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				E,L	aboveground storage tank to evaluate potential releases.
O-6	45		SA42-10B	10	X	X	X	X		X	X	X	R	X				X				E,L	GW estimated at ~40 feet bgs.
O-6	45		SA42-20B	20	R	R	R	R		R	R		R	R				R				B	
O-6	45		SA42-25B	25	X	X	X	X		X	X	X		X				X				B,E,L	
O-6	45		SA42-30B	30	R	R	R	R		R	R		R	R				R				B	
O-6	45		SA42-38B	38	X	X	X	X		X	X	X		X				X				B	
O-6	45		SA42-40B	40	R	R	R	R		R	R		R	R				R				B,E,L	
O-6	45	SA43	SA43-0.0B	0.0																	X		Boring located to evaluate LOU 45 (Diesel Storage Tanks), LOU 59 (Storm Sewer System), and LOU 60 Acid Drain
O-6	45		SA43-0.5B	0.5	X	X	X	X		X	X		R	X			X	X				E	System). Located on the perimeter of the former aboveground storage tank to evaluate potential releases (see text
O-6	45		SA43-10B	10	X	X	X	X		X	X		R	X				X				E	for historic details) and between LOUs 59 and 60 to evaluate possible piping releases.
O-6	45		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		X	X			X				X				E	
O-6	45		SA43-30B	30	R	R	R	R		R	R		R	R				R				B	
O-6	45		SA43-40B	40	R	R	R	R		R	R		R	R				R				B	
O-6	45		SA43-43B	43	X	X	X	X		X	X			X				X				B,E	

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

			Laboratory K. :		CAS - Kelso		CAS - Rochester									CAS - Houston		GEL - Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale for Revision	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
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		
Borings are organized by grid location as shown on Plate A - Starting point is on the northwestern most grid in Area II (M-2) and ending with the southeastern most grid in Area II (S-7).																							
O-6	14	SA51	SA51-0.0B	0.0																	X		Boring located to evaluate LOU 14 (Pond P-1 and Associated Conveyance Piping). Located in a low spot in the
O-6	14		SA51-0.5B	0.5	X	X	X	X	X	X	X		R	X			X	X				E,W	bottom of LOU 14 to evaluate worst case conditions.
O-6	14		SA51-10B	10	X	X	X	X	X	X	X		R	X				X				E,W	GW estimated at ~38 feet bgs.
O-6	14		SA51-20B	20	R	R	R	R		R	R		R	R				R				B	
O-6	14		SA51-25B	25	X	X	X	X	X	X	X			X				X				B,E,W	
O-6	14		SA51-30B	30	R	R	R	R		R	R		R	R				R				B	
O-6	14		SA51-36B	36	X	X	X	X	X	X	X			X				X				B,E,W	
O-6	13	RSAO6	RSAO6-0.0B	0.0																	X		Boring located to evaluate LOU 13 (Pond S-1). Random boring in a lowspot in the bottom of LOU 13 to evaluate
O-6	13		RSAO6-0.5B	0.5	X	X	X	X	X	X	X		X	X			X	X				W	worst case conditions and site wide conditions.
O-6	13		RSAO6-10B	10	X	X	X	X	X	X	X		Hold	X				X				W	GW estimated at ~36 feet bgs.
O-6	13		RSAO6-20B	20	X	X	X	X		X	X		Hold	X				X				B,W	
O-6	13		RSAO6-30B	30	R	R	R	R		R	R		R	R				R				B	
O-6	13		RSAO6-34B	34	X	X	X	X	X	X	X		X	X				X				B,W	
O-6	13		RSAO6-35B	35	R	R	R	R		R	R		R	R				R				A	
O-6	9	SA200	SA200-0.0B	0.0																	X		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	9		SA200-0.5B	0.5	X	X	X	X	X	X	X		R	X			X	X				E,W	to evaluate worst case conditions.
O-6	9		SA200-10B	10	X	X	X	X	X	X	X		R	X				X				E,W	GW estimated at ~33 feet bgs.
O-6	9		SA200-20B	20	X	X	X	X	X	X	X		R	X				X				B,E,W	
O-6	9		SA200-30B	30	R	R	R	R		R	R		R	R				R				B	
O-6	9		SA200-31B	31	X	X	X	X	X	X	X			X				X				B,E,W	
P-5	59, 60	SA117	SA117-0.0B	0.0																	X	G,Q	Boring located to evaluate LOU 59 (Storm Sewer System). Random boring located near LOU 59 piping to evaluate
P-5	59, 60		SA117-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X	X	X		L,Q,Z	possible piping releases and for site wide conditions. New boring added per NDEP (July 21, 2008).
P-5	59, 60		SA117-9B	9	X	X	X	X		X	X	X	X	X				X	X	X		J,L,Q,Z	LOU 60 pipeline invert occurs approximately 8 feet bgs. GW estimated at ~43 feet bgs.
P-5	59, 60		SA117-25B	25	X	X	X	X		X	X	X	Hold	X				X				B,L,Q	
P-5	59, 60		SA117-41B	41	X	X	X	X		X	X	X	X	X				X	X	X		B,L,Q,Z	
Q-5	11	SA124	SA124-0.0B	0.0																	X		Boring located to evaluate LOU 11 (Sodium Chlorate Filter Cake Holding Area). Located adjacent to LOU 11 pad
Q-5	11		SA124-0.5B	0.5	X	X	X			X	X	X	R	X			X	X				E,L	at a likely runoff location to evaluate possible release runoff. Phase A boring SA05 located north (downslope) of LOU 11.
Q-5	11		SA124-10B	10	X	X	X			X	X	X	R	X				X				E,L	GW estimated at ~44 feet bgs.
Q-5	11		SA124-20B	20	R	R	R			R	R		R	R				R				B	
Q-5	11		SA124-25B	25	X	X	X			X	X	X		X				X				B,E,L	
Q-5	11		SA124-30B	30	R	R	R			R	R		R	R				R				B	
Q-5	11		SA124-35B	35	R	R	R			R	R		R	R				R				B	
Q-5	11		SA124-42B	42	X	X	X			X	X	X		X				X				B,E,L	
Q-5	59	RSAQ5	RSAQ5-0.0B	0.0																	X		Boring located to evaluate LOU 59 (Storm Sewer System). Random boring located near LOU 59 piping to evaluate
Q-5	59		RSAQ5-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X				L	possible piping releases and for site wide conditions.
Q-5	59		RSAQ5-10B	10	X	X	X	X		X	X	X	X	X				X				L	GW estimated at ~43 feet bgs.
Q-5	59		RSAQ5-20B	20	R	R	R	R		R	R		R	R				R				B	
Q-5	59		RSAQ5-25B	25	X	X	X	X		X	X	X	Hold	X				X				B,L	
Q-5	59		RSAQ5-30B	30	R	R	R	R		R	R		R	R				R				B	
Q-5	59		RSAQ5-35B	35	R	R	R	R		R	R		R	R				R				B	
Q-5	59		RSAQ5-41B	41	X	X	X	X		X	X	X	X	X				X				B,L	
Q-6	12, 59, 60	SA125	SA125-0.0B	0.0																	X		Boring located to evaluate LOU 12 (Hazardous Waste Storage Area), LOU 59 (Storm Sewer System), and LOU 60
Q-6	12, 59, 60		SA125-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				E,L	(Acid DrainSystem). Located downslope of LOU 12 to evaluate surface runoff releases and adjacent to LOU 59 and 60
Q-6	12, 59, 60		SA125-10B	10	X	X	X	X		X	X	X	R	X				X				E,L	piping to evaluate high risk release locations (Manhole).
R-6	12, 59, 60		SA125-20B	20	R	R	R	R		R	R		R	R				R				B	LOU 60 pipeline invert occurs at approximately 9 feet bgs.
Q-6	12, 59, 60		SA125-25B	25	X	X	X	X		X	X	X		X				X				B,E,L	GW estimated at ~41 feet bgs.
R-6	12, 59, 60		SA125-30B	30	R	R	R	R		R	R		R	R				R				B	
R-6	12, 59, 60		SA125-35B	35	R	R	R	R		R	R		R	R				R				B	
Q-6	12, 59, 60		SA125-39B	39	X	X	X	X		X	X	X		X				X				B,E,L	
Q-6	15, 60	SA126	SA126-0.0B	0.0																	X		Boring located to evaluate LOU 15 (Platinum Drying Unit) and LOU 60 (Acid Drain System). Located as close as
Q-6	15, 60		SA126-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				E,H,L,bb	possible and downslope of LOU 15 to evaluate potential surface runoff releases and adjacent to LOU 60 piping to
Q-6	15, 60		SA126-10B	10	X	X	X	X		X	X	X	R	X				X				E,H,L	evaluate local piping releases.
Q-6	15, 60		SA126-18B	18	X	X	X			X	X	X		X				X				E,H,J,L	LOU 60 pipeline invert occurs at approximately 17 feet bgs.
Q-6	15, 60		SA126-20B	20	R	R	R	R		R	R		R	R				R				B	GW estimated at ~42 feet bgs.
Q-6	15, 60		SA126-25B	25	X	X	X	X		X	X	X		X				X				B,E,H,L	
Q-6	15, 60		SA126-30B	30	R	R	R	R		R	R		R	R				R				B	
Q-6	15, 60		SA126-35B	35	R	R	R	R		R	R		R	R				R				B	
Q-6	15, 60		SA126-40B	40	X	X	X	X		X	X	X		X				X				B,E,H,L,bb	
Q-6	59	SA136	SA136-0.0B	0.0																	X		Boring located to evaluate for potential impacts associated with LOU 59 (Storm Sewer System) pipeline segment/junction.
Q-6	59		SA136-0.5B	0.5	X	X	X	X		X	X		X	X			X	X	X	X		Q,W,Z	GW estimated at ~42 feet bgs. New boring added per NDEP (July 21, 2008).
Q-6	59		SA136-10B	10	X	X	X	X		X	X		X	X				X	X	X		Q,W,Z	
Q-6	59		SA136-25B	25	X	X	X	X		X	X		Hold	X				X				B,Q,W	
Q-6	59		SA136-40B	40	X	X	X	X		X	X		X	X				X	X	X		B,Q,W,Z	
Q-6	43, 59, 60	RSAQ6	RSAQ6-0.0B	0.0																	X		Boring located nearby LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning), LOU 59 Storm
Q-6	43, 59, 60		RSAQ6-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X				L,bb	Sewer System), and LOU 60 (Acid Drain System). Located downslope of OU 43 to evaluate potential subsurface
Q-6	43, 59, 60		RSAQ6-10B	10	X	X	X	X		X	X	X	Hold	X				X				L	releases and near LOU 60 piping to evaluate local piping releases.
Q-6	43, 59, 60		RSAQ6-20B	20	R	R	R	R		R	R		R	R				R				B	LOU 60 pipeline invert occurs at approximately 19 feet bgs.
Q-6	43, 59, 60		RSAQ6-25B	25	X	X	X	X		X	X	X	Hold	X				X				B,L	GW estimated at ~40 feet bgs.
Q-6	43, 59, 60		RSAQ6-30B	30	R	R	R	R		R	R		R	R				R				B	
Q-6	43, 59, 60		RSAQ6-35B	35	R	R	R	R		R	R		R	R				R				B	

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

				Laboratory K. :	CAS - Kelso		CAS - Rochester									CAS - Houston		GEL - Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale for Revision	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
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		
Borings are organized by grid location as shown on Plate A - Starting point is on the northwestern most grid in Area II (M-2) and ending with the southeastern most grid in Area II (S-7).																							
Q-6	43, 59, 60		RSAQ6-38B	38	X	X	X	X		X	X	X	X	X				X				B,L,bb	
R-5	36	SA133	SA133-0.0B	0.0																	X		Boring located to evaluate LOU 36 (Former Satellite Accumulation Point, Unit 3, Maintenance Shop). Located in
R-5	36		SA133-0.5B	0.5	X	X	X	X		X	X	X	R		X		X	X				E,L,P,U	damaged pavement area within LOU 36 to evaluate worst case location of surface releases.
R-5	36		SA133-10B	10	X	X	X	X		X	X	X	R					X				E,L,U	GW estimated at ~33 feet bgs.
R-5	36		SA133-20B	20	X	X	X	X		X	X	X	R					X				B,E,L,U	Borehole for SA133 will be converted into monitoring well M-146.
R-5	36		SA133-30B	30	R	R	R	R		R	R		R					R				B	
R-5	36		SA133-31B	31	X	X	X	X		X	X	X			X			X				B,E,L,P,U	
R-5	36		SA133-35B	35	R	R	R	R		R	R		R					R				A	
R-6	59, 60	SA30	SA30-0.0B	0.0																	X		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	X	X	X	X		X	X	X	R	X			X	X				E,L	and 60 piping to evaluate possible local piping releases and for general site coverage in Unit Buildings area.
R-6	59, 60		SA30-9B	9	X	X	X	X		X	X	X	R	X				X				E,L	LOU 60 pipeline invert occurs at approximately 8 feet bgs.
R-6	59, 60		SA30-10B	10	R	R	R	R		R	R		R	R				R				B	GW estimated at ~40 feet bgs.
R-6	59, 60		SA30-20B	20	R	R	R	R		R	R		R	R				R				B	
R-6	59, 60		SA30-25B	25	X	X	X	X		X	X	X		X				X				B,E,L	
R-6	59, 60		SA30-30B	30	R	R	R	R		R	R		R	R				R				B	
R-6	59, 60		SA30-35B	35	R	R	R	R		R	R		R	R				R				B	
R-6	59, 60		SA30-38B	38	X	X	X	X		X	X	X		X				X				B,E,L	
R-6	43	SA31	SA31-0.0B	0.0																	X		Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning). Located
R-6	43		SA31-0.5B	0.5	X	X	X			X	X		R	X			X	X				E,P,V	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	X	X			X	X		R	X				X				E,V	GW estimated at ~34 feet bgs.
R-6	43		SA31-20B	20	X	X	X			X	X		R	X				X				B,E,V	
R-6	43		SA31-30B	30	R	R	R			R	R		R					R				V	
R-6	43		SA31-32B	32	X	X	X			X	X			X				X				B,E,P,V	
R-6	43		SA31-35B	35	R	R	R			R	R		R					R				A	
R-6	43, 60	SA32	SA32-0.0B	0.0																	X		Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning), and LOU 60
R-6	43, 60		SA32-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				E,L,V	(Acid DrainSystem). Located within the footprint of LOU 43 as a worst case location and also located near LOU 60
R-6	43, 60		SA32-9B	9	X	X	X	X		X	X	X	R	X				X				E,J,L,V	piping to evaluate local piping releases near a manhole.
R-6	43, 60		SA32-10B	10	R	R	R	R		R	R		R					R				B	LOU 60 pipeline invert occurs at approximately 8 feet bgs.
R-6	43, 60		SA32-20B	20	R	R	R	R		R	R		R					R				B	GW estimated at ~39 feet bgs.
R-6	43, 60		SA32-25B	25	X	X	X	X		X	X	X		X				X				B,E,L,V	
R-6	43, 60		SA32-30B	30	R	R	R	R		R	R		R					R				B	
R-6	43, 60		SA32-35B	35	R	R	R	R		R	R		R					R				B	
R-6	43, 60		SA32-37B	37	X	X	X	X		X	X	X		X				X				B,E,L,V	
R-6	43	SA161	SA161-0.0B	0.0																	X		Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning).
R-6	43		SA161-0.5B	0.5	X	X	X			X	X	X	R	X			X	X				E,L,V	Co-located with SG70 to compare VOC results, and for general site coverage.
R-6	43		SA161-10B	10	X	X	X			X	X	X	R	X				X				E,L,V	GW estimated at ~39 feet bgs.
R-6	43		SA161-20B	20	R	R	R			R	R		R					R				B	
R-6	43		SA161-25B	25	X	X	X			X	X	X		X				X				B,E,L,V	
R-6	43		SA161-30B	30	R	R	R			R	R		R					R				B	
R-6	43		SA161-35B	35	R	R	R			R	R		R					R				B	
R-6	43		SA161-37B	37	X	X	X			X	X	X		X				X				B,E,L,V	
R-6	43	SA208	SA208-0.0B	0.0																	X		Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning). Located
R-6	43		SA208-0.5B	0.5	X	X	X	X		X	X		R	X			X	X				E,F,V,W	in the basement footprint of LOU 43 as a worst case location to evaluate surface releases.
R-6	43		SA208-10B	10	X	X	X	X		X	X		R	X				X				E,F,V,W	GW estimated at ~39 feet bgs.
R-6	43		SA208-20B	20	R	R	R			R	R		R					R				B	
R-6	43		SA208-25B	25	X	X	X	X		X	X			X				X				B,E,F,V,W	
R-6	43		SA208-30B	30	R	R	R			R	R		R					R				B	
R-6	43		SA208-35B	35	R	R	R			R	R		R					R				B	
R-6	43		SA208-37B	37	X	X	X	X		X	X			X				X				B,E,F,V,W	
R-6	43, 59, 60	RSAR6	RSAR6-0.0B	0.0																	X		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			X	X				L	and LOU 59 (Storm Sewer System) and LOU 60 (Acid Drain System). Random boring located near LOU 43 as a
R-6	43, 59, 60		RSAR6-9B	9	X	X	X	X		X	X	X	Hold	X				X				J,L	stepout for general coverage, adjacent to LOU 59 and 60 piping to evaluate for potential releases and for area-wide
R-6	43, 59, 60		RSAR6-10B	10	R	R	R	R		R	R		R	R				R				J	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	43, 59, 60		RSAR6-25B	25	X	X	X	X		X	X	X	Hold	X				X				B,L	GW estimated at ~39 feet bgs.
R-6	43, 59, 60		RSAR6-30B	30	R	R	R	R		R	R		R	R				R				B	
R-6	43, 59, 60		RSAR6-35B	35	R	R	R	R		R	R		R	R				R				B	
R-6	43, 59, 60		RSAR6-37B	37	X	X	X	X		X	X	X	X	X				X				B,L	
S-7	29, WAPA	SA122	SA122-0.0B	0.0																	X		Boring located to evaluate LOU 29 (Solid Waste Dumpsters). Located within the footprint of LOU 29 at an area
S-7	29, WAPA		SA122-0.5B	0.5	X	X	X	X		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	X	X		X	X		R					X				E,W	GW estimated at ~33 feet bgs.
S-7	29, WAPA		SA122-20B	20	X	X	X	X		X	X							X				B,E,S,W	
S-7	29, WAPA		SA122-31B	31	X	X	X	X		X	X				X			X				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	29, WAPA		SA170-0.5B	0.5	X	X	X	X		X	X		R		X		X	X				E,P,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		SA170-10B	10	X	X	X	X		X	X		R					X				E,W	south.
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		SA170-31B	31	X	X	X	X		X	X				X			X				B,E,P,S,W	
Number of Borings:		**87**																					

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

			Laboratory K. :		CAS - Kelso		CAS - Rochester									CAS - Houston		GEL - Charleston, SC	STL-Denver	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[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	Rationale for Revision	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
Borings are organized by grid location as shown on Plate A - Starting point is on the northwestern most grid in Area II (M-2) and ending with the southeastern most grid in Area II (S-7).																							
Synthetic Precipitate Leaching Procedure (SPLP) Samples :																						Geotechnical Tests[12.]	
L-6	55	RSAL6	RSAL6-0.5	0.5	X	X	X	X		X	X		X	X				X				X	Soil sample collected from the southeast corner of LOU 55 (Area Affected by July 1990 Fire) to evaluate leaching potential of Site-related analytes from Alluvium (Qal) soils. Expected soil type: Gravelly Sand.
L-6	55	RSAL6	RSAL6-DD	28 DD*	X	X	X	X		X	X		X	X				X				X	**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 36 feet bgs. Groundwater is expected to occur at approximately 30 feet bgs. Expected soil type: Calichified Gravelly Sand.
M-4	5	SA128	SA128-10	10	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	Soil sample collected from within LOU 5 (Beta Ditch) at the confluence of the Stauffer Extension and the out-flow from LOU 59 (Storm Sewer System) to evaluate leaching potential of Site-related analytes. Expected soil type: Sand.
M-4	5	SA128	SA128-DD	29 DD*	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	**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 30 feet bgs. Groundwater is expected to occur at approximately 31 feet bgs. Expected soil type: Sand.
M-6	5, 16, 17, 57, 60	SA64	SA64-10	10	X	X	X	X		X	X	X	R	X				X				X	Soil sample collected from within LOU 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer Lines) to evaluate leaching potential of Site-related analytes from Alluvium (Qal) soils. Expected soil type: Gravelly Sand.
M-6	5, 16, 17, 57, 60	SA64	SA64-DD	21 DD*	X	X	X	X		X	X	X	R	X				X				X	**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 26 feet bgs. Groundwater is expected to occur at approximately 23 feet bgs. Expected soil type: Calichified Gravelly Sand.
O-5	7	SA102	SA102-10	10	X	X	X	X	X	X	X	X	R	X				X				X	Soil sample collected within the boundaries of LOU 7 (Old P-2 Pond and Associated Conveyance Facilities) to evaluate leaching potential of Site-related analytes. Expected soil type: Gravelly Sand.
O-5	7	SA102	SA102-DD	30 DD*	X	X	X	X	X	X	X	X	R	X				X				X	**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 39 feet bgs. Groundwater is expected to occur at approximately 32 feet bgs. Expected soil type: Calichified Gravel.
R-6	59, 60	SA30	SA30-9	9	X	X	X	X		X	X	X	R	X				X				X	Soil sample collected west of LOU 43 (Old Sodium Plant Decommissioning and Unit-4 Basement) to evaluate leaching potential of Site-related analytes. Expected soil type: Sand with caliche lens.
R-6	59, 60	SA30	SA30-10	10	R	R	R			R	R		R	R				R				R	
R-6	59, 60	SA30	SA30-DD	35 DD*	X	X	X	X		X	X	X	R	X				X				X	**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 33 feet bgs. Groundwater is expected to occur at approximately 40 feet bgs. Expected soil type: Sand.
Number of Soil Samples	**Subtotal Sample Count:**				**319**	**319**	**319**	**259**	**107**	**319**	**319**	**261**	**70**	**273**	**34**	**11**	**86**	**319**	**42**	**42**	**86**	**10**	
	QA/QC Samples:																						
	Field Duplicates (10%)				32	32	32	26	11	32	32	27	7	28	4	2	9	32	5	5	0	0	
	Field Blanks				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	
	Equipment Rinsate Blanks				16	16	16	13	5	16	16	13	4	14	2	1	4	16	2	2	0	0	
	Trip Blank Samples				0	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	0	0	
	Matrix Spike (5%)				16	16	16	13	6	16	16	14	4	14	2	1	5	16	3	3	0	0	
	Matrix Spike Duplicate (5%)				16	16	16	13	6	16	16	14	4	14	2	1	1	16	3	3	0	0	
	Total Sample Count:				**400**	**400**	**400**	**325**	**151**	**415**	**400**	**330**	**90**	**344**	**45**	**17**	**106**	**400**	**56**	**56**	**86**	**10**	

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.
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, Beryllium, 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.
3.	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, CO_3, HCO_3), 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
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.
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).

Rational 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.
X	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.
A	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.
B	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). 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

Laboratory K. :					CAS - Kelso		CAS - Rochester								CAS - Houston		GEL - Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale for Revision	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
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		
Borings are organized by grid location as shown on Plate A - Starting point is on the northwestern most grid in Area II (M-2) and ending with the southeastern most grid in Area II (S-7).																						
E	OCP analysis was removed because OCPs were not created, stored, conveyed, or disposed at this location.																					
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 processes (historic and current) operate at ambient temperatures, and 2) Aroclor PCBs are typically associated with electrical transformer spills and transformers were not associated with this area.																					
G	New boring added by NDEP (July 21, 2008).																					
H	Platinum analysis was added to this sample by NDEP (July 21, 2008)																					
J	Soil sample will be collected at this depth because the depth is one-foot below pipeline invert.																					
K	Laboratory information was added to Table 2 to assist field sampling personnel in shipping the sample containers to the appropriate laboratory.																					
L	Cyanide analysis was added to this borning by the NDEP (July 21, 2008)																					
N	Boring was removed from the table because it is not located in Area II.																					
P	Aroclor and congener PCBs were added per NDEP (July 21, 2008).																					
Q	Analysis selected for this additional boring are consistent with the LOU packet for the represented LOU(s)																					
S	Soil boring was extended to groundwater, per NDEP (July 21, 2008).																					
U	NDEP requested (July 21, 2008) that 1,4-dioxane be added. 1,4-Dioxane is a standard analyte in the SVOC analysis.																					
V	SVOC analysis was added to this boring by NDEP (July 21, 2008).																					
W	TPH-DRO/ORO (and/or TPH-GRO) was added to this boring by NDEP (July 21, 2008).																					
Z	OPPs and OAs were added to this boring by Tronox for general coverage and to evaluate the potential transport of these constituents by wind and groundwater.																					
bb	OPPs and OAs for this boring were requested by NDEP (July 21, 2008); however, Tronox proposes not to sample this boring because it is located in an area considered not to have been potentially impacted by migration of off-site sources to the west.																					

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

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

						Laboratory :	CAS - Kelso		CAS - Rochester									CAS - Houston		GEL - Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	PTS Santa Fe Springs, CA	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
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[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 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	≥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 II (M-2) and ending with the southeastern most grid in Area II (S-7).																									
L-5	SA72	SA72-0.0B	0.0																				X		Boring located to evaluate LOU 31 (Drum Crushing & Recycling Area) and as a down gradient boring for LOU 19 (Pond AP-5).
L-5		SA72-0.5B	0.5				X	X	X			X	X	X					X	X					Boring is in drum storage area of LOU 31 and in an accessible low area down slope of LOU 19 to evaluate potential releases.
L-5		SA72-10B	10				X	X	X			X	X	X						X					GW estimated at ~31 feet bgs.
L-5		SA72-29B	29				X	X	X			X	X	X						X					
L-5	SA123	SA123-0.0B	0.0																				X		Boring located to evaluate LOU 30 (AP Area Pad 35), LOU 56 (AP Plant Area
L-5		SA123-0.5B	0.5				X	X	X			X	X	X					X	X					Old D-1 Building Wash-Down), and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate
L-5		SA123-10B	10				X	X	X			X	X	X						X					Process, AP Plant SI's and Transfer Lines). Located at logical runoff point for releases from LOU 30 pad as an upslope
L-5		SA123-27B	27				X	X	X			X	X	X						X					stepout for LOU 56 and downslope stepout for LOU 57.
																									GW estimated at ~29 feet bgs
L-5	SA167	SA167-0.0B	0.0																				X		Boring located to evaluate LOU 31 (Drum Crushing and Recycling Area). Located at former drum crusher location and
L-5		SA167-0.5B	0.5				X	X	X			X	X	X					X	X					downslope of LOU 56. Phase A boring SA19 is located downslope of the drum storage area.
L-5		SA167-10B	10				X	X	X			X	X	X						X					GW estimated at ~ 30 feet bgs.
L-5		SA167-10BD	10 (dup)				X	X	X			X	X	X						X					
L-5		SA167-28B	28				X	X	X			X	X	X						X					
L-5	SA173	SA173-0.0B	0.0																				X		Boring located to evaluate LOU 56 (AP Plant Area Old D-1 Building Wash-Down). Located adjacent to LOU 56 bourndary to
L-5		SA173-0.5B	0.5				X	X	X			X	X	X					X	X					evaluate potiential runoff releases to the west. Phase A boring SA19 is located downslope of the drum storage area.
L-5		SA173-0.5BD	0.5 (dup)				X	X	X			X	X	X					X	X					GW estimated at ~31 feet bgs.
L-5		SA173-10B	10				X	X	X			X	X	X						X					
L-5		SA173-29B	29				X	X	X			X	X	X						X					
L-5	SA179	SA179-0.0B	0.0																				X		Boring located to evaluate LOU 56 (AP Plant Area Old D-1 Building Wash-Down). Located adjacent to the LOU 56
L-5		SA179-0.5B	0.5				X	X	X			X	X	X					X	X					boundary to evaluate potiential runoff releases to the east. Phase A boring SA19 is located downslope of the drum
L-5		SA179-0.5B	0.5	X			X	X	X			X	X	X					X	X					storage area.
L-5		SA179-10B	10				X	X	X			X	X	X						X					GW estimated at ~31 feet bgs.
L-5		SA179-29B	29				X	X	X			X	X	X						X					
L-6	SA73	SA73-0.0B	0.0																				X		Boring located to evaluate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate
L-6		SA73-0.5B	0.5				X	X	X			X	X	X	X				X	X	X	X			Process, AP Plant SIs and Transfer Lines). Located as a downslope stepout to the north of LOU 57 for area wide coverage.
L-6		SA73-10B	10				X	X	X			X	X	X	Hold					X					GW estimated at ~30 feet bgs.
L-6		SA73-28B	28				X	X	X			X	X	X	X					X	X	X			
L-6	RSAL6	RSAL6-0.0B	0.0																				X		Boring located to evaluate LOU 55 (Area Affected by July 1990 Fire). Random location within the LOU to evaluate area wide issues.
L-6		RSAL6-0.5B	0.5				X	X	X	X		X	X		X	X			X	X					Phase A boring SA20 located in the northwest protion of LOU 55. GW estimated at ~30 feet bgs.
L-6		RSAL6-0.5B	0.5		X		X	X	X	X		X	X		X	X				X				X	SPLP sample must be of Quaternary Alluvium (Qal) soils.
L-6		RSAL6-10B	10				X	X	X	X		X	X		Hold	X				X					
L-6		RSAL6-28B	28				X	X	X	X		X	X		X	X				X					
L-6		RSAL6-28B	28		X		X	X	X	X		X	X		X	X				X				X	SPLP sample must be of Muddy Creek soils & must be dry. If soils not dry, don't collect sample. Choose another boring.
L-8	SA131	SA131-0.0B	0.0																				X		Boring located to evaluate LOU 5 (Beta Ditch). Located in ditch bottom near downstream end of the Beta Ditch to evaluate
L-8		SA131-0.5B	0.5				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				for potential impacts from historic discharges into Beta Ditch..
L-8		SA131-0.5BD	0.5 (dup)				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				GW estimated at ~29 feet bgs.
L-8		SA131-10B	10				X	X	X	X	X	X	X	X	X	X	X	X		X	X	X				
L-8		SA131-27B	27				X	X	X	X	X	X	X	X	X	X	X	X		X	X	X				
M-3	SA66	SA66-0.0B	0.0																				X		Boring located to evaluate LOU 5 (Beta Ditch). Located in the western ditch bottom to evaluate potential impacts from off-site sources
M-3		SA66-0.5B	0.5				X	X	X	X	X	X	X	X	X	X	X		X	X	X	X				sources to the west. Also, a point of comparison for discharge to the downstream Western Diversion Ditch.
M-3		SA66-0.5BD	0.5 (dup)				X	X	X	X	X	X	X	X	X	X	X		X	X	X	X				GW estimated at ~30 feet bgs.
M-3		SA66-10B	10				X	X	X	X	X	X	X	X	X	X	X			X	X	X				
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																				X		Boring located to evaluate LOU 5 (Beta Ditch). Located in the LOU 5 ditch bottom just downstream from the Western
M-4		SA128-0.5B	0.5				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				Diversion Ditch to evaluate inflow from the western and southwestern parts of Tronox and off-site facilities to the west.
M-4		SA128-10B	10				X	X	X	X	X	X	X	X	X	X	X	X		X	X	X				GW estimated at ~31 feet bgs.
M-4		SA128-10B	10		X		X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	SPLP sample must be of Quaternary Alluvium (Qal) soils.
M-4		SA128-29B	29				X	X	X	X	X	X	X	X	X	X	X	X		X	X	X				
M-4		SA128-29B	29 DD*		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 soils not dry, don't collect sample. Choose another boring.
M-5	SA65	SA65-0.0B	0.0																				X		Boring located to evaluate LOU 52 (AP Plant Screening Building, Dryer Building Process, AP Plant SIs and Transfer
M-5		SA65-0.5B	0.5				X	X	X			X	X	X		X			X	X					Lines). Located within LOU 52 in damaged pavement area to evaluate potiential releases and for general coverage of
M-5		SA65-10B	10				X	X	X			X	X	X		X				X					LOU 57.
M-5		SA65-20B	20				X	X	X			X	X	X		X				X					GW estimated at ~33 feet bgs.
M-5		SA65-31B	31				X	X	X			X	X	X		X				X					
M-5	SA70	SA70-0.0B	0.0																				X		Boring located to evaluate LOU 57 (AP Plant Transfer and Associated Piping) and LOU 57 (AP Plant
M-5		SA70-0.5B	0.5				X	X	X	X	X	X	X	X	X	X			X	X					Transfer Lines to Sodium Chlorate Lines to Sodium Chlorate Process, AP Plant SIs and Transfer Lines). Located for
M-5		SA70-10B	10				X	X	X	X	X	X	X	X	X	X				X					general coverage of LOU 57 and as a downslope stepout for possible releases from LOU 5.
M-5		SA70-30B	30				X	X	X	X	X	X	X	X	X	X				X					GW estimated at ~32 feet bgs.
M-5	SA104	SA104-0.0B	0.0																				X		Boring located to evaluate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP
M-5		SA104-0.5B	0.5				X	X	X	X	X	X	X	X	X	X			X	X					Plant SIs and Transfer Lines). Located in a low area near existing LOU 57 piping and as an upslope stepout from LOU 5.
M-5		SA104-10B	10				X	X	X	X	X	X	X	X	X	X				X					GW estimated at ~32 feet bgs.
M-5		SA104-10BD	10 (dup)				X	X	X	X	X	X	X	X	X	X				X					
M-5		SA104-30B	30				X	X	X	X	X	X	X	X	X	X				X					
M-5	SA129	SA129-0.0B	0.0																				X		Boring located to evaluate LOU 5 (Beta Ditch), LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant
M-5		SA129-0.5B	0.5				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				SIs and Transfer Lines). Located in a low spot within LOU 5 to evaluate potential impacts associated with historic
M-5		SA129-0.5BD	0.5 (dup)				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				discharges into Beta Ditch.
M-5		SA129-10B	10				X	X	X	X	X	X	X	X	X	X	X	X		X	X	X				GW estimated at ~31 feet bgs.
M-5		SA129-29B	29				X	X	X	X	X	X	X	X	X	X	X	X		X	X	X				
M-5	RSAM5	RSAM5-0.0B	0.0																				X		Boring located to evaluateLOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP
M-5		RSAM5-0.5B	0.5				X	X	X	X	X	X	X	X	X	X			X	X					Plant SIs and Transfer Lines). Randomly located as an upslope stepout for LOU 5 and general coverage for LOU 57.
M-5		RSAM5-0.5BD	0.5 (dup)				X	X	X	X	X	X	X	X	X	X			X	X					GW estimated at ~30 feet bgs.
M-5		RSAM5-10B	10				X	X	X	X	X	X	X	X	Hold	X				X					
M-5		RSAM5-28B	28				X	X	X	X	X	X	X	X	X	X				X					

						Laboratory :	CAS - Kelso		CAS - Rochester									CAS - Houston		GEL - Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	PTS Santa Fe Springs, CA	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
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[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 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	≥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 II (M-2) and ending with the southeastern most grid in Area II (S-7).																									
M-6	SA64	SA64-0.0B	0.0																				X		Boring located to evaluate LOUs 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer Lines), LOU 57 (AP
M-6		SA64-0.5B	0.5			X	X	X	X		X	X	X		X			X	X					Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer Lines), and LOU 60 (Acid Drain System).
M-6		SA64-10B	10			X	X	X	X		X	X	X		X				X					Located in a low spot of bottom of LOU 16 and 17 for worst case coverage, near LOU 60 to evaluate possible piping
M-6		SA64-10B	10		X	X	X	X	X		X	X	X		X				X				X	releases, and for general coverage of LOU 57. GW estimated at ~23 feet bgs.
M-6		SA64-21B	21			X	X	X	X		X	X	X		X				X					10-Foot SPLP sample must be of Quaternary Alluvium (Qal) soils.
M-6		SA64-21B	21 DD*		X	X	X	X	X		X	X	X		X				X				X	21-Foot SPLP sample must be of Muddy Creek soils & must be dry. If soils not dry, don't collect sample. Choose another boring.
M-6	SA175	SA175-0.0B	0.0																				X		Boring located to evaluate LOU 5 (Beta Ditch), LOU 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer
M-6		SA175-0.5B	0.5			X	X	X	X	X	X	X	X		X			X	X					Lines), and LOU 18 (Pond AP-4). Located in a low spot downslope of LOU 16 and 17. Upslope of LOU 5 to evaluate
M-6		SA175-10B	10			X	X	X	X	X	X	X	X		X				X					potential overflow releases from LOUs 5, 16, and 17.
M-6		SA175-28B	28			X	X	X	X	X	X	X	X		X				X					GW estimated at ~30 feet bgs.
M-6	RSAM6	RSAM6-0.0B	0.0																				X		Boring located to evaluate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer
M-6		RSAM6-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					Lines). Randomly located for general coverage of LOU 57 and for site wide coverage.
M-6		RSAM6-10B	10			X	X	X	X		X	X	X	Hold	X				X					GW estimated at ~30 feet bgs.
M-6		RSAM6-28B	28			X	X	X	X		X	X	X	X	X				X					
M-6		RSAM6-28BD	28 (dup)			X	X	X	X		X	X	X	X	X				X					
M-6	SA197	SA197-0.0B	0.0																				X		Boring located to evaluate LOUs 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer Lines) and LOU 57
M-6		SA197-0.5B	0.5			X	X	X			X	X	X		X			X	X					(AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer Lines). Located in a low spot
M-6		SA197-10B	10			X	X	X			X	X	X		X				X					of bottom of LOU 16 and 17 to evaluate worst case conditions and for general coverage of LOU 57.
M-6		SA197-10BD	10 (dup)			X	X	X			X	X	X		X				X					GW estimated at ~23 feet bgs.
M-6		SA197-21B	21			X	X	X			X	X	X		X				X					
M-6	SA198	SA198-0.0B	0.0																				X		Boring located to evaluate LOU 16 and 17 (Ponds AP-1 through AP-3 and Associated Transfer Lines), LOU 57 (AP
M-6		SA198-0.5B	0.5			X	X	X	X		X	X	X		X			X	X					Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer Lines), and LOU 60 (Acid Drain System).
M-6		SA198-10B	10			X	X	X	X		X	X	X		X				X					Located in a low spot of bottom of LOU 16 and 17 to evaluate worst case conditions and for general coverage of LOU 57
M-6		SA198-27B	27			X	X	X	X		X	X	X		X				X					and adjacent to the LOU 60 former conveyance flume to evaluate underlying soils for potential impacts from historical
																									releases. LOU 60 flume was on ground surface (0 feet bgs). GW estimated at ~29 feet bgs.
M-7	SA63	SA63-0.0B	0.0																				X		Boring located to evaluate LOU 18 (Pond AP-4), and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process,
M-7		SA63-0.5B	0.5			X	X	X			X	X	X					X	X					AP Plant SIs and Transfer Lines). Located in a low spot in the bottom of LOU 18 to evaluate worst case conditions and
M-7		SA63-10B	10			X	X	X			X	X	X						X					for general coverage of LOU 57.
M-7		SA63-10B	10	X		X	X	X			X	X	X						X					GW estimated at ~25 feet bgs.
M-7		SA63-23B	23			X	X	X			X	X	X						X					
M-7	SA86	SA86-0.0B	0.0																				X		Boring located to evaluate LOU 5 (Beta Ditch) and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process,
M-7		SA86-0.5B	0.5			X	X	X	X	X	X	X	X	X	X	X		X	X	X	X				AP Plant SIs and Transfer Lines). Located in the bottom of LOU 5 to evaluate potential impacts from historic discharges
M-7		SA86-10B	10			X	X	X	X	X	X	X	X	X	X	X			X	X	X				into Beta Ditch and for general coverage of LOU 57.
M-7		SA86-10BD	10 (dup)			X	X	X	X	X	X	X	X	X	X	X			X	X	X				GW estimated at ~30 feet bgs.
M-7		SA86-28B	28			X	X	X	X	X	X	X	X	X	X	X			X	X	X				
M-7	SA92	SA92-0.0B	0.0																				X		Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping) and LOU 5 (Beta Ditch). Located in bottom of
M-7		SA92-0.5B	0.5			X	X	X	X	X	X	X	X	X	X	X		X	X	X	X				Eastern Diversion Ditche to evaluate upstream tributary releases and potiential overflow releases from LOU 20.
M-7		SA92-10B	10			X	X	X	X	X	X	X	X	X	X	X			X	X	X				GW estimated at ~33 feet bgs.
M-7		SA92-10B	10	X		X	X	X	X	X	X	X	X	X	X	X			X	X	X				
M-7		SA92-20B	20			X	X	X	X	X	X	X	X	Hold	X				X						
M-7		SA92-31B	31			X	X	X	X	X	X	X	X	X	X	X			X	X	X				
M-7	SA155	SA155-0.0B	0.0																				X		Boring located to evaluate LOU 22 (Pond WC-West Associated Piping), LOU 23 (Pond WC-East Associated Piping),
M-7		SA155-0.5B	0.5			X	X	X	X	X	X	X	X		X			X	X					and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer Lines). To evaluate
M-7		SA155-10B	10			X	X	X	X	X	X	X	X		X				X					potential LOU 22 and 23 piping releases and for general stepout coverage of LOU 57.
M-7		SA155-30B	30			X	X	X	X	X	X	X	X		X				X					GW estimated at ~32 feet bgs.
M-7	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		RSAM7-0.5B	0.5			X	X	X	X	X	X	X	X	X	X			X	X					AP Plant SIs and Transfer Lines). Randomly located to provide downslope overflow releases from LOU 5, general
M-7		RSAM7-10B	10			X	X	X	X	X	X	X	X	Hold	X				X					coverage for LOU 57, and for site wide coverage.
M-7		RSAM7-10BD	10 (dup)			X	X	X	X	X	X	X	X	Hold	X				X					GW estimated at ~30 feet bgs.
M-7		RSAM7-28B	28			X	X	X	X	X	X	X	X	X	X				X					
M-8	SA62	SA62-0.0B	0.0																				X		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		SA62-0.5B	0.5			X	X	X	X		X	X						X	X					inflow piping outlet to evaluate worst case conditions.
M-8		SA62-0.5BD	0.5 (dup)			X	X	X	X		X	X						X	X					GW estimated at ~26 feet bgs.
M-8		SA62-10B	10			X	X	X	X		X	X							X					
M-8		SA62-24B	24			X	X	X	X		X	X							X					
M-8	SA71	SA71-0.0B	0.0																				X		Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping). Located to evaluate
M-8		SA71-0.5B	0.5			X	X	X	X	X	X	X	X		X			X	X					possible overflow releases from historical LOU 5 Beta Ditch and overflows from lou 20; both LOUs are upslope
M-8		SA71-10B	10			X	X	X	X	X	X	X	X		X				X					of SA71.
M-8		SA71-25B	25			X	X	X	X	X	X	X	X		X				X					GW estimated at ~38 feet bgs.
M-8		SA71-36B	36			X	X	X	X	X	X	X	X		X				X					
M-8	SA144	SA144-0.0B	0.0																				X		Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping). Located to evaluate
M-8		SA144-0.5B	0.5			X	X	X	X	X	X	X	X		X			X	X					possible overflow releases from historical LOU 5 (before LOU 20 was constructed) and a low spot in bottom
M-8		SA144-10B	10			X	X	X	X	X	X	X	X		X				X					of LOU 20 for worst case conditions.
M-8		SA144-10BD	10 (dup)			X	X	X	X	X	X	X	X		X				X					GW estimated at ~30 feet bgs.
M-8		SA144-28B	28			X	X	X	X	X	X	X	X		X				X					
M-8	SA145	SA145-0.0B	0.0																				X		Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping). Located in a lowspot at the bottom and near an
M-8		SA145-0.5B	0.5			X	X	X	X		X	X						X	X					inlet pipe for worst case conditions in LOU 20.
M-8		SA145-0.5B	0.5	X		X	X	X	X		X	X						X	X					GW estimated at ~26 feet bgs.
M-8		SA145-10B	10			X	X	X	X		X	X							X					
M-8		SA145-24B	24			X	X	X	X		X	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

						Laboratory :	CAS - Kelso		CAS - Rochester									CAS - Houston		GEL - Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	PTS Santa Fe Springs, CA	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
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[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 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	≥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 II (M-2) and ending with the southeastern most grid in Area II (S-7).																									
M-8	RSAM8	RSAM8-0.0B	0.0																				X		Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping). Randomly located to evaluate possible overflow releases from LOU 20 and for site wide coverage. GW estimated at ~33 feet bgs.
M-8		RSAM8-0.5B	0.5				X	X	X	X	X	X	X	X	X	X			X	X					
M-8		RSAM8-10B	10				X	X	X	X	X	X	X	X	Hold	X				X					
M-8		RSAM8-20B	20				X	X	X	X	X	X	X	X	Hold	X				X					
M-8		RSAM8-20BD	20 (dup)				X	X	X	X	X	X	X	X	Hold	X				X					
M-8		RSAM8-31B	31				X	X	X	X	X	X	X	X	X	X				X					
N-4	SA165	SA165-0.0B	0.0																				X		Boring located to evaluate LOU 5 (Beta Ditch). Located in the bottom of the ditch to evaluate for potential impacts from storm sewer outfall into the Western Diversion Ditch segment of Beta Ditch. GW estimated at ~30 feet bgs.
N-4		SA165-0.5B	0.5				X	X	X	X		X	X	X	X	X	X		X	X	X	X			
N-4		SA165-10B	10				X	X	X	X		X	X	X	X	X	X			X	X	X			
N-4		SA165-10B	10	X			X	X	X	X		X	X	X	X	X	X			X	X	X			
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																				X		Boring located to evaluate LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer Lines). Located as an upslope stepout for general coverage of LOU 57. GW estimated at ~30 feet bgs.
N-5		SA58-0.5B	0.5				X	X	X			X	X	X	X	X			X	X	X	X			
N-5		SA58-10B	10				X	X	X			X	X	X	Hold	X				X					
N-5		SA58-28BD	28 (dup)				X	X	X			X	X	X	X	X				X	X	X			
N-5		SA58-28B	28				X	X	X			X	X	X	X	X				X	X	X			
N-5	SA94	SA94-0.0B	0.0																				X		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. GW estimated at ~31 feet bgs.
N-5		SA94-0.5B	0.5				X	X	X			X	X	X		X			X	X					
N-5		SA94-10B	10				X	X	X			X	X	X		X				X					
N-5		SA94-29B	29				X	X	X			X	X	X		X				X					
N-5	SA113	SA113-0.0B	0.0																				X		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. GW estimated at ~32 feet bgs.
N-5		SA113-0.5B	0.5				X	X	X			X	X	X		X			X	X					
N-5		SA113-10B	10				X	X	X			X	X	X		X				X					
N-5		SA113-30B	30				X	X	X			X	X	X		X				X					
N-5	RSAN5	RSAN5-0.0B	0.0																				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		RSAN5-0.5B	0.5				X	X	X	X		X	X	X	X	X			X	X					
N-5		RSAN5-10B	10				X	X	X	X		X	X	X	Hold	X				X					
N-5		RSAN5-20B	20				X	X	X	X		X	X	X	Hold	X				X					
N-5		RSAN5-33B	33				X	X	X	X		X	X	X	X	X				X					
N-6	SA196	SA196-0.0B	0.0																				X		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. GW estimated at ~31 feet bgs.
N-6		SA196-0.5B	0.5				X	X	X			X	X	X		X			X	X					
N-6		SA196-10B	10				X	X	X			X	X	X		X				X					
N-6		SA196-29B	29				X	X	X			X	X	X		X				X					
N-6	SA60	SA60-0.0B	0.0																				X		Boring located to evaluate LOU 53 (AP Plant Area Tank Farm) and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SI's and Transfer Lines). Located at a low spot at location of former tanks in LOU 53 (see LOU 53 summary for historical source) to evaluate worst case conditions, and for general coverage of LOU 57. GW estimated at ~35 feet bgs.
N-6		SA60-0.5B	0.5				X	X	X			X	X	X		X			X	X					
N-6		SA60-10B	10				X	X	X			X	X	X		X				X					
N-6		SA60-20B	20				X	X	X			X	X	X		X				X					
N-6		SA60-20BD	20 (dup)				X	X	X			X	X	X		X				X					
N-6		SA60-33B	33				X	X	X			X	X	X		X				X					
N-6	SA105	SA105-0.0B	0.0																				X		Boring located to evaluate LOU 53 (AP Plant Area Tank Farm) and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SI's and Transfer Lines). Located at a low spot at location of former tanks in LOU 53 (see LOU 53 summary for historical source) to evaluate worst case conditions, and for general coverage of LOU 57. GW estimated at ~33 feet bgs.
N-6		SA105-0.5B	0.5				X	X	X	X		X	X	X					X	X					
N-6		SA105-10B	10				X	X	X	X		X	X	X						X					
N-6		SA105-10BD	10 (dup)				X	X	X	X		X	X	X						X					
N-6		SA105-20B	20				X	X	X	X		X	X	X						X					
N-6		SA105-31B	31				X	X	X	X		X	X	X						X					
N-6	SA150	SA150-0.0B	0.0																				X		Boring located to evaluate general Site-wide conditions, is not associated with a specific LOU. GW estimated at ~32 feet bgs.
N-6		SA150-0.5B	0.5				X	X	X	X		X	X	X		X			X	X					
N-6		SA150-0.5B	0.5	X			X	X	X	X		X	X	X		X			X	X					
N-6		SA150-10B	10				X	X	X	X		X	X	X		X				X					
N-6		SA150-30B	30				X	X	X	X		X	X	X		X				X					
N-6	RSAN6	RSAN6-0.0B	0.0																				X		Boring located to evaluate general Site-wide conditions. Randomly located boring not associated with a specific LOU. GW estimated at ~35 feet bgs.
N-6		RSAN6-0.5B	0.5				X	X	X	X		X	X		X	X			X	X					
N-6		RSAN6-10B	10				X	X	X	X		X	X		Hold	X				X					
N-6		RSAN6-10BD	10 (dup)				X	X	X	X		X	X		Hold	X				X					
N-6		RSAN6-20B	20				X	X	X	X		X	X		Hold	X				X					
N-6		RSAN6-33B	33				X	X	X	X		X	X		X	X				X					
N-6	SA151	SA151-0.0B	0.0																				X		Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping). Located along LOU 20 piping to evaluate potential releases. GW estimated at ~41 feet bgs.
N-6		SA151-0.5B	0.5				X	X	X	X		X	X			X			X	X					
N-6		SA151-10B	10				X	X	X	X		X	X			X				X					
N-6		SA151-25B	25				X	X	X	X		X	X			X				X					
N-6		SA151-39B	39				X	X	X	X		X	X			X				X					
N-6		SA151-39BD	39 (dup)				X	X	X	X		X	X			X				X					
N-7	SA49	SA49-0.0B	0.0																				X		Boring located to evaluate LOU 5 (Beta Ditch) and LOU 57 (AP Plant Transfer Lines to Sodium Chlorate Process, AP Plant SIs and Transfer Lines). Located as a downslope stepout for LOU 5 to evaluate potential overflows releases and for general coverage of LOU 57. GW estimated at ~34 feet bgs.
N-7		SA49-0.5B	0.5				X	X	X	X	X	X	X	X		X			X	X					
N-7		SA49-10B	10				X	X	X	X	X	X	X	X		X				X					
N-7		SA49-20B	20				X	X	X	X	X	X	X	X		X				X					
N-7		SA49-32B	32				X	X	X	X	X	X	X	X		X				X					
N-7	SA154	SA154-0.0B	0.0																				X		Boring located to evaluate LOU 5 (Beta Ditch) and LOU 60 (Acid Drain System) conveyance route. Located in the bottom of the Eastern Diversion ditch of LOU 5 to evaluate underlying soil for potential impacts from historical upstream tributary source flows into Beta Ditch. The former segment of LOU 60 conveyance system consisted of a flume that was situated on the ground surface (0 feet bgs). GW estimated at ~35 feet bgs.
N-7		SA154-0.5B	0.5				X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			
N-7		SA154-10B	10				X	X	X	X	X	X	X	X	X	X	X			X	X	X			
N-7		SA154-20B	20				X	X	X	X	X	X	X	X		X				X					
N-7		SA154-33B	33				X	X	X	X	X	X	X	X	X	X	X			X	X	X			

						Laboratory :	CAS - Kelso		CAS - Rochester									CAS - Houston		GEL - Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	PTS Santa Fe Springs, CA	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
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[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 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	>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 II (M-2) and ending with the southeastern most grid in Area II (S-7).																									
N-7	SA107	SA107-0.0B	0.0																				X		Boring located to evaluate LOU 5 (Beta Ditch). Located in the bottom of the Eastern Diversion Ditch to evaluate
N-7		SA107-0.5B	0.5				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			potential impacts from historical upstream tributary source flows into Beta Ditch.
N-7		SA107-10B	10				X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			GW estimated at ~31 feet bgs.
N-7		SA107-10BD	10 (dup)				X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			
N-7		SA107-29B	29				X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			
N-7	RSAN7	RSAN7-0.0B	0.0																				X		Boring located to evaluate LOU 5 (Beta Ditch), LOU 20 (Pond C-1 and Associated Piping), LOU 22 (Pond WC-West
N-7		RSAN7-0.5B	0.5				X	X	X	X	X	X	X	X	X	X			X	X					Associated Piping), and LOU 23 (Pond WC-East Associated Piping). Randomly located in a low spot of the Eastern
N-7		RSAN7-10B	10				X	X	X	X	X	X	X	X	Hold	X				X					Diversion Ditch of LOU 5 to evaluate possible releases and overflow runoff from LOU 20. Also to evaluate potential
N-7		RSAN7-25B	25				X	X	X	X	X	X	X	X	Hold	X				X					releases from LOUs 22 and 23 piping.
N-7		RSAN7-38B	38				X	X	X	X	X	X	X	X	X	X				X					GW estimated at ~40 feet bgs.
N-8	SA61	SA61-0.0B	0.0																				X		Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping). Located adjacent to a sharp bend in LOU 20
N-8		SA61-0.5B	0.5				X	X	X		X	X	X						X	X					outfall piping to evaluate possible pipeline releases and upslope of LOU 20 to evaluate
N-8		SA61-10B	10				X	X	X		X	X	X							X					overflow releases.
N-8		SA61-30B	30				X	X	X		X	X	X							X					GW estimated at ~32 feet bgs.
N-8	SA158	SA158-0.0B	0.0																				X		Boring located to evaluate LOU 20 (Pond C-1 and Associated Piping). Located adjacent to a sharp bend in LOU 20
N-8		SA158-0.5B	0.5				X	X	X	X	X	X	X	X		X			X	X					outfall piping to evaluate possible pipeline releases and upslope of LOU 20 to evaluate
N-8		SA158-10B	10				X	X	X	X	X	X	X	X		X				X					overflow releases.
N-8		SA158-20B	20				X	X	X	X	X	X	X	X		X				X					GW estimated at ~33 feet bgs.
N-8		SA158-31B	31				X	X	X	X	X	X	X	X		X				X					
O-4	SA54	SA54-0.0B	0.0																				X		Boring located to evaluate general site wide subsurface soil conditions and not associated with a specific LOU.
O-4		SA54-0.5B	0.5				X	X	X	X		X	X	X		X			X	X					GW estimated at ~33 feet bgs.
O-4		SA54-10B	10				X	X	X	X		X	X	X		X				X					
O-4		SA54-20B	20				X	X	X	X		X	X	X		X				X					
O-4		SA54-31B	31				X	X	X	X		X	X	X		X				X					
O-4		SA54-31B	31	X			X	X	X	X		X	X	X		X				X					
O-5	SA41	SA41-0.0B	0.0																				X		Boring located to evaluate LOU 45 (Diesel Storage Tanks), LOU 59 (Storm Sewer System), and LOU 60 Acid Drain
O-5		SA41-0.5B	0.5				X	X	X	X		X	X	X		X			X	X					System). Located on the perimeter of the former aboveground storage tank to evaluate potential releases (see text
O-5		SA41-12B	12				X	X	X	X		X	X	X		X				X					for historic details) and between LOUs 59 and 60 to evaluate possible piping releases.
O-5		SA41-25B	25				X	X	X	X		X	X	X		X				X					LOU 60 pipeline invert occurs at approximately 11 feet bgs.
O-5		SA41-38B	38				X	X	X	X		X	X	X		X				X					GW estimated at ~40 feet bgs.
O-5	SA44	SA44-0.0B	0.0																				X		Boring located to evaluate LOU 45 (Diesel Storage Tanks), System). Located on the perimeter of the former
O-5		SA44-0.5B	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		SA44-10B	10				X	X	X	X		X	X	X		X				X					GW estimated at ~44 feet bgs.
O-5		SA44-25B	25				X	X	X	X		X	X	X		X				X					
O-5		SA44-42B	42				X	X	X	X		X	X	X		X				X					
O-5	SA45	SA45-0.0B	0.0																				X		Boring located to evaluate LOU 45 (Diesel Storage Tanks) and LOU 60 (Acid Drain System). Located within the footprint
O-5		SA45-0.5B	0.5				X	X	X	X		X	X	X		X			X	X					of a former tank to evaluate potential subsurface releases and near LOU 60 manhole which is a high risk release
O-5		SA45-0.5BD	0.5 (dup)				X	X	X	X		X	X	X		X			X	X					location. LOU 60 pipeline invert occurs at approximately 9 feet bgs.
O-5		SA45-10B	10				X	X	X	X		X	X	X		X				X					GW estimated at ~38 feet bgs.
O-5		SA45-25B	25				X	X	X	X		X	X	X		X				X					
O-5		SA45-36B	36				X	X	X	X		X	X	X		X				X					
O-5	SA106	SA106-0.0B	0.0																				X		Boring located to evaluate LOU 8 (Old P-3 Pond and Associated Conveyance Facilities) to further evaluate north edge
O-5		SA106-0.5B	0.5				X	X	X	X	X	X	X	X	X	X			X	X	X	X			of pond where historic boring SB2-8 was drilled & sampled. New boring added per NDEP July 21, 2008).
O-5		SA106-0.5B	0.5	X			X	X	X	X	X	X	X	X	X	X			X	X	X	X			GW estimated at~37 feet bgs.
O-5		SA106-12B	12				X	X	X	X	X	X	X	X	X	X				X	X	X			LOU 60 pipeline invert occurs at approximately 11 ft bgs.
O-5		SA106-20B	20				X	X	X	X	X	X	X	X	Hold	X				X					
O-5		SA106-35B	35				X	X	X	X	X	X	X	X	X	X				X	X	X			
O-5	SA50	SA50-0.0B	0.0																				X		Boring located as a westward step out to LOU 8 (Old P-3 Pond and Associated Conveyance Facilities). For general
O-5		SA50-0.5B	0.5				X	X	X	X	X	X	X	X		X			X	X					site conditions and possible overflow release of surface runoff. Boring will also serve to evaluate for potential impacts
O-5		SA50-12B	12				X	X	X	X	X	X	X	X		X				X					from LOU 60 (former Acid Drain System).
O-5		SA50-12BD	12 (dup)				X	X	X	X	X	X	X	X		X				X					LOU 60 pipeline invert (bottom of pipeline) occurs at approx 11 feet bgs.
O-5		SA50-25B	25				X	X	X	X	X	X	X	X	Hold	X				X					GW estimated at ~38 feet bgs.
O-5		SA50-36B	36				X	X	X	X	X	X	X	X		X				X					
O-5	SA53	SA53-0.0B	0.0																				X		Boring located to evaluate LOU 7 (Old P-2 Pond and Associated Conveyance Pond and Associated Conveyance
O-5		SA53-0.5B	0.5				X	X	X	X	X	X	X	X		X			X	X					Facilities), and LOU 9 (New P-2 Pond and Associated Piping). Located downslope between all three LOUs to
O-5		SA53-10B	10				X	X	X	X	X	X	X	X		X				X					evaluate potential overflow surface runoff releases.
O-5		SA53-25B	25				X	X	X	X	X	X	X	X		X				X					GW estimated at ~34 feet bgs.
O-5		SA53-32B	32				X	X	X	X	X	X	X	X		X				X					
O-5	SA102	SA102-0.0B	0.0																				X		Boring located to evaluate LOU 7 (Old P-2 Pond and Associated Conveyance Facilities) and LOU 8 (Old P-3 Facilities).
O-5		SA102-0.5B	0.5				X	X	X	X	X	X	X	X		X			X	X					Located at a lowspot in bottom of LOU 7 for worst case evaluation.
O-5		SA102-10B	10				X	X	X	X	X	X	X	X		X				X					GW estimated at ~32 feet bgs.
O-5		SA102-10B	10		X		X	X	X	X	X	X	X	X		X				X				X	10-Foot SPLP sample must be of Quaternary Alluvium (Qal) soils.
O-5		SA102-30B	30				X	X	X	X	X	X	X	X		X				X					
O-5		SA102-30B	30 DD*		X		X	X	X	X	X	X	X	X		X				X				X	SPLP sample must be of Muddy Creek soils & must be dry. If soils not dry, don't collect sample. Choose another boring.
O-5	SA109	SA109-0.0B	0.0																				X		Boring located to evaluate LOU 7 (Old P-2 Pond and Associated Conveyance Facilities) in area near western
O-5		SA109-0.5B	0.5				X	X	X	X	X	X	X	X		X			X	X					sidewall where soil staining was noted in 1991 observations. New boring added per NDEP (July 21, 2008).
O-5		SA109-10B	10				X	X	X	X	X	X	X	X		X				X					GW estimated at ~36 feet bgs.
O-5		SA109-25B	25				X	X	X	X	X	X	X	X		X				X					
O-5		SA109-34B	34				X	X	X	X	X	X	X	X		X				X					
O-5	SA114	SA114-0.0B	0.0																				X		Boring located to evaluate LOU 7 (Old P-2 Pond and Associated Conveyance Facilities) to evaluate pond floor area
O-5		SA114-0.5B	0.5				X	X	X	X	X	X	X	X		X			X	X					where white encrustations were noted in 1991 observations. New boring added per NDEP (July 21, 2008).
O-5		SA114-0.5BD	0.5 (dup)				X	X	X	X	X	X	X	X		X			X	X					GW estimated at ~32 feet bgs.
O-5		SA114-10B	10				X	X	X	X	X	X	X	X		X				X					
O-5		SA114-30B	30				X	X	X	X	X	X	X	X		X				X					

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

						Laboratory :	CAS - Kelso		CAS - Rochester									CAS - Houston		GEL - Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	PTS Santa Fe Springs, CA	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
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[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 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	>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 II (M-2) and ending with the southeastern most grid in Area II (S-7).																									
O-5	SA153	SA153-0.0B	0.0																				X		Boring located to evaluate LOU 45 (Diesel Storage Tanks). Located beneath the footprint of a aboveground storage
O-5		SA153-0.5B	0.5				X	X	X	X		X	X	X		X			X	X					tank to evaluate subsurface releases (See LOU 45 summary for historical data).
O-5		SA153-10B	10				X	X	X	X		X	X	X		X				X					GW estimated at ~40 feet bgs.
O-5		SA153-25B	25				X	X	X	X		X	X	X		X				X					
O-5		SA153-38B	38				X	X	X	X		X	X	X		X				X					
O-5	SA172	SA172-0.0B	0.0																				X		Boring located to evaluate LOU 45 (Diesel Storage Tanks) potential releases.
O-5		SA172-0.5B	0.5				X	X	X	X		X	X	X		X			X	X					Located beneath the footprint of a aboveground storage tank to evaluate subsurface releases (See LOU 45
O-5		SA172-10B	10				X	X	X	X		X	X	X		X				X					summary for historical data).
O-5		SA172-25B	25				X	X	X	X		X	X	X		X				X					GW estimated at ~41 feet bgs.
O-5		SA172-39B	39				X	X	X	X		X	X	X		X				X					
O-5	RSAO5	RSAO5-0.0B	0.0																				X		Boring located to evaluate LOU 45 (Diesel Storage Tanks). Randomly located within LOU 45 to evaluate possible
O-5		RSAO5-0.5B	0.5				X	X	X	X		X	X	X	X	X			X	X					surface runoff releases and to evaluate site wide conditions.
O-5		RSAO5-10B	10				X	X	X	X		X	X	X	Hold	X				X					GW estimated at ~43 feet bgs.
O-5		RSAO5-25B	25				X	X	X	X		X	X	X	Hold	X				X					
O-5		RSAO5-41B	41				X	X	X	X		X	X	X	X	X				X					
O-5	SA185	SA185-0.0B	0.0																				X		Boring located to evaluate LOU 45 (Diesel Storage Tanks), System). Located on the perimeter of the former
O-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		SA185-10B	10				X	X	X	X		X	X	X		X				X					GW estimated at ~43 feet bgs.
O-5		SA185-10B	10	X			X	X	X	X		X	X	X		X				X					
O-5		SA185-25B	25				X	X	X	X		X	X	X		X				X					
O-5		SA185-41B	41				X	X	X	X		X	X	X		X				X					
O-5	SA186	SA186-0.0B	0.0																				X		Boring located to evaluate LOU 45 (Diesel Storage Tanks), System). Located on the perimeter of the former
O-5		SA186-0.5B	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		SA186-10B	10				X	X	X	X		X	X	X		X				X					GW estimated at ~39 feet bgs.
O-5		SA186-25B	25				X	X	X	X		X	X	X		X				X					
O-5		SA186-37B	37				X	X	X	X		X	X	X		X				X					
O-5	SA187	SA187-0.0B	0.0																				X		Boring located to evaluate LOU 45 (Diesel Storage Tanks) and LOU 59 (Storm Sewer System). Located on the
O-5		SA187-0.5B	0.5				X	X	X	X		X	X	X		X			X	X					perimeter of the former aboveground storage tank area to evaluate potential releases (see text for historic details).
O-5		SA187-10B	10				X	X	X	X		X	X	X		X				X					GW estimated at ~41 feet bgs.
O-5		SA187-25B	25				X	X	X	X		X	X	X		X				X					
O-5		SA187-39B	39				X	X	X	X		X	X	X		X				X					
O-5	SA188	SA188-0.0B	0.0																				X		Boring located to evaluate LOU 45 (Diesel Storage Tanks) and LOU 59 (Storm Sewer System), and LOU 60 (Acid Drain
O-5		SA188-0.5B	0.5				X	X	X	X		X	X	X		X			X	X					System). Located beneath the footprint of an aboveground storage tank to evaluate subsurface releases (See LOU 45
O-5		SA188-10B	10				X	X	X	X		X	X	X		X				X					summary for historical data).
O-5		SA188-25B	25				X	X	X	X		X	X	X		X				X					GW estimated at ~39 feet bgs.
O-5		SA188-37B	37				X	X	X	X		X	X	X		X				X					
O-6	SA40	SA40-0.0B	0.0																				X		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				X	X	X	X		X	X	X		X			X	X					System). Located on the perimeter of the former aboveground storage tank to evaluate potential releases (see text
O-6		SA40-10B	10				X	X	X	X		X	X	X		X				X					for historic details) and between LOUs 59 and 60 to evaluate possible piping releases.
O-6		SA40-25B	25				X	X	X	X		X	X	X		X				X					GW estimated at ~43 feet bgs.
O-6		SA40-41B	41				X	X	X	X		X	X	X		X				X					
O-6		SA40-41B	41	X			X	X	X	X		X	X	X		X				X					
O-6	SA42	SA42-0.0B	0.0																				X		Boring located to evaluate LOU 45 (Diesel Storage Tanks). Located at a low spot within the footprint of former
O-6		SA42-0.5B	0.5				X	X	X	X		X	X	X		X			X	X					aboveground storage tank to evaluate potential releases.
O-6		SA42-10B	10				X	X	X	X		X	X	X		X				X					GW estimated at ~40 feet bgs.
O-6		SA42-10BD	10 (dup)				X	X	X	X		X	X	X		X				X					
O-6		SA42-25B	25				X	X	X	X		X	X	X		X				X					
O-6		SA42-38B	38				X	X	X	X		X	X	X		X				X					
O-6	SA43	SA43-0.0B	0.0																				X		Boring located to evaluate LOU 45 (Diesel Storage Tanks), LOU 59 (Storm Sewer System), and LOU 60 Acid Drain
O-6		SA43-0.5B	0.5				X	X	X	X		X	X			X			X	X					System). Located on the perimeter of the former aboveground storage tank to evaluate potential releases (see text
O-6		SA43-0.5BD	0.5 (dup)				X	X	X	X		X	X			X			X	X					for historic details) and between LOUs 59 and 60 to evaluate possible piping releases.
O-6		SA43-10B	10				X	X	X	X		X	X			X				X					GW estimated at ~45 feet bgs.
O-6		SA43-25B	25				X	X	X	X		X	X			X				X					
O-6		SA43-43B	43				X	X	X	X		X	X			X				X					
O-6	SA51	SA51-0.0B	0.0																				X		Boring located to evaluate LOU 14 (Pond P-1 and Associated Conveyance Piping). Located in a low spot in the
O-6		SA51-0.5B	0.5				X	X	X	X	X	X	X			X			X	X					bottom of LOU 14 to evaluate worst case conditions.
O-6		SA51-10B	10				X	X	X	X	X	X	X			X				X					GW estimated at ~38 feet bgs.
O-6		SA51-10BD	10 (dup)				X	X	X	X	X	X	X			X				X					
O-6		SA51-25B	25				X	X	X	X	X	X	X			X				X					
O-6		SA51-36B	36				X	X	X	X	X	X	X			X				X					
O-6	RSAO6	RSAO6-0.0B	0.0																				X		Boring located to evaluate LOU 13 (Pond S-1). Random boring in a lowspot in the bottom of LOU 13 to evaluate
O-6		RSAO6-0.5B	0.5				X	X	X	X	X	X	X		X	X			X	X					worst case conditions and site wide conditions.
O-6		RSAO6-10B	10				X	X	X	X	X	X	X		Hold	X				X					GW estimated at ~36 feet bgs.
O-6		RSAO6-20B	20				X	X	X	X		X	X		Hold	X				X					
O-6		RSAO6-34B	34				X	X	X	X	X	X	X		X	X				X					
O-6		RSAO6-34B	34	X			X	X	X	X	X	X	X		X	X				X					
O-6	SA200	SA200-0.0B	0.0																				X		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	X	X	X	X	X	X			X			X	X					to evaluate worst case conditions.
O-6		SA200-10B	10				X	X	X	X	X	X	X			X				X					GW estimated at ~33 feet bgs.
O-6		SA200-20B	20				X	X	X	X	X	X	X			X				X					
O-6		SA200-31B	31				X	X	X	X	X	X	X			X				X					
O-6		SA200-31BD	31 (dup)				X	X	X	X	X	X	X			X				X					

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Tronox Facility - Henderson, Nevada

						Laboratory :	CAS - Kelso		CAS - Rochester									CAS - Houston		GEL - Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	PTS Santa Fe Springs, CA	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
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[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 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	>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 II (M-2) and ending with the southeastern most grid in Area II (S-7).																									
P-5	SA117	SA117-0.0B	0.0																				X		Boring located to evaluate LOU 59 (Storm Sewer System). Random boring located near LOU 59 piping to evaluate
P-5		SA117-0.5B	0.5				X	X	X	X		X	X	X	X	X			X	X	X	X			possible piping releases and for site wide conditions. New boring added per NDEP (July 21, 2008).
P-5		SA117-9B	9				X	X	X	X		X	X	X	X	X				X	X	X			LOU 60 pipeline invert occurs approximately 8 feet bgs. GW estimated at ~43 feet bgs.
P-5		SA117-9B	9	X			X	X	X	X		X	X	X	X	X				X	X	X			
P-5		SA117-25B	25				X	X	X	X		X	X	X	Hold	X				X					
P-5		SA117-41B	41				X	X	X	X		X	X	X	X	X				X	X	X			
Q-5	SA124	SA124-0.0B	0.0																				X		Boring located to evaluate LOU 11 (Sodium Chlorate Filter Cake Holding Area). Located adjacent to LOU 11 pad
Q-5		SA124-0.5B	0.5				X	X	X			X	X	X		X			X	X					at a likely runoff location to evaluate possible release runoff. Phase A boring SA05 located north (downslope) of LOU 11.
Q-5		SA124-10B	10				X	X	X			X	X	X		X				X					GW estimated at ~44 feet bgs.
Q-5		SA124-10BD	10 (dup)				X	X	X			X	X	X		X				X					
Q-5		SA124-25B	25				X	X	X			X	X	X		X				X					
Q-5		SA124-42B	42				X	X	X			X	X	X		X				X					
Q-5	RSAQ5	RSAQ5-0.0B	0.0																				X		Boring located to evaluate LOU 59 (Storm Sewer System). Random boring located near LOU 59 piping to evaluate
Q-5		RSAQ5-0.5B	0.5				X	X	X	X		X	X	X	X	X			X	X					possible piping releases and for site wide conditions.
Q-5		RSAQ5-10B	10				X	X	X	X		X	X	X	X	X				X					GW estimated at ~43 feet bgs.
Q-5		RSAQ5-25B	25				X	X	X	X		X	X	X	Hold	X				X					
Q-5		RSAQ5-41B	41				X	X	X	X		X	X	X	X	X				X					
Q-5		RSAQ5-41B	41	X			X	X	X	X		X	X	X	X	X				X					
Q-6	SA125	SA125-0.0B	0.0																				X		Boring located to evaluate LOU 12 (Hazardous Waste Storage Area), LOU 59 (Storm Sewer System), and LOU 60
Q-6		SA125-0.5B	0.5				X	X	X	X		X	X	X		X			X	X					(Acid DrainSystem). Located downslope of LOU 12 to evaluate surface runoff releases and adjacent to LOU 59 and 60
Q-6		SA125-10B	10				X	X	X	X		X	X	X		X				X					piping to evaluate high risk release locations (Manhole).
Q-6		SA125-25B	25				X	X	X	X		X	X	X		X				X					LOU 60 pipeline invert occurs at approximately 9 feet bgs.
Q-6		SA125-39B	39				X	X	X	X		X	X	X		X				X					GW estimated at ~41 feet bgs.
Q-6		SA125-39BD	39 (dup)				X	X	X	X		X	X	X		X				X					
Q-6	SA126	SA126-0.0B	0.0																				X		Boring located to evaluate LOU 15 (Platinum Drying Unit) and LOU 60 (Acid Drain System). Located as close as
Q-6		SA126-0.5B	0.5				X	X	X	X		X	X	X		X			X	X					possible and downslope of LOU 15 to evaluate potential surface runoff releases and adjacent to LOU 60 piping to
Q-6		SA126-10B	10				X	X	X	X		X	X	X		X				X					evaluate local piping releases.
Q-6		SA126-18B	18				X	X	X			X	X	X		X				X					LOU 60 pipeline invert occurs at approximately 17 feet bgs.
Q-6		SA126-25B	25				X	X	X	X		X	X	X		X				X					GW estimated at ~42 feet bgs.
Q-6		SA126-40B	40				X	X	X	X		X	X	X		X				X					
Q-6		SA126-40B	40	X			X	X	X	X		X	X	X		X				X					
Q-6	SA136	SA136-0.0B	0.0																				X		Boring located to evaluate for potential impacts associated with LOU 59 (Storm Sewer System) pipeline segment/junction.
Q-6		SA136-0.5B	0.5				X	X	X	X		X	X		X	X			X	X	X	X			GW estimated at ~42 feet bgs. New boring added per NDEP (July 21, 2008).
Q-6		SA136-10B	10				X	X	X	X		X	X		X	X				X	X	X			
Q-6		SA136-25B	25				X	X	X	X		X	X		Hold	X				X					
Q-6		SA136-40B	40				X	X	X	X		X	X		X	X				X	X	X			
Q-6	RSAQ6	RSAQ6-0.0B	0.0																				X		Boring located nearby LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning), LOU 59 Storm
Q-6		RSAQ6-0.5B	0.5				X	X	X	X		X	X	X	X	X			X	X					Sewer System), and LOU 60 (Acid Drain System). Located downslope of OU 43 to evaluate potential subsurface
Q-6		RSAQ6-10B	10				X	X	X	X		X	X	X	Hold	X				X					releases and near LOU 60 piping to evaluate local piping releases.
Q-6		RSAQ6-25B	25				X	X	X	X		X	X	X	Hold	X				X					LOU 60 pipeline invert occurs at approximately 19 feet bgs.
Q-6		RSAQ6-38B	38				X	X	X	X		X	X	X	X	X				X					GW estimated at ~40 feet bgs.
Q-6		RSAQ6-38BD	38 (dup)				X	X	X	X		X	X	X	X	X				X					
R-5	SA133	SA133-0.0B	0.0																				X		Boring located to evaluate LOU 36 (Former Satellite Accumulation Point, Unit 3, Maintenance Shop). Located in
R-5		SA133-0.5B	0.5				X	X	X	X		X	X	X			X		X	X					damaged pavement area within LOU 36 to evaluate worst case location of surface releases.
R-5		SA133-10B	10				X	X	X	X		X	X	X						X					GW estimated at ~33 feet bgs.
R-5		SA133-20B	20				X	X	X	X		X	X	X						X					Borehole for SA133 will be converted into monitoring well M-146.
R-5		SA133-31B	31				X	X	X	X		X	X	X			X			X					
R-5		SA133-31B	31	X			X	X	X	X		X	X	X			X			X					
R-6	SA30	SA30-0.0B	0.0																				X		Boring located to evaluate LOU 59 (Storm Sewer System) and LOU 60 (Acid 'Drain System). Located near LOU 59
R-6		SA30-0.5B	0.5				X	X	X	X		X	X	X		X			X	X					and 60 piping to evaluate possible local piping releases and for general site coverage in Unit Buildings area.
R-6		SA30-9B	9				X	X	X	X		X	X	X		X				X					LOU 60 pipeline invert occurs at approximately 8 feet bgs. GW estimated at ~40 feet bgs.
R-6		SA30-9B	9		X		X	X	X	X		X	X	X		X				X				X	9-Foot SPLP sample must be of Quaternary Alluvium (Qal) soils.
R-6		SA30-25B	25				X	X	X	X		X	X	X		X				X					
R-6		SA30-35B	35		X		X	X	X	X		X	X	X		X				X				X	SPLP sample must be of Muddy Creek soils & must be dry. If soils not dry, don't collect sample. Choose another boring.
R-6		SA30-38B	38				X	X	X	X		X	X	X		X				X					
R-6	SA31	SA31-0.0B	0.0																				X		Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning). Located
R-6		SA31-0.5B	0.5				X	X	X			X	X			X			X	X					upslope as a stepout for LOU 43 and co-located with SG43 to compare VOC results, and for general site coverage.
R-6		SA31-10B	10				X	X	X			X	X			X				X					GW estimated at ~34 feet bgs.
R-6		SA31-20B	20				X	X	X			X	X			X				X					
R-6		SA31-32B	32				X	X	X			X	X			X				X					
R-6	SA32	SA32-0.0B	0.0																				X		Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning), and LOU 60
R-6		SA32-0.5B	0.5				X	X	X	X		X	X	X		X			X	X					(Acid DrainSystem). Located within the footprint of LOU 43 as a worst case location and also located near LOU 60
R-6		SA32-9B	9				X	X	X	X		X	X	X		X				X					piping to evaluate local piping releases near a manhole.
R-6		SA32-25B	25				X	X	X	X		X	X	X		X				X					LOU 60 pipeline invert occurs at approximately 8 feet bgs.
R-6		SA32-25BD	25 (dup)				X	X	X	X		X	X	X		X				X					GW estimated at ~39 feet bgs.
R-6		SA32-37B	37				X	X	X	X		X	X	X		X				X					
R-6	SA161	SA161-0.0B	0.0																				X		Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning).
R-6		SA161-0.5B	0.5				X	X	X			X	X	X		X			X	X					Co-located with SG70 to compare VOC results, and for general site coverage.
R-6		SA161-10B	10				X	X	X			X	X	X		X				X					GW estimated at ~39 feet bgs.
R-6		SA161-25B	25				X	X	X			X	X	X		X				X					
R-6		SA161-25BD	25 (dup)				X	X	X			X	X	X		X				X					
R-6		SA161-37B	37				X	X	X			X	X	X		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

						Laboratory :	CAS - Kelso		CAS - Rochester									CAS - Houston		GEL - Charleston, SC	STL-Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	PTS Santa Fe Springs, CA	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions)
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[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 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	≥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 II (M-2) and ending with the southeastern most grid in Area II (S-7).																									
R-6	SA208	SA208-0.0B	0.0																				X		Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning). Located
R-6		SA208-0.5B	0.5				X	X	X	X		X	X			X			X	X					in the basement footprint of LOU 43 as a worst case location to evaluate surface releases.
R-6		SA208-10B	10				X	X	X	X		X	X			X				X					GW estimated at ~39 feet bgs.
R-6		SA208-25B	25				X	X	X	X		X	X			X				X					
R-6		SA208-37B	37				X	X	X	X		X	X			X				X					
R-6	RSAR6	RSAR6-0.0B	0.0																				X		Boring located to evaluate LOU 43 (Unit 4 Basement and Old Sodium Chlorate Plant Decommissioning),
R-6		RSAR6-0.5B	0.5				X	X	X	X		X	X	X	X	X			X	X					and LOU 59 (Storm Sewer System) and LOU 60 (Acid Drain System). Random boring located near LOU 43 as a
R-6		RSAR6-9B	9				X	X	X	X		X	X	X	Hold	X				X					stepout for general coverage, adjacent to LOU 59 and 60 piping to evaluate for potential releases and for area-wide
R-6		RSAR6-25B	25				X	X	X	X		X	X	X	Hold	X				X					coverage. LOU 60 pipeline invert occurs at approximately 8 feet bgs.
R-6		RSAR6-37B	37				X	X	X	X		X	X	X	X	X				X					GW estimated at ~39 feet bgs.
R-6		RSAR6-37B	37	X			X	X	X	X		X	X	X	X	X				X					
S-7	SA122	SA122-0.0B	0.0																				X		Boring located to evaluate LOU 29 (Solid Waste Dumpsters). Located within the footprint of LOU 29 at an area
S-7		SA122-0.5B	0.5				X	X	X	X		X	X				X		X	X					between the two active dumpsters and to evaluate for potential impacts from nearby WAPA site to the south.
S-7		SA122-10B	10				X	X	X	X		X	X							X					GW estimated at ~33 feet bgs.
S-7		SA122-20B	20				X	X	X	X		X	X							X					
S-7		SA122-31B	31				X	X	X	X		X	X				X			X					
S-7	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		SA170-0.5B	0.5				X	X	X	X		X	X				X		X	X					stained area to evaluate visible surface release area and to evaluate for potential impacts from nearby WAPA site to the.
S-7		SA170-10B	10				X	X	X	X		X	X							X					south.
S-7		SA170-20B	20				X	X	X	X		X	X							X					GW estimated at ~33 feet bgs.
S-7		SA170-31B	31				X	X	X	X		X	X				X			X					

86 = Number of Borings

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.

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, Beryllium, 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.
3. 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, CO_3, HCO_3), 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
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.
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 3
Groundwater Sampling And Analysis Plan for Area II
Phase B Source Area Investigation Work Plan
Tronox Facility - Henderson Nevada

							Laboratory [E.] :		CAS - Kelso, WA	CAS - Rochester, NY					GEL - Charleston, SC	STL-Denver	Alpha Analytical	Rationale for Revision	Location Description and Rationale for Investigation
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		
Wells are organized by grid location as shown on Plate A - Starting point is on the northwestern-most grid in Area II (L-4) and ending with the southeastern-most grid covering Area II (S-7).																			
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	II	I-AR	I-ARB	25 - 45	MCfg1	yes	X	X	X	X	X	X	X	X	X			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	II	M-64	M-64B	12.7 - 37.3	Qal/MCfg1	no	X	X	X	X	X	X	X	X	X			F	Located to evaluate LOU 55; as a downgradient stepout for LOUs 30 and 56 and for general Site coverage.
L-6	II	M-25	M-25B	24 - 39	Qal/MCfg1	no	X	X	X	X	X	X	X	X	X			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	II	M-38	M-38B	20 - 35	MCfg1	no	X	X	X	X	X	X	X	X	X			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	X	X	X	X	X	X	X	X	X			F	Located to evaluate LOU 57 as a downgradient stepout for LOU 5; and for general Site coverage.
M-5	II	M-111A	M-111AB	29.7 - 39.7	MCfg1	no	X	X	X	X	X	X	X	X	X	X	X	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	II	M-89	M-89B	18 - 38.2	Qal/MCfg1	yes	X	X	X	X	X	X	X	X	X	X	X	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	II	M-22A	M-22AB	16 - 36	Qal/MCfg1	no	X	X	X	X	X	X	X	X	X			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	X	X	X	X	X	X	X	X	X			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	II	M-75	M-75B	34.6 - 49.3	Qal/MCfg1	no	X	X	X	X	X	X	X	X	X			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	II	M-76	M-76B	34.6 - 49.3	MCcg1	yes	X	X	X	X	X	X	X	X	X			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	X	X	X	X	X	X	X	X	X			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	X	X	X	X	X	X	X	X	X			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	II	M-34	M-34B	25 - 40	Qal/MCfg1	no	X	X	X	X	X	X	X	X	X	X	X	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.
O-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	X	X	X	X	x	X	X	X			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	II	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.

Table 3
Groundwater Sampling And Analysis Plan for Area II
Phase B Source Area Investigation Work Plan
Tronox Facility - Henderson Nevada

							Laboratory [E.] :	CAS - Kelso, WA	CAS - Rochester, NY						GEL - Charleston, SC	STL-Denver	Alpha Analytical	Rationale for Revision	Location Description and Rationale for Investigation
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		
Wells are organized by grid location as shown on Plate A - Starting point is on the northwestern-most grid in Area II (L-4) and ending with the southeastern-most grid covering Area II (S-7).																			
Q-5	II	M-13	M-13B	28 - 48	MCfg1	yes	X	X	X	X	X	X	X	X	X			F	Located to serve as a downgradient stepout for LOU 60; as an upgradient stepout for LOUs 36 and 45; and for general Site coverage.
Q-6	II	M-12A	M-12AB	40 - 50	MCfg1	yes	X	X	X	X	X	X	X	X	X			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	II	M-146	M-146B	TBD	Qal/MCfg1*	no	X	X	X	X	X	X	X	X	X			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.
						Number of Field Samples:	**18**	**18**	**18**	**18**	**18**	**18**	**18**	**18**	**18**	**3**	**3**		
QA/QC Samples:																			
						Field Duplicates (10%)	2	2	2	2	2	2	2	2	2	1	1		
						Field Blanks	1	1	1	1	1	1	1	1	1	1	1		
						Equipment Rinseate Blanks	2	2	2	2	2	2	2	2	2	1	1		
						Trip Blank Samples	0	0	5	0	0	0	0	0	0	0	0		
						Matrix Spike (5%)	1	1	1	1	1	1	1	1	1	1	1		
						Matrix Spike Duplicate (5%)	1	1	1	1	1	1	1	1	1	1	1		
						Total 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 BMI.
X	Sample will be collected and analyzed.
blank	No sample collected under Phase B sampling plan.
1.	It is anticipated that the large majority of the flow to the well will be from the coarse-grained sediments. As such, in the cases where there are two lithologies present across the screen interval, the water sampled will represent conditions in the coarse-grained interval.
2.	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, Zinc
3.	VOCs = Volatile organic compounds (to include analysis for naphthalene).
4.	Hexavalent Chromium.
5.	Complete list of wet chemistry parameters are shown on Table 1. All groundwater samples will have pH measured in the field.
6.	OCPs = Organochlorine pesticides (to include analysis for hexachlorobenzene).
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).
10.	OPPs = Organophosphorous Pesticides
IIIN/E/W/S	Well located outside (north, east, west, or south) of Area II.
TBD	To Be Determined when well is constructed.
(a)	Complete list of wet chemistry parameters are shown on Table 1. All groundwater samples will have pH measured in the field.
TD	Total Depth of the well determined by Site-wide routine groundwater monitoring.
nr	Not recorded in Tronox database (screen intervals to be acquired from BMI where possible or determined by downhole camera).
Qal	Quaternary Alluvium.
MCfg1	Muddy Creek Formation - first fine-grained facies
MCcg1	Muddy Creek Formation - first coarse-grained facies
X	Green-shading indicates items that have been added or changed from Table 3 in the June 2008 Area II Work Plan originally reviewed by NDEP.
R	Brown-shading indicates items that have been removed from Table 3 in the June 2008 Area II Work Plan originally reviewed by NDEP.
A	Sample ID was added to convey sample ID nomenclature to field sampling team ("B" suffix denotes sample is associated with Phase B sampling event).
B	OPPs and Organic Acids were added per NDEP (July 21, 2008).
C	Asterisks were removed from April 2008 submission
D	Well was removed from Table 3 because this well is not located in Area II.
E	Laboratory information was added to Table 3 to assist field sampling personnel in shipping the sample containers to the appropriate laboratory.
F	Total Cyanide was added per NDEP (July 21, 2008)
G	Expected soil types across expected screen interval based on nearby wells
H	Hyphen inserted to correct typographical error

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

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

								Laboratory [E.] :											
								CAS - Kelso, WA		CAS - Rochester, 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[8.]	OPPs[10.] (8141A)	Organic Acids	Location Description and Rationale for Investigation
Wells are organized by grid location as shown on Plate A - Starting point is on the northwestern-most grid in Area II (L-5) and ending with the southeastern-most grid covering Area II (R-5).																			
L-5	II	I-AR	I-ARB	25 - 45	MCfg1	yes		X	X	X	X	X	X	X	X	X			Located as an upgradient stepout for LOUs 30, 31, and 56; and LOU 58 and for general Site coverage.
L-6	II	M-64	M-64B	12.7 - 37.3	Qal/MCfg1	no		X	X	X	X	X	X	X	X	X			Located to evaluate LOU 55; as a downgradient stepout for LOUs 30 and 56 and for general Site coverage.
L-6	II	M-25	M-25B	24 - 39	Qal/MCfg1	no		X	X	X	X	X	X	X	X	X			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		X	X	X	X	X	X	X	X	X			Located to serve as a downgradient stepout for LOUs 16, 17, 19, and LOU 57; and for general Site coverage.
M-5	II	M-110	M-110B	30 - 40	Qal/MCfg1	no		X	X	X	X	X	X	X	X	X			Located to evaluate LOU 57 as a downgradient stepout for LOU 5; and for general Site coverage.
M-5	II	M-111A	M-111AB	29.7 - 39.7	MCfg1	no		X	X	X	X	X	X	X	X	X	X	X	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	II	M-89	M-89B	18 - 38.2	Qal/MCfg1	yes		X	X	X	X	X	X	X	X	X	X	X	Located to evaluate LOU 57; as a downgradient stepout for LOUs 5, 16, 17, and 53; and for general Site coverage.
			M-89B	18 - 38.2			X	X	X	X	X	X	X	X	X	X	X	X	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	II	M-22A	M-22AB	16 - 36	Qal/MCfg1	no		X	X	X	X	X	X	X	X	X			Located to evaluate LOU 57; as a downgradient stepout for LOUs 5, and 16 through 18; and for general Site coverage.
M-8	II	M-19	M-19B	14.5 - 34.5	MCfg1	no		X	X	X	X	X	X	X	X	X			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	II	M-75	M-75B	34.6 - 49.3	Qal/MCfg1	no		X	X	X	X	X	X	X	X	X			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		X	X	X	X	X	X	X	X	X			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		X	X	X	X	X	X	X	X	X			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)				X	X	X	X	X	X	X	X	X			This is a duplicate sample of M-2AB.
N-6	II	M-17A	M-17AB	35 - 45	Qal/MCfg1	no		X	X	X	X	X	X	X	X	X			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		X	X	X	X	X	X	X	X	X	X	X	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		X	X	X	X	X	x	X	X	X			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	II	M-13	M-13B	28-48	MCfg1	yes		X	X	X	X	X	X	X	X	X			Located to serve as a downgradient stepout for LOU 60; as an upgradient stepout for LOUs 36 and 45; and fo general Site coverage.
			M-13BD	28 - 48 (dup)				X	X	X	X	X	X	X	X	X			This is a duplicate sample of M-13B.
Q-6	II	M-12A	M-12AB	40 - 50	MCfg1	yes		X	X	X	X	X	X	X	X	X			Located as a downgradient stepout for LOUs 12, 15, 29, 36, 43, 59 and 60; and for general Site coverage.
R-5	II	M-146	M-146B	TBD	Qal/MCfg1*	no		X	X	X	X	X	X	X	X	X			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.
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.	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, Zinc
3.	VOCs = Volatile organic compounds (to include analysis for naphthalene).
4.	Hexavalent Chromium.
5.	Complete list of wet chemistry parameters are shown on Table 1. All groundwater samples will have pH measured in the field.
6.	OCPs = Organochlorine pesticides (to include analysis for hexachlorobenzene).

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

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

								Laboratory [E.] :		CAS - Kelso, WA		CAS - Rochester, NY						GEL - Charleston, SC	STL-Denver	Alpha Analytical	Location Description and Rationale for Investigation
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	
Wells are organized by grid location as shown on Plate A - Starting point is on the northwestern-most grid in Area II (L-5) and ending with the southeastern-most grid covering Area II (R-5).																			

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).
10. OPPs = Organophosphorous Pesticides

IIN/E/W/S Well located outside (north, east, west, or south) of Area II.
TBD To Be Determined when well is constructed.
TD Total Depth of the well determined by Site-wide routine groundwater monitoring.
nr Not recorded in Tronox database (screen intervals to be acquired from BMI where possible or determined by downhole camera).
Qal Quaternary Alluvium.
MCfg1 Muddy Creek Formation - first fine-grained facies
MCcg1 Muddy Creek Formation - first coarse-grained facies

Area III

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

				Laboratory [K.] :	Columbia Analytical Services Kelso, WA		Columbia Analytical Services - Rochester, NY									Columbia Analytical Services - Houston, TX		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	Location Description and Rationale for Investigation (NDEP may not agree with upgradient and downgradient descriptions)
Borings are organized by grid location as shown on Plate A - Starting point is on the northwestern most grid in Area 3 (N-7) and ending with the southeastern most grid in Area 3 (S-8).																							
N-7	20, 21, 22, 23	SA157	SA157-0.0B	0.0																	X		
N-7	20, 21, 22, 23		SA157-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				O, G	Boring located to evaluate LOU 20 (Pond C-1 Associated Piping), LOU 21 (Pond Mn-1 and Associated Piping),
N-7	20, 21, 22, 23		SA157-10B	10	X	X	X	X		X	X	X	R	X				X				O, G	LOU 22 (WC-West Associated Piping), and LOU 23 (WC-East Associated Piping). Located at piping junction
N-7	20, 21, 22, 23		SA157-20B	20	R	R	R			R	R		R	R				R				B	from all LOUs at highest release potential location (manhole and junction).
N-7	20, 21, 22, 23		SA157-25B	25	X	X	X	X		X	X	X		X				X				B, O, G	GW anticipated at ~46 feet bgs.
N-7	20, 21, 22, 23		SA157-30B	30	R	R	R			R	R		R	R				R				B	
N-7	20, 21, 22, 23		SA157-40B	40	R	R	R			R	R		R	R				R				B	
N-7	20, 21, 22, 23		SA157-44B	44	X	X	X	X		X	X	X		X				X				I, O, G	
N-8	21, 24, 46	RSAN8	RSAN8-0.0B	0.0																	X		
N-8	21, 24, 46		RSAN8-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					Boring located to evaluate LOU 24 (Manganese [Mn] Tailings Pile Area), LOU 46 (Former Old Main Cooling
N-8	21, 24, 46		RSAN8-10B	10	X	X	X	X		X	X	X	Hold	X				X					Tower and Recirculation Lines), and LOU 21 (Pond Mn-1 and Associated Piping). Located near the perimeter
N-8	21, 24, 46		RSAN8-20B	20	X	X	X	X		X	X	X	Hold	X				X					of two LOUs and associated piping at a high release potential location (down slope and low spot).
N-8	21, 24, 46		RSAN8-30B	30	R	R	R	R		R	R		R	R				R				B	GW anticipated at ~36 feet bgs.
N-8	21, 24, 46		RSAN8-34B	34	X	X	X	X		X	X	X	X	X				X				B, I	
N-8	21, 24, 46		RSAN8-40B	40	R	R	R	R		R	R		R	R				R				A	
N-8	21, 24, 46	SA139	SA139-0.0B	0.0																	X		
N-8	21, 24, 46		SA139-0.5B	0.5	X	X	X			X	X		R				X	X				G	Boring located to evaluate LOU 21 (Pond Mn-1 and Associated Piping), LOU 24 (Mn Tailings Pile area), and
N-8	21, 24, 46		SA139-10B	10	X	X	X			X	X		R					X				G	LOU 46 (Former Old Main Cooling Tower and Recirculation Lines). Located near the perimeter of two LOUs
N-8	21, 24, 46		SA139-20B	20	R	R	R			R	R		R					R				B	and associated piping at a high release potential location (down slope and low spot)
N-8	21, 24, 46		SA139-25B	25	X	X	X			X	X							X				B, G	GW anticipated at ~37 feet bgs.
N-8	21, 24, 46		SA139-30B	30	R	R	R			R	R		R					R				B	
N-8	21, 24, 46		SA139-35B	35	X	X	X			X	X							X				I, G	
N-8	21, 24, 46		SA139-40B	40	R	R	R			R	R		R					R				A	
N-8	21, 24, 46	SA160	SA160-0.0B	0.0																	X		
N-8	21, 24, 46		SA160-0.5B	0.5	X	X	X			X	X		R				X	X				G	Boring located to evaluate upgradient LOU 24 (Mn Tailings Pile Area) , LOU 46 (Former Old Main Cooling
N-8	21, 24, 46		SA160-10B	10	X	X	X			X	X		R					X				G	Tower and Recirculation Lines) and LOU 21 (Pond Mn-1 and Associated Piping). Located near perimeter of
N-8	21, 24, 46		SA160-20B	20	X	X	X			X	X		R					X				B, G	two LOUs and piping at high release potential location (down slope and low spot)
N-8	21, 24, 46		SA160-30B	30	R	R	R			R	R		R					R				B	GW anticipated at ~36 feet bgs.
N-8	21, 24, 46		SA160-34B	34	X	X	X			X	X							X				I, G	
N-8	21, 24, 46		SA160-40B	40	R	R	R			R	R		R					R				A	
O-6	34W	SA39	SA39-0.0B	0.0																	X		
O-6	34W		SA39-0.5B	0.5	X	X	X	X		X	X		R				X	X				G	Boring located north of Chemstar to evaluate LOU 34W (Historic Mn Tailings Pile Area, West). Located in low
O-6	34W		SA39-10B	10	X	X	X	X		X	X		R					X				G	spot of LOU 34W at likely worst case location.
O-6	34W		SA39-20B	20	R	R	R	R		R	R		R					R				B	GW anticipated at ~43 feet bgs.
O-6	34W		SA39-25B	25	X	X	X	X		X	X							X				B, G	
O-6	34W		SA39-30B	30	R	R	R	R		R	R		R					R				B	
O-6	34W		SA39-40B	40	R	R	R	R		R	R		R					R				B	
O-6	34W		SA39-41B	41	X	X	X	X		X	X							X				I, G	
O-7	24, 46	RSAO7	RSAO7-0.0B	0.0																		Y	
O-7	24, 46		RSAO7-15B#	15 #	X	X	X	X		X	X		X	X			X	X				B	Boring located to evaluate potential impacts to soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46
O-7	24, 46		RSAO7-10B	10	R	R	R	R		R	R		R	R				R				B	(Former Old Main Cooling Tower and Recirculation Lines). Located in low spot of LOU 24 and down hill
O-7	24, 46		RSAO7-25B##	25 ##	X	X	X	X		X	X		Hold	X				X				B	topographically of LOU 46.
O-7	24, 46		RSAO7-20B	20	R	R	R	R		R	R		R	R				R				B	Soil samples will be collected below Mn-tailings/soil interface; interface at approx. 15 ft bgs.
O-7	24, 46		RSAO7-30B	30	R	R	R	R		R	R		R	R				R				B	GW anticipated at ~49 feet bgs.
O-7	24, 46		RSAO7-35B#	35 #	X	X	X	X		X	X		Hold	X				X				B	
O-7	24, 46		RSAO7-40B	40	R	R	R	R		R	R		R	R				R				B	
O-7	24, 46		RSAO7-47B	47	X	X	X	X		X	X		X	X				X				I	
O-7	34W, 60, 20, 22, 23	SA178	SA178-0.0B	0.0																	X		
O-7	34W, 60, 20, 22, 23		SA178-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				O, G	Boring located to evaluate LOU 20 (Pond C-1 Associated Piping Associated Piping), LOU 22 (WC-West
O-7	34W, 60, 20, 22, 23		SA178-10B	10	X	X	X	X		X	X	X	R	X				X				O, G	Associated Piping), LOU 23 (WC-East Associated Piping), LOU 34W (Historic Mn Tailings Pile Area, West),
O-7	34W, 60, 20, 22, 23		SA178-17B	17	X	X	X	X		X	X	X		X				X				E, G, O	and LOU 60 (Acid Drain system). Located within this cluster of LOUs at a likely high release potential location
O-7	34W, 60, 20, 22, 23		SA178-20B	20	R	R	R			R	R	R	R	R				R				B	for all five LOUs (low point, edge of road).
O-7	34W, 60, 20, 22, 23		SA178-25B	25	X	X	X	X		X	X	X		X				X				B, G, O	LOU 60 pipeline invert located approximately 16 ft bgs.
O-7	34W, 60, 20, 22, 23		SA178-30B	30	R	R	R			R	R	R	R	R				R				B	GW anticipated at ~45 feet bgs.
O-7	34W, 60, 20, 22, 23		SA178-40B	40	R	R	R			R	R	R	R	R				R				B	
O-7	34W, 60, 20, 22, 23		SA178-43B	43	X	X	X	X		X	X	X		X				X				I, G, O	
O-7	24, 46	SA52	SA52-0.0B	0.0																		Y	
O-7	24, 46		SA52-19B#	19 #	X	X	X			X	X		R				X	X					Boring located to evaluate soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46 (Former Old Main
O-7	24, 46		SA52-10B	10	R	R	R			R	R		R					R				B	Cooling Tower and Recirculation Lines). Located within the footprint of both LOUs at a topographically low
O-7	24, 46		SA52-20B	20	R	R	R			R	R		R					R				B	area for worst case coverage.
O-7	24, 46		SA52-30B	30	R	R	R			R	R		R					R				B	Soil samples will be collected below Mn-tailings/soil interface; interface at approx. 19 to 25 feet bgs.
O-7	24, 46		SA52-33B#	33 #	X	X	X			X	X							X				E,G	LOU 60 pipeline invert located approximately 13 feet below Mn tailings/soil interface (32 to 38 bgs).
O-7	24, 46		SA52-40B	40	R	R	R			R	R		R					R				B	GW anticipated at ~45 feet bgs.
O-7	24, 46		SA52-43B	43	X	X	X			X	X							X				I, G	
O-7	24, 46	SA149	SA149-0.0B	0.0																		Y	
O-7	24, 46		SA149-17B#	17 #	X	X	X			X	X		R				X	X				B,G	Boring located to evaluate soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46 (Former Old Main Cooling
O-7	24, 46		SA149-10B	10	R	R	R			R	R		R					R				B	Tower and Recirculation Lines). Located within LOU 24 and just upgradient of LOU 46 to provide area coverage
O-7	24, 46		SA149-27B#	27 ##	X	X	X			X	X							X				B,G	of both LOUs.
O-7	24, 46		SA149-20B	20	R	R	R			R	R		R					R				B	Soil samples will be collected below Mn-tailings/soil interface; interface at approx. 16 feet bgs.
O-7	24, 46		SA149-30B	30	R	R	R			R	R		R					R				B, G	GW anticipated at ~47 feet bgs.
O-7	24, 46		SA149-40B	40	R	R	R			R	R		R					R				B	
O-7	24, 46		SA149-45B	45	X	X	X			X	X							X				I, G	
O-7	24, 60	SA137	SA137-0.0B	0.0																	X	N	
O-7	24, 60		SA137-0.5B	0.5	X	X	X	X		X	X	X		X			X	X					Boring located to evaluate LOU 24 (Mn Tailings Pile Area) historical surface drainage path and LOU 60 (Acid
O-7	24, 60		SA137-15B	15	X	X	X	X		X	X	X		X				X				E, G	Drain System) conveyance route. Boring to be drilled on soil in surface drainage swale near toe of Mn tailings
O-7	24, 60		SA137-31B	31	X	X	X	X		X	X	X		X				X				I, G	pile (not on top of tailings pile). LOU 60 pipeline invert occurs approximately 14 feet bgs.
O-7	24, 46, 60	SA141	SA141-0.0B	0.0																		Q,Y	GW anticipated at ~33 feet bgs.
O-7	24, 46, 60		SA141-13B#	13 #	X	X	X	X		X	X		R	X			X	X				O, G, L	Boring located to evaluate potential impacts to underlying soil from LOU 24 (Mn Tailings Pile Area), LOU 46
O-7	24, 46, 60		SA141-10B	10	R	R	R			R	R		R					R				B	Cooling Tower and Recirculation Lines), and LOU 60 (Acid Drain System).
O-7	24, 46, 60		SA141-23B##	23 ##	X	X	X	X		X	X			X				X				B, O, G, L	Former Old Main Cooling Tower soil samples will be collected below Mn-tailings/soil interface; interface at
O-7	24, 46, 60		SA141-20B	20	R	R	R			R	R		R					R				B	approx 18 ft bgs. LOU 60 pipeline invert occurs at 13 feet below Mn tailings/soil interface (`31 feet bgs).
O-7	24, 46, 60		SA141-30B	30	X	X	X	X		X	X		R	X				X				B, G, O, L	The soil sample for the pipeline invert will determined in the field based on the depth to the Mn tailings/soil
O-7	24, 46, 60		SA141-40B	40	R	R	R			R	R		R					R				A	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.

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

				Laboratory [K.] :	Columbia Analytical Services Kelso, WA		Columbia Analytical Services - Rochester, NY									Columbia Analytical Services - Houston, TX		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	Location Description and Rationale for Investigation (NDEP may not agree with upgradient and downgradient descriptions)
Borings are organized by grid location as shown on Plate A - Starting point is on the northwestern most grid in Area 3 (N-7) and ending with the southeastern most grid in Area 3 (S-8).																							
O-8	24, 46	RSAO8	RSAO8-0.0B	0.0																		Y	Boring located to evaluate for potential impacts to soil underlying LOU 24 (Manganese Tailings Pile Area) and
O-8	24, 46		RSAO8-15B#	15 #	X	X	X	X		X	X		X				X	X					LOU 46 (Former Old Main Cooling Tower and Recirculation Lines). Located within LOU 24 and just upgradient of
O-8	24, 46		RSAO8-10B	10	R	R	R	R		R	R		R					R				B	area coverage LOU 46 to provide of both LOUs.
O-8	24, 46		RSAO8-25B##	25 ##	X	X	X	X		X	X		Hold					X				B	Soil samples will be collected below Mn-tailings/soil interface at approx 15 ft bgs. GW anticipated at ~45 feet bgs.
O-8	24, 46		RSAO8-20B	20	R	R	R	R		R	R		R					R				B	Borehole for RSAO8 will be converted to well M-148.
O-8	24, 46		RSAO8-30B	30	R	R	R	R		R	R		R					R				B	
O-8	24, 46		RSAO8-40B	40	R	R	R	R		R	R		R					R				B	
O-8	24, 46		RSAO8-43B	43	X	X	X	X		X	X		X					X				I	
O-8	24, 46	SA108	SA108-0.0B	0.0																	X		Boring located to evaluate soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46 (Former Old Main Cooling
O-8	24, 46		SA108-20B#	20 #	X	X	X			X	X		R				X	X				G	Tower and Recirculation Lines). Located within the footprint of both LOUs at a slight low spot to provide
O-8	24, 46		SA108-10B	10	R	R	R			R	R		R					R				B	reasonable coverage of both.
O-8	24, 46		SA108-20B	20	R	R	R			R	R		R					R				B	Soil samples will be collected below Mn-tailings/soil interface; interface at approx 20 to 29 feet bgs.
O-8	24, 46		SA108-30B##	30 ##	X	X	X			X	X		R					X				B, G	
O-8	24, 46		SA108-40B	40	R	R	R			R	R		R					R				B	GW anticipated at ~50 feet bgs.
O-8	24, 46		SA108-48B	48	X	X	X			X	X							X				I, G	
O-8	24, 46, 60	SA142	SA142-0.0B	0.0																		Y	Boring located to evaluate potential impacts to underlying soil from LOU 24 (Mn Tailings Pile Area), LOU 46
O-8	24, 46, 60		SA142-20B	20	X	X	X	X		X	X	X	R	X			X	X				B,O, L, G	(Former Old Main Cooling Tower and Recirculation Lines), and LOU 60 (Acid Drain System).
O-8	24, 46, 60		SA142-10B	10	R	R	R			R	R		R					R				B	Soil samples will be collected below Mn-tailings/soil interface; interface at approx 20 to 30 ft bgs.
O-8	24, 46, 60		SA142-20B	20	R	R	R			R	R		R					R				B	Lou 60 pipeline invert occurs at approximately 13 feet below Mn tailings/soil interface (33-43 bgs).
O-8	24, 46, 60		SA142-34B	34	X	X	X	X		X	X	X	R	X				X				B, E, O, G, L	Groundwater anticipated at ~53 ft bgs.
O-8	24, 46, 60		SA142-30B	30	R	R	R			R	R		R					R				B, O, L	
O-8	24, 46, 60		SA142-40B	40	R	R	R			R	R		R					R				B	
O-8	24, 46, 60		SA142-51B	51	X	X	X	X		X	X	X		X				X				I, O, G, L	
O-8	24, 46	SA143	SA143-0.0B	0.0																	X		Boring located to evaluate for potential impacts to soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46
O-8	24, 46		SA143-31B#	31 #	X	X	X			X	X		R				X	X				G	(Former Old Main Cooling Tower and Recirculation Lines). Located within LOU 42 and downgradient of LOU 46
O-8	24, 46		SA143-10B	10	R	R	R			R	R		R					R				B	to provide area coverage of both LOUs.
O-8	24, 46		SA143-20B	20	R	R	R			R	R		R					R				B	Soil samples will be collected below Mn-tailings/soil interface; interface estimated to occur at 31 ft bgs.
O-8	24, 46		SA143-30B	30	R	R	R			R	R		R					R				B	GW anticipated at ~54 feet bgs.
O-8	24, 46		SA143-41B#	41 ##	X	X	X			X	X							X				B, G	
O-8	24, 46		SA143-40B	40	R	R	R			R	R		R					R				B, G	
O-8	24, 46		SA143-52B	52	X	X	X			X	X							X				I, G	
O-8	21, 24, 46, 59, 60	SA171	SA171-0.0B	0.0																		Y	Boring located to evaluate potential impacts to soil underlying LOU 21 (Pipeline associated with Pond Mn-1),
O-8	21, 24, 46, 59, 60		SA171-5B#	5 #	X	X	X	X		X	X	X	R	X			X	X				G, L, O	LOU 24 (Mn Tailings Pile Area), LOU 46 (Former Old Main Cooling Tower and Recirculation Lines), LOU 59
O-8	21, 24, 46, 59, 60		SA171-10B	10	R	R	R	R		R	R		R	R				R				E, G, L, O	(Storm Sewer System), and LOU 60 (Acid Drain System). Located within LOU 24 nearby LOU 46 and adjacent to
O-8	21, 24, 46, 59, 60		SA171-18B#	18 ##	X	X	X	X		X	X	X		X				X				B,E,G,L,O	LOUs 21, 59 and 60 piping at a reasonable release location to evaluate all five LOUs.
O-8	21, 24, 46, 59, 60		SA171-20B	20	R	R	R			R	R		R					R				B	Soil samples will be collected below Mn-tailings/soil interface at approx 5 feet bgs. LOU 60 invert at 17 bgs.
O-8	21, 24, 46, 59, 60		SA171-30B	30	X	X	X	X		X	X	X	R	X				X				B, G, L, O	Storm sewer pipeline occurs approximately 9 feet bgs.
O-8	21, 24, 46, 59, 60		SA171-40B	40	R	R	R			R	R		R					R				B	GW anticipated at ~44 feet bgs.
O-8	21, 24, 46, 59, 60		SA171-42B	42	X	X	X	X		X	X	X		X				X				I, G, L, O	
P-6	59	SA130	SA130-0.0B	0.0																	X	N	Boring located to evaluate potential impacts to soil from possible LOU 59 (Storm Sewer System) pipeline
P-6	59		SA130-0.5B	0.5	X	X	X	X		X	X	X		X			X	X					segment/junction releases.
P-6	59		SA130-10B	10	X	X	X	X		X	X	X		X				X				B,G	GW anticipated at ~45 feet bgs.
P-6	59		SA130-25B	25	X	X	X	X		X	X	X		X				X				B,G	
P-6	59		SA130-43B	43	X	X	X	X		X	X	X		X				X				G, I	
P-6	34W	RSAP6	RSAP6-0.0B	0.0																	X		Boring located to evaluate LOU 34W (Historic Mn Tailings Pile Area, West). Random boring located within low spot of
P-6	34W		RSAP6-0.5B	0.5	X	X	X	X					X	X			X	X					at worst case potential environmental issue location.
P-6	34W		RSAP6-10B	10	X	X	X	X		X	X		Hold	X				X					GW anticipated at ~46 feet bgs.
P-6	34W		RSAP6-20B	20	R	R	R	R		R	R		R	R				R				B	
P-6	34W		RSAP6-25B	25	X	X	X	X		X	X		Hold	X				X				B	
P-6	34W		RSAP6-30B	30	R	R	R	R		R	R		R	R				R				B	
P-6	34W		RSAP6-40B	40	R	R	R	R		R	R		R	R				R				B	
P-6	34W		RSAP6-44B	44	X	X	X	X		X	X		X	X				X				I	
P-7	60, 20, 21, 22, 23	RSAP7	RSAP7-0.0B	0.0																	X		Boring located to evaluate LOU 20 (Pipeline route associated with Pond C-1), LOU 21 (Pond Mn-1 associated
P-7	60, 20, 21, 22, 23		RSAP7-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X	X	X		Z	pipeline route), LOU 22 (WC-West Associated Piping), LOU 23 (Pond WC-East associated pipeline), and LOU
P-7	60, 20, 21, 22, 23		RSAP7-10B	10	R	R	R	R		R	R	R	R	R				R				B	60 (Acid Drain System).
P-7	60, 20, 21, 22, 23		RSAP7-14B	14	X	X	X	X		X	X	X	Hold	X				X	X	X		E, Z	LOU 60 pipeline invert occurs at approximately 13 feet bgs.
P-7	60, 20, 21, 22, 23		RSAP7-20B	20	R	R	R	R		R	R	R	R	R				R				B	GW anticipated at ~43 feet bgs.
P-7	60, 20, 21, 22, 23		RSAP7-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	
P-7	60, 20, 21, 22, 23		RSAP7-30B	30	R	R	R	R		R	R	R	R	R				R				B	
P-7	60, 20, 21, 22, 23		RSAP7-40B	40	R	R	R	R		R	R	R	R	R				R				B	
P-7	60, 20, 21, 22, 23		RSAP7-41B	41	X	X	X	X		X	X	X	X	X				X	X	X		I, Z	
P-7	48, 49, 50	SA140	SA140-0.0B	0.0																	X		Boring located to evaluate LOU 48 (Leach Plant Anolyte Tank), LOU 49 (Leach Plant Area
P-7	48, 49, 50		SA140-0.5B	0.5	X	X	X			X	X		X				X	X					Sulfuric Acid Storage Tank), and LOU 50 (Leach Plant Area Leach Tanks). Located adjacent to three LOUs
P-7	48, 49, 50		SA140-10B	10	X	X	X			X	X		Hold					X					at an accessible and reasonable potential release point for all three LOUs (just down slope).
P-7	48, 49, 50		SA140-20B	20	X	X	X			X	X		Hold					X				B	Borehole SA140 will be converted to well M-141.
P-7	48, 49, 50		SA140-30B	30	X	X	X			X	X		Hold					X					
P-7	48, 49, 50		SA140-40B	40	X	X	X			X	X		X					X					
P-8	47, 70	RSAP8	RSAP8-0.0B	0.0																	X		Boring located to evaluate LOU 47 (Leach Plant Area Mn Ore Pile Area) and Area 70 (Former U.S. Vanadium
P-8	47, 70		RSAP8-0.5B	0.5	X	X	X	X		X	X		X	X			X	X					Site). Random boring located within LOU 47 and at downgradient edge of Area 70 to evaluate potential area
P-8	47, 70		RSAP8-10B	10	X	X	X	X		X	X		Hold	X				X					releases from both LOU 47 and Area 70 LOUs (down slope and low spot).
P-8	47, 70		RSAP8-20B	20	R	R	R	R		R	R		R	R				R				B	GW anticipated at ~42 feet bgs.
P-8	47, 70		RSAP8-25	25	X	X	X	X		X	X		Hold	X				X				B	
P-8	47, 70		RSAP8-30B	30	R	R	R	R		R	R		R	R				R				B	
P-8	47, 70		RSAP8-40B	40	X	X	X	X		X	X		X	X				X					
P-8	34E, 47, 48, 51, A70	SA38	SA38-0.0B	0.0																	R	H	Boring located to evaluate LOU 34E (Historic Mn Tailings Pile Area, East), LOU 47 (Leach
P-8	34E, 47, 48, 51, A70		SA38-0.5B	0.5	R	R	R	R	R	R	R		R	R		R	R	R					Plant Manganese Ore Pile Area), LOU 48 (Leach Plant Anolyte Storage Tanks), LOU 51
P-8	34E, 47, 48, 51, A70		SA38-10B	10	R	R	R	R	R	R	R		R	R				R					(Leach Plant Area Transfer Lines To/From Unit-6), and Area 70 (Former U.S. Vanadium Site).
P-8	34E, 47, 48, 51, A70		SA38-20B	20	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					
P-8	34E, 47, 48, 51, A70		SA38-40B	40	R	R	R	R	R	R	R		R	R				R					

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

				Laboratory [K.] :	Columbia Analytical Services Kelso, WA		Columbia Analytical Services - Rochester, NY									Columbia Analytical Services - Houston, TX		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	Location Description and Rationale for Investigation (NDEP may not agree with upgradient and downgradient descriptions)
Borings are organized by grid location as shown on Plate A - Starting point is on the northwestern most grid in Area 3 (N-7) and ending with the southeastern most grid in Area 3 (S-8).																							
Q-7	20, 22, 23, 48, 50	RSAQ7	RSAQ7-0.0B	0.0																	X		Boring located to evaluate potential releases associated with LOU 20 (Pond C-1 Associated Piping), LOU 22
Q-7	20, 22, 23, 48, 50		RSAQ7-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					(WC-West Associated Piping), LOU 23 (WC-East Associated Piping), LOU 48 (Leach Plant Anolyte Storage
Q-7	20, 22, 23, 48, 50		RSAQ7-10B	10	X	X	X	X		X	X	X	Hold	X				X					Tanks), and LOU 50 (Leach Plant Area Leach Tanks).
Q-7	20, 22, 23, 48, 50		RSAQ7-20B	20	R	R	R	R		R	R	R	R	R				R				B	GW anticipated at ~39 feet bgs.
Q-7	20, 22, 23, 48, 50		RSAQ7-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	
Q-7	20, 22, 23, 48, 50		RSAQ7-30B	30	R	R	R	R		R	R	R	R	R				R				B	
Q-7	20, 22, 23, 48, 50		RSAQ7-37B	37	X	X	X	X		X	X	X	X	X				X				I	
Q-7	20, 22, 23, 48, 50		RSAQ7-40B	40	R	R	R	R		R	R		R	R				R				A	
Q-7	20, 22, 23, 61	SA36	SA36-0.0B	0.0																	R	H	Boring located to evaluate LOU 20 (Pond C-1 Associated Piping), LOU 22 (WC-West Associated
Q-7	20, 22, 23, 61		SA36-0.5B	0.5	R	R	R	R		R	R		R				R	R					Piping), LOU 23 (WC-East Associated Piping), and LOU 61 (Old Sodium Plant Decommissioning
Q-7	20, 22, 23, 61		SA36-10B	10	R	R	R	R		R	R		R					R					and Unit-5 Basement). Located adjacent to piping for LOUs 20,22,and 23 for potential release points,
Q-7	20, 22, 23, 61		SA36-20B	20	R	R	R	R		R	R		R					R					and downgradient of LOU 61 for likely releases (accessible low area).
Q-7	20, 22, 23, 61		SA36-30B	30	R	R	R	R		R	R		R					R					
Q-7	20, 22, 23, 61		SA36-40B	40	R	R	R	R		R	R		R					R					
Q-8	47, 48, 59	RSAQ8	RSAQ8-0.0B	0.0																	X		Boring located to evaluate LOU 47 (Leach Plant Mn Ore Pile Area), LOU 48 (Leach Plant Anolyte Storage
Q-8	47, 48, 59		RSAQ8-0.5B	0.5	X	X	X	X		X	X		X	X			X	X					Tanks), and LOU 59 (Storm Sewer System). Random boring in accessible location within LOUs nearby LOU
Q-8	47, 48, 59		RSAQ8-10B	10	X	X	X	X		X	X		Hold	X				X					47 and 48 and 59 for accessible area coverage and a low spot.
Q-8	47, 48, 59		RSAQ8-20B	20	X	X	X	X		X	X		Hold	X				X				B	GW anticipated at ~36 feet bgs.
Q-8	47, 48, 59		RSAQ8-30B	30	R	R	R	R		R	R		R	R				R				B	
Q-8	47, 48, 59		RSAQ8-34B	34	X	X	X	X		X	X		X	X				X				I	
Q-8	47, 48, 59		RSAQ8-40B	40	R	R	R	R		R	R		R	R				R				A	
Q-8	47, 48, 51, 59,A70	SA37	SA37-0.0B	0.0																	R	H	Boring located to evaluate LOU 51 (Mn Leach Plant Area Transfer Lines), LOU 47
Q-8	47, 48, 51, 59,A70		SA37-0.5B	0.5	R	R	R	R	R	R	R		R	R			R	R					(Leach Plant Area Mn Ore Pile Area), LOU 48 (Leach Plant Sewer System), LOU 59 (Storm
Q-8	47, 48, 51, 59,A70		SA37-10B	10	R	R	R	R	R	R	R		R	R				R					Sewer System), and Area 70 (Former U.S. Vanadium Site). Located at an accessible location at low spot
Q-8	47, 48, 51, 59,A70		SA37-20B	20	R	R	R	R	R	R	R		R	R				R					for LOUs 47,48, 51,and Area 70 for worst case releases and nearby LOU 59 pipeline for possible releases.
Q-8	47, 48, 51, 59,A70		SA37-30B	30	R	R	R	R	R	R	R		R	R				R					
Q-8	47, 48, 51, 59,A70		SA37-40B	40	R	R	R	R	R	R	R		R	R				R					
Q-8	21, 59, 60	SA174	SA174-0.0B	0.0																	R	H	Boring located to evaluate potential soil impacts associated with LOU 21 (pipeline route associated
Q-8	21, 59, 60		SA174-0.5B	0.5	R	R	R			R	R		R				R	R					with Pond Mn-1), LOU 59 (Storm Sewer System), and LOU 60 (Acid Drain System).
Q-8	21, 59, 60		SA174-10B	10	R	R	R			R	R		R					R					
Q-8	21, 59, 60		SA174-11B	11	R	R	R			R	R		R					R					LOU 60 pipeline invert located at roughly 10 feet bgs.
Q-8	21, 59, 60		SA174-20B	20	R	R	R			R	R		R					R					
Q-8	21, 59, 60		SA174-30B	30	R	R	R			R	R		R					R					
Q-8	21, 59, 60		SA174-40B	40	R	R	R			R	R		R					R					
Q-8	37, 44, 60	SA177	SA177-0.0B	0.0																	R	H	Boring located to evaluate LOU 37 (Former Satellite Accumulation Point for Unit-6), LOU 44 (Unit 6 Base-
Q-8	37, 44, 60		SA177-0.5B	0.5	R	R	R			R	R		R	R			R	R					ment), and LOU 60 (Acid Drain System). Located at a close but accessible location to evaluate releases
Q-8	37, 44, 60		SA177-10B	10	R	R	R			R	R		R	R				R					
Q-8	37, 44, 60		SA177-11B	11	R	R	R			R	R		R	R				R					from LOUs 37 and 44, and adjacent to LOU 60 pipeline for potential releases at a pipeline junction.
Q-8	37, 44, 60		SA177-20B	20	R	R	R			R	R		R	R				R					LOU 60 pipeline invert occurs at approximately 10 feet bgs.
Q-8	37, 44, 60		SA177-30B	30	R	R	R			R	R		R	R				R					
Q-8	37, 44, 60		SA177-40B	40	R	R	R			R	R		R	R				R					
R-7	40, 59, 61	RSAR7	RSAR7-0.0B	0.0																	X		Boring located to evaluate soils for potential impacts associated with LOU 40 (former PCB Transformer Spill),
R-7	40, 59, 61		RSAR7-0.5B	0.5	X	X	X	X		X	X		X	X			X	X					LOU 59 (Storm Sewer System), and LOU 61 (Old Sodium Chlorate Plant Decommissioning and Unit-5 Basement).
R-7	40, 59, 61		RSAR7-9B	9	X	X	X	X		X	X		Hold	X				X				E	LOU 60 pipeline invert occurs at approximately 8 feet bgs.
R-7	40, 59, 61		RSAR7-10B	10	R	R	R	R		R	R		R	R				R				B	GW anticipated at ~36 feet bgs.
R-7	40, 59, 61		RSAR7-20B	20	X	X	X	X		X	X		Hold	X				X				B	
R-7	40, 59, 61		RSAR7-30B	30	R	R	R	R		R	R		R	R				R				B	
R-7	40, 59, 61		RSAR7-34B	34	X	X	X	X		X	X		X	X				X				I	
R-7	40, 59, 61		RSAR7-40B	40	R	R	R	R		R	R		R	R				R				A	
R-7	40, 61	SA112	SA112-0.0B	0.0											X	X					X	W, F	Boring is located to evaluate LOU 40 (PCB Transformer Spill), and LOU 61 (Old Sodium Chlorate Plant
R-7	40, 61		SA112-0.5B	0.5	X	X	X	X		X	X		R	X	X	X	X	X				G, L, F	Decommissioning and Unit-5 Basement). Located in PCB transformer Spill area at visible spill location and
R-7	40, 61		SA112-10B	10	X	X	X	X		X	X		R	X		R		X				G, L	adjacent to LOU 61 basement for area coverage.
R-7	40, 61		SA112-20B	20	X	X	X	X		X	X		R	X		R		X				G, L	GW anticipated at ~36 feet bgs.
R-7	40, 61		SA112-30B	30	R	R	R	R		R	R		R			R		R				B	
R-7	40, 61		SA112-34B	34	X	X	X	X		X	X			X	X	X		X				I, G, L, F	
R-7	40, 61		SA112-40B	40	R	R	R	R		R	R		R					R				A	
R-7	33, 59, 61	SA132	SA132-0.0B	0.0																	X	F,W	Located to evaluate LOU 33 (Former Sodium Perchlorate Platinum By-Product Filter), LOU 59
R-7	33, 59, 61		SA132-0.5B	0.5	X	X	X	X		X	X		X				X	X				B,C,F,G,L	(Storm Sewer System), and LOU 61 (Old Sodium Chlorate Plant Decommissioning and Unit-5
R-7	33, 59, 61		SA132-10B	10	X	X	X	X		X	X		Hold					X				B,C,G,L	Basement). Located at high risk point, adjacent to containment in pavement crack within LOU 33
R-7	33, 59, 61		SA132-20B	20	X	X	X	X		X	X		Hold					X				B,C,G,L	and nearby LOUs 59 and 61 for area coverage.
R-7	33, 59, 61		SA132-30B	30	R	R	R	R		R	R		R					R				B	
R-7	33, 59, 61		SA132-34B	34	X	X	X	X		X	X		X					X				C,F,G,I,L	GW anticipated at ~36 feet bgs.
R-7	33, 59, 61		SA132-40B	40	R	R	R	R		R	R		R					R				A	
R-7	40, 61	SA33	SA33-0.0B	0.0											X	X					X	W, F	Boring located to evaluate LOU 40 (PCB Transformer Spill) and LOU 61 (Old Sodium Chlorate Plant
R-7	40, 61		SA33-0.5B	0.5	X	X	X	X		X	X		R		X	X	X	X				G, F	Decommissioning and Unit-5 Basement). Located at an accessible interior location adjacent to LOUs 40 and 61
R-7	40, 61		SA33-10B	10	X	X	X	X		X	X		R					X				G	(as close as upgradient utilities allow) to potential release points.
R-7	40, 61		SA33-20B	20	X	X	X	X		X	X		R					X				G	W = Concrete Wipe Sample for PCBs Per NDEP (July 21,2008)
R-7	40, 61		SA33-30B	30	R	R	R	R		R	R		R					R				B,G	GW anticipated at ~35 feet bgs.
R-7	40, 61		SA33-33B	33	X	X	X	X		X	X				X	X		X				I, G, F	
R-7	40, 61		SA33-40B	40	R	R	R	R		R	R		R					R				A	
R-8	44	RSAR8	RSAR8-0.0B	0.0																	X		Boring located south of Unit-6 to evaluate LOU 44 (Unit-6 Basement) and as part of site-wide coverage for
R-8	44		RSAR8-0.5B	0.5	X	X	X	X		X	X		X	X	X		X	X				M, C	potential historical chemical use. Located as close as possible outside to LOU 44 near potential release
R-8	44		RSAR8-10B	10	X	X	X	X		X	X		Hold	X				X				C	point and for area wide coverage.
R-8	44		RSAR8-20B	20	X	X	X	X		X	X		Hold	X				X				C	GW anticipated at ~36 feet bgs.
R-8	44		RSAR8-30B	30	R	R	R	R		R	R		R	R				R				B	
R-8	44		RSAR8-34B	34	X	X	X	X		X	X		X	X	X			X				I, M, C	
R-8	44		RSAR8-40B	40	R	R	R	R		R	R		R	R				R				A	
R-8	33, 44, 59, 61	SA34	SA34-0.0B	0.0																	X		Boring located to evaluate LOU 33 (Former Sodium Perchlorate Platinum By-Product Filter), LOU
R-8	33, 44, 59, 61		SA34-0.5B	0.5	X	X	X	X		X	X		R	X			X	X				G,L	44 (Unit-6 Basement), LOU 59 (Storm Sewer System), and LOU 61 (Old Sodium Chlorate Plant
R-8	33, 44, 59, 61		SA34-10B	10	X	X	X	X		X	X		R	X				X				G,L	Decommissioning and Unit-5 Basement). Located in between LOUs 44,33 and 61 to evaluate all three
R-8	33, 44, 59, 61		SA34-20B	20	X	X	X	X		X	X		R	X				X				B,G,L	LOUs and adjacent to LOU 59 to evaluate for potential pipeline releases.
R-8	33, 44, 59, 61		SA34-30B	30	R	R	R	R		R	R		R	R				R				B	
R-8	33, 44, 59, 61		SA34-34B	34	X	X	X	X		X	X		R	X				X				B,G,I,L	GW anticipated at ~36 feet bgs.
R-8	33, 44, 59, 61		SA34-40B	40	R	R	R	R		R	R		R	R				R				A	

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

				Laboratory [K.] :	Columbia Analytical Services Kelso, WA		Columbia Analytical Services - Rochester, NY									Columbia Analytical Services - Houston, TX		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	Location Description and Rationale for Investigation (NDEP may not agree with upgradient and downgradient descriptions)
Borings are organized by grid location as shown on Plate A - Starting point is on the northwestern most grid in Area 3 (N-7) and ending with the southeastern most grid in Area 3 (S-8).																							
R-8	44	SA59	SA59-0.0B	0.0																	X	N	Boring located south (upgradient) of Unit-6 to evaluate LOU 44 (Unit-6 Basement) and as part of site-wide
R-8	44		SA59-0.5B	0.5	X	X	X	X		X	X			X	X		X	X				G,M	coverage for potential historical chemical use. Borehole SA59 will be converted into well M-139.
R-8	44		SA59-10B	10	X	X	X	X		X	X			X				X				G	GW anticipated at ~38 feet bgs.
R-8	44		SA59-25B	25	X	X	X	X		X	X			X				X				B,G	
R-8	44		SA59-36B	36	X	X	X	X		X	X			X	X			X				G,I,M	
R-8	44, 59	SA68	SA68-0.0B	0.0																	X	N	Boring located south of Unit-6 to evaluate for potential impacts associated with LOU 44 (Unit-6 Basement) and
R-8	44, 59		SA68-0.5B	0.5	X	X	X	X		X	X			X			X	X				G	Western Area Power Administration (WAPA) site as part of site-wide coverage for potential historical chemical
R-8	44, 59		SA68-10B	10	X	X	X	X		X	X			X				X				G	use. Borehole SA68 will be converted into well M-145.
R-8	44, 59		SA68-25B	25	X	X	X	X		X	X			X				X				B,G	
R-8	44, 59		SA68-36B	36	X	X	X	X		X	X			X				X				G, I	GW anticipated at ~38 feet bgs.
S-8	WAPA site, 59	SA77	SA77-0.0B	0.0																	X	N	This boring is located to evaluate Site-wide conditions and potential impacts from the offsite Western Area
S-8	WAPA site, 59		SA77-0.5B	0.5	X	X	X	X		X	X	X		X	X		X	X				G,M	Power Administration (WAPA) site.
S-8	WAPA site, 59		SA77-10B	10	X	X	X	X		X	X	X		X				X				G	GW anticipated at ~43 feet bgs.
S-8	WAPA site, 59		SA77-25B	25	X	X	X	X		X	X	X		X				X				B,G	
S-8	WAPA site, 59		SA77-41B	41	X	X	X	X		X	X	X		X	X			X				G, I, M	
S-8	WAPA site	RSAS8	RSAS8-0.0B	0.0																	X		This boring is located to evaluate Site-wide conditions and potential impacts from the offsite Western Area
S-8	WAPA site		RSAS8-0.5B	0.5	X	X	X	X		X	X	X	X	X	X		X	X				M	Power Administration (WAPA) site.
S-8	WAPA site		RSAS8-10B	10	X	X	X	X		X	X	X	Hold	X				X					GW anticipated at ~37 feet bgs.
S-8	WAPA site		RSAS8-20B	20	R	R	R	R		R	R		R	R				R				B	
S-8	WAPA site		RSAS8-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	
S-8	WAPA site		RSAS8-30B	30	R	R	R	R		R	R		R	R				R				B	
S-8	WAPA site		RSAS8-35B	35	X	X	X	X		X	X	X	X	X	X			X				I, M	
S-8	WAPA site		RSAS8-40B	40	R	R	R	R		R	R		R	R				R				A	
Number of Borings:		**33**	**Number of Samples:**		**126**	**126**	**126**	**101**	**0**	**126**	**126**	**43**	**26**	**86**	**14**	**6**	**33**	**126**	**3**	**3**	**26**		
Synthetic Precipitate Leaching Procedure (SPLP) Samples:																						Geotechnical Tests [14.]	
N-8	21, 24, 46	RSAN8	RSAN8-10B	10	X	X	X	X		X	X	X	Hold	X	X			X				X	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 Alluvium (Qal) soils. Expected soil type: Gravelly Sand.
N-8	21, 24, 46		RSAN8-DDB	33 DD*	X	X	X	X		X	X	X	X	X	X			X				X	**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.
O-7	24, 46	SA52	SA52-10B	19 DD*	X	X	X			X	X		X		X			X				X	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.
O-7	24, 46	SA52	SA52-DDB	33 DD*	X	X	X			X	X		X		X			X				X	**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.
Q-8	34E, 47, 48, 59, A70	RSAQ8	RSAQ8-10B	10	X	X	X	X		X	X		Hold	X	X			X				X	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.
Q-8	34E, 47, 48, 59, A70		RSAQ8-DDB	31 DD*	X	X	X	X		X	X		X	X	X			X				X	**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.
R-8	33, 44, 61, 59	SA34	SA34-10	10	X	X	X	X		X	X			X	X			X				X	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.
R-8	33, 44, 61, 59		SA34-DD	31 DD*	X	X	X	X		X	X			X	X			X				X	**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: Sand.
Number of Soil Samples:					**134**	**134**	**134**	**107**	**0**	**134**	**134**	**45**	**32**	**92**	**22**	**6**	**33**	**134**	**3**	**3**	**28**	**8**	
	QA/QC Samples:																						
	Field Duplicates (10%)				13	13	13	11	0	13	13	5	3	9	2	1	4	13	1	1	3	0	
	Field Blanks				1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	0	0	
	Equipment Rinsate Blanks				6	6	6	6	0	6	6	0	2	5	2	1	2	6	1	3	0	0	
	Trip Blank Samples				0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	
	Matrix Spike (5%)				7	7	7	6	0	7	7	3	2	5	1	1	2	7	1	1	0	0	
	Matrix Spike Duplicate (5%)				7	7	7	6	0	7	7	3	2	5	1	1	2	7	1	1	0	0	
	Total Sample Count:				**168**	**168**	**168**	**137**	**0**	**174**	**168**	**56**	**42**	**117**	**29**	**11**	**44**	**168**	**8**	**10**	**31**	**8**	

Notes:

X	Green-shading indicates new addition to this table.
R	Brown-shading indicates item will be removed from this table.
X	Sample will be collected and analyzed.
	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-GRO	Total petroleum hydrocarbons - Gasoline-Range Organics.
TPH-D/O	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±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 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.
2.	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
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, CO_3, HCO_3), 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
8.	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.
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 NDE
11.	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.
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.

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

				Laboratory [K.] :	Columbia Analytical Services Kelso, WA		Columbia Analytical Services - Rochester, NY									Columbia Analytical Services - Houston, TX		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	Location Description and Rationale for Investigation (NDEP may not agree with upgradient and downgradient descriptions)
Borings are organized by grid location as shown on Plate A - Starting point is on the northwestern most grid in Area 3 (N-7) and ending with the southeastern most grid in Area 3 (S-8).																							

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).

Rationale Codes

A The soil sample was removed from the sampling plan because the 2008 groundwater data indicates that the water table is likely above this depth.
B 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 (or at Mn tailings/soil interface, as appropriate), 10-ft (or 10-ft beneath Mn tailings/soil interface or 1-ft below a pipeline invert, as appropriate), and the capillary fringe (2-ft above the water table). Additional samples will be collected if the vertical distance between samples exceeds 20 ft. (depth rounded off to the closest 5-ft interval). Unless otherwise indicated, soil samples will not be collected at depths of 20, 30, or 40-ft.
C Platinum was added per NDEP (July 21, 2008)
E Soil sample will be collected at this depth because the depth is one-foot below pipeline invert.
F Aroclor and congener PCBs were added per NDEP (July 21, 2008).
G Where indicated, judgmental OCP samples were removed from the sampling plan because OCPs were not created, stored, conveyed, or potentially disposed at this location. All random grid samples are analyzed for OCPs.
H Tronox is not requesting closure for these LOUs at this time because they are still active; therefore, Judgmental borings were removed from the Phase B sampling plans. Sampling is postponed until production operations permanently cease (per discussions with NDEP, October 1, 2008).
I Sample depth was added so that the capillary fringe sample will be collected 2 feet above the water table.
K Laboratory information was added to Table 2 to assist field sampling personnel in shipping the sample containers to the appropriate laboratory.
L SVOC analysis was added to this boring per NDEP (July 21, 2008).
M Aroclor PCB analysis (EPA 8082) was added to this boring per NDEP (July 21, 2008).
N New boring added per NDEP (July 21, 2008)
O TPH-DRO/ORO was added per NDEP (July 21, 2008).
Sample depth dependent upon depth of the Mn tailings/soil interface. Final depth will be determined in the field
Q SA141 was moved to grid O-7 from O-8 per NDEP (July 21, 2008).
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
W Wipe sample of concrete surface for Aroclor and congener PCBs was added to sampling plan per NDEP (July 21, 2008).
Y Asbestos sample removed because it is not feasible to collect a sample from the Mn tailings pile or the Mn tailings/soil interface.
Z OPPs and organic Acids were added per NDEP (July 21, 2008). Note that sample is proposed at 14 foot depth to evaluate pipeline invert..

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

						Laboratory :	Columbia Analytical Services Kelso, WA		Columbia Analytical Services - Rochester, NY									Columbia Analytical Services - Houston, TX		GEL - Charleston, SC	STL Denver, CO	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	PTS Santa Fe Springs, CA	Location Description and Rationale for Investigation (NDEP may not agree with upgradient and downgradient descriptions)
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 per Sample:					1 - 4 oz. Jar		1 - 4 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 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 3 (N-7) and ending with the southeastern most grid in Area 3 (S-8).																									
N-7	SA157	SA157-0.0B	0.0																				X		Boring located to evaluate LOU 20 (Pond C-1 Associated Piping), LOU 21 (Pond Mn-1 and Associated Piping),
N-7		SA157-0.5B	0.5				X	X	X	X		X	X	X		X			X	X					LOU 22 (WC-West Associated Piping), and LOU 23 (WC-East Associated Piping). Located at piping junction
N-7		SA157-0.5BD	0.5 (dup)				X	X	X	X		X	X	X		X			X	X					from all LOUs at highest release potential location (manhole and junction).
N-7		SA157-10B	10				X	X	X	X		X	X	X		X				X					GW anticipated at ~46 feet bgs.
N-7		SA157-25B	25				X	X	X	X		X	X	X		X				X					
N-7		SA157-44B	44				X	X	X	X		X	X	X		X				X					
N-8	RSAN8	RSAN8-0.0B	0.0																				X		Boring located to evaluate LOU 24 (Manganese [Mn] Tailings Pile Area), LOU 46 (Former Old Main Cooling
N-8		RSAN8-0.5B	0.5				X	X	X	X		X	X	X	X	X			X	X					Tower and Recirculation Lines), and LOU 21 (Pond Mn-1 and Associated Piping). Located near the perimeter
N-8		RSAN8-10B	10				X	X	X	X		X	X	X	Hold	X				X					of two LOUs and associated piping at a high release potential location (down slope and low spot).
N-8		RSAN8-10B	10		X		X	X	X	X		X	X	X	Hold	X	X			X				X	GW anticipated at ~36 feet bgs. SPLP sample must be of Quaternary Alluvium (Qal) soils.
N-8		RSAN8-20B	20				X	X	X	X		X	X	X	Hold	X				X					
N-8		RSAN8-33B	33		X		X	X	X	X		X	X	X	X	X	X			X				X	Qal/MC contact at ~ 32 feet bgs. SPLP sample must be of Muddy Creek soils & dry. If moist, don't collect SPLP her
N-8		RSAN8-34B	34				X	X	X	X		X	X	X	X	X				X					
N-8	SA139	SA139-0.0B	0.0																				X		Boring located to evaluate LOU 21 (Pond Mn-1 and Associated Piping), LOU 24 (Mn Tailings Pile area), and
N-8		SA139-0.5B	0.5				X	X	X			X	X						X	X					LOU 46 (Former Old Main Cooling Tower and Recirculation Lines). Located near the perimeter of two LOUs
N-8		SA139-10B	10				X	X	X			X	X							X					and associated piping at a high release potential location (down slope and low spot)
N-8		SA139-25B	25				X	X	X			X	X							X					GW anticipated at ~37 feet bgs.
N-8		SA139-25BD	25 (dup)				X	X	X			X	X							X					
N-8		SA139-35B	35				X	X	X			X	X							X					
N-8	SA160	SA160-0.0B	0.0																				X		Boring located to evaluate upgradient LOU 24 (Mn Tailings Pile Area) , LOU 46 (Former Old Main Cooling
N-8		SA160-0.5B	0.5				X	X	X			X	X						X	X					Tower and Recirculation Lines) and LOU 21 (Pond Mn-1 and Associated Piping). Located near perimeter of
N-8		SA160-10B	10				X	X	X			X	X							X					two LOUs and piping at high release potential location (down slope and low spot)
N-8		SA160-10B	10	X			X	X	X			X	X							X					GW anticipated at ~36 feet bgs.
N-8		SA160-20B	20				X	X	X			X	X							X					
N-8		SA160-34B	34				X	X	X			X	X							X					
O-6	SA39	SA39-0.0B	0.0																				X		Boring located north of Chemstar to evaluate LOU 34W (Historic Mn Tailings Pile Area, West). Located in low
O-6		SA39-0.5B	0.5				X	X	X	X		X	X						X	X					spot of LOU 34W at likely worst case location.
O-6		SA39-10B	10				X	X	X	X		X	X							X					GW anticipated at ~43 feet bgs.
O-6		SA39-25B	25				X	X	X	X		X	X							X					
O-6		SA39-25B	25	X			X	X	X	X		X	X							X					
O-6		SA39-41B	41				X	X	X	X		X	X							X					
O-7	RSAO7	RSAO7-0.0B	0.0																						Boring located to evaluate potential impacts to soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46
O-7		RSAO7-15B#	15 #				X	X	X	X		X	X		X	X			X	X					(Former Old Main Cooling Tower and Recirculation Lines). Located in low spot of LOU 24 and down hill
O-7		RSAO7-25B##	25 ##				X	X	X	X		X	X		Hold	X				X					topographically of LOU 46.
O-7		RSAO7-35B#	35 #				X	X	X	X		X	X		Hold	X				X					Soil samples will be collected below Mn-tailings/soil interface; interface at approx. 15 ft bgs.
O-7		RSAO7-47B	47				X	X	X	X		X	X		X	X				X					GW anticipated at ~ 49 feet bgs.
O-7	SA178	SA178-0.0B	0.0																				X		Boring located to evaluate LOU 20 (Pond C-1 Associated Piping Associated Piping), LOU 22 (WC-West
O-7		SA178-0.5B	0.5				X	X	X	X		X	X	X		X			X	X					Associated Piping), LOU 23 (WC-East Associated Piping), LOU 34W (Historic Mn Tailings Pile Area, West),
O-7		SA178-10B	10				X	X	X	X		X	X	X		X				X					and LOU 60 (Acid Drain system). Located within this cluster of LOUs at a likely high release potential location
O-7		SA178-17B	17				X	X	X	X		X	X	X		X				X					for all five LOUs (low point, edge of road).
O-7		SA178-25B	25				X	X	X	X		X	X	X		X				X					LOU 60 pipeline invert located approximately 16 ft bgs.
O-7		SA178-43B	43				X	X	X	X		X	X	X		X				X					GW anticipated at ~45 feet bgs.
O-7	SA52	SA52-0.0B	0.0																						Boring located to evaluate soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46 (Former Old Main
O-7		SA52-19B#	19 #				X	X	X				X						X	X					Cooling Tower and Recirculation Lines). Located within the footprint of both LOUs at a topographically low
O-7		SA52-19B#	19 #		X		X	X	X				X	X	X		X			X				X	area for worst case coverage.
O-7		SA52-33B#	33 #				X	X	X				X	X						X					Soil samples will be collected below Mn-tailings/soil interface; interface at approx. 19 to 25 feet bgs.
O-7		SA52-33B#	33 #		X		X	X	X				X	X	X		X			X				X	LOU 60 pipeline invert located approximately 13 feet below Mn tailings/soil interface (32 to 38 bgs).
O-7		SA52-43B	43				X	X	X				X	X						X					GW anticipated at ~45 feet bgs.
O-7	SA149	SA149-0.0B	0.0																						Boring located to evaluate soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46 (Former Old Main Cooling
O-7		SA149-17B#	17 #				X	X	X				X						X	X					Tower and Recirculation Lines). Located within LOU 24 and just upgradient of LOU 46 to provide area coverage
O-7		SA149-27B#	27 ##				X	X	X				X							X					of both LOUs.
O-7		SA149-45B	45				X	X	X				X							X					Soil samples will be collected below Mn-tailings/soil interface; interface at approx. 16 feet bgs.
O-7		SA149-45BD	45 (dup)				X	X	X				X							X					GW anticipated at ~47 feet bgs.
O-7	SA137	SA137-0.0B	0.0																				X		Boring located to evaluate LOU 24 (Mn Tailings Pile Area) historical surface drainage path and LOU 60 (Acid
O-7		SA137-0.5B	0.5				X	X	X	X		X	X	X		X			X	X					Drain System) conveyance route. Boring to be drilled on soil in surface drainage swale near toe of Mn tailings
O-7		SA137-15B	15				X	X	X	X		X	X	X		X				X					pile (not on top of tailings pile). LOU 60 pipeline invert occurs approximately 14 feet bgs.
O-7		SA137-31B	31				X	X	X	X		X	X	X		X				X					GW anticipated at ~33 feet bgs.
O-7	SA141	SA141-0.0B	0.0																						Boring located to evaluate potential impacts to underlying soil from LOU 24 (Mn Tailings Pile Area), LOU 46
O-7		SA141-13B#	13 #				X	X	X	X						X			X	X					Cooling Tower and Recirculation Lines), and LOU 60 (Acid Drain System).
O-7		SA141-13BD#	13 (dup)#				X	X	X	X						X			X	X					Former Old Main Cooling Tower soil samples will be collected below Mn-tailings/soil interface; interface at
O-7		SA141-23B##	23 ##				X	X	X	X						X				X					approx 18 ft bgs. LOU 60 pipeline invert occurs at 13 feet below Mn tailings/soil interface (`31 feet bgs).
O-7		SA141-30B	30				X	X	X	X						X				X					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.
O-8	RSAO8	RSAO8-0.0B	0.0																						Boring located to evaluate for potential impacts to soil underlying LOU 24 (Manganese Tailings Pile Area) and
O-8		RSAO8-15B#	15 #				X	X	X	X					X				X	X					LOU 46 (Former Old Main Cooling Tower and Recirculation Lines). Located within LOU 24 and just upgradient of
O-8		RSAO8-25B##	25 ##				X	X	X	X					Hold					X					area coverage LOU 46 to provide of both LOUs.
O-8		RSAO8-43B	43				X	X	X	X					X					X					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.
O-8	SA108	SA108-0.0B	0.0																				X		Boring located to evaluate soil underlying LOU 24 (Mn Tailings Pile Area) and LOU 46 (Former Old Main Cooling
O-8		SA108-20B#	20 #				X	X	X				X						X	X					Tower and Recirculation Lines). Located within the footprint of both LOUs at a slight low spot to provide
O-8		SA108-20B#	20 #	X			X	X	X				X	X					X	X					reasonable coverage of both.
O-8		SA108-30B##	30 ##				X	X	X				X	X						X					Soil samples will be collected below Mn-tailings/soil interface; interface at approx 20 to 29 feet bgs.
O-8		SA108-48B	48				X	X	X				X	X						X					GW anticipated at ~50 feet bgs.
O-8	SA142	SA142-0.0B	0.0																						Boring located to evaluate potential impacts to underlying soil from LOU 24 (Mn Tailings Pile Area), LOU 46
O-8		SA142-20B	20				X	X	X	X			X	X	X		X		X	X					(Former Old Main Cooling Tower and Recirculation Lines), and LOU 60 (Acid Drain System).
O-8		SA142-20BD	20 (dup)				X	X	X	X			X	X	X		X		X	X					Soil samples will be collected below Mn-tailings/soil interface; interface at approx 20 to 30 ft bgs.
O-8		SA142-34B	34				X	X	X	X			X	X	X		X			X					Lou 60 pipeline invert occurs at approximately 13 feet below Mn tailings/soil interface (33-43 bgs).
O-8		SA142-51B	51				X	X	X	X			X	X	X		X			X					Groundwater anticipated at ~53 ft bgs.

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						Laboratory :	Columbia Analytical Services Kelso, WA		Columbia Analytical Services - Rochester, NY									Columbia Analytical Services - Houston, 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	Location Description and Rationale for Investigation (NDEP may not agree with upgradient and downgradient descriptions)
		Number of Containers per Sample:					1 - 4 oz. Jar		1 - 4 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 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 3 (N-7) and ending with the southeastern most grid in Area 3 (S-8).																									
O-8	SA143	SA143-0.0B	0.0																				X		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.
O-8		SA143-31B#	31 #				X	X	X			X	X						X	X					
O-8		SA143-41B#	41 ##				X	X	X			X	X							X					
O-8		SA143-52B	52				X	X	X			X	X							X					
O-8		SA143-52BD	52 (dup)				X	X	X			X	X							X					
O-8	SA171	SA171-0.0B	0.0																						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.
O-8		SA171-5B#	5 #				X	X	X	X		X	X	X		X			X	X					
O-8		SA171-18B#	18 ##				X	X	X	X		X	X	X		X				X					
O-8		SA171-30B	30				X	X	X	X		X	X	X		X				X					
O-8		SA171-42B	42				X	X	X	X		X	X	X		X				X					
P-6	SA130	SA130-0.0B	0.0																				X		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.
P-6		SA130-0.5B	0.5				X	X	X	X		X	X	X		X			X	X					
P-6		SA130-10B	10				X	X	X	X		X	X	X		X				X					
P-6		SA130-25B	25				X	X	X	X		X	X	X		X				X					
P-6		SA130-43B	43				X	X	X	X		X	X	X		X				X					
P-6	RSAP6	RSAP6-0.0B	0.0																				X		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.
P-6		RSAP6-0.5B	0.5				X	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		RSAP6-25B	25				X	X	X	X		X	X		Hold	X				X					
P-6		RSAP6-44B	44				X	X	X	X		X	X		X	X				X					
P-7	RSAP7	RSAP7-0.0B	0.0																				X		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.
P-7		RSAP7-0.5B	0.5				X	X	X	X		X	X	X	X	X			X	X	X	X			
P-7		RSAP7-0.5B	0.5	X			X	X	X	X		X	X	X	X	X			X	X	X	X			
P-7		RSAP7-14B	14				X	X	X	X		X	X	X	Hold	X				X	X	X			
P-7		RSAP7-25B	25				X	X	X	X		X	X	X	Hold	X				X					
P-7		RSAP7-41B	41				X	X	X	X		X	X	X	X	X				X	X	X			
P-7	SA140	SA140-0.0B	0.0																				X		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.
P-7		SA140-0.5B	0.5				X	X	X			X	X		X				X	X					
P-7		SA140-10B	10				X	X	X			X	X		Hold					X					
P-7		SA140-10BD	10 (dup)				X	X	X			X	X		Hold					X					
P-7		SA140-30B	30				X	X	X			X	X		Hold					X					
P-7		SA140-40B	40				X	X	X			X	X		X					X					
P-8	RSAP8	RSAP8-0.0B	0.0																				X		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.
P-8		RSAP8-0.5B	0.5				X	X	X	X		X	X		X	X			X	X					
P-8		RSAP8-10B	10				X	X	X	X		X	X		Hold	X				X					
P-8		RSAP8-25	25				X	X	X	X		X	X		Hold	X				X					
P-8		RSAP8-40B	40				X	X	X	X		X	X		X	X				X					
Q-7	RSAQ7	RSAQ7-0.0B	0.0																				X		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.
Q-7		RSAQ7-0.5B	0.5				X	X	X	X		X	X	X	X	X			X	X					
Q-7		RSAQ7-10B	10				X	X	X	X		X	X	X	Hold	X				X					
Q-7		RSAQ7-25B	25				X	X	X	X		X	X	X	Hold	X				X					
Q-7		RSAQ7-37B	37				X	X	X	X		X	X	X	X	X				X					
Q-7		RSAQ7-37B	37	X			X	X	X	X		X	X	X	X	X				X					
Q-8	RSAQ8	RSAQ8-0.0B	0.0																				X		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.
Q-8		RSAQ8-0.5B	0.5				X	X	X	X		X	X		X	X			X	X					
Q-8		RSAQ8-10B	10				X	X	X	X		X	X		Hold	X				X					
Q-8		RSAQ8-10B	10		X		X	X	X	X		X	X		Hold	X	X			X				X	
Q-8		RSAQ8-20B	20				X	X	X	X		X	X		Hold	X				X					
Q-8		RSAQ8-31B	31		X		X	X	X	X		X	X		X	X	X			X				X	
Q-8		RSAQ8-34B	34				X	X	X	X		X	X		X	X				X					
R-7	RSAR7	RSAR7-0.0B	0.0																				X		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.
R-7		RSAR7-0.5B	0.5				X	X	X	X		X	X		X	X			X	X					
R-7		RSAR7-9B	9				X	X	X	X		X	X		Hold	X				X					
R-7		RSAR7-9BD	9 (dup)				X	X	X	X		X	X		Hold	X				X					
R-7		RSAR7-20B	20				X	X	X	X		X	X		Hold	X				X					
R-7		RSAR7-34B	34				X	X	X	X		X	X		X	X				X					
R-7	SA112	SA112-0.0B	0.0														X	X					X		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.
R-7		SA112-0.5B	0.5				X	X	X	X		X	X			X	X	X	X	X					
R-7		SA112-10B	10				X	X	X	X		X	X			X			R	X					
R-7		SA112-20B	20				X	X	X	X		X	X			X			R	X					
R-7		SA112-34B	34				X	X	X	X		X	X			X	X	X	X	X					
R-7	SA132	SA132-0.0B	0.0																				X		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.
R-7		SA132-0.5B	0.5				X	X	X	X		X	X		X				X	X					
R-7		SA132-10B	10				X	X	X	X		X	X		Hold					X					
R-7		SA132-10BD	10 (dup)				X	X	X	X		X	X		Hold					X					
R-7		SA132-20B	20				X	X	X	X		X	X		Hold					X					
R-7		SA132-34B	34				X	X	X	X		X	X		X					X					
R-7	SA33	SA33-0.0B	0.0														X	X					X		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.
R-7		SA33-0.5B	0.5				X	X	X	X		X	X				X	X	X	X					
R-7		SA33-0.5BD	0.5 (dup)				X	X	X	X		X	X				X	X	X	X					
R-7		SA33-10B	10				X	X	X	X		X	X							X					
R-7		SA33-20B	20				X	X	X	X		X	X							X					
R-7		SA33-33B	33				X	X	X	X		X	X				X	X		X					

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

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

						Laboratory :	Columbia Analytical Services Kelso, WA		Columbia Analytical Services - Rochester, NY									Columbia Analytical Services - Houston, TX		GEL - Charleston, SC	STL Denver, CO	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	PTS Santa Fe Springs, CA	Location Description and Rationale for Investigation (NDEP may not agree with upgradient and downgradient descriptions)
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 per Sample:					1 - 4 oz. Jar		1 - 4 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 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 3 (N-7) and ending with the southeastern most grid in Area 3 (S-8).																									
R-8	RSAR8	RSAR8-0.0B	0.0																				X		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.
R-8		RSAR8-0.5B	0.5				X	X	X	X		X	X		X	X	X		X	X					
R-8		RSAR8-10B	10				X	X	X	X		X	X		Hold	X				X					
R-8		RSAR8-20B	20				X	X	X	X		X	X		Hold	X				X					
R-8		RSAR8-34B	34				X	X	X	X		X	X		X	X				X					
R-8		RSAR8-34B	34	X			X	X	X	X		X	X		X	X	X			X					
R-8	SA34	SA34-0.0B	0.0																				X		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.
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				X					
R-8		SA34-10B	10		X		X	X	X	X		X	X			X	X			X				X	
R-8		SA34-20B	20				X	X	X	X		X	X			X				X					
R-8		SA34-31B	31		X		X	X	X	X		X	X			X	X			X				X	
R-8		SA34-34B	34				X	X	X	X		X	X			X				X					
R-8	SA59	SA59-0.0B	0.0																				X		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.
R-8		SA59-0.5B	0.5				X	X	X	X		X	X			X	X		X	X					
R-8		SA59-10B	10				X	X	X	X		X	X			X				X					
R-8		SA59-25B	25				X	X	X	X		X	X			X				X					
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	X			X					
R-8	SA68	SA68-0.0B	0.0																				X		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.
R-8		SA68-0.5B	0.5				X	X	X	X		X	X			X			X	X					
R-8		SA68-10B	10				X	X	X	X		X	X			X				X					
R-8		SA68-25B	25				X	X	X	X		X	X			X				X					
R-8		SA68-25BD	25 (dup)				X	X	X	X		X	X			X				X					
R-8		SA68-36B	36				X	X	X	X		X	X			X				X					
S-8	SA77	SA77-0.0B	0.0																				X		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.
S-8		SA77-0.5B	0.5				X	X	X	X		X	X	X		X	X		X	X					
S-8		SA77-10B	10				X	X	X	X		X	X	X		X				X					
S-8		SA77-10BD	10 (dup)				X	X	X	X		X	X	X		X				X					
S-8		SA77-25B	25				X	X	X	X		X	X	X		X				X					
S-8		SA77-41B	41				X	X	X	X		X	X	X		X	X			X					
S-8	RSAS8	RSAS8-0.0B	0.0																				X		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.
S-8		RSAS8-0.5B	0.5				X	X	X	X		X	X	X	X	X	X		X	X					
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					
S-8		RSAS8-35B	35	X			X	X	X	X		X	X	X	X	X	X			X					

Notes:

X	Sample will be collected and analyzed.
	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-GRO	Total petroleum hydrocarbons - Gasoline-Range Organics.
TPH-D/O	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, 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 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.
2.	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
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, CO_3, HCO_3), 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
8.	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.
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 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.
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).
#	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 3
Groundwater Sampling and Analysis Plan - Area III
Phase B Source Area Investigation Work Plan
Tronox Facility - Henderson, Nevada

							Laboratory [E.] :	CAS - Kelso, WA	CAS - Rochester, NY						GEL -Charleston, SC	STL - Denver	Alpha Analytical Sparks, NV	Rationale for Revision	Location Description and Rationale for Investigation
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]		
Wells are organized by grid location as shown on Plate A - Starting point is on the northwestern-most grid in Area III (N-7) and ending with the southeastern-most grid 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	III	M-35	M-35B	25 - 40	MCfg1	no	X	X	X	X	X	X	X	X	X			F	Located to serve as a downgradient step out for LOUs 24 and 46; as an crossgradient step out for LOU 21; and fo general Site coverage.
N-8	III	M-147	M-147B	TBD	Qal/MCfg1*	new well	X	X	X	X	X	X	X	X	X			F	
N-9	TIMET	CLD-4R	CLD-4RB	nr	Qal/MCfg1*	no	X	X	X	X	X	X	X	X	X			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	III	M-50	M-50B	39.6 - 59.6	MCfg1	no	X	X	X	X	X	X	X	X	X			F	Located to evaluate LOU 34W; as an upgradient step out for LOU 60; and for general Site coverage.
O-8	III	M-33	M-33B	30 - 45	MCfg1	no	X	X	X	X	X	X	X	X	X			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	III	M-148	M-148B	TBD	MCfg1*	new well	X	X	X	X	X	X	X	X	X			F	Located south of LOU 46 (Former Old Main Cooling Tower) per NDEP.
O-10	TIMET	CLU1	CLU1B	nr	MCfg1*	no	X	X	X	X	X	X	X	X	X			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	III	M-31A	M-31AB	35 - 55	MCfg1	yes	X	X	X	X	X	X	X	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	III	M-52	M-52B	34.5 - 44.5	MCfg1	no	X	X	X	X	X	X	X	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	X	X	X	X	X	X	X	X	X			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	X	X	X	X	X	X	X	X	X			F	Located to evaluate LOUs 34E, 47 through 51 and Area 70 (former U.S. Vanadium); as a downgradient step out fo 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	III	M-11	M-11B	33.3 - 53	Qal/MCfg1	yes	X	X	X	X	X	X	X	X	X			F	Located as a downgradient step out for LOU 61; as an upgradient step out for LOUs 34E, 47 through 51 and Area 70 (former U.S. Vanadium); as a crossgradient step out for LOUs 20, 22, 23, and 60, and for general Site coverage.
Q-8	III	M-122	M-122B	TBD	Qal/MCfg1*	new well	X	X	X	X	X	X	X	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	X	X	X	X	X	X	X	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	III	M-139	M-139B	TBD	MCfg1*	new well	X	X	X	X	X	X	X	X	X			F	Located as an upgradient step out for LOUs 37 and 44, and general Site coverage.
R-8	III	M-145	M-145B	TBD	MCfg1*	new well	X	X	X	X	X	X	X	X	X			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	III	M-29	M-29B	22-42	MCfg1	no	X	X	X	X	X	X	X	X	X			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.
						Number of Field Samples:	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**0**	**0**		
QA/QC Samples:																			
						Field Duplicates (10%)	2	2	2	2	2	2	2	2	2	0	0		
						Field Blanks	1	1	1	1	1	1	1	1	1	0	0		
						Equipment Rinseate Blanks	1	1	1	1	1	1	1	1	1	0	0		
						Trip Blank Samples	0	0	5	0	0	0	0	0	0	0	0		
						Matrix Spike (5%)	1	1	1	1	1	1	1	1	1	0	0		
						Matrix Spike Duplicate (5%)	1	1	1	1	1	1	1	1	1	0	0		
						Total Samples:	**23**	**23**	**28**	**23**	**23**	**23**	**23**	**23**	**23**	**0**	**0**		

Notes:

*	Well completion information or boring log not available. Soil type inferred from nearby wells and geologic cross-section provided in the Phase A Source Area Investigation Report (ENSR, 2007). ENSR is in the process of obtaining information from BMI.
X	Sample will be collected and analyzed.
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.	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.	VOCs = Volatile organic compounds (to include analysis for naphthalene).
4.	Hexavalent Chromium.
5.	Complete list of wet chemistry parameters are shown on Table 1. All groundwater samples will have pH measured in the field.
6.	OCPs = Organochlorine pesticides (to include analysis for hexachlorobenzene).
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).
10.	OPPs = Organophosphorous Pesticides

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

						Laboratory [E.] :	CAS - Kelso, WA		CAS - Rochester, NY						GEL -Charleston, SC	STL - Denver	Alpha Analytical Sparks, NV	Rationale for Revision	Location Description and Rationale for Investigation
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]		
Wells are organized by grid location as shown on Plate A - Starting point is on the northwestern-most grid in Area III (N-7) and ending with the southeastern-most grid covering Area III (Q-9).																			
IIIN/E/W/S	Well located outside (north, east, west, or south) of Area III.																		
TBD	To be determined when well is constructed.																		
(a)	Complete list of wet chemistry parameters are shown on Table 1. All groundwater samples will have pH measured in the field.																		
TD	Total Depth of the well determined by Site wide routine groundwater monitoring.																		
nr	Not recorded in the Tronox Database (June 2008) - information will be acquired from BMI or determined by downhole camera.																		
Qal	Quaternary Alluvium.																		
MCfg1	Muddy Creek Formation - first fine-grained facies.																		
MCcg1	Muddy Creek Formation - first coarse-grained facies.																		
X	Green-shading indicates items that have been added or changed from Table 3 in the June 2008 Area III Work Plan originally reviewed by NDEP.																		
R	Brown-shading indicates items that have been removed from Table 3 in the June 2008 Area III Work Plan originally reviewed by NDEP.																		
A	Sample ID was added to convey sample ID nomenclature to field sampling team.																		
B	OPPs were added per NDEP (July 21, 2008).																		
C	Organic Acids were added per NDEP (July 21, 2008).																		
D	Well was removed from Table 3 because this well is not located in Area III.																		
E	Laboratory information was added to Table 3 to assist field sampling personnel in shipping the sample containers to the appropriate laboratory.																		
F	Total cyanide column was added per NDEP (July 21, 2008).																		

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

								Laboratory [E.] :	CAS - Kelso, WA	CAS - Rochester, NY						GEL -Charleston, SC	STL - Denver	Alpha Analytical Sparks, NV	Location Description and Rationale for Investigation
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.B] (8141A)	Organic Acids[C]	
Wells are organized by grid location as shown on Plate A - Starting point is on the northwestern-most grid in Area III (N-7) and ending with the southeastern-most grid covering Area III (R-8).																			
N-7	III	M-35	M-35B	25 - 40	MCfg1	no			X	X	X	X	X	X	X	X	X			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			X	X	X	X	X	X	X	X	X			
N-9	TIMET	CLD-4R	CLD-4RB	nr	Qal/MCfg1*	no			X	X	X	X	X	X	X	X	X			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	III	M-50	M-50B	39.6 - 59.6	MCfg1	no			X	X	X	X	X	X	X	X	X			Located to evaluate LOU 34W; as an upgradient step out for LOU 60; and for general Site coverage.
O-8	III	M-33	M-33B	30 - 45	MCfg1	no			X	X	X	X	X	X	X	X	X			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	III	M-148	M-148B	TBD	MCfg1*	new well			X	X	X	X	X	X	X	X	X			Located south of LOU 46 (Former Old Main Cooling Tower) per NDEP.
O-10	TIMET	CLU1	CLU1B	nr	MCfg1*	no			X	X	X	X	X	X	X	X	X			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	III	M-31A	M-31AB	35 - 55	MCfg1	yes			X	X	X	X	X	X	X	X	X			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	III	M-52	M-52B	34.5 - 44.5	MCfg1	no			X	X	X	X	X	X	X	X	X			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			X	X	X	X	X	X	X	X	X			New monitoring well co-located with boring SA140 to evaluate LOUs 49 and 50.
			M-141BD	TBD (dup)					X	X	X	X	X	X	X	X	X			This is a duplicate sample of M-141B.
P-8	III	M-77	M-77B	29 - 43.8	Qal/MCfg1	no			X	X	X	X	X	X	X	X	X			Located to evaluate LOUs 34E, 47 through 51 and Area 70 (former U.S. Vanadium); as a downgradient step out for LOUs 33, 40, and 61; as a crossgradient step out for LOU 59; and for general Site coverage.
			M-77B	29 - 43.8			X		X	X	X	X	X	X	X	X	X			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-77B.
Q-7	III	M-11	M-11B	33.3 - 53	Qal/MCfg1	yes			X	X	X	X	X	X	X	X	X			Located as a downgradient step out for LOU 61; as an upgradient step out for LOUs 34E, 47 through 51 and Area 70 (former U.S. Vanadium); as a crossgradient step out for LOUs 20, 22, 23, and 60, and for general Site coverage.
			M-11BD	33.3 - 53 (dup)					X	X	X	X	X	X	X	X	X			This is a duplicate sample of M-11B.
Q-8	III	M-122	M-122B	TBD	Qal/MCfg1*	new well			X	X	X	X	X	X	X	X	X			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	X	X	X	X	X	X	X	X			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	III	M-139	M-139B	TBD	MCfg1*	new well			X	X	X	X	X	X	X	X	X			Located as an upgradient step out for LOUs 37 and 44, and general Site coverage.
R-8	III	M-145	M-145B	TBD	MCfg1*	new well			X	X	X	X	X	X	X	X	X			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	III	M-29	M-29B	22-42	MCfg1	no			X	X	X	X	X	X	X	X	X			Located to evaluate groundwater conditions beneath the Unit 6 building for LOUs 44 and 37.

Notes:

*	Well completion information or boring log not available. Soil type inferred from nearby wells and geologic cross-section provided in the Phase A Source Area Investigation Report (ENSR, 2007). ENSR is in the process of obtaining information from BMI.
X	Sample will be collected and analyzed.
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.	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.	VOCs = Volatile organic compounds (to include analysis for naphthalene).
4.	Hexavalent Chromium.
5.	Complete list of wet chemistry parameters are shown on Table 1. All groundwater samples will have pH measured in the field.
6.	OCPs = Organochlorine pesticides (to include analysis for hexachlorobenzene)
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).
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.
nr	Not recorded in the Tronox Database (June 2008) - information will be acquired from BMI or determined by downhole camera.
Qal	Quaternary Alluvium.
MCfg1	Muddy Creek Formation - first fine-grained facies.
MCcg1	Muddy Creek Formation - first coarse-grained facies

Area IV

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

			Laboratory	CAS - Kelso, WA		CAS - Rochester, NY									CAS - Houston		GEL Charleston, SC	STL - Denver	Alpha Analytical Sparks, NV	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.]	Organic Acids[12.]	Asbestos[13.] EPA/540/R-97/028	Rationale for Revision	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions.)
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).																							
P-4	n/a	SA103	SA103-0.0B	0.0																	X		Boring located to evaluate soils for area-wide coverage and not associated with any specific LOU.
P-4	n/a		SA103-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					GW anticipated at ~37 feet bgs.
P-4	n/a		SA103-10B	10	X	X	X	X		X	X	X	Hold	X				X					
P-4	n/a		SA103-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	
P-4	n/a		SA103-35B	35	X	X	X	X		X	X	X	X	X				X				Q	
P-5	n/a	RSAP5	RSAP5-0.0B	0.0																	X		Boring located to evaluate soils for area-wide coverage and not associated with any specific LOU.
P-5	n/a		RSAP5-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					GW anticipated at ~41 feet bgs.
P-5	n/a		RSAP5-10B	10	X	X	X	X		X	X	X	Hold	X				X					
P-5	n/a		RSAP5-20B	20	R	R	R	R		R	R		R	R				R				B	
P-5	n/a		RSAP5-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	
P-5	n/a		RSAP5-30B	30	R	R	R	R		R	R		R	R				R				B	
P-5	n/a		RSAP5-37B	37	R	R	R	R		R	R		R	R				R				B	
P-5	n/a		RSAP5-39B	39	X	X	X	X		X	X	X	X	X				X				Q	
Q-3	41	RSAQ3	RSAQ3-0.0B	0.0																	X		Boring located to evaluate LOU 41 (Tenant stains north of Unit 1). Random boring located within footprint of
Q-3	41		RSAQ3-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					LOU 41 at probable location of former Tenant stains (See LOU 41 summary for detailed information).
Q-3	41		RSAQ3-10B	10	X	X	X	X		X	X	X	Hold	X				X					GW anticipated at ~43 feet bgs.
Q-3	41		RSAQ3-20B	20	R	R	R	R		R	R		R	R				R				B	
Q-3	41		RSAQ3-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	
Q-3	41		RSAQ3-30B	30	R	R	R	R		R	R		R	R				R				B	
Q-3	41		RSAQ3-40B	40	R	R	R	R		R	R		R	R				R				B	
Q-3	41		RSAQ3-41B	41	X	X	X	X		X	X	X	X	X				X				Q	
Q-3	41, 60	SA169	SA169-0.0B	0.0																	X		Boring located to evaluate LOU 41 (Tenant stains north of Unit 1) and a pipeline segment of LOU 60
Q-3	41, 60		SA169-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				G	(Acid Drain System). Boring located within footprint of LOU 41 at probable location of former tenant stains
Q-3	41, 60		SA169-10B	10	X	X	X	X		X	X	X	R	X				X				G	and adjacent to LOU 60 at a high risk for release location (manhole) (See LOU 41 and 60 summaries for
Q-3	41, 60		SA169-20B	20	R	R	R	R		R	R		R	R				R				B	detailed information).
Q-3	41, 60		SA169-25B	25	X	X	X	X		X	X	X		X				X				B,G	GW anticipated at ~44 feet bgs.
Q-3	41, 60		SA169-30B	30	R	R	R	R		R	R		R	R				R				B	
Q-3	41, 60		SA169-40B	40	R	R	R	R		R	R		R	R				R				B	
Q-3	41, 60		SA169-42B	42	X	X	X	X		X	X	X		X				X				G,Q	
Q-3	65a	SA193	SA193-0.0B	0.0																	X		Boring located to evaluate LOU 65a (Ebony Construction Sites) and soils north (downgradient) of Unit 1.
Q-3	65a		SA193-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				G	Located in an area previously described as the location of a release (See LOU 65a summary for detailed
Q-3	65a		SA193-10B	10	X	X	X	X		X	X	X	R	X				X				G	information).
Q-3	65a		SA193-20B	20	R	R	R	R		R	R		R	R				R				B,G	GW anticipated at ~44 feet bgs.
Q-3	65a		SA193-25B	25	X	X	X	X		X	X	X		X				X				B,G	
Q-3	65a		SA193-30B	30	R	R	R	R		R	R		R	R				R				B	
Q-3	65a		SA193-40B	40	R	R	R	R		R	R		R	R				R				B	
Q-3	65a		SA193-42B	42	X	X	X	X		X	X	X		X				X				G,Q	
Q-3	59, 60	SA211	SA211-0.0B	0.0																	X		Boring located to evaluate LOU 59 (storm Sewer System) and LOU 60 (acid Drain System). Located to evaluate
Q-3	59, 60		SA211-0.5B	0.5	X	X	X	X		X	X	X		X	X	X	X	X	X	X		G,L,S	point of entry to Tronox for LOU 60 piping and adjacent to LOU 59 piping at same location.
Q-3	59, 60		SA211-11B	11	X	X	X	X		X	X	X		X				X	X	X		G,S	GW anticipated at ~45 feet bgs.
Q-3	59, 60		SA211-25B	25	X	X	X	X		X	X	X		X				X				G	Boring added per NDEP June 18, 2008 letter.
Q-3	59, 60		SA211-43B	43	X	X	X	X		X	X	X		X	X	X		X	X	X		G,L,Q,S	Pipeline invert for this boirng is estimated at 10 feet bgs.
Q-3	60	SA212	SA212-0.0B	0.0																	X		Boring located to evaluate LOU 60 (Acid Drain System). Located at a high risk release location (junction of multiple piping).
Q-3	60		SA212-0.5B	0.5	X	X	X	X		X	X	X		X			X	X				G	GW anticipated at ~46 feet bgs.
Q-3	60		SA212-13B	13	X	X	X	X		X	X	X		X				X				G	Pipeline invert for this boirng is estimated at 12 feet bgs.
Q-3	60		SA212-30B	30	X	X	X	X		X	X	X		X				X				G	Boring added per NDEP June 18, 2008 letter.
Q-3	60		SA212-44B	44	X	X	X	X		X	X	X		X				X				G,Q	
Q-4	60	SA213	SA213-0.0B	0.0																	X		Boring located to evaluate LOU 60 (Acid Drain System). Located at a high risk release location (junction of multiple piping).
Q-4	60		SA213-0.5B	0.5	X	X	X	X		X	X	X		X			X	X				G	GW anticipated at ~46 feet bgs.
Q-4	60		SA213-14B	14	X	X	X	X		X	X	X		X				X				G	Pipeline invert for this boirng is estimated at 13 feet bgs.
Q-4	60		SA213-30B	30	X	X	X	X		X	X	X		X				X				G	Boring added per NDEP June 18, 2008 letter.
Q-4	60		SA213-44B	44	X	X	X	X		X	X	X		X				X				G,Q	
Q-4	59, 60	SA214	SA214-0.0B	0.0																	X		Boring located to evaluate LOU 59 (Storm Sewer System) and LOU 60 (Acid Drain System). For LOU 60 located at a
Q-4	59, 60		SA214-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X				G	potential worst-case release point (junction of multiple pipes) and for general coverage of LOU 59 piping.
Q-4	59, 60		SA214-15B	15	X	X	X	X		X	X	X	X	X				X				G	GW anticipated at ~45 feet bgs.
Q-4	59, 60		SA214-30B	30	X	X	X	X		X	X	X	Hold	X				X				G	Pipeline invert for this boirng is estimated at 14 feet bgs.
Q-4	59, 60		SA214-43B	43	X	X	X	X		X	X	X	X	X				X				G,Q	Boring added per NDEP June 18, 2008 letter.
Q-4	4	RSAQ4	RSAQ4-0.0B	0.0																	X		Boring located to evaluate northern area of LOU 4 (Hardesty Chemical Company Site). Random boring located
Q-4	4		RSAQ4-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					in a low spot to evaluate the western portion of this LOU for potential worst case releases.
Q-4	4		RSAQ4-10B	10	X	X	X	X		X	X	X	X	X				X					GW anticipated at ~34 feet bgs.
Q-4	4		RSAQ4-20B	20	X	X	X	X		X	X	X	Hold	X				X					
Q-4	4		RSAQ4-30B	30	R	R	R	R		R	R		R	R				R				B	
Q-4	4		RSAQ4-32B	32	X	X	X	X		X	X	X	X	X				X				Q	
Q-4	4		RSAQ4-40B	40	R	R	R	R		R	R		R	R				R				A	
Q-4	4, 60	SA84	SA84-0.0B	0.0																	X		Boring located to evaluate southern area of LOU 4 (Hardesty Chemical Company Site) and a pipeline segment
Q-4	4, 60		SA84-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X	X	X		S	of LOU 60 (Acid Drain System). Located at a high risk spot for surface releases from LOU 4 and directly
Q-4	4, 60		SA84-10B	10	X	X	X	X		X	X	X	X	X				X					adjacent to LOU 60 to evaluate potential pipeline releases.
Q-4	4, 60		SA84-20B	20	R	R	R	R		R	R		R	R				R				B	GW anticipated at ~45 feet bgs.
Q-4	4, 60		SA84-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	Pipeline invert for this boirng is estimated at 8 feet bgs.
Q-4	4, 60		SA84-30B	30	R	R	R	R		R	R		R	R				R				B	
Q-4	4, 60		SA84-35B	35	R	R	R	R		R	R		R	R				R				B	
Q-4	4, 60		SA84-43B	43	X	X	X	X		X	X	X	X	X				X	X	X		Q,S	
Q-4	4, 27	SA101	SA101-0.0B	0.0																	X		Boring located to evaluate southern area of LOU 4 (Hardesty Chemical Company Site) and LOU 27
Q-4	4, 27		SA101-0.5B	0.5	X	X	X	X		X	X	X	X	X	X	X	X	X				F	(Former PCB Storage Area). Located downslope of LOU 27 to evaluate potential runoff. The surface of
Q-4	4, 27		SA101-10B	10	X	X	X	X		X	X	X	X	X				X					LOU 27 consists of concrete in good condition and this area is currently used to store old equipment.
Q-4	4,27		SA101-20B	20	R	R	R	R		R	R		R	R				R				B	Assessment through LOU 27 would compromise containment. Boring also locate to evaluate potential surface
Q-4	4,27		SA101-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	releases in from LOU 4.
Q-4	4,27		SA101-30B	30	R	R	R	R		R	R		R	R				R				B	Pipeline invert for this boirng is estimated at 8 feet bgs.
Q-4	4,27		SA101-40B	40	R	R	R	R		R	R		R	R				R				B	
Q-4	4, 27		SA101-42B	42	X	X	X	X		X	X	X	X	X	X	X		X				F,Q	GW anticipated at ~44 feet bgs.
Q-4	26	SA120	SA120-0.0B	0.0																	X		Boring located to evaluate LOU 26 (Trash Storage Area) and is north (downgradient) from Unit 1 for general
Q-4	26		SA120-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				G	area-wide coverage. Located within the footprint of LOU 26 at a location considered to represent the
Q-4	26		SA120-10B	10	X	X	X	X		X	X	X	R	X				X				G	worst case location for the assessment of potential releases.
Q-4	26		SA120-20B	20	R	R	R	R		R	R		R	R				R				B	GW anticipated at ~45 feet bgs.
Q-4	26		SA120-25B	25	X	X	X	X		X	X	X		X				X				B,G	
Q-4	26		SA120-30B	30	R	R	R	R		R	R		R	R				R				B	
Q-4	26		SA120-40B	40	R	R	R	R		R	R		R	R				R				B	
Q-4	26		SA120-43B	43	X	X	X	X		X	X	X		X				X				Q	

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

			Laboratory		CAS - Kelso, WA		CAS - Rochester, NY									CAS - Houston		GEL Charleston, SC	STL - Denver	Alpha Analytical Sparks, NV	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.]	Organic Acids[12.]	Asbestos[13.] EPA/540/R-97/028	Rationale for Revision	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions.)
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).																							
Q-4	26, 4	SA121	SA121-0.0B	0.0																	X		Boring located to evaluate LOU 26 (Trash Storage Area), LOU 4 (former Hardesty Chemical Company Site),
Q-4	26, 4		SA121-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					and the boring is north (downgradient) of Unit 2 for general area coverage. Located within the footprint of
Q-4	26, 4		SA121-10B	10	X	X	X	X		X	X	X	X	X				X					LOU 26 and 4 at a location considered to represent the worst case location for the assessment of potential
Q-4	26, 4		SA121-20B	20	R	R	R	R		R	R		R	R				R				B	releases.
Q-4	26, 4		SA121-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	GW anticipated at ~46 feet bgs.
Q-4	26, 4		SA121-30B	30	R	R	R	R		R	R		R	R				R				B	
Q-4	26, 4		SA121-40B	40	R	R	R	R		R	R		R	R				R				B	
Q-4	26, 4		SA121-44B	44	X	X	X	X		X	X	X	X	X				X				Q	
Q-4	4	SA138	SA138-0.0B	0.0																	X		Boring located to evaluate northern area of LOU 4 (former Hardesty Chemical Company Site).
Q-4	4		SA138-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					
Q-4	4		SA138-10B	10	X	X	X	X		X	X	X	X	X				X					GW anticipated at ~47 feet bgs.
Q-4	4		SA138-20B	20	R	R	R	R		R	R		R	R				R				B	
Q-4	4		SA138-30B	30	X	X	X	X		X	X	X	Hold	X				X					
Q-4	4		SA138-35B	35	R	R	R	R		R	R		R	R				R				B	
Q-4	4		SA138-45B	45	X	X	X	X		X	X	X	X	X				X				Q	
Q-4	4, 60	SA148	SA148-0.0B	0.0																	X		Boring located to evaluate southern area of LOU 4 (former Hardesty Chemical Company Site) and a pipeline
Q-4	4, 60		SA148-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X	X	X		S	segment of LOU 60 (Acid Drain System). Located on the northern edge of LOU 4 to evaluate potential
Q-4	4, 60		SA148-10B	10	X	X	X	X		X	X	X	X	X				X					surface releases and also located above LOU 60 to evaluate potential pipeline releases.
Q-4	4, 60		SA148-20B	20	R	R	R	R		R	R		R	R				R				B	GW anticipated at ~47 feet bgs.
Q-4	4, 60		SA148-30B	30	X	X	X	X		X	X	X	Hold	X				X					
Q-4	4, 60		SA148-35B	35	R	R	R	R		R	R		R	R				R				B	
Q-4	4, 60		SA148-45B	45	X	X	X	X		X	X	X	X	X				X	X	X		Q,S	
Q-4	4	SA203	SA203-0.0B	0																	X		Boring located to evaluate pipeline route connecting northern and southern areas of LOU 4 (former
Q-4	4		SA203-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					Hardesty Chemical Company Site). Located along the former pipeline route to evaluate potential worst
Q-4	4		SA203-10B	10	X	X	X	X		X	X	X	X	X				X					case release at a jog in the line.
Q-4	4		SA203-20B	20	R	R	R	R		R	R		R	R				R				B	GW anticipated at ~48 feet bgs.
Q-4	4		SA203-30B	30	X	X	X	X		X	X	X	Hold	X				X					
Q-4	4		SA203-40B	40	R	R	R	R		R	R		R	R				R				B	
Q-4	4		SA203-46B	46	X	X	X	X		X	X	X	X	X				X				Q	
Q-4	4, 60	SA204	SA204-0.0B	0																	X		Boring located to evaluate southern area of LOU 4 (former Hardesty Chemical Company Site) and a
Q-4	4, 60		SA204-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					pipeline segment of LOU 60 (Acid Drain System). Located to evaluate potential worst case location for
Q-4	4, 60		SA204-10B	10	X	X	X	X		X	X	X	X	X				X					surface releases in LOU 4. Also directly adjacent to LOU 60 to evaluate potential historical pipeline releases.
Q-4	4, 60		SA204-20B	20	R	R	R	R		R	R		R	R				R				B	Boring will be converted into well M-143.
Q-4	4, 60		SA204-30B	30	X	X	X	X		X	X	X	Hold	X				X					
Q-4	4, 60		SA204-40B	40	R	R	R	R		R	R		R	R				R				B	GW anticipated at ~47 feet bgs.
Q-4	4, 60		SA204-45B	45	X	X	X	X		X	X	X	X	X				X				Q	
Q-5	4, 28, 59	RSAQ5	RSAQ5-0.0B	0																	X		Boring located to evaluate LOU 4 (Former Hardesty Chemical Company Site), LOU 28 (Hazardous Waste
Q-5	4, 28, 59		RSAQ5-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					Storage Area), LOU 59 (Storm Sewer Drain), and for area-wide coverage. Random boring located directly
Q-5	4, 28, 59		RSAQ5-10B	10	X	X	X	X		X	X	X	X	X				X					adjacent to LOU 59 pipeline to evaluate potential pipeline releases and for general stepout coverage for
Q-5	4, 28, 59		RSAQ5-20B	20	R	R	R	R		R	R		R	R				R				B	LOUs 4 and 28.
Q-5	4, 28, 59		RSAQ5-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	GW anticipated at ~43 feet bgs.
Q-5	4, 28, 59		RSAQ5-30B	30	R	R	R	R		R	R		R	R				R				B	
Q-5	4, 28, 59		RSAQ5-40B	40	R	R	R	R		R	R		R	R				R				B	
Q-5	4, 28, 59		RSAQ5-41B	41	X	X	X	X		X	X	X	X	X				X				Q	
Q-5	28, 59	SA205	RSA205-0.0B	0																	X		Boring located as northward stepout boring from Phase A boring SA04 (for Hex Cr) to evaluate LOU 59
Q-5	28, 59		RSA205-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					as requested by NDEP in comments on Phase A Investigation report and LOU 28 and 59. Located to satisfy NDEP
Q-5	28, 59		RSA205-10B	10	X	X	X	X		X	X	X	X	X				X					Phase A comments and to evaluate potential pipeline releases from LOU 59
Q-5	28, 59		RSA205-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	GW anticipated at ~43 feet bgs.
Q-5	28, 59		RSA205-41B	41	X	X	X	X		X	X	X	X	X				X				Q	
Q-5	28	SA191	SA191-0.0B	0.0																	X		Boring located to evaluate LOU 28 (Hazardous Waste Storage Area)
Q-5	28		SA191-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X				K	GW anticipated at ~42 feet bgs.
Q-5	28		SA191-10B	10	X	X	X	X		X	X	X	X	X				X				K	
Q-5	28		SA191-20B	20	R	R	R	R		R	R		R					R				B	
Q-5	28		SA191-25B	25	X	X	X	X		X	X	X	Hold	X				X				B,K	
Q-5	28		SA191-30B	30	R	R	R	R		R	R		R					R				B	
Q-5	28		SA191-40B	40	X	X	X	X		X	X	X	X	X				X				K,Q	
Q-5	28	SA156	SA156-0.0B	0.0																			Boring located to evaluate LOU 28 (Hazardous Waste Storage Area). Containment liner will be cut and the boring will be
Q-5	28		SA156-2B	2	X	X	X	X		X	X	X	X	X			X	X				K	hand augered to 2-ft bgs (below original grade) to collect a soil sample, and the liner will be repaired. Deeper soil samples
Q-5	28																						will not be collected with the use of powered drilling equiment to avoid further damage to the containment liner. No asbestos
Q-5	28																						sample will be collected.
R-3	60, Unit 1	RSAR3	RSAR3-0.0B	0.0																	X		Unit 1, and for general area-wide coverage. Random boring
R-3	60, Unit 1		RSAR3-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					located directly adjacent to LOU 60 at a high risk location (inlet).
R-3	60, Unit 1		RSAR3-10B	10	X	X	X	X		X	X	X	Hold	X				X					GW anticipated at ~40 feet bgs.
R-3	60, Unit 1		RSAR3-20B	20	R	R	R	R		R	R		R	R				R				B	
R-3	60, Unit 1		RSAR3-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	
R-3	60, Unit 1		RSAR3-30B	30	R	R	R	R		R	R		R	R				R				B	
R-3	60, Unit 1		RSAR3-38B	38	X	X	X	X		X	X	X	X	X				X				Q	
R-3	60, Unit 1		RSAR3-40B	40	R	R	R	R		R	R		R	R				R				A	
R-3	Unit 1	SA110	SA110-0.0B	0.0																	X		Boring located to evaluate Unit 1 and for general area-wide coverage and not associated with a specific LOU
R-3	Unit 1		SA110-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				G	GW anticipated at ~39 feet bgs.
R-3	Unit 1		SA110-10B	10	X	X	X	X		X	X	X	R	X				X				G	
R-3	Unit 1		SA110-20B	20	R	R	R	R		R	R		R	R				R				B	
R-3	Unit 1		SA110-25B	25	X	X	X	X		X	X	X		X				X				B	
R-3	Unit 1		SA110-30B	30	R	R	R	R		R	R		R	R				R				B	
R-3	Unit 1		SA110-37B	37	X	X	X	X		X	X	X		X				X				Q	
R-3	Unit 1		SA110-40B	40	R	R	R	R		R	R		R	R				R				A	
R-3	59, 65b, Unit1	SA192	SA192-0.0B	0.0																	X		Boring located to evaluate LOU 59 (Storm Sewer Drain), LOU 65b (former Buckles Construction Company Site) and Unit 1
R-3	59, 65b, Unit1		SA192-0.5B	0.5	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X		S	and not associated with a specific LOU. Located directly adjacent to LOU 59 pipeline to evaluate potential releases. Also
R-3	59, 65b, Unit1		SA192-10B	10	X	X	X	X		X	X	X	X	X				X	X	X		S	located in accessible area of LOU 65b to evaluate surface releases, and within Unit 1 for area coverage. OPPs and
R-3	59, 65b, Unit1		SA192-20B	20	R	R	R	R		R	R		R	R				R				B	organic acids were added to the SAP to evaluate for potential impacts from offsite sources from the west per NDEP.
R-3	59, 65b, Unit1		SA192-25B	25	X	X	X	X		X	X	X	Hold	X				X				B,S	GW anticipated at ~41 feet bgs.
R-3	59, 65b, Unit1		SA192-30B	30	R	R	R	R		R	R		R	R				R				B	
R-3	59, 65b, Unit1		SA192-39B	39	X	X	X	X		X	X	X	X	X	X	X		X	X	X		Q,S	
R-3	59, 65b, Unit1		SA192-40B	40	R	R	R	R		R	R		R	R				R				A	
R-3	59, 60	SA209	SA209-0.0B	0.0																	X		Boring located to evaluate LOU 59 (storm Sewer System) and LOU 60 (acid Drain System). Located at high risk release
R-3	59, 60		SA209-0.5B	0.5	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X		L,S	locations for both LOUs (junctions and bends in piping).
R-3	59, 60		SA209-10B	10	X	X	X	X		X	X	X	X	X				X	X	X		S	GW anticipated at ~37 feet bgs.
R-3	59, 60		SA209-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	
R-3	59, 60		SA209-35B	35	X	X	X	X		X	X	X	X	X	X	X		X	X	X		L,Q,S	

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

				Laboratory	CAS - Kelso, WA		CAS - Rochester, NY									CAS - Houston		GEL Charleston, SC	STL - Denver	Alpha Analytical Sparks, NV	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.]	Organic Acids[12.]	Asbestos[13.] EPA/540/R-97/028	Rationale for Revision	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions.)
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).																							
R-4	25, 59, Unit 2	RSAR4	RSAR4-0.0B	0.0																	X		Boring located to evaluate LOU 25 (Process Hardware Storage Area), LOU 59 (Storm Sewer System), and for Unit 2 area
R-4	25, 59, Unit 2		RSAR4-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					coverage. Random during located at a low spot of LOU 25 to evaluate worst-case scenario surface releases in LOU 25
R-4	25, 59, Unit 2		RSAR4-10B	10	X	X	X	X		X	X	X	Hold	X				X					and adjacent to LOU 59 to evaluate piping releases.
R-4	25, 59, Unit 2		RSAR4-20B	20	R	R	R	R		R	R		R	R				R				B	GW anticipated at ~39 feet bgs.
R-4	25, 59, Unit 2		RSAR4-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	
R-4	25, 59, Unit 2		RSAR4-30B	30	R	R	R	R		R	R		R	R				R				B	
R-4	25, 59, Unit 2		RSAR4-37B	37	X	X	X	X		X	X	X	X	X				X				Q	
R-4	25, 59, Unit 2		RSAR4-40B	40	R	R	R	R		R	R		R	R				R				A	
R-4	25, Unit 2	SA29	SA29-0.0B	0.0																	X		Boring located downslope of LOU 25 (Process Hardware Storage Area) and to evaluate surface runoff releases and for
R-4	25, Unit 2		SA29-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					general coverage of Unit 2.
R-4	25, Unit 2		SA29-10B	10	X	X	X	X		X	X	X	X	X				X					GW anticipated at ~42 feet bgs.
R-4	25, Unit 2		SA29-20B	20	R	R	R	R		R	R		R	R				R				B	
R-4	25, Unit 2		SA29-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	
R-4	25, Unit 2		SA29-30B	30	R	R	R	R		R	R		R	R				R				B	
R-4	25, Unit 2		SA29-35B	35	R	R	R	R		R	R		R	R				R				B	
R-4	25, Unit 2		SA29-40B	40	X	X	X	X		X	X	X	X	X				X				Q	
R-4	25, 59, 60, Unit 2	SA111	SA111-0.0B	0.0																	X		Boring located to evaluate LOU 25 (Process Hardware Storage Area), LOU 59 (Storm Sewer Drain), LOU 60 (Acid Drain
R-4	25, 59, 60, Unit 2		SA111-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				G	System) and for Unit 2 area coverage. Located in the central portion of LOU 25 to evaluate surface releases, at the inlet
R-4	25, 59, 60, Unit 2		SA111-10B	10	X	X	X	X		X	X	X	R	X				X				G	for LOU 60 piping to evaluate surface runoff into the inlet, and near LOU 59 piping to evaluate local piping releases
R-4	25, 59, 60, Unit 2		SA111-20B	20	R	R	R	R		R	R		R	R				R				B	GW anticipated at ~41 feet bgs.
R-4	25, 59, 60, Unit 2		SA111-25B	25	X	X	X	X		X	X	X		X				X				B	
R-4	25, 59, 60, Unit 2		SA111-30B	30	R	R	R	R		R	R		R	R				R				B	
R-4	25, 59, 60, Unit 2		SA111-39B	39	X	X	X	X		X	X	X		X				X				Q	
R-4	25, 59, 60, Unit 2		SA111-40B	40	R	R	R	R		R	R		R	R				R				A	
R-4	25, Unit 1	SA190	SA190-0.0B	0.0																	X		Boring located to evaluate LOU 25 (Process Hardware Storage Area) and for Unit 1 area-coverage. Located as a general
R-4	25, Unit 1		SA190-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				G	stepout for LOU 25 and for general coverage of Unit 1.
R-4	25, Unit 1		SA190-10B	10	X	X	X	X		X	X	X	R	X				X				G	GW anticipated at ~40 feet bgs.
R-4	25, Unit 1		SA190-20B	20	R	R	R	R		R	R		R	R				R				B	
R-4	25, Unit 1		SA190-25B	25	X	X	X	X		X	X	X		X				X				B	
R-4	25, Unit 1		SA190-30B	30	R	R	R	R		R	R		R	R				R				B	
R-4	25, Unit 1		SA190-38B	38	X	X	X	X		X	X	X		X				X				Q	
R-4	25, Unit 1		SA190-40B	40	R	R	R	R		R	R		R	R				R				A	
R-4	Unit 2	SA191	SA191-0.0B	0.0																	X		Boring located to evaluate Unit 2 for area coverage.
R-4	Unit 2		SA191-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X				K	GW anticipated at ~42 feet bgs.
R-4	Unit 2		SA191-10B	10	X	X	X	X		X	X	X	X	X				X				K	
R-4	Unit 2		SA191-20B	20	R	R	R	R		R	R		R					R				B	
R-4	Unit 2		SA191-25B	25	X	X	X	X		X	X	X	Hold	X				X				B,K	
R-4	Unit 2		SA191-30B	30	R	R	R	R		R	R		R					R				B	
R-4	Unit 2		SA191-40B	40	X	X	X	X		X	X	X	X	X				X				K,Q	
R-5	4, 59, 60	RSAR5	RSAR5-0.0B	0.0																	X		Boring located to evaluate LOU 4 (Former Hardesty Chemical Company Site), LOU 59 (Storm Sewer System), and LOU 60
R-5	4, 59, 60		RSAR5-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					(Acid Drain System) and for Unit 3 area-wide coverage. Random boring as a step out for LOU 4. Boring adjacent to LOU
R-5	4, 59, 60		RSAR5-10B	10	X	X	X	X		X	X	X	Hold	X				X					59 and LOU 60 to evaluate potential piping releases, and for general coverage of Unit 3.
R-5	4, 59, 60		RSAR5-20B	20	R	R	R	R		R	R		R	R				R				B	GW anticipated at ~42 feet bgs.
R-5	4, 59, 60		RSAR5-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	
R-5	4, 59, 60		RSAR5-30B	30	R	R	R	R		R	R		R	R				R				B	
R-5	4, 59, 60		RSAR5-40B	40	X	X	X	X		X	X	X	X	X				X				Q	
R-5	42	SA135	SA135-0.0B	0.0																	X		Boring located within LOU 42 (former location of salt conveyor) to evaluate worst-case scenario release location
R-5	42		SA135-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				G,K	(conveyor and inlet hopper). Boring to be converted to Well M-144.
R-5	42		SA135-10B	10	X	X	X	X		X	X	X	R	X				X				G,K	GW anticipated at ~39 feet bgs.
R-5	42		SA135-20B	20	R	R	R	R		R	R		R					R				B	
R-5	42		SA135-25B	25	X	X	X	X		X	X	X		X				X				B,K	
R-5	42		SA135-30B	30	R	R	R	R		R	R		R					R				B	
R-5	42		SA135-37B	37	X	X	X	X		X	X	X		X				X				K,Q	
R-5	42		SA135-40B	40	R	R	R	R		R	R		R					R				A	
S-3	n/a	RSAS3	RSAS3-0.0B	0.0																	X		Boring located approximately 200 feet south of Unit 1 for area-wide coverage and not associated with any specific LOU.
S-3	n/a		RSAS3-0.5B	0.5	X	X	X	X		X	X	X	X	X	X		X	X	X	X		L,N,S	PCBs and TPH-DRO/ORO added to SAP to evaluate for potential impacts from Western Area Power Administration
S-3	n/a		RSAS3-10B	10	X	X	X	X		X	X	X	Hold	X				X				N	(WAPA) site per NDEP.
S-3	n/a		RSAS3-20B	20	R	R	R	R		R	R		R	R				R				B	GW anticipated at ~46 feet bgs.
S-3	n/a		RSAS3-25B	25	X	X	X	X		X	X	X	Hold	X				X				B,N	
S-3	n/a		RSAS3-30B	30	R	R	R	R		R	R		R	R				R				B	
S-3	n/a		RSAS3-40B	40	R	R	R	R		R	R		R	R				R				B	
S-3	n/a		RSAS3-44B	44	X	X	X	X		X	X	X	X	X	X			X	X	X		L,N,Q,S	
S-4	59	RSAS4	RSAS4-0.0B	0.0																	X		Boring located to evaluate LOU 59 (Storm Sewer System) 350 feet south of Unit 2 for area-wide coverage. Random
S-4	59		RSAS4-0.5B	0.5	X	X	X	X		X	X	X	X	X	X		X	X				L,N	boring adjacent to LOU 59 piping to evaluate potential piping releases, adjacent to SG46 for VOC comparison purposes
S-4	59		RSAS4-10B	10	X	X	X	X		X	X	X	Hold	X	X			X				N	and for area-wide coverage. PCBs and TPH-DRO/ORO added to SAP to evaluate for potential impacts from WAPA
S-4	59		RSAS4-20B	20	R	R	R	R		R	R		R	R				R				B	site per NDEP.
S-4	59		RSAS4-30B	30	X	X	X	X		X	X	X	Hold	X				X				N	GW anticipated at ~47 feet bgs.
S-4	59		RSAS4-40B	40	R	R	R	R		R	R		R	R				R				B	
S-4	59		RSAS4-45B	45	X	X	X	X		X	X	X	X	X	X			X				L,N,Q	
S-5	n/a	RSAS5	RSAS5-0.0B	0.0																	X		Boring located 150 feet south of Unit 3 for area-wide coverage and north (downgradient) of WAPA Site and not
S-5	n/a		RSAS5-0.5B	0.5	X	X	X	X		X	X	X	X	X	X		X	X				L,N	associated with a specific LOU. Adjacent to SG65 for VOC comparison purposes. PCBs and TPH-DRO/ORO added to
S-5	n/a		RSAS5-10B	10	X	X	X	X		X	X	X	Hold	X				X				N	SAP to evaluate for potential impacts from WAPA site per NDEP.
S-5	n/a		RSAS5-20B	20	R	R	R	R		R	R		R	R				R				B	GW anticipated at ~38 feet bgs.
S-5	n/a		RSAS5-25B	25	X	X	X	X		X	X	X	Hold	X				X				B,N	
S-5	n/a		RSAS5-30B	30	R	R	R	R		R	R		R	R				R				B	
S-5	n/a		RSAS5-36B	36	X	X	X	X		X	X	X	X	X	X			X				L,N,Q	
S-5	n/a		RSAS5-40B	40	R	R	R	R		R	R		R	R				R				A	
S-6	n/a	RSAS6	RSAS6-0.0B	0.0																	X		Boring located 100 feet south-southeast of Tronox Administration Building for area-wide coverage and not associated
S-6	n/a		RSAS6-0.5B	0.5	X	X	X	X		X	X	X	X	X	X		X	X				L,N	with a specific LOU. PCBs and TPH-DRO/ORO added to SAP to evaluate for potential impacts from WAPA site per
S-6	n/a		RSAS6-10B	10	X	X	X	X		X	X	X	Hold	X				X				N	NDEP.
S-6	n/a		RSAS6-20B	20	R	R	R	R		R	R		R	R				R				B	GW anticipated at ~41 feet bgs.
S-6	n/a		RSAS6-25B	25	X	X	X	X		X	X	X	Hold	X				X				B,N	
S-6	n/a		RSAS6-30B	30	R	R	R	R		R	R		R	R				R				B	
S-6	n/a		RSAS6-39B	39	X	X	X	X		X	X	X	X	X	X			X				L,N,Q	
S-6	n/a		RSAS6-40B	40	R	R	R	R		R	R		R	R				R				A	

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

			Laboratory		CAS - Kelso, WA		CAS - Rochester, NY									CAS - Houston		GEL Charleston, SC	STL - Denver	Alpha Analytical Sparks, NV	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]	Organic Acids[12]	Asbestos[13] EPA/540/R-97/028	Rationale for Revision	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions.)
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).																							
S-7	n/a	RSAS7	RSAS7-0.0B	0.0																	X		Boring located upgradient of WAPA site, for general area-wide coverage and not associated with a specific LOU. PCBs
S-7	n/a		RSAS7-0.5B	0.5	X	X	X	X		X	X	X	X	X	X		X	X				L,N	and TPH-DRO/ORO added to SAP to evaluate for potential impacts from WAPA site per NDEP.
S-7	n/a		RSAS7-10B	10	X	X	X	X		X	X	X	Hold	X				X				N	GW anticipated at ~44 feet bgs.
S-7	n/a		RSAS7-20B	20	R	R	R	R		R	R		R	R				R				B	
S-7	n/a		RSAS7-25B	25	X	X	X	X		X	X	X	Hold	X				X				B,N	
S-7	n/a		RSAS7-30B	30	R	R	R	R		R	R		R	R				R				B	
S-7	n/a		RSAS7-40B	40	R	R	R	R		R	R		R	R				R				B	
S-7	n/a		RSAS7-42B	42	X	X	X	X		X	X	X	X	X	X			X				L,N,Q	
T-3	59	RSAT3	RSAT3-0.0B	0.0																	X		Boring located to evaluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Random boring adjacent
T-3	59		RSAT3-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					to LOU 59 piping to evaluate potential piping releases.
T-3	59		RSAT3-10B	10	X	X	X	X		X	X	X	Hold	X				X					GW anticipated at ~55 feet bgs.
T-3	59		RSAT3-20B	20	R	R	R	R		R	R	R	R	R				R				B	
T-3	59		RSAT3-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	
T-3	59		RSAT3-30B	30	R	R	R	R		R	R	R	R	R				R				B	
T-3	59		RSAT3-40B	40	X	X	X	X		X	X	X	Hold	X				X					
T-3	59		RSAT3-53B	53	X	X	X	X		X	X	X	X	X				X				Q	
T-4	59	RSAT4	RSAT4-0.0B	0.0																	X		Boring located to evaluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Random boring adjacent
T-4	59		RSAT4-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					to LOU 59 piping to evaluate potential piping releases
T-4	59		RSAT4-10B	10	X	X	X	X		X	X	X	Hold	X				X					GW anticipated at ~55 feet bgs.
T-4	59		RSAT4-20B	20	R	R	R	R		R	R		R	R				R				B	
T-4	59		RAST4-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	
T-4	59		RSAT4-30B	30	R	R	R	R		R	R		R	R				R				B	
T-4	59		RSAT4-40B	40	X	X	X	X		X	X	X	Hold	X				X					
T-4	59		RSAT4-53B	53	X	X	X	X		X	X	X	X	X				X				Q	
T-4	59, 62	SA119	SA119-0.0B	0.0																	X		Boring located to evaluate LOU 59 (Storm Sewer System) adjacent to former State Industries building (Building T-5) and
T-4	59, 62		SA119-0.5B	0.5	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X		L,S	LOU 62 (State Industries, Inc. Site). Located adjacent to LOU 59 piping and manhole/inlet where waste water from the
T-4	59, 62		SA119-10B	10	X	X	X	X		X	X	X	X	X				X	X	X		S	surface impoundments associated with LOU 62 was released to, as well as for general coverage for LOU 62 (on and off
T-6	59, 62		SA119-20B	20	R	R	R	R		R	R	R	R	R				R				B	Tronox site).
T-4	59, 62		SA119-30B	30	X	X	X	X		X	X	X	Hold	X				X					GW anticipated at ~50 feet bgs.
T-6	59, 62		SA119-40B	40	R	R	R	R		R	R	R	R	R				R				B	
T-4	59, 62		SA119-48B	48	X	X	X	X		X	X	X	X	X	X	X		X	X	X		L,Q,S	
T-5	n/a	RSAT5	RSAT5-0.0B	0.0																	X		Boring located approximately 200 feet west of Tronox Purchasing/Training Building to evaluate soils for general area-
T-5	n/a		RSAT5-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					wide coverage and not associated with a specific LOU.
T-5	n/a		RSAT5-10B	10	X	X	X	X		X	X	X	Hold	X				X					GW anticipated at ~53 feet bgs.
T-5	n/a		RSAT5-20B	20	R	R	R	R		R	R		R	R				R				B	
T-5	n/a		RSAT5-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	
T-5	n/a		RSAT5-30B	30	R	R	R	R		R	R		R	R				R				B	
T-5	n/a		RSAT5-40B	40	X	X	X	X		X	X	X	Hold	X				X					
T-5	n/a		RSAT5-51B	51	X	X	X	X		X	X	X	X	X				X				Q	
T-5	59	SA115	SA115-0.0B	0.0																	X		Boring located to evaluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Located adjacent to LOU
T-5	59		SA115-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				G	59 piping and manhole/inlet to evaluate high risk piping release locations (piping and inlet structure).
T-5	59		SA115-10B	10	X	X	X	X		X	X	X	R	X				X				G	GW anticipated at ~53 feet bgs.
T-5	59		SA115-20B	20	R	R	R	R		R	R	R	R	R				R				B	
T-5	59		SA115-25B	25	X	X	X	X		X	X	X		X				X				B	
T-5	59		SA115-30B	30	R	R	R	R		R	R	R	R	R				R				B	
T-5	59		SA115-40B	40	X	X	X	X		X	X	X	R	X				X				G	
T-5	59		SA115-51B	51	X	X	X	X		X	X	X		X				X				Q	
T-5	59	SA116	SA116-0.0B	0.0																	X		Boring located to evaluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Located adjacent to LOU
T-5	59		SA116-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				G	59 piping for general coverage and adjacent to SG68 for VOC comparison purposes.
T-5	59		SA116-10B	10	X	X	X	X		X	X	X	R	X				X				G	GW anticipated at ~52 feet bgs.
T-5	59		SA116-20B	20	R	R	R	R		R	R	R	R	R				R				B	
T-5	59		SA116-30B	30	X	X	X	X		X	X	X	R	X				X				G,R	
T-5	59		SA116-40B	40	R	R	R	R		R	R	R	R	R				R				B	
T-5	59		SA116-50B	50	X	X	X	X		X	X	X		X				X				Q	
T-6	n/a	RSAT6	RSAT6-0.0B	0.0																	X		Boring located to evaluate soils for general area-wide coverage and not associated with a specific LOU. PCBs and TPH-
T-6	n/a		RSAT6-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X				N	DRO/ORO added to SAP to evaluate for potential impacts from WAPA site per NDEP.
T-6	n/a		RSAT6-10B	10	X	X	X	X		X	X	X	Hold	X				X				N	GW anticipated at ~51 feet bgs.
T-6	n/a		RSAT6-20B	20	R	R	R	R		R	R		R	R				R				B	
T-6	n/a		RSAT6-30B	30	X	X	X	X		X	X	X	Hold	X				X				N	
T-6	n/a		RSAT6-40B	40	R	R	R	R		R	R		R	R				R				B	
T-6	n/a		RSAT6-49B	49	X	X	X	X		X	X	X	X	X				X				N,Q	
T-6	59	SA118	SA118-0.0B	0.0																	X		Boring located to evaluate LOU 59 (Storm Sewer System).
T-6	59		SA118-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				G	GW anticipated at ~53 feet bgs.
T-6	59		SA118-10B	10	X	X	X	X		X	X	X	R	X				X				G	
T-6	59		SA118-20B	20	R	R	R	R		R	R		R	R				R				B	
T-6	59		SA118-25B	25	X	X	X	X		X	X	X		X				X				B	
T-6	59		SA118-30B	30	R	R	R	R		R	R		R	R				R				B	
T-6	59		SA118-40B	40	X	X	X	X		X	X	X	R	X				X					
T-6	59		SA118-51B	51	X	X	X	X		X	X	X		X				X				Q	
T-7	59	RSAT7	RSAT7-0.0B	0.0																	X		Boring located to evaluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Random boring adjacent
T-7	59		RSAT7-0.5B	0.5	X	X	X	X		X	X	X	X	X	X		X	X				L,N	to LOU 59 piping to evaluate potential piping releases. PCBs and TPH-DRO/ORO added to SAP to evaluate for potential
T-7	59		RSAT7-10B	10	X	X	X	X		X	X	X	Hold	X				X				N	impacts from WAPA site per NDEP.
T-7	59		RSAT7-20B	20	R	R	R	R		R	R		R	R				R				B	GW anticipated at ~46 feet bgs.
T-7	59		RSAT7-25B	25	X	X	X	X		X	X	X	Hold	X				X				B,N	
T-7	59		RSAT7-30B	30	R	R	R	R		R	R		R	R				R				B	
T-7	59		RSAT7-40B	40	R	R	R	R		R	R		R	R				R				B	
T-7	59		RSAT7-44B	44	X	X	X	X		X	X	X	X	X	X			X				L,N,Q	
T-8	59	RSAT8	RSAT8-0.0B	0.0																	X		Boring located to evaluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Random boring adjacent
T-8	59		RSAT8-0.5B	0.5	X	X	X	X		X	X	X	X	X	X		X	X				L,N	to LOU 59 piping and manhole/inlet to evaluate potential releases (piping and inlet). PCBs and TPH-DRO/ORO added to
T-8	59		RSAT8-10B	10	X	X	X	X		X	X	X	Hold	X				X				N	SAP to evaluate for potential impacts from WAPA site per NDEP.
T-8	59		RSAT8-20B	20	R	R	R	R		R	R		R	R				R				B	GW anticipated at ~46 feet bgs.
T-8	59		RSAT8-25B	25	X	X	X	X		X	X	X	Hold	X				X				B,N	
T-8	59		RSAT8-30B	30	R	R	R	R		R	R		R	R				R				B	
T-8	59		RSAT8-40B	40	R	R	R	R		R	R		R	R				R				B	
T-8	59		RSAT8-44B	44	X	X	X	X		X	X	X	X	X	X			X				L,N,Q	

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

			Laboratory	CAS - Kelso, WA		CAS - Rochester, NY									CAS - Houston		GEL Charleston, SC	STL - Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale for Revision	
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		Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions.)
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).																						
T-8	59	SA210	SA210-0.0B	0.0																	X		Boring located to evaluate LOU 59 (storm Sewer System). Located areally to evaluate point of exit from the Tronox site rather than at a worst-case scenario.
T-8	59		SA210-0.5B	0.5	X	X	X	X		X	X	X		X	X		X	X				L	
T-8	59		SA210-10B	10	X	X	X	X		X	X	X		X				X					GW anticipated at ~51 feet bgs.
T-8	59		SA210-30B	30	X	X	X	X		X	X	X		X				X					
T-8	59		SA210-49B	49	X	X	X	X		X	X	X		X	X			X				L,Q	
U-4	62	RSAU4	RSAU4-0.0B	0.0																	X		Boring located to evaluate former western pond in LOU 62 (State Industries, Inc. Site). Located within footprint and in the center of the former pond to provide general coverage of pond area for potential releases (see LOU 62 summary for details).
U-4	62		RSAU4-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					
U-4	62		RSAU4-10B	10	X	X	X	X		X	X	X	Hold	X				X					
U-4	62		RSAU4-20B	20	R	R	R	R		R	R	R	R	R				R				B	GW anticipated at ~58 feet bgs.
U-4	62		RSAU4-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	
U-4	62		RSAU4-30B	30	R	R	R	R		R	R	R	R	R				R				B	
U-4	62		RSAU4-40B	40	X	X	X	X		X	X	X	Hold	X				X					
U-4	62		RSAU4-50B	50	R	R	R	R		R	R	R	R	R				R				B	
U-4	62		RSAU4-56B	56	X	X	X	X		X	X	X	X	X				X				Q	
U-4	62		RSAU4-60B	60	R	R	R	R		R	R	R	R	R				R				A	
U-4	62	SA146	SA146-0.0B	0.0																	X		Boring located to evaluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint of former pond to provide general coverage of pond area for potential releases (see LOU 62 summary for details).
U-4	62		SA146-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				G	
U-4	62		SA146-10B	10	X	X	X	X		X	X	X	R	X				X				G	GW anticipated at ~57 feet bgs.
U-4	62		SA146-20B	20	R	R	R	R		R	R	R	R	R				R				B	
U-4	62		SA146-25B	25	X	X	X	X		X	X	X		X				X				B	
U-4	62		SA146-30B	30	R	R	R	R		R	R	R	R	R				R				B	
U-4	62		SA146-40B	40	X	X	X	X		X	X	X	R	X				X				G	
U-4	62		SA146-50B	50	R	R	R	R		R	R	R	R	R				R				B	
U-4	62		SA146-55B	55	X	X	X	X		X	X	X		X				X				Q	
U-4	62		SA146-60B	60	R	R	R	R		R	R	R	R	R				R				A	
U-4	62	SA147	SA147-0.0B	0.0																	X		Boring located to evaluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint of former pond to provide general coverage of pond area for potential releases (see LOU 62 summary for details).
U-4	62		SA147-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				G	
U-4	62		SA147-10B	10	X	X	X	X		X	X	X	R	X				X				G	GW anticipated at ~58 feet bgs.
U-4	62		SA147-20B	20	R	R	R	R		R	R	R	R	R				R				B	
U-4	62		SA147-25B	25	X	X	X	X		X	X	X		X				X				B	
U-4	62		SA147-30B	30	R	R	R	R		R	R	R	R	R				R				B	
U-4	62		SA147-40B	40	X	X	X	X		X	X	X	R	X				X				G	
U-4	62		SA147-50B	50	R	R	R	R		R	R	R	R	R				R				B	
U-4	62		SA147-56B	56	X	X	X	X		X	X	X		X				X				Q	
U-4	62		SA147-60B	60	R	R	R	R		R	R	R	R	R				R				A	
U-5	62	RSAU5	RSAU5-0.0B	0.0																	X		Boring located to evaluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint of former pond to provide general coverage of pond area for potential releases (see LOU 62 summary for details).
U-5	62		RSAU5-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					
U-5	62		RSAU5-10B	10	X	X	X	X		X	X	X	Hold	X				X					GW anticipated at ~57 feet bgs.
U-5	62		RSAU5-20B	20	R	R	R	R		R	R	R	R	R				R				B	
U-5	62		RSAU5-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	
U-5	62		RSAU5-30B	30	R	R	R	R		R	R	R	R	R				R				B	
U-5	62		RSAU5-40B	40	X	X	X	X		X	X	X	Hold	X				X					
U-5	62		RSAU5-50B	50	R	R	R	R		R	R	R	R	R				R				B	
U-5	62		RSAU5-55B	55	X	X	X	X		X	X	X	X	X				X				Q	
U-5	62		RSAU5-60B	60	R	R	R	R		R	R	R	R	R				R				A	
U-5	62	SA28	SA28-0.0B	0.0																	X		Boring located to evaluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint and in the center of the former pond to provide general coverage of pond area for potential releases (see LOU 62 summary for details).
U-5	62		SA28-0.5B	0.5	X	X	X	X		X	X	X	R	X			X	X				G	
U-5	62		SA28-10B	10	X	X	X	X		X	X	X	R	X				X				G	
U-5	62		SA28-20B	20	R	R	R	R		R	R	R	R	R				R				B	
U-5	62		SA28-25B	25	X	X	X	X		X	X	X		X				X				B	
U-5	62		SA28-30B	30	R	R	R	R		R	R	R	R	R				R				B	GW anticipated at ~57 feet bgs.
U-5	62		SA28-40B	40	X	X	X	X		X	X	X	X	X				X				G	
U-5	62		SA28-55B	55	X	X	X	X		X	X	X	R	X				X				Q	
U-5	62		SA28-60B	60	R	R	R	R		R	R	R	R	R				R				A	
U-6	n/a	RSAU6	RSAU6-0.0B	0.0																	X		Boring located to evaluate soil for area-wide coverage and not associated with a specific LOU.
U-6	n/a		RSAU6-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X				G	GW anticipated at ~55 feet bgs.
U-6	n/a		RSAU6-10B	10	X	X	X	X		X	X	X	Hold	X				X				G	
U-6	n/a		RSAU6-20B	20	R	R	R	R		R	R		R	R				R				B	
U-6	n/a		RSAU6-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	
U-6	n/a		RSAU6-30B	30	R	R	R	R		R	R		R	R				R				B	
U-6	n/a		RSAU6-40B	40	X	X	X	X		X	X	X	Hold	X				X				G	
U-6	n/a		FSAU6-50B	50	R	R	R	R		R	R		R	R				R				B	
U-6	n/a		RSAU6-53B	53	X	X	X	X		X	X	X	X	X				X				Q	
U-6	n/a		RSAU6-60B	60	R	R	R	R		R	R		R	R				R				A	
U-7	n/a	RSAU7	RSAU7-0.0B	0.0																	X		Boring located to evaluate soil for area-wide coverage and not associated with a specific LOU.
U-7	n/a		RSAU7-0.5B	0.5	X	X	X	X		X	X	X	X	X			X	X					GW anticipated at ~56 feet bgs.
U-7	n/a		RSAU7-10B	10	X	X	X	X		X	X	X	Hold	X				X					
U-7	n/a		RSAU7-20B	20	R	R	R	R		R	R		R	R				R				B	
U-7	n/a		RSAU7-25B	25	X	X	X	X		X	X	X	Hold	X				X				B	
U-7	n/a		RSAU7-30B	30	R	R	R	R		R	R		R	R				R				B	
U-7	n/a		RSAU7-40B	40	X	X	X	X		X	X	X	Hold	X				X					
U-7	n/a		RSAU7-50B	50	R	R	R	R		R	R		R	R				R				B	
U-7	n/a		RSAU7-54B	54	X	X	X	X		X	X	X	X	X				X				Q	
U-7	n/a		RSAU7-60B	60	R	R	R	R		R	R		R	R				R				A	
Number of Borings:		**56**																				

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

				Laboratory	CAS - Kelso, WA		CAS - Rochester, NY									CAS - Houston		GEL Charleston, SC	STL - Denver	Alpha Analytical Sparks, NV	EMSL Westmont, NJ	Rationale for Revision	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions.)
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		
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).																							
Synthetic Precipitate Leaching Procedure (SPLP) Samples:																							
Grid Location		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	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	Location Description and Characterized Area Rationale
Q-4	4	RSAQ4	RSAQ4-10	10	X	X	X			X	X	X	X	X	X	X		X	X	X		X	Soil sample collected below bottom of former AST in the northern part of LOU 4 (former Hardesty Chemical Co. Site) to evaluate leaching potential of Site-related analytes from Alluvium (Qal) soils. Expected soil type: Sand.
Q-4	4	RSAQ4	RSAQ4-32DD*	32 DD*	X	X	X			X	X	X	X	X	X	X		X	X	X		X	**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 29 feet bgs. Groundwater is expected to occur at approximately 34 feet bgs. Expected soil type: Silt.
Q-4	4	SA148	SA148-10	10	X	X	X			X	X	X	X	X	X	X		X	X	X		X	Soil sample collected below bottom of former UST in the southern part of LOU 4 (former Hardesty Chemical Co. Site) to evaluate leaching potential of Site-related analytes from Alluvium (Qal) soils. Expected soil type: Gravelly Sand.
Q-4	4	SA148	SA148-35	35	X	X	X			X	X	X	X	X	X	X		X	X	X		X	Soil sample collected from below bottom of former UST in the southern part of LOU 4 (former Hardesty Chemical Co. Site) to evaluate leaching potential of Site-related analytes from Muddy Creek Formation - First Fine-Grained Facies (MCfg1) soils. Contact between Qal a MCfg1 is approximately 31 feet bgs. Groundwater anticipated to be at approximately 47 feet bgs. No soil sample will be collected within capillary fringe. Expected soil type: Silt.
R-3	60	RSAR3	RSAR3-0.5	0.5	X	X	X			X	X	X	X	X	X	X		X	X	X		X	Soil sample collected from below LOU 60 (Acid Drain System pipeline) to evaluate leaching potential of Site-related analytes from Alluvium (Qal) soils. Expected soil type: Sand.
R-3	60	RSAR3	RSAR3-35DD*	35 DD*	X	X	X			X	X	X	X	X	X	X		X	X	X		X	**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 29 feet bgs. Groundwater is expected to occur at approximately 40 feet bgs. Expected soil type: Silt.
U-4	62	RSAU4	RSAU4-20	20	X	X	X			X	X	X	X	X	X	X		X	X	X		x	Soil sample collected from beneath bottom of former western pond in LOU 62 (State Industries, Inc. Site) to evaluate leaching potential of Site-related analytes. Expected soil type: Gravelly Sand.
U-4	62	RSAU4	RSAU4-50	50	X	X	X			X	X	X	X	X	X	X		X	X	X		x	**Optional sample** - only to be collected if Silt/Clay of the Muddy Creek Formation - first fine-grained facies (MCfg1) is encountered at this boring location. If soil type is similar to soils at 20 feet, then no sample will be collected for SPLP analyses. Expected soil type: Silt.
U-5	62	RSAU5	RSAU5-0.5	0.5	X	X	X			X	X	X	X	X	X	X		X	X	X		x	Soil sample collected from beneath bottom of former eastern pond in LOU 62 (State Industries) to evaluate leaching potential of Site-related analytes from Alluvium (Qal). Expected soil type: Gravelly Sand.
U-5	62	RSAU5	RSAU5-50	50	X	X	X			X	X	X	X	X	X	X		X	X	X		x	**Optional sample** - only to be collected if Silt/Clay of the Muddy Creek Formation - first fine-grained facies (MCfg1) is encountered at this boring location. If soil type is similar to soils at 20 feet, then no sample will be collected for SPLP analyses. Expected soil type: Silt.
Number of Soil Samples:		**Subtotal Sample Count:**			**239**	**239**	**239**	**229**	**0**	**239**	**239**	**239**	**103**	**239**	**37**	**20**	**55**	**239**	**28**	**28**	**55**	**10**	
		QA/QC Samples:																					
		Field Duplicates (10%)			24	24	24	23	0	24	24	0	11	24	4	2	6	24	3	3			
		Field Blanks			1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	0	0	
		Equipment Rinsate Blanks			15	15	15	11	0	11	15	0	5	10	0	0	15	14	2	2	0	0	
		Trip Blank 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	
		Matrix Spike Duplicate (5%)			12	12	12	12	0	12	12	0	6	12	2	1	3	12	2	2	0	0	
		Total Sample Count:			**303**	**303**	**303**	**288**	**0**	**317**	**303**	**239**	**132**	**298**	**46**	**25**	**83**	**302**	**38**	**38**	**55**	**10**	

Notes:

X	Sample will be collected and analyzed.
	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-GRO	Total petroleum hydrocarbons - Gasoline-Range Organics.
TPH-DRO/ORO	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, 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.
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, Thalium, Tungsten, Uranium, Vanadium, and Zinc.
3.	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, CO_3, HCO_3), 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
8.	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 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).

Rationale Codes

A	The soil sample was removed from the sampling plan because the 2008 groundwater data indicates that the water table is likely above this depth.
B	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). Mid-depth samples will be collected between the 10-ft and capillary fringe samples to make the vertical distance between samples no greater than 20 ft (sample depth rounded off to Unless otherwise indicated, soil samples will not 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.
E	Soil sample will be collected at this depth because the depth is one-foot below a pipeline invert.
F	Aroclor and congener PCBs were added per NDEP (July 21, 2008).
G	Where indicated, OCPs were removed from the sampling plan because OCPs were not created, stored, conveyed, or potentially disposed at this location.
K	SVOC analysis was added to this boring per NDEP (July 21, 2008).
L	Aroclor PCB analysis (EPA 8082) was added to this boring per NDEP (July 21, 2008).
N	TPH-DRO/ORO was added per NDEP (July 21, 2008).
Q	Sample depth was revised so that the capillary fringe sample will be collected 2 feet above the water table.
R	Radionuclides added where they were left off boring SA-115 per NDEP comment June 18, 2008
S	Organophosphorous Pesticides and Organic Acids were added to SAP by NDEP (July 21, 2008 and subsequent teleconferences)..
X	Green-shading indicates new addition to this table.
R	Brown-shading indicates item will be removed from this table.

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

Laboratory :						CAS Kelso, 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	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions.)
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)	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	Geotechnical Tests	
Number of Containers per Sample:						1 - 4 oz Jar		1 - 4 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 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).																									
P-4	SA103	SA103-0.0B	0.0																			X		Boring located to evaluate soils for area-wide coverage and not associated with any specific LOU.
P-4		SA103-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					GW anticipated at ~37 feet bgs.
P-4		SA103-10B	10			X	X	X	X		X	X	X	Hold	X				X						
P-4		SA103-10BD	10 (dup)			X	X	X	X		X	X	X	Hold	X				X						
P-4		SA103-25B	25			X	X	X	X		X	X	X	Hold	X				X						
P-4		SA103-35B	35			X	X	X	X		X	X	X	X	X				X						
P-5	RSAP5	RSAP5-0.0B	0.0																			X		Boring located to evaluate soils for area-wide coverage and not associated with any specific LOU.
P-5		RSAP5-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					GW anticipated at ~41 feet bgs.
P-5		RSAP5-10B	10			X	X	X	X		X	X	X	Hold	X				X						
P-5		RSAP5-10BD	10 (dup)			X	X	X	X		X	X	X	Hold	X				X						
P-5		RSAP5-25B	25			X	X	X	X		X	X	X	Hold	X				X						
P-5		RSAP5-39B	39			X	X	X	X		X	X	X	X	X				X						
Q-3	RSAQ3	RSAQ3-0.0B	0.0																			X		Boring located to evaluate LOU 41 (Tenant stains north of Unit 1). Random boring located within footprint of
Q-3		RSAQ3-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					LOU 41 at probable location of former Tenant stains (See LOU 41 summary for detailed information).
Q-3		RSAQ3-0.5BD	0.5 (dup)			X	X	X	X		X	X	X	X	X			X	X					GW anticipated at ~43 feet bgs.
Q-3		RSAQ3-10B	10			X	X	X	X		X	X	X	Hold	X				X						
Q-3		RSAQ3-25B	25			X	X	X	X		X	X	X	Hold	X				X						
Q-3		RSAQ3-41B	41			X	X	X	X		X	X	X	X	X				X						
Q-3	SA169	SA169-0.0B	0.0																			X		Boring located to evaluate LOU 41 (Tenant stains north of Unit 1) and a pipeline segment of LOU 60
Q-3		SA169-0.5B	0.5			X	X	X	X		X	X	X		X			X	X					(Acid Drain System). Boring located within footprint of LOU 41 at probable location of former tenant stains
Q-3		SA169-10B	10			X	X	X	X		X	X	X		X				X						and adjacent to LOU 60 at a high risk for release location (manhole) (See LOU 41 and 60 summaries for
Q-3		SA169-25B	25			X	X	X	X		X	X	X		X				X						detailed information).
Q-3		SA169-42B	42			X	X	X	X		X	X	X		X				X						GW anticipated at ~44 feet bgs.
Q-3	SA193	SA193-0.0B	0.0																			X		Boring located to evaluate LOU 65a (Ebony Construction Sites) and soils north (downgradient) of Unit 1.
Q-3		SA193-0.5B	0.5			X	X	X	X		X	X	X		X			X	X					Located in an area previously described as the location of a release (See LOU 65a summary for detailed
Q-3		SA193-10B	10			X	X	X	X		X	X	X		X				X						information).
Q-3		SA193-10BD	10 (dup)			X	X	X	X		X	X	X		X				X						GW anticipated at ~44 feet bgs.
Q-3		SA193-25B	25			X	X	X	X		X	X	X		X				X						
Q-3		SA193-42B	42			X	X	X	X		X	X	X		X				X						
Q-3	SA211	SA211-0.0B	0.0																			X		Boring located to evaluate LOU 59 (storm Sewer System) and LOU 60 (acid Drain System). Located to evaluate
Q-3		SA211-0.5B	0.5			X	X	X	X		X	X	X		X	X	X	X	X	X	X				point of entry to Tronox for LOU 60 piping and adjacent to LOU 59 piping at same location.
Q-3		SA211-0.5B	0.5	X		X	X	X	X		X	X	X		X	X	X	X	X	X	X				GW anticipated at ~45 feet bgs.
Q-3		SA211-11B	11			X	X	X	X		X	X	X		X				X	X	X				Boring added per NDEP June 18, 2008 letter.
Q-3		SA211-25B	25			X	X	X	X		X	X	X		X				X						Pipeline invert for this boirng is estimated at 10 feet bgs.
Q-3		SA211-43B	43			X	X	X	X		X	X	X		X	X	X		X	X	X				
Q-3	SA212	SA212-0.0B	0.0																			X		Boring located to evaluate LOU 60 (Acid Drain System). Located at a high risk release location (junction of multiple piping).
Q-3		SA212-0.5B	0.5			X	X	X	X		X	X	X		X			X	X					GW anticipated at ~46 feet bgs.
Q-3		SA212-13B	13			X	X	X	X		X	X	X		X				X						Pipeline invert for this boirng is estimated at 12 feet bgs.
Q-3		SA212-13B	13			X	X	X	X		X	X	X		X				X						Boring added per NDEP June 18, 2008 letter.
Q-3		SA212-30B	30			X	X	X	X		X	X	X		X				X						
Q-3		SA212-44B	44			X	X	X	X		X	X	X		X				X						
Q-4	SA213	SA213-0.0B	0.0																			X		Boring located to evaluate LOU 60 (Acid Drain System). Located at a high risk release location (junction of multiple piping).
Q-4		SA213-0.5B	0.5			X	X	X	X		X	X	X		X			X	X					GW anticipated at ~46 feet bgs.
Q-4		SA213-14B	14			X	X	X	X		X	X	X		X				X						Pipeline invert for this boirng is estimated at 13 feet bgs.
Q-4		SA213-14B	14	X		X	X	X	X		X	X	X		X				X						Boring added per NDEP June 18, 2008 letter.
Q-4		SA213-30B	30			X	X	X	X		X	X	X		X				X						
Q-4		SA213-44B	44			X	X	X	X		X	X	X		X				X						
Q-4	SA214	SA214-0.0B	0.0																			X		Boring located to evaluate LOU 59 (Storm Sewer System) and LOU 60 (Acid Drain System). For LOU 60 located at a
Q-4		SA214-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					potential worst-case release point (junction of multiple pipes) and for general coverage of LOU 59 piping.
Q-4		SA214-15B	15			X	X	X	X		X	X	X	X	X				X						GW anticipated at ~45 feet bgs.
Q-4		SA214-30B	30			X	X	X	X		X	X	X	Hold	X				X						Pipeline invert for this boirng is estimated at 14 feet bgs.
Q-4		SA214-43B	43			X	X	X	X		X	X	X	X	X				X						Boring added per NDEP June 18, 2008 letter.
Q-4	RSAQ4	RSAQ4-0.0B	0.0																			X		Boring located to evaluate northern area of LOU 4 (Hardesty Chemical Company Site). Random boring located
Q-4		RSAQ4-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					in a low spot to evaluate the western portion of this LOU for potential worst case releases.
Q-4		RSAQ4-10B	10			X	X	X	X		X	X	X	X	X				X						GW anticipated at ~34 feet bgs.
Q-4		RSAQ4-10B	10		X	X	X	X			X	X	X	X	X	X	X		X	X	X			X	10-Foot SPLP sample must be of Quaternary Alluvium (Qal) soils.
Q-4		RSAQ4-20B	20			X	X	X	X		X	X	X	Hold	X				X						
Q-4		RSAQ4-32B	32		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 soils not dry, don't collect sample. Choose another boring.
Q-4		RSAQ4-32B	32			X	X	X	X		X	X	X	X	X				X						
Q-4	SA84	SA84-0.0B	0.0																			X		Boring located to evaluate southern area of LOU 4 (Hardesty Chemical Company Site) and a pipeline segment
Q-4		SA84-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X	X	X			of LOU 60 (Acid Drain System). Located at a high risk spot for surface releases from LOU 4 and directly
Q-4		SA84-10B	10			X	X	X	X		X	X	X	X	X				X						adjacent to LOU 60 to evaluate potential pipeline releases.
Q-4		SA84-10BD	10 (dup)			X	X	X	X		X	X	X	X	X				X						GW anticipated at ~45 feet bgs. Pipeline invert for this boring is estimated at 8 feet bgs.
Q-4		SA84-25B	25			X	X	X	X		X	X	X	Hold	X				X						
Q-4		SA84-43B	43			X	X	X	X		X	X	X	X	X				X	X	X				
Q-4	SA101	SA101-0.0B	0.0																			X		Boring located to evaluate southern area of LOU 4 (Hardesty Chemical Company Site) and LOU 27
Q-4		SA101-0.5B	0.5			X	X	X	X		X	X	X	X	X	X	X	X	X						(Former PCB Storage Area). Located downslope of LOU 27 to evaluate potential runoff. The surface of
Q-4		SA101-0.5B	0.5	X		X	X	X	X		X	X	X	X	X	X	X	X	X						LOU 27 consists of concrete in good condition and this area is currently used to store old equipment.
Q-4		SA101-10B	10			X	X	X	X		X	X	X	X	X				X						Assessment through LOU 27 would compromise containment. Boring also locate to evaluate potential surface
Q-4		SA101-25B	25			X	X	X	X		X	X	X	Hold	X				X						releases in from LOU 4. Pipeline invert for this borng is estimated at 8 feet bgs. GW estimated at ~45 feet bgs.
Q-4		SA101-42B	42			X	X	X	X		X	X	X	X	X	X	X		X						
Q-4	SA120	SA120-0.0B	0.0																			X		Boring located to evaluate LOU 26 (Trash Storage Area) and is north (downgradient) from Unit 1 for general
Q-4		SA120-0.5B	0.5			X	X	X	X		X	X	X		X			X	X					area-wide coverage. Located within the footprint of LOU 26 at a location considered to represent the
Q-4		SA120-10B	10			X	X	X	X		X	X	X		X				X						worst case location for the assessment of potential releases.
Q-4		SA120-25B	25			X	X	X	X		X	X	X		X				X						GW anticipated at ~45 feet bgs.
Q-4		SA120-43B	43			X	X	X	X		X	X	X		X				X						
Q-4	SA121	SA121-0.0B	0.0																			X		Boring located to evaluate LOU 26 (Trash Storage Area), LOU 4 (former Hardesty Chemical Company Site),
Q-4		SA121-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					and the boring is north (downgradient) of Unit 2 for general area coverage. Located within the footprint of
Q-4		SA121-0.5BD	0.5 (dup)			X	X	X	X		X	X	X	X	X			X	X					LOU 26 and 4 at a location considered to represent the worst case location for the assessment of potential
Q-4		SA121-10B	10			X	X	X	X		X	X	X	X	X				X						releases. GW anticipated at ~46 feet bgs.
Q-4		SA121-25B	25			X	X	X	X		X	X	X	Hold	X				X						
Q-4		SA121-44B	44			X	X	X	X		X	X	X	X	X				X						

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

Laboratory :						CAS Kelso, 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	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions.)
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)	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	Geotechnical Tests	
Number of Containers per Sample:						1 - 4 oz Jar		1 - 4 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 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).																									
Q-4	SA138	SA138-0.0B	0.0																			X		Boring located to evaluate northern area of LOU 4 (former Hardesty Chemical Company Site).
Q-4		SA138-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					GW anticipated at ~47 feet bgs.
Q-4		SA138-10B	10			X	X	X	X		X	X	X	X	X				X					
		SA138-10BD	10 (dup)			X	X	X	X		X	X	X	X	X				X					
Q-4		SA138-30B	30			X	X	X	X		X	X	X	Hold	X				X					
Q-4		SA138-45B	45			X	X	X	X		X	X	X	X	X				X					
Q-4	SA148	SA148-0.0B	0.0																			X		Boring located to evaluate southern area of LOU 4 (former Hardesty Chemical Company Site) and a pipeline
Q-4		SA148-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X	X	X			segment of LOU 60 (Acid Drain System). Located on the northern edge of LOU 4 to evaluate potential
Q-4		SA148-10B	10			X	X	X	X		X	X	X	X	X				X					surface releases and also located above LOU 60 to evaluate potential pipeline releases.
Q-4		SA148-10B	10		X	X	X	X			X	X	X	X	X	X	X		X	X	X		X	10-Foot SPLP sample must be of Quaternary Alluvium (Qal) soils.
Q-4		SA148-30B	30			X	X	X	X		X	X	X	Hold	X				X					GW anticipated at ~47 feet bgs.
Q-4		SA148-35B	35		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 soils not dry, don't collect sample. Choose another boring.
Q-4		SA148-45B	45			X	X	X	X		X	X	X	X	X				X	X	X			
Q-4	SA203	SA203-0.0B	0																			X		Boring located to evaluate pipeline route connecting northern and southern areas of LOU 4 (former
Q-4		SA203-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					Hardesty Chemical Company Site). Located along the former pipeline route to evaluate potential worst
Q-4		SA203-10B	10			X	X	X	X		X	X	X	X	X				X					case release at a jog in the line.
Q-4		SA203-30B	30			X	X	X	X		X	X	X	Hold	X				X					GW anticipated at ~48 feet bgs.
Q-4		SA203-46B	46			X	X	X	X		X	X	X	X	X				X					
Q-4	SA204	SA204-0.0B	0																			X		Boring located to evaluate southern area of LOU 4 (former Hardesty Chemical Company Site) and a
Q-4		SA204-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					pipeline segment of LOU 60 (Acid Drain System). Located to evaluate potential worst case location for
Q-4		SA204-10B	10			X	X	X	X		X	X	X	X	X				X					surface releases in LOU 4. Also directly adjacent to LOU 60 to evaluate potential historical pipeline releases.
Q-4		SA204-10BD	10 (dup)			X	X	X	X		X	X	X	X	X				X					Boring will be converted into well M-143. GW anticipated at ~47 feet bgs.
Q-4		SA204-30B	30			X	X	X	X		X	X	X	Hold	X				X					
Q-4		SA204-45B	45			X	X	X	X		X	X	X	X	X				X					
Q-5	RSAQ5	RSAQ5-0.0B	0																			X		Boring located to evaluate LOU 4 (Former Hardesty Chemical Company Site), LOU 28 (Hazardous Waste
Q-5		RSAQ5-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					Storage Area), LOU 59 (Storm Sewer Drain), and for area-wide coverage. Random boring located directly
Q-5		RSAQ5-10B	10			X	X	X	X		X	X	X	X	X				X					adjacent to LOU 59 pipeline to evaluate potential pipeline releases and for general stepout coverage for
Q-5		RSAQ5-10B	10	X		X	X	X	X		X	X	X	X	X				X					LOUs 4 and 28. GW anticipated at ~43 feet bgs.
Q-5		RSAQ5-25B	25			X	X	X	X		X	X	X	Hold	X				X					
Q-5		RSAQ5-41B	41			X	X	X	X		X	X	X	X	X				X					
Q-5	SA205	RSA205-0.0B	0																			X		Boring located as northward stepout boring from Phase A boring SA04 (for Hex Cr) to evaluate LOU 59
Q-5		RSA205-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					as requested by NDEP in comments on Phase A Investigation report and LOU 28 and 59. Located to satisfy NDEP
Q-5		RSA205-10B	10			X	X	X	X		X	X	X	X	X				X					Phase A comments and to evaluate potential pipeline releases from LOU 59
Q-5		RSA205-25B	25			X	X	X	X		X	X	X	Hold	X				X					GW anticipated at ~43 feet bgs.
Q-5		RSA205-41B	41			X	X	X	X		X	X	X	X	X				X					
Q-5	SA191	SA191-0.0B	0.0																			X		Boring located to evaluate LOU 28 (Hazardous Waste Storage Area)
Q-5		SA191-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					GW anticipated at ~42 feet bgs.
Q-5		SA191-10B	10			X	X	X	X		X	X	X	X	X				X					
Q-5		SA191-25B	25			X	X	X	X		X	X	X	Hold	X				X					
Q-5		SA191-40B	40			X	X	X	X		X	X	X	X	X				X					
Q-5	SA156	SA156-0.0B	0.0																					Boring located to evaluate LOU 28 (Hazardous Waste Storage Area). Containment liner will be cut and the boring will l
Q-5		SA156-2B	2			X	X	X	X		X	X	X	X	X			X	X					hand augered to 2-ft bgs (below original grade) to collect a soil sample, and the liner will be repaired. Deeper soil samp
Q-5																								will not be collected with the use of powered drilling equiment to avoid further damage to the containment liner. No asbestos
Q-5																								sample will be collected.
R-3	RSAR3	RSAR3-0.0B	0.0																			X		Unit 1, and for general area-wide coverage. Random boring
R-3		RSAR3-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					located directly adjacent to LOU 60 at a high risk location (inlet). GW anticipated at ~40 feet bgs.
R-3		RSAR3-0.5B	0.5		X	X	X	X			X	X	X	X	X	X	X		X	X	X		X	0.5-Foot SPLP sample must be of Quaternary Alluvium (Qal) soils.
R-3		RSAR3-10B	10			X	X	X	X		X	X	X	Hold	X				X					
R-3		RSAR3-25B	25			X	X	X	X		X	X	X	Hold	X				X					
R-3		RSAR3-35B	35		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 soils not dry, don't collect sample. Choose another boring.
R-3		RSAR3-38B	38			X	X	X	X		X	X	X	X	X				X					
R-3	SA110	SA110-0.0B	0.0																			X		Boring located to evaluate Unit 1 and for general area-wide coverage and not associated with a specific LOI
R-3		SA110-0.5B	0.5			X	X	X	X		X	X	X		X			X	X					GW anticipated at ~39 feet bgs.
R-3		SA110-10B	10			X	X	X	X		X	X	X		X				X					
R-3		SA110-25B	25			X	X	X	X		X	X	X		X				X					
R-3		SA110-37B	37			X	X	X	X		X	X	X		X				X					
R-3		SA110-37BD	37 (dup)			X	X	X	X		X	X	X		X				X					
R-3	SA192	SA192-0.0B	0.0																			X		Boring located to evaluate LOU 59 (Storm Sewer Drain), LOU 65b (former Buckles Construction Company Site) and Unit 1
R-3		SA192-0.5B	0.5			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			and not associated with a specific LOU. Located directly adjacent to LOU 59 pipeline to evaluate potential releases. Also
R-3		SA192-10B	10			X	X	X	X		X	X	X	X	X				X	X	X			located in accessible area of LOU 65b to evaluate surface releases, and within Unit 1 for area coverage. OPPs and
R-3		SA192-10B	10	X		X	X	X	X		X	X	X	X	X				X	X	X			organic acids were added to the SAP to evaluate for potential impacts from offsite sources from the west per NDEP.
R-3		SA192-25B	25			X	X	X	X		X	X	X	Hold	X				X					GW anticipated at ~41 feet bgs.
R-3		SA192-39B	39			X	X	X	X		X	X	X	X	X	X	X		X	X	X			
R-3	SA209	SA209-0.0B	0.0																			X		Boring located to evaluate LOU 59 (storm Sewer System) and LOU 60 (acid Drain System). Located at high risk release
R-3		SA209-0.5B	0.5			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			locations for both LOUs (junctions and bends in piping).
R-3		SA209-10B	10			X	X	X	X		X	X	X	X	X				X	X	X			GW anticipated at ~37 feet bgs.
R-3		SA209-10BD	10 (dup)			X	X	X	X		X	X	X	X	X				X	X	X			
R-3		SA209-25B	25			X	X	X	X		X	X	X	Hold	X				X					
R-3		SA209-35B	35			X	X	X	X		X	X	X	X	X	X	X		X	X	X			
R-4	RSAR4	RSAR4-0.0B	0.0																			X		Boring located to evaluate LOU 25 (Process Hardware Storage Area), LOU 59 (Storm Sewer System), and for Unit 2 area
R-4		RSAR4-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					coverage. Random during located at a low spot of LOU 25 to evaluate worst-case scenario surface releases in LOU 25
R-4		RSAR4-10B	10			X	X	X	X		X	X	X	Hold	X				X					and adjacent to LOU 59 to evaluate piping releases.
R-4		RSAR4-10BD	10 (dup)			X	X	X	X		X	X	X	Hold	X				X					GW anticipated at ~39 feet bgs.
R-4		RSAR4-25B	25			X	X	X	X		X	X	X	Hold	X				X					
R-4		RSAR4-37B	37			X	X	X	X		X	X	X	X	X				X					
R-4	SA29	SA29-0.0B	0.0																			X		Boring located downslope of LOU 25 (Process Hardware Storage Area) and to evaluate surface runoff releases and for
R-4		SA29-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					general coverage of Unit 2.
R-4		SA29-10B	10			X	X	X	X		X	X	X	X	X				X					GW anticipated at ~42 feet bgs.
R-4		SA29-25B	25			X	X	X	X		X	X	X	Hold	X				X					
R-4		SA29-40B	40			X	X	X	X		X	X	X	X	X				X					
R-4	SA111	SA111-0.0B	0.0																			X		Boring located to evaluate LOU 25 (Process Hardware Storage Area), LOU 59 (Storm Sewer Drain), LOU 60 (Acid Drain
R-4		SA111-0.5B	0.5			X	X	X	X		X	X	X		X			X	X					System) and for Unit 2 area coverage. Located in the central portion of LOU 25 to evaluate surface releases, at the inlet
R-4		SA111-10B	10			X	X	X	X		X	X	X		X				X					for LOU 60 piping to evaluate surface runoff into the inlet, and near LOU 59 piping to evaluate local piping releas
R-4		SA111-25B	25			X	X	X	X		X	X	X		X				X					GW anticipated at ~41 feet bgs.
R-4		SA111-25B	25	X		X	X	X	X		X	X	X		X				X					

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

Laboratory :						CAS Kelso, 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	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions.)
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)	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	Geotechnical Tests	
Number of Containers per Sample:						1 - 4 oz Jar		1 - 4 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 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).																									
R-4		SA111-39B	39			X	X	X	X		X	X	X		X				X						
R-4	SA190	SA190-0.0B	0.0																			X			Boring located to evaluate LOU 25 (Process Hardware Storage Area) and for Unit 1 area-coverage. Located as a general
R-4		SA190-0.5B	0.5			X	X	X	X		X	X	X		X			X	X						stepout for LOU 25 and for general coverage of Unit 1.
R-4		SA190-10B	10			X	X	X	X		X	X	X		X				X						GW anticipated at ~40 feet bgs.
R-4		SA190-25B	25			X	X	X	X		X	X	X		X				X						
R-4		SA190-38B	38			X	X	X	X		X	X	X		X				X						
R-4		SA190-38B	38	X		X	X	X	X		X	X	X		X				X						
R-4	SA191	SA191-0.0B	0.0																			X			Boring located to evaluate Unit 2 for area coverage.
R-4		SA191-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X						GW anticipated at ~42 feet bgs.
R-4		SA191-10B	10			X	X	X	X		X	X	X	X	X				X						
R-4		SA191-25B	25			X	X	X	X		X	X	X	Hold	X				X						
R-4		SA191-40B	40			X	X	X	X		X	X	X	X	X				X						
R-4		SA191-40BD	40 (dup)			X	X	X	X		X	X	X	X	X				X						
R-5	RSAR5	RSAR5-0.0B	0.0																			X			Boring located to evaluate LOU 4 (Former Hardesty Chemical Company Site), LOU 59 (Storm Sewer System), and LOU 60
R-5		RSAR5-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X						(Acid Drain System) and for Unit 3 area-wide coverage. Random boring as a step out for LOU 4. Boring adjacent to LOU
R-5		RSAR5-10B	10			X	X	X	X		X	X	X	Hold	X				X						59 and LOU 60 to evaluate potential piping releases, and for general coverage of Unit 3.
R-5		RSAR5-25B	25			X	X	X	X		X	X	X	Hold	X				X						GW anticipated at ~42 feet bgs.
R-5		RSAR5-40B	40			X	X	X	X		X	X	X	X	X				X						
R-5		RSAR5-40B	40	X		X	X	X	X		X	X	X	X	X				X						
R-5	SA135	SA135-0.0B	0.0																			X			Boring located within LOU 42 (former location of salt conveyor) to evaluate worst-case scenario release location
R-5		SA135-0.5B	0.5			X	X	X	X		X	X	X		X			X	X						(conveyor and inlet hopper). Boring to be converted to Well M-144.
R-5		SA135-10B	10			X	X	X	X		X	X	X		X				X						GW anticipated at ~39 feet bgs.
R-5		SA135-10BD	10 (dup)			X	X	X	X		X	X	X		X				X						
R-5		SA135-25B	25			X	X	X	X		X	X	X		X				X						
R-5		SA135-37B	37			X	X	X	X		X	X	X		X				X						
S-3	RSAS3	RSAS3-0.0B	0.0																			X			Boring located approximately 200 feet south of Unit 1 for area-wide coverage and not associated with any specific LOU.
S-3		RSAS3-0.5B	0.5			X	X	X	X		X	X	X	X	X	X		X	X	X	X				PCBs and TPH-DRO/ORO added to SAP to evaluate for potential impacts from Western Area Power Administration
S-3		RSAS3-0.5BD	0.5 (dup)			X	X	X	X		X	X	X	X	X	X		X	X	X	X				(WAPA) site per NDEP.
S-3		RSAS3-10B	10			X	X	X	X		X	X	X	Hold	X				X						GW anticipated at ~46 feet bgs.
S-3		RSAS3-25B	25			X	X	X	X		X	X	X	Hold	X				X						
S-3		RSAS3-44B	44			X	X	X	X		X	X	X	X	X	X			X	X	X				
S-4	RSAS4	RSAS4-0.0B	0.0																			X			Boring located to evaluate LOU 59 (Storm Sewer System) 350 feet south of Unit 2 for area-wide coverage. Random
S-4		RSAS4-0.5B	0.5			X	X	X	X		X	X	X	X	X	X		X	X						boring adjacent to LOU 59 piping to evaluate potential piping releases, adjacent to SG46 for VOC comparison purpose
S-4		RSAS4-10B	10			X	X	X	X		X	X	X	Hold	X	X			X						and for area-wide coverage. PCBs and TPH-DRO/ORO added to SAP to evaluate for potential impacts from WAPA
S-4		RSAS4-30B	30			X	X	X	X		X	X	X	Hold	X				X						site per NDEP. GW anticipated at ~47 feet bgs.
S-4		RSAS4-45B	45			X	X	X	X		X	X	X	Hold	X	X			X						
S-4		RSAS4-45BD	45 (dup)			X	X	X	X		X	X	X	X	X	X			X						
S-5	RSAS5	RSAS5-0.0B	0.0																			X			Boring located 150 feet south of Unit 3 for area-wide coverage and north (downgradient) of WAPA Site and not
S-5		RSAS5-0.5B	0.5			X	X	X	X		X	X	X	X	X	X		X	X						associated with a specific LOU. Adjacent to SG65 for VOC comparison purposes. PCBs and TPH-DRO/ORO added to
S-5		RSAS5-10B	10			X	X	X	X		X	X	X	Hold	X				X						SAP to evaluate for potential impacts from WAPA site per NDEP.
S-5		RSAS5-25B	25			X	X	X	X		X	X	X	Hold	X				X						GW anticipated at ~38 feet bgs.
S-5		RSAS5-36B	36			X	X	X	X		X	X	X	X	X	X			X						
S-5		RSAS5-36BD	36 (dup)			X	X	X	X		X	X	X	X	X	X			X						
S-6	RSAS6	RSAS6-0.0B	0.0																			X			Boring located 100 feet south-southeast of Tronox Administration Building for area-wide coverage and not associated
S-6		RSAS6-0.5B	0.5			X	X	X	X		X	X	X	X	X	X		X	X						with a specific LOU. PCBs and TPH-DRO/ORO added to SAP to evaluate for potential impacts from WAPA site per
S-6		RSAS6-10B	10			X	X	X	X		X	X	X	Hold	X				X						NDEP.
S-6		RSAS6-25B	25			X	X	X	X		X	X	X	Hold	X				X						GW anticipated at ~41 feet bgs.
S-6		RSAS6-39B	39			X	X	X	X		X	X	X	X	X	X			X						
S-7	RSAS7	RSAS7-0.0B	0.0																			X			Boring located upgradient of WAPA site, for general area-wide coverage and not associated with a specific LOU. PCBs
S-7		RSAS7-0.5B	0.5			X	X	X	X		X	X	X	X	X	X		X	X						and TPH-DRO/ORO added to SAP to evaluate for potential impacts from WAPA site per NDEP.
S-7		RSAS7-0.5BD	0.5 (dup)			X	X	X	X		X	X	X	X	X	X		X	X						GW anticipated at ~44 feet bgs.
S-7		RSAS7-10B	10			X	X	X	X		X	X	X	Hold	X				X						
S-7		RSAS7-25B	25			X	X	X	X		X	X	X	Hold	X				X						
S-7		RSAS7-42B	42			X	X	X	X		X	X	X	X	X	X			X						
T-3	RSAT3	RSAT3-0.0B	0.0																			X			Boring located to evaluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Random boring adjacent
T-3		RSAT3-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X						to LOU 59 piping to evaluate potential piping releases.
T-3		RSAT3-10B	10			X	X	X	X		X	X	X	Hold	X				X						GW anticipated at ~55 feet bgs.
T-3		RSAT3-10B	10	X		X	X	X	X		X	X	X	Hold	X				X						
T-3		RSAT3-25B	25			X	X	X	X		X	X	X	Hold	X				X						
T-3		RSAT3-40B	40			X	X	X	X		X	X	X	Hold	X				X						
T-3		RSAT3-53B	53			X	X	X	X		X	X	X	X	X				X						
T-4	RSAT4	RSAT4-0.0B	0.0																			X			Boring located to evaluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Random boring adjacent
T-4		RSAT4-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X						to LOU 59 piping to evaluate potential piping releases
T-4		RSAT4-10B	10			X	X	X	X		X	X	X	Hold	X				X						GW anticipated at ~55 feet bgs.
T-4		RAST4-25B	25			X	X	X	X		X	X	X	Hold	X				X						
T-4		RSAT4-40B	40			X	X	X	X		X	X	X	Hold	X				X						
T-4		RSAT4-53B	53			X	X	X	X		X	X	X	X	X				X						
T-4	SA119	SA119-0.0B	0.0																			X			Boring located to evaluate LOU 59 (Storm Sewer System) adjacent to former State Industries building (Building T-5) and
T-4		SA119-0.5B	0.5			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X				LOU 62 (State Industries, Inc. Site). Located adjacent to LOU 59 piping and manhole/inlet where waste water from the
T-4		SA119-10B	10			X	X	X	X		X	X	X	X	X				X	X	X				surface impoundments associated with LOU 62 was released to, as well as for general coverage for LOU 62 (on and off
T-4		SA119-30B	30			X	X	X	X		X	X	X	Hold	X				X						Tronox site). GW anticipated at ~50 feet bgs.
T-4		SA119-48B	48			X	X	X	X		X	X	X	X	X	X	X		X	X	X				
T-5	RSAT5	RSAT5-0.0B	0.0																			X			Boring located approximately 200 feet west of Tronox Purchasing/Training Building to evaluate soils for general area-
T-5		RSAT5-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X						wide coverage and not associated with a specific LOU.
T-5		RSAT5-10B	10			X	X	X	X		X	X	X	Hold	X				X						GW anticipated at ~53 feet bgs.
T-5		RSAT5-25B	25			X	X	X	X		X	X	X	Hold	X				X						
T-5		RSAT5-40B	40			X	X	X	X		X	X	X	Hold	X				X						
T-5		RSAT5-51B	51			X	X	X	X		X	X	X	X	X				X						
T-5	SA115	SA115-0.0B	0.0																			X			Boring located to evaluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Located adjacent to LOU
T-5		SA115-0.5B	0.5			X	X	X	X		X	X	X		X			X	X						59 piping and manhole/inlet to evaluate high risk piping release locations (piping and inlet structure).
T-5		SA115-10B	10			X	X	X	X		X	X	X		X				X						GW anticipated at ~53 feet bgs.
T-5		SA115-10Bd	10 (dup)			X	X	X	X		X	X	X		X				X						
T-5		SA115-25B	25			X	X	X	X		X	X	X		X				X						
T-5		SA115-40B	40			X	X	X	X		X	X	X		X				X						
T-5		SA115-51B	51			X	X	X	X		X	X	X		X				X						

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

Laboratory :						CAS Kelso, 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	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions.)
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)	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	Geotechnical Tests	
Number of Containers per Sample:						1 - 4 oz Jar		1 - 4 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 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).																									
T-5	SA116	SA116-0.0B	0.0																			X		Boring located to evaluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Located adjacent to LOU
T-5		SA116-0.5B	0.5			X	X	X	X		X	X	X		X			X	X					59 piping for general coverage and adjacent to SG68 for VOC comparison purposes.
T-5		SA116-10B	10			X	X	X	X		X	X	X		X				X					GW anticipated at ~52 feet bgs.
T-5		SA116-30B	30			X	X	X	X		X	X	X		X				X					
T-5		SA116-50B	50			X	X	X	X		X	X	X		X				X					
T-5		SA116-50B	50	X		X	X	X	X		X	X	X		X				X					
T-6	RSAT6	RSAT6-0.0B	0.0																			X		Boring located to evaluate soils for general area-wide coverage and not associated with a specific LOU. PCBs and TPH-
T-6		RSAT6-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					DRO/ORO added to SAP to evaluate for potential impacts from WAPA site per NDEP.
T-6		RSAT6-10B	10			X	X	X	X		X	X	X	Hold	X				X					GW anticipated at ~51 feet bgs.
T-6		RSAT6-30B	30			X	X	X	X		X	X	X	Hold	X				X					
T-6		RSAT6-49B	49			X	X	X	X		X	X	X	X	X				X					
T-6	SA118	SA118-0.0B	0.0																			X		Boring located to evaluate LOU 59 (Storm Sewer System). Random boring adjacent to LOU 59 piping to evaluate
T-6		SA118-0.5B	0.5			X	X	X	X		X	X	X		X			X	X					potential high risk piping releases.
T-6		SA118-10B	10			X	X	X	X		X	X	X		X				X					GW anticipated at ~53 feet bgs.
T-6		SA118-25B	25			X	X	X	X		X	X	X		X				X					
T-6		SA118-40B	40			X	X	X	X		X	X	X		X				X					
T-6		SA118-51B	51			X	X	X	X		X	X	X		X				X					
T-7	RSAT7	RSAT7-0.0B	0.0																			X		Boring located to evaluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Random boring adjacent
T-7		RSAT7-0.5B	0.5			X	X	X	X		X	X	X	X	X	X		X	X					to LOU 59 piping to evaluate potential piping releases. PCBs and TPH-DRO/ORO added to SAP to evaluate for potential
T-7		RSAT7-10B	10			X	X	X	X		X	X	X	Hold	X				X					impacts from WAPA site per NDEP.
T-7		RSAT7-25B	25			X	X	X	X		X	X	X	Hold	X				X					GW anticipated at ~46 feet bgs.
T-7		RSAT7-44B	44			X	X	X	X		X	X	X	X	X	X			X					
T-7		RSAT7-44B	44	X		X	X	X	X		X	X	X	X	X	X			X					
T-8	RSAT8	RSAT8-0.0B	0.0																			X		Boring located to evaluate LOU 59 (Storm Sewer System) and for general area-wide coverage. Random boring adjacent
T-8		RSAT8-0.5B	0.5			X	X	X	X		X	X	X	X	X	X		X	X					to LOU 59 piping and manhole/inlet to evaluate potential releases (piping and inlet). PCBs and TPH-DRO/ORO added to
T-8		RSAT8-10B	10			X	X	X	X		X	X	X	Hold	X				X					SAP to evaluate for potential impacts from WAPA site per NDEP.
T-8		RSAT8-25B	25			X	X	X	X		X	X	X	Hold	X				X					GW anticipated at ~46 feet bgs.
T-8		RSAT8-25BD	25 (dup)			X	X	X	X		X	X	X	Hold	X				X					
T-8		RSAT8-44B	44			X	X	X	X		X	X	X	X	X	X			X					
T-8	SA210	SA210-0.0B	0.0																			X		Boring located to evaluate LOU 59 (storm Sewer System). Located areally to evaluate point of exit from the Tronox site
T-8		SA210-0.5B	0.5			X	X	X	X		X	X	X		X	X		X	X					rather than at a worst-case scenario.
T-8		SA210-10B	10			X	X	X	X		X	X	X		X				X					GW anticipated at ~51 feet bgs.
T-8		SA210-30B	30			X	X	X	X		X	X	X		X				X					
T-8		SA210-49B	49			X	X	X	X		X	X	X		X	X			X					
T-8		SA210-30B	30			X	X	X	X		X	X	X		X				X					
T-8		SA210-49B	49			X	X	X	X		X	X	X		X	X			X					
U-4	RSAU4	RSAU4-0.0B	0.0																			X		Boring located to evaluate former western pond in LOU 62 (State Industries, Inc. Site). Located within footprint and in the
U-4		RSAU4-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					center of the former pond to provide general coverage of pond area for potential releases (see LOU 62 summary for
U-4		RSAU4-10B	10			X	X	X	X		X	X	X	Hold	X				X					details). GW anticipated at ~58 feet bgs.
U-4		RSAU4-20B	20	X		X	X	X			X	X	X	X	X	X	X		X	X	X		X	20-Foot SPLP sample must be of Quaternary Alluvium (Qal) soils.
U-4		RSAU4-25B	25			X	X	X	X		X	X	X	Hold	X				X					
U-4		RSAU4-40B	40			X	X	X	X		X	X	X	Hold	X				X					
U-4		RSAU4-50B	50	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 soils not dry, don't collect sample. Choose another boring.
U-4		RSAU4-56B	56			X	X	X	X		X	X	X	X	X				X					
U-4	SA146	SA146-0.0B	0.0																			X		Boring located to evaluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint of former
U-4		SA146-0.5B	0.5			X	X	X	X		X	X	X		X			X	X					pond to provide general coverage of pond area for potential releases (see LOU 62 summary for details).
U-4		SA146-10B	10			X	X	X	X		X	X	X		X				X					GW anticipated at ~57 feet bgs.
U-4		SA146-25B	25			X	X	X	X		X	X	X		X				X					
U-4		SA146-25BD	25 (dup)			X	X	X	X		X	X	X		X				X					
U-4		SA146-40B	40			X	X	X	X		X	X	X		X				X					
U-4		SA146-55B	55			X	X	X	X		X	X	X		X				X					
U-4	SA147	SA147-0.0B	0.0																			X		Boring located to evaluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint of former
U-4		SA147-0.5B	0.5			X	X	X	X		X	X	X		X			X	X					pond to provide general coverage of pond area for potential releases (see LOU 62 summary for details).
U-4		SA147-10B	10			X	X	X	X		X	X	X		X				X					GW anticipated at ~58 feet bgs.
U-4		SA147-25B	25			X	X	X	X		X	X	X		X				X					
U-4		SA147-25BD	25 (dup)			X	X	X	X		X	X	X		X				X					
U-4		SA147-40B	40			X	X	X	X		X	X	X		X				X					
U-4		SA147-56B	56			X	X	X	X		X	X	X		X				X					
U-5	RSAU5	RSAU5-0.0B	0.0																			X		Boring located to evaluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint of former
U-5		RSAU5-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					pond to provide general coverage of pond area for potential releases (see LOU 62 summary for details).
U-5		RSAU5-0.5B	0.5	X		X	X	X			X	X	X	X	X	X	X		X	X	X		X	0.5-Foot SPLP sample must be of Quaternary Alluvium (Qal) soils.
U-5		RSAU5-10B	10			X	X	X	X		X	X	X	Hold	X				X					GW anticipated at ~57 feet bgs.
U-5		RSAU5-25B	25			X	X	X	X		X	X	X	Hold	X				X					
U-5		RSAU5-40B	40			X	X	X	X		X	X	X	Hold	X				X					
U-5		RSAU5-50B	50	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 soils not dry, don't collect sample. Choose another boring.
U-5		RSAU5-55B	55			X	X	X	X		X	X	X	X	X				X					
U-5	SA28	SA28-0.0B	0.0																			X		Boring located to evaluate former eastern pond in LOU 62 (State Industries, Inc. Site). Located within footprint and in the
U-5		SA28-0.5B	0.5			X	X	X	X		X	X	X		X			X	X					center of the former pond to provide general coverage of pond area for potential releases (see LOU 62 summary for
U-5		SA28-10B	10			X	X	X	X		X	X	X		X				X					details). GW anticipated at ~57 feet bgs.
U-5		SA28-10B	10D			X	X	X	X		X	X	X		X				X					
U-5		SA28-25B	25			X	X	X	X		X	X	X		X				X					
U-5		SA28-40B	40			X	X	X	X		X	X	X	X	X				X					
U-5		SA28-55B	55			X	X	X	X		X	X	X		X				X					
U-6	RSAU6	RSAU6-0.0B	0.0																			X		Boring located to evaluate soil for area-wide coverage and not associated with a specific LOU.
U-6		RSAU6-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					GW anticipated at ~55 feet bgs.
U-6		RSAU6-0.5B	0.5	X		X	X	X	X		X	X	X	X	X			X	X					
U-6		RSAU6-10B	10			X	X	X	X		X	X	X	Hold	X				X					
U-6		RSAU6-25B	25			X	X	X	X		X	X	X	Hold	X				X					
U-6		RSAU6-40B	40			X	X	X	X		X	X	X	Hold	X				X					
U-6		RSAU6-53B	53			X	X	X	X		X	X	X	X	X				X					
U-7	RSAU7	RSAU7-0.0B	0.0																			X		Boring located to evaluate soil for area-wide coverage and not associated with a specific LOU.
U-7		RSAU7-0.5B	0.5			X	X	X	X		X	X	X	X	X			X	X					GW anticipated at ~56 feet bgs.
U-7		RSAU7-0.5BD	0.5 (dup)			X	X	X	X		X	X	X	X	X			X	X					
U-7		RSAU7-10B	10			X	X	X	X		X	X	X	Hold	X				X					
U-7		RSAU7-25B	25			X	X	X	X		X	X	X	Hold	X				X					
U-7		RSAU7-40B	40			X	X	X	X		X	X	X	Hold	X				X					

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

Laboratory :						CAS Kelso, 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	Location Description and Characterized Area Rationale (NDEP may not agree with upgradient and downgradient descriptions.)
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)	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	Geotechnical Tests	
Number of Containers per Sample:						1 - 4 oz Jar		1 - 4 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 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			X	X	X	X		X	X	X	X	X				X					
	56 = Number of Borings																							

Notes:

X	Sample will be collected and analyzed.
	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-GRO	Total petroleum hydrocarbons - Gasoline-Range Organics.
TPH-DRO/ORO	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 5.00.05), 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.
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, Thalium, Tungsten, Uranium, Vanadium, and Zinc.
3.	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, CO_3 HCO_3), 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
8.	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 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 3
Groundwater Sampling and Analysis Plan for Area IV
Phase B Source Area Investigation Work Plan
Tronox Facility - Henderson, Nevada

							Laboratory [E.] :	CAS - Kelso, WA		CAS - Rochester, NY							GEL Charleston, SC	CAS - Houston	STL-Denver	Alpha Analytical Sparks, NV	Rationale for Revision	Location Description and Rationale for Investigation
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]		
Wells are organized by grid location as shown on Plate A - Starting point is on the northwestern-most grid in Area 4 (P-2) and ending with the southeastern-most grid covering Area 4 (W-7).																					
P-2	Parcel F	TR-6	TR-6B	60-80	MCcg1	No	X	X	X	X	X	X	X	X	X	X	X	X	X	A, B, C, F, 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	X	X	X	X	X	X	X	X		X				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	X	X	X	X	X	X	X	X		X		X	X	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	X	X	X	X	X	X	X	X		X				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	II	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	II	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	X	X	X	X	X	X	X	X		X		X	X	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	X	X	X	X	X	X	X	X		X				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	X	X	X	X	X	X	X	X		X		X	X	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	X	X	X	X	X	X	X	X		X				F	Located as stepout for LOU 59; and for general Site coverage.
U-4	IV	TR-10	TR-10B	80-100	MCfg1	No	X	X	X	X	X	X	X	X		X				F	Located to evaluate LOU 62 and for general Site coverage.
U-4	IV	M-137	M-137B	TBD	MCcg1*	new well	X	X	X	X	X	X	X	X		X					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	X	X	X	X	X	X	X	X		X					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	X	X	X	X	X	X	X	X		X				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	X	X	X	X	X	X	X	X		X				F	To provide general area-wide upgradient information.
W-4	Parcel H	M-121	M-121B	77 - 97	MCcg1	No	X	X	X	X	X	X	X	X		X				F, J	Located to evaluate upgradient (southwest) groundwater conditions on the Site.
W-5	Parcel H	M-118	M-118B	138 - 158	MCfg2	No	X	X	X	X	X	X	X	X		X				F	Located to evaluate upgradient (south) groundwater conditions on the Site.
W-6	Parcel H	M-120	M-120B	80 - 100	MCcg1	Yes	X	X	X	X	X	X	X	X		X				F, G	Located to evaluate upgradient (south) groundwater conditions on the Site.
W-7	Parcel H	M-117	M-117B	130 - 150	MCfg2	No	X	X	X	X	X	X	X	X		X				F, G	Located to evaluate upgradient groundwater conditions on the southeast corner of the Site.
						Number of Field Samples:	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**1**	**17**	**1**	**4**	**4**		
QA/QC Samples:																					
Field Duplicates (10%)							2	2	2	2	2	2	2	2	0	2	0	1	1		
Field Blanks							1	1	1	1	1	1	1	1	1	1	1	1	1		
Equipment Rinseate Blanks							1	1	1	1	1	1	1	1	0	1	0	1	1		
Trip Blank Samples							0	0	5	0	0	0	0	0	0	0	0	0	0		
Matrix Spike (5%)							1	1	1	1	1	1	1	1	1	1	1	1	1		
Matrix Spike Duplicate (5%)							1	1	1	1	1	1	1	1	1	1	1	1	1		
						Total Samples:	**23**	**23**	**28**	**23**	**23**	**23**	**23**	**23**	**4**	**23**	**4**	**9**	**9**		

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

							Laboratory [E.] :	CAS - Kelso, WA	CAS - Rochester, NY							GEL Charleston, SC	CAS - Houston	STL-Denver	Alpha Analytical Sparks, NV	Rationale for Revision	Location Description and Rationale for Investigation
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]		
Wells are organized by grid location as shown on Plate A - Starting point is on the northwestern-most grid in Area 4 (P-2) and ending with the southeastern-most grid covering Area 4 (W-7).																					

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.
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.	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.	VOCs = Volatile organic compounds (to include analysis for naphthalene)
4.	Hexavalent Chromium.
5.	Complete list of wet chemistry parameters are shown on Table 1. All groundwater samples will have pH measured in the field.
6.	OCPs = Organochlorine pesticides (to include analysis for hexachlorobenzene).
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).
10.	OPPs = Organophosphorous Pesticides
TBD	To Be Determined when well is constructed.
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
(a)	Complete list of wet chemistry parameters are shown on Table 1. All groundwater samples will have pH measured in the field.
X	Green-shading indicates items that have been added or changed from Table 3 in the May 2008 Area IV Work Plan originally reviewed by NDEP.
R	Brown-shading indicates items that have been removed from Table 3 in the May 2008 Area IV Work Plan originally reviewed by NDEP.
A	OPPs were added per NDEP (July 21, 2008).
B	Organic Acids were added per NDEP (July 21, 2008).
C	Well was added to evaluate groundwater coming onto Tronox from the west.
D	Well was removed from Table 3 because this well is not located in Area IV.
E	Laboratory information was added to Table 3 to assist field sampling personnel in shipping the sample containers to the appropriate laboratory.
F	Total cyanide was added per NDEP (July 21, 2008).
G	VOCs analysis will be added to these samples as they were inadvertently left off of the Table 3 that was reviewed by NDEP.
H	Grid code was listed incorrectly
I	Location area was revised to reflect the name of the parcel. The parcel is a part of area IV
J	NDEP requested that soil types be inclusive of all types encountered across screening depth, boring logs were reviewed to ensure correct soil types are listed.
K	Sample ID was added to convey sample ID nomenclature to field sampling team ("B" suffix denotes sample is associated with Phase B sampling event).
L	PCB columns were added per NDEP (May 6, 2008)

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

Laboratory :								CAS Kelso, WA		Columbia Analytical Services Rochester, NY							GEL Charleston, SC	CAS Houston, TX	STL Denver, CO	Alpha Analytical Sparks, NV	Location Description and Rationale for Investigation
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 organized by grid location as shown on Plate A - Starting point is on the northwestern-most grid in Area 4 (P-2) and ending with the southeastern-most grid covering Area 4 (W-7).																					
P-2	Parcel F	TR-6	TR-6B	60-80	MCcg1	No		X	X	X	X	X	X	X	X	X	X	X	X	X	Located to evaluate groundwater migrating onto Tronox from the west.
P-4	Parcel F	M-93	M-93B	35.4 - 45.4	MCfg1	No		X	X	X	X	X	X	X	X		X				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		X	X	X	X	X	X	X	X		X		X	X	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		X	X	X	X	X	X	X	X		X				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.
			M-92B	34.9 - 44.9			X	X	X	X	X	X	X	X	X		X				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.
Q-4	IV	M-143	M-143B	TBD	Qal/MCfg1*	new well		X	X	X	X	X	X	X	X		X		X	X	New well to be installed; located to evaluate LOUs 4, 25, 26, 27, 28, 42, and 60; and for general Site coverage
			M-143BD	TBD (dup)				X	X	X	X	X	X	X	X		X		X	X	This is a duplicate sample of M-143B.
R-5	IV	M-144	M-144B	TBD	Qal/MCfg1*	new well		X	X	X	X	X	X	X	X		X				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		X	X	X	X	X	X	X	X		X		X	X	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		X	X	X	X	X	X	X	X		X				Located as stepout for LOU 59; and for general Site coverage.
U-4	IV	TR-10	TR-10B	80-100	MCfg1	No		X	X	X	X	X	X	X	X		X				Located to evaluate LOU 62 and for general Site coverage.
U-4	IV	M-137	M-137B	TBD	MCcg1*	new well		X	X	X	X	X	X	X	X		X				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		X	X	X	X	X	X	X	X		X				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.
			M-138BD	TBD (dup)				X	X	X	X	X	X	X	X		X				This is a duplicate sample of M-138B.
V-7	Parcel H	M-103	M-103B	69.5 - 89.5	MCcg1	No		X	X	X	X	X	X	X	X		X				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		X	X	X	X	X	X	X	X		X				To provide general area-wide upgradient information.
W-4	Parcel H	M-121	M-121B	77 - 97	MCcg1	No		X	X	X	X	X	X	X	X		X				Located to evaluate upgradient (southwest) groundwater conditions on the Site.
W-5	Parcel H	M-118	M-118B	138 - 158	MCfg2	No		X	X	X	X	X	X	X	X		X				Located to evaluate upgradient (south) groundwater conditions on the Site.
W-6	Parcel H	M-120	M-120B	80 - 100	MCcg1	Yes		X	X	X	X	X	X	X	X		X				Located to evaluate upgradient (south) groundwater conditions on the Site.
W-7	Parcel H	M-117	M-117B	130 - 150	MCfg2	No		X	X	X	X	X	X	X	X		X				Located to evaluate upgradient groundwater conditions on the southeast corner of the Site.
Number of Wells:		**17**																			

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.
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.	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.	VOCs = Volatile organic compounds (to include analysis for naphthalene).
4.	Hexavalent Chromium.

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

Laboratory :								CAS Kelso, WA		Columbia Analytical Services Rochester, NY							GEL Charleston, SC	CAS Houston, TX	STL Denver, CO	Alpha Analytical Sparks, NV	Location Description and Rationale for Investigation
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 organized by grid location as shown on Plate A - Starting point is on the northwestern-most grid in Area 4 (P-2) and ending with the southeastern-most grid covering Area 4 (W-7).																					

5. Complete list of wet chemistry parameters are shown on Table 1. All groundwater samples will have pH measured in the field.
6. OCPs = Organochlorine pesticides (to include analysis for hexachlorobenzene).
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).
10. OPPs = Organophosphorous Pesticides

TBD To Be Determined when well is constructed.
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