Grid Location	LOU Number	Phase B Boring No. Sample Numbe	Depths"	Perchlorate (EPA 314.0)	Metals (EPA 6020)	Hex Cr (EPA 7199)	TPH- DRO/ORO (EPA 8015B)		^{2.} Wet Chemistry ^{3.}	Total Cyanide (EPA 9012A)	OCPs ^{4.} (EPA 8081A)	SVOCs ^{5.} (EPA 8270C)	Radio- nuclides ^{6.}	Dioxins/ Furans ^{7.}	PCBs ^{8.} (EPA 1668A)	Asbestos ^{9.} EPA/540/R- 97/028	Geo- technical Tests ^{10.}	Rationale
			(ft. bgs)		-			,		-						31/020	16515	
N-7	20, 21, 22, 23	SA157 SA157-0		on Plate A -	Starting p	Doint is o	n the <u>norti</u>	nwestern most g	rid in <u>Area 3 (N</u>	<u>N-7)</u> and endi	ng with <u>ti</u>	ne southe	eastern mo	ost gria in	Area 3 (5-8).	Х	1	Boring located to evaluate LOU 20 (Pond C-1 Associated Piping), LOU 21 (Pond Mn-1 and
N-7	20, 21, 22, 23	SA157 SA157-0		х	Х	Х		x	х		X	х	Х	Х		^		Associated Piping), LOU 22 (WC-West Associated Piping), and LOU 23 (WC-East Associated
N-7	20, 21, 22, 23	SA157-1	0 10	Х	Х	Х		X	Х		Hold	Х	Х					Piping). Located at piping junction from all LOUs at highest release potential location (manhole and junction).
N-7	20, 21, 22, 23	SA157-2		X	X	X		X	X		Hold	X	X					
N-7 N-7	20, 21, 22, 23 20, 21, 22, 23	SA157-3 SA157-4		X	X	X X		X X	X		Hold X	X	X					
N-8	21, 24, 46	RSAN8 RSAN8-0			~	~						~				Х		Boring located to evaluate LOU 24 (Manganese [Mn] Tailings Pile Area), LOU 46 (Former Old
N-8	21, 24, 46	RSAN8-0		Х	Х	Х	Х	X	Х		Х	Х	Х	Х				Main Cooling Tower and Recirculation Lines), and LOU 21 (Pond Mn-1 and Associated Piping).
N-8 N-8	21, 24, 46 21, 24, 46	RSAN8- RSAN8-		X	X	X	X	X	X		Hold Hold	X X	X				Х	Located near the perimeter of two LOUs and associated piping at a high release potrntial location (down slope and low spot).
N-8	21, 24, 46	RSAN8-		X	X	x	X	X	X		Hold	X	X					
N-8	21, 24, 46	RSAN8-	40 40	Х	Х	Х	Х	Х	Х		Х	Х	Х					
N-8	21, 24, 46	SA139 SA139-0	.0 0.0						_							Х		Boring located to evaluate LOU 21 (Pond Mn-1 and Associated Piping), LOU 24 (Mn Tailings Pile
N-8	21, 24, 46	SA139-0	5 0.5	x	x	x		x	x		x		x	x				area), and LOU 46 (Former Old Main Cooling Tower and Recirculation Lines). Located near the perimeter of two LOUs and associated piping at a high release potential location (down slope and low spot)
N-8	21, 24, 46	SA139-1		X	X	X		X	X		Hold		X					
N-8	21, 24, 46	SA139-2		Х	Х	Х		X	Х		Hold		Х					
N-8 N-8	21, 24, 46 21, 24, 46	SA139-3 SA139-4		X	X	X		X	X		Hold X		X					
N-8	21, 24, 46	SA160 SA160-0		^	^	^		^	^		^		^			Х		Boring located to evaluate upgradient LOU 24 (Mn Tailings Pile Area) , LOU 46 (Former Old
	2., 21, 10	5.1.00 0,1100 0																Main Cooling Tower and Recirculation Lines) and LOU 21 (Pond Mn-1 and Associated Piping). Located near perimeter of two LOUs and
N-8	21, 24, 46	SA160-0		Х	Х	Х		X	X		X		Х	Х				piping at high release potiential location (down slope and low spot)
N-8 N-8	21, 24, 46	SA160-1		X	X	X		X	X		Hold		X					
N-8	21, 24, 46 21, 24, 46	SA160-2 SA160-3		X	X	X		X	X		Hold Hold		X					
N-8	21, 24, 46	SA160-4		X	X	X		X	X		X		X					
O-6	34W	SA39 SA39-0														Х		Boring located north of Chemstar to evaluate LOU 34W (Historic Mn Tailings Pile Area, West).
0-6	34W 34W	SA39-0 SA39-1		X	X	X	X	X	X		X Hold		X	X				Located in low spot of LOU 34W at likely worst case location.
O-6 O-6	34W	SA39-1 SA39-2		X	X	X	X	X X	X		Hold		X					
O-6	34W	SA39-3		X	X	X	X	X	X		Hold		X					
O-6	34W	SA39-4	-	Х	Х	Х	Х	X	Х		Х		Х			×		
0-7	24, 46	RSAO7 RSAO7-	0.0 0.0													Х		Boring located to evaluate LOU 24 (Mn Tailings Pile Area) and LOU 46 (Former Old Main Cooling Tower and Recirculation Lines). Located in low spot of LOU 24 and down hill topographically of LOU 46 at likely worst case location.
0-7	24, 46	RSA07-0	0.5	x	x	x	x	x	x		x	x	x	x				
0-7	24, 46	RSA07-		X	X	X	X	X	X		Hold	X	X					
0-7	24, 46	RSAO7-		Х	Х	Х	Х	X	X		Hold	Х	Х					
0-7 0-7	24, 46 24, 46	RSAO7- RSAO7-		X	X	X	X	X X	X		Hold X	X X	X					
0-7	34W, 60, 20, 22, 23			~	^	^	~	^	~		^		^			х		Boring located to evaluate LOU 20 (Pond C-1 Associated Piping Associated Piping), LOU 22
0-7	34W, 60, 20, 22, 23	SA178-0	.5 0.5	Х	Х	Х		X	Х	Х	Х	Х	Х	Х				(WC-West Associated Piping), LOU 23 (WC-East Associated Piping), LOU 34W (Historic Mn
0.7	34W, 60, 20, 22, 23	04470	10	x	x	x		x	×	×		x	x					Tailings Pile Area, West), and LOU 60 (Acid Drain system). Located within this cluster of LOUs at a likely high release potential location
0-7 0-7	34W, 60, 20, 22, 23 34W, 60, 20, 22, 23	SA178- SA178-2	0	X	X	X		X	X	X	Hold Hold	X	X					for all five LOUs (low point,edge of road).
0-7	34W, 60, 20, 22, 23	SA178-3		X	X	X		X	X	X	Hold	X	X					
0-7	34W, 60, 20, 22, 23	SA178-4		Х	Х	Х		Х	Х	Х	Х	Х	Х					
0-7	24, 46	SA52 SA52-0	0 0.0													X		Boring located to evaluate LOU 24 (Mn Tailings Pile Area) and LOU 46 (Former Old Main Cooling
0-7	24, 46	SA52-0	5 0.5	х	х	х		x	x		x		х	X				Tower and Recirculation Lines). Located withinn the footprint of both LOUs at a topographically low area for worst case coverage.
0-7	24, 46	SA52-1	0 10	Х	Х	Х		Х	Х		Hold		Х				Х	
0-7	24, 46	SA52-2		X	X	X		X	X		Hold		X					
0-7 0-7	24, 46 24, 46	SA52-3 SA52-4		X	X	X		X X	X		Hold X		X	+	-			
0-7	24, 46	SA149 SA149-0							~							Х		Boring located to evaluate LOU 24 (Mn Tailings Pile Area) and LOU 46 (Former Old Main Cooling
0-7	24, 46	SA149-0	.5 0.5	Х	Х	Х	ļ	X	Х		Х		Х	Х				Tower and Recirculation Lines). Located within LOU 24 and just upgradient of LOU 46 to provide area coverage of both LOUs.
0-7 0-7	24, 46 24, 46	SA149-2 SA149-2		X	X	X		X X	X		Hold Hold		X					
0-7	24, 46	SA149-2 SA149-3		X	X	X		X	X		Hold		X	-				
0-7	24, 46	SA149-4	0 40	X	X	X		X	X		X		X					
0-8	24, 46	RSAO8 RSAO8-														Х		Boring located to evaluate LOU 24 (Manganese Tailings Pile Area) and LOU 46 (Former Old
0-8 0-8	24, 46 24, 46	RSAO8-0 RSAO8-		X	X	X X	X	X X	X		X Hold		X	X				Main Cooling Tower and Recirculation Lines). Located within LOU 24 and just upgradient of LOU 46 to provide area coverage of both LOUs.
0-8	24, 46	RSA08-		X	X	X	X	X	X	1	Hold		X	1	1			בטיטווט אווווויז בטט בד מוזע ועטו ערטווע טי בטט אט גט דוטאועב מוכמ טטיפומער טי טטווו בטטא.
O-8	24, 46	RSAO8-	30 30	Х	Х	Х	Х	Х	Х		Hold		Х					
0-8	24, 46	RSAO8-		Х	Х	Х	Х	X	Х		Х		Х	-		V		Device leasts the products 1 OH OA (Me Tellings Dir. As a) as 14 OH 40 (Tellings OH Mail, Co., 11
O-8	24, 46	SA108 SA108-0		+	-				-					1		Х		Boring located to evaluate LOU 24 (Mn Tailings Pile Area) and LOU 46 (Former Old Main Cooling
O-8	24, 46	SA108-0	.5 0.5	х	x	х		x	x		x		х	x				Tower and Recirculation Lines). Located within the footprint of both LOUs at a slight low spot to provide reasonable coverage of both.
O-8	24, 46	SA108-1	0 10	Х	Х	Х		X	Х		Hold		Х					
O-8	24, 46	SA108-2		X	X	X		X	X		Hold		X		<u> </u>			
O-8 O-8	24, 46 24, 46	SA108-3 SA108-4		X	X	X X		X X	X		Hold X		X	-				
0-8	24, 46, 60	SA141 SA141-0		~					~							Х		Boring located to evaluate LOU 24 (Mn Tailings Pile Area), LOU 46 (Former Old Main Cooling
			0.5															Tower and Recirculation Lines), and LOU 60 (Acid Drain System). Located within LOU 24, just downgradient of LOU 46 and adjacent to
0-8	24, 46, 60	SA141-0	.5	X	X	X		X	X		X		X	X		-		LOU 60 drain pipe to evaluate likely release locations from all three LOUs.
0-8 0-8	24, 46, 60 24, 46, 60	SA141- SA141-2		X	X	X		X	X		Hold Hold		X	+	+			
0	2-1, -0, 00	0/141-2	20	~		~	I	~	~	1	1 100			1	1	1	1	1

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Grid Location	LOU Number	Phase B Boring No.	Sample ID Number	Sample Depths ^{1.} (ft. bgs)	Perchlorate (EPA 314.0)	Metals (EPA 6020)	Hex Cr (EPA 7199)	TPH- DRO/ORO (EPA 8015B)	TPH-GRO (EPA 8015B)	VOCs ^{2.} (EPA 8260B)	Wet Chemistry ^{3.}	Total Cyanide (EPA 9012A)	OCPs ^{4.} (EPA 8081A)	SVOCs ^{5.} (EPA 8270C)	Radio- nuclides ^{6.}	Dioxins/ Furans ^{7.}	PCBs ^{8.} (EPA 1668A)	Asbestos ^{9.} EPA/540/R- 97/028	Geo- technical Tests ^{10.}	
В	orings are orgar	nized by g	rid location	as shown	on Plate A - S	Starting p	point is o	n the north	nwestern	most gri	d in <u>Area 3 (N</u>	-7) and endin	g with t	he southe	astern mo	st grid in	Area 3 (S-8).			
O-8	24, 46, 60		SA141-30	30	Х	Х	Х			Х	Х		Hold		Х					
O-8	24, 46, 60	0.1.1.0	SA141-40	40	Х	Х	Х			Х	Х		Х		Х		-			
O-8	24, 46, 60	SA142	SA142-0.0	0.0														Х		Boring located to evaluate LOU 24 (Mn Ta Tower and Recirculation Lines), and LOU
O-8	24, 46, 60		SA142-0.5	0.5	х	х	х			x	х		х		х	x				LOU 60 drain pipe to evaluate likely releas
O-8	24, 46, 60		SA142-10	10	Х	Х	Х			Х	Х		Hold		Х					
O-8	24, 46, 60		SA142-20	20	X	Х	Х			Х	X		Hold		Х					
O-8 O-8	24, 46, 60 24, 46, 60		SA142-30 SA142-40	30 40	X	X X	X X			X X	X X		Hold X		X X					
0-8	24, 46, 60	SA143	SA142-40 SA143-0.0	0.0	^	^	^			^	^		^		^			X		Boring located to evaluate LOU 24 (Mn Ta
O-8	24, 46	0/11-10	SA143-0.5	0.5	Х	Х	Х			х	Х		Х		Х	Х		, A		Tower and Recirculation Lines). Located v
O-8	24, 46		SA143-10	10	Х	Х	Х			Х	Х		Hold		Х					
O-8	24, 46		SA143-20	20	X	X	X			X	X		Hold		X					
O-8 O-8	24, 46 24, 46		SA143-30 SA143-40	30 40	X X	X X	X X			X X	X		Hold X		X X					
0-8	21, 24, 46, 59, 60	SA171	SA171-0.0	0.0	X	~	~			~	~		~		~			Х		Boring located to evaluate LOU 21 (Pond
O-8	21, 24, 46, 59, 60		SA171-0.5	0.5	Х	Х	Х			Х	Х		Х		Х	Х				Area), LOU 46 (Former Old Main Cooling
				10																System), and LOU 60 (Acid Drain System)
O-8 O-8	21, 24, 46, 59, 60 21, 24, 46, 59, 60		SA171-10 SA171-20	20	X	X X	X X			X	X		Hold Hold		X X					reasonable release location to evaluate all
0-8	21, 24, 46, 59, 60		SA171-20 SA171-30	30	X	X	X			X X	X X		Hold		X					
0-8	21, 24, 46, 59, 60		SA171-40	40	X	X	X			X	X		X		X					
				0.0																Boring located to evaluate LOU 34W (Hist
P-6	34W	RSAP6	RSAP6-0.0		Y						X							Х		worst case potiential enviormental issue lo
P-6 P-6	34W 34W		RSAP6-0.5 RSAP6-10	0.5	X	X X	X X	X		X X	X X		X Hold	X	X X	Х				
P-6	34W		RSAP6-10 RSAP6-20	20	X	X	x	X		X	X		Hold	X	X					
P-6	34W		RSAP6-30	30	X	X	X	X		X	X		Hold	X	X					
P-6	34W		RSAP6-40	40	Х	Х	Х	Х		Х	Х		Х	Х	Х					
P-7	60, 20, 21, 22, 23	RSAP7	RSAP7-0.0	0.0	X	X	X	X		X	X	X	X	X	X	X		Х		Boring located to evaluate LOU 20 (Pond
P-7	60, 20, 21, 22, 23		RSAP7-0.5	0.5	Х	Х	Х	Х		Х	Х	Х	Х	Х	Х	Х				(Pond Mn-1 and Associated Piping), LOU
P-7	60, 20, 21, 22, 23		RSAP7-10	10	х	х	х	х		x	х	х	Hold	x	х					Associated Piping), and LOU 60 (Acid Dra
P-7	60, 20, 21, 22, 23		RSAP7-20	20	Х	Х	Х	Х		Х	Х	Х	Hold	Х	Х					
P-7	60, 20, 21, 22, 23		RSAP7-30	30	X	X	X	X		X	X	X	Hold	X	X					
P-7 P-7	60, 20, 21, 22, 23 48, 49, 50	SA140	RSAP7-40 SA140-0.0	40	Х	Х	Х	Х		Х	Х	Х	Х	Х	Х			Х		Boring located to evaluate LOU 48 (Leach
1-1	40, 43, 30	5/140	5A140-0.0															~		Sulfuric Acid Storage Tank), and LOU 50 (
P-7	48, 49, 50		SA140-0.5	0.5	х	Х	Х			х	Х		Х		Х	Х				release point for all three LOUs (just down
P-7	48, 49, 50		SA140-10	10	X	X	X			X	X		Hold		X					
P-7 P-7	48, 49, 50 48, 49, 50		SA140-20 SA140-30	20 30	X	X X	X X			X X	X X		Hold Hold		X X					
P-7	48, 49, 50		SA140-30	40	X	X	X			X	X		X		X					
P-8	47, A70	RSAP8	RSAP8-0.0	0.0														Х		Boring located to evaluate LOU 47 (Leach
				0.5																U.S. Vanadium Site). Random boring local
P-8 P-8	47, A70 47, A70		RSAP8-0.5 RSAP8-10	10	X	X X	X X	X		X X	X X		X Hold	X	X X	Х				from both LOU 47 and Area 70 LOUs (dow
P-8	47, A70		RSAP8-20	20	X	X	X	X		X	X		Hold	X	X					
P-8	47, A70		RSAP8-30	30	Х	Х	Х	Х		Х	Х		Hold	Х	Х					
P-8	47, A70		RSAP8-40	40	Х	Х	Х	Х		Х	Х		Х	Х	Х					
	34E, 47, 48, 51, A70 34E, 47, 48, 51, A70		SA38-0.0 SA38-0.5	0.0	Х	x	x	х	x	X	Х		х	x	x	x		Х		Boring located to evaluate LOU 34E (Histo Plant Manganese Ore Pile Area), LOU 48
	34E, 47, 48, 51, A70		SA38-0.5 SA38-10	10	X	X	X	X	X	X	X		Hold	X	X	^				(Leach Plant Area Transfer Lines To/From
				20																Located within and near a cluster of four L
	34E, 47, 48, 51, A70		SA38-20		Х	Х	Х	Х	Х	Х	Х		Hold	Х	Х					potiential releases from LOU 51 (low area)
	34E, 47, 48, 51, A70 34E, 47, 48, 51, A70		SA38-30 SA38-40	30 40	X	X X	X X	X X	X X	X X	X X		Hold X	X X	X X					
	20, 22, 23, 48, 50, 60		RSAQ7-0.0	0.0	^	^	^	^	^	^	^		^	^	^			X		Boring located to evaluate LOU 20 (Pond
	20, 22, 23, 48, 50, 60		RSAQ7-0.5	0.5	Х	Х	Х	Х		х	Х	Х	Х	Х	Х	Х				Piping), LOU 23 (WC-East Associated Pip
				10																LOU 50 (Leach Plant Area Leach Tanks),
	20, 22, 23, 48, 50, 60		RSAQ7-10		X	X	X	X		X	X	X	Hold	X	X					for likely release points.
	20, 22, 23, 48, 50, 60 20, 22, 23, 48, 50, 60		RSAQ7-20 RSAQ7-30	20 30	X	X X	X X	X		X X	X X	X X	Hold Hold	X X	X X					
	20, 22, 23, 48, 50, 60		RSAQ7-40	40	X	X	X	X		X	X	X	X	X	X					
Q-7	20, 22, 23, 61	SA36	SA36-0.0	0.0														Х		Boring located to evaluate LOU 20 (Pond
Q-7	20, 22, 23, 61		SA36-0.5	0.5	Х	Х	Х	Х		Х	Х		Х		Х	Х				Piping), LOU 23 (WC-East Associated Pip
Q-7	20 22 22 61		SA36-10	10	x	v	v	x		v	х		Hold		x					and Unit-5 Basement). Located adjacent to likely releases (accessible low area).
Q-7 Q-7	20, 22, 23, 61 20, 22, 23, 61		SA36-10 SA36-20	20	X	X X	X X	X		X X	X		Hold		X					INCEY TELEASES (ACCESSIBLE IOW ALEA).
Q-7	20, 22, 23, 61		SA36-30	30	X	Х	X	Х		X	Х		Hold		Х					
Q-7	20, 22, 23, 61		SA36-40	40	Х	Х	Х	Х		Х	Х		Х		Х					
Q-8	47, 48, 59	RSAQ8	RSAQ8-0.0	0.0														Х		Boring located to evaluate LOU 47 (Leach
	47, 48, 59		RSAQ8-0.5	0.5	х	x	x	x		x	х		х	x	x	x				Anolyte Storage Tanks), and LOU 59 (Sto LOU 59 for accessible area coverage and
0-8			RSAQ8-0.5 RSAQ8-10	10	X	X	X	X		X	X		A Hold	X	X				х	
Q-8 Q-8	47.48.59																			
	47, 48, 59 47, 48, 59		RSAQ8-20	20	Х	Х	Х	Х		Х	Х		Hold	Х	Х					
Q-8				20 30	X X X	X X X	X X X	X X X		X X X	X X X		Hold Hold X	X X X	X X X					

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Rationale
Tailings Pile Area), LOU 46 (Former Old Main Cooling IU 60 (Acid Drain System).Located within LOU 24, just downgradient of LOU 46 and adjacent to pase locations from all three LOUs.
Tailings Pile Area) and LOU 46 (Former Old Main Cooling
ed within LOU 42 and downgradient of LOU 46 to provide area coverage of both LOUs.
nd Mn-1 and Associated Piping), LOU 24 (Mn Tailings Pile
ng Tower and Recirculation Lines), LOU 59 (Storm Sewer m). Located within LOU 24 nearby LOU 46 and adjacent to LOUs 21,59 and 60 piping at a all five LOUs.
listoric Mn Tailings Pile Area, West). Random boring located within low spot of LOU 34W at a location.
nd C-1 Associated Piping Associated Piping), LOU 21
U 22 (WC-West Associated Piping), LOU 23 (WC-East
Drain System). Random boring located within a cluster of five LOUs for area coverage of all five.
ch Plant Anolyte Tank), LOU 49 (Leach Plant Area
50 (Leach Plant Area Leach Tanks). Located adjacent to three LOUs at an accessible reasonable wn slope).
In the Plant Area Mn Ore Pile Area) and Area 70 (Former Incated within LOU 47 and at downgradient edge of Area 70 to evaluate potiential area releases down slope and low spot).
istoric Mn Tailings Pile Area, East), LOU 47 (Leach
48 (Leach Plant Anolyte Storage Tanks), LOU 51
om Unit-6), and Area 70 (Former U.S. Vanadium Site). r LOUs and Area 70 to evaluate worst case releases from LOUs 34E,47 and 48 and Area 70 and ea).
nd C-1 Associated Piping), LOU 22 (WC-West Associated Piping), LOU 48 (Leach Plant Anolyte Storage Tanks), s), and LOU 60 (Acid Drain System). Random boring located within area piping for all five LOUs
nd C-1 Associated Piping), LOU 22 (WC-West Associated
Piping), and LOU 61 (Old Sodium Plant Decommissioning nt to piping for LOUs 20,22,and 23 for potiential release points, and downgradient of LOU 61 for
ach Plant Mn Ore Pile Area), LOU 48 (Leach Plant Storm Sewer System). Random boring in accessible location within LOUs 47 and 48 and nearby nd a low spot.

Grid Location	LOU Number	Phase B Boring No.	Sample ID Number	Sample Depths ^{1.} (ft. bgs)	Perchlorate (EPA 314.0)	Metals (EPA 6020)	Hex Cr (EPA 7199)	TPH- DRO/ORO (EPA 8015B)	TPH-GRO (EPA 8015B)	VOCs ^{2.} (EPA 8260B)	Wet Chemistry ^{3.}	Total Cyanide (EPA 9012A)	OCPs ^{4.} (EPA 8081A)	SVOCs ^{5.} (EPA 8270C)	Radio- nuclides ^{6.}	Dioxins/ Furans ^{7.}	PCBs ^{8.} (EPA 1668A)	Asbestos ^{9.} EPA/540/R- 97/028	Geo- technical Tests ^{10.}	
	Borings are orgar	ized by gi	rid location	as shown	on Plate A - S	Starting p	oint is o	n the <u>north</u>	western	nost gri	d in <u>Area 3 (N</u>	I-7) and endir	ng with t	he southe	astern mo	ost grid in	Area 3 (S-8).		I	
Q-8	47, 48, 51, 59,A70	SA37	SA37-0.0	0.0														Х		Boring located to evaluate LOU 51 (Mn Lea
Q-8	47, 48, 51, 59,A70		SA37-0.5	0.5	Х	Х	Х	Х	Х	Х	Х		Х	Х	Х	Х				(Leach Plant Area Mn Ore Pile Area), LOU
Q-8	47, 48, 51, 59,A70		SA37-10	10	х	x	х	х	х	х	х		Hold	x	x					Sewer System), and Area 70 (Former U.S.
Q-8	47, 48, 51, 59,A70 47, 48, 51, 59,A70		SA37-10 SA37-20	20	X	X	X	X	X	X	X		Hold	X	X					Area 70 for worst case releases and nearby
Q-8	47, 48, 51, 59,A70		SA37-30	30	X	X	X	X	X	X	X		Hold	X	X					
Q-8	47, 48, 51, 59,A70		SA37-40	40	X	X	X	X	X	X	X		X	X	X					
Q-8	21, 59, 60	SA174	SA174-0.0	0.0														Х		Boring located to evaluate LOU 21 (Pond M
				0.5																System), and LOU 60 (Acid Drain System).
Q-8	21, 59, 60		SA174-0.5		X	X	X			X	X		X		X	Х				street with differential load potiential.
Q-8 Q-8	21, 59, 60 21, 59, 60		SA174-10 SA174-20	10 20	X	X X	X X			X	X		Hold Hold		X					
Q-8	21, 59, 60		SA174-20 SA174-30	30	X	X	X			X	X		Hold		X				-	
Q-8	21, 59, 60		SA174-40	40	X	X	X			X	X		X		X					
Q-8	37, 44, 60	SA177	SA177-0.0	0.0														Х		Boring located to evaluate LOU 37 (Former
				0.5																LOU 44 (Unit-6 Basement), and LOU 60 (A
Q-8	37, 44, 60		SA177-0.5		X	X	X			X	X		X	X	X	Х				LOUs 37 and 44, and adjacent to LOU 60 p
Q-8 Q-8	37, 44, 60 37, 44, 60		SA177-10 SA177-20	10 20	X	X X	X X			X	X		Hold Hold	X X	X					
Q-8	37, 44, 60		SA177-20 SA177-30	30	X	X	X			X	X		Hold	X	X					
Q-8	37, 44, 60		SA177-40	40	X	X	X			X	X		X	X	X				-	
R-7	40, 59, 61	RSAR7	RSAR7-0.0	0.0		~~~~	~				~~~~				~			Х		Boring located to evaluate soils for known of
R-7	40, 59, 61		RSAR7-0.5	0.5	Х	Х	Х	Х		Х	Х		Х	Х	Х	Х				40 (PCB Transformer Spill), LOU 59 (Storm
				10																Plant Decomissioning and Unit-5 Basement
R-7	40, 59, 61		RSAR7-10		X	X	X	Х		X	X		Hold	X	X					and randomly near LOUs 40 and 61 for area
R-7 R-7	40, 59, 61 40, 59, 61		RSAR7-20 RSAR7-30	20	X X	X X	X	X X		X	X X		Hold Hold	X X	X					
R-7	40, 59, 61		RSAR7-30 RSAR7-40	30 40	X	X	X	X		X	X		X	X	X					
R-7	40, 61	SA112	SA112-0.0	0.0	X	~	Χ	~		~	~		~		~			х		Boring is located to evaluate LOU 40 (PCB
	,																			Sodium Chlorate Plant Decomissioning and
R-7	40, 61		SA112-0.5	0.5	Х	Х	Х	Х		Х	Х		Х		Х	Х	Х			adjacent to LOU 61 basement for area cove
R-7	40, 61		SA112-10	10	X	Х	Х	Х		Х	X		Hold		Х		X			
R-7	40, 61		SA112-20	20	X	X	X	X		X	X		Hold		X		X			
R-7 R-7	40, 61 40, 61		SA112-30 SA112-40	30 40	X X	X X	X X	X X		X	X X		Hold X		X		X			
R-7	33, 59, 61	SA132	SA132-0.0	0.0	X	~	Λ	~			X				~		X	х	1	Located to evaluate LOU 33 (Former Sodiu
R-7	33, 59, 61		SA132-0.5	0.5	Х	Х	Х	Х		Х	Х		Х		Х	Х				(Storm Sewer System), and LOU 61 (Old S
				10																Basement). Located at high risk point, adja
R-7	33, 59, 61		SA132-10		Х	Х	Х	Х		Х	Х		Hold		Х					coverage.
R-7	33, 59, 61		SA132-20	20 30	X	X	X	X		X	X		Hold		X					
R-7 R-7	33, 59, 61 33, 59, 61		SA132-30 SA132-40	40	X	X X	X X	X X		X	X		Hold X		X					
R-7	40, 61	SA33	SA33-0.0	0.0	X	~	Λ	~			X				~			х	1	Boring located to evaluate LOU 40 (PCB Tr
																				Plant Decommissioning and Unit-5 Baseme
R-7	40, 61		SA33-0.5	0.5	х	Х	Х	Х		Х	Х		Х		Х	Х				upgradient utilities allow) to potiential release
R-7	40, 61		SA33-10	10	Х	Х	Х	Х		Х	Х		Hold		Х					
R-7 R-7	40, 61		SA33-20	20 30	X	X	X	X		X	X		Hold Hold		X					
R-7 R-7	40, 61 40, 61		SA33-30 SA33-40	30 40	X	X X	X X	X X		X	X X		X		X					
R-8	44	RSAR8	RSAR8-0.0	0.0	X	~	Λ	~			X				~			х	1	Boring located south of Unit-6 to evaluate L
																				as part of site-wide coverage for potential h
R-8	44		RSAR8-0.5	0.5	х	Х	Х	Х		Х	Х		Х	Х	Х	Х				release point and for area wide coverage.
R-8	44		RSAR8-10	10	Х	Х	Х	Х		Х	Х		Hold	Х	Х					
R-8	44		RSAR8-20	20	X	X	X	X		X	X		Hold	X	X				_	
R-8 R-8	44		RSAR8-30 RSAR8-40	30 40	X	X X	X X	X X		X X	X		Hold X	X X	X					
R-8	33, 44, 59, 61	SA34	SA34-0.0	0.0	^	^	^	^		^	^		^	^	^			Х		Boring located to evaluate LOU 33 (Former
R-8	33, 44, 59, 61	0/101	SA34-0.5	0.5	Х	Х	Х	Х		Х	Х		X		Х	Х		~		44 (Unit-6 Basement), LOU 59 (Storm Sew
				10																Decommissioning and Unit-5 Basement). Lo
R-8	33, 44, 59, 61		SA34-10		Х	Х	Х	Х		Х	Х		Hold		Х				Х	evaluate pipeline releases.
R-8	33, 44, 59, 61		SA34-20	20	X	X	X	X		X	X		Hold		X	-				
R-8	33, 44, 59, 61 33, 44, 59, 61		SA34-30	30	X	X	X	X		X	X		Hold		X			-		
R-8 S-8	33, 44, 59, 61 n/a	RSAS8	SA34-40 RSAS8-0.0	40	Х	Х	Х	Х		Х	Х		Х		Х			Х		This randomly-located boring is located to e
S-8	n/a	110/100	RSAS8-0.0	0.0	Х	X	Х	х		X	Х		x	х	x	x		<u> </u>		with any specific LOU.
S-8	n/a		RSAS8-10	10	X	X	X	X		X	X		Hold	X	X					
S-8	n/a		RSAS8-20	20	X	X	X	X		X	X		Hold	X	X	1			1	1
S-8	n/a		RSAS8-30	30	Х	Х	Х	Х		Х	Х		Hold	Х	Х					
S-8	n/a		RSAS8-40	40	Х	Х	Х	Х		Х	Х		Х	Х	Х					1
- NI	umber of Borings:	33																1		

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Rationale
Leach Plant Area Transfer Lines), LOU 47
OU 48 (Leach Plant Sewer System), LOU 59 (Storm
J.S. Vanadium Site). Located at an accesible location at low spot of LOUs 47,48 and 51 and
arby LOU 59 pipeline for possible releases.
nd Mn-1 and Associated Piping), LOU 59 (Storm Sewer
m). Located adjacent to all three LOU pipelines at a reasonable release location from edge of
mer Satellite Accumulation Point for Unit-6),
O (Acid Drain System). Located at a close but accessible location to evaluate releases from
50 piping at worst case location for releases at a junction.
vn or potential chemical classes associated with LOU
torm Sewer System), and LOU 61 (Old Sodium Chlorate
nent). Random boring located adjacent to LOU 59 piping near a logical release point a (manhole)
area coverage.
CB Transformer Spill), and LOU 61 (Old
and Unit-5 Basement). Located in PCB transformer Spill area at visible spill location and
coverage.
-
odium Perchlorate Platinum By-Product Filter), LOU 59
Id Sodium Chlorate Plant Decommisioning and Unit-5
djacent to containment in pavement crack within LOU 33 and nearby LOUs 59 and 61 for area
3 Transformer Spill) and LOU 61 (Old Sodium Chlorate
ement). Located at an accessible exterior location adjacent to LOUs 40 and 61 (as close as
ease points.
to LOUL 44 (Unit & Decompost) and
te LOU 44 (Unit-6 Basement) and
al historical chemical use. Located as close as possible outside to LOU 44 near potential e.
mer Sodium Perchlorate Platinum By-Product Filter), LOU Sewer System), and LOU 61 (Old Sodium Chlorate Plant
). Located in between LOUs 44,33 and 61 to evaluate all three LOUs and adjacent to LOU 59 to
to evaluate Site-wide conditions and is not associated

Oright Supple Supple Supple Supple Note Note<	-																				
Synthetic Preceivate Leaching Procedure (SPLP) Samples ": Solution of the sufficience o	Grid Location	LOU Number	Boring		Depths ^{1.}		(EPA	(EPA	DRO/ORO	(EPA	(EPA		Cyanide	(EPA	(EPA				EPA/540/R-	technical	
N4 R144 R348 R348 <	B	Borings are orgai	nized by g	rid locatior	n as shown	on <u>Plate A</u> - S	Starting p	oint is o	n the nort	nwestern	most gri	id in <u>Area 3 (N</u>	I-7) and endir	ng with <u>t</u>	he southe	eastern mo	st grid in	Area 3 (S-8).			
N=0 (1)	Synthetic Precip	pitate Leaching Pro	ocedure (SI	PLP) Sample	s ¹¹ :																
N8 21.24.40 RSAN8 RSAN8 <t< td=""><td>N-8</td><td>21, 24, 46</td><td>RSAN8</td><td>RSAN8-10</td><td>10</td><td>x</td><td>х</td><td>х</td><td>х</td><td></td><td>х</td><td>х</td><td></td><td></td><td>x</td><td>x</td><td></td><td></td><td></td><td>x</td><td></td></t<>	N-8	21, 24, 46	RSAN8	RSAN8-10	10	x	х	х	х		х	х			x	x				x	
O-7 Z4, 46 SA2 SA2 SA2 SA2 N X	N-8	21, 24, 46	RSAN8	RSAN8-DD		х	х	х	х		х	x			х	х				х	between Qal & MCfg1 is approximately 32 fe
O-7 24,46 SA52 SA52-DD DD ⁺ eight (ft) X	0-7	24, 46	SA52	SA52-10	10	x	x	х	x		x	x			x	x				x	
Cl-3 A70 KSAU8 KSAU8 I	0-7	24, 46	SA52	SA52-DD		х	х	х	х		x	х			х	х				x	between Qal & MCfg1 is approximately 48 fe
R-8 33, 44, 61, 59 SA34 SA34-D0 DD* = depth (t) X <td>Q-8</td> <td></td> <td>RSAQ8</td> <td>RSAQ8-10</td> <td>10</td> <td>х</td> <td>х</td> <td>х</td> <td>х</td> <td></td> <td>x</td> <td>х</td> <td></td> <td></td> <td>х</td> <td>x</td> <td></td> <td></td> <td></td> <td>x</td> <td></td>	Q-8		RSAQ8	RSAQ8-10	10	х	х	х	х		x	х			х	x				x	
R-8 33, 44, 61, 59 SA34 SA34-10 10 X	Q-8		RSAQ8	RSAQ8-DD	DD* = depth (ft)	x	х	х	х		x	x			х	х				x	between Qal & MCfg1 is approximately 37 fe
K-8 33, 44, 61, 59 SA34 SA34 SA34 SA34 X <th< td=""><td>R-8</td><td>33, 44, 61, 59</td><td>SA34</td><td>SA34-10</td><td>10</td><td>x</td><td>х</td><td>х</td><td>x</td><td></td><td>x</td><td>x</td><td></td><td></td><td>x</td><td>x</td><td></td><td></td><td></td><td>x</td><td>Sodium Perchlorate Platinum By-Product Fil</td></th<>	R-8	33, 44, 61, 59	SA34	SA34-10	10	x	х	х	x		x	x			x	x				x	Sodium Perchlorate Platinum By-Product Fil
QA/QC Samples: Image: Constraint of the system	R-8	33, 44, 61, 59	SA34	SA34-DD		х	х	х	х		x	х			х	х				х	
Field Duplicates (10%)18181811118181279184140Field Blanks11111111111110Equipment Rinsate Blanks66666666666100Trip Blank Samples0006600000000Matrix Spike (5%)999619914592100Matrix Spike Duplicate (5%)999619914592100	Nu	umber of Samples:				173	173	173	103	10	173	173	15	66	83	173	33	5	33	8	
Field Blanks 1 <t< td=""><td colspan="4"></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>																					
Equipment Rinsate Blanks 6 6 6 6 6 6 6 6 6 6 1 0 0 Trip Blank Samples 0 0 0 0 6 6 0							18	11	-	18	18	2		-	1	-			-	4	
Trip Blank Samples 0 0 0 0 6 6 0							1	1		1	1	1				<u> </u>			-	4	
Matrix Spike (5%) 9 9 9 6 1 9 9 1 4 5 9 2 1 0 0 Matrix Spike Duplicate (5%) 9 9 9 6 1 9 9 1 4 5 9 2 1 0 0				-	-	-	-	-	-		-	-	-	-	-		-	-	1		
Matrix Spike Duplicate (5%) 9 9 9 6 1 9 9 1 4 5 9 2 1 0 0				-	-	-	-	-	-		1	-	-	-	-	-	-		1		
Total Sample Count: 216 216 216 133 26 222 216 88 109 216 48 10 38 8				-	-	-	-	1	-	-	1	4	-					-	1		
					216	216	216	133	26	222	216		88	109	216	48	10	38	8]	

Notes:

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

Х Sample will be collected and analyzed.

No sample collected under Phase B sampling program.

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

TPH-DRO/ORO Total petroleum hydrocarbons - Diesel-Range Organics/Oil-Range Organics.

The 0.5 ft bgs sample will be collected from the 0.0 to 0.5 ft bgs interval, unless the area is paved. If area is paved, samples will be collected at 0.5 feet below or from a representative depth beneath the pavement. Alternately, if an unpaved area is within a reasonable distance, the sample will be moved to the unpaved area. 2

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

3. Consists of wet chemistry parameters (including pH) listed on Table 1 of the Phase B Source Area Work Plan.

4 Organochlorine Pesticides (includes analysis for hexachlorobenzene).

5. Semi-volatile Organic Compounds

Radionuclides consists of alpha spec reporting for isotopic thorium and isotopic uranium, and Radium-226, plus Radium-228 by beta counting (per NDEP). 6

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. 7

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

Soil samples for asbestos analyses will be collected from a depth of 0 to 2-inches bgs. 9.

Geotechnical Tests consist of: moisture content (ASTM D-2216), grain size analysis (ASTM D-422 and C117-04), Soil Dry Bulk Density (ASTM D-2937), Grain Density (ASTM D-854, Soil-Water Filled Porosity (ASTM D-2216); Vertical Hydraulic Conductivity (ASTM D-5084/USEPA 9100). 10. 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. 11

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Rationale corner of LOU 21 (Pond Mn-1 and Associated Piping) to evaluate leaching potential of Site-related analytes pe: Gravelly Sand. soil type is different than at 10 ft bgs; no sample will be collected within the capillary fringe. Contact feet bgs. Groundwater is expected to occur at approximately 33 feet bgs. Expected soil type: Calichified rtion of LOU 46 (Old Main Cooling Towers and Recirculation Lines) and LOU 24 (Mn Tailings Pile Area) to analytes from Alluvium (Qal) soils. Expected soil type: Gravelly Sand. soil type is different than at 10 ft bgs; no sample will be collected within the capillary fringe. Contact B feet bgs. Groundwater is expected to occur at approximately 53 feet bgs. Expected soil type: Calichified es of LOU 47 (Leach Plant Mn Ore Pile Area) and Area 70 (Former U.S. Vanadium Site) to evaluate Expected soil type: Sand. soil type is different than at 10 ft bgs; no sample will be collected within the capillary fringe. Contact feet bgs. Groundwater is expected to occur at approximately 44 feet bgs. Expected soil type: Calichified 61 (Old Sodium Plant Decomissioning and Unit-5 Basement), LOU 44 (Unit-6 Basement), LOU 33 (Former Filter), LOU 59 (Storm Sewer System), and LOU 60 (Acid Drain System) to evaluate leaching potential of Sand. soil type is different than at 10 ft bgs; no sample will be collected within the capillary fringe. Contact feet bgs. Groundwater is expected to occur at approximately 40 feet bgs. Expected soil type: Sand.