



STATE OF NEVADA  
Department of Conservation & Natural Resources  
DIVISION OF ENVIRONMENTAL PROTECTION

Jim Gibbons, Governor

Allen Biaggi, Director

Leo M. Drozdoff, P.E., Administrator

December 1, 2010

Matt Paque  
Tronox LLC  
PO BOX 268859  
Oklahoma City, OK 73134

Re: **Tronox LLC (TRX)**  
**NDEP Facility ID #H-000539**  
Nevada Division of Environmental Protection (NDEP) Revised Response to:  
*Revised Excavation Plan for Phase B Soil Remediation of RZ-C, Addendum to the  
Removal Action Work Plan, Tronox LLC, Henderson, Nevada*  
Dated: September 1, 2010

*Revised RZ-C Figures 2a through 2c*  
Dated: October 12, 2010

*TRX Email RE: Requested RZ-C Information*  
Dated: October 15, 2010

And

*TRX Email: RE: Requested RZ-C Information*  
Dated: October 21, 2010

Dear Mr. Paque,

NDEP has reviewed the above-referenced documents and provides the following revised response based on review of the soil flushing remediation schedule, the Capture Zone Analysis reporting schedule, *Interim Approach for Unsaturated Zone Soil Remediation and Revised Work Plan to Evaluate In-Situ Flushing of Perchlorate-Impacted Soil* (dated October 6, 2010), *Revised Work Plan to Evaluate In Situ Soil Flushing of Perchlorate Impacted Soil – Response to Comments* (dated November 12, 2010), and Northgate Environmental Management (NGEM) letter RE: Request for Schedule Extension: Capture Zone Evaluation Report (dated November 30, 2010). Attachment A contains the revised conditions for approval from NDEP's October 25, 2010 RZ-C Excavation Plan response letter. Attachment B contains the revised Table for the determination of the limits for the excavation polygons in RZ-C. Attachment C contains the Figures that have been revised. The revisions to the conditional approval of the RZ-C Excavation Plan are based on the following rationale:

1. The results from the bench scale soil flushing tests indicate that other contaminants (metals and organics such as Beta-BHC) will leach from the soil in concentrations greater than the BCLs. Based on these results, full scale operation of soil flushing may adversely



impact the current groundwater treatment system. Determination of the potential impact to the current groundwater treatment system by full scale soil flushing cannot be determined before the December 31, 2010 deadline for the demonstration of source control as required in the December 14, 2009 Finding of Alleged Violation and Order.

2. The above-referenced Soil Flushing Work Plan does not include a proposal for the full scale remediation system; therefore, TRX cannot meet the schedule as reported in the November 5, 2010 update of the Remediation Schedule for the installation of the full-scale system by the December 31, 2010 deadline.
3. According to the above-referenced NGEM November 30, 2010 letter, TRX cannot meet the interim deadline for the submittal of the Capture Zone Report for the demonstration of capture at the current On-Site and Athens Road well fields. This report is necessary for TRX to demonstrate soil source control for leachable contaminants proposed to remain in place. The proposed revised submittal date of December 17, 2010 does not provide NDEP with enough time to completely review the Capture Zone Report that includes extensive modeling by the December 31, 2010 deadline.

Please contact the undersigned with any questions at [sharbour@ndep.nv.gov](mailto:sharbour@ndep.nv.gov) or 775-687-9332.

Sincerely,



Shannon Harbour, P.E.  
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Bureau of Corrective Actions  
Special Projects Branch  
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SH:sh

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Victoria Tyson, Tyson Contracting  
George Crouse, Syngenta Crop Protection, Inc.  
Nick Pogoncheff, PES Environmental  
Lee Erickson, Stauffer Management Company  
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Lee Erickson, Stauffer Management Company

## Attachment A

1. General comment: as TRX has already issued a response-to-comments letter to NDEP's October 25<sup>th</sup>, 2010 RZ-C Excavation Plan response letter, the following comments include only those comments that have been modified from the October 25, 2010 response letter. Additionally, NDEP has underlined any modifications to the original October 25, 2010 comment.
2. General comment, to avoid confusion due to multiple issuances of comments, NDEP lists each excavation area with the contaminated sample location(s) that is/are driving excavation for a particular remediation polygon along with the sampling locations that determine the limits of the remediation polygon. The following protocol should be used unless conceptual site model (CSM) rationale is used to modify.
  - a. The basis for deriving the excavation polygon lateral and vertical extents is summarized below; however, these comments may not be comprehensive and TRX should note that the lack of an NDEP comment on specific instances where this methodology was not followed does not relieve TRX's obligation under the Order to complete the excavation in accordance with these criteria:
    - i. The depth of the excavation polygon was determined by the depth to a non-contaminated (i.e. less than BCLs or background) sample in the contaminated sampling location. The depth of excavation polygons that are driven only by perchlorate will be limited to 10 fbg below final post-excavation grade.
    - ii. The lateral limits of excavation for the Voronoi diagrams/Thiessen polygons were generated by determining the half-way point between defining contaminated sampling location(s) and adjacent non-contaminated sampling locations or adjacent contaminated sampling locations with a different depth of excavation determination.
    - iii. Upon NDEP approval, conceptual site model (CSM) rationale may be used to constrain the limits of excavation; however, TRX must present the justification and receive approval for the constraint prior to implementation.
3. Table 1: NDEP provides the following comments:
  - a. The following borings should have the analytes listed added to/removed from the "Chemicals Group Driving Excavation" column:
    - i. RZ-C-06: add hexachlorobenzene (HCB), dioxins/furans TEQ
    - ii. RZ-C-34: do not remove perchlorate
    - iii. RZ-C-46A: remove manganese and cobalt
  - b. RZ-C-34: perchlorate is a chemical driving excavation and should remain in Table 1.
  - c. RZ-C-46: this excavation polygon should be divided into two separate polygons as shown in Attachment B. Additionally, the chemical drivers for the subdivided polygons are as follows:
    - i. RZ-C-46: arsenic, cobalt, manganese
    - ii. RZ-C-40A: arsenic
4. Figures: the limits for the remediation polygons have been revised per these comments found in Attachment A, the Attachment B table, and the Attachment C Figures.

**Attachment B**

The following table is based on Figure 1: RZ-C Excavation Areas and Nature and Extent of Contamination (dated September 24, 2010). Note: yellow highlights indicate that Excavation Figures should be revised as indicated in the Attachment B table and Attachment C figures, green highlights indicate changes made in this revised response, and blue highlights indicate that the depth of the excavation area has not been determined. Please note that TRX should not submit another Figure to NDEP until such time as all of the pending analytical data has been received unless otherwise directed by NDEP.

Excavation Area	Contaminated Sampling Location	Adjacent Sampling Locations	Depth fbg	Exceptions
RZ-C-01	SA56	SSAN2-01 SA35 SSAO2-01 SSAN2-02	2	Western cutline: western property boundary
RZ-C-02A	SA09	SSAN3-02 SA35 RSAO2 SA57 SA176 SSAN2-01	3	
RZ-C-02B	SA57	SA09 SA48 RSAO2 SA176	5	
RZ-C-02C	SA09	SSAN3-01 SA35 SSAN3-02	0.33	Southern cutlines: RZ-C-02B limits
RZ-C-03	SA48	SA166 SA57 SSAO3-01 SSAO3-02 SA207	1	
RZ-C-04	SSAO3-01	SSA166 SA48 SSAP3-01 SSAP3-02	2	
RZ-C-05A	SSAO3-02	SA166 SA48 SA181 SA180 SA207 SSAO3-05	5	

Excavation Area	Contaminated Sampling Location	Adjacent Sampling Locations	Depth fbgs	Exceptions
RZ-C-05B	SA207	SSAP3-01 SSAO3-03 SA181 SSAO3-02 SA48	12	
RZ-C-06	SSAO3-03	SA181 SA207 SSAP3-01	9	Southern cutline: Parcel F boundary
RZ-C-07A	SA182	SSAO4-01 SSAO4-02 SA181	5	Southern cutline: Parcel F boundary
RZ-C-07B	RSAO3	SSAO3-04 SSAO4-06 SSAO3-05 SA182 SA47	0.5	
RZ-C-08	SSAO4-02	SSAO4-05 SA182 RSAO4 SA54	3	
RZ-C-09A	SA50	SA54 SSAO5-01 SSAO5-02 SA185	0.33	Southern cutline: modified by LOU8
RZ-C-09B	SSAO4-03	SA50 SA54 SSAO4-02 SSAO5-05	3	
RZ-C-10	SA106	SA11	10	**remediation alternatives for perchlorate have been rejected for the 0-10 fbgs range, excavation should be completed Northern, southern, and eastern cutlines are the pond boundaries
RZ-C-10A	SA11	SA106	0.33	Northern, southern, and western cutlines are the pond boundaries
RZ-C-10B	SSAO5-02	SSAO5-06 SA53 SSAO5-07 SA50	5	Southern cutline: LOU8 boundary

Excavation Area	Contaminated Sampling Location	Adjacent Sampling Locations	Depth fbgs	Exceptions
RZ-C-11	SSAO5-05	RSAO5 SSAO4-03 SSAO4-04 SSAO5-03	10	
RZ-C-12	SSAO4-04	RSAO4 SSAO5-03 SSAP5-03 SSAO5-05 SSAP4-02 SSAO5-03	11	
RZ-C-13	SSAO5-03	SA187 SSAO5-05 SSAO4-04 SSAP5-03	2	
RZ-C-13A	SSAP5-03	SSAO5-03 SA117 RSAP5 SSAO4-04 SSAP4-02	3	Southeastern corner cutline: property boundary with ChemStar
RZ-C-14	SA187	SA117 SA188 SA45 SSAO5-05 SSAO5-03	1.5	
RZ-C-15	SA188	SA172 SA186 SA45 SA187 SA117	2	

Excavation Area	Contaminated Sampling Location	Adjacent Sampling Locations	Depth fbgs	Exceptions
RZ-C-16	SSAN6-06	SSAN6-04 SSAO6-01 SSAN5-04 SSAN6-08 SSAN6-09	1	Southwestern corner cutline: LOU9 boundaries
RZ-C-16A	SSAN6-08	SSAN6-06 SSAO6-01 RSA06 SA151 SA150	≥2	
RZ-C-17	SSAO6-01	SA53 SSAN6-05 SA43 SSAO5-02 SA150	0.33	
	RSA06	SSAN6-05 SSAN6-05 SSA07-01 SSA07-02		
RZ-C-18	SA114	SA109 SSAO6-04	1	Northern and eastern cutlines: LOU boundaries
	SA102	SSAO6-04		
RZ-C-19	SA43	SSA06-01 SA39 SSAO6-05 SA44 SA42	2	Northwestern corner cutline: LOU7 boundary
RZ-C-20	SSAO6-02	SSAO6-03 SA39 SA43	3	Northern cutline: LOU14 boundary
RZ-C-21	SA51		4	Cutlines: LOU14 boundaries
RZ-C-22	SSAO6-05	SA43 SA40 SSAP6-02 SA130	4	
RZ-C-22A	SSAO6-03	SSAO7-01 SSAO6-02 SA39 RSAP6 SA178 SSAO7-09	0.66	Eastern cutline: eastern property boundary



Excavation Area	Contaminated Sampling Location	Adjacent Sampling Locations	Depth fbgs	Exceptions
RZ-C-22B	SSA07-09	SSA06-03 SSA07-03 SA52 SA178	10	
RZ-C-23	SA39	RSAP6 SA130 SSA06-02 SSA06-05 SA43 SA178	6	
RZ-C-24	SA41	SA40 SA42 SA172 SA44 SSAP5-02	1.5	
RZ-C-25	SA42	SA43 SA44 SA40 SA41	4	
RZ-C-26	SA40	SA42 SA41 SA130 SA39 SSAP5-02	1	Southern outline: property boundary with ChemStar
RZ-C-27	SA130	SA39 SSA06-03 SA178 SSAP6-03 SSAP2-03	10	
	RSAP6	SSAP6-02 SSA06-05 SA39 SSAP6-05		
RZ-C-28	SA65	SSAN5-03 SSAN4-01 SSAM4-02 SSAM5-02	10	**remediation alternatives for perchlorate have been rejected for the 0-10 fbgs range, excavation should be completed
RZ-C-28A	SSAM5-02	RSAM5 SA65 SA15	4	**remediation alternatives for perchlorate have been rejected for the 0-10 fbgs range, excavation should be completed

Excavation Area	Contaminated Sampling Location	Adjacent Sampling Locations	Depth fbgs	Exceptions
RZ-C-28B	SSAN5-02	SA15 SA58 SA196 SA94	4	
RZ-C-28C	SA15	SA65 SSAM5-02 SA58 SSAN5-03 RSAM4 SA13	10	**remediation alternatives for perchlorate have been rejected for the 0-10 fbgs range, excavation should be completed
RZ-C-28D	RSAM5	SA15 SSAM5-02 SSAM6-05 SA94	10	**remediation alternatives for perchlorate have been rejected for the 0-10 fbgs range, excavation should be completed Northeastern corner boundary: BT Tank area boundaries
RZ-C-29	SA104	RSAM5 SA94 SA105 SSAM6-01 SSAM6-06	7	**remediation alternatives for perchlorate have been rejected for the 0-10 fbgs range, excavation should be completed Northern boundary: BT Tank area boundaries
RZ-C-30	SSAM6-02	SA104 SSAN6-07 SA175	10	**remediation alternatives for perchlorate have been rejected for the 0-10 fbgs range, excavation should be completed Northern cutline: RZ-E boundary Southern cutline (partial): LOU16&17 boundaries
RZ-C-31	SSAM6-01	SA104 SA105 SA60 SSAN6-07	10	**remediation alternatives for perchlorate have been rejected for the 0-10 fbgs range, excavation should be completed
	SSAM6-03	SSAN6-07 SSAM6-04 SSAM6-02 SA175		
RZ-C-31A	SA198		10	Cutlines: LOU16&17 boundaries

Excavation Area Name	Contaminated Sampling Location	Adjacent Sampling Locations	Depth fbgs	Exceptions
RZ-C-32	SSAM6-04	SSAM6-03 SSAN6-07 SSAN6-01 SA49 SSAM7-03	2	**remediation alternatives for perchlorate have been rejected for the 0-10 fbgs range, excavation should be completed
RZ-C-33	SA63		1	Cutlines: LOU18 boundaries
RZ-C-34	SA60	SA105 SA150 SSAN6-07 SSAM6-01	3	
	SSAN6-02	RSAN6 SSAN6-01 SSAN6-07		
RZ-C-35	SSAN6-07	SSAM6-03 SSAM6-01 SA60 SSAN6-02 SSAN6-01 SSAM6-04	6	Arsenic drives excavation.
RZ-C-36	SSAN6-01	SSAN6-07 RSAN6 RSAN7 SA49 SSAM6-04	3	
RZ-C-37	SA49	SSAM6-04 SSAN6-01 SSAM7-03 RSAN7	1.5	Eastern cutline: RZ-E boundary
RZ-C-38	SSAM7-03	SSAM6-04 SA49 SSAM7-04	4	**remediation alternatives for perchlorate have been rejected for the 0-10 fbgs range, excavation should be completed Northwestern boundary: LOU18 boundaries North and eastern boundaries: RZ-E boundaries
RZ-C-39	SA58	SSAN5-01 SA196 SSAN5-02 SA15 RSAN5	0.33	

Excavation Area Name	Contaminated Sampling Location	Adjacent Sampling Locations	Depth fbgs	Exceptions
RZ-C-39A	SSAN5-03	SA65 SA15 SA87 RSAN5	≥1.17	NDEP has provided an additional Figures (C-7 and C-8) in Attachment C for the scenarios of the asbestos results at SA113 being greater than or less than the comparison level.
RZ-C-40	SA196	SA94 SSAN5-02 SSA58 SSAN5-01 SSAN6-04 SA150 SA105 SSAN6-09	1.5	
RZ-C-40A	SA94	SA105 SA104 SSAN5-02 RSAM5 SA196	≥11	
RZ-C-40B	SA105	SA94 SA196 SA104 SSAM6-01 SA60 SA150	0.5	
RZ-C-41	SA150	SA196 SSAN6-09 SSAN6-03 SA60 SA105	1	
RZ-C-42	RSAN6	SSAN6-02 SSAN6-03 SA151 RSAN7	1	
RZ-C-43				Polygon eliminated: error in reporting, no exceedances of comparison levels at SA151
RZ-C-44	SA137	SSAN7-06 SA141 SSAN7-03 SSAO7-02 RSAO7	10	Eastern cutlines: former manganese tailings pile (RZ-C-45)

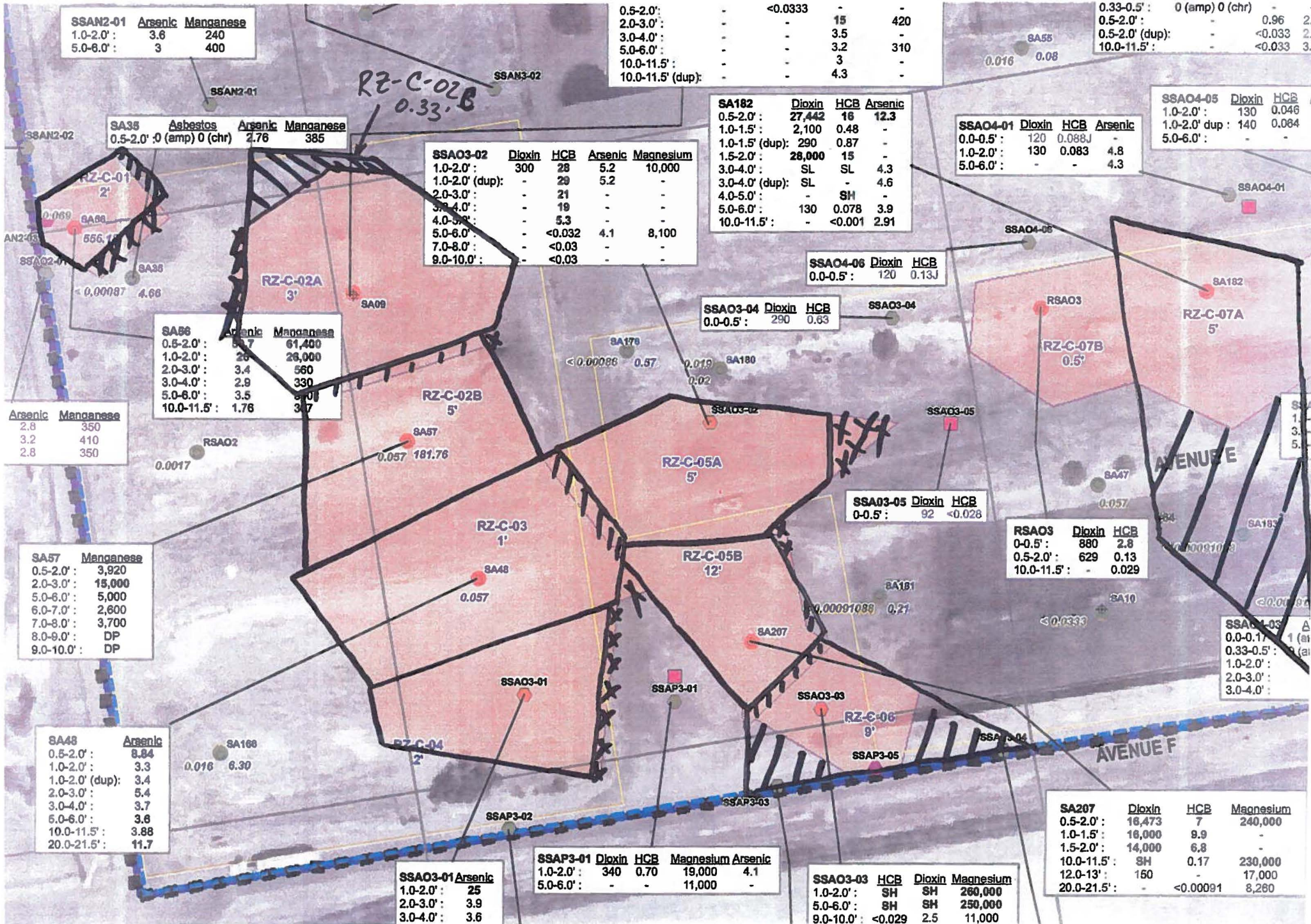
Excavation Area Name	Contaminated Sampling Location	Adjacent Sampling Locations	Depth fbgs	Exceptions
RZ-C-45			?	Will be subdivided as necessary based on additional pre-confirmation sampling.
RZ-C-45A	SSAO8-02	SSAP7-01	0.33	Eastern cutline: eastern property boundary Northern cutline: former manganese tailings area boundary (RZ-C-45) Southern cutline: current operations area boundary
RZ-C-46	SA139	SSAN8-05 SSAN8-04 SSAN8-06	4	Southern cutline: former manganese tailings area boundary (RZ-C-45)
RZ-C-46A	SSAN8-05	SA160 SA139 RSAN8 SSAN8-06	≥0.5	
RZ-C-47	SSAN8-07 SSAN8-06 SSAN8-01	SSAN8-05 RSAN8	2	Eastern cutline: eastern property boundary

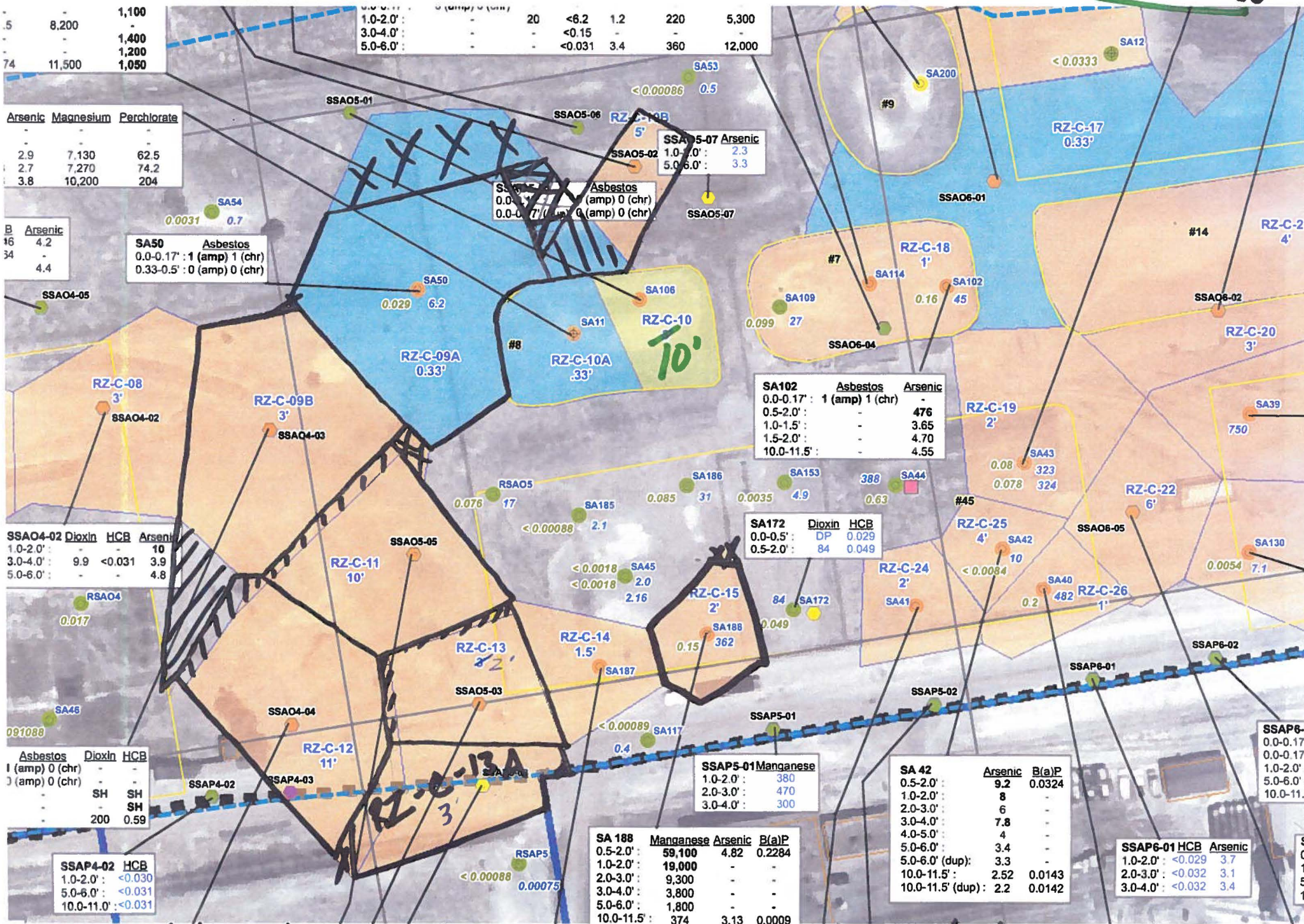
### Attachment C

The following Figures are excerpts from Figure 1: RZ-C Excavation Areas and Nature and Extent of Contamination (dated October 12, 2010). NDEP has provided approximate revisions to excavation limits to illustrate the comments made in the Attachment B Table as well as based on comment 2 of Attachment A.

Please note that Figures C-7 and C-8 are included for the revisions that will be necessary once the asbestos results are received for SA113. Figure C-7 is for the scenario where the asbestos results are less than the comparison levels resulting in the reduction of RZ-C-39A. Figure C-8 are for the scenario where the asbestos results are greater than or equal to the comparison levels resulting in the increase of RZ-C-39A.

Additionally in this revised response, only Figures C-2, C-4, and C-5 have been revised. The revised depths are marked in green.





5	8,200	1,100
	1,400	
	1,200	
74	11,500	1,050

Arsenic	Magnesium	Perchlorate
2.9	7,130	62.5
2.7	7,270	74.2
3.8	10,200	204

B	Arsenic
16	4.2
34	4.4

SA50	Asbestos
0.0-0.17'	1 (amp) 1 (chr)
0.33-0.5'	0 (amp) 0 (chr)

SSAO4-02	Dioxin	HCB	Arsenic
1.0-2.0'	-	-	10
3.0-4.0'	9.9	<0.031	3.9
5.0-6.0'	-	-	4.8

Asbestos	Dioxin	HCB
1 (amp) 0 (chr)	-	-
3 (amp) 0 (chr)	-	-
	SH	SH
	SH	SH
	200	0.59

SSAP4-02	HCB
1.0-2.0'	<0.030
5.0-6.0'	<0.031
10.0-11.0'	<0.031

Depth	Asbestos (amp)	Asbestos (chr)	Other
1.0-2.0'	20	<6.2	1.2
3.0-4.0'	-	<0.15	-
5.0-6.0'	-	<0.031	3.4

SA 188	Manganese	Arsenic	B(a)P
0.5-2.0'	59,100	4.82	0.2284
1.0-2.0'	19,000	-	-
2.0-3.0'	9,300	-	-
3.0-4.0'	3,800	-	-
5.0-6.0'	1,800	-	-
10.0-11.5'	374	3.13	0.0009

SSAP5-01	Manganese
1.0-2.0'	380
2.0-3.0'	470
3.0-4.0'	300

SA 42	Arsenic	B(a)P
0.5-2.0'	9.2	0.0324
1.0-2.0'	8	-
2.0-3.0'	6	-
3.0-4.0'	7.8	-
4.0-5.0'	4	-
5.0-6.0'	3.4	-
5.0-6.0' (dup)	3.3	-
10.0-11.5'	2.52	0.0143
10.0-11.5' (dup)	2.2	0.0142

SSAP6-01	HCB	Arsenic
1.0-2.0'	<0.029	3.7
2.0-3.0'	<0.032	3.1
3.0-4.0'	<0.032	3.4

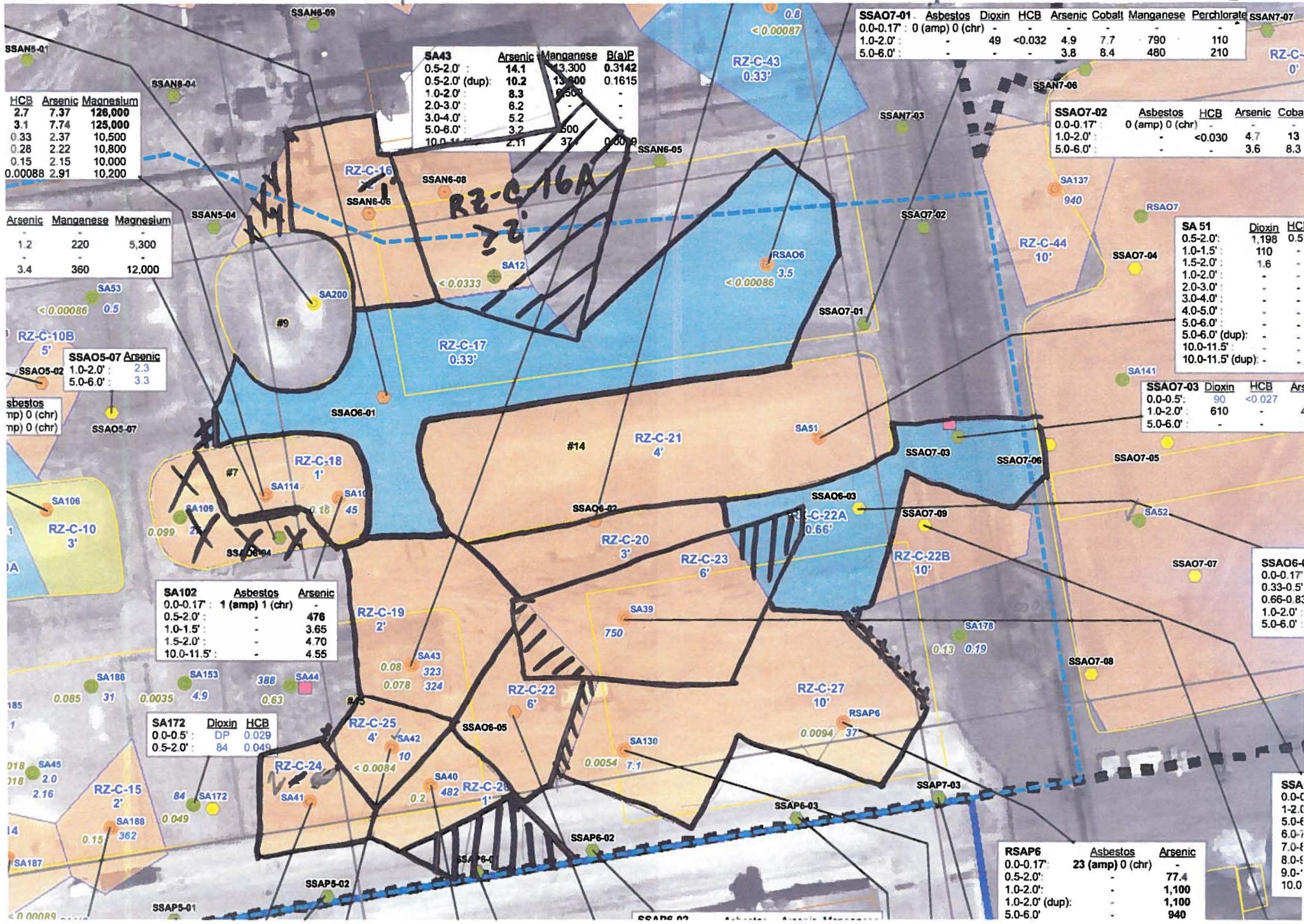
/// additional excavation area

xxx eliminated excavation area



steer plan

C-3



HCB	Arsenic	Magnesium
2.7	7.37	126,000
3.1	7.74	125,000
0.33	2.37	10,500
0.28	2.22	10,800
0.15	2.15	10,000
0.00088	2.91	10,200

SA43	Arsenic	Manganese	B(a)P
0.5-2.0'	14.1	13,300	0.3142
0.5-2.0' (dup):	10.2	13,900	0.1615
1.0-2.0'	8.3	6,500	-
2.0-3.0'	6.2	-	-
3.0-4.0'	5.2	-	-
5.0-6.0'	3.7	500	-
10.0-11.5' (dup):	2.11	37	0.0019

SSAO7-01	Asbestos	Dioxin	HCB	Arsenic	Cobalt	Manganese	Perchlorate	SSAN7-07
0.0-0.17'	0 (amp)	0 (chr)	-	-	-	-	-	-
1.0-2.0'	-	49	<0.032	4.9	7.7	790	110	-
5.0-6.0'	-	-	-	3.8	8.4	480	210	-

Arsenic	Manganese	Magnesium
1.2	220	5,300
3.4	360	12,000

SSAO7-02	Asbestos	HCB	Arsenic	Cobalt
0.0-0.17'	0 (amp)	0 (chr)	-	-
1.0-2.0'	-	<0.030	4.7	13
5.0-6.0'	-	-	3.6	8.3

SA 51	Dioxin	HCB
0.5-2.0'	1,198	0.51
1.0-1.5'	110	-
1.5-2.0'	1.6	-
1.0-2.0'	-	-
2.0-3.0'	-	-
3.0-4.0'	-	-
4.0-5.0'	-	-
5.0-6.0'	-	-
5.0-6.0' (dup):	-	-
10.0-11.5'	-	-
10.0-11.5' (dup):	-	-

SSAO7-03	Dioxin	HCB	Arsenic
0.0-0.5'	90	<0.027	-
1.0-2.0'	610	-	4
5.0-6.0'	-	-	-

SA102	Asbestos	Arsenic
0.0-0.17'	1 (amp)	1 (chr)
0.5-2.0'	-	476
1.0-1.5'	-	3.65
1.5-2.0'	-	4.70
10.0-11.5'	-	4.55

SA172	Dioxin	HCB
0.0-0.5'	DP	0.029
0.5-2.0'	84	0.049

RSAP6	Asbestos	Arsenic
0.0-0.17'	23 (amp)	0 (chr)
0.5-2.0'	-	77.4
1.0-2.0'	-	1,100
1.0-2.0' (dup):	-	1,100
5.0-6.0'	-	940

SSAO6-0	Dioxin	HCB	Arsenic
0.0-0.17'	-	-	-
0.33-0.5'	-	-	-
0.66-0.83'	-	-	-
1.0-2.0'	-	-	-
5.0-6.0'	-	-	-

6.0-7.0':	-	440
6.0-7.0' (dup):	-	520
8.0-9.0':	-	360
10.0-11.0':	-	120

6.0-7.0':	4,800
8.0-9.0':	5,000
10.0-11.5':	2,620

10.0-11.5':	-	0.012	2.5	12.2
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SSAN5-02	Asbestos	Dioxin	HCB	Perchlorate
0.0-0.17':	0 (amp) 0 (chr)	-	-	-
1.0-2.0':	-	SH	SH	340
3.0-4.0':	-	-	SH	-
4.0-5.0':	-	530	0.49	-
5.0-6.0':	-	-	-	160

Asbestos	HCB	Perchlorate
0.31	-	113
-	-	73
-	-	140
-	-	630
-	-	1,200
-	-	1,700
-	-	1,210
-	-	1,160

SA65	Perchlorate
0.5-2.0':	647
0.5-2.0' (dup):	850
4.0-5.0':	1,100
4.0-5.0' (dup):	1,500
6.0-7.0':	1,500
8.0-9.0':	2,600
10.0-11.5':	1,690
20.0-21.5':	984

SSAN4-01	Perchlorate
2.0-3.0':	14
4.0-5.0':	22
6.0-7.0':	5.2
8.0-9.0':	2.2
10.0-11.0':	9.9

SSAN5-03	Asbestos	Dioxin	HCB	Perchlorate
0.0-0.17':	22 (amp) 22 (chr)	-	-	-
0.33-0.5':	10 (amp) 24 (chr)	-	-	-
0.1-1.17':	11 (amp) 31 (chr)	-	-	-
1.5'-1.67':	DP	-	-	-
1.0-2.0':	-	-	-	0.4
5.0-6.0':	-	-	-	0.74

SA58	Asbestos	Dioxin	HCB
0.0-0.17':	0 (amp) 8 (chr)	-	-
0.33-0.5':	0 (amp) 0 (chr)	-	-
0.5-2.0':	-	1,432	0.62
1.0-1.5':	-	1,100	-
1.5-2.0':	-	500	-
3.0-4.0':	-	0.3	-

SSAN5-01	Asbestos	Dioxin
0.0-0.17':	0 (amp) 0 (chr)	-
1.0-2.0':	-	7.9

SA196	Dioxin	HCB
0.5-2.0':	6,952	5.8
1.0-1.5':	550	1.4
1.5-2.0':	25	0.096
10.0-11.5':	-	<0.0009

SSAN5-02	Asbestos	Dioxin	HCB	Arsenic	Perchlorate
0.0-0.17':	-	-	-	-	-
0.5-2.0':	-	11	0.69	1.79	1.44
10.0-11.5':	-	-	<0.00091	3.9	11.6

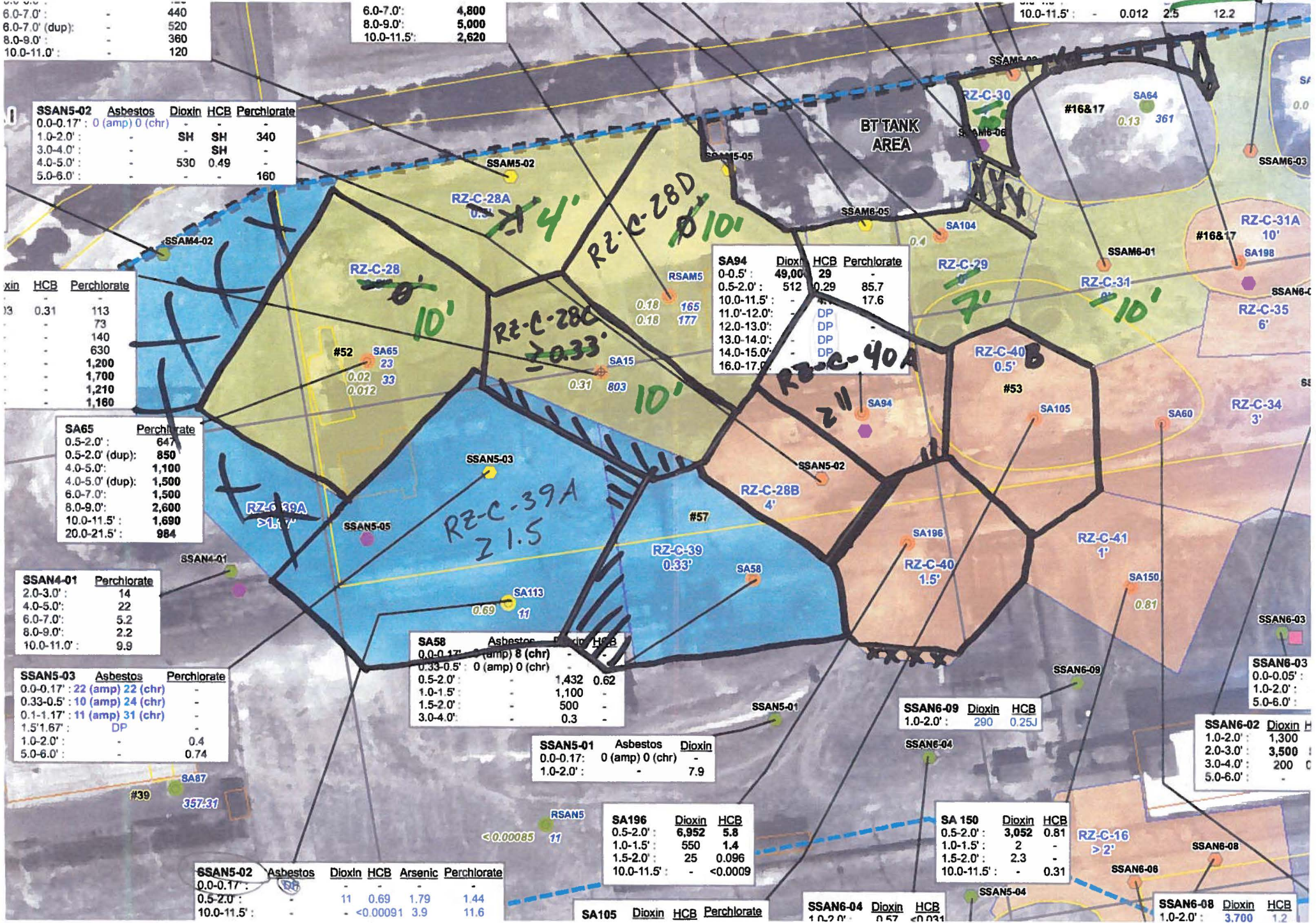
SA105	Dioxin	HCB	Perchlorate
1.0-2.0':	0.57	<0.031	-

SSAN6-04	Dioxin	HCB
1.0-2.0':	0.57	<0.031

SA 150	Dioxin	HCB
0.5-2.0':	3,052	0.81
1.0-1.5':	2	-
1.5-2.0':	2.3	-
10.0-11.5':	-	0.31

SSAN6-08	Dioxin	HCB
1.0-2.0':	3,700	1.2

SA94	Dioxin	HCB	Perchlorate
0-0.5':	49,000	29	-
0.5-2.0':	512	0.29	85.7
10.0-11.5':	-	-	17.6
11.0-12.0':	-	DP	-
12.0-13.0':	-	DP	-
13.0-14.0':	-	DP	-
14.0-15.0':	-	DP	-
16.0-17.0':	-	-	-



8.0-9.0' (dup): 2,300  
 10.0-11.0': 1,100

SA198	Dioxin	HCB	Arsenic	Perchlorate
0.0-0.5'	4,300	2.2	-	-
0.5-2.0'	964	0.43	7.51	18.8
1.0-2.0'	-	-	DP	-
2.0-3.0'	-	-	DP	-
3.0-4.0'	-	-	DP	-
10.0-11.5'	-	0.012	2.5	12.2

SSAM7-04	Dioxin	HCB	Arsenic
1.0-2.0'	170	0.09	3.5
5.0-6.0'	-	-	4.2

SSAM7-03	Dioxin	HCB	Arsenic	Perchlorate
1.0-2.0'	360	0.16	3.8	4,800
2.0-3.0'	-	-	-	4,500
3.0-4.0'	-	-	-	3,000
4.0-5.0'	-	-	-	710
5.0-6.0'	-	-	4.3	430
5.0-6.0' (dup):	-	-	3.9	-

SA 49	Dioxin	HCB	Perchlorate
0.5-2.0'	4,018	1.2	1,330
1.0-1.5'	3,900	1.9	707
1.0-1.5' (dup):	3,800	1.7	-
1.5-2.0'	23	0.76	509
1.5-2.0' (dup):	-	-	713
10.0-11.5'	-	0.0044	56.9

SSAN6-01	Dioxin	HCB	Perchlorate
1.0-2.0'	SH	SH	1,000
2.0-3.0'	SH	SH	480
3.0-4.0'	560	0.39	130
5.0-6.0'	-	-	38
5.0-6.0' (dup):	-	-	33

RSAN6	Asbestos	Arsenic
0.0-0.17':	0 (amp) 0 (chr)	-
0.5-2.0'	-	8.61
1.0-2.0'	-	4.6
2.0-3.0'	-	3.8
3.0-4.0'	-	3.4
5.0-6.0'	-	3.8
5.0-6.0' (dup):	-	5.1
10.0-11.5'	-	2.23
10.0-11.5' (dup):	-	2.09

SSAN7-03	Asbestos	Dioxin	HCB	Arsenic	Perchlorate
0.0-0.17':	0 (amp) 0 (chr)	-	-	-	-
0.0-0.5':	-	340	0.088J	-	-
1.0-2.0'	-	431	0.29	5.38	16.8
10.0-11.5'	-	-	<0.0003	2.66	11.8
25.0-26.5':	-	-	<0.00088	4.18	88.7

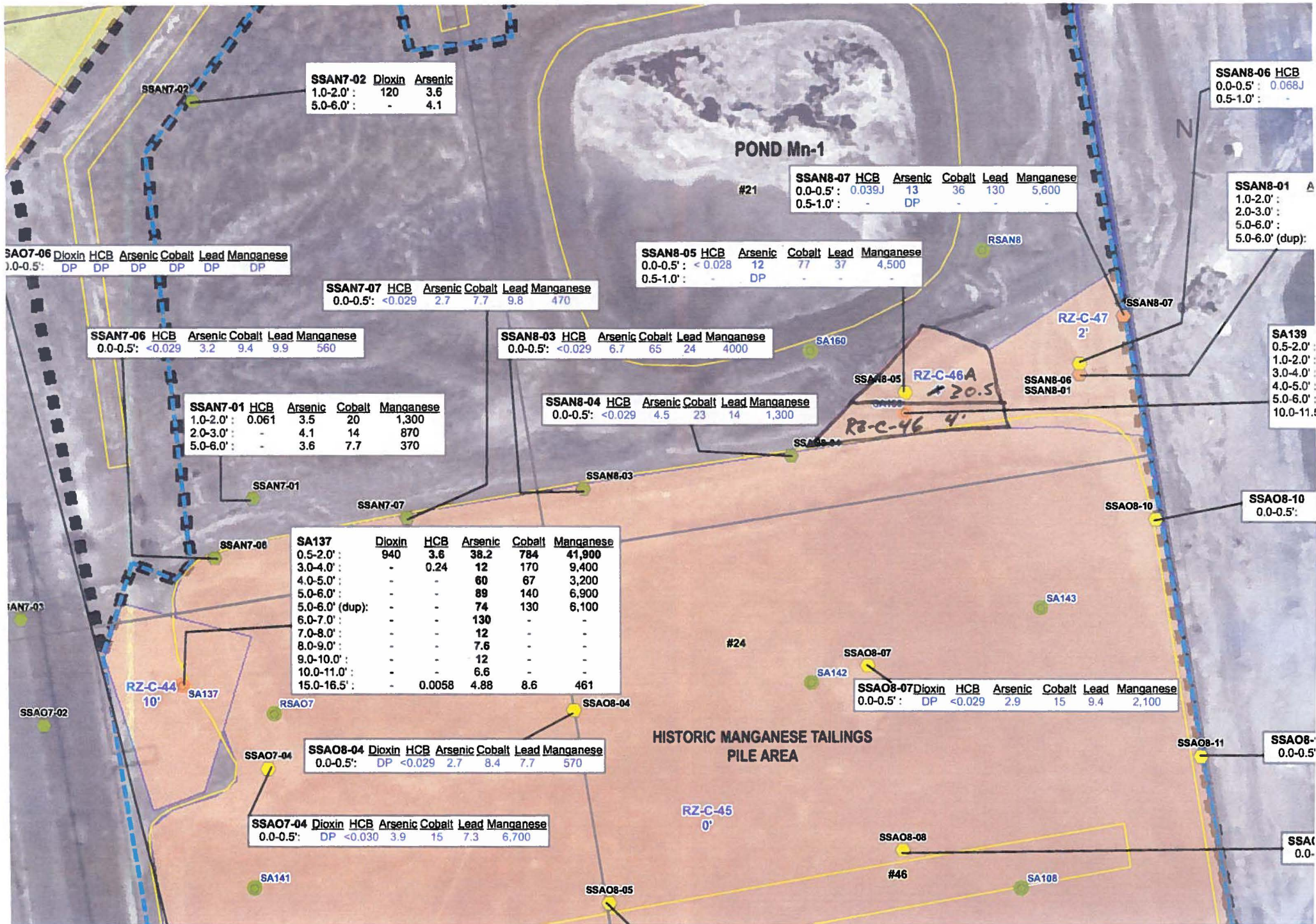
SSAN6-03	Dioxin	Arsenic
0.0-0.05'	85	-
1.0-2.0'	46	3.3
5.0-6.0'	-	2.6

SSAN6-02	Dioxin	HCB	Arsenic
1.0-2.0'	1,300	-	4.4
2.0-3.0'	3,500	SH	-
3.0-4.0'	200	0.16	-
5.0-6.0'	-	-	3.9

SA151	Asbestos	Arsenic
0.0-0.17':	0 (amp) 0 (chr)	-
0.0-0.5' (dup):	1 (amp) 0 (chr)	-
0.5-0.5'	0 (amp) 0 (chr)	-
0.5-2.0'	-	2.6

Dioxin	HCB
290	0.25J

SSAN7-03	Asbestos	HCB	Arsenic	Cobalt	Manganese
0.0-0.17':	0 (amp) 0 (chr)	-	-	-	-



**AREA I**

SSAM4-02	Perchlorate
2.0-3.0'	630
4.0-5.0'	230
6.0-7.0'	260
8.0-9.0'	210
10.0-11.0'	110

SSAN5-02	Asbestos	Dioxin	HCB	Perchlorate
0.0-0.17'	0 (amp) 0 (chr)	-	-	-
1.0-2.0'	-	SH	SH	340
3.0-4.0'	-	-	SH	-
4.0-5.0'	-	530	0.49	-
5.0-6.0'	-	-	-	160

SA15	Asbestos	Dioxin	HCB	Perchlorate
0.0-0.17'	2 (amp) 2 (chr)	-	-	-
0.5-2.0'	-	803	0.31	113
1.0-2.0'	-	-	-	73
3.0-4.0'	-	-	-	140
5.0-6.0'	-	-	-	630
7.0-8.0'	-	-	-	1,200
9.0-10.0'	-	-	-	1,700
10.0-11.5'	-	-	-	1,210
10.0-11.5' (dup):	-	-	-	1,160

SA94	Dioxin	HCB	Perchlorate
0-0.5'	49,000	29	-
0.5-2.0'	512	0.29	85.7
10.0-11.5'	-	4.1	17.6
11.0-12.0'	-	DP	-
12.0-13.0'	-	DP	-
13.0-14.0'	-	DP	-
14.0-15.0'	-	DP	-
16.0-17.0'	-	DP	-

SA65	Perchlorate
0.5-2.0'	647
0.5-2.0' (dup):	850
4.0-5.0'	1,100
4.0-5.0' (dup):	1,500
6.0-7.0'	1,500
8.0-9.0'	2,600
10.0-11.5'	1,690
20.0-21.5'	984

SSAN4-01	Perchlorate
2.0-3.0'	14
4.0-5.0'	22
6.0-7.0'	5.2
8.0-9.0'	2.2
10.0-11.0'	9.9

SSAN5-03	Asbestos	Perchlorate
0.0-0.17'	22 (amp) 22 (chr)	-
0.33-0.5'	10 (amp) 24 (chr)	-
0.1-1.17'	11 (amp) 31 (chr)	-
1.5-1.67'	DP	-
1.0-2.0'	-	0.4
5.0-6.0'	-	0.74

SA58	Asbestos	Dioxin	HCB
0.0-0.17'	0 (amp) 8 (chr)	-	-
0.33-0.5'	0 (amp) 0 (chr)	-	-
0.5-2.0'	-	1,432	0.62
1.0-1.5'	-	1,100	-
1.5-2.0'	-	500	-
3.0-4.0'	-	0.3	-

SSAN5-01	Asbestos	Dioxin
0.0-0.17'	0 (amp) 0 (chr)	-
1.0-2.0'	-	7.9

SSAN6-09	Dioxin	HCB
1.0-2.0'	290	0.25J

SSAN5-02	Asbestos	Dioxin	HCB	Arsenic	Perchlorate
0.0-0.17'	DP	-	-	-	-
0.5-2.0'	-	11	0.69	1.79	1.44
10.0-11.5'	-	<0.00091	3.9	11.6	-

SA196	Dioxin	HCB
0.5-2.0'	6,952	5.8
1.0-1.5'	550	1.4
1.5-2.0'	25	0.096
10.0-11.5'	-	<0.0009

SA 150	Dioxin	HCB
0.5-2.0'	3,052	0.
1.0-1.5'	2	-
1.5-2.0'	2.3	-
10.0-11.5'	-	0.

SA105	Dioxin	HCB	Perchlorate
0-0.5'	13,000	0.66	-
0.5-2.0'	1,402	-	33.2
1.0-1.5'	300	-	-
1.5-2.0'	430	-	-
10-11.5'	-	-	64.7

SSAN6-04	Dioxin	HCB
1.0-2.0'	0.57	<0.031

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 \* if asbestos results in SA113 are < comparison levels

**AREA I**

SSAM4-02	Perchlorate
2.0-3.0':	630
4.0-5.0':	230
6.0-7.0':	260
8.0-9.0':	210
10.0-11.0':	110

SSAN5-02	Asbestos	Dioxin	HCB	Perchlorate
0.0-0.17':	0 (amp) 0 (chr)	-	-	-
1.0-2.0':	-	SH	SH	340
3.0-4.0':	-	-	SH	-
4.0-5.0':	-	530	0.49	-
5.0-6.0':	-	-	-	160

SA15	Asbestos	Dioxin	HCB	Perchlorate
0.0-0.17':	2 (amp) 2 (chr)	-	-	-
0.5-2.0':	-	803	0.31	113
1.0-2.0':	-	-	-	73
3.0-4.0':	-	-	-	140
5.0-6.0':	-	-	-	630
7.0-8.0':	-	-	-	1,200
9.0-10.0':	-	-	-	1,700
10.0-11.5':	-	-	-	1,210
10.0-11.5' (dup):	-	-	-	1,160

SA65	Perchlorate
0.5-2.0':	647
0.5-2.0' (dup):	850
4.0-5.0':	1,100
4.0-5.0' (dup):	1,500
6.0-7.0':	1,500
8.0-9.0':	2,600
10.0-11.5':	1,690
20.0-21.5':	984

SSAN4-01	Perchlorate
2.0-3.0':	14
4.0-5.0':	22
6.0-7.0':	5.2
8.0-9.0':	2.2
10.0-11.0':	9.9

SSAN5-03	Asbestos	Perchlorate
0.0-0.17':	22 (amp) 22 (chr)	-
0.33-0.5':	10 (amp) 24 (chr)	-
0.1-1.17':	11 (amp) 31 (chr)	-
1.5-1.67':	DP	-
1.0-2.0':	-	0.4
5.0-6.0':	-	0.74

SA58	Asbestos	Dioxin	HCB
0.0-0.17':	0 (amp) 8 (chr)	-	-
0.33-0.5':	0 (amp) 0 (chr)	-	-
0.5-7.0':	-	1,432	0.62
1.0-1.5':	-	1,400	-
1.5-2.0':	-	500	-
3.0-4.0':	-	0.3	-

SSAN5-01	Asbestos	Dioxin
0.0-0.17':	0 (amp) 0 (chr)	-
1.0-2.0':	-	7.9

SSAN5-02	Asbestos	Dioxin	HCB	Arsenic	Perchlorate
0.0-0.17':	DP	-	-	-	-
0.5-2.0':	-	11	0.69	1.79	1.44
10.0-11.5':	-	-	<0.00091	3.9	11.6

SA105	Dioxin	HCB	Perchlorate
0-0.5':	13,000	0.66	-
0.5-2.0':	1,402	-	33.2
1.0-1.5':	300	-	-
1.5-2.0':	430	-	-
10-11.5':	-	-	64.7

SSAN6-04	Dioxin	HCB
1.0-2.0':	0.57	<0.031

SA150	Dioxin	HCB
0.5-2.0':	3,052	0.8
1.0-1.5':	2	-
1.5-2.0':	2.3	-
10.0-11.5':	-	0.3

SA94	Dioxin	HCB	Perchlorate
0-0.5':	49,000	29	-
0.5-2.0':	512	0.29	85.7
10.0-11.5':	-	4.1	17.6
11.0-12.0':	-	DP	-
12.0-13.0':	-	DP	-
13.0-14.0':	-	DP	-
14.0-15.0':	-	DP	-
16.0-17.0':	-	DP	-

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 \* if asbestos results for SA113 are  $\geq$  comparison levels