

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

Jim Gibbons, Governor
Allen Biaggi, Director
Leo M. Drozdoff, P.E., Administrator

October 25, 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) 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,

The NDEP has received and reviewed TRX's above-identified Deliverables and documentation and provides conditional approval so that TRX may proceed with implementation of this Excavation Plan without further delay. TRX should complete the excavation of RZ-C based on the comments found in Attachments A, B, and C of this letter to prevent any delay to the remediation schedule. Delay in the remediation schedule will be considered non-compliance without prior NDEP concurrence.

TRX should submit an annotated response-to-comments letter **by November 6, 2010**. Please contact the undersigned with any questions at sharbour@ndep.nv.gov or 775-687-9332.

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Sincerely,



Shannon Harbour, P.E.
Staff Engineer III
Bureau of Corrective Actions
Special Projects Branch
NDEP-Carson City Office
Fax: 775-687-8335

SH:sh

EC: Jim Najima, Bureau of Corrective Actions, NDEP
Greg Lovato, Bureau of Corrective Actions, NDEP
William Knight, Bureau of Corrective Actions, NDEP
Carolyn Tanner, AG's Office, Carson City, NV
Brenda Pohlmann, City of Henderson
Mitch Kaplan, U.S. Environmental Protection Agency, Region 9
Mike Skromyda, Tronox LLC
Michael J. Foster, Tronox LLC
Keith Bailey, Environmental Answers LLC
Susan Crowley, Tronox LLC (Contractor)
Deni Chambers, Northgate Environmental
Brian Rakvica, McGinley and Associates
Joe McGinley, McGinley & Associates
Barry Conaty, Holland & Hart LLP
Ranajit Sahu, BRC
Rick Kellogg, BRC
Lee Farris, BRC
Mark Paris, Landwell
Craig Wilkinson, TIMET
Kirk Stowers, Broadbent & Associates
Victoria Tyson, Tyson Contracting
George Crouse, Syngenta Crop Protection, Inc.
Nick Pogoncheff, PES Environmental
Lee Erickson, Stauffer Management Company
Michael Bellotti, Olin Corporation
Curt Richards, Olin Corporation
Paul Sundberg, Montrose Chemical Corporation
Joe Kelly, Montrose Chemical Corporation of CA
Jeff Gibson, AMPAC
Larry Cummings, AMPAC
Ebrahim Juma, Clean Water Team
Joe Leedy, Clean Water Team
Kathryn Hoffmann, Clean Water Team

CC: Susan Crowley, C/O Tronox LLC, PO Box 55, Henderson, NV 89009
Lee Farris, BRC, 875 W. Warm Springs Road, Henderson, NV 89011
Lee Erickson, Stauffer Management Company

Attachment A

1. General comment, TRX should contact NDEP **by November 1, 2010** to schedule a conference call to discuss these comments or to advise NDEP that TRX plans to implement work in accordance with these comments. Additionally, NDEP does not plan to review any errata or written response-to-comments provided by TRX until such time as all of the RZ-C sampling data has been received or otherwise determined by NDEP.
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.
 - 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. General comment: TRX should provide discussion on the disposition of former pond berms in final grading.
4. Section 3.2, page 10, NDEP views this section as informational only as TRX has submitted a separate Deliverable with recommendations for the wells affected by the excavation polygons for each remediation zone. NDEP has issued a response concerning well abandonment in response to this well Deliverable.
5. Section 3.4, page 12, TRX continues to defer the issue of how risk assessments will be conducted in areas where backfill is not proposed to be placed. Therefore, NDEP provides the following:
 - a. If excavation that will not be backfilled is less than or equal to 5 feet below ground surface (fbgs), TRX may use the current 10 fbgs data to represent the new 0 – 10 fbgs range.
 - b. Excavations greater than 5 fbgs either need to be backfilled to pre-excavation grades or a post-excavation 10 fbgs sample must be collected and used in the risk assessment.
6. Table 1: NDEP provides the following comments:
 - a. TRX should revise this Table based on the comments found in Attachment B.
 - b. In comparison with Figure 1, Site property boundary samples do not appear to have been collected at the property boundary between ChemStar and TRX in excavation polygon

- RZ-C-13. Please collect a boundary confirmation sample at property boundary with ChemStar in RZ-C-13.
- c. Please notify NDEP as soon as the pending results for the following sampling points are received so that a final depth of excavation can be established for the corresponding remediation polygons:
 - i. SSAN6-08 (RZ-C-16A)
 - ii. SSAM5-02 (RZ-C-28A)
 - d. 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: remove perchlorate
 - iii. RZ-C-46A: remove manganese and cobalt
 - e. RZ-C-05: boring SSAN2-01 cannot be used to reduce the limits of excavation for this polygon because asbestos is the chemical driving excavation and asbestos was not analyzed in this samples.
 - f. RZ-C-07A: borings RSAO4 and SA47 cannot be used to reduce the limits of excavation for this polygon because dioxins/furans TEQ is a chemical driving excavation and dioxins/furans TEQ was not analyzed in these samples.
 - g. RZ-C-10 and RZ-C-10A: TRX should indicate how the berms for LOU8 will be handled during excavation and final grading.
 - h. RZ-C-10B: polygon should be added to table as shown in Attachment B with arsenic listed as the chemical driving excavation.
 - i. RZ-C-13A: polygon should be added to table as shown in Attachment B with HCB as the chemical driving excavation.
 - j. RZ-C-16A: polygon should be added to table as shown in Attachment B with dioxins/furans TEQ and HCB as the chemicals driving excavation.
 - k. RZ-C-18: TRX should indicate how the berms for LOU7 will be handled during excavation and final grading.
 - l. RZ-C-22B: polygon should be added to table as shown in Attachment B with arsenic (and potentially asbestos) as the chemical driving excavation.
 - m. RZ-C-28: this excavation polygon should be divided into three separate polygons as shown in Attachment B. Additionally, the chemical drivers for the subdivided polygons are as follows:
 - i. RZ-C-28 – perchlorate
 - ii. RZ-C-28C – asbestos, perchlorate
 - iii. RZ-C-28D - perchlorate
 - n. RZ-C-34: perchlorate is not a chemical driving excavation and should be removed from Table 1.
 - o. RZ-C-39A: polygon should be added to table as shown in Attachment B with asbestos as the chemical driving excavation.
 - p. RZ-C-40A: 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-40A: dioxins/furans TEQ, HCB
 - ii. RZ-C-40B: dioxins/furans

- q. RZ-C-41A: this excavation polygon should be removed from Table 1 as shown in Attachment B since it was not shown on any of the RZ-C Figures. RZ-C-16A replaces this polygon on Table 1.
 - r. RZ-C-43: this excavation polygon should be removed from Table 1 as shown in Attachment B since the asbestos results reported for SA151 are in error. The correct results are 2 chrysotile fibers not 1 amphibole fiber, and therefore, are not in exceedance of the comparison levels for asbestos. No excavation is necessary.
 - s. RZ-C-45: this area is the former manganese tailings pile. Based on confirmation soil sampling after the removal of the tailings pile, additional contamination has been discovered. RZ-C-45 will be divided into several other polygons based on the results of additional sampling and will be submitted under separate cover.
 - t. 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
7. 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 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 fbgs	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 fbg	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	3	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 outline: 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 fbg	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 SSAO7-02		
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	SSAO6-03 SSAO7-03 SA52 SA178	10	
RZ-C-23	SA39	RSAP6 SA130 SSAO6-02 SSAO6-05 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 cutline: property boundary with ChemStar
RZ-C-27	SA130	SA39 SSAO6-03 SA178 SSAP6-03 SSAP2-03	10	
	RSAP6	SSAP6-02 SSAO6-05 SA39 SSAP6-05		
RZ-C-28	SA65	SSAN5-03 SSAN4-01 SSAM4-02 SSAM5-02	0	**remediation alternatives will be investigated for perchlorate contamination
RZ-C-28A	SSAM5-02	RSAM5 SA65 SA15	≥1	Northern cutline: RZ-E boundary

Excavation Area	Contaminated Sampling Location	Adjacent Sampling Locations	Depth fbg	Exceptions
RZ-C-28B	SSAN5-02	SA15 SA58 SA196 SA94	4	
RZ-C-28C	SA15	SA65 SSAM5-02 SA58 SSAN5-03 RSAM4 SA13	≥0.33	
RZ-C-28D	RSAM5	SA15 SSAM5-02 SSAM6-05 SA94	0	**remediation alternatives will be investigated for perchlorate contamination Northeastern corner boundary: BT Tank area boundaries
RZ-C-29	SA104	RSAM5 SA94 SA105 SSAM6-01 SSAM6-06	0	**remediation alternatives will be investigated for perchlorate contamination Northern boundary: BT Tank area boundaries
RZ-C-30	SSAM6-02	SA104 SSAN6-07 SA175	4	Northern cutline: RZ-E boundary Southern cutline (partial): LOU16&17 boundaries
RZ-C-31	SSAM6-01	SA104 SA105 SA60 SSAN6-07	0	**remediation alternatives will be investigated for perchlorate contamination
	SSAM6-03	SSAN6-07 SSAM6-04 SSAM6-02 SA175		
RZ-C-31A	SA198		10	Cutlines: LOU16&17 boundaries
RZ-C-32	SSAM6-04	SSAM6-03 SSAN6-07 SSAN6-01 SA49 SSAM7-03	0	**remediation alternatives will be investigated for perchlorate contamination
RZ-C-33	SA63		1	Cutlines: LOU18 boundaries

Excavation Area Name	Contaminated Sampling Location	Adjacent Sampling Locations	Depth fbgs	Exceptions
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	0	**remediation alternatives will be investigated for perchlorate contamination
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	0	**remediation alternatives will be investigated for perchlorate contamination Northwestern boundary: LOU18 boundaries North and eastern boundaries: RZ-E boundaries
RZ-C-39	SA58	SSAN5-01 SA196 SSAN5-02 SA15 RSAN5	0.33	
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.

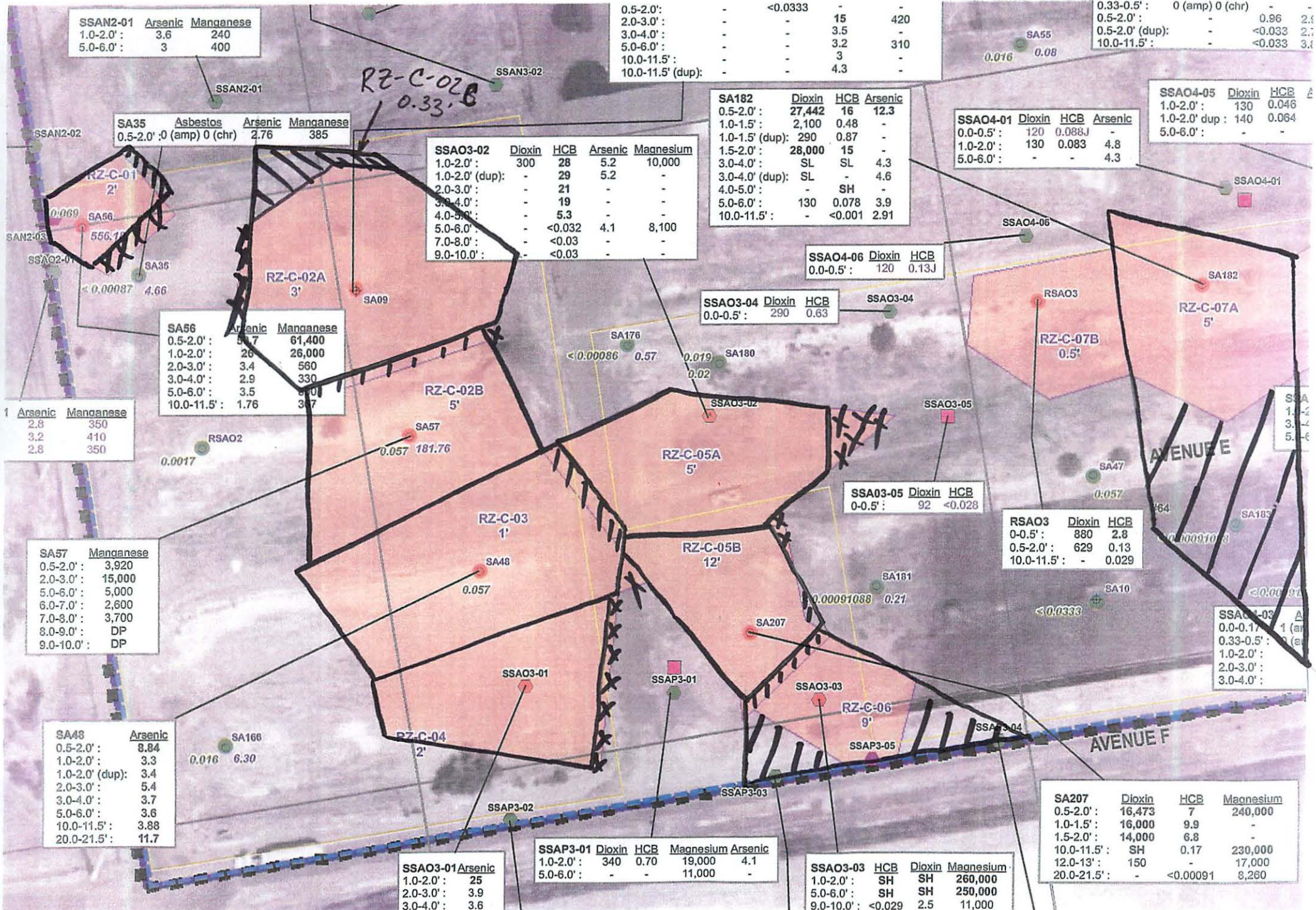
Excavation Area Name	Contaminated Sampling Location	Adjacent Sampling Locations	Depth fbgs	Exceptions
RZ-C-40	SA196	SA94 SSAN5-02 SSA58 SSAN5-01 SSAN6-04 SA150 SA105 SSAN6-09	1.5	
RZ-C-40A	SA94	SA105 SA104 SSAN5-02 RSAM5 SA196	≥11	
RZ-C-40B	SA105	SA94 SA196 SA104 SSAM6-01 SA60 SA150	0.5	
RZ-C-41	SA150	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)
RZ-C-45			?	Will be subdivided as necessary based on additional pre-confirmation sampling.

Excavation Area Name	Contaminated Sampling Location	Adjacent Sampling Locations	Depth fbgs	Exceptions
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.



SSAN2-01	Arsenic	Manganese
1.0-2.0':	3.6	240
5.0-6.0':	3	400

0.5-2.0':	<0.0333	-	-
2.0-3.0':	-	15	420
3.0-4.0':	-	3.5	-
5.0-6.0':	-	3.2	310
10.0-11.5':	-	3	-
10.0-11.5' (dup):	-	4.3	-

0.33-0.5':	0 (amp)	0 (chr)	-	-
0.5-2.0':	-	-	0.96	2.1
0.5-2.0' (dup):	-	-	<0.033	2.1
10.0-11.5':	-	-	<0.033	3.1

RZ-C-02B
0.33'

SA35	Asbestos	Arsenic	Manganese
0.5-2.0':	0 (amp)	0 (chr)	2.76
			385

SSAO3-02	Dioxin	HCB	Arsenic	Magnesium
1.0-2.0':	300	28	5.2	10,000
1.0-2.0' (dup):	-	29	5.2	-
2.0-3.0':	-	21	-	-
3.0-4.0':	-	19	-	-
4.0-5.0':	-	5.3	-	-
5.0-6.0':	-	<0.032	4.1	8,100
7.0-8.0':	-	<0.03	-	-
9.0-10.0':	-	<0.03	-	-

SA182	Dioxin	HCB	Arsenic
0.5-2.0':	27,442	16	12.3
1.0-1.5':	2,100	0.48	-
1.0-1.5' (dup):	290	0.87	-
1.5-2.0':	28,000	15	-
3.0-4.0':	SL	SL	4.3
3.0-4.0' (dup):	SL	SL	4.6
4.0-5.0':	-	SH	-
5.0-6.0':	130	0.078	3.9
10.0-11.5':	-	<0.001	2.91

SSAO4-01	Dioxin	HCB	Arsenic
0.0-0.5':	120	0.088J	-
1.0-2.0':	130	0.083	4.8
5.0-6.0':	-	-	4.3

SSAO4-05	Dioxin	HCB
1.0-2.0':	130	0.046
1.0-2.0' dup:	140	0.064
5.0-6.0':	-	-

SA56	Arsenic	Manganese
0.5-2.0':	1.7	61,400
1.0-2.0':	26	26,000
2.0-3.0':	3.4	560
3.0-4.0':	2.9	330
5.0-6.0':	3.5	300
10.0-11.5':	1.76	347

SSAO3-04	Dioxin	HCB
0.0-0.5':	290	0.63

SSAO4-06	Dioxin	HCB
0.0-0.5':	120	0.13J

Arsenic	Manganese
2.8	350
3.2	410
2.8	350

SA57	Manganese
0.5-2.0':	3,920
2.0-3.0':	15,000
5.0-6.0':	5,000
6.0-7.0':	2,600
7.0-8.0':	3,700
8.0-9.0':	DP
9.0-10.0':	DP

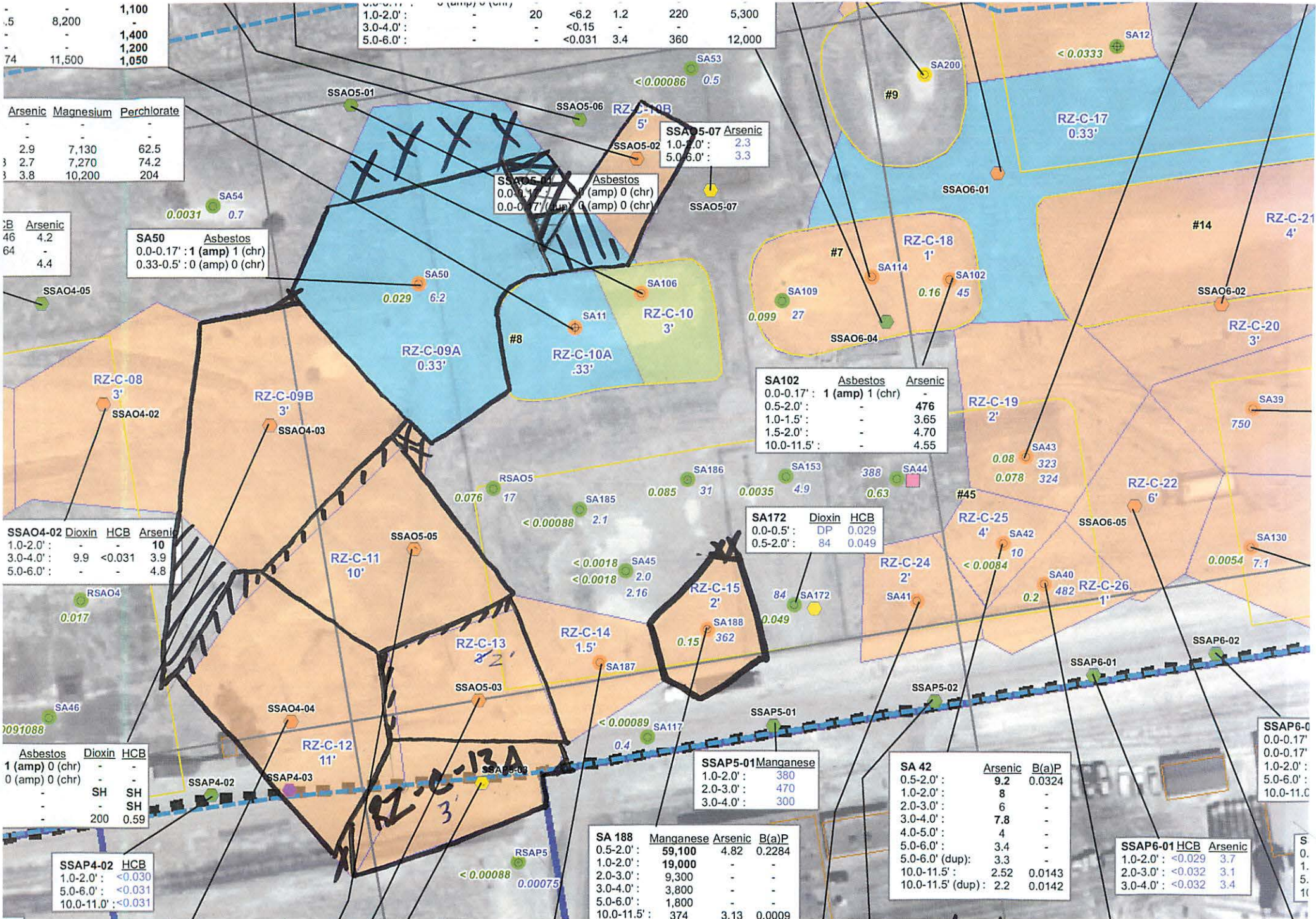
SA48	Arsenic
0.5-2.0':	8.84
1.0-2.0':	3.3
1.0-2.0' (dup):	3.4
2.0-3.0':	5.4
3.0-4.0':	3.7
5.0-6.0':	3.6
10.0-11.5':	3.88
20.0-21.5':	11.7

SSAO3-01	Arsenic
1.0-2.0':	25
2.0-3.0':	3.9
3.0-4.0':	3.6

SSAP3-01	Dioxin	HCB	Magnesium	Arsenic
1.0-2.0':	340	0.70	19,000	4.1
5.0-6.0':	-	-	11,000	-

SSAO3-03	HCB	Dioxin	Magnesium
1.0-2.0':	SH	SH	260,000
5.0-6.0':	SH	SH	250,000
9.0-10.0':	<0.029	2.5	11,000

SA207	Dioxin	HCB	Magnesium
0.5-2.0':	16,473	7	240,000
1.0-1.5':	16,000	9.9	-
1.5-2.0':	14,000	6.8	-
10.0-11.5':	SH	0.17	230,000
12.0-13':	150	-	17,000
20.0-21.5':	-	<0.00091	8,260

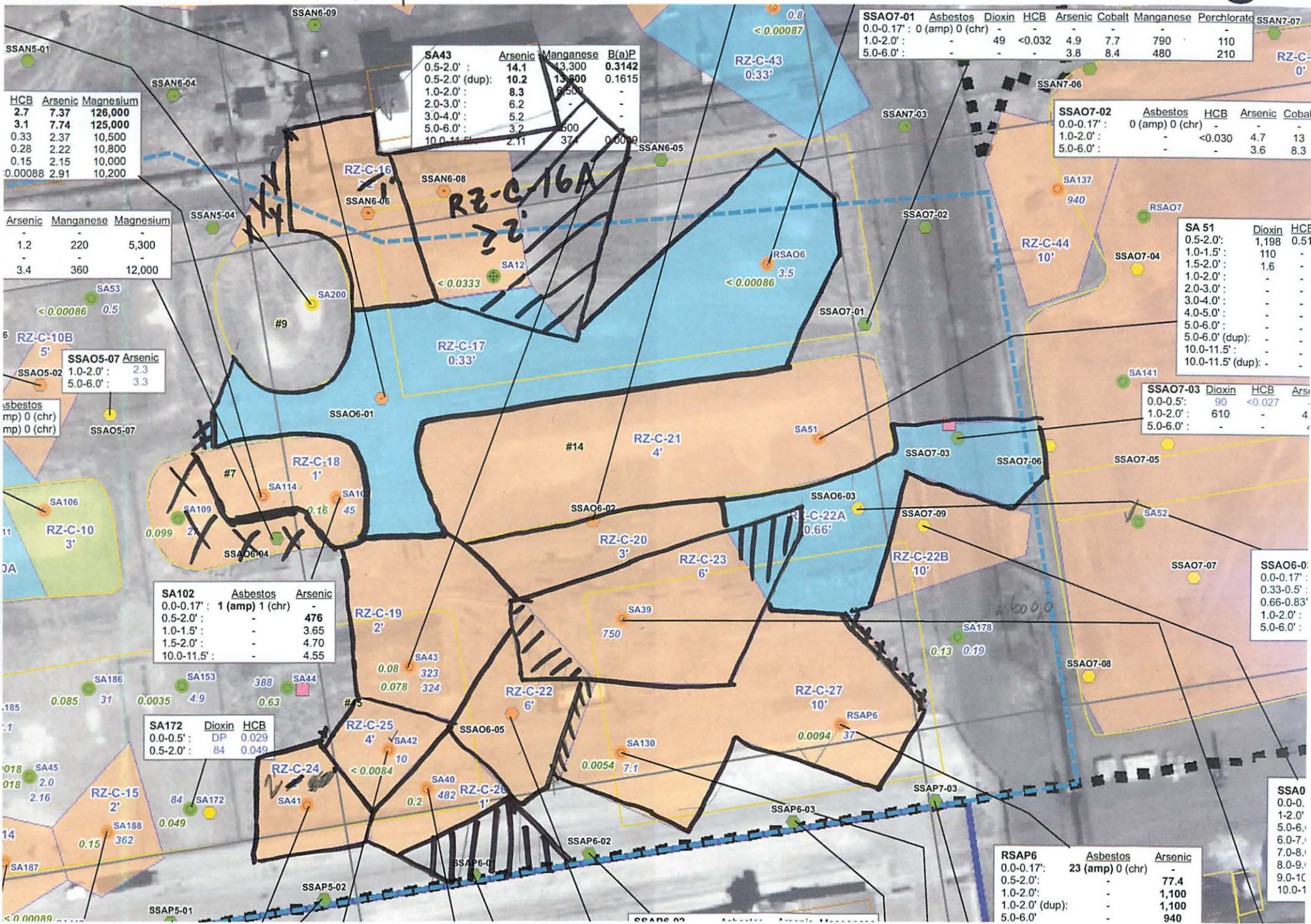


/// additional excavation area

xxx eliminated excavation area

05 17

Steam plant



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

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

SSAO5-07 Arsenic
1.0-2.0': 2.3
5.0-6.0': 3.3

Asbestos (mp) 0 (chr)
0 (chr)

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	0.049
0.5-2.0': 84	0.049	-

SA43	Arsenic	Manganese	B(a)P
0.5-2.0': -	14.1	13,300	0.3142
0.5-2.0' (dup): -	10.2	13,800	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': -	3.2	500	-
10.0-11.5': -	2.11	374	0.0009

SSAO7-01	Asbestos	Dioxin	HCB	Arsenic	Cobalt	Manganese	Perchlorate
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

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': -	-	-	-

SSAO6-01	Dioxin	HCB	Arsenic
0.0-0.17': -	-	-	-
0.33-0.5': -	-	-	-
0.66-0.83': -	-	-	-
1.0-2.0': -	-	-	-
5.0-6.0': -	-	-	-

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

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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	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	-

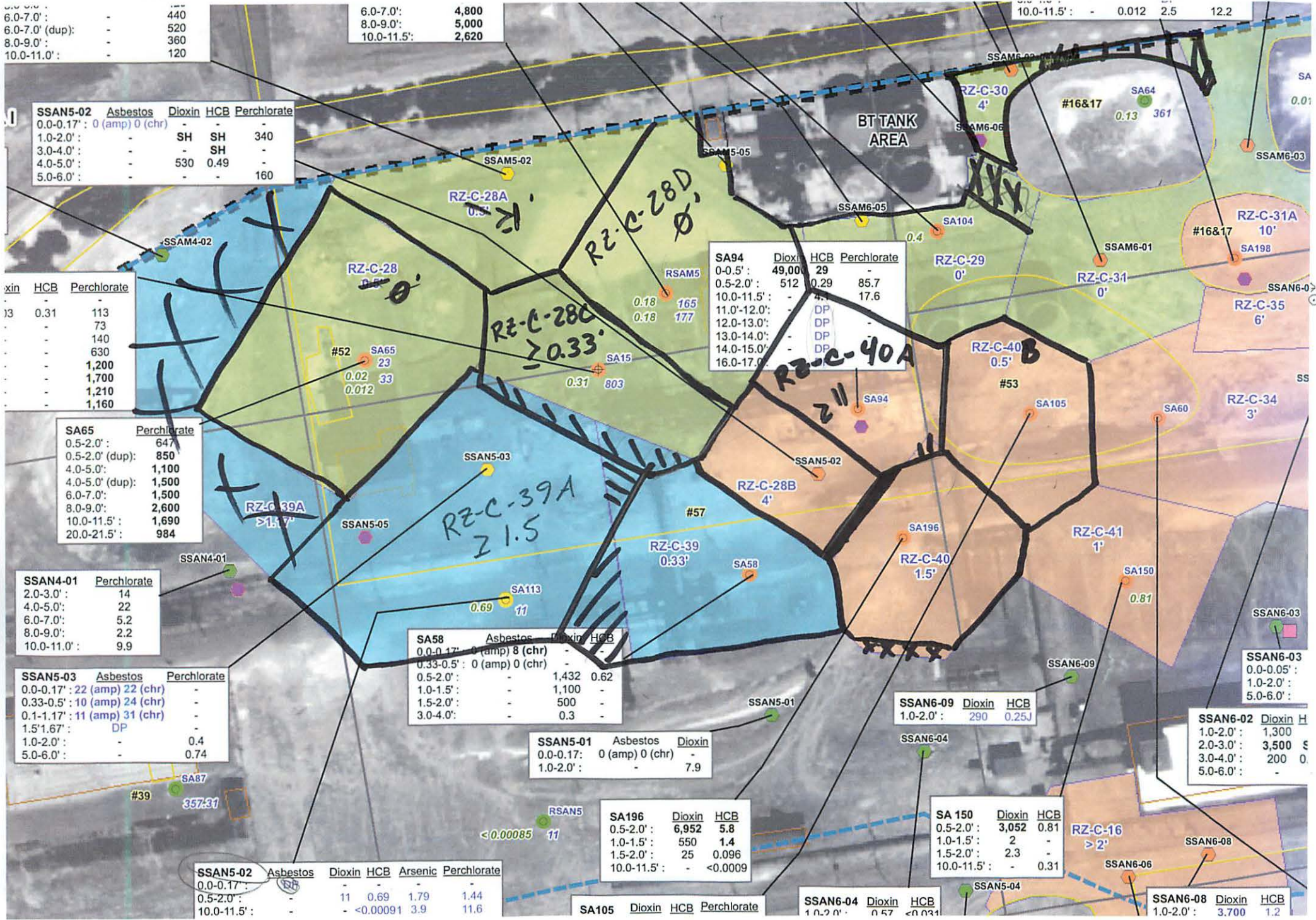
SSAN6-09	Dioxin	HCB
1.0-2.0'	290	0.25J

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

SSAN6-02	Dioxin	HCB
1.0-2.0'	1,300	-
2.0-3.0'	3,500	-
3.0-4.0'	200	-
5.0-6.0'	-	-

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'	-	-	-



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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

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
10.011.5':	-	-	<0.0003	2.66	11.8
25.0-26.5':	-	-	<0.00088	4.18	88.7

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

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):	0 (amp) 0 (chr)	-
0.33-0.5':	0 (amp) 0 (chr)	-
0.5-2.0':	-	2.6

Dioxin 290 HCB 0.25J

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

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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

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

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)	-	-
0.5-2.0' :	-	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

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

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

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	-

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

SA 150	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

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

* if asbestos results in SA113 are < comparison levels
 - only RZ-C-28E, RZ-C-39, & RZ-C-39A ~~are~~ revised limits shown

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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)	-	-
0.5-2.0':	-	1,432	0.62
1.0-1.5':	-	1,700	-
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

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

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

SA 150	Dioxin	HC
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

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

* if asbestos results for SA113 are \geq comparison levels
 - only RZ-C-28C, RZ-C-39, & RZ-C-39A revised limits shown