LIMITED SITE DATA DOCUMENT

BATAVIA IRON & METAL COMPANY, INC.

CITY OF BATAVIA, GENESEE COUNTY, NEW YORK

SITE NO. 819018

These documents that follow are **NOT** part of the Contract Documents for the remedial work at the Batavia Iron & Metal Company, Inc. Site. The Department neither represents that the Site conditions will be the same as in the attached document nor considers the attached documents as being comprehensive and an actual description of the site conditions. The Contractor shall be responsible for performing the remediation work based on the existing conditions at the Site.

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INVESTIGATION SUMMARY

The following is a summary of reports describing historical investigations conducted at the Batavia Iron & Metal Company, Inc. Site between 2012 and 2019. These are provided in chronological order.

- GZA, 2012. Site Investigation and Remedial Alternatives Report, Batavia Iron & Metal Site, 301-305 Bank Street, Batavia, New York, NYSDEC Site #819018; Prepared by GZA GeoEnvironmental of New York; Prepared for the City of Batavia, New York. June 2012.

- MACTEC, 2015. Construction Completion Report, Area of Concern (AOC) 4, Remedial Action, Batavia Iron and Metal, State Superfund Site Number: 819018. Prepared for the New York State Department of Environmental Conservation, Albany, New York. June 2015.

- MACTEC Engineering and Consulting, P.C. (MACTEC), 2019. Construction Completion Report – Off-Site Interim Remedial Measure (City of Batavia Owned Property) Batavia Iron and Metal, State Superfund Site Number: 819018. Prepared for the New York State Department of Environmental Conservation, Albany, New York. February 2019.

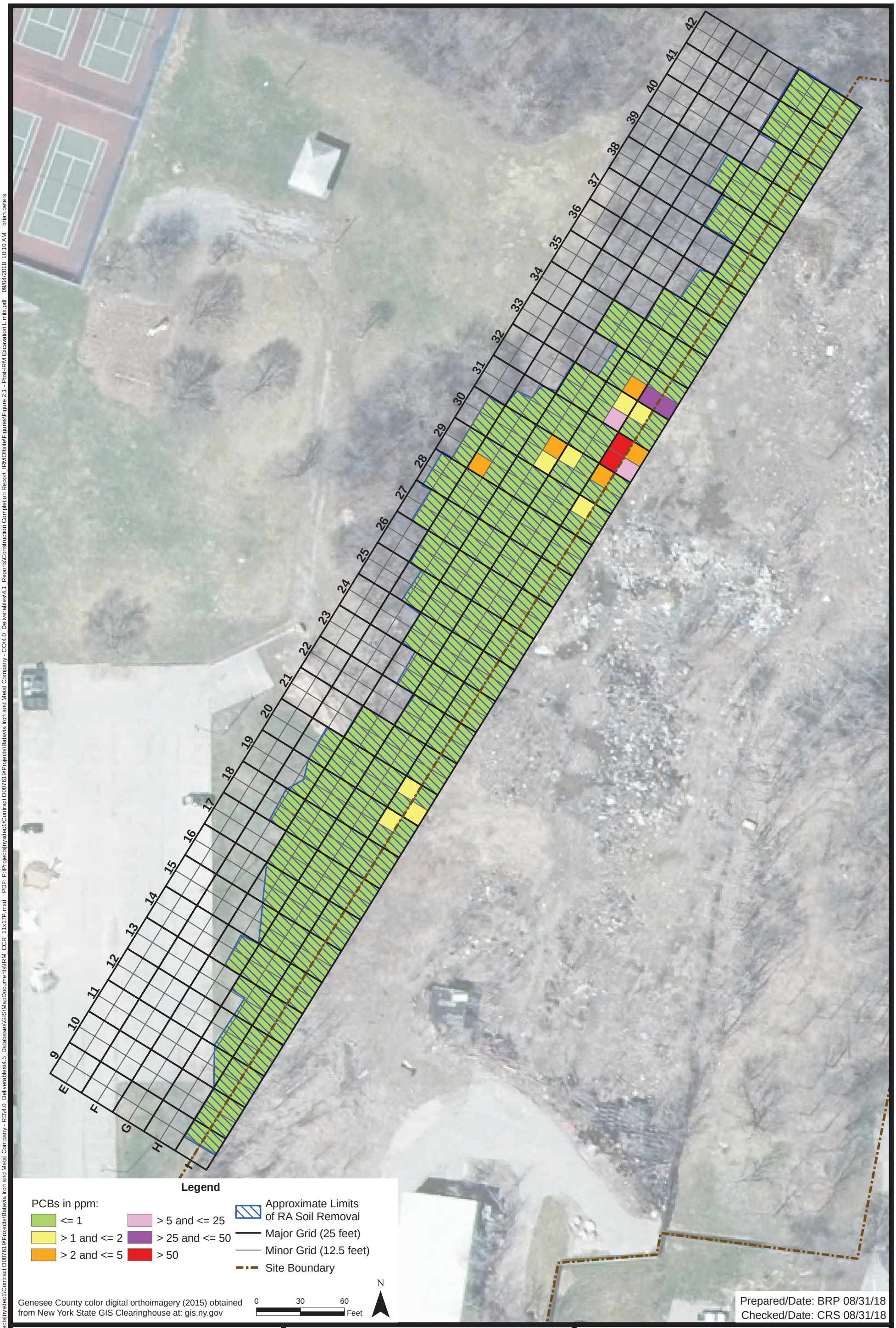
- MACTEC, 2019. Pre-Design Investigation Report – Batavia Iron and Metal Company, NYSDEC Site 819018. Prepared for the New York State Department of Environmental Conservation, Albany, New York. April 26, 2019.

- MACTEC, 2020. Field Activities Report – Phase II Pre-Design Investigation, Batavia Iron & Metal Co. (NYSDEC Site #819018). Prepared for the New York State Department of Environmental Conservation, Albany, New York. September 10, 2020.

This information is being offered for consideration when planning the Site remedial work. Electronic copies of these reports can be provided upon request.

FIGURES

The enclosed figures are taken from the 2019 IRM Construction Completion Report and the Phase 1 and Phase 2 Pre-Design Investigation Reports. In general, the figures depict on- and off-Site area conditions observed during the 2018 and 2019 investigations, to some extent summarize additional data collected between 2018 and 2019, and include locations that need additional excavation after completion of the off-site IRM. The intent of each figure is to illustrate site conditions as they were known to have existed at the time the figure was generated. This information is being offered for consideration when planning the remedial work.



NYSDEC Site No. 819018
Batavia Iron and Metal Co.
Batavia, New York

MACTEC

Post-IRM Excavation Limits
and Exceedances
Project 3617137301 Figure 2.1

Legend

Maximum PCBs in Soil:

- Non-Detect
- < 1 ppm
- >= 1 and < 25 ppm
- >= 25 and < 50 ppm
- >= 50 ppm
- 25 Foot Grid
- Site Boundary

N

0 40 80 Feet

Genesee County color digital orthoimagery (2015) obtained from New York State GIS Clearinghouse at: gis.ny.gov

Prepared/Date: BRP 01/24/19
Checked/Date: CRS 01/24/19

NYSDEC Site No. 819018
Batavia Iron and Metal
Batavia, New York

MACTEC

Maximum PCB Concentrations in Soil

Project 3617137301 Figure 5

Document: P:\Projects|nysdec1\Contract D007619\Projects\Batavia Iron and Metal Company - RD4.0_Deliverables\4.5_Databases\GIS\MapDocuments\Max_PCBs_2018_11x17P.mxd PDF: P:\Projects|nysdec1\Contract D007619\Projects\Batavia Iron and Metal Company - RD4.0_Deliverables\4.1_Reports\2018-PDI Report\Figures\Figure 5 - Max PCBs in Soil.pdf 01/24/2019 8:15 AM brian.peters

Legend

- Interpreted > 50 ppm PCB Areas

Maximum PCBs in Soil:

- Non-Detect
- < 1 ppm
- >= 1 and < 25 ppm
- >= 25 and < 50 ppm
- >= 50 ppm
- 50 Foot Grid
- 25 Foot Grid
- Excavated as IRM
- Concrete Foundation
- Wetland
- Former Wetland
- Site Property Boundary

N

0 40 80 Feet

Genesee County color digital orthoimagery (2015) obtained from New York State GIS Clearinghouse at: gis.ny.gov

Prepared/Date: BRP 11/20/19
Checked/Date: CRS 11/20/19

NYSDEC Site No. 819018
Batavia Iron and Metal
Batavia, New York

MACTEC

Maximum PCB Concentrations in Soil

Project 3617137301 Figure 4

Document: P:\Projects\nysdec1\Contract D007619\Projects\Batavia Iron and Metal Company - RD\4.0_Deliverables\4.1_Reports\2019-Phase 2 PDI\Figures\Figure 4 - Max PCBs in Soil.pdf 11/20/2019 11:38 AM brian.peters

Document: P:\Projects\nysdec1\Contract D007619\Projects\Batavia Iron and Metal Company - RD\4.0_Deliverables\4.5_Databases\GIS\MapDocuments\PhaseII_PDI_Rpt_11x17P.mxd PDF: P:\Projects\nysdec1\Contract D007619\Projects\Batavia Iron and Metal Company - RD\4.0_Deliverables\4.1_Reports\2019-Phase 2 PDI\Figures\Figure 4 - Max PCBs in Soil.pdf 11/20/2019 11:38 AM brian.peters

TABLES

The enclosed tables are taken from the Phase 1 and Phase 2 Pre-Design Investigation Reports, and do not include all historical site data. Additional site data is available in the site investigation reports listed above. In general, the tables depict on- and off-Site area conditions observed during the Pre-Design Investigations and the off-site Construction Activities. The intent of the tables is to depict contaminant concentrations for soil and groundwater.

Contaminant concentrations presented on the tables are those reported at the time the table was generated. This information is being offered for consideration when planning the remedial work.

Table 5: Boring/Test Pit Select Data

	Sample Location											Analytical Results												
Site Type	**Location ID**	**Grid ID**	**Latitude**	**Longitude**	**Ground Elevation (ft)**	**Field Sample ID**	**Sample Date**	**Fill Thickness [1] (ft)**	**Observed Impacts[2] (Y/N)**	**Comment (Staining, Odors, Types of Fill [Metal, Ceramics, Bricks])**	**Sample Depth (ft bgs)**	PCB (total) 1 (mg/kg)	Arsenic 16 (mg/kg)	Barium 350 (mg/kg)	Cadmium 2.5 (mg/kg)	Chromium 22 (mg/kg)	Copper 270 (mg/kg)	Lead 400 (mg/kg)	Manganese 2000 (mg/kg)	Mercury 0.81 (mg/kg)	Nickel 140	Selenium 36	Silver 36	Zinc 2200
TP	TP-I08	I08	1256782.1	1096750.3	900.2	819018-TPI08000	8/1/2018	0	N	Very trace metal fragments on	0	**5.4**	**9.1**	**141**	**4.3**	**28.5**	**768**	**747**	**397**	**0.84**	**26.7**	**0.99 J**	**1.1**	**704**
						819018-TPI08002	8/1/2018			surface.	2	**1.2**	**3**	**42.4**	**0.45**	**12.4**	**53.5**	**58.9**	**326**	**0.19**	**12.6**	4.5 U	0.67 U	**79.2**
						819018-TPI08005	8/1/2018				5	**1.2**	**4 J**	**155 J**	**0.63**	**11.3**	**49.2 J**	**50.3 J**	**3090**	**0.13**	**18.4**	4.6 UJ	0.69 U	**73.6 J**
TP	TP-I42	I42	1257228.4	1097473.8	896.7	819018-TPI42000	8/1/2018	2.2	N	Wood and metal fragments observed	1.3	**130**	**14.4 J**	**549 J**	**48.2 J**	**234 J**	**3880 J**	**2410 J**	**562 J**	**8.2 J**	**253 J**	**3.1 J**	**16.8 J**	**5880 J**
						819018-TPI42002	8/1/2018			1.3-2.2 ft bgs.	2	**0.11 J**	**0.55 J**	**26.7**	**0.19 J**	**7.5**	**15**	**9.3**	**138**	0.022 U	**7.6**	4.6 U	0.69 U	**37.4**
						819018-TPI42005	8/1/2018				5	0.23 U	**1.2 J**	**13.5**	**0.11 J**	**4**	**6.4**	**3.2**	**139**	0.022 U	**4.2 J**	4.4 U	0.66 U	**13.7**
DP/MW	MW-102	J30	1257086.8	1097208.6	899.2	819018-DPJ30000	7/24/2018	4	Y	Bricks and wood chunks (0-2 ft bgs);	0	**52 J**	**24.5**	**222**	**18.3**	**183**	**5440**	**1880**	**718**	**6.3**	**115**	**1.4 J**	**7.8**	**2980**
						819018-DPJ30002	7/24/2018			Black staining at 2-3 ft bgs (114.7	2	**29 J**	**44.9**	**308**	**14.5**	**207**	**1760**	**1840**	**1660**	**8.2**	**109**	**1.3 J**	**4.5**	**2620**
						819018-DPJ30004	7/24/2018			ppm PID).	4	**1.4 J**	**3**	**44.5**	**0.59**	**10.6**	**124**	**51.1**	**312**	**0.15**	**11.1**	4.3 U	0.64 U	**126**
						819018-DPJ30008	7/24/2018				8	0.25 U	**1.2 J**	**27.1**	**0.097 J**	**9**	**8.2**	**5.3**	**262**	**0.017 J**	**9.9**	4.6 U	0.69 U	**21.4**
HA	HA-J44	J44	1257271.0	1097508.9	896.6	819018-HAJ44000	8/2/2018	0	N	Wetland area, trace surface debris	0	**0.49**	**2.7 J**	**79.7**	**2.9**	**23.7**	**136 J**	**93.3 J**	**108**	**0.36 J**	**15.6**	**1.1 J**	**0.57 J**	**641**
						819018-HAJ44000D	8/2/2018			only.	0	**0.66**	**3.1 J**	**85.9**	**1.9**	**20.8**	**128 J**	**80.2 J**	**116**	**0.29 J**	**22.1**	**0.86 J**	1.2 U	**455**
						819018-HAJ44002	8/2/2018				2	0.24 U	**2.8**	**36.1**	**0.29**	**8.5**	**15.2**	**11.4**	**155**	**0.015 J**	**8.4**	4.9 U	0.74 U	**79.3**
HA	HA-K04	K04	1256766.8	1096642.3	900.0	819018-HAK04000	8/2/2018	1	N	Refusal at 1 ft bgs, backfill material.	0	0.24 U	**4.1**	**60.3**	**0.5**	**13.2**	**61.6**	**115**	**250**	**0.15 J**	**12.7**	4.5 U	0.68 U	**136**
						819018-HAK04001	8/2/2018				1	0.28 U	**4.6**	**71.6**	**0.68**	**13.5**	**83.8**	**169**	**278**	**0.24**	**12.7**	4.5 U	0.68 U	**168**
DP	DP-K06	K06	1256793.1	1096684.8	899.9	819018-DPK06000	7/23/2018	>5.8	N	Fill depth indeterminate due to	0	**33 J**	**54.8**	**427**	**5.3**	**26.4**	**2260**	**6030**	**263**	**2.6**	**24.1**	**1.2 J**	**1.5**	**1050**
						819018-DPK06002	7/23/2018			repeated shallow refusal.	2	**0.98 J**	**4.9**	**68.9**	**0.56**	**14.3**	**68.9**	**64.1**	**357**	**0.32**	**14.8**	4.3 U	0.65 U	**115**
						819018-DPK06006	7/23/2018				6	0.24 U	**1.7 J**	**17.1**	**0.095 J**	**6.5**	**8.6**	**5.1**	**255**	0.02 U	**5.5**	4.1 U	0.62 U	**18.8**
TP	TP-K08	K08	1256819.3	1096727.4	900.3	819018-TPK08000	8/1/2018	0.9	N	Ver trace metal fragments observed	0	**7**	**6**	**105**	**5.9**	**37.5**	**928**	**881**	**453**	**1**	**39.7**	**0.74 J**	**1.4**	**795**
						819018-TPK08002	8/1/2018			at 0.9 ft bgs.	2	0.23 U	**2.3**	**31.1**	**0.094 J**	**7.7**	**11.6**	**6.4**	**259**	**0.029**	**9**	4.6 U	0.69 U	**22.6**
						819018-TPK08005	8/1/2018				5	**0.34**	**4**	**42.9**	**0.42**	**10.8**	**90.9**	**59.9**	**322**	**0.12**	**12.4**	4.4 U	0.66 U	**68**
TP	TP-K10	K10	1256845.6	1096769.9	900.7	819018-TPK10000	7/31/2018	1.8	Y	Very trace metal fragments and	0	**0.12 J**	**2.5**	**9.7**	**0.44**	**6**	**17.8**	**11**	**93.3**	**0.033**	**7.2**	4.1 U	0.62 U	**39.8**
						819018-TPK10002	7/31/2018			organic odor (PID 3.1 ppm) observed	2	**2.5 J**	**7.9**	**144 J**	**4.1**	**29.5 J**	**578**	**531 J**	**383 J**	**0.75 J**	**32.5**	**0.87 J**	**0.68 J**	**560**
						819018-TPK10002D	7/31/2018			at 1.8 ft bgs.	2	**7.9 J**	**10.3**	**203 J**	**5.6**	**34 J**	**546**	**761 J**	**696 J**	**1.2 J**	**44.7**	**52.7 J**	**0.54 J**	**637**
						819018-TPK10005	7/31/2018				5	**0.17 J**	**2.2**	**34.5**	**0.17 J**	**12.5**	**13.1**	**10.6**	**240**	**0.026**	**12.1**	4.3 U	0.65 U	**31.7**
TP	TP-K12	K12	1256871.8	1096812.5	901.0	819018-TPK12000	7/31/2018	2.3	Y	Very trace metal fragments and	0	0.22 U	**2.8**	**8.2**	**0.091 J**	**6.1**	**5.5**	**4.7**	**75.8**	**0.011 J**	**6.6**	**0.8 J**	0.62 U	**13.5**
						819018-TPK12002	7/31/2018			organic odor (PID 5.4 ppm) observed	2	**23**	**9.2**	**143**	**8.6**	**49.2**	**982**	**1100**	**451**	**1.9**	**44.6**	**1.1 J**	**1.3**	**2780**
						819018-TPK12005	7/31/2018			at 2.3 ft bgs.	5	**1.3**	**3.5**	**51.8**	**0.5**	**14.4**	**23.7**	**20**	**403**	**0.093**	**15.7**	4.7 U	0.7 U	**51.2**
TP	TP-K14	K14	1256898.1	1096855.0	902.9	819018-TPK14000	7/31/2018	1.2	Y	Some glass and metal fragments	0	**0.48**	**2.7**	**64.7**	**1.2**	**17.2**	**1200**	**232**	**314**	**0.2**	**15.3**	4.6 U	0.69 U	**273**
						819018-TPK14001	7/31/2018			from 0.4-1.2 ft bgs , some to faint	1	**12**	**9.3**	**227**	**17**	**113**	**1500**	**1040**	**1120**	**3.7**	**77.3**	**2.7 J**	**2.9**	**1570**
						819018-TPK14002	7/31/2018			decomposition odor (PID 3.3 ppm)	2	**1.2**	**2.5**	**22.8**	**0.41**	**12.1**	**36.9**	**32.5**	**215**	**0.082**	**7.8**	4.2 U	0.63 U	**61**
						819018-TPK14005	7/31/2018			throughout.	5	0.27 U	**2.3**	**17.6**	**0.066 J**	**5.3**	**9.9**	**3.7**	**216**	0.022 U	**6.2**	4.3 U	0.65 U	**19.5**
TP	TP-K16	K16	1256924.3	1096897.6	903.9	819018-TPK16000	7/30/2018	4.5	Y	Some metal, little ceramics 0-1.5 ft,	0	**3.3**	**3.1**	**52.1**	**1.3**	**18.5**	**248**	**153**	**288**	**0.27**	**14.8**	4.4 U	**0.23 J**	**216**
						819018-TPK16002	7/30/2018			mostly bricks, some C&D debris 1.5-	2	**3.9**	**20**	**613**	**20.7**	**135**	**3010**	**22100**	**643**	**1**	**125**	**0.63 J**	**1.1**	**3140**
						819018-TPK16005	7/30/2018			4.5 ft bgs.	5	0.27 U	**5.9**	**205**	**1.1**	**18.6**	**67.2**	**950**	**272**	**2.7 J**	**14.7**	5.1 U	0.77 U	**454**
						819018-TPK16007	7/30/2018				7	0.19 U	**2.2**	**27.5**	**0.36**	**6.5**	**18**	**32.9**	**154**	**0.58**	**6.6**	4.4 U	0.65 U	**48.9**
TP	TP-K18	K18	1256950.6	1096940.1	903.1	819018-TPK18000	7/30/2018	5	Y	Weathered concrete, ceramics, bricks, battery boxes, and some	0	**3.5**	**3.9**	**75.8**	**2.1**	**28.1**	**207**	**204**	**313**	**0.45**	**26.9**	4.5 U	**0.9**	**380**
						819018-TPK18003	7/30/2018			metal observed from 0-5.0 ft bgs.	3	**4**	**26.4**	**579**	**10.7**	**55.9**	**2070**	**2090**	**507**	**9.5**	**82.4**	**3.1 J**	**0.62 J**	**3490**
						819018-TPK18005	7/30/2018			Slight organic odor (PID 1.3 ppm) 5-	5	**2.8**	**8.7**	**1030**	**6.5**	**60.4**	**886**	**4510**	**420**	**1.5 J**	**65.6**	5 U	**0.46 J**	**1950**
						819018-TPK18009	7/30/2018			8.5 ft bgs.	9	0.26 U	**0.56 J**	**60.7**	**0.1 J**	**11.1**	**6.8**	**28.3**	**66**	**0.016 J**	**8.9**	4.3 U	0.64 U	**66.1**
TP	TP-K20	K20	1256976.8	1096982.7	903.0	819018-TPK20000	7/30/2018	3.4	Y	Some metal debris, ceramics, bricks,	0	**1.4**	**2.9**	**47**	**1.1**	**16.9**	**108**	**93.2**	**307**	**0.31**	**14.3**	4.6 U	0.69 U	**368**
						819018-TPK20002	7/30/2018			C&D debris from 0-3.4 ft bgs. Slight	2	**7.7**	**6.9 J**	**120 J**	**5 J**	**103 J**	**543 J**	**456 J**	**589 J**	**2**	**72.2 J**	**0.66 J**	**0.56 J**	**694**
						819018-TPK20002D	7/30/2018			organic odor (PID 2.5 ppm) 3.4-7.2	2	**12**	**19.8 J**	**148 J**	**15.2 J**	**402 J**	**1080 J**	**678 J**	**1440 J**	**1.4 J**	**139 J**	4.2 UJ	**3.5**	**972**
						819018-TPK20003	7/30/2018			ft bgs.	3	0.31 U	**3.1**	**72.4**	**0.84**	**16.8**	**12.5**	**58.7**	**94.3**	**0.13**	**13.7**	5.6 U	0.85 U	**98.4**
						819018-TPK20007	7/30/2018				7	0.25 U	**1.1 J**	**48.5**	**0.12 J**	**11.4**	**8.2**	**10**	**105**	**0.011 J**	**10.6**	4.7 U	0.71 U	**37.9**

Table 5: Boring/Test Pit Select Data

	Sample Location											Analytical Results											
Site Type	**Location ID**	**Grid ID**	**Latitude**	**Longitude**	**Ground Elevation (ft)**	**Field Sample ID**	**Sample Date**	**Fill Thickness [1] (ft)**	**Observed Impacts[2] (Y/N)**	**Comment (Staining, Odors, Types of Fill [Metal, Ceramics, Bricks])**	**Sample Depth (ft bgs)**	PCB (total) 1 (mg/kg)	Arsenic 16 (mg/kg)	Barium 350 (mg/kg)	Cadmium 2.5 (mg/kg)	Chromium 22 (mg/kg)	Copper 270 (mg/kg)	Lead 400 (mg/kg)	Manganese 2000 (mg/kg)	Mercury 0.81 (mg/kg)	Nickel 140	Selenium 36	Silver 36	Zinc 2200
TP	TP-K22	K22	1257003.1	1097025.2	901.3	819018-TPK22000	7/27/2018	1.5	Y	Slag, metal, brick, rubber in fill.	0	**21**	**22.2**	**524**	**24.4**	**140**	**4840**	**1680**	**908**	**4.9 J**	**96.6**	**5 J**	**4.8**	**35300**
						819018-TPK22003	7/27/2018			Petroleum like odor (PID 2.0 ppm)	3	0.25 U	**2.9**	**34.6**	**0.29**	**11.1**	**77.4**	**20.2**	**245**	0.022 U	**10.6**	4.6 U	0.68 U	**71.1**
						819018-TPK22004	7/27/2018			and gray staining to 5.5 ft bgs.	4	0.25 U	**2.4 J**	**68.7**	**0.53**	**13.8**	**13.5**	**24.9**	**77.7**	**0.091**	**11**	4.9 U	0.74 U	**74.1**
						819018-TPK22007	7/27/2018				7	0.24 U	**2.3**	**70.3**	**0.21 J**	**14.4**	**13**	**9.5**	**383**	**0.02 J**	**14.5**	4.3 U	0.65 U	**50.8**
TP	TP-K24	K24	1257029.3	1097067.8	900.0	819018-TPK24000	7/26/2018	3.8	Y	Metal in top 1.1 ft bgs, strong odor	0	**7**	**25.4 J**	**217**	**12.4**	**6130**	**2040**	**1200**	**1070**	**4.2**	**313**	**9.4**	**4**	**2440**
						819018-TPK24001	7/26/2018			(PID 3.5 ppm) 3.8-4.8 ft bgs.	1	**0.69**	**5.7**	**50.3**	**1.4**	**40.3**	**151**	**168**	**461**	**0.1**	**32.2**	4.2 U	0.63 U	**582**
						819018-TPK24004	7/26/2018				4	0.24 U	**5**	**62.3**	**0.55**	**11.6**	**12.8**	**35.1**	**127**	**0.068**	**10.8**	4.5 U	0.68 U	**83.5**
						819018-TPK24007	7/26/2018				7	0.2 U	**1.8 J**	**52.8**	**0.14 J**	**13.1**	**9.6**	**4.5**	**290**	0.023 U	**12.3**	4.5 U	0.68 U	**26.9**
TP	TP-K26	K26	1257055.6	1097110.4	899.0	819018-TPK26000	7/26/2018	2.7	Y	Wires, metal, C&D debris, and slag	0	**36**	**24.1**	**362**	**22.2**	**885**	**5760**	**2530**	**1420**	**5.8**	**345**	**15.5**	**7.1**	**4850**
						819018-TPK26003	7/26/2018			from 0.0-1.0 ft bgs, black stained	3	**4.7**	**11.2**	**47.1**	**1.3**	**23.4**	**145**	**166**	**368**	**0.47**	**26.6**	4.4 U	**0.33 J**	**207**
						819018-TPK26006	7/26/2018			slag from 2.5-2.7 ft bgs.	6	**7.3**	**1.4 J**	**20.8**	**0.29**	**7**	**24.5**	**21.9**	**214**	**0.1**	**7.1**	4.3 U	0.64 U	**61.6**
TP	TP-K28	K28	1257081.8	1097152.9	898.8	819018-TPK28000	7/26/2018	2	Y	Wires, metal, C&D debris, and slag from 0.0-1.8 ft bgs, black stained	0	**9.8**	**5.5**	**72.7**	**5.4**	**117**	**671**	**465**	**280**	**1.7**	**53.8**	4.5 U	**1.8**	**710**
						819018-TPK28002	7/26/2018			slag and orange sand from 1.8-2.0 ft	2	**2.8**	**15.7**	**242**	**3.6**	**57.3**	**645**	**474**	**980**	**0.2**	**70.9**	4.4 U	3.3 U	**8040**
						819018-TPK28005	7/26/2018			bgs.	5	**1**	**2.5**	**23.8**	**0.4**	**6.7**	**109**	**38.6**	**442**	**0.049**	**8.5**	4.4 U	0.66 U	**512**
TP	TP-K30	K30	1257114.2	1097191.6	899.9	819018-TPK30000	7/25/2018	2.2	Y	Wires, metal, C&D debris, bricks, wood fragments, and slag, strong	0	**11**	**6.1**	**99.2**	**3.5**	**167**	**564**	**351**	**347**	**3.9**	**59.4**	**0.54 J**	**1.2**	**693**
						819018-TPK30002	7/25/2018			odor (PID 15.9 ppm), refusal on slag floor at 2.2 ft bgs.	2	**17 J**	**17.1**	**249**	**14.4**	**230**	**3530**	**2690**	**992**	**3.2**	**115**	**2.6 J**	**5.6**	**4060**
TP	TP-K34	K34	1257160.6	1097280.6	899.6	819018-TPK34000	7/24/2018	5	Y	Metal, C&D debris, bricks, rubber	0	**28 J**	**25.5**	**358**	**17.5**	**843**	**2360**	**1870**	**1090**	**4.6**	**446**	**0.94 J**	**6.7**	**3150**
						819018-TPK34003	7/24/2018			hose, dark gray staining, strong odor	3	**100**	**13.3 J**	**319**	**22.2**	**371**	**7560**	**1620**	**1040**	**2.4**	**281**	**13.4 J**	**669**	**5560**
						819018-TPK34005	7/24/2018			(PID 35.0 ppm) from 0-5.0 ft bgs.	5	**4.4**	**12.8**	**315**	**20.6**	**310**	**22800**	**1860**	**583**	**4.7**	**111**	**4.2 J**	**7.3**	**3550**
						819018-TPK34008	7/24/2018				8	**0.11 J**	**2.1 J**	**108**	**0.28**	**14.8**	**52.8**	**20.7**	**477**	**0.017 J**	**16.8**	4.7 U	0.7 U	**66.9**
TP	TP-K36	K36	1257186.8	1097323.1	901.0	819018-TPK36000	7/24/2018	5.2	N	Metal, C&D debris, and concrete throughout. Large concrete chunks	0	**17**	**9.7**	**194**	**18.3**	**110**	**2330**	**1570**	**458**	**3.7**	**94.4**	**4.1 J**	**5.9**	**4330**
						819018-TPK36002	7/24/2018			and carpet from 0.0-2.0 ft bgs, trace	2	**13**	**10.2**	**570**	**28.5**	**345**	**21300**	**6590**	**944**	**3.3**	**258**	**8.3 J**	**20.3**	**14300**
						819018-TPK36005	7/24/2018			tires only from 0.0-1.0 ft bgs.	5	**40**	**10.5**	**448**	**12.9**	**288**	**6960**	**1740**	**1250**	**3.6**	**217**	**6.3 J**	**15.7**	**5540**
						819018-TPK36007	7/24/2018				7	0.25 U	**0.68 J**	**85.7**	**0.22**	**11.7**	**101**	**38**	**101**	**0.033**	**11**	4.5 U	0.67 U	**88.2**
TP	TP-K38	K38	1257213.1	1097365.7	897.4	819018-TPK38000	7/23/2018	3.7	N	Some metal and woody debris	0	**71**	**6.4**	**375**	**51.8**	**825**	**1980**	**1790**	**402**	**2.4**	**74.1**	6 U	**3.5**	**4140**
						819018-TPK38002	7/23/2018			throughout, tires in top 2 ft. PID 2.7	2	**24**	**7.2**	**578**	**19.2**	**210**	**7030**	**2470**	**474**	**4.2**	**121**	**6.6**	**11.5**	**4480**
						819018-TPK38004	7/23/2018			ppm at 3.7 ft bgs.	4	**7.1**	**1.8 J**	**112**	**1.1**	**21.5**	**50.6**	**17.6**	**109**	**0.089**	**19.7**	5.6 U	0.85 U	**222**
						819018-TPK38006	7/23/2018				6	0.22 U	**1.1 J**	**51.6**	**0.18 J**	**14.1**	**12.6**	**7.9**	**292**	**0.011 J**	**13.9**	4.8 U	0.72 U	**38.6**
TP	TP-K40	K40	1257239.4	1097408.2	897.4	819018-TPK40000	7/23/2018	1.4	Y	Some metal and woody debris from 0-	0	**270**	**13.8**	**574**	**18**	**350**	**3620**	**12500**	**929**	**10**	**416**	5 U	**103**	**4460**
						819018-TPK40002	7/23/2018			1.4 ft bgs.	2	**3.9**	**3.1**	**132 J**	**3.2 J**	**40.3 J**	**715 J**	**332 J**	**225**	**3 J**	**34.9 J**	4.9 U	**2 J**	**740 J**
						819018-TPK40002D	7/23/2018				2	**6.1**	**3.5**	**164 J**	**4.8 J**	**62 J**	**1140 J**	**709 J**	**189**	**1.1 J**	**60.5 J**	4.9 U	**3.7 J**	**1450 J**
						819018-TPK40004	7/23/2018				4	**1.5**	**1.7 J**	**39.2**	**1.2**	**25.5**	**224**	**83.9**	**350**	**0.32**	**19**	4.3 U	**0.97**	**191**
TP	TP-K42	K42	1257265.6	1097450.8	897.3	819018-TPK42000	7/23/2018	1	Y	Some metal and woody debris from 0-	0	**30**	**8.5**	**601**	**12**	**66.3**	**2810**	**2280**	**551**	**2**	**68.7**	**0.94 J**	**3.1**	**5020**
						819018-TPK42001	7/23/2018			1.0 ft bgs.	1	**0.76**	**1.9 J**	**111**	**0.72**	**15.5**	**135**	**108**	**88.6**	**0.11**	**13.6**	**0.59 J**	0.81 U	**232**
						819018-TPK42003	7/23/2018				3	0.25 U	**1.6 J**	**48.6**	**0.23 J**	**13.1**	**21.1**	**14.8**	**273**	**0.012 J**	**12.8**	4.9 U	0.74 U	**62.2**
DP/MW	MW-103	L23	1257037.5	1097033.4	900.2	819018-DPL23000	7/24/2018	5	Y	None observed.	0	0.25 U	**2.3**	**530**	**2**	**101**	**175**	**26**	**296**	**0.095**	**34**	4.4 U	0.67 U	**314**
						819018-DPL23002	7/24/2018				2	0.26 U	**1.1 J**	**19.1**	**0.11 J**	**6**	**6.1**	**4.1**	**200**	**0.011 J**	**5.8**	4.2 U	0.63 U	**21.3**
						819018-DPL23005	7/24/2018				5	0.2 U	**2.3**	**29.6**	**0.53**	**19**	**51.6**	**40.7**	**248**	**0.082**	**10.1**	4.4 U	0.66 U	**94.4**
						819018-DPL23011	7/24/2018				11	0.22 U	**1.9 J**	**20.7**	**0.07 J**	**5.9**	**4.7**	**2.4**	**153**	0.024 U	**4.7 J**	4.7 U	0.7 U	**11.5**
TP	TP-L27	L27	1257090.5	1097118.4	900.5	819018-TPL27000	7/26/2018	4	Y	Little metal and C&D debris 0-4 ft bgs, rainbow sheen on water at slab	0	**310 J**	**10.5**	**602**	**78.7**	**355**	**13200**	**6270**	**2600**	**16.2**	**354**	67.6 U	**19.3**	**19000**
						819018-TPL27002	7/26/2018			floor. Refusal on slab floor at 4 ft	2	**22 J**	**6.3**	**333**	**44.7**	**231**	**14000**	**15900**	**1060**	**6.6**	**553**	53.4 U	**42**	**23100**
						819018-TPL27004	7/26/2018			bgs.	4	**95 J**	**6.2**	**445**	**44.3**	**249**	**9060**	**10000**	**1030**	**5**	**485**	53.8 U	**12.2**	**28600**

Table 5: Boring/Test Pit Select Data

	Sample Location										Analytical Results												
Site Type	**Location ID**	**Grid ID**	**Latitude**	**Longitude**	**Ground Elevation (ft)**	**Field Sample ID**	**Sample Date**	**Fill Thickness [1] (ft)**	**Observed Impacts [2] (Y/N)**	**Comment (Staining, Odors, Types of Fill [Metal, Ceramics, Bricks])**	**Sample Depth (ft bgs)**	PCB (total) 1 (mg/kg)	Arsenic 16 (mg/kg)	Barium 350 (mg/kg)	Cadmium 2.5 (mg/kg)	Chromium 22 (mg/kg)	Copper 270 (mg/kg)	Lead 400 (mg/kg)	Manganese 2000 (mg/kg)	Mercury 0.81 (mg/kg)	Nickel 140	Selenium 36	Silver 36	Zinc 2200
TP	TP-L32	L32	1257150.8	1097228.9	898.8	819018-TPL32000	7/25/2018	3	Y	Wire, metal and C&D debris, bricks, and slag from 0-3 ft bgs. Possible sheen and product 1.7-3 ft bgs, strong odor (PID 6.2 ppm) throughout .	0	**22**	**75.4**	**343**	**22**	**4330**	**3060**	**2510**	**978**	**5.4**	**238**	**26.3**	**5.9**	**4510**
						819018-TPL32002	7/25/2018				2	**53**	**29**	**499**	**36.5**	**439**	**6740**	**2400**	**1500**	**3.1**	**202**	**4.8 J**	**3.1 J**	**3030**
						819018-TPL32005	7/25/2018				5	**1.3**	**3**	**29**	**0.55**	**11**	**179**	**78.7**	**181**	**0.17**	**9.3**	4.2 U	**2.9**	**164**
TP	TP-L44	L44	1257313.1	1097480.2	896.8	819018-TPL44000	7/23/2018	0	N	None	0	**14**	**7.1 J**	**480 J**	**15 J**	**81.1 J**	**2500 J**	**1600 J**	**416 J**	**3.3 J**	**90.4 J**	**1.1 J**	**8.7 J**	**5870 J**
						819018-TPL44001	7/23/2018				1	0.26 U	**0.79 J**	**31.7**	**0.16 J**	**8.5**	**8.2**	**4.4**	**318**	0.024 U	**7.9**	4.8 U	0.72 U	**29.5**
						819018-TPL44002	7/23/2018				2	**0.93**	**2.1 J**	**86.9**	**0.43**	**17**	**29.9**	**25.4**	**99.7**	**0.091**	**13.7**	5.4 U	0.81 U	**87.5**
HA	HA-L45	L45	1257325.6	1097501.6	896.4	819018-HAL45000	8/2/2018	0	N	Wetland area, trace surface debris only.	0	**0.12 J**	**1.8 J**	**51.2**	**0.84**	**14.1**	**72**	**60.6**	**62.1**	**0.22**	**11.9**	5.5 U	**0.28 J**	**218**
						819018-HAL45002	8/2/2018				2	0.22 U	**2.1 J**	**43.4**	**0.12 J**	**10**	**9.5**	**7.3**	**189**	0.022 UJ	**10.6**	4.5 U	0.67 U	**34.9**
DP/MW	MW-107	M02	1256783.1	1096573.5	899.4	819018-DPM02000	7/23/2018	2.3	Y	PID hits 3.1 to 4.5 ppm from 0.8 to 10ft bgs.	0	**5 J**	**13**	**215**	**15.3**	**99.6**	**2320**	**2540**	**547**	**2.7**	**104**	**0.5 J**	**4.2**	**1870**
						819018-DPM02002	7/23/2018				2	**6.7 J**	**8.7**	**116**	**6**	**47.8**	**2570**	**12200**	**465**	**2.6**	**115**	4.3 U	**2.2**	**1180**
						819018-DPM02010	7/23/2018				10	0.21 U	**0.65 J**	**17.4**	**0.23**	**5.3**	**21.9**	**39.1**	**126**	**0.058**	**4.9 J**	4.5 U	0.67 U	**44.7**
DP	DP-M04	M04	1256809.4	1096616.0	900.1	819018-DPM04000	7/23/2018	2.9	Y	PID Hits 1.9 to 5.1ppm throughout (up to 9 ft bgs).	0	**5.9 J**	**7.3**	**126**	**5.3**	**25.1**	**2130**	**1460**	**273**	**1**	**38**	4.2 U	**2.4**	**859**
						819018-DPM04002	7/23/2018				2	0.2 U	**3.2**	**39**	**0.15 J**	**10.1**	**19.9**	**9.6**	**377**	**0.028**	**10.8**	4.1 U	0.62 U	**42.9**
						819018-DPM04006	7/23/2018				6	0.26 U	**2.1**	**31.4**	**0.21**	**10**	**54.4**	**33.5**	**311**	**0.078**	**6.5**	4.2 U	0.63 U	**41.8**
						819018-DPM04009	7/23/2018				9	0.21 U	**1.4 J**	**17.8**	**0.17 J**	**6.3**	**34.6**	**20.9**	**260**	**0.024**	**5 J**	4.2 U	0.62 U	**29.3**
DP	DP-M06	M06	1256835.6	1096658.6	900.3	819018-DPM06000	7/24/2018	3.5	Y	None observed.	0	0.22 U	**3.3**	**36.5**	**0.37**	**10.8**	**130**	**74.5**	**367**	**0.17**	**12.5**	4.3 U	0.65 U	**88.5**
						819018-DPM06002	7/24/2018				2	0.24 U	**3.2**	**39.4**	**0.17 J**	**10.9**	**7.3**	**10.4**	**266**	**0.047**	**10.4**	4.4 U	0.65 U	**27.6**
						819018-DPM06009	7/24/2018				9	0.22 U	**1.6 J**	**19.1**	**0.17 J**	**6.9**	**24.1 J**	**13.7 J**	**239**	**0.022 J**	**5.6**	4.3 U	0.64 U	**23.9 J**
						819018-DPM06009D	7/24/2018				9	0.22 U	**1.2 J**	**17**	**0.12 J**	**5.6**	**15.9 J**	**8.1 J**	**182**	**0.013 J**	**5.5**	4.1 U	0.62 U	**19.7 J**
						819018-DPM06011	7/24/2018				11	0.27 U	2.1 U	**6.6**	**0.066 J**	**2.5**	**3.1 J**	**1.4**	**129**	0.021 U	**2.8 J**	4.3 U	0.64 U	**8.5**
TP	TP-M08	M08	1256861.9	1096701.1	901.1	819018-TPM08000	8/1/2018	1.2	N	Gravel/stone roadbase at surface to 1.2 ft bgs.	0	**67**	**7.4**	**145**	**5.4**	**60.8**	**2730**	**1310**	**486**	**2.4**	**43.6**	**0.79 J**	**1.7**	**965**
						819018-TPM08002	8/1/2018				2	**0.95**	**2.5**	**33.4**	**0.44**	**7.5**	**226**	**102**	**243**	**0.065**	**9.2**	4.3 U	0.64 U	**83.7**
						819018-TPM08005	8/1/2018				5	**1.5**	**2.8**	**32.1**	**0.32**	**9.5**	**113**	**56.8**	**264**	**0.065**	**10.5**	4.5 U	0.68 U	**65.9**
TP	TP-M10	M10	1256888.1	1096743.7	901.9	819018-TPM10001	7/31/2018	0.8	N	Gravel/stone roadbase at surface to 0.8 ft bgs.	1	**2.6**	**4.3**	**58.9**	**7.8**	**21.6**	**287**	**345**	**300**	**0.35**	**22.1**	**0.45 J**	**0.29 J**	**308**
						819018-TPM10002	7/31/2018				2	**0.51**	**2.5**	**30**	**0.68**	**9.6**	**79.9**	**45.5**	**271**	**0.076**	**10.7**	4.4 U	0.65 U	**320**
						819018-TPM10004	7/31/2018				4	**2.2**	**2.8**	**33.7**	**0.54**	**9.7**	**78.2**	**63.5**	**236**	**0.1**	**10.7**	4.3 U	0.64 U	**74.5**
TP	TP-M12	M12	1256914.4	1096786.2	902.9	819018-TPM12000	7/31/2018	2.3	N	Gravel/stone roadbase at surface to 1.7 ft bgs Trace metal fragments 1.7-2.3 ft bgs.	0	**0.61**	**2 J**	**23.2**	**0.49**	**10**	**61**	**84.5**	**134**	**0.059**	**10.3**	4.1 U	0.62 U	**85.6**
						819018-TPM12002	7/31/2018				2	**6.6**	**4 J**	**75.5 J**	**5.2 J**	**55.3 J**	**1240 J**	**963 J**	**306**	**1.3**	**31.6 J**	4.1 U	**2.5**	**645 J**
						819018-TPM12002D	7/31/2018				2	**7.8**	**9.2 J**	**113 J**	**7.9 J**	**66.5 J**	**1780 J**	**32100 J**	**428**	**1.5**	**62.7 J**	4.3 U	**2.5**	**1280 J**
						819018-TPM12007	7/31/2018				7	**0.13 J**	**1.7 J**	**26.9**	**0.19 J**	**6.5**	**18.7**	**19.5**	**224**	**0.022**	**7.6**	4.3 U	0.65 U	**29**
TP	TP-M14	M14	1256940.6	1096828.8	904.4	819018-TPM14000	7/31/2018	2	N	Gravel/stone roadbase at surface to 0.4 ft bgs and old utility wires at 2 ft bgs.	0	**4.1**	**8.1**	**192**	**6.4**	**73.8**	**1220**	**759**	**448**	**1.1 J**	**55.7**	4.4 U	**1.1**	**1510**
						819018-TPM14002	7/31/2018				2	0.27 U	**4.1**	**60**	**0.13 J**	**15.2**	**10.3**	**10.3**	**327**	**0.041**	**16.2**	4.9 U	0.73 U	**36.4**
						819018-TPM14005	7/31/2018				5	0.21 U	**1.3 J**	**15**	**0.047 J**	**3.8**	**2.8 J**	**1.9**	**178**	0.02 U	**4.5 J**	4.3 U	0.65 U	**14.2**
TP	TP-M16	M16	1256966.9	1096871.3	905.5	819018-TPM16000	7/30/2018	2.1	Y	Metal, C&D debris, bricks, and slag from 0-2.1 ft bgs.	0	**9.3**	**8.4**	**459**	**17.4**	**50.6**	**2020**	**3070**	**438**	**1 J**	**78.9**	4.3 U	**1**	**1940**
						819018-TPM16002	7/30/2018				2	**0.84**	**13**	**472**	**6.2**	**1510**	**1490**	**972**	**889**	**0.11 J**	**845**	5.4 U	1.6 U	**5160**
						819018-TPM16006	7/30/2018				6	0.22 U	**2 J**	**23.9**	**0.08 J**	**5.5**	**8.2**	**7.7**	**208**	0.022 U	**6.8**	4.3 U	0.64 U	**24.1**
TP	TP-M18	M18	1256993.1	1096913.9	902.9	819018-TPM18000	7/30/2018	5.2	Y	Metal, C&D debris, ceramics, and slag from 0-5.2 ft bgs.	0	**22**	**12**	**309**	**15**	**291**	**1850**	**1450**	**753**	**5.9 J**	**106**	**2.1 J**	**4.1**	**2710**
						819018-TPM18003	7/30/2018				3	0.23 U	**4.4**	**18.6**	**0.053 J**	**8.2**	**13.8**	**11**	**434**	0.021 U	**7.2**	4.3 U	0.64 U	**23.5**
						819018-TPM18005	7/30/2018				5	0.32 U	**4.3**	**54.1**	**0.32**	**14.4**	**9.5**	**36.2**	**145**	**0.14**	**12.7**	5.2 U	0.78 U	**58.1**
						819018-TPM18008	7/30/2018				8	0.25 U	**1.5 J**	**17.2**	**0.15 J**	**6.3**	**8.4**	**17.7**	**193**	**0.027**	**6.1**	4.5 U	0.67 U	**30.3**
TP	TP-M20	M20	1257019.4	1096956.4	902.0	819018-TPM20000	7/30/2018	5.3	Y	Metal, C&D debris, ceramics, slag, bricks, tires, petroleum-like odor (PID 10.8 ppm) observed 0-5.3 ft bgs.	0	**5.7**	**5.9**	**117**	**7.2**	**141**	**825**	**635**	**459**	**1 J**	**86.9**	4.8 U	**1.9**	**1110**
						819018-TPM20002	7/30/2018				2	**35**	**20.1**	**1470**	**37.1**	**97.6**	**1300**	**3560**	**949**	**7.8 J**	**124**	4.1 U	**42.6**	**2990**
						819018-TPM20004	7/30/2018				4	**5.3**	**23.8**	**396**	**12**	**86.5**	**1190**	**1680**	**655**	**1.6 J**	**84.1**	4.9 U	**2.7**	**2860**
						819018-TPM20005	7/30/2018				5	0.23 U	**1.9 J**	**63.7**	**0.31**	**13.4**	**8.5**	**40.5**	**83**	**0.087**	**9.2**	5.1 U	0.77 U	**107**
						019018-TPM20007	7/30/2018				7	0.24 U	**0.63 J**	**47.3**	**0.052 J**	**11.7**	**8.7**	**7.6**	**194**	0.024 U	**11.2**	4.7 U	0.71 U	**25.4**

Table 5: Boring/Test Pit Select Data

	Sample Location											Analytical Results												
Site Type	**Location ID**	**Grid ID**	**Latitude**	**Longitude**	**Ground Elevation (ft)**	**Field Sample ID**	**Sample Date**	**Fill Thickness [1] (ft)**	**Observed Impacts[2] (Y/N)**	**Comment (Staining, Odors, Types of Fill [Metal, Ceramics, Bricks])**	**Sample Depth (ft bgs)**	PCB (total) 1 (mg/kg)	Arsenic 16 (mg/kg)	Barium 350 (mg/kg)	Cadmium 2.5 (mg/kg)	Chromium 22 (mg/kg)	Copper 270 (mg/kg)	Lead 400 (mg/kg)	Manganese 2000 (mg/kg)	Mercury 0.81 (mg/kg)	Nickel 140	Selenium 36	Silver 36	Zinc 2200
TP	TP-M22	M22	1257045.6	1096999.0	900.8	819018-TPM22000	7/27/2018	4.4	Y	Metal, brick, plastic, glass, C&D debris, petroleum-like odor (1.7-2.3 ft bgs, 4.8 ppm PID).	0	**10**	**13.8**	**187**	**12.5**	**229**	**1440**	**1280**	**690**	**3.6 J**	**139**	**1.1 J**	**5.6**	**2970**
						819018-TPM22002	7/27/2018				2	0.26 U	**2.5**	**56.2**	**1.3 J**	**11.7**	**48.1 J**	**215 J**	**123**	**0.043 J**	**8.5**	4.3 U	0.65 U	**105**
						819018-TPM22002D	7/27/2018				2	**0.12 J**	**3.1**	**64.3**	**0.62 J**	**14.4**	**43.7 J**	**97.4 J**	**132**	**0.13 J**	**10.1**	**0.49 J**	0.69 U	**82.2**
						819018-TPM22004	7/27/2018				4	0.26 U	**1.8 J**	**28.5**	**0.12 J**	**7.9**	**6.1**	**8.5**	**176**	**0.023**	**7.2**	4.5 U	0.68 U	**90.5**
						819018-TPM22007	7/27/2018				7	0.24 U	**1 J**	**24.9**	**0.041 J**	**8.9**	**4.5**	**3**	**127**	0.023 U	**6**	4.4 U	0.66 U	**20.4**
TP	TP-M24	M24	1257071.9	1097041.5	900.0	819018-TPM24000	7/26/2018	2.5	Y	Metal and plastic 0-2.5 ft bgs, strong odor 2.5-5.0 bgs (19.4 ppm PID).	0	**19**	**7.8**	**135**	**19.4**	**710**	**1240**	**987**	**526**	**2.8**	**188**	**2.5 J**	**3.3**	**2260**
						819018-TPM24003	7/26/2018				3	**4.6**	**4.5**	**99.3**	**1.7**	**35.2**	**850**	**204**	**396**	**0.67**	**21.6**	4.1 U	**0.49 J**	**556**
						819018-TPM24005	7/26/2018				5	**0.16 J**	**2.4**	**48.2**	**0.61**	**12.6**	**65.1**	**72.5**	**203**	**0.61**	**9.5**	4.5 U	0.68 U	**87.9**
TP	TP-M26	M26	1257098.1	1097084.1	900.3	819018-TPM26000	7/26/2018	3.5	Y	Little metal 0-2.3 ft bgs. Dark gray staining, woody bits, moderate to strong odor 2.3-3.5 ft bgs (2.0 ppm PID).	0	**1.9**	**11.4**	**41.4**	**2.5**	**16.9**	**197**	**165**	**241**	**0.42**	**31.2**	4.3 U	0.64 U	**382**
						819018-TPM26002	7/26/2018				2	0.22 U	**14.3**	**42.1**	**0.23 J**	**10.4**	**40**	**73.9**	**384**	**0.077**	**13.5**	4.8 U	0.72 U	**59.2**
						819018-TPM26006	7/26/2018				6	**0.59**	**2.2**	**19.8**	**0.2 J**	**7.6**	**24.9**	**39.5**	**212**	**0.053**	**8.3**	4.4 U	0.66 U	**64.5**
TP	TP-M28	M28	1257124.4	1097126.7	900.0	819018-TPM28000	7/26/2018	1	Y	Plastic/trash, organic decomposition odor in top 1.0 ft.	0	**7.9**	**13**	**290**	**29.4**	**253**	**14600**	**1350**	**515**	**3.9**	**104**	**1.9 J**	**12.5**	**2330**
						819018-TPM28003	7/26/2018				3	0.18 U	**4.3**	**32.2**	**0.42**	**7.6**	**41.6**	**36.2**	**215**	**0.048**	**10.6**	4.2 U	0.62 U	**323**
						819018-TPM28006	7/26/2018				6	0.19 U	**1.6 J**	**11.8**	**0.062 J**	**3.6**	**2.1 J**	**1.4**	**117**	0.022 U	**3.4 J**	4.4 U	0.67 U	**13.2**
TP	TP-M30	M30	1257155.9	1097165.3	900.5	819018-TPM30000	7/25/2018	1.7	Y	Stone, metal, wood fragments from 0-1.7 ft bgs. Medium to strong odor (PID 1.2 ppm) and slight gray staining from 2.7-4.0 ft bgs.	0	**17**	**20.3**	**262**	**22**	**177**	**13700**	**3200**	**706**	**5.7**	**154**	25.1 U	**8**	**3290**
						819018-TPM30001	7/25/2018				1	**4.7**	**5.8 J**	**45.7**	**0.75**	**4750**	**114**	**82.6**	**501**	**0.27**	**2180**	4.6 U	**1.5**	**313**
						819018-TPM30003	7/25/2018				3	**0.63**	**3.2**	**64.3**	**1.2**	**10.5**	**146**	**91.9**	**362**	**0.087**	**11.6**	4.5 U	**10**	**1120**
						819018-TPM30004	7/25/2018				4	**1.1**	**2.3 J**	**76.9**	**1.1**	**104**	**76.3**	**611**	**252**	**0.22**	**11.4**	4.8 U	**4.2**	**461**
TP	TP-M38	M38	1257255.7	1097339.4	899.4	819018-TPM38000	7/24/2018	3.3	Y	Stone, C&D debris, and tires from 0-3 ft bgs, Dark gray staining and petroleum-like odor (PID 2.3 ppm) 2-3 ft bgs.	0	**64 J**	**11**	**487**	**16.9**	**156 J**	**6350**	**2540**	**922**	**5.7**	**134 J**	**5.3 J**	**7.6**	**3180**
						819018-TPM38002	7/24/2018				2	**69 J**	**17.8**	**730**	**23.5**	**368**	**4320**	**2200**	**959**	**13.2**	**258**	**4.6 J**	**17.8**	**5070**
						819018-TPM38003	7/24/2018				3	**1.3 J**	**1 J**	**71.5**	**0.49**	**15.6**	**44**	**30.8**	**120**	**0.58**	**11.7**	**0.46 J**	**0.23 J**	**85.6**
						819018-TPM38006	7/24/2018				6	**1.2 J**	**0.99 J**	**23**	**0.27**	**5.9**	**42.7**	**22.8**	**167**	**0.022**	**5.5**	4.4 U	0.66 U	**60**
TP	TP-M40	M40	1257281.9	1097382.0	900.9	819018-TPM40000	7/23/2018	3.2	Y	Plastic and metal debris from 0-3.2 ft bgs. Petroleum-like odors throughout (PID 7.0 ppm).	0	**37**	**18.7**	**895**	**34**	**538**	**6620**	**6020**	**928**	**9.7**	**434**	**8.5**	**15**	**6820**
						819018-TPM40002	7/23/2018				2	**17**	**2 J**	**192**	**2.8**	**29.3**	**759**	**220**	**120**	**0.5**	**41.4**	**0.71 J**	**1.7**	**554**
						819018-TPM40003	7/23/2018				3	**11**	**3.3**	**247**	**5.2**	**41.2**	**1430**	**516**	**208**	**4.1**	**37.4**	**1.1 J**	**3.7**	**950**
						819018-TPM40005	7/23/2018				5	0.27 U	**3.2**	**68.3**	**0.17 J**	**17**	**22.2**	**8.1**	**417**	**0.018 J**	**20.2**	4.7 U	0.71 U	**39.1**
TP	TP-M42	M42	1257308.2	1097424.5	899.2	819018-TPM42000	7/23/2018	3.1	Y	Tires 0-2 ft bgs. PID 1.3 ppm in top 3 ft.	0	**70**	**6.9**	**390**	**12.7**	**141**	**1720**	**1260**	**690**	**6.1**	**117**	**1.2 J**	**6.9**	**2430**
						819018-TPM42002	7/23/2018				2	**23**	**7.3**	**485**	**11.9**	**114**	**1900**	**1790**	**459**	**3.5**	**101**	**1.4 J**	**9.8**	**4130**
						819018-TPM42004	7/23/2018				4	**0.58 J**	**1.2 J**	**44.4 J**	**0.2 J**	**10.2**	**21.4 J**	**15 J**	**200**	**0.011 J**	**10.5**	4.7 U	0.71 U	**50.6 J**
						819018-TPM42004D	7/23/2018				4	0.28 UJ	**0.72 J**	**36.5 J**	**0.17 J**	**9.1**	**16.2 J**	**12.8 J**	**199**	**0.066 J**	**9.9**	4.7 U	0.7 U	**41.6 J**
DP/MW	MW-105	N14	1256961.9	1096815.7	905.0	819018-DPN14000	7/24/2018	0.7	Y	None observed.	0	**0.84 J**	**3.1**	**72**	**1.3**	**15.1**	**218**	**272**	**287**	**0.26**	**21.4**	4.2 U	**0.22 J**	**195**
						819018-DPN14002	7/24/2018				2	**120 J**	**10.6**	**164**	**13**	**69.7**	**1970**	**2440**	**445**	**15.6**	**115**	**0.72 J**	**2.6**	**1850**
						819018-DPN14008	7/24/2018				8	**0.11 J**	**2.8**	**19.9**	**0.17 J**	**5**	**13.5**	**12.1**	**193**	**0.048**	**5.5**	4.3 U	0.65 U	**42.1**
HA	HA-V24	N24	1257272.6	1096920.8	899.6	819018-HAV24001	8/2/2018	0	N	None	1	0.26 U	**7**	**74.4**	**0.54**	**16.9**	**41.2**	**61.3**	**505**	**0.13 J**	**13.7**	4.7 U	0.71 U	**83.3**
HA	HA-V27	N27	1257309.3	1096992.2	898.5	819018-HAV27001	8/2/2018	0	N	None	1	0.24 U	**8.6**	**73.4**	**1.2**	**17.6**	**89.4**	**97.9**	**328**	**0.3**	**15**	**0.84 J**	0.67 U	**158**
TP	TP-N32	N32	1257192.5	1097202.6	899.0	819018-TPN32000	7/25/2018	2.7	Y	Brick and metal throughout, slight odor (3.3 ppm PID), sheen at 5ft bgs. Saturated and loose at 4.5 ft bgs.	0	**38**	**15.8**	**297**	**21.4**	**199**	**2190**	**3380**	**884**	**10.2**	**172**	**2.9 J**	**5.2**	**3270**
						819018-TPN32002	7/25/2018				2	**19 J**	**4.4**	**148 J**	**4.7 J**	**33.1 J**	**2050 J**	**3420 J**	**358 J**	**13.6 J**	**39.2 J**	**0.85 J**	**2.9 J**	**779 J**
						819018-TPN32002D	7/25/2018				2	**42 J**	**11.1**	**315 J**	**15.8 J**	**87.8 J**	**122000 J**	**17300 J**	**734 J**	**14.4**	**110 J**	**2.7 J**	**6.9 J**	**2100 J**
						819018-TPN32005	7/25/2018				5	**1.5**	**1 J**	**28.4**	**0.77**	**8.2**	**124**	**74.4**	**167**	**0.24**	**9.7**	5.3 U	0.8 U	**108**
TP	TP-N34	N34	1257218.8	1097245.2	898.9	819018-TPN34000	7/24/2018	4	Y	Cinder block and rubber hose in fill; sheen and strong odor (13.7 ppm PID) at 2.5-4 ft bgs; dark gray staining and some odor 4-6.5 ft bgs.	0	**29**	**17.5**	**470**	**32.8**	**347**	**3600**	**2750**	**1130**	**9.2**	**383**	25 U	**10.8**	**5730**
						819018-TPN34002	7/24/2018				2	**9.6**	**9**	**125**	**6.4**	**66.2**	**1020**	**756**	**291**	**2.6**	**52.7**	**1.1 J**	**2.4**	**1180**
						819018-TPN34004	7/24/2018				4	**0.26**	**1.1 J**	**29.8**	**2.3**	**8.9**	**27.5**	**21.6**	**160**	**0.03**	**14.9**	4.4 U	0.66 U	**56**
						819018-TPN34007	7/24/2018				7	0.21 U	**1.1 J**	**37.3**	**0.24 J**	**12.3**	**44.6**	**25.6**	**242**	**0.033**	**10.6**	4.9 U	0.74 U	**67.7**
TP	TP-N36	N36	1257245.0	1097287.8	899.5	819018-TPN36000	7/24/2018	4	Y	0-2.5 ft bgs Metal and C&D debris; Tires top 1ft. 2.5-4.0 ft bgs Black woody debris, railroad ties, and moderate odor (3.9 ppm PID); 4-6 ft bgs Dark gray staining and very strong odor (2.4 ppm PID).	0	**31**	**20**	**797**	**21**	**316**	**4230**	**4930**	**988**	**14.7**	**156**	24.9 U	**15.2**	**5680**
						819018-TPN36003	7/24/2018				3	**25 J**	**8.8**	**329**	**13.7**	**108**	**1960**	**1220**	**482**	**8.4**	**98.2**	**2.2 J**	**19.1**	**2340**
						819018-TPN36004	7/24/2018				4	**3.8 J**	**1.3 J**	**72.7**	**0.5**	**17.1**	**55.3**	**37.7**	**196**	**0.5**	**18.4**	4.7 U	0.71 U	**130**
						819018-TPN36006	7/24/2018				6	**1.4 J**	**1.8 J**	**41.7**	**0.1 J**	**11.6**	**12.8**	**8.6**	**322**	0.025 U	**11.6**	5 U	0.75 U	**36.9**

Table 5: Boring/Test Pit Select Data

	Sample Location											Analytical Results												
Site Type	**Location ID**	**Grid ID**	**Latitude**	**Longitude**	**Ground Elevation (ft)**	**Field Sample ID**	**Sample Date**	**Fill Thickness [1] (ft)**	**Observed Impacts[2] (Y/N)**	**Comment (Staining, Odors, Types of Fill [Metal, Ceramics, Bricks])**	**Sample Depth (ft bgs)**	PCB (total) 1 (mg/kg)	Arsenic 16 (mg/kg)	Barium 350 (mg/kg)	Cadmium 2.5 (mg/kg)	Chromium 22 (mg/kg)	Copper 270 (mg/kg)	Lead 400 (mg/kg)	Manganese 2000 (mg/kg)	Mercury 0.81 (mg/kg)	Nickel 140	Selenium 36	Silver 36	Zinc 2200
TP	TP-N44	N44	1257355.7	1097454.0	897.2	819018-TPN44000	7/23/2018	0.2	Y	Surficial tires.	0	**13**	**4**	**186**	**8.2**	**51.3**	**1360**	**814**	**191**	**1.7**	**71.1**	**0.89 J**	**2.5**	**2090**
						819018-TPN44001	7/23/2018				1	0.29 U	**1.2 J**	**51.7**	**0.4**	**11.3**	**33.5**	**18.4**	**128**	**0.015 J**	**11.2**	5.2 U	0.77 U	**55.7**
						819018-TPN44002	7/23/2018				2	0.24 U	**1.8 J**	**48.9**	**0.13 J**	**12.3**	**10.9**	**7.7**	**242**	**0.027**	**11.3**	4.8 U	0.72 U	**36.3**
HA	HA-N46	N46	1257382.3	1097492.2	896.1	819018-HAN46000	8/2/2018	0	N	None	0	**2.7**	**1.5 J**	**44.5**	**1**	**15.1**	**73.8**	**65.4**	**53.7**	**0.26**	**12.6**	4.5 U	**0.35 J**	**262**
						819018-HAN46002	8/2/2018				2	**0.2 J**	**1.5 J**	**48.4**	**0.32**	**11.6**	**21.6**	**15.5**	**142**	**0.024 J**	**11.7**	4.8 U	0.72 U	**62.5**
DP	DP-O02	O02	1256825.7	1096547.2	899.7	819018-DPO02000	7/23/2018	5	Y	Staining 3.5-4.0 ft bgs. PID hit of 3.2 ppm from 5-6.5 ft bgs.	0	**0.38 J**	**3**	**40.8**	**0.37**	**20**	**338**	**62.2**	**467**	**0.14**	**11.9**	4.1 U	0.61 U	**308**
						819018-DPO02005	7/23/2018				5	0.27 U	**3.8**	**60.7 J**	**0.55**	**14.6**	**18.1**	**70.3 J**	**276**	**0.11**	**12.3**	4.8 U	0.72 U	**65.5 J**
						819018-DPO02007	7/23/2018				7	0.26 U	**1.7 J**	**25**	**0.099 J**	**7.1**	**13.8**	**4.3**	**272**	0.021 U	**6.7**	4.2 U	0.63 U	**17.5**
						819018-DPO02011	7/23/2018				11	0.22 U	2.1 U	**11.4**	**0.087 J**	**4.3**	**5.7**	**0.91 J**	**150**	0.021 U	**5 J**	4.3 U	0.64 U	**15.3**
DP	DP-O04	O04	1256851.9	1096589.8	900.7	819018-DPO04000	7/23/2018	2.9	Y	Staining and PID reading of 2.1 ppm from 2.9-4.0 ft bgs.	0	0.21 U	**2.9**	**36.4**	**0.2 J**	**13.4**	**40.9**	**20.4**	**378**	**0.045**	**10.4**	4.3 U	0.65 U	**47.6**
						819018-DPO04004	7/23/2018				4	**1.9**	**5.5**	**114**	**1.6**	**19.7**	**105**	**310**	**375**	**0.67**	**17.3**	5.4 U	0.81 U	**207**
						819018-DPO04006	7/23/2018				6	0.23 U	**1.6 J**	**21.5**	**0.12 J**	**5.8**	**5.9**	**12.2**	**197**	**0.021**	**5.6**	4.4 U	0.66 U	**18.1**
						819018-DPO04007	7/23/2018				7	0.2 U	**1.4 J**	**18.4**	**0.082 J**	**5.1**	**6.2**	**2.8**	**190**	0.022 U	**5.7**	4.4 U	0.67 U	**15**
DP	DP-O06	O06	1256878.2	1096632.3	901.0	819018-DPO06000	7/23/2018	3	Y	Staining 2.0-3.0 ft bgs. PID hit of 2.3 ppm from 0-2.0 ft bgs.	0	**0.17 J**	**3.4**	**44.4**	**0.66**	**10.4**	**39**	**41.9**	**467**	**0.23**	**13.6**	4.2 U	0.63 U	**68.2**
						819018-DPO06003	7/23/2018				3	0.24 U	**4.5**	**49.8**	**0.32**	**11.9**	**15.3**	**64**	**287**	**0.087**	**9.1**	4.9 U	0.73 U	**61**
						819018-DPO06008	7/23/2018				8	0.25 U	**0.83 J**	**6.7**	0.21 U	**2.8**	**1.2 J**	5.2 U	**125**	**0.0088 J**	**2.2 J**	4.2 U	0.62 U	**6.1**
						819018-DPO06010	7/23/2018				10	0.23 U	**0.48 J**	**11.5**	0.22 U	**3.7**	**0.86 J**	1.1 U	**71.8**	0.021 U	**2.9 J**	4.3 U	0.65 U	**8.5**
DP	DP-O08	O08	1256904.4	1096674.9	901.7	819018-DPO08000	7/24/2018	2.2	Y	Possible staining with bricks and ceramics from 0.2-1.5 ft bgs.	0	**15 J**	**10.4**	**172**	**335**	**39.1**	**4990**	**2290**	**480**	**3**	**39**	**1.4 J**	**2**	**1150**
						819018-DPO08002	7/24/2018				2	0.25 U	**5**	**89**	**0.33**	**13.4**	**16.9**	**99.4**	**266**	**0.11**	**11.2**	**0.59 J**	0.69 U	**121**
						819018-DPO08006	7/24/2018				6	0.2 U	**2.4**	**21.9**	**0.095 J**	**6.7**	**29**	**20.3**	**306**	**0.022**	**7.6**	4.3 U	0.65 U	**27.3**
DP	DP-O10	O10	1256930.7	1096717.4	902.2	819018-DPO10000	7/24/2018	2	N	Plastics and metal fragments from 1.0-2.0 ft bgs.	0	0.25 U	**2.5**	**58.1**	**0.18 J**	**8**	**29.9**	**14.3**	**357**	**0.018 J**	**8.5**	4.2 U	0.62 U	**47.4**
						819018-DPO10002	7/24/2018				2	0.23 U	**3.8**	**65**	**0.28**	**14.5**	**35.5**	**37.1**	**357**	**0.077**	**14.2**	4.5 U	0.67 U	**52.9**
						819018-DPO10006	7/24/2018				6	0.23 U	**1.4 J**	**20.7**	**0.14 J**	**7.4**	**15.9**	**12.1**	**191**	**0.051**	**6.5**	4.3 U	0.65 U	**29.1**
TP	TP-O12	O12	1256956.9	1096760.0	904.6	819018-TPO12001	7/31/2018	0.8	N	Roadbase, geofabric, metal, and glass fragments from 0-0.8 ft bgs.	1	**5.8**	**6.3**	**134**	**10**	**98.6**	**4140**	**41400**	**465**	**1.8**	**70**	4.2 U	**2.9**	**3400**
						819018-TPO12002	7/31/2018				2	**0.17 J**	**1.9 J**	**25.3**	**0.26**	**7.4**	**132**	**83.2**	**263**	**0.083**	**21.2**	4.3 U	0.64 U	**61.5**
						819018-TPO12005	7/31/2018				5	0.2 U	**1.6 J**	**21.6**	**0.1 J**	**6.2**	**32**	**18.7**	**211**	**0.014 J**	**6.6**	4.4 U	0.65 U	**25.8**
TP	TP-O14	O14	1256983.2	1096802.5	905.2	819018-TPO14000	7/31/2018	0.4	Y	Roadbase at surface and geotextile fabric at 0.4 ft bgs.	0	**15**	**2.1**	**23.8**	**0.31**	**6.1**	**24.8**	**29.9**	**158**	**0.065**	**6.9**	4.2 U	0.62 U	**42.5**
						819018-TPO14002	7/31/2018				2	0.23 U	**2.7**	**21.9**	**0.043 J**	**5.4**	**5.5**	**2.5**	**212**	**0.0089 J**	**6.5**	4.4 U	0.66 U	**16.5**
						819018-TPO14005	7/31/2018				5	0.27 U	**1.9 J**	**20.8**	**0.11 J**	**6.5**	**10.8**	**10.7**	**229**	**0.13**	**6.6**	4.3 U	0.65 U	**32**
TP	TP-O16	O16	1257009.4	1096845.1	905.0	819018-TPO16000	7/30/2018	2	Y	C&D debris, trace metal, brick, and some cobble sized slag from 0.0-2.0 ft bgs. Faint petroleum-like odor (PID 1.2 ppm).	0	**37**	**12.5**	**221**	**18.1**	**114**	**2360**	**1920**	**633**	**5.4 J**	**93.1**	**1.1 J**	**8.3**	**2300**
						819018-TPO16002	7/30/2018				2	0.23 U	**4.6 J**	**61.8**	**0.17 J**	**15.2**	**10.7 J**	**53.1 J**	**272 J**	**0.12 J**	**18**	4.6 UJ	0.69 UJ	**50.8 J**
						819018-TPO16002D	7/30/2018				2	**0.32**	**3.8 J**	**57.7**	**0.34 J**	**11.6**	**22.7 J**	**116 J**	**2330 J**	**0.075 J**	**13.1**	4.5 UJ	0.67 UJ	**81.7 J**
						819018-TPO16005	7/30/2018				5	0.24 U	**1.3 J**	**17.1**	**0.073 J**	**4.1**	**8.4**	**6.6**	**186**	0.022 U	**4.8 J**	4.4 U	0.66 U	**19.2**
TP	TP-O20	O20	1257061.9	1096930.2	902.2	819018-TPO20000	7/27/2018	2.3	Y	0-2 ft bgs Metal, bricks, concrete, ceramic; 2-2.3 ft bgs Trace ceramics and dark gray staining and petroleum-like odor.	0	**53**	**10.5**	**222**	**18.4**	**170**	**2190**	**1700**	**670**	**6.8 J**	**173**	**1.9 J**	**6.6**	**2560**
						819018-TPO20002	7/27/2018				2	0.24 U	**2.8**	**41.2**	**0.27**	**10.3**	**9.8**	**32.2**	**114**	**0.074**	**7.7**	**0.63 J**	0.65 U	**57.1**
						819018-TPO20005	7/27/2018				5	**0.84**	**2.2**	**34 J**	**1.8**	**26 J**	**212**	**85.9 J**	**595**	**0.21**	**61.8 J**	4.2 U	**1.1**	**169**
TP	TP-O22	O22	1257088.2	1096972.7	900.5	819018-TPO22000	7/27/2018	4.7	Y	Some metal and plastic 0-1 ft bgs. Slight petroleum-like odor 1-1.9 ft bgs (PID 4.2 ppm). Little brick and glass fragments 3.5-4.7ft bgs.	0	**32**	**14.3**	**795**	**33.1**	**453**	**4830**	**5520**	**1360**	2.2 UJ	**203**	**7.2**	**26.9**	**5240**
						819018-TPO22001	7/27/2018				1	0.25 U	**1.9 J**	**110**	**0.62**	**12**	**23.7**	**243**	**95**	**0.019 J**	**9**	**0.6 J**	0.69 U	**167**
						819018-TPO22005	7/27/2018				5	**0.51**	**3.5**	**119**	**1.9**	**18.5**	**73.4**	**243**	**143**	**0.49**	**15.1**	**0.78 J**	0.73 U	**370**
						819018-TPO22007	7/27/2018				7	0.24 U	**0.67 J**	**16.1**	**0.081 J**	**4.4**	**2.8**	**4.6**	**124**	**0.053**	**3.7 J**	4.2 U	0.62 U	**16.3**
TP	TP-O24	O24	1257114.4	1097015.3	900.0	819018-TPO24000	7/26/2018	2.5	Y	Metal and bricks from 0-1.5 ft bgs. Staining and very strong to moderate odor (PID 13.3 ppm) 1.5-6 ft bgs.	0	**15**	**10.2**	**359**	**24.5**	**163**	**2470**	**2180**	**1150**	**4.7**	**124**	**1.6 J**	**6.9**	**3960**
						819018-TPO24002	7/26/2018				2	**0.91**	**8.5**	**119**	**1.3**	**13**	**90.5**	**114**	**669**	**0.21**	**16.2**	4.7 U	**0.42 J**	**341**
						819018-TPO24003	7/26/2018				3	0.25 U	**3.6**	**54.5**	**0.49**	**12.7**	**10.2**	**51.8**	**93.6**	**0.076**	**10.6**	4.4 U	0.66 U	**168**
						819018-TPO24006	7/26/2018				6	0.21 U	**1.2 J**	**25.5**	**0.06 J**	**8.1**	**3.8**	**3**	**128**	**0.023**	**6**	4.5 U	0.68 U	**18**
TP	TP-O26	O26	1257140.7	1097057.8	899.8	819018-TPO26000	7/26/2018	0	N	None	0	**8.9**	**7.8**	**323**	**10.9**	**95.7**	**1730**	**1180**	**459**	**2.8**	**94.3**	**1.3 J**	**3.3**	**3230**
						819018-TPO26001	7/26/2018				1	0.2 U	**1.1 J**	**13.6**	**0.25**	**7.4**	**4.4**	**6.8**	**187**	0.02 U	**4 J**	4.4 U	0.66 U	**66.8**
						819018-TPO26003	7/26/2018				3	0.31 U	**2.4 J**	**68.9 J**	**0.31**	**16.1**	**8.2**	**17.6 J**	**104 J**	**0.069**	**11.3**	5.2 U	0.79 U	**83 J**
						819018-TPO26003D	7/26/2018				3	0.27 U	**2.4 J**	**66.4 J**	**0.31**	**15.2**	**9.1**	**19.8 J**	**99.5 J**	**0.079**	**10.7**	5.7 U	0.85 U	**85.2 J**
						819018-TPO26005	7/26/2018				5	0.19 U	**0.94 J**	**20.5**	**0.1 J**	**5.5**	**5.7**	**3.3**	**161**	**0.0093 J**	**5.8**	4.2 U	0.64 U	**32.1**
TP	TP-O28	O28	1257166.9	1097100.4	900.2	819018-TPO28000	7/25/2018	3.5	Y	Metal fragments from 0-3.5 ft bgs (PID 1.1 ppm). Slight odor at 7.0 ft bgs.	0	**110**	**65.7**	**583**	**34**	**146**	**5560**	**11100**	**1140**	**6.5**	**153**	25.6 U	**5.6**	**8140**
						819018-TPO28002	7/25/2018				2	**90**	**33.6**	**2880**	**20.1**	**1380**	**8680**	**1780**	**3030**	**6.1**	**922**	**2.5 J**	**2.7 J**	**5670**
						819018-TPO28004	7/25/2018				4	**5.4**	**2.6**	**120**	**6.5**	**95.2**	**209**	**108**	**276**	**0.47**	**46.9**	5.3 U	**0.37 J**	**445**
						819018-TPO28007	7/25/2018				7	**2.9**	**1.3 J**	**29.7**	**0.68**	**55**	**77**	**36.1**	**185**	**0.09**	**20.7**	**0.56 J**	0.66 U	**111**

Table 5: Boring/Test Pit Select Data

	Sample Location											Analytical Results											
Site Type	**Location ID**	**Grid ID**	**Latitude**	**Longitude**	**Ground Elevation (ft)**	**Field Sample ID**	**Sample Date**	**Fill Thickness [1] (ft)**	**Observed Impacts[2] (Y/N)**	**Comment (Staining, Odors, Types of Fill [Metal, Ceramics, Bricks])**	**Sample Depth (ft bgs)**	PCB (total) 1 (mg/kg)	Arsenic 16 (mg/kg)	Barium 350 (mg/kg)	Cadmium 2.5 (mg/kg)	Chromium 22 (mg/kg)	Copper 270 (mg/kg)	Lead 400 (mg/kg)	Manganese 2000 (mg/kg)	Mercury 0.81 (mg/kg)	Nickel 140	Selenium 36	Silver 36	Zinc 2200
TP	TP-O30	O30	1257193.2	1097143.0	899.5	819018-TPO30000	7/25/2018	3.5	Y	Concrete, tires, metal, and plastic	0	**57**	**27.5**	**526**	**79.6 J**	**263**	**4520**	**2880**	**1400**	**8.7**	**284**	**3.6 J**	**9**	**5160**
						819018-TPO30002	7/25/2018			from 0-2 ft bgs. Some odor and dark	2	**4.8**	**17.5**	**223**	**12.3**	**854**	**2580**	**1300**	**664**	**1.6**	**187**	**5.8**	**4.6**	**2140**
						819018-TPO30004	7/25/2018			gray staining 2-3.5 ft bgs.	4	**1.3**	**1.9 J**	**17.7**	**0.63**	**11.2**	**98.9**	**152**	**160**	**0.12**	**7.8**	4.2 U	0.63 U	**195**
TP	TP-O32	O32	1257219.4	1097185.5	899.0	819018-TPO32000	7/25/2018	1.2	Y	Trace concrete and metal from 0-1.2	0	**70**	**20.9**	**548**	**48.3**	**166**	**26000**	**97200**	**816**	**11.3**	**168**	**5.8 J**	**12.7**	**8250**
						819018-TPO32001	7/25/2018			ft bgs. Very dark gray staining and	1	**1.8**	**4.1**	**80.1**	**2.5**	**20**	**656**	**399**	**307**	**2**	**31.6**	4.7 U	**0.44 J**	**349**
						819018-TPO32003	7/25/2018			very strong odor (PID 46.8 ppm) 2.7-	3	**6.3**	**2.2 J**	**79.1**	**1.3**	**20.8**	**217**	**223**	**186**	**1.4**	**20.6**	5 U	**0.38 J**	**262**
						819018-TPO32005	7/25/2018			3.0 ft bgs.	5	**0.99**	**1.9 J**	**39.6**	**1.3**	**7.8**	**106**	**97.3**	**123**	**0.099**	**8**	4.7 U	0.71 U	**93.4**
TP	TP-O34	O34	1257245.7	1097228.1	898.9	819018-TPO34000	7/24/2018	3.8	Y	Metal, concrete and bricks from 0-2.5 ft bgs. Slight odor (PID 3.9 ppm)	0	**17 J**	**19**	**1560**	**35.9**	**169**	**47500**	**63600**	**684**	**3.4**	**388**	**5**	**7.2**	**30900**
						819018-TPO34003	7/24/2018			and slight staining 2.5-3.8 ft bgs.	3	**17 J**	**14.9**	**408**	**11.4**	**273**	**3230**	**1550**	**820**	**6.8**	**149**	**1.1 J**	**3.8**	**3400**
						819018-TPO34004	7/24/2018			Strong odors (PID 2031 ppm) 3.8-6	4	**1.2 J**	**2 J**	**106**	**0.78**	**24.5**	**110**	**93**	**115**	**0.22**	**18.1**	**0.88 J**	**0.31 J**	**185**
						819018-TPO34006	7/24/2018			ft bgs.	6	0.23 U	**1 J**	**41.9**	**0.1 J**	**13.2**	**13.7**	**9.4**	**314**	**0.01 J**	**12.9**	4.9 U	0.73 U	**41.6**
TP	TP-O36	O36	1257272.0	1097270.6	899.3	819018-TPO36000	7/24/2018	4.5	Y	Metal and C&D debris from 0-3 ft	0	**58**	**22.9**	**602**	**31.5**	**519**	**4380**	**3230**	**1120**	**13.3**	**419**	**5.4**	**15.4**	**7260**
						819018-TPO36003	7/24/2018			bgs. Some odor, slight staining from	3	**34 J**	**67.6 J**	**606**	**29.6**	**499 J**	**6110 J**	**1590**	**3340 J**	**25.7 J**	**355 J**	**2.8 J**	**12.9 J**	**6580**
						819018-TPO36003D	7/24/2018			3-4.5 ft bgs.	3	**38 J**	**20.4 J**	**703**	**38.4**	**1330 J**	**3680 J**	**2240**	**1320 J**	**39 J**	**699 J**	**4.8 J**	**30.2 J**	**6440**
						819018-TPO36004	7/24/2018				4	**6.6**	**5.4**	**195**	**6.5**	**64.8**	**2400**	**730**	**334**	**1.2**	**57.2**	**0.64 J**	**2**	**1220**
						819018-TPO36007	7/24/2018				7	**0.33**	**2 J**	**50.4**	**0.41**	**23.7**	**44.3**	**24.7**	**355**	**0.092**	**18**	5 U	0.75 U	**67.2**
TP	TP-O38	O38	1257298.2	1097313.2	900.5	819018-TPO38000	7/24/2018	1.9	N	Concrete, stone, metal, and C&D	0	**6.7**	**1.6 J**	**199**	**76.5**	**383**	**36900**	**1990**	**1500**	**8.2**	**228**	**8.6 J**	**43.2**	**11800**
						819018-TPO38002	7/24/2018			debris from 0-1.9 ft bgs.	2	**0.59**	**1.3 J**	**49.2**	**1.2**	**13.2**	**190**	**62.6**	**235**	**0.086**	**12.9**	4.7 U	**0.46 J**	**177**
						819018-TPO38004	7/24/2018				4	**0.35**	**1.1 J**	**57**	**0.74**	**16.3**	**119**	**33.4**	**248**	**0.13**	**15.2**	4.9 U	**0.66 J**	**145**
TP	TP-O40	O40	1257324.5	1097355.7	900.2	819018-TPO40000	7/23/2018	2.5	Y	Metal and plastic, with slight	0	**49**	**14.1**	**682**	**23.5**	**332**	**5500**	**2080**	**1010**	**9.4**	**241**	**3.7 J**	**24.8**	**6220**
						819018-TPO40002	7/23/2018			petroleum-like odor (PID 2.2 ppm)	2	**2.9**	**3**	**85.6**	**1.6**	**66.8**	**416**	**138**	**289**	**0.36**	**25.7**	4.6 U	**1.5**	**280**
						819018-TPO40005	7/23/2018			from 0-2.5 ft bgs.	5	**6.7**	**1.2 J**	**22.1**	**0.52**	**6.9**	**40.3**	**30.6**	**165**	**0.59**	**7.3**	4.4 U	**0.44 J**	**78.2**
TP	TP-O42	O42	1257350.7	1097398.3	899.3	819018-TPO42000	7/23/2018	1.5	Y	Metal fragments from 0-1.5 ft bgs.	0	**41**	**13.4**	**402**	**18.2**	**274**	**2240**	**1010**	**870**	**25.3**	**162**	**2.1 J**	**18.9**	**3140**
						819018-TPO42002	7/23/2018			PID 2.2 ppm.	2	**0.26**	**1.6 J**	**55.8**	**0.19 J**	**12.8**	**7.9**	**15.4**	**101**	**0.081**	**9.4**	5.1 U	0.77 U	**38.1**
						819018-TPO42004	7/23/2018				4	**0.9**	**2.6**	**35.4**	**0.3**	**9.6**	**239**	**43.7**	**228**	**0.071**	**8.3**	4.5 U	0.67 U	**58**
TP	TP-P18	P18	1257057.0	1096874.5	902.9	819018-TPP18000	7/27/2018	0.2	Y	Trace metal fragments in top 0.0-0.2	0	**18**	**14.1**	**402**	**23**	**192**	**2620**	**1880**	**1080**	**8.9**	**175**	**4 J**	**12.1**	**3330**
						819018-TPP18002	7/27/2018			ft bgs. Faint odor at 1.5 ft bgs.	2	0.23 U	**3.7**	**53.6**	**0.21 J**	**13.1**	**7.9**	**11**	**485**	**0.078**	**13.6**	4.5 U	0.67 U	**34.4**
						819018-TPP18004	7/27/2018				4	**0.72**	**1.9 J**	**24.2**	**0.33**	**6.9**	**26.5**	**41.7**	**217**	**0.097**	**6.4**	4.3 U	0.64 U	**46.1**
HA	HA-P44	P44	1257396.2	1097426.0	896.6	819018-HAP44000	8/2/2018	0	N	None	0	0.3 U	**3.2**	**71**	**0.48**	**15.1**	**36.9**	**32.8**	**66.4**	**0.11 J**	**12.4**	**0.59 J**	0.86 U	**70.1**
						819018-HAP44002	8/2/2018				2	0.2 U	**3.6**	**36.1**	**0.1 J**	**10**	**10.3**	**5.7**	**245**	0.022 UJ	**10.6**	4.5 U	0.68 U	**30.5**
DP	DP-Q04	Q04	1256894.5	1096563.5	900.0	819018-DPQ04000	7/23/2018	2.8	Y	Staining and ash, some odor (PID 5.6	0	**1.5**	**3.5**	**58**	**1.7**	**17.6**	**747**	**502**	**433**	**0.6**	**24.6**	4.2 U	**0.66**	**394**
						819018-DPQ04002	7/23/2018			ppm) from 1.0-1.9 ft bgs.	2	**0.3**	**10.8**	**58.6 J**	**0.71**	**12.4 J**	**92.4 J**	**179 J**	**282**	**0.28**	**12.7 J**	4.5 U	0.68 U	**141**
						819018-DPQ04002D	7/23/2018				2	**0.42**	**12.1**	**58.6 J**	**0.59 J**	**17.9 J**	**102 J**	**117 J**	**378**	**0.23**	**15 J**	4.4 U	3.3 U	**114**
						819018-DPQ04004	7/23/2018				4	0.23 U	**2.3 J**	**32**	**0.1 J**	**7.4**	**6.6**	**5.6**	**555**	**0.031**	**8.2**	4.7 U	0.71 U	**16.1**
						819018-DPQ04006	7/23/2018				6	**0.55**	**3.1**	**30.1**	**0.64**	**79.8**	**219**	**141**	**244**	**0.15**	**11.4**	4.3 U	**0.22 J**	**116**
TP	TP-Q12	Q12	1256999.5	1096733.7	905.6	819018-TPQ12000	7/31/2018	2	Y	Cinder block wall, slag, and concrete	0	**7.4**	**6.9**	**117**	**6.2**	**99**	**1270**	**1180**	**1770**	**1.2**	**60.2**	4.4 U	**1.1**	**818**
						819018-TPQ12001	7/31/2018			footer at 1.2 ft bgs.	1	**0.9**	**77.8**	**268**	**5**	**26.5**	**406**	**800**	**299**	**0.36**	**41.1**	**2.1 J**	0.69 U	**858**
						819018-TPQ12002	7/31/2018				2	0.22 U	**3.5**	**49.7**	**0.66**	**11.1**	**69.4**	**128**	**325**	**0.098**	**13.5**	4.5 U	0.67 U	**140**
						819018-TPQ12006	7/31/2018				6	0.27 U	**1.7 J**	**20.4**	**0.11 J**	**5.4**	**27**	**13.5**	**199**	**0.021 J**	**6.3**	4.3 U	0.65 U	**22**
TP	TP-Q14	Q14	1257025.7	1096776.3	905.8	819018-TPQ14000	7/31/2018	0.4	N	Roadbase at surface and geotextile	0	**22**	**10.5**	**210**	**14.4**	**147**	**2830**	**2820**	**764**	**2.8**	**95.5**	**5.8**	**6.9**	**1840**
						819018-TPQ14002	7/31/2018			fabric at 0.4 ft bgs.	2	0.25 U	**1.7 J**	**19.5**	**0.089 J**	**6.1**	**8.2**	**4.9**	**239**	0.021 U	**6.6**	4.3 U	0.65 U	**26.6**
						819018-TPQ14002D	7/31/2018				2	0.25 U	**1.1 J**	**16.2**	**0.082 J**	**5.3**	**6.5**	**3.8**	**198**	**0.012 J**	**5.8**	4.4 U	0.66 U	**22.9**
						819018-TPQ14005	7/31/2018				5	0.23 U	**1.7 J**	**26.1**	**0.11 J**	**5.8**	**11.4**	**13.4**	**267**	**0.0084 J**	**8.4**	4.2 U	0.63 U	**34.5**
TP	TP-Q16	Q16	1257052.0	1096818.8	904.9	819018-TPQ16000	7/30/2018	0.8	Y	Weathered iron rich cobbles, rubber	0	**3.3**	**5**	**167**	**5.3**	**20**	**384**	**559**	**392**	**1.4 J**	**35.4**	4.4 U	**2.6**	**712**
						819018-TPQ16002	7/30/2018			and plastic from 0-0.8 ft bgs.	2	0.25 U	**1.6 J**	**32.8**	**0.15 J**	**6.2**	**10.8**	**35**	**236**	**0.064**	**7.2**	4.6 U	0.68 U	**35.8**
						819018-TPQ16006	7/30/2018				6	0.22 U	**1.5 J**	**21.8**	**0.056 J**	**5.3**	**4.9**	**2.5**	**182**	0.021 U	**6.1**	4.3 U	0.64 U	**16.6**
TP	TP-Q18	Q18	1257078.2	1096861.4	903.2	819018-TPQ18000	7/27/2018	2.7	Y	Trace metal, glass, and rubber from 0-	0	**100**	**13**	**433**	**36.4**	**184**	**3900**	**2270**	**787**	**8.1**	**197**	**37.4**	**11.3**	**4710**
						819018-TPQ18003	7/27/2018			2.7 ft bgs. Faint petroleum-like odor	3	**0.51**	**5.1**	**230**	**3.2**	**15.6**	**72.8**	**353**	**154**	**3.5**	**16**	4.3 U	0.64 U	**670**
						819018-TPQ18005	7/27/2018			(PID 3.0 ppm).	5	**3.6**	**2.1 J**	**23.6**	**0.17 J**	**6.3**	**11.6**	**13.6**	**178**	**0.063**	**6.9**	4.4 U	0.66 U	**27.8**

Table 5: Boring/Test Pit Select Data

	Sample Location											Analytical Results											
Site Type	**Location ID**	**Grid ID**	**Latitude**	**Longitude**	**Ground Elevation (ft)**	**Field Sample ID**	**Sample Date**	**Fill Thickness [1] (ft)**	**Observed Impacts[2] (Y/N)**	**Comment (Staining, Odors, Types of Fill [Metal, Ceramics, Bricks])**	**Sample Depth (ft bgs)**	PCB (total) 1 (mg/kg)	Arsenic 16 (mg/kg)	Barium 350 (mg/kg)	Cadmium 2.5 (mg/kg)	Chromium 22 (mg/kg)	Copper 270 (mg/kg)	Lead 400 (mg/kg)	Manganese 2000 (mg/kg)	Mercury 0.81 (mg/kg)	Nickel 140	Selenium 36	Silver 36	Zinc 2200
TP	TP-Q20	Q20	1257104.5	1096903.9	901.6	819018-TPQ20000	7/27/2018	2.3	Y	Metal, ceramics, and concrete from 0-2.3 ft bgs. Faint odor (PID 3.6 ppm)	0	**15**	**16.5**	**488**	**20.3**	**209**	**2580**	**1760**	**993**	**5.1**	**144**	**2.2 J**	**5.1**	**10000**
						819018-TPQ20002	7/27/2018				2	0.26 U	**5.1**	**147**	**1.4**	**17.2**	**51.4**	**283**	**488**	**0.088**	**15.1**	4.6 U	0.7 U	**294**
						819018-TPQ20005	7/27/2018			1.5-2.3 ft bgs.	5	**0.4**	**2.4**	**37.7**	**0.83**	**9.9**	**140**	**58.2**	**225**	**0.14 J**	**11.5**	4.2 U	0.64 U	**86.8**
TP	TP-Q22	Q22	1257130.7	1096946.5	900.5	819018-TPQ22000	7/27/2018	4.6	Y	Metal, bricks, concrete and ceramics from 0-4.0 ft bgs. Black staining and strong odor (PID 15.1 ppm) from 4-4.6 ft bgs.	0	**23**	**11.9**	**549**	**64**	**217**	**5850**	**3060**	**765**	**6.4**	**159**	**7.4 J**	**41.8**	**9800**
						819018-TPQ22002	7/27/2018				2	**6.9**	**3.9**	**114**	**5.7**	**37.4**	**542**	**406**	**182**	**3.9**	**40.9**	**0.97 J**	**3.2**	**745**
						819018-TPQ22005	7/27/2018				5	**0.95**	**4.4**	**93**	**1.4**	**13.5**	**16.6**	**69.5**	**230**	**0.1**	**13.3**	4.7 U	0.71 U	**112**
TP	TP-Q24	Q24	1257157.0	1096989.0	899.0	819018-TPQ24000	7/26/2018	1.5	Y	Trace metal and slight organic decomposition odor (PID 1.8 ppm). in top 0.5 ft bgs. Orange/red iron leach zone 2.2-2.4 ft bgs.	0	**7.2 J**	**10.1**	**273**	**30.4**	**112**	**4930**	**2080**	**601**	**6.6**	**108**	**4.7 J**	**12.6**	**4190**
						819018-TPQ24002	7/26/2018				2	**0.3 J**	**4.7**	**66.6**	**0.95**	**16.4**	**83.3 J**	**101 J**	**223**	**0.31 J**	**10.5**	**0.54 J**	0.74 U	**134 J**
						819018-TPQ24002D	7/26/2018				2	**1.5 J**	**4.8**	**62.2**	**1**	**15.4**	**83.3 J**	**98.9 J**	**214**	**0.32 J**	**10.6**	4.7 U	0.7 U	**122 J**
						819018-TPQ24005	7/26/2018				5	0.23 U	**1.7 J**	**25**	**0.3**	**7.8**	**24.8**	**17.7**	**168**	**0.045**	**6.9**	4.7 U	0.71 U	**38.8**
TP	TP-Q26	Q26	1257183.2	1097031.6	897.9	819018-TPQ26000	7/26/2018	0	N	None	0	**16 J**	**16**	**284**	**11.9**	**77.9**	**2040**	**994**	**354**	**7.2**	**131**	**2.1 J**	**3.2**	**2160**
						819018-TPQ26002	7/26/2018				2	**1.5 J**	**3.7**	**44**	**0.59**	**13.6**	**50.7**	**41.4**	**92**	**0.3**	**8**	**0.53 J**	0.72 U	**101**
						819018-TPQ26006	7/26/2018				6	**4.9 J**	**7.7**	**72.1**	**2.1**	**15.8**	**191**	**197**	**171**	**1.5**	**28.6**	4.9 U	**0.5 J**	**382**
TP	TP-Q28	Q28	1257209.5	1097074.1	896.0	819018-TPQ28000	7/26/2018	0	N	None	0	**0.97 J**	**2.1 J**	**91**	**1.3**	**17.1**	**78.7**	**69.6**	**82.5**	**0.31**	**17.8**	**0.64 J**	0.88 U	**334**
						819018-TPQ28001	7/26/2018				1	0.25 U	**0.59 J**	**77.9 J**	**0.21 J**	**13.9**	**9.7**	**11.9**	**95.3 J**	**0.032**	**13**	4.7 U	0.7 U	**67.2**
						819018-TPQ28004	7/26/2018				4	**1.9 J**	2.5 U	**16.9**	**0.16 J**	**3.6**	**8**	**4.8**	**48.8**	**0.11**	**3.3 J**	5 U	0.75 U	**31.1**
TP	TP-Q30	Q30	1257235.7	1097116.7	897.7	819018-TPQ30000	7/25/2018	1.5	Y	Metal and wood in top 1.0 ft bgs. Black flowing material in west sidewall at 1.8 ft bgs; some sheen and strong odor (PID 8.8 ppm).	0	**24**	**22.1**	**358**	**34.8**	**842**	**2980**	**2300**	**1220**	**7.7**	**227**	12.5 U	**11.1**	**4470**
						819018-TPQ30002	7/25/2018				2	**10**	**10.4**	**278**	**18.2**	**94.6**	**2030**	**1250**	**488**	**5.2**	**108**	**1.4 J**	**5.8**	**3590**
						819018-TPQ30004	7/25/2018				4	**1.3**	**2.1 J**	**37**	**1.2**	**8.6**	**104**	**93.2**	**167**	**0.16**	**11.3**	4.5 U	**0.32 J**	**267**
TP	TP-Q32	Q32	1257262.0	1097159.3	897.4	819018-TPQ32000	7/25/2018	1.8	Y	Metal and wood in top 1.0 ft bgs. Dark gray mottling and strong odor (PID 2.8 ppm) from 1.8-2.5 ft bgs. Boney and unstable at 4 ft bgs.	0	**66**	**12.5**	**579**	**64.6**	**350**	**6910**	**2260**	**968**	**9.3**	**240**	**7.8 J**	**15.6**	**8700**
						819018-TPQ32003	7/25/2018				3	**12**	**3.6**	**108**	**4.7**	**33.7**	**494**	**276**	**361**	**0.82**	**36.7**	**4.8 J**	**0.95**	**930**
						819018-TPQ32004	7/25/2018				4	**1.6**	**1.1 J**	**46.8**	**2**	**18.3**	**202**	**102**	**185**	**0.2**	**22**	4.7 U	**2.4**	**366**
TP	TP-Q34	Q34	1257288.3	1097201.8	897.3	819018-TPQ34000	7/25/2018	0.2	Y	Metal in top 0.2 ft bgs. Trace sheen in water entering hole at roughly 3 ft bgs.	0	**27**	**38.8**	**454**	**27.7**	**296**	**3830**	**2310**	**1240**	**212**	**167**	23.9 U	**12**	**5070**
						819018-TPQ34003	7/25/2018				3	**1.3**	**2.3 J**	**92.1**	**1.4**	**19.5**	**142**	**92.9**	**124**	**0.57**	**20**	4.9 U	**0.25 J**	**338**
						819018-TPQ34005	7/25/2018				5	0.26 U	**1.3 J**	**40.5 J**	**0.17 J**	**12.7**	**11.8**	**7.4**	**359**	**0.4 J**	**12.9**	4.8 U	0.72 U	**39**
						819018-TPQ34005D	7/25/2018				5	0.3 U	**2.1 J**	**46.1 J**	**0.19 J**	**14**	**16.7**	**8.9**	**321**	0.022 UJ	**14.5**	4.8 U	0.72 U	**43.4**
TP	TP-Q36	Q36	1257314.5	1097244.4	897.8	819018-TPQ36000	7/24/2018	2.5	N	Metal and C&D debris from 0-2 ft bgs.	0	**26**	**17.1**	**565**	**28.6**	**387**	**4330**	**2650**	**998**	**9**	**258**	**1.5 J**	**14.4**	**3740**
						819018-TPQ36003	7/24/2018				3	0.29 U	**2.1 J**	**97**	**1.1**	**18.7**	**111**	**55.9**	**118**	**0.14**	**17.5**	5.1 U	0.77 U	**172**
						819018-TPQ36005	7/24/2018				5	**0.81**	**2.3 J**	**126**	**0.26**	**16.1**	**50**	**18.7**	**401**	**0.038**	**19.1**	5 U	0.76 U	**61.9**
TP	TP-Q38	Q38	1257340.8	1097286.9	898.9	819018-TPQ38000	7/24/2018	1.5	Y	Metal, stone, C&D debris from 0-1.5 ft bgs.	0	**16**	**15.1**	**252**	**8.8**	**206**	**2620**	**1010**	**860**	**1.8**	**152**	29.2 U	**2.5 J**	**4070**
						819018-TPQ38002	7/24/2018				2	0.26 U	**0.98 J**	**34.7**	**0.13 J**	**8.3**	**7.3**	**5.8**	**187**	**0.013 J**	**8.9**	4.8 U	0.73 U	**29.5**
						819018-TPQ38004	7/24/2018				4	0.26 U	**0.67 J**	**19**	**0.11 J**	**5**	**5**	**3.1**	**175**	0.022 U	**4.3 J**	4.3 U	0.64 U	**20.3**
HA	HA-Q41	Q41	1257378.0	1097348.8	897.8	819018-HAQ41000	8/2/2018	0	N	None	0	**0.17 J**	**5.6**	**66.1**	**0.82**	**18.9**	**114**	**84.2**	**167**	**0.27**	**15.4**	5.3 U	0.79 U	**141**
						819018-HAQ41002	8/2/2018				2	0.24 U	**2.7**	**39.9**	**0.19 J**	**10**	**17.5**	**15.4**	**164**	**0.07 J**	**7.6**	4.7 U	0.71 U	**34.9**
DP	DP-S08	S08	1256989.5	1096622.4	903.1	819018-DPS08000	7/23/2018	5	Y	Charred soils with staining from 0.5-2.0 ft bgs.	0	**1.7**	**5.2**	**60.2**	**1.6**	**15.1**	**501**	**2260**	**356**	**2.1**	**14.3**	4 U	**0.3 J**	**157**
						819018-DPS08003	7/23/2018				3	**0.17 J**	**6.4**	**124**	**0.87**	**10.4**	**472**	**653**	**204**	**0.61**	**23.4**	4.5 U	0.67 U	**430**
						819018-DPS08009	7/23/2018				9	**0.5**	**3.6**	**75.6**	**0.83**	**15.5**	**132**	**370**	**296**	**0.98**	**14.7**	4.4 U	0.65 U	**346**
						819018-DPS08012	7/23/2018				12	0.23 U	**1.6 J**	**14.6**	**0.07 J**	**4.7**	**4.4 J**	**2.6**	**174**	**0.018 J**	**4.6 J**	4.1 U	0.61 U	**12**
TP	TP-S10	S10	1257015.8	1096664.9	905.0	819018-TPS10000	7/31/2018	1.8	Y	Plastic fabric at 1.8 ft bgs.	0	**1.1**	**3.9**	**48**	**0.45**	**12.1**	**47.7**	**47.6**	**401**	**0.11**	**32**	4.2 U	0.64 U	**76.9**
						819018-TPS10002	7/31/2018				2	**11**	**6.4**	**102**	**2**	**17.8**	**162**	**925**	**327**	**1.2**	**16.1**	4.6 U	0.68 U	**313**
						819018-TPS10006	7/31/2018				6	0.21 U	**1.8 J**	**22.5**	**0.11 J**	**5.2**	**8.6**	**13.4**	**191**	0.02 U	**6**	4.3 U	0.65 U	**20.7**
TP	TP-S12	S12	1257042.0	1096707.5	906.2	819018-TPS12000	7/31/2018	3	Y	Plastic fabric at 3 ft bgs. Slight odor from 3-6 ft bgs.	0	0.24 U	**2.7**	**54**	**0.21 J**	**13.1**	**16.6**	**18.3**	**390**	**0.032**	**13**	4.5 U	0.67 U	**53.8**
						819018-TPS12003	7/31/2018				3	**18**	**4**	**80.2**	**8.6**	**14.3**	**860**	**432**	**289**	**0.83**	**30**	4.7 U	**0.58 J**	**559**
						819018-TPS12005	7/31/2018				5	**5.1**	**2 J**	**20.3**	**0.97**	**4.9**	**17.5**	**7.6**	**222**	**0.017 J**	**5.8**	4.3 U	0.65 U	**38.7**
						819018-TPS12006	7/31/2018				6	**1.1**	**2.4**	**23.6**	**0.16 J**	**5.7**	**15.2**	**11**	**245**	**0.028**	**7.1**	4.4 U	0.66 U	**26.3**
TP	TP-S14	S14	1257068.3	1096750.0	906.1	819018-TPS14000	7/30/2018	0.2	Y	Surficial rubber and plastic.	0	**5.8**	**6.4**	**316**	**10.8**	**25.2**	**807**	**381**	**396**	**0.88**	**32.5**	4.4 U	**0.88**	**676**
						819018-TPS14002	7/30/2018				2	0.19 U	**1.5 J**	**17.1**	**0.053 J**	**4.6**	**5.6 J**	**2.1 J**	**182**	0.022 UJ	**5.5**	4.4 U	0.66 U	**14.1**
						819018-TPS14002D	7/30/2018				2	0.25 U	**1.7 J**	**20.1**	**0.077 J**	**5.2**	**9.6 J**	**4.2 J**	**200**	**0.0096 J**	**6.2**	4.3 U	0.65 U	**19.7**
						819018-TPS14004	7/30/2018				4	0.26 U	**1.7 J**	**20.2**	**0.095 J**	**5.3**	**10.1**	**5.6**	**198**	**0.01 J**	**6.1**	4.4 U	0.65 U	**22.6**
TP	TP-S16	S16	1257094.5	1096792.6	905.5	819018-TPS16000	7/30/2018	0.8	Y	Rubber and plastic 0-0.8 ft bgs. Decompositional odor (PID 1.0 ppm) 0-1.8 ft bgs.	0	**560**	**11.7**	**249**	**22.5**	**111**	**1870**	**1800**	**705**	**7.6 J**	**89.2**	**1.1 J**	**5.2**	**1490**
						819018-TPS16002	7/30/2018				2	**0.74**	**8.3**	**96.5**	**0.93**	**15**	**41.2**	**131**	**516**	**0.46**	**14.5**	4.8 U	0.72 U	**231**
						819018-TPS16005	7/30/2018				5	0.21 U	**1.3 J**	**21.5**	**0.056 J**	**4.9**	**5.4**	**2.2**	**194**	0.021 U	**6.3**	4.2 U	0.63 U	**14**
TP	TP-S18	S18	1257120.8	1096835.1	904.3	819018-TPS18000	7/30/2018	0.2	Y	Trace rubber, metal, and plastic in top 0.2 ft bgs.	0	**320**	**25.2**	**474**	**46.1**	**3930**	**7450**	**2180**	**1400**	**20.9**	**2080**	**2.6 J**	**11.6**	**3250**
						819018-TPS18002	7/30/2018				2	**3.3**	**4.7**	**77.4**	**2.4**	**13.3**	**235**	**276**	**334**	**0.39**	**18.6**	4.3 U	0.65 U	**235**
						819018-TPS18005	7/30/2018				5	**4.5**	**8.1**	**82.1**	**1.7**	**16.8**	**154**	**194**	**548**	**0.28**	**27.4**	4.5 U	**0.32 J**	**215**

Table 5: Boring/Test Pit Select Data

	Sample Location											Analytical Results											
Site Type	**Location ID**	**Grid ID**	**Latitude**	**Longitude**	**Ground Elevation (ft)**	**Field Sample ID**	**Sample Date**	**Fill Thickness [1] (ft)**	**Observed Impacts[2] (Y/N)**	**Comment (Staining, Odors, Types of Fill [Metal, Ceramics, Bricks])**	**Sample Depth (ft bgs)**	PCB (total) 1 (mg/kg)	Arsenic 16 (mg/kg)	Barium 350 (mg/kg)	Cadmium 2.5 (mg/kg)	Chromium 22 (mg/kg)	Copper 270 (mg/kg)	Lead 400 (mg/kg)	Manganese 2000 (mg/kg)	Mercury 0.81 (mg/kg)	Nickel 140	Selenium 36	Silver 36	Zinc 2200
TP	TP-S20	S20	1257147.0	1096877.7	900.6	819018-TPS20000	8/2/2018	0.5	Y	Trace plastic and metal in top 0.5 ft bgs.	0	**26**	**9**	**194**	**5.9**	**31.9**	**585**	**467**	**617**	**1.3**	**30.8**	4.7 U	**2.1**	**707**
						819018-TPS20002	8/2/2018				2	**1.7**	**3.5**	**38.6**	**0.83**	**9**	**63**	**44.2**	**278**	**0.087 J**	**8.9**	4.3 U	0.65 U	**87.3**
						819018-TPS20005	8/2/2018				5	**1.5**	**2.9**	**21.5**	**0.38**	**6.3**	**108**	**24.5**	**204**	**0.14 J**	**6.7**	4.3 U	0.65 U	**55.4**
TP	TP-S22	S22	1257173.3	1096920.2	899.8	819018-TPS22000	8/2/2018	0	N	None	0	**7.6**	**8.6**	**166**	**11.3**	**36**	**842**	**605**	**582**	**2.9 J**	**39.2**	**0.89 J**	**2.7**	**819**
						819018-TPS22002	8/2/2018				2	0.19 U	**2.7**	**23.2**	**0.12 J**	**6.6**	**8.7**	**8.1**	**202**	**0.02**	**6.9**	4.3 U	0.64 U	**29.7**
						819018-TPS22005	8/2/2018				5	0.19 U	**2 J**	**17.8**	**0.1 J**	**5.5**	**3.8**	**4.4**	**127**	**0.023**	**5.8**	4.4 U	0.66 U	**21.2**
TP	TP-S24	S24	1257199.5	1096962.8	899.2	819018-TPS24000	8/2/2018	0.5	Y	Trace metal, wood, plastic, and ceramics in top 0.5 ft bgs.	0	**0.93**	**7.1**	**79.9**	**2.1**	**20.2**	**236**	**227**	**321**	**0.44**	**17.6**	4.8 U	**0.43 J**	**291**
						819018-TPS24002	8/2/2018				2	0.26 U	**2.5**	**20.5**	**0.11 J**	**5.5**	**8.5**	**9.3**	**182**	**0.022**	**6.1**	4.2 U	0.63 U	**21.5 J**
						819018-TPS24002D	8/2/2018				2	0.24 U	**2.2**	**15**	**0.075 J**	**5.8**	**6.7**	**5.1**	**187**	**0.023**	**5.5**	4.3 U	0.64 U	**23.9 J**
						819018-TPS24004	8/2/2018				4	0.2 U	**2 J**	**15.3**	**0.085 J**	**4.9**	**4.6**	**2.9**	**160**	**0.011**	**5.1 J**	4.5 U	0.67 U	**17.9**
TP	TP-S26	S26	1257225.8	1097005.3	898.7	819018-TPS26000	8/2/2018	0.5	N	Trace metal and ceramics in top 0.5 ft bgs.	0	**1.9**	**6.9**	**94.9**	**3.7**	**27.7**	**562**	**348**	**341**	**1.6**	**31.7**	4.6 U	**1**	**467**
						819018-TPS26002	8/2/2018				2	0.26 U	**2.9**	**48.6**	**0.049 J**	**11.2**	**6.3**	**7.3**	**127**	**0.031 J**	**10.2**	4.8 U	0.71 U	**40.2**
						819018-TPS26005	8/2/2018				5	0.25 U	**0.97 J**	**16.9**	**0.12 J**	**4.9**	**2.2 J**	**2.7**	**110**	**0.031**	**4 J**	4.9 U	0.74 U	**22**
TP	TP-S28	S28	1257252.0	1097047.9	897.1	819018-TPS28000	8/2/2018	0.2	N	Surficial plastic.	0	**1.1**	**2.2 J**	**85.2**	**3.1**	**17.6**	**164**	**128**	**186**	**0.5**	**21.3**	5.1 U	**0.46 J**	**581**
						819018-TPS28002	8/2/2018				2	0.24 U	**2.1 J**	**49.4**	**0.2 J**	**15.2**	**8.1**	**9.4**	**64.8**	**0.038 J**	**9.9**	4.8 U	0.72 U	**66.6**
						819018-TPS28005	8/2/2018				5	0.2 U	**0.81 J**	**28.1**	**0.16 J**	**6.4**	**8**	**4.7**	**45.2**	**0.046**	**5.8 J**	4.8 U	0.71 U	**44.2**
TP	TP-S30	S30	1257278.3	1097090.4	896.7	819018-TPS30000	8/2/2018	0.2	Y	Surficial metal, plastic, C&D debris. Wet, oily, emulsified substance floating on water as it enters hole.	0	**7**	**13.2**	**406**	**12.4**	**87.5**	**864**	**585**	**426**	**6**	**78.4**	25 U	**3.4 J**	**1410**
						819018-TPS30002	8/2/2018				2	0.24 U	**3.7**	**80.8**	**0.13 J**	**19.5**	**20.8**	**10.5**	**354**	0.025 U	**21.5**	5.1 U	0.77 U	**45.7**
						819018-TPS30004	8/2/2018				4	**0.96**	**2 J**	**75.7**	**1.4**	**13.3**	**54.5**	**31.5**	**108**	**0.23**	**12.1**	5.3 U	0.8 U	**163**
TP	TP-S32	S32	1257304.6	1097133.0	897.0	819018-TPS32000	8/2/2018	0.5	N	Plastic, metal, C&D debris.	0	**7.7**	**14.5**	**335**	**20.6**	**149**	**1630**	**1040**	**481**	**3.2 J**	**198**	**1.9 J**	**5**	**3120**
						819018-TPS32002	8/2/2018				2	0.24 U	**2.8**	**56.5**	**0.25**	**14.4**	**15.2**	**8.5**	**252**	0.023 U	**14.9**	4.6 U	0.7 U	**38.7**
						819018-TPS32005	8/2/2018				5	0.2 U	**1.1 J**	**20.3**	**0.098 J**	**7.2**	**5.4**	**2.3**	**165**	0.024 U	**6.2**	4.8 U	0.73 U	**13.5**
DP	DP-T06	T06	1256984.5	1096566.7	900.8	819018-DPT06000	7/23/2018	>4.2	Y	Possible staining 0.6-2.0 ft bgs. PID hit of 1.3 ppm from 0-0.6 ft bgs.	0	**0.85**	**5.7**	**111**	**0.78**	**15**	**204**	**173**	**235**	**0.2**	**18.3**	4.3 U	**0.29 J**	**121**
						819018-DPT06002	7/23/2018				2	0.28 U	**4.2**	**55.3**	**0.28**	**14**	**10.9**	**94**	**284**	**0.17**	**11.6**	4.8 U	0.73 U	**57.8**
						819018-DPT06004	7/23/2018				4	0.25 U	**2.2 J**	**21**	**0.081 J**	**6.1**	**7**	**3.6**	**236**	**0.016 J**	**6.7**	4.6 U	0.69 U	**16**
DP/MW	MW-106	T17	1257128.9	1096800.7	904.7	819018-DPT17000	7/24/2018	0	N	None observed.	0	**1.5 J**	**5.1**	**71.7**	**1.7**	**14.9**	**184**	**125**	**515**	**0.22**	**15**	4.6 U	0.69 U	**175**
						819018-DPT17002	7/24/2018				2	0.23 U	**2.6**	**25.1**	**0.15 J**	**6.2**	**6.7**	**9**	**266**	**0.025**	**6.7**	4.2 U	0.63 U	**20.3**
						819018-DPT17010	7/24/2018				10	0.2 U	**1.8 J**	**17.1**	**0.19 J**	**5.6**	**23.2 J**	**10.9 J**	**219**	**0.0088 J**	**6.2**	4.4 U	0.66 U	**24.8 J**
						819018-DPT17010D	7/24/2018				10	0.26 U	**1.7 J**	**17.7**	**0.12 J**	**5.7**	**8.7 J**	**5.9 J**	**208**	0.022 U	**5.7**	4.3 U	0.65 U	**17.4 J**
DP/MW	MW-104	T27	1257260.2	1097013.5	898.7	819018-DPT27000	7/24/2018	0	Y	PID reading of 4.6 ppm from 0.8-2.0 ft bgs.	0	**0.46 J**	**5.8**	**63.3**	**1.7**	**17.5**	**119**	**113**	**277**	**0.37**	**13.6**	4.9 U	0.74 U	**154**
						819018-DPT27002	7/24/2018				2	0.22 U	**4.5**	**42.3**	**0.3**	**11.7**	**18.3**	**24.5**	**251**	**0.081**	**10.3**	4.4 U	0.66 U	**36.2**
						819018-DPT27006	7/24/2018				6	0.24 U	**1.2 J**	**9.1**	**0.057 J**	**4.1**	**2.5**	**2.7**	**117**	0.021 U	**3.7 J**	4.3 U	0.65 U	**10.9**
						819018-DPT27010	7/24/2018				10	0.18 U	**3**	**22.1**	**0.097 J**	**4**	**7.9**	**4.2**	**152**	**0.012 J**	**5.3 J**	4.4 U	0.66 U	**15.5**
TP	TP-T30	T30	1257299.6	1097077.3	897.1	819018-TPT30005	8/2/2018	0.2	N	Surficial metal and styrofoam.	5	0.25 U	**0.89 J**	**40.1**	**0.19 J**	**6.2**	**8.8 J**	**11.4**	**161**	**0.036 J**	**5.6**	4.4 U	0.66 U	**32.5**
TP	TP-U14	U14	1257105.1	1096728.8	906.0	819018-TPU14000	7/30/2018	0.2	Y	Surficial rubber and plastic, no odors (PID 1.8 at 5 ft bgs).	0	**91**	**7.8**	**110**	**7.7**	**57.1**	**2030**	**496**	**596**	**0.92**	**48.4**	**1.1 J**	**1.3**	**989**
						819018-TPU14002	7/30/2018				2	**0.18 J**	**1.7 J**	**19.6**	**0.18 J**	**5.4**	**23.6 J**	**8.5 J**	**196**	**0.014 J**	**6.3**	4.1 U	0.62 U	**19.8 J**
						819018-TPU14002D	7/30/2018				2	**1.3 J**	**1.7 J**	**22.5**	**0.28**	**6.2**	**51.4 J**	**21.6 J**	**230**	**0.031 J**	**7.7**	4.1 U	0.62 U	**23.9 J**
						819018-TPU14005	7/30/2018				5	0.2 U	**1.3 J**	**15.2**	**0.044 J**	**4.2**	**131**	**1.5**	**172**	0.021 U	**4.8 J**	4.4 U	0.66 U	**15.9**
TP	TP-U16	U16	1257137.1	1096766.3	904.4	819018-TPU16000	8/1/2018	1.5	N	Concrete chunks at 1.5 ft bgs.	0	**0.49**	**4.2**	**74.9**	**0.5**	**10.1**	**33.1**	**76.2**	**378**	**0.11**	**10.6**	4.8 U	0.72 U	**105**
						819018-TPU16002	8/1/2018				2	**0.21 J**	**6.5**	**66.8**	**0.99**	**12.7**	**88.4**	**110**	**478**	**0.2**	**11.8**	4.5 U	0.67 U	**120**
						819018-TPU16005	8/1/2018				5	0.24 U	**3.8**	**52.4**	**0.43**	**11**	**29**	**33.7**	**393**	**0.099**	**12**	4.5 U	0.68 U	**59.1**
TP	TP-U18	U18	1257163.3	1096808.9	902.3	819018-TPU18000	8/1/2018	0.8	N	Garden hose, brick, and plastic in top 0.8 ft bgs.	0	0.25 U	**4.3**	**52.3**	**0.61**	**11.5**	**49.1**	**75.6**	**501**	**0.15**	**15.7**	4.3 U	0.65 U	**102**
						819018-TPU18002	8/1/2018				2	0.2 U	**3.6**	**51.9**	**0.26**	**12.7**	**12.8**	**20.2**	**542**	**0.073**	**14**	4.3 U	0.65 U	**43**
						819018-TPU18004	8/1/2018				4	0.21 U	**3.2**	**43.3**	**0.36**	**9.7**	**31.3**	**31**	**354**	**0.085**	**10**	4.4 U	0.66 U	**51.6**
TP	TP-U20	U20	1257189.6	1096851.4	900.0	819018-TPU20000	8/1/2018	0	N	None	0	**0.43**	**8**	**104**	**1.6**	**21**	**187 J**	**214**	**582**	**0.31**	**20.2**	4.8 U	0.72 U	**205**
						819018-TPU20002	8/1/2018				2	0.24 U	**3.2**	**53.1**	**0.1 J**	**11.9**	**8.9**	**9.4**	**295**	**0.032**	**12.3**	4.3 U	0.64 U	**27.7**
						819018-TPU20005	8/1/2018				5	0.19 U	**2.4**	**29.2**	**0.1 J**	**8**	**9.7**	**6.4**	**263**	**0.0095 J**	**8.3**	4.3 U	0.65 U	**24.5**
TP	TP-U22	U22	1257215.8	1096894.0	899.6	819018-TPU22000	8/1/2018	0	N	None	0	**0.39**	**7**	**84.6**	**2.3**	**18.5**	**232**	**203**	**520**	**0.34**	**18**	**0.74 J**	**0.3 J**	**252**
						819018-TPU22002	8/1/2018				2	0.2 U	**2.5**	**29.7**	**0.17 J**	**7.1**	**11.2**	**11.4**	**244**	**0.05**	**7.3**	4.3 U	0.65 U	**27.5**
						819018-TPU22004	8/1/2018				4	0.22 U	**2 J**	**19.4**	**0.081 J**	**5.2**	**5.3**	**3.5**	**222**	0.022 U	**5.8**	4.2 U	0.64 U	**18.1**
TP	TP-U24	U24	1257242.1	1096936.5	899.3	819018-TPU24000	8/2/2018	0.2	Y	Surficial asphalt.	0	0.27 U	**8.3**	**69**	**0.88**	**15.3**	**72.4**	**89.5**	**386**	**0.19**	**13**	4.7 U	0.71 U	**104**
						819018-TPU24002	8/2/2018				2	0.22 U	**2.5**	**33**	**0.18 J**	**9.9**	**8.1**	**10.7**	**132 J**	**0.027 J**	**9**	4.4 U	0.67 U	**40 J**
						819018-TPU24002D	8/2/2018				2	0.23 U	**3.1**	**31.8**	**0.17 J**	**9.1**	**8.1**	**10.3**	**144 J**	**0.01 J**	**8.8**	4.4 U	0.66 U	**35.9 J**
						819018-TPU24004	8/2/2018				4	0.28 U	**3.8**	**35.9**	**0.22**	**12.4**	**8.8**	**13.5**	**132**	**0.021 J**	**9.5**	4.4 U	0.67 U	**49.1**
TP	TP-U26	U26	1257268.3	1096979.1	899.0	819018-TPU26000	8/2/2018	0	N	None	0	**0.23 J**	**6.6**	**71.6**	**1.5**	**17.1**	**189**	**134**	**349**	**0.37**	**16.5**	4.5 U	**0.3 J**	**205**
						819018-TPU26002	8/2/2018				2	0.19 U	**1.9 J**	**16**	**0.1 J**	**4.3**	**5.3**	**2.6**	**183**	0.02 UJ	**4.9 J**	4.3 U	0.64 U	**13.4**
						819018-TPU26005	8/2/2018				5	0.22 U	**1.7 J**	**12.1**	**0.091 J**	**4.9**	**3.3**	**2.3**	**130**	0.022 UJ	**4.1 J**	4.4 U	0.67 U	**17.3**

Table 5: Boring/Test Pit Select Data

	Sample Location											Analytical Results											
Site Type	**Location ID**	**Grid ID**	**Latitude**	**Longitude**	**Ground Elevation (ft)**	**Field Sample ID**	**Sample Date**	**Fill Thickness [1] (ft)**	**Observed Impacts[2] (Y/N)**	**Comment (Staining, Odors, Types of Fill [Metal, Ceramics, Bricks])**	**Sample Depth (ft bgs)**	PCB (total) 1 (mg/kg)	Arsenic 16 (mg/kg)	Barium 350 (mg/kg)	Cadmium 2.5 (mg/kg)	Chromium 22 (mg/kg)	Copper 270 (mg/kg)	Lead 400 (mg/kg)	Manganese 2000 (mg/kg)	Mercury 0.81 (mg/kg)	Nickel 140	Selenium 36	Silver 36	Zinc 2200
TP	TP-U28	U28	1257294.6	1097021.6	899.1	819018-TPU28000	8/2/2018	0.2	N	Surficial brick, coal, glass, and metal.	0	0.29 U	**5.1**	**45.7**	**0.68**	**11.4**	**33.9**	**47.5**	**244**	**0.12 J**	**9.4**	4.6 U	0.69 U	**79.1**
						819018-TPU28002	8/2/2018				2	0.22 U	**1.2 J**	**16**	**0.096 J**	**4.6**	**3.1**	**1.9**	**149**	0.021 UJ	**4.6 J**	4.3 U	0.65 U	**13.5**
						819018-TPU28005	8/2/2018				5	0.22 U	**0.47 J**	**11.1**	**0.13 J**	**3.1**	**3.2**	**2.4**	**136**	0.02 UJ	**3.2 J**	4.3 U	0.65 U	**17.7**
TP	TP-W16	W16	1257179.6	1096740.1	904.0	819018-TPW16000	8/1/2018	0.2	Y	Trace glass in top 0.2 ft bgs.	0	**0.23 J**	**9.9**	**80.7**	**1.2**	**13.8**	**105**	**207**	**517**	**0.39**	**14.5**	4.7 U	0.7 U	**160**
						819018-TPW16002	8/1/2018				2	0.25 U	**3.9**	**45.7**	**0.31**	**9.4**	**17.5**	**38.2**	**358**	**0.1**	**10.7**	4.2 U	0.63 U	**46.4**
						819018-TPW16005	8/1/2018				5	0.2 U	**14.9**	**27.9**	**0.17 J**	**6.1**	**15.9**	**21.9**	**244**	**0.085**	**7.8**	4.2 U	0.63 U	**30.5**
TP	TP-W18	W18	1257205.9	1096782.6	901.8	819018-TPW18000	8/1/2018	0.8	N	Trace plastic in top 0.8 ft bgs.	0	**0.2 J**	**6.1**	**81**	**1.9**	**14.3**	**135**	**197**	**458**	**0.27**	**14.5**	4.9 U	0.73 U	**223**
						819018-TPW18002	8/1/2018				2	**0.12 J**	**2.4**	**26.7**	**0.14 J**	**6.3**	**9**	**11.7**	**236**	**0.047**	**6.9**	4.3 U	0.64 U	**24.5**
						819018-TPW18004	8/1/2018				4	0.23 U	**3.4**	**36.6**	**0.3**	**8.3**	**21**	**35.1**	**296**	**0.022**	**9.3**	4.2 U	0.63 U	**42.3**
TP	TP-W20	W20	1257232.1	1096825.2	901.8	819018-TPW20000	8/1/2018	0	N	None	0	**0.5**	**8.6**	**91.1**	**2.6**	**18.2**	**246**	**254**	**566**	**0.38**	**16.4**	5 UJ	0.75 U	**292**
						819018-TPW20002	8/1/2018				2	0.21 U	**3.9**	**57.9**	**0.12 J**	**11.7**	**11.5**	**12.7**	**381**	**0.034**	**13.4**	4.4 U	0.65 U	**29.4**
						819018-TPW20005	8/1/2018				5	0.22 U	**3**	**34.7**	**0.16 J**	**7.7**	**12.7 J**	**15.1 J**	**259 J**	**0.016 J**	**7.7**	4.2 U	0.64 U	**29.3 J**
						819018-TPW20005D	8/1/2018				5	0.25 U	**2.8**	**38.8**	**0.058 J**	**9.8**	**6.3 J**	**7.6 J**	**170 J**	**0.017 J**	**8.6**	4.3 U	0.65 U	**27.1 J**
TP	TP-W22	W22	1257258.4	1096867.7	900.6	819018-TPW22000	8/1/2018	0	N	None	0	**0.27**	**7.3**	**77.5**	**1.9**	**15**	**201**	**175**	**529**	**0.33**	**14.8**	4.9 UJ	**0.3 J**	**196**
						819018-TPW22002	8/1/2018				2	0.22 U	**2.8**	**26.2**	**0.13 J**	**7.3**	**9**	**8.5**	**278**	**0.04**	**8.2**	4.3 U	0.64 U	**28.1**
						819018-TPW22004	8/1/2018				4	0.19 U	**3.4**	**35.1**	**0.18 J**	**8.4**	**15.1**	**16.2**	**342**	**0.043**	**9.2**	4.2 U	0.64 U	**38.8**
TP	TP-Y16	Y16	1257222.2	1096713.8	904.9	819018-TPY16000	8/1/2018	0.2	N	Clay tile/terracotta debris.	0	**0.15 J**	**7.1**	**75.6**	**0.95**	**12.3**	**86.6**	**135**	**514**	**0.22**	**19.8**	4.8 UJ	0.72 U	**124**
						819018-TPY16002	8/1/2018				2	0.18 U	**2.9**	**27.2**	**0.12 J**	**5.3**	**5.7**	**9.5**	**250**	**0.016 J**	**6.7**	4 U	0.6 U	**20.1**
						819018-TPY16004	8/1/2018				4	0.18 U	**2.8**	**28.2**	**0.097 J**	**5.4**	**7.6**	**14.3**	**236**	**0.038**	**6.4**	4.1 U	0.62 U	**22.8**

Notes:
1 = Fill thickness as determined by visual observations noted in Attachment 2, test pit logs.
2 = Impacts are defined as staining, odor, or PID hits over 1.0 part per million (ppm).
Site Type: TP=test pit; DP=direct push, MW=microwell; HA=test pit
Latitude and longitude in New York State Plane West; survey data from hand held global positioning system device.
Elevation in feet (ft) above mean sea level North American Vertical Datum 1988
ft bgs = feet below ground surface
Analytical Results: Results shown for PCBs and metals detected at concentrations greater than the New York State Part 375 Soil Cleanup Objective (SCO) for Residential Use.
PCB = polychlorinated biphenols
Number immediately below PCB (total) and individual metals is the New York State Part 375 SCO for Residential Use for that analyte
Results in milligrams per kilogram (mg/kg)
Bold results indicate analyte detected
Highlighted result indicates concentration exceeds the respective SCO
J = estimated value
U = not detected

Table 6: Monitoring Well Data and Groundwater Elevations

Monitoring Location	Northing	Easting	Surveyor	Top of Riser or Monitoring Point Elevation	Casing	Ground	Depth of Well (feet btor)	Length of Well Screen (feet)	Top of Well Screen Elevation (feet)	Bottom of Well Screen Elevation (feet)	DTW-7/26/18 (feet btor)	Groundwater Elevation 7/26/18
MW-1	1097427.7	1257398.2	GZA-Corrected	900.65	902.45	898.85	24.5	NA	NA	876.2	4.08	896.6
MW-2	1097508.9	1257271.6	GPI	899.45	NA	897.21	22.2	NA	NA	877.3	3.13	896.3
MW-3	1097423.2	1257072.3	GZA-Corrected	901.23	901.18	898.23	23.7	NA	NA	877.6	4.33	896.9
MW-4	1096757.5	1256841.6	Patriot	903.00	903.40	901.88	11.5	5.0	896.5	891.5	10.80	892.2
MW-5	1097104.5	1257193.7	GPI	901.81	901.95	899.25	8.5	4.0	897.3	893.3	6.75	895.1
MW-7	1097337.9	1257159.8	GPI	902.89	903.07	900.77	10.0	5.0	897.9	892.9	5.69	897.2
MW-8	1096833.6	1257030.6	GPI	907.69	907.87	905.24	15.0	10.0	902.7	892.7	14.57	893.1
MW-9	1096610.6	1256993.1	Patriot	902.21	902.71	902.66	11.9	5.0	895.4	890.4	10.33	891.9
MW-101	1097272.0	1257072.0	Patriot	901.26	901.39	898.92	10.5	5.0	895.8	890.8	5.74	895.5
MW-102	1097232.3	1257103.4	Patriot	901.33	NA	899.23	9.9	5.0	896.4	891.4	5.69	895.6
MW-103	1097031.9	1257038.8	Patriot	901.42	NA	900.33	11.8	5.0	894.6	889.6	6.78	894.6
MW-104	1097004.2	1257260.6	Patriot	899.79	NA	899.32	10.7	5.0	894.1	889.1	6.74	893.1
MW-105	1096839.3	1256957.6	Patriot	904.97	905.38	905.29	10.0	5.0	900.0	895.0	dry	<894.97
MW-106	1096795.6	1257134.5	Patriot	903.72	NA	903.38	11.2	5.0	897.5	892.5	dry	<893.72
MW-107	1096573.1	1256792.8	Patriot	899.95	900.1	899.94	9.9	5.0	895.1	890.1	8.02	891.9
SP-12	1097231.3	1257195.4	Patriot	901.26	NA	899.12	9.9	5.0	896.4	891.4	5.12	896.1

Notes:

1. Monitoring points have been established at the top of the PVC riser, with the exception of MW-1, MW-2 and MW-3, which are top of steel casing.
2. The horizontal and vertical data is New York State Planes Coordinates, West Zone, North American Datum 83 and North Atlantic Vertical Datum 88, (US Survey Foot) respectively.
3. Survey completed by: Patriot Design and Consulting-October 2018; GPI Engineering, Landscape Architecture & Surveying, LLP-August 2018, and GZA-2012 that was corrected based on relative elevations at MW-4.

btor = below top of riser
DTW = depth to water
NA = Not available

Table 7: Groundwater Sample Results

				Location	MW-1		MW-2		MW-3		MW-4		MW-5		MW-7		MW-8	
				Sample Date	7/26/2018		7/26/2018		7/27/2018		7/31/2018		8/1/2018		7/30/2018		8/2/2018	
				Sample ID	819018-MW001022		819018-MW002020		819018-MW003021		819018-MW004011		819018-MW005008		819018-MW007009		819018-MW008015	
				QC Code	FS		FS		FS		FS		FS		FS		FS	
Parameter	**HA**	**GA**	**GV**		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dioxane (µg/L)																		
1,4-Dioxane*	0.46	1	NA				0.2	U			**0.27**		**0.32**		**1.1**		**1.2**	J
Per-and Polyfluorinated Alkyl Substances (ng/L)																		
Perfluorooctanesulfonic acid (PFOS)*	70	20	NA				**1.1**	J			**24**		**140**		**120**		**41**	
Perfluorooctanoic acid (PFOA)*	70	20	NA				**3.9**				**17**		**82**		**33**		**36**	
Sum PFOS + PFOA	70	NA	NA				**5**				**41**		**222**		**153**		**77**	
6:2 fluorotelomer sulfonate (6:2 FTS)	NA	NA	NA				41	U			17	U	18	U	**3.3**	J	19	U
Perfluorobutanesulfonic acid (PFBS)	NA	NA	NA				**1.5**	J			**2.6**	J	**7.1**	J	**3.5**		**3**	J
Perfluorobutanoic acid (PFBA)	NA	NA	NA				**15**				**89**	J	**130**	J	**65**		**140**	J
Perfluorodecanoic acid (PFDA)	NA	NA	NA				1.7	U			1.7	U	**1.8**		**0.31**	J	1.9	U
Perfluoroheptanesulfonic acid (PFHpS)	NA	NA	NA				1.7	U			**0.9**	J	**4.2**		**2.7**		**1.2**	J
Perfluoroheptanoic acid (PFHpA)	NA	NA	NA				**1.7**				**5.6**		**26**		**13**		**8.6**	
Perfluorohexane sulfonic acid (PFHxS)	NA	NA	NA				1.7	U			**6.3**		**20**		**9.4**		**8.7**	
Perfluorohexanoic acid (PFHxA)	NA	NA	NA				**4.7**				**11**		**34**		**16**		**14**	
Perfluorononanoic acid (PFNA)	NA	NA	NA				**0.61**	J			**1.2**	J	**5.7**		**1.7**	J	**1.7**	J
Perfluoropentanoic acid (PFPeA)	NA	NA	NA				**5.5**				**14**		**42**		**25**		**13**	
Volatile Organic Compounds (µg/L)																		
1,3-Dichlorobenzene	NA	3	NA		2	U	1	U	2	U	2	U	2	U	1	U	1	U
1,4-Dichlorobenzene	NA	3	NA		2	U	1	U	2	U	2	U	2	U	1	U	1	U
1,4-Dioxane	NA	NA	NA		80	U	40	U	80	U	80	U	80	U	40	U	40	U
Acetone	NA	NA	50		20	U	**3.4**	J	20	U	20	U	**7.9**	J	10	U	**4.6**	J
Chlorobenzene	NA	5	NA		2	U	1	U	2	U	2	U	2	U	1	U	1	U
Chloromethane	NA	5	NA		2	U	1	U	2	U	2	U	2	U	1	U	1	U
Cis-1,2-Dichloroethene	NA	5	NA		2	U	1	U	2	U	**13**		2	U	1	U	**13**	
Methyl Tertbutyl Ether	NA	NA	10		2	U	1	U	2	U	2	U	2	U	1	U	**2.9**	
Methylene chloride	NA	5	NA		**2.7**		1	U	**2.4**		2	U	2	U	1	U	1	U
Tetrachloroethene	NA	5	NA		2	U	1	U	2	U	2	U	2	U	1	U	1	U
trans-1,2-Dichloroethene	NA	5	NA		2	U	1	U	2	U	2	U	2	U	1	U	1	U
Trichloroethene	NA	5	NA		2	U	1	U	2	U	2	U	2	U	1	U	1	U
Trichlorofluoromethane	NA	5	NA		2	U	1	U	2	U	2	U	2	U	1	U	1	U
Vinyl chloride	NA	2	NA		2	U	1	U	2	U	2	U	2	U	1	U	**1.1**	
Semi-volatile Organic Compounds (µg/L)																		
Di-n-butylphthalate	NA	50	NA		5	U	5	U	**0.4**	J	5	U	5	U	5	U	5	U
Phenol	NA	1	NA		5	U	5	U	5	U	5	U	5	U	5	U	5	U
Polychlorinated Biphenyls (µg/L)																		
Aroclor-1242	NA	0.09	NA		0.5	U	0.5	U	0.5	U	0.5	U	**0.29**	J	0.5	U	0.52	UJ
Aroclor-1260	NA	0.09	NA		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.52	UJ
PCB (total)	NA	0.09	NA		0.5	U	0.5	U	0.5	U	0.5	U	**0.29**	J	0.5	U	0.52	UJ
Total Metals (mg/L)																		
Aluminum	NA	NA	NA		200	U	200	U	200	U	200	U	200	U	200	U	200	U
Arsenic	NA	25	NA		15	U	**17**		**13**	J	15	U	15	U	15	U	**14**	J
Barium	NA	1000	NA		**190**		**200**		**250**		**120**		**160**		**1400**		**100**	
Cadmium	NA	5	NA		2	U	2	U	2	U	2	U	**1.2**	J	2	U	2	U
Calcium	NA	NA	NA		**208000**		**215000**		**235000**		**177000**		**181000**		**76700**		**146000**	
Chromium	NA	50	NA		4	U	4	U	4	U	4	U	4	U	**2.3**	J	4	U
Cobalt	NA	NA	NA		4	U	4	U	4	U	**2.9**	J	**2**	J	4	U	4	U
Copper	NA	200	NA		10	U	10	U	10	U	10	U	**200**		**26**		**3**	J
Iron	NA	300	NA		**16300**		**24700**		**14600**		**7200**		**1400**		**2600**		**6300**	
Lead	NA	25	NA		10	U	10	U	10	U	10	U	**3.5**	J	**5.5**	J	10	U
Magnesium	NA	NA	35000		**36000**		**38000**		**44900**		**28700**		**26800**		**63000**		**31600**	
Manganese	NA	300	NA		**540**		**690**		**590**		**400**		**500**		**310**		**280**	
Nickel	NA	100	NA		**1.7**	J	**3**	J	10	U	**4.8**	J	**20**		**6.1**	J	**2.1**	J
Potassium	NA	NA	NA		**3200**		**3600**		**4700**		**12400**		**6800**		**35400**		**8200**	
Sodium	NA	20000	NA		**213000**		**226000**		**261000**		**92100**		**77000**		**21200**		**53300**	
Vanadium	NA	NA	NA		5	U	5	U	5	U	5	U	5	U	5	U	**1.6**	J
Zinc	NA	NA	2000		10	U	10	U	**1.7**	J	**2**	J	**570**		**160**		10	U

See Table 8 for notes

Table 7: Groundwater Sample Results

				Location	MW-9		MW-101		MW-102		MW-103		MW-103		MW-104		MW-107		SP-12	
				Sample Date	8/1/2018		7/27/2018		7/30/2018		7/31/2018		7/31/2018		7/31/2018		8/1/2018		7/31/2018	
				Sample ID	819018-MW009012		819018-MW101012		819018-MW102010		819018-MW103012		819018-MW103012D		819018-MW104010		819018-MW107010		819018-SP015010	
				QC Code	FS		FS		FS		FS		FD		FS		FS		FS	
Parameter	**HA**	**GA**	**GV**		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dioxane (µg/L)																				
1,4-Dioxane*	0.46	1	NA				0.2	U	**2.5**		**1.4**		**1.4**		**0.3**		**0.29**		**0.78**	
Per-and Polyfluorinated Alkyl Substances (ng/L)																				
Perfluorooctanesulfonic acid (PFOS)*	70	20	NA		-		**37**		**160**		**74**		**78**		**90**		**8.4**		**97**	
Perfluorooctanoic acid (PFOA)*	70	20	NA		-		**22**		**34**		**36**		**36**		**56**		**14**		**40**	
Sum PFOS + PFOA	70	NA	NA		-		**59**		**194**		**110**		**114**		**146**		**22.4**		**137**	
6:2 fluorotelomer sulfonate (6:2 FTS)	NA	NA	NA		-		17	U	180	U	17	U	17	U	19	U	18	U	85	U
Perfluorobutanesulfonic acid (PFBS)	NA	NA	NA		-		**3.1**		**4.7**		**4.4**	J	**3.9**	J	**5.9**	J	**3.4**		**4.1**	J
Perfluorobutanoic acid (PFBA)	NA	NA	NA		-		**73**		**360**		**140**	J	**140**	J	**110**	J	**30**		**480**	J
Perfluorodecanoic acid (PFDA)	NA	NA	NA		-		1.7	U	**0.34**	J	**0.63**	J	**0.61**	J	**0.64**	J	1.8	U	**0.69**	J
Perfluoroheptanesulfonic acid (PFHpS)	NA	NA	NA		-		**1.3**	J	**3.1**		**2.1**		**2.2**		**3.2**		**0.4**	J	**1.5**	J
Perfluoroheptanoic acid (PFHpA)	NA	NA	NA		-		**8.8**		**9.7**		**10**		**9.6**		**18**		**4.1**		**13**	
Perfluorohexane sulfonic acid (PFHxS)	NA	NA	NA		-		**5.6**		**9.6**		**10**		**9.6**		**16**		**3.3**		**10**	
Perfluorohexanoic acid (PFHxA)	NA	NA	NA		-		**12**		**18**		**15**		**16**		**26**		**7.9**		**21**	
Perfluorononanoic acid (PFNA)	NA	NA	NA		-		**1.3**	J	**1.9**		**2.7**		**3.1**		**4.9**		**0.8**	J	**3.4**	
Perfluoropentanoic acid (PFPeA)	NA	NA	NA		-		**6.8**		**15**		**14**		**16**		**31**		**9.3**		**24**	
Volatile Organic Compounds (µg/L)																				
1,3-Dichlorobenzene	NA	3	NA		1	U	**1.7**		2	U	**1.2**	J	2	UJ	2	U	1	U	2	U
1,4-Dichlorobenzene	NA	3	NA		1	U	**12**		2	U	**2.6**		**2.7**		2	U	1	U	2	U
1,4-Dioxane	NA	NA	NA		40	U	40	U	80	U	40	U	80	U	80	U	40	U	80	U
Acetone	NA	NA	50		**3.7**	J	**3.1**	J	20	U	**6.2**	J	**10**	J	**7.7**	J	10	U	20	U
Chlorobenzene	NA	5	NA		1	U	**15**		2	U	**0.85**	J	2	U	2	U	1	U	2	U
Chloromethane	NA	5	NA		1	U	1	U	2	U	**0.35**	J	2	U	2	U	1	U	2	U
Cis-1,2-Dichloroethene	NA	5	NA		**13**		1	U	2	U	**110**	J	**110**		2	U	**1.1**		2	U
Methyl Tertbutyl Ether	NA	NA	10		**2**		1	U	2	U	**7.8**		**8.5**		2	U	1	U	2	U
Methylene chloride	NA	5	NA		1	U	1	U	2	U	1	U	2	U	2	U	1	U	2	U
Tetrachloroethene	NA	5	NA		**1.5**		1	U	2	U	1	U	2	U	2	U	1	U	2	U
trans-1,2-Dichloroethene	NA	5	NA		1	U	1	U	2	U	**1.8**		**2.1**		2	U	1	U	2	U
Trichloroethene	NA	5	NA		**1.1**		1	U	2	U	**1.8**		**2**		2	U	**0.58**	J	2	U
Trichlorofluoromethane	NA	5	NA		1	U	1	U	2	U	1	U	2	U	2	U	1	U	**3.3**	
Vinyl chloride	NA	2	NA		**1.2**		1	U	2	U	**11**		**10**		2	U	1	U	2	U
Semi-volatile Organic Compounds (µg/L)																				
Di-n-butylphthalate	NA	50	NA		5	U	**0.43**	J	5	U	5	U	5	U	5	U	5	U	5	U
Phenol	NA	1	NA		5	U	5	U	5	U	5	U	**0.45**	J	**0.42**	J	5	U	5	U
Polychlorinated Biphenyls (µg/L)																				
Aroclor-1242	NA	0.09	NA		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Aroclor-1260	NA	0.09	NA		0.5	U	**0.54**		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
PCB (total)	NA	0.09	NA		0.5	U	**0.54**		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Total Metals (mg/L)																				
Aluminum	NA	NA	NA		200	U	200	U	200	U	**120**	J	**130**	J	200	U	200	U	200	U
Arsenic	NA	25	NA		15	U	15	U	15	U	**32**		**31**		**8.1**	J	15	U	15	U
Barium	NA	1000	NA		**67**		**260**		**200**		**130**		**130**		**170**		**74**		**180**	
Cadmium	NA	5	NA		2	U	2	U	2	U	2	U	2	U	2	U	2	U	**4.4**	
Calcium	NA	NA	NA		**137000**		**96600**		**162000**		**149000**		**147000**		**176000**		**153000**		**171000**	
Chromium	NA	50	NA		4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U
Cobalt	NA	NA	NA		**1.4**	J	4	U	4	U	**1.1**	J	**1**	J	**0.75**	J	**1.4**	J	**3.4**	J
Copper	NA	200	NA		**3.5**	J	**2.5**	J	10	U	10	U	10	U	10	U	**10**		**240**	
Iron	NA	300	NA		**620**		50	U	**6400**		**8900**		**8800**		**14200**		**180**		**5900**	
Lead	NA	25	NA		10	U	10	U	10	U	10	U	10	U	10	U	**3.1**	J	**7.6**	J
Magnesium	NA	NA	35000		**21800**		**39400**		**39500**		**29800**		**29300**		**31100**		**18900**		**31400**	
Manganese	NA	300	NA		**50**		**230**		**300**		**410**		**400**		**730**		**190**		**740**	
Nickel	NA	100	NA		**4**	J	**2.2**	J	10	U	**2.3**	J	**2**	J	**2.6**	J	**3.5**	J	**28**	
Potassium	NA	NA	NA		**6200**		**4300**		**20600**		**10400**		**10300**		**9100**		**3400**		**8100**	
Sodium	NA	20000	NA		**36700**		**60500**		**106000**		**81900**		**81100**		**123000**		**36400**		**91300**	
Vanadium	NA	NA	NA		5	U	5	U	5	U	**1.5**	J	5	U	**2.4**	J	5	U	5	U
Zinc	NA	NA	2000		10	U	**4.1**	J	**2.7**	J	**11**		**9.8**	J	**2**	J	**50**		**660**	

See Table 8 for notes

Table 3: Soil PFAS Results

	Location	HA-N36		HA-T33		TP-J34		TP-L26		TP-P27		TP-P27		TP-R17	
	Sample Date	8/1/2019		8/1/2019		7/29/2019		7/30/2019		7/30/2019		7/30/2019		7/31/2019	
	Sample ID	819018-HAN3600		819018-HAT3300		819018-TPJ3402		819018-TPL2600		819018-TPP2700		819018-TPP2700D		819018-TPR1700	
	Sample Depth (ft bgs)	0		0		2		0		0		0		0	
	QC Code	FS		FS		FS		FS		FS		FD		FS	
Parameter		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Per- and polyfluoroalkyl substances (ug/kg)															
N-ethyl perfluorooctanesulfonamidoacetic acid (N-EtFOSA)		2.7	U	2.9	U	**1.4**	J	**0.7**	J	2.9	U	2.9	U	2.2	U
Perfluorobutanoic acid (PFBA)		**2.1**		**0.27**	J	**0.26**	J	**0.24**		**0.22**	J	**0.23**	J	**1.4**	
Perfluorodecanesulfonic acid (PFDS)		**0.13**	J	0.29	U	**0.35**		**0.088**	J	0.29	U	0.29	U	**1.9**	
Perfluorodecanoic acid (PFDA)		**0.5**		**0.06**	J	**0.15**	J	**0.077**	J	**0.17**	J	**0.18**	J	**0.62**	
Perfluorododecanoic acid (PFDoA)		0.27	U	0.29	U	0.33	U	0.23	U	0.29	U	0.29	U	**0.29**	
Perfluoroheptanesulfonic acid (PFHpS)		**0.047**	J	0.29	U	**0.23**	J	0.23	U	0.29	U	0.29	U	0.22	U
Perfluoroheptanoic acid (PFHpA)		**0.08**	J	**0.14**	J	**0.14**	J	**0.066**	J	**0.092**	J	**0.12**	J	**0.19**	J
Perfluorohexanesulfonic acid (PFHxS)		**0.12**	J+	**0.16**	J+	**0.31**	J+	**0.1**	J+	0.29	U	0.29	U	**0.15**	J+
Perfluorohexanoic acid (PFHxA)		0.27	U	**0.11**	J	0.33	U	0.23	U	**0.09**	J	**0.12**	J	2.2	U
Perfluorononanoic acid (PFNA)		**0.29**		**0.16**	J	**0.23**	J	**0.044**	J	**0.18**	J	**0.25**	J	**0.24**	
Perfluorooctanesulfonic acid (PFOS)		**10**		**2.2**		**15**		**2.8**		**1.5**		**2.1**		**6.7**	
Perfluorooctanoic acid (PFOA)		**0.7**		**0.89**		**1.1**		**0.18**	J	**0.23**	J	**0.35**		**0.59**	
Perfluorotetradecanoic acid (PFTeDA)		0.27	U	0.29	U	0.33	U	0.23	U	0.29	U	0.29	U	**0.15**	J
Perfluoroundecanoic acid (PFUnDA)		**0.15**	J	**0.08**	J	**0.17**	J	**0.058**	J	**0.12**	J	**0.13**	J	**0.29**	
Perfluroroctanesulfonamide (FOSA)		0.27	U	0.29	U	**0.25**	J	0.23	U	0.29	U	0.29	U	**0.095**	J

Notes:

ft bgs = feet below ground surface

QC code: FS= field sample, FD = field duplicate

Samples analyzed for:

Per-and polyflouroalkyl substances (PFAS) by USEPA Modified Method 537

Results in micrograms per kilogram (ug/kg)

Only detected compounds shown (detections in bold)

Qualifiers: U = not detected; J = estimated value (+ = biased high)

There are no New York soil standards or guidance values for PFAS compounds

Created by: KMS 11/07/19
Checked by: CRS 11/07/19

Table 4: Boring/Test Pit Select Data

	Sample Location											Analytical Results											
Site Type	**Location ID**	**Grid ID**	**Easting**	**Northing**	**Ground Elevation (ft)**	**Field Sample ID**	**Sample Date**	**Fill Thickness [1] (ft)**	**Observed Impacts [2] (Y/N)**	**Comment (Staining, Odors, Types of Fill [Metal, Ceramics, Bricks])**	**Sample Depth (ft bgs)**	PCB (total) 1 (mg/kg)	Arsenic 16 (mg/kg)	Barium 350 (mg/kg)	Cadmium 2.5 (mg/kg)	Chromium 22 (mg/kg)	Copper 270 (mg/kg)	Lead 400 (mg/kg)	Manganese 2000 (mg/kg)	Mercury 0.81 (mg/kg)	Nickel 140 (mg/kg)	Selenium 36 (mg/kg)	Silver 36 (mg/kg)	Zinc 2200 (mg/kg)
HA	HA-H43	H43	1,257,224	1,097,505	896.6	819018-HAH4300	8/1/2019	0	N	None	0	0.26 U	**3.9**	**61**	**0.12 J**	**15**	**11.1**	**13.5**	**436**	**0.031**	**15.1**	4.9 U	0.73 U	**67.1**
						819018-HAH4301	8/1/2019				1	**1.3**	**2 J**	**92.7**	**5.2**	**25**	**74**	**58.9**	**84.2**	**0.22**	**18.1**	**2.7 J**	1.1 U	**176**
						819018-HAH4302	8/1/2019				2	0.26 U	**1.5 J**	**56.6**	**0.51**	**14.6**	**9.9**	**7.8**	**66.1**	**0.015 J**	**11**	**0.52 J**	0.66 U	**46.7**
HA	HA-I43	I43	1257245	1097492	896.4	819018-HAI4300	7/31/2019	0	N	None (black organic material)	0	**28**	**10.2**	**314 J**	**25.1**	**162 J+**	**4450**	**1560**	**655**	**3.9**	**117 J+**	**3.4 J**	**8.6 J**	**6710 J**
						819018-HAI4300D	7/31/2019				0	**43**	**7.6**	**205 J**	**24.4**	**76.2 J+**	**3280**	**1330**	**473**	**2.8**	**70.7 J+**	**0.66 J**	**2.6 J**	**3090 J**
						819018-HAI4301	7/31/2019				1	**0.51**	**3.3**	**102**	**0.9**	**19.3**	**69.1**	**39.8**	**146**	**0.18**	**16.4**	**1.9 J**	0.96 U	**142**
						819018-HAI4302	7/31/2019				2	0.26 U	2.4 U	**58.9**	**0.057 J**	**13.7**	**6.7**	**7.7**	**96.4**	**0.034**	**11.7**	4.7 U	0.71 U	**36.5**
HA	HA-I44	I44	1257248	1097510	896.3	819018-HAI4400	8/1/2019	0	N	None	0	0.39 U	**2.9 J**	**96.5**	**1.1**	**18.4**	**52.9**	**40.3**	**78.5**	**0.16**	**14**	**1.9 J**	1.1 U	**170**
TP	TP-J34	J34	1257139	1097294	899.3	819018-TPJ3400	7/29/2019	0.5	Y	Metal, rubber, plastic and glass debris and large metal and concrete pieces from 0 to 2 feet bgs. Metal, bricks and dark grey staining at 2.5 to 3 feet bgs. Slag, bricks, and strong odor from 3.5 to 4 feet bgs (PID reading of 69.7 ppm)	0	**15 J+**	**11.8**	**193**	**10.3**	**105**	**1610**	**1200**	**1080**	**3.5**	**82.6**	**1.5 J**	**4.5**	**1750**
						819018-TPJ3402	7/29/2019				2	**230**												
						819018-TPJ3404	7/29/2019				4	**370**	**27.6**	**321**	**17.5**	**418**	**5850**	**1860**	**1640**	**6.7**	**256**	**7.2 J**	**24.5**	**4860**
						819018-TPJ3406	7/29/2019				6	**0.4**	**3**	**67.8**	**0.25**	**12.4**	**66.2**	**34.4**	**397**	**0.021 J**	**11.6**	4.5 U	0.67 U	**86.9**
TP	TP-J38	J38	1257192	1097379	897.4	819018-TPJ3800	7/29/2019	0	Y	Metal and glass found at 0 to 2 feet bgs (PID reading of 2.4 ppm). Bricks and dark grey staining present at 2.5 to 3 feet bgs.	0	**0.62**	**4**	**65.4**	**1.2**	**15.4**	**191**	**134**	**226**	**0.37**	**14.4**	4.6 U	**0.59 J**	**296**
						819018-TPJ3802	7/29/2019				2	**5.5**	**20.7**	**879**	**37.1**	**123**	**8890**	**4470**	**660**	**3.4**	**720**	**3.8 J**	**12.4**	**24200**
						819018-TPJ3804	7/29/2019				4	0.21 U	**1.4 J**	**23.2**	**1.1**	**7.8**	**102**	**34.5**	**185**	**0.056**	**7.8**	3.9 U	**0.47 J**	**240**
						819018-TPJ3806	7/29/2019				6	**0.8**												
TP	TP-L07	L07	1256827	1096693	900.4	819018-TPL0700	7/31/2019	2	Y	Non-native road base material present in 0 to 2 feet bgs.	0	0.23 U	**3.1**	**51.6**	**0.19 J**	**9.5**	**20.7**	**11.5**	**419**	**0.023**	**9.3**	4.2 U	0.63 U	**51.5**
						819018-TPL0702	7/31/2019				2	0.26 U												
						819018-TPL0704	7/31/2019				4	0.24 U												
						819018-TPL0706	7/31/2019				6	0.23 U												
TP	TP-L09	L09	1256854	1096736	901.0	819018-TPL0900	7/31/2019	2	Y	Non-native road base material present in 0 to 2 feet bgs.	0	0.22 U												
						819018-TPL0900D	7/31/2019				0	0.22 U												
						819018-TPL0902	7/31/2019				2	0.23 U												
						819018-TPL0904	7/31/2019				4	0.2 U												
						819018-TPL0906	7/31/2019				6	0.21 U												
TP	TP-L26	L26	1257077	1097097	900.4	819018-TPL2600	7/30/2019	2	Y	Trace glass, brick, metal, and ceramic fragments from 0 to 2 feet bgs. Faint odor present at 2 to 4 feet bgs (PID reading of 0.1 ppm).	0	**16 J+**	**16.4**	**238**	**23.5**	**266**	**2300**	**2050**	**884**	**5.1**	**158**	**1.7 J**	**7.3**	**3650**
						819018-TPL2602	7/30/2019				2	0.25 U	**11.2**	**37.1**	**0.16 J**	**10.8**	**40.5**	**46.5**	**365**	**0.092**	**15**	4.1 U	0.62 U	**110**
						819018-TPL2604	7/30/2019				4	0.19 U	**2.3**	**19.7**	**0.029 J**	**4.1**	**8.7**	**8.8**	**188**	**0.012 J**	**5.6**	3.9 U	0.59 U	**29.8**
						819018-TPL2606	7/30/2019				6	0.24 U	**2.3**	**16.2**	**0.21**	**10.3**	**19.1**	**19.3**	**198**	**0.062**	**5.7**	4.1 U	0.62 U	**51.6**
						819018-TPL2608	7/30/2019				8	0.2 U	**1.7 J**	**14.3**	**0.049 J**	**4.2**	**8.6**	**3.9**	**182**	**0.01 J**	**4.7 J**	4 U	0.6 U	**19.7**
HA	HA-L27	L27	1257091	1097118	900.5	819018-HAL2702	8/1/2019	-	-	Confirmation sample for waste stream characterization- previously described during Phase I PDI	2		**13.5 J**	**447**	**92 J-**	**2150**	**14500**	**20300**	**1510**	**6**	**1320**	**11.6**	**27.6 J-**	**39500**
TP	TP-L28	L28	1257103	1097140	899.1	819018-TPL2800	7/30/2019	2	Y	Trace glass, brick, plastic, and ceramic fragments from 0 to 2 feet bgs.	0	**6.4**	**20.4**	**212**	**10.3**	**145**	**2290**	**4780**	**665**	**4.1**	**138**	8.4 U	**6**	**1820**
						819018-TPL2802	7/30/2019				2	**0.34**	**3.5**	**33**	**1.4**	**12.1**	**276**	**107**	**214**	**0.17**	**13.3**	4.1 U	**0.55 J**	**501**
						819018-TPL2804	7/30/2019				4	0.21 U	**4.3**	**12.2**	0.21 U	**4.1**	**10.8**	**5.3**	**170**	**0.014 J**	**4.9 J**	4.2 U	0.64 U	**40.9**
						819018-TPL2806	7/30/2019				6	0.21 U	**2 J**	**16.7**	**0.08 J**	**4.7**	**11.3**	**6.1**	**155**	**0.013 J**	**5.1 J**	4.8 U	0.72 U	**36.7**
						819018-TPL2808	7/30/2019				8	0.2 U	**5.8**	**19.5**	**0.042 J**	**9.1**	**19.7**	**10.7**	**225**	**0.063**	**9.8**	4.9 U	0.74 U	**43.5**
TP	TP-L31	L31	1257142	1097204	899.0	819018-TPL3100	7/30/2019	1.5	Y	Bricks and ceramic fragments from 0 to 0.1 feet bgs (PID reading of 1.9 ppm). Odor, bricks, rubber, glass, metal, and ceramic debris from 1.5-4 feet bgs (PID reading of 1.7 ppm). Odor from 4 to 6 feet bgs (PID reading of 1.1 ppm).	0	**6.4**	**19.9**	**334**	**9.1**	**159**	**2800**	**1380**	**600**	**2.2**	**118**	**1.9 J**	**2.9**	**1690**
						819018-TPL3102	7/30/2019				2	**13**	**26.8**	**613**	**26.7**	**3320**	**146000**	**15800**	**1350**	**1.7**	**1780**	**5.5 J**	**25.6**	**5910**
						819018-TPL3104	7/30/2019				4	**0.35 J+**	**4.5**	**65.2**	**0.5**	**10.7**	**76.8**	**46.2**	**185**	**0.096**	**12.7**	4.3 U	**1.7**	**361**
						819018-TPL3106	7/30/2019				6	**2.6**	**2.2**	**54**	**0.81**	**20.1**	**263**	**93**	**165**	**0.13**	**14.1**	4.2 U	**1.3**	**189**
TP	TP-M43	M43	1257321	1097446	899.5	819018-TPM4300	7/29/2019	0	Y	Trace metal debris from 0 to 2 feet bgs.	0	**5.3 J+**	**3.2**	**211**	**3.2**	**36.8**	**536**	**334**	**174**	**1.1 J-**	**29**	**0.7 J**	**2.3**	**1030**
						819018-TPM4302	7/29/2019				2	**0.22 J**												
						819018-TPM4304	7/29/2019				4	0.27 U	**2.1 J**	**35**	**0.099 J**	**9.9**	**9.8**	**4.8**	**201**	**0.012 J**	**9.4**	4.8 U	0.71 U	**29.7**
HA	HA-M46	M46	1257361	1097510	896.2	819018-HAM4600	7/31/2019	0	N	None	0	0.43 U	**1.7 J**	**86.5**	**0.77**	**18.9**	**39**	**39.8**	**89.4**	**0.16**	**14.8**	**1.7 J**	1.1 U	**121**
						819018-HAM4601	7/31/2019				1	0.23 U	**2.1 J**	**48.6**	**0.12 J**	**11.4**	**5.2**	**7.4**	**133**	**0.015 J**	**10.3**	4.9 U	0.73 U	**33.5**
						819018-HAM4602	7/31/2019				2	0.24 U	**1.6 J**	**35.4**	**0.067 J**	**8.8**	**6.4**	**4.3**	**165 J+**	0.023 U	**8.2**	4.3 U	0.65 U	**26**
						819018-HAM4602D	7/31/2019				2	0.25 U	**1.1 J**	**39.6**	**0.053 J**	**9.7**	**5.8**	**5.5**	**185 J+**	0.024 U	**9.4**	4.3 U	0.64 U	**26.9**

Table 4: Boring/Test Pit Select Data

	Sample Location											Analytical Results												
Site Type	**Location ID**	**Grid ID**	**Easting**	**Northing**	**Ground Elevation (ft)**	**Field Sample ID**	**Sample Date**	**Fill Thickness [1] (ft)**	**Observed Impacts [2] (Y/N)**	**Comment (Staining, Odors, Types of Fill [Metal, Ceramics, Bricks])**	**Sample Depth (ft bgs)**	PCB (total) 1 (mg/kg)	Arsenic 16 (mg/kg)	Barium 350 (mg/kg)	Cadmium 2.5 (mg/kg)	Chromium 22 (mg/kg)	Copper 270 (mg/kg)	Lead 400 (mg/kg)	Manganese 2000 (mg/kg)	Mercury 0.81 (mg/kg)	Nickel 140 (mg/kg)	Selenium 36 (mg/kg)	Silver 36 (mg/kg)	Zinc 2200 (mg/kg)
TP	TP-N07	N07	1256870	1096667	900.8	819018-TPN0700	7/31/2019	2	Y	Non-native road base material present in 0 to 2 feet bgs.	0	**1.5**												
						819018-TPN0702	7/31/2019				2	**0.29**												
						819018-TPN0704	7/31/2019				4	**1.3**												
						819018-TPN0706	7/31/2019				6	**0.22 J**												
TP	TP-N09	N09	1256896	1096709	901.8	819018-TPN0900	7/31/2019	2	Y	Non-native road base material present in 0 to 2 feet bgs.	0	**0.3**												
						819018-TPN0902	7/31/2019				2	**0.19 J**												
						819018-TPN0904	7/31/2019				4	0.2 U												
						819018-TPN0906	7/31/2019				6	**0.27**												
TP	TP-N13	N13	1256949	1096794	904.2	819018-TPN1300	7/31/2019	2	Y	Non-native road base material present in 0 to 2 feet bgs.	0	0.23 U	**2.8**	**13.8**	**0.05 J**	**6.5**	**5.2 J**	**5.2**	**102**	**0.0096 J**	**8.6**	4.2 U	0.63 U	**9.7**
						819018-TPN1302	7/31/2019				2	0.25 U	**3.6**	**44.7**	**0.11 J**	**11.6**	**7.4**	**10.1**	**354**	**0.064**	**13.4**	4.4 U	0.66 U	**31.5**
						819018-TPN1304	7/31/2019				4	0.22 U	**2.3**	**23.1**	**0.092 J**	**6.5**	**6.4**	**7.6**	**243**	**0.034**	**7.7**	4.4 U	0.67 U	**19.7**
						819018-TPN1306	7/31/2019				6	0.2 U	**2.2**	**25**	**0.082 J**	**6**	**27.7**	**7.4**	**222**	**0.014 J**	**6.8**	4.3 U	0.65 U	**22.5**
TP	TP-N15	N15	1256975	1096837	905.4	819018-TPN1500	7/31/2019	2	Y	Non-native road base material, trace glass, metal, brick, plastic, and slag present in 0 to 1 feet bgs. Brown to black foundry sand from 1 to 2 feet bgs.	0	**11**	**8.9**	**867**	**21.1**	**981**	**70800**	**2230**	**697**	**2.3**	**695**	**2.8 J**	**3.3**	**9830**
						819018-TPN1502	7/31/2019				2	0.22 U	**6.6**	**678**	**0.57**	**40.7**	**26.7**	**857**	**227**	**0.66**	**17.6**	4.4 U	0.65 U	**331**
						819018-TPN1504	7/31/2019				4	**0.66**	**2.3**	**27.3**	**0.16 J**	**8.7**	**19.3**	**236**	**234**	**0.028**	**9.7**	4.3 U	0.65 U	**54.6**
						819018-TPN1506	7/31/2019				6	**0.2 J**	**2.9**	**37.3**	**0.49**	**6.3**	**66**	**76.6**	**216**	**0.045**	**13.5**	4.3 U	0.65 U	**179**
TP	TP-N21	N21	1257067	1096968	900.9	819018-TPN2100	7/31/2019	2	Y	Trace glass, brick, plastic, and metal fragments from 0 to 2 feet bgs. Faint odor from 2 to 4 feet bgs (PID reading of 0.2 ppm).	0	**6.1**												
						819018-TPN2102	7/31/2019				2	0.28 U												
						819018-TPN2104	7/31/2019				4	0.3 U												
						819018-TPN2106	7/31/2019				6	0.24 U												
TP	TP-N27	N27	1257133	1097092	900.2	819018-TPN2700	7/30/2019	2	Y	Faint odor from 4 to 4.5 feet bgs.	0	**7.1**	6 U	80.3 U	4.8 U	**56.7**	**2700**	**1060**	**539**	**1.3**	57.8 U	4.2 U	2.3 U	**1430**
						819018-TPN2702	7/30/2019				2	**0.11 J+**	**1.2 J**	**21.1**	**0.33**	**5.9**	**15.8**	**20.3**	**236**	**0.063**	**5.3**	4.2 U	0.64 U	**109**
						819018-TPN2704	7/30/2019				4	**0.32**	**2.5**	**65.5**	**0.89**	**12.4**	**49.2**	**118**	**233**	**0.13**	**11.8**	4.3 U	0.64 U	**549**
						819018-TPN2706	7/30/2019				6	0.2 U	**0.96 J**	**17.8**	**0.055 J**	**4.7**	**4.1**	**3.5**	**137**	0.022 U	**4.7 J**	4.1 U	0.62 U	**20**
						819018-TPN2708	7/30/2019				8	0.21 U	**1.6 J**	**13.7**	0.21 U	**5.9**	**5.4**	**5.1**	**149**	0.021 U	**4.2 J**	4.2 U	0.63 U	**22.8**
HA	HA-N36	N36	1257245	1097288	899.5	819018-HAN3600	8/1/2019	-	-	Confirmation sample for waste stream characterization- previously described during Phase I PDI	0		**18.1**	**887**	**31.3**	**737**	**4220**	**4980**	**1800**	**64.8**	**470**	**4.6**	**14.5**	**5430**
HA	HA-N47	N47	1257395	1097518	896.0	819018-HAN4700	7/31/2019	0	N	None	0	0.44 U	**3.5 J**	**101**	**1.1**	**22**	**53.8**	**48.8**	**86.1**	**0.2**	**16.5**	**1.9 J**	1.3 U	**140**
						819018-HAN4701	7/31/2019				1	0.24 U	**1.2 J**	**70.1**	**0.21 J**	**16.1**	**8.1**	**10.9**	**122**	**0.022 J**	**12.9**	5 U	0.75 U	**43.7**
						819018-HAN4702	7/31/2019				2	0.21 U	**1.5 J**	**38**	**0.05 J**	**9.8**	**5.2**	**5.9**	**198**	0.023 U	**8.9**	4.7 U	0.7 U	**29.3**
TP	TP-O19	O19	1257049	1096909	902.7	819018-TPO1900	7/30/2019	2	Y	Trace glass and metal fragments from 0 to 2 feet bgs. Trace brick, wood, and plastic fragments from 2 to 4 feet bgs.	0	**8.4**												
						819018-TPO1902	7/30/2019				2	**1.3**												
						819018-TPO1904	7/30/2019				4	**0.38**												
						819018-TPO1904D	7/30/2019				4	**0.34**												
HA	HA-O32	O32	1257219	1097186	899.0	819018-HAO3200	8/1/2019	-	-	Confirmation sample for waste stream characterization- previously described during Phase I PDI	0		**14.9**	**487**	**64.9**	**664**	**11000**	**70000**	**619**	**6.5**	**153**	**13.3**	**7.6**	**6070**
HA	HA-O46	O46	1257403	1097483	896.0	819018-HAO4600	7/31/2019	0	N	None	0	**4.5**	**3.2 J**	**77.4**	**0.12 J**	**19**	**11.1**	**11.9**	**353**	**0.39**	**17.6**	9.4 U	1.4 U	**55.6**
						819018-HAO4601	7/31/2019				1	0.27 U	**1.5 J**	**57.9**	**0.086 J**	**13.3**	**10.8**	**8.4**	**119**	**0.011 J**	**13.9**	4.5 U	0.68 U	**39.6**
						819018-HAO4602	7/31/2019				2	0.25 U	**3.1**	**54**	0.25 U	**13**	**11.3**	**8.3**	**222**	**0.01 J**	**12.9**	4.9 U	0.74 U	**35.9**
HA	HA-P03	P03	1256860	1096555	899.9	819018-HAP0300	8/1/2019	0	Y	Slag located at 1.8-2.1 feet bgs. Odor presents from 2.1-2.7 feet bgs.	0	**1.3**	**3.6**	**53**	**2**	**18.4**	**602**	**379**	**227**	**0.76**	**19.7**	4.1 U	**0.45 J**	**292**
						819018-HAP0301	8/1/2019				1	0.22 U	**3.8**	**33.2**	**0.21**	**9.4**	**91.5**	**46.9**	**547**	**0.066**	**11.6**	4.1 U	0.61 U	**78**
						819018-HAP0302	8/1/2019				2	**0.58**	**29.3**	**198**	**7.6**	**27.2**	**225**	**2850**	**659**	**1.6**	**44.8**	5.8 U	**0.3 J**	**623**
						819018-HAP0304	8/1/2019				4	0.21 U	**3.4**	**62.2**	**0.12 J**	**17**	**7.1**	**22.5**	**177**	**0.064**	**13.2**	**1.2 J**	0.7 U	**44**
TP	TP-P19	P19	1257070	1096896	902.1	819018-TPP1900	7/30/2019	2	Y	Trace glass, ceramic, and metal fragments from 0 to 2 feet bgs.	0	**5.6 J+**	**34**	**1680**	**20.4**	**381**	**2290**	**5480**	**1500**	**8.4**	**305**	21 U	**6.8**	**5140**
						819018-TPP1902	7/30/2019				2	**1.6**												
						819018-TPP1904	7/30/2019				4	0.19 U												
TP	TP-P27	P27	1257175	1097066	899.4	819018-TPP2700	7/30/2019	0	Y	Glass, brick, and wood debris from 0 to 3 feet bgs (PID reading of 0.6 ppm).	0	**24**	**32.3**	**787 J**	**39.4**	**345**	**11500 J**	**3230**	**1140**	**10.1 J**	**239**	**1.9 J**	**12.9 J**	**7760**
						819018-TPP2700D	7/30/2019				0	**22**	**31.1**	**1240 J**	**37.4**	**379**	**6490 J**	**3760**	**1540**	**6.8 J**	**299**	**1.1 J**	**34.6 J**	**8780**
						819018-TPP2702	7/30/2019				2	**9.2 J+**	**12.3**	**279**	**16.3**	**76.9**	**688**	**662**	**336**	**3.9**	**102**	5.1 U	**2.6**	**2720**
						819018-TPP2704	7/30/2019				4	**1.3 J+**	**2.2 J**	**58.5**	**0.72**	**13.9**	**55.3**	**52.9**	**298**	**0.18**	**15.8**	4.9 U	0.74 U	**154**
						819018-TPP2706	7/30/2019				6	0.22 U	**0.66 J**	**32.2**	**0.035 J**	**9.6**	**7.9**	**3.2**	**178 J-**	0.023 U	**8.9**	4.6 U	0.68 U	**18.2**
						819018-TPP2708	7/30/2019				8	**0.22 J+**	**2.3 J**	**45.5**	**0.53**	**12.1**	**33**	**34.9**	**183**	**0.36**	**13**	4.9 U	0.73 U	**117**
TP	TP-P29	P29	1257201	1097109	899.1	819018-TPP2900	7/29/2019	1	Y	Glass, weathered concrete, an d roof shingle debris from 0 to 1 feet bgs.	0	**110**	**12.5**	**364**	**42.7**	**221**	**8570**	**5060**	**896**	**12.1**	**237**	**8.6**	**15.5**	**8110**
						819018-TPP2902	7/29/2019				2	**3.3 J+**	**5.7**	**118**	**3.4**	**45**	**407**	**324**	**250**	**0.58**	**68.9**	4.7 U	**1**	**713**
						819018-TPP2904	7/29/2019				4	0.25 U	**1.8 J**	**38.7**	**0.062 J**	**9.8**	**8.4**	**5.9**	**282**	**0.017 J**	**8.2**	4.6 U	0.69 U	**31.1**
						819018-TPP2906	7/29/2019				6	0.24 U	**0.7 J**	**30.5**	**0.064 J**	**10.2**	**8.6**	**6.3**	**269**	**0.016 J**	**8.7**	4.5 U	0.68 U	**29.3**

Created By: KMS 10/21/19
Checked By: ANC 11/07/19

Table 4: Boring/Test Pit Select Data

	Sample Location											Analytical Results												
Site Type	**Location ID**	**Grid ID**	**Easting**	**Northing**	**Ground Elevation (ft)**	**Field Sample ID**	**Sample Date**	**Fill Thickness [1] (ft)**	**Observed Impacts[2] (Y/N)**	**Comment (Staining, Odors, Types of Fill [Metal, Ceramics, Bricks])**	**Sample Depth (ft bgs)**	PCB (total) 1 (mg/kg)	Arsenic 16 (mg/kg)	Barium 350 (mg/kg)	Cadmium 2.5 (mg/kg)	Chromium 22 (mg/kg)	Copper 270 (mg/kg)	Lead 400 (mg/kg)	Manganese 2000 (mg/kg)	Mercury 0.81 (mg/kg)	Nickel 140 (mg/kg)	Selenium 36 (mg/kg)	Silver 36 (mg/kg)	Zinc 2200 (mg/kg)
						819018-TPP2908	7/29/2019				8	0.25 U	**0.65 J**	**27.2**	**0.074 J**	**8.6**	**8.5**	**5.7**	**244**	**0.012 J**	**7.3**	4.7 U	0.71 U	**38.3**

Table 4: Boring/Test Pit Select Data

	Sample Location											Analytical Results											
Site Type	**Location ID**	**Grid ID**	**Easting**	**Northing**	**Ground Elevation (ft)**	**Field Sample ID**	**Sample Date**	**Fill Thickness [1] (ft)**	**Observed Impacts [2] (Y/N)**	**Comment (Staining, Odors, Types of Fill [Metal, Ceramics, Bricks])**	**Sample Depth (ft bgs)**	PCB (total) 1 (mg/kg)	Arsenic 16 (mg/kg)	Barium 350 (mg/kg)	Cadmium 2.5 (mg/kg)	Chromium 22 (mg/kg)	Copper 270 (mg/kg)	Lead 400 (mg/kg)	Manganese 2000 (mg/kg)	Mercury 0.81 (mg/kg)	Nickel 140 (mg/kg)	Selenium 36 (mg/kg)	Silver 36 (mg/kg)	Zinc 2200 (mg/kg)
TP	TP-P31	P31	1257228	1097151	899.3	819018-TPP3100	7/29/2019	2	Y	Trace glass, brick, and wood fragments between 0 and 2 feet bgs. PID reading of 0.5 ppm.	0	**2.1**	**5.8**	**90.6**	**2.5**	**32.1**	**731**	**392**	**392**	**1**	**26.5**	**1 J**	**108**	**577**
						819018-TPP3102	7/29/2019				2	**8.2**	**16.4**	**760**	**21.3**	**78**	**29800**	**7020**	**514**	**2.8**	**231**	**1.6 J**	**5.2**	**11000**
						819018-TPP3104	7/29/2019				4	0.25 U	**2.1**	**27.1**	**0.14 J**	**8.4**	**13.7**	**8.2**	**231**	**0.012 J**	**8.1**	4.1 U	0.62 U	**29.5**
						819018-TPP3106	7/29/2019				6	**0.47 J+**	**2.2**	**50**	**0.66**	**7.1**	**110**	**79.7**	**175**	**0.14**	**7.8**	4.2 U	0.64 U	**247**
						819018-TPP3108	7/29/2019				8	0.25 U	**0.82 J**	**30.8**	**0.24**	**10.9**	**33.5**	**28.4**	**179**	**0.039**	**19.3**	4.7 U	0.71 U	**70.7**
TP	TP-P35	P35	1257280	1097236	898.0	819018-TPP3500	7/29/2019	2	Y	Metal debris, rubber, plastic, and glass present 0- 2 feet bgs. PID reading of 0.4 ppm.	0	**20**	**18**	**549**	**31.4**	**356**	**6140**	**3880**	**1040**	**12.3**	**252**	**11**	**13.3**	**9160**
						819018-TPP3502	7/29/2019				2	**5.7**	**9.4**	**374**	**10.9**	**132**	**1890**	**864**	**455**	**6.4**	**104**	**2.1 J**	**14.8**	**2980**
						819018-TPP3504	7/29/2019				4	**0.83**	**2.4**	**62.8**	**0.32**	**15.6**	**36.5**	**22.2**	**245**	**0.074**	**16.8**	4.5 U	0.67 U	**81**
						819018-TPP3506	7/29/2019				6	0.23 U	**2.1 J**	**33.6**	**0.11 J**	**11.4**	**15.6**	**7.6**	**305**	**0.036**	**12.1**	**0.61 J**	0.71 U	**43.7**
						819018-TPP3508	7/29/2019				8	0.28 U	**1.9 J**	**20.7**	**0.12 J**	**8.4**	**10**	**5.8**	**272**	**0.014 J**	**7.9**	4.4 U	0.66 U	**37.5**
HA	HA-Q27	Q27	1257196	1097053	898.1	819018-HAQ2700	8/1/2019	0	Y	Metal debris	0	**1.2**	**1.6 J**	**40.1**	**2.6**	**13.9**	**126**	**93.3**	**132**	**0.54**	**15.7**	4.9 U	**0.27 J**	**360**
HA	HA-Q39	Q39	1257354	1097308	897.7	819018-HAQ3900	8/1/2019	0	N	None	0	**0.26 J**	**8.6**	**104**	**3.7**	**29.3**	**377**	**255**	**217**	**0.52**	**31.5**	**1.5 J**	**0.68 J**	**526**
						819018-HAQ3901	8/1/2019				1	0.39 U	**4.4**	**68**	**0.75**	**16.6**	**68.9**	**54.4**	**116**	**0.17**	**14.2**	**1 J**	0.88 U	**125**
						819018-HAQ3902	8/1/2019				2	0.19 U	**1.3 J**	**23.7**	**0.076 J**	**5.1**	**7.7**	**6.6**	**236**	**0.023**	**5.1 J**	4.7 U	0.7 U	**20.6**
HA	HA-R05	R05	1256929	1096572	901.3	819018-HAR0500	8/1/2019	0.25	N	None	0	**0.8**	**4.2**	**63.6**	**2.5**	**38.1**	**371**	**333**	**309**	**1.1**	**28.1**	4 U	**1.3**	**415**
						819018-HAR0501	8/1/2019				1	**1.5**	**5.8**	**85.9**	**1.8**	**23.3**	**415**	**385**	**507**	**0.63**	**23.7**	4.2 U	**1**	**359**
						819018-HAR0502	8/1/2019				2	**0.19 J**	**3.6**	**67.4**	**0.36**	**10.5**	**120**	**81.1**	**328**	**0.64**	**11.8**	4.3 U	0.65 U	**84.4**
						819018-HAR0504	8/1/2019				4	0.22 U	**2.1**	**53.5**	**0.047 J**	**7.5**	**13.2**	**7.4**	**347**	**0.012 J**	**8.9**	3.9 U	0.59 U	**37.9**
TP	TP-R15	R15	1257060	1096784	905.6	819018-TPR1500	7/31/2019	2	Y	Trace metal, plastic, and slag fragments.	0	**9 J+**	**10.3**	**188**	**28.1**	**124**	**3850**	**1800**	**644**	**3.7**	**100**	**0.9 J**	**23.9**	**1710**
						819018-TPR1501	7/31/2019				1	**0.16 J**	**1.3 J**	**17.4**	**0.19 J**	**3.9**	**14.2**	**10.2**	**156**	**0.042**	**4.4 J**	4.1 U	0.62 U	**16.9**
						819018-TPR1502	7/31/2019				2	0.2 U	**2.2**	**22.5**	**0.051 J**	**4.8**	**7.2**	**4.9**	**209**	**0.025**	**5.9**	4.3 U	0.65 U	**13.7**
						819018-TPR1504	7/31/2019				4	0.27 U	**2.1**	**18.5**	**0.038 J**	**4.7**	**5.5**	**4.2**	**199**	**0.017 J**	**5.7**	4.3 U	0.64 U	**13.3**
TP	TP-R17	R17	1257086	1096827	904.8	819018-TPR1700	7/31/2019	2	Y	Trace glass, metal, plastic, and ceramic fragments from 0 to 2 feet bgs.	0	**110**	**18.2**	**473**	**57**	**523**	**3880**	**4280**	**1200**	**20.3**	**231**	**3.5 J**	**26.7**	**5600**
						819018-TPR1702	7/31/2019				2	0.22 U												
						819018-TPR1704	7/31/2019				4	**0.13 J**												
						819018-TPR1706	7/31/2019				6	0.19 U												
TP	TP-R19	R19	1257113	1096870	902.9	819018-TPR1900	7/30/2019	2	Y	Trace glass, metal, and plastic fragments from 0 to 2 feet bgs. Glass fragments to 4 feet bgs.	0	**63**	**23.8**	**1910**	**32 J-**	**157**	**6650**	**6720**	**1140**	**8.4**	**160**	39.9 U	**17.6 J-**	**10500**
						819018-TPR1900D	7/30/2019				0	**71**	**25.4**	**815**	**28.7**	**183**	**5350**	**3760**	**1230**	**8.3**	**213**	20.5 U	**8.7**	**5150**
						819018-TPR1902	7/30/2019				2	**3.3**	**16.4**	**176**	**2.9**	**23.9**	**296**	**328**	**615**	**0.61**	**26.7**	**1.5 J**	**0.25 J**	**482**
						819018-TPR1904	7/30/2019				4	**0.96**	**6.1**	**61.6**	**0.24**	**14.5**	**25.4**	**31.9**	**381**	**0.68**	**16.3**	**0.77 J**	0.68 U	**60.8**
						819018-TPR1906	7/30/2019				6	**2.2**												
						819018-TPR1908	7/30/2019				8	**1.7**												
TP	TP-R31	R31	1257270	1097125	896.9	819018-TPR3100	7/29/2019	0	N	None	0	**13 J+**	**19.4**	**569**	**18.4**	**242**	**1620**	**1620**	**533**	**3.8**	**148**	8.1 U	**7.3**	**4310**
						819018-TPR3102	7/29/2019				2	0.25 U	**0.95 J**	**37.6**	**0.083 J**	**10**	**9.3**	**6.7**	**149**	0.023 U	**8.9**	4.3 U	0.65 U	**40.8**
						819018-TPR3104	7/29/2019				4	0.3 U	**1.1 J**	**34.5**	**0.13 J**	**9.2**	**14.6**	**17.5**	**164**	**0.047**	**8.9**	5.2 U	0.78 U	**38.8**
						819018-TPR3106	7/29/2019				6	**0.12 J+**	**1.6 J**	**21.4**	**0.45**	**5.7**	**19.8**	**10.9**	**156**	**0.063**	**6.5**	5.1 U	0.76 U	**40.1**
TP	TP-R33	R33	1257296	1097167	897.0	819018-TPR3300	8/1/2019	0	Y	Trace brick and glass fragments from 0 to 2 feet bgs.	0	**2.4**												
						819018-TPR3302	8/1/2019				2	0.2 U												
						819018-TPR3304	8/1/2019				4	0.21 U												
						819018-TPR3306	8/1/2019				6	0.21 U												
HA	HA-R35	R35	1257323	1097210	896.9	819018-HAR3500	8/1/2019	0	Y	Trace metal debris from 0-2 ft bgs (PID hit of 0.9 ppm).	0	**1.1 J+**	**5.2**	**164 J+**	**8.1**	**40.9**	**877**	**343**	**193 J+**	**1.5 J+**	**61.1 J+**	**1.2 J**	**1.7**	**3510**
						819018-HAR3500D	8/1/2019				0	**1.7 J+**	**5.5**	**206 J+**	**8.2**	**41.7**	**885**	**267**	**238 J+**	**2 J+**	**56.5 J+**	**1.8 J**	**1.4**	**3800**
						819018-HAR3502	8/1/2019				2	0.26 U	**2.3 J**	**73.7**	**0.16 J**	**14.8**	**11.6**	**9.4**	**181**	**0.025**	**14.7**	4.8 U	0.72 U	**71.8**
						819018-HAR3503	8/1/2019				3	0.23 U												
HA	HA-R37	R37	1257349	1097253	897.0	819018-HAR3700	8/1/2019	0	N	None	0	0.35 U	**4.8**	**118**	**2.5**	**29.5**	**259**	**387**	**95.5**	**0.71**	**25.7**	**1.7 J**	**0.48 J**	**431**
						819018-HAR3701	8/1/2019				1	0.28 U	**2.6**	**78.5**	**0.11 J**	**16.2**	**8.3**	**17.6**	**143**	**0.016 J**	**16**	5 U	0.75 U	**42.8**
						819018-HAR3702	8/1/2019				2	0.24 U	**3**	**72.7**	**0.069 J**	**17.2**	**11.9**	**9.6**	**281**	**0.017 J**	**17.2**	4.8 U	0.73 U	**45**
HA	HA-S35	S35	1257344	1097197	896.8	819018-HAS3500	8/1/2019	0	N	None	0	**1.6**	**2.5 J**	**134**	**3**	**32.7**	**211**	**173**	**106**	**1.2**	**26.8**	8.3 U	**0.59 J**	**520**
						819018-HAS3501	8/1/2019				1	0.21 U	**0.83 J**	**36.5**	**0.15 J**	**9**	**11.4**	**6.5**	**63.9**	**0.032**	**8.4**	4.7 U	0.7 U	**39.7**
						819018-HAS3502	8/1/2019				2	0.24 U	**1.3 J**	**66.9**	**0.33**	**14.1**	**16.6**	**10.3**	**137**	**0.036**	**13.8**	5 U	0.75 U	**78.8**
TP	TP-T18	T18	1257142	1096822	902.5	819018-TPT1800	8/1/2019	0	N	None	0	**0.15 J**	**4.7**	**58.5 J+**	**0.87**	**13.7**	**90.5 J-**	**122 J-**	**425**	**0.19**	**17.3**	4.3 U	**0.24 J**	**165 J-**
						819018-TPT1800D	8/1/2019				0	**0.17 J**	**4.2**	**61.5 J+**	**0.88**	**13.6**	**77.9 J-**	**116 J-**	**461**	**0.18**	**16.7**	4.1 U	0.62 U	**153 J-**
						819018-TPT1802	8/1/2019				2	**1.5**	**4.1**	**59.1**	**1.3**	**14.5**	**262**	**114**	**428**	**0.23**	**15.7**	4.3 U	0.64 U	**152**
						819018-TPT1804	8/1/2019				4	0.24 U	**3**	**31.4**	**0.14 J**	**6.8**	**15.7**	**11**	**273**	**0.059**	**8.7**	4.4 U	0.65 U	**31.7**
						819018-TPT1806	8/1/2019				6	**0.099 J**	**2.2**	**32.6**	**0.16 J**	**7.1**	**27**	**17.3**	**295**	**0.042**	**8.1**	4.2 U	0.63 U	**33.8**
HA	HA-T31	T31	1257313	1097099	897.0	819018-HAT3100	8/1/2019	0	N	None	0	**0.25 J**	**9.2**	**139**	**3.7**	**39.2**	**279**	**466**	**176**	**1.2**	**29.7**	**2.7 J**	**0.98 J**	**742**
						819018-HAT3101	8/1/2019				1	0.29 U	**2.7**	**107**	**0.49**	**20.5**	**36**	**22.3**	**92.5**	**0.14**	**14.8**	**1.5 J**	0.8 U	**109**
						819018-HAT3102	8/1/2019				2	0.24 U	**0.8 J**	**38.9**	**0.075 J**	**8.2**	**7.4**	**6**	**53.2**	**0.034**	**7.4**	**0.88 J**	0.7 U	**34.5**
HA	HA-T33	T33	1257339	1097141	897.0	819018-HAT3300	8/1/2019	0	N	None	0	0.35 U	**3.6**	**82.5**	**1.3**	**18.7**	**113**	**106**	**116**	**0.39**	**14.8**	7.1 U	1.1 U	**216**
						819018-HAT3301	8/1/2019				1	0.25 U	**1.8 J**	**46.7**	**0.062 J**	**10.5**	**7.2**	**6.4**	**208**	**0.013 J**	**9.4**	4.8 U	0.72 U	**27.7**
						819018-HAT3302	8/1/2019				2	0.28 U	**3.3**	**28.7**	0.25 U	**8.8**	**8.5**	**5.4**	**250**	**0.011 J**	**8.5**	5 U	0.75 U	**28.2**

Created By: KMS 10/21/19
Checked By: ANC 11/07/19

Table 4: Boring/Test Pit Select Data

	Sample Location											Analytical Results											
Site Type	**Location ID**	**Grid ID**	**Easting**	**Northing**	**Ground Elevation (ft)**	**Field Sample ID**	**Sample Date**	**Fill Thickness [1] (ft)**	**Observed Impacts[2] (Y/N)**	**Comment (Staining, Odors, Types of Fill [Metal, Ceramics, Bricks])**	**Sample Depth (ft bgs)**	PCB (total) 1 (mg/kg)	Arsenic 16 (mg/kg)	Barium 350 (mg/kg)	Cadmium 2.5 (mg/kg)	Chromium 22 (mg/kg)	Copper 270 (mg/kg)	Lead 400 (mg/kg)	Manganese 2000 (mg/kg)	Mercury 0.81 (mg/kg)	Nickel 140 (mg/kg)	Selenium 36 (mg/kg)	Silver 36 (mg/kg)	Zinc 2200 (mg/kg)
HA	HA-U15	U15	1257124	1096745	905.1	819018-HAU1500	8/1/2019	0	N		0	**4.2**	**5.3**	**75.5**	**4.2**	**34.4**	**1620**	**371**	**594**	**0.31**	**41.5**	**1.4 J**	**0.68**	**688**
						819018-HAU1501	8/1/2019			None	1	**10**	**7.8**	**218**	**10.6**	**68.1**	**3230**	**806**	**770**	**0.81**	**56.1**	**2.6 J**	**1.6**	**1250**
						819018-HAU1502	8/1/2019				2	**4.7 J+**	**5.2**	**92.5**	**3.7**	**29.2**	**1270**	**359**	**586**	**0.33**	**33**	**1.8 J**	**0.66 J**	**554**

Notes:
1 = Fill thickness as determined by visual observations noted in Attachment 2, test pit logs.
2 = Impacts are defined as staining, odor, or PID hits over 1.0 part per million (ppm).
Site Type: TP=test pit; HA=test pit
Latitude and longitude in New York State Plane West; survey data from hand held global positioning system device.
Elevation in feet (ft) above mean sea level North American Vertical Datum 1988
ft bgs = feet below ground surface
Analytical Results: Results shown for PCBs and metals detected at concentrations greater than the New York State Part 375 Soil Cleanup Objective (SCO) for Residential Use.
PCB = polychlorinated biphenols
Number immediately below PCB (total) and individual metals is the New York State Part 375 SCO for Residential Use for that analyte
Results in milligrams per kilogram (mg/kg)
Bold results indicate analyte detected
Shaded result indicates concentration exceeds the respective SCO
J = estimated value
U = not detected

LOGS AND RECORDS

The enclosed logs and records are select logs taken from the Phase 1 and Phase 2 Pre-Design Investigation Reports and do not include all historical logs and records. Additional logs and records are available in the site investigation reports listed above. In general, the logs and records depict information from soil and groundwater sampling records to provide general conditions observed during the Pre-Design investigations.

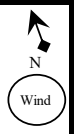
PHASE 1 PRE-DESIGN INVESTIGATION FIELD DATA RECORDS

TEST PIT RECORD

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Batavia Iron and Metal Company		Test Pit ID: TPK16
Project Location: Batavia NY		Page No. 1
Project No.: 3617137301.03.****	Client: NYSDEC	of: 1
Test Pit Location: K16	Monitoring Equipment: Mini-Rae 3000 PID	
Weather: 70, mostly cloudy	Photographs (Y/N): Y	Protection Level: D
Surface Conditions: Soil/metal/debris	Length of Exc: 6.2 ft	Width of Exc: 4.2 ft
Subcontractor: Nothnagle	Date Started: 7/30/18	Date Completed: 7/30/18
Operator: Thom Mangefrida	Logged By: Nate Vogan	Checked By: HEP
Equipment: Bobcat E45	Refusal Depth: NA	Total Depth: 7.0 ft
Reference Elevation NA	Water Level: Dry	Time: 1145

Location Sketch



Sample Information			Monitoring						
Depth (ft. bgs)	Sample No. & Type	Pocket Pen/ Torvane (Kg/cm^2)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0			0.0	0.5			Moist, soft, brown, SILT, little f sand and fmc gravel, some metal, little ceramics. No odor	FILL	
1.5			NA	NA			Hard, moist, medium dark brown, fm SAND, mostly bricks, some CD, no odors.	FILL	
4.5			0.0	0.8			Moist, soft, brownish black, SILT, little fine sand and organics, noncohesive, slight organic odor.	ML	
5.5			0.0	0.7			Soft, moist, medium brown, FM SAND, little fmc subrounded gravel, some subrounded to subangular cobbles, no odors.	SW	
7			0.0	0.9			SAA	SW	
							EOP at 7 ft bgs		

PLAN VIEW

CROSS-SECTIONAL VIEW

NOTES:

Sample 0-0.2, 2.3 (SVOC), 4.5, 7.0

TEST PIT RECORD

TEST PIT RECORD

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Batavia Iron and Metal Company		Test Pit ID: TPK18
Project Location: Batavia NY		Page No. 1
Project No.: 3617137301.03.**** Client: NYSDEC		of: 1
Test Pit Location: K18	Monitoring Equipment: Mini-Rae 3000 PID	**Location Sketch**
Weather: 70, mostly cloudy	Photographs (Y/N): Y Protection Level: D	N, Wind
Surface Conditions Soil/metal/debris	Length of Exc: 6.2 ft Width of Exc: 4.2 ft	
Subcontractor: Nothnagle	Date Started: 7/30/18 Date Completed: 7/30/18	
Operator: Thom Mangefrida	Logged By: Nate Vogan Checked By: HEP	
Equipment: Bobcat E45	Refusal Depth: NA Total Depth: 8.5 ft	
Reference Elevation NA	Water Level: Dry Time: 0827	

Sample Information			Monitoring						
Depth (ft. bgs)	Sample No. & Type	Pocket Pen/ Torvane (Kg/cm^2)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0			0.0	0.2			Moist, soft, brown, SILT, little f sand and fmc gravel, some metal debris, weathered concrete throughout, trace ceramics. No odor	FILL	
1.2			NA	NA			Bricks, battery boxes, metal debris, brown silt and f sand matrix. Trace ceramics.	FILL	
2.5			0.0	0.5			SAA	FILL	
5			0.0	1.3			Moist, soft, brownish black, SILT, little fine sand and organics, noncohesive, slight organic odor.	ML	
8.5			0.0	0.6			Moist, soft, brownish gray, f SAND, some clay and fm subrounded gravel, trace large cobbles. No odors.	SC	
							EOP at 8.5 ft bgs		

PLAN VIEW

CROSS-SECTIONAL VIEW

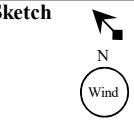
NOTES:

Sample 0-0.2, 2.5 (SVOC), 5.0, 8.5

TEST PIT RECORD

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Batavia Iron and Metal Company		Test Pit ID: TPL44
Project Location: Batavia NY		Page No. 1
Project No.: 3617137301.03.****	Client: NYSDEC	of: 1
Test Pit Location: L44	Monitoring Equipment: MiniRae 3000 PID	**Location Sketch**
Weather: 75, Overcast	Photographs (Y/N): Y	Protection Level: D
Surface Conditions Soil/metal/debris	Length of Exc: 8.3	Width of Exc: 2.4
Subcontractor: Nothnagle	Date Started: 7/23/18	Date Completed: 7/23/18
Operator: Thom Mangefrida	Logged By: Nate Vogan	Checked By: HEP
Equipment: Bobcat E45	Refusal Depth: NA	Total Depth: 2.2
Reference Elevation: NA	Water Level: 1.1 ft bgs	Time: 0950



Sample Information			Monitoring						
Depth (ft. bgs)	Sample No. & Type	Pocket Pen/ Torvane (Kg/cm^2)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0			0.0	0.4			Wet, soft, brownish black, CLAY, some organic debris, slightly plastic, no odor or staining.	CL	
1			0.0	0.3			Wet, dense, grayish brown, SILT, some clay, trace f sand, slightly plastic.	ML	
2.2			0.0	0.2			SAA	ML	
							EOP at 2.2 ft bgs		

PLAN VIEW

CROSS-SECTIONAL VIEW

NOTES:

Sample 0-0.2, 1.0 (bottom of fill), 2.2 (bottom of excavation)

TEST PIT RECORD

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Batavia Iron and Metal Company		Test Pit ID: TPM42
Project Location: Batavia NY		Page No. 1
Project No.: 3617137301.03.****	Client: NYSDEC	of: 1
Test Pit Location: M42	Monitoring Equipment: MiniRae 2000 PID	
Weather: 75 Overcast	Photographs (Y/N): Y	Protection Level: D
Surface Conditions Soil/metal/debris	Length of Exc: 8.3	Width of Exc: 3.8
Subcontractor: Nothnagle	Date Started: 7/23/18	Date Completed: 7/23/18
Operator: Thom Mangefrida	Logged By: Nate Vogan	Checked By: HEP
Equipment: Bobcat E45	Refusal Depth: NA	Total Depth: 3.9
Reference Elevation: NA	Wat 2.4 ft bgs	Time: 1205

Location Sketch

Sample Information			Monitoring						
Depth (ft. bgs)	Sample No. & Type	Pocket Pen/ Torvane (Kg/cm^2)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0			0.0	1.3			Wet, soft, brownish black, SILT, some organic debris, slightly plastic, no odor or staining. Mostly tires 0-2 ft bgs.	FILL	
3.1			0.0	1.1			Wet, dense, grayish brown, SILT, some clay, trace f sand, slightly plastic.	ML	
3.9			0.0	0.5			SAA	ML	
							EOP at 3.9 ft bgs		

PLAN VIEW

CROSS-SECTIONAL VIEW

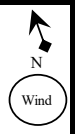
NOTES:

Sample 0-0.2, 1.5 (mid of fill), 3.9 (D/MS/MD) (bottom of excavation)

TEST PIT RECORD

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Batavia Iron and Metal Company		Test Pit ID: TPQ36
Project Location: Batavia NY		Page No. 1
Project No.: 3617137301.03.****	Client: NYSDEC	of: 1
Test Pit Location: Q36	Monitoring Equipment: Mini-Rae 3000 PID	**Location Sketch**
Weather: 75, mostly cloudy	Photographs (Y/N): Y	Protection Level: D
Surface Conditions Soil/metal/debris	Length of Exc: 8.2 ft	Width of Exc: 2.4 ft
Subcontractor: Nothnagle	Date Started: 7/24/18	Date Completed: 7/24/18
Operator: Thom Mangefrida	Logged By: Nate Vogan	Checked By: HEP
Equipment: Bobcat E45	Refusal Depth: NA	Total Depth: 5.0 ft
Reference Elevation: NA	Water Level: 2.2 ft (perched)	Time: 1259



Sample Information			Monitoring						
Depth (ft. bgs)	Sample No. & Type	Pocket Pen/ Torvane (Kg/cm^2)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0			0.0	0.0			Moist, medium dark brown, SILT, some fine sand, little coarse angular 6" stone, non plastic, no odors, metal and cd debris (bricks concrete) throughout.	FILL	
2			0.0	0.0			Dark brownish gray, wet, fmc GRAVEL with wood fragments.	FILL	
2.5			0.0	0.0			Moist, grayish brown, fine SAND, some silt, little fmc subanguar gravel, trace clay, trace large cobbles, some tan mottling.	SM	
5			0.0	0.0			SAA	SM	
							EOP at 5 ft bgs		

PLAN VIEW

CROSS-SECTIONAL VIEW

NOTES:

Sample 0-0.2, 2.5, 5.0

TEST PIT RECORD

PHASE 2 PRE-DESIGN INVESTIGATION FIELD DATA RECORDS

TEST PIT RECORD

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Batavia Iron and Metal Company		Test Pit ID: TPP35
Project Location: Batavia NY		Page No. 1
Project No.: 3617137301.03.****	Client: NYSDEC	of: 1
Test Pit Location: TPP35	Monitoring Equipment: Mini-Rae 2000 PID	Location Sketch
Weather: 80, Sunny	Photographs (Y/N): Y	Protection Level: D
Surface Conditions: Soil/metal/debris	Length of Exc: 8'	Width of Exc: 4'
Subcontractor: Nothnagle	Date Started: 7/29/19	Date Completed: 7/29/19
Operator: Thom Mangefrida	Logged By: Katie Amann	Checked By: Haley Plante
Equipment: Back Hoe	Refusal Depth: NA	Total Depth: 8'
Reference Elevation: NA	Water Level: 2.7'	Time: 1305

Sample Information			Monitoring						
Depth (ft. bgs)	Sample No. & Type	Pocket Pen/ Torvane (Kg/cm^2)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0	1		0.4			000	Brown SILT, soft, some fine sand, some fine gravel, some metal debris, rubber, plastic and glass, organics throughout, moist.	FILL	
2	2		0.0			002	Brown SILT, little clay, little fine sand, little fine gravel, some metal debris, trace bricks, dark grey staining, wet.	ML	
4	3		0.0			004	Gray and brown mottled SILT, little clay, trace fine sand, moist.	ML	
6	4		0.0			006	Gray and brown mottled SILT, little clay, trace fine sand, moist.	ML	
8	5		0.0			008	Gray and brown mottled SILT, little clay, trace fine sand, moist.	ML	
							EOP 8 ft bgs		

PLAN VIEW

CROSS-SECTIONAL VIEW

NOTES:

1 - metals, mercury, PCBs, TCLP metals
2 - metals, mercury, PCBs, TCLP metals
3 - metals, mercury, PCBs
4 - metals, mercury, PCBs
5 - metals, mercury, PCBs

TEST PIT RECORD

TEST PIT RECORD

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Batavia Iron and Metal Company		Test Pit ID: TPR19
Project Location: Batavia NY		Page No. 1
Project No.: 3617137301.03.**** Client: NYSDEC		of: 1
Test Pit Location: TPR19	Monitoring Equipment: Mini-Rae 2000 PID	Location Sketch
Weather: 77F, mostly cloudy, windy	Photographs (Y/N): Y Protection Level: D	
Surface Conditions: Soil/metal/debris	Length of Exc: 8' Width of Exc: 4'	
Subcontractor: Nothnagle	Date Started: 7/30/19 Date Completed: 7/30/19	
Operator: Thom Mangefrida	Logged By: Katie Amann Checked By: Haley Plante	
Equipment: Back Hoe	Refusal Depth: NA Total Depth: 8'	
Reference Elevation: NA	Water Level: Dry Time: 1525	

Sample Information			Monitoring						
Depth (ft. bgs)	Sample No. & Type	Pocket Pen/ Torvane (Kg/cm^2)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0	1		0.0			000	Brown fine SAND and SILT, trace coarse sand, little fine gravel, organic material, dry (fill material), trace glass, metal, plastic fragments.	FILL	
2	2		0.0			002	Brown fine SAND and SILT, trace coarse sand, some fine gravel, trace coarse gravel, organic material, dry, trace glass fragments.	SM	
4	3		0.0			004	Orange-brown fine SAND and SILT, trace coarse sand, trace fine gravel, trace clay, moist.	SM	
6	4		0.0			006	Same as 4-ft. description.	SM	
8	5		0.0			008	Same as 4-ft. description.	SM	
							EOP 8 ft bgs		

PLAN VIEW

CROSS-SECTIONAL VIEW

NOTES:

1 - PCBs, metals, mercury (Duplicate , MD, MSD collected)
2 - PCBs, metals, mercury
3 - PCBs, metals, mercury
4 - PCBs
5 - PCBs

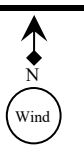
TEST PIT RECORD

TEST PIT RECORD

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Batavia Iron and Metal Company		Test Pit ID: TPR33
Project Location: Batavia NY		Page No. 1
Project No.: 3617137301.03.****	Client: NYSDEC	of: 1
Test Pit Location: TPR33	Monitoring Equipment: Mini-Rae 2000 PID	
Weather: 68F, sunny, wind to east @ 3 mph	Photographs (Y/N): Y	Protection Level: D
Surface Conditions: Soil/metal/debris	Length of Exc: 8'	Width of Exc: 4'
Subcontractor: Nothnagle	Date Started: 8/1/19	Date Completed: 8/1/19
Operator: Thom Mangefrida	Logged By: Katie Amann	Checked By: Haley Plante
Equipment: Back Hoe	Refusal Depth: NA	Total Depth: 6'
Reference Elevation: NA	Water Level: 4.5'	Time: 0855

Location Sketch



Sample Information			Monitoring						
Depth (ft. bgs)	Sample No. & Type	Pocket Pen/ Torvane (Kg/cm^2)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0	1		0.0			000	Dark brown SILT, some fine sand, trace clay, little fine gravel, some organic material, trace brick and glass fragments, moist.	ML	
2	2		0.0			002	Gray and brown mottled SILT and fine SAND, little clay, moist.	ML	
4	3		0.0			004	Gray and brown mottled CLAY, some silt, trace fine sand, moist.	CL	
6	4		0.0			006	Gray-brown SILT, some fine sand, little clay, wet.	ML	
							EOP 6 ft bgs		

PLAN VIEW

CROSS-SECTIONAL VIEW

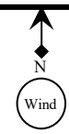
NOTES:

1 - PCBs
2 - PCBs
3 - PCBs
4 - PCBs

TEST PIT RECORD

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Batavia Iron and Metal Company		Test Pit ID: TPN15
Project Location: Batavia NY		Page No. 1
Project No.: 3617137301.03.****	Client: NYSDEC	of: 1
Test Pit Location: TPN15	Monitoring Equipment: Mini-Rae 2000 PID	**Location Sketch**
Weather: 71F, partly cloudy	Photographs (Y/N): Y	Protection Level: D
Surface Conditions Soil/metal/debris	Length of Exc: 8’	Width of Exc: 4’
Subcontractor: Nothnagle	Date Started: 7/31/19	Date Completed: 7/31/19
Operator: Thom Mangefrida	Logged By: Katie Amann	Checked By: ANC
Equipment: Back Hoe	Refusal Depth: NA	Total Depth: 6’
Reference Elevation: NA	Water Level: Dry	Time: 1030



Sample Information			Monitoring						
Depth (ft. bgs)	Sample No. & Type	Pocket Pen/ Torvane (Kg/cm^2)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0	1		0.0			000	Gray-brown fine SAND and SILT and fine GRAVEL, dry (Non-native road base material), trace glass, metals, brick, plastic, slag fragments. 1.0-2.0 ft.: Brown/black foundry sand.	FILL	
2	2		0.0			002	Dark brown fine SAND and SILT, trace coarse sand, trace clay, little fine gravel, moist.	SM	
4	3		0.0			004	Grayish brown fine SAND and SILT, trace coarse sand, trace clay, little fine gravel, moist.	SM	
6	4		0.0			006	Same as 4 ft description.	SM	
							EOP 6 ft bgs		

PLAN VIEW

CROSS-SECTIONAL VIEW

NOTES:

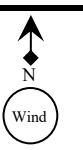
1 - PCBs, metals, mercury, TCLP metals
2 - PCBs, metals, mercury, TCLP metals
3 - PCBs, metals, mercury
4 - PCBs, metals, mercury

TEST PIT RECORD

TEST PIT RECORD

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Batavia Iron and Metal Company		Test Pit ID: TPP27
Project Location: Batavia NY		Page No. 1
Project No.: 3617137301.03.****	Client: NYSDEC	of: 1
Test Pit Location: TPP27	Monitoring Equipment: Mini-Rae 2000 PID	**Location Sketch**
Weather: 73F, Cloudy, spotty light rain	Photographs (Y/N): Y	Protection Level: D
Surface Conditions: Soil/metal/debris	Length of Exc: 8’	Width of Exc: 4’
Subcontractor: Nothnagle	Date Started: 7/30/19	Date Completed: 7/30/19
Operator: Thom Mangefrida	Logged By: Katie Amann	Checked By: ANC
Equipment: Back Hoe	Refusal Depth: NA	Total Depth: 8’
Reference Elevation: NA	Water Level: 6.5’	Time: 0805



Sample Information			Monitoring						
Depth (ft. bgs)	Sample No. & Type	Pocket Pen/ Torvane (Kg/cm^2)	PID Field Scan	PID Headspace	Lab Tests Performed	Lab Sample ID	Sample Description and Classification	USCS Group Symbol	Remarks
0	1		0.6			000	Dark brown SILT, soft, some fine sand, trace glass, brick, wood debris, organic material throughout, moist.	ML	
2	2		0.4			002	Dark brown SILT, soft, some fine sand, trace glass, brick, wood debris, organic material throughout, moist.	ML	
3							Gray and gray-brown SILT, some f sand, little clay; occasional 1-2” lenses of orange-brown clay, trace organic material, moist (This lithology starts at 2-ft).	ML	
4	3		0.0			004	Same as 3-ft description.	ML	
6	4		0.0			006	Brownish gray fine SAND, little clay, trace organic material, damp.	SM	
8	5		0.0			008	Brownish gray fine SAND, little clay, trace coarse sand, wet.	SM	
							EOP 8 ft bgs		

PLAN VIEW

CROSS-SECTIONAL VIEW

NOTES:

1 - PCBs, metals, mercury, PFAS (Duplicate samples collected)
2 - PCBs, metals, mercury
3 - PCBs, metals, mercury
4 - PCBs, metals, mercury (MS/MSD samples collected)
5 - PCBs, metals, mercury

APPENDIX A

PHOTOGRAPHS

Appendix A contains select photographs of the Site taken during the execution of the Phase 2 Pre-Design Investigation in 2019 and wetland delineation activities in 2019. This information is offered for consideration when planning the remedial work.

Site Photographs

Client:	NYDEC	***Project Number:***	**3617137301**
Site Name:	Batavia Iron and Metal Co., Inc.	***Site Location:***	Batavia, New York

Photographer:
Charles Lyman

Date:
11/03/2019

Photograph: 1

Direction:
North

Description:
View of isolated wetland on west side of property

Photographer:
Charles Lyman

Date:
11/03/2019

Photograph: 2

Direction:
West

Description:
View of isolated wetland on west side of property

Site Photographs

Client:	NYDEC	***Project Number:***	**3617137301**
Site Name:	Batavia Iron and Metal Co., Inc.	***Site Location:***	Batavia, New York

Photographer:
Charles Lyman

Date:
11/03/2019

Photograph: 3

Direction:
North

Description:
View of swale connecting isolated wetland to forested wetland north of the site.

Photographer:
Charles Lyman

Date:
11/03/2019

Photograph: 4

Direction:
Northwest

Description:
View of forested wetland along the back (north) side of the site.

Site Photographs

Client:	NYDEC	***Project Number:***	**3617137301**
Site Name:	Batavia Iron and Metal Co., Inc.	***Site Location:***	Batavia, New York

Photographer: Charles Lyman ***Date:*** 11/03/2019 ***Photograph:*** 5 ***Direction:*** South ***Description:*** View along back of property, note edge of forested wetland (picture left).	
Photographer: Charles Lyman ***Date:*** 11/03/2019 ***Photograph:*** 6 ***Direction:*** North ***Description:*** View of swale between isolated wetland and forested wetland located north of the site.	

APPENDIX B

SITE SURVEY

Appendix B contains the most recent surveys of the Site. This information is offered for consideration when planning the remedial work.

STATE OF NEW YORK · MARK J. ANDREWS · 050455 · LICENSED LAND SURVEYOR

DATE	REVISION/TYPE

NOTES:

1.) FINAL GRADING TOPOGRAPHIC DATA WAS COLLECTED BY GPI ON JUNE 1, 2018

2.) THIS MAP REFERENCES A BOUNDARY SURVEY PERFORMED BY LU ENGINEERS ON JULY 10, 2014.

3.) HORIZONTAL DATUM: NAD 83 NY STATE PLANE WEST ZONE
VERTICAL DATUM: NAVD 88

40 0 40 80 120
Scale: 1" = 40'

LEGEND

- CATCH BASIN
- GAS METER
- MONITORING WELL
- PAINT MARK/FLAG
- SANITARY MANHOLE
- TELEPHONE POLE
- REBAR
- IRON PIPE
- DECIDUOUS TREE
- WOOD FENCE
- CHAINLINK FENCE
- WOODS LINE

THIS MAPPING WAS PREFORMED FOR:

CONTRACTOR: NATURE'S WAY ENVIRONMENTAL
ADDRESS: 3553 CRITTENDEN ROAD
ALDEN, NY 14004
PHONE: (716)937-6527 EXT. 105

FINAL GRADING AND SITE RESTORATION MAP

301 BANK STREET

BATAVIA IRON & METAL SITE

CITY OF BATAVIA, GENESEE COUNTY, NEW YORK

GPI ENGINEERING, LANDSCAPE ARCHITECTURE & SURVEYING, LLP
ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE
4950 GENESEE STREET, SUITE 100
BUFFALO, NEW YORK 14225
(716) 633-4844 FAX 633-4940

Job No. 2017068.33–FINAL SURFACE Date: AUGUST 4, 2018
Scale: 1" = 40' TAX No.

APPENDIX C

RECORD OF DECISION

Appendix C contains the Record of Decision (ROD) issued for the Site (April 2013) under the NYSDEC Superfund Program. This information is offered for consideration when planning the remedial work.

ROD is located at this link: https://www.dec.ny.gov/data/DecDocs/819018/

APPENDIX D

Dewatering Calculations

Appendix D contains a memo summarizing the dewatering calculations that can assist in sizing the construction water treatment system to be used during the Work. This information is offered for consideration when planning the remedial work.

MACTEC

engineering and constructing a better tomorrow

Batavia Iron and Metal Co., Inc.

Batavia, New York

Dewatering Calculations

October 6, 2020

Introduction:

Shallow soils at the Batavia Iron and Metal Site (Site) have been contaminated primarily with relatively low concentrations of polychlorinated biphenyl (PCB) compounds. While most excavation areas across the Site are proposed for the removal of the upper 1 to 6 feet of soil, there are a few areas on-site that are proposed for excavation up to 8 feet below the natural ground surface. Depth to groundwater over much of the Site area to be excavated varies seasonally. For the purposes of this dewatering evaluation, the July 26, 2018 synoptic set of depth to groundwater measurements has been used. Based on these data, the depth to groundwater is estimated to vary from ground surface (at the wetland area on the northern portion of the site) to 8 feet or more below natural ground surface at the south end of the site. Hence, dewatering only needs to be implemented for areas with proposed excavation depths below the water table. In general, where these areas occur, excavations do not exceed 4 feet below the water table although two areas (GW-6 and GW-7) extend 5 to 6 feet below the water table.

The Site has been gridded with a spacing of 50 feet x 50 feet, and the grid has been used to assign expected depths of excavation within a grid block. Based on considerations of Site workflow, access, and similar project experience, it has been assumed that no more than 6 grid blocks will be dewatered and excavated at a time (a Work Area), while other grid blocks are yet to be excavated or have already been excavated and backfilled. Work Areas (also referred to as cells) range in size from about 2 to 6 of these 50-foot x 50-foot grid blocks.

Because the deepest excavation depth within each Work Area has been assumed for the purposes of estimating dewatering flows, an additional dewatering depth below this has not been considered. In practice, assuming reasonable success with dewatering to the target depths, the adjacent shallower excavations will be dewatered well below the target bottom elevations. These conditions are anticipated to provide for a stable working surface on which to place and compact backfill materials.

Hydrogeology:

Depth to groundwater measurements were made at 5 monitoring well and 7 piezometer locations to generate an interpreted groundwater contour map of the Site. Slug test data from a prior contractor (GZA) was reviewed and considered along with test pit and boring log soil descriptions to estimate the hydraulic conductivity (K) of the soils underlying the Site.

These calculations provided estimates of K ranging from an arithmetic mean of 0.015 feet per day (ft/d), a geometric mean of 0.0080 ft/d, and a maximum of 0.037 ft/d. These estimates are consistent with soil descriptions at the Site: shallow fill and silty sand with significant portions of silt and/or clay at depth, and direct push refusal around 14 feet below ground surface. Based on these conditions, a saturated thickness of 10 feet was assumed to be capable of contributing groundwater to excavations at flow rates requiring management.

As with many dewatering projects, it is possible that layers of higher permeability material are present in the subsurface which could yield substantial volumes of groundwater. To account for this uncertainty an assumed more conservative horizontal K of 0.40 ft/d has been used in the calculations. In addition, upward flow into the bottom of the excavation was considered based on the bottom area of each Work Area, a unit upward hydraulic gradient and a vertical K of 0.04 feet/day (10% of the estimated horizontal K).

Of note, without a barrier around the wetland at the north end of the site, the wetland could provide a constant head of water and/or deliver large flows to any nearby Work Areas excavated below the elevation of the wetland. We understand that permitting for wetland work has been obtained to accommodate control of inflow from the wetland to adjacent excavation Work Areas.

Based on metered flow rates from Frac tanks during a prior Interim Remedial Measure at the immediately abutting city property that occurred steadily over a six-month time frame, flows averaged 6 gallons per minute (gpm) with a maximum daily flow of 15 gpm. These data provide a useful benchmark against which dewatering estimates may be compared and to confirm the estimates used in **Table 1**.

Dewatering Estimates:

Dewatering flow rate estimates were prepared assuming the 50-foot x 50-foot grid blocks are excavated to the depths shown on Drawings C-106 to 108 Excavation Plans with Groundwater Contours and Work Areas in **Attachment 1**. Work Areas (consisting of up to 6 of these 50-foot x 50-foot grid blocks) are labelled to indicate whether each Work Area is subject to Stormwater Only (e.g., **SO-1**) or Stormwater and Groundwater (e.g., **GW-1**) construction flows.

The calculation method follows that described in Construction Dewatering (Powers, 1992, pages 95 - 104), and assumes that dewatering of the excavation will behave similar to a large diameter well. The diameter or radius of the equivalent well is determined using the perimeter or area encompassing the excavation. Simple well equations then can be used to determine the requisite rate to produce a given drawdown using an estimated K of the aquifer. This method estimates only the pumping rates necessary to keep the excavation dewatered to the desired depth. Higher initial rates will likely be required as the head differential between the center of the Work Area being dewatered and the surrounding undisturbed soils will be greater than toward the end of the dewatering period when these head differences will be smaller.

Groundwater dewatering equations and calculations are included in **Table 1**.

The results suggest that the required dewatering rate for Groundwater Work Areas GW-1 through GW-11 may range from 2 to 6 gpm to maintain dewatered conditions within individual Work Areas. The amount of free draining water in the volume of soil within Work Areas that would need to be initially removed before maintenance pumping is estimated to range from less than 10,000 gallons to just over 100,000 gallons, assuming a specific yield of 0.2.

Assuming a well point and sump dewatering network is installed at sufficient spacing within one Work Area at a time (anticipated to require a maximum well point or sump spacing of 20 feet on center) dewatering time frames of 2 to 12 days or more may be required for each Work Area.

While the above estimates are lower than the range observed during the Interim Remedial Measures dewatering (6 to 15 gpm), they are of the same magnitude.

The rainfall and subsequent stormwater flows that will require management during construction are estimated and summarized in **Tables 2 through 4**. Period of record storm events for Batavia NY were obtained along with the maximum daily rainfall recorded for the area over the anticipated construction period of May through December. These values were considered along with contributing areas that may deliver stormwater runoff within a maximum of 6 of the 50-foot x 50-foot blocks. Based on the maximum observed daily storm of record, an approximate 26,810 gallons of runoff from a 15,000 square foot Work Area would be collected, or an average of 19 gpm over the 24-hour period.

Combined groundwater and stormwater flows (construction water flows) from up to 3 Work areas at various stages of excavation, sampling and analyses, and backfilling, and storm water flows are estimated in **Tables 5 through 7**.

Based on a 20 gpm maximum treatment plant rate, an estimate of Frac tank storage requirements is provided in **Tables 8 and 9**.

Limitations:

These estimates should be considered approximate. The range of K values used in these calculations was taken from limited slug test estimates and inspection of soil boring and test pit logs; no aquifer pumping test data were available. Treatment of the area's dewatering as equivalent to a large-diameter well is also approximate given that dewatering depths may approach or exceed assumptions used in developing the equations employed.

These methods also do not provide estimates of rates that may be encountered during the initial phases of the dewatering process. As indicated above, the estimates rest on actual Ks of the aquifer, its heterogeneity, and the possibility of rapid draining from sand or gravel seams that the excavations may encounter. The extent of these more freely draining seams, if present, is unknown, so it is not known if they would yield high rates for an extended period of time or would run dry in a time frame of hours to days.

Depending on the time of year that excavation will occur, temporary hydraulic barriers around the Limit of Work at the wetland at the north end of the site may be required to contain water in the wetland and prevent it from flowing directly into excavations. Such barriers are not considered here and will be the responsibility of others.

Prepared by: JBR 09-03-20, RAL comments addressed 09-24-20

Checked by: RAL 09-17-20, MJS 9-25-20

TABLES 1-9
Construction Dewatering Flow Estimates

Table 1: Estimate of Groundwater Dewatering Flows

Work Area ID Note 1	Area of Work Area, A (sf)	Perimeter of Work Area, P (ft)	Depth of Excavation (ft bgs) Note 2	Depth to GW (ft bgs) Note 3	Excavation Depth Below GW Depth (ft)	Volume of Water in the saturated Volume of Soil (gal) Note 4	Estimated Dewater Rate (gpm) Note 4	Volume of Water Inflow During 24- hr Hold Time (gal) Note 5	Volume of Dewater During 10-hr Backfill Operation (gal) Note 6	Total Dewater Volume Per Excavated Work Area (gal)
SO-1	12,100	N/A	6	10.0	None	0	N/A	0	0	0
SO-2	5,750	N/A	2	8.0	None	0	N/A	0	0	0
SO-3	5,000	N/A	2.5	10.0	None	0	N/A	0	0	0
SO-4	15,000	N/A	5.5	10.0	None	0	N/A	0	0	0
SO-5	11,000	N/A	7	15.0	None	0	N/A	0	0	0
SO-6	15,000	N/A	8	9.0	None	0	N/A	0	0	0
SO-7	15,000	N/A	6	10.0	None	0	N/A	0	0	0
SO-8	15,000	N/A	9	10.0	None	0	N/A	0	0	0
SO-9	15,000	N/A	5	6.0	None	0	N/A	0	0	0
SO-10	15,000	N/A	3	7.0	None	0	N/A	0	0	0
SO-11	15,000	N/A	1	2.0	None	0	N/A	0	0	0
GW-1	15,000	500	7	3.5	3.5	78,550	**5.7**	8,220	3,420	90,190
GW-2	15,000	500	8	4.0	4.0	89,770	**5.7**	8,140	3,390	101,300
GW-3	15,000	500	6	3.0	3.0	67,320	**5.8**	8,290	3,450	79,060
GW-4	15,000	500	7	2.5	4.5	100,990	**5.6**	8,060	3,360	112,410
GW-5	5,000	300	5	1.0	4.0	29,920	**2.6**	3,800	1,580	35,300
GW-6	5,000	300	7	1.0	6.0	44,880	**2.5**	3,630	1,510	50,020
GW-7	5,000	300	6	1.0	5.0	37,400	**2.6**	3,720	1,550	42,670
GW-8	3,125	300	2	0.0	2.0	9,350	**2.3**	3,370	1,400	14,120
GW-9	3,750	250	2	0.0	2.0	11,220	**2.2**	3,180	1,320	15,720
GW-10	5,000	300	4.5	0.0	4.5	33,660	**2.6**	3,760	1,570	38,990
GW-11	5,000	350	1	0.0	1.0	7,480	**3.0**	4,380	1,820	13,680
Total	230,725	-	-	-	-	510,540	-	58,550	24,370	
									Estimated Total Groundwater Dewatering Volume Generated (gal):	**593,460**

Table 1: Estimate of Groundwater Dewatering Flows

Work Area ID Note 1	Area of Work Area, A (sf)	Perimeter of Work Area, P (ft)	Depth of Excavation (ft bgs) Note 2	Depth to GW (ft bgs) Note 3	Excavation Depth Below GW Depth (ft)	Volume of Water in the saturated Volume of Soil (gal) Note 4	Estimated Dewater Rate (gpm) Note 4	Volume of Water Inflow During 24- hr Hold Time (gal) Note 5	Volume of Dewater During 10-hr Backfill Operation (gal) Note 6	Total Dewater Volume Per Excavated Work Area (gal)

Summary of Minimum, Maximum, and Average Calculated Areas, Rates, and Volumes

Maximum Work Area (Cell):	15000.0	sf
Minimum Cell Area:	3125.0	sf
Average Cell Area:	10487.5	sf
Maximum Estimated Dewater Rate per Cell:	5.8	gpm
Minimum Estimated Dewater Rate per Cell:	2.2	gpm
Average Estimated Dewater Rate per Cell:	3.7	gpm
Max Estimated Volume (V) of Water in a Saturated V of Soil per Cell:	100,990	gal
Min Estimated Volume (V) of Water in a Saturated V of Soil per Cell:	0	gal
Avg Estimated Volume (V) of Water in a Saturated V of Soil per Cell:	46,413	gal (only cells with excavation below GW)

Specific Yield: 0.20

Assumed Excavation Open Time (hr): 24 Hold 10 Backfill

Maximum Perm Test Hydraulic Conductivity, K =	0.037 ft/d	1.3E-05 cm/s	GZA
Boring Log/Test Pit Soils Estimated Hydraulic Conductivity, K =	0.40 ft/d	1.4E-04 cm/s	
Assumed Hydraulic Conductivity, K =	**0.40 ft/d**	1.4E-04 cm/s	
Assumed Hydraulic Conductivity, K =	**3.0 gpd/ft^2**		
Assumed Hydraulic Conductivity, K =	1.4 microns/s		
Assumed Vertical Hydraulic Conductivity, K =	**0.04 ft/d**		

Notes:

1. Work Area IDs correspond to excavation cell layout and labels on the Construction Drawings. SO = Stormwater Only Work Area; GW = Stormwater and Groundwater Work Area.
2. Excavation depth per Pre-Design Investigation and historical Remedial Investigation data for PCBs. Excavation depths were set at minimum 1 foot intervals.
3. Depth of groundwater below ground surface estimated as the shallowest depth crossing the Work Area to the nearest 0.5 foot interval (one half the groundwater contour interval). Groundwater contours interpreted from Figure 4 *Groundwater Sampling Locations and Interpreted Groundwater Contours - July 2018,* MACTEC in July 2019.
4. Calculations based on the *Dewatering Estimate for Soil Removal at the Oneida Street Site* completed by MACTEC in January 2012, and *Construction Dewatering, Powers 1992.* Updated for the Batavia Site July 2020.
5. Each cell must be confirmed clean prior to backfilling. The specifications will require confirmation sample analysis to have a 24-hour turnaround, therefore, the cell will remain open for a minimum of 24 hours hold period.
6. It is assumed that the combination of additional hold time and backfilling will occur over a 10 hour work day. Each cell will require dewatering to keep the cell open and dry during this period.
7. Abbreviations: GW, groundwater; ft, feet; bgs, below ground surface; gal, gallon; gpm, gallon per minute; hr, hour; A, area; P, perimeter; avg, average; min, minimum; max, maximum; d, day; V, volume.
8. Estimate of maximum groundwater flow upward through floor of excavation Work Area assumes a unit gradient and K = 0.04 ft/day.

Prepared By: JRand Date: 9/2/2020
Checked By: RLewis Date: 9/9/2020

Page 3 - Supporting Equations and Calculations

$R_o = 3(H-h)*K^{0.5}$ $Q = ((Pi*K)(H^2-h^2))/ln(R_o/r_s)$

Basic Equations

Radial Flow to Water Table Aquifer,
Assumes Ro = Ro+rs and rw = rs (Powers pg 95, 104):

$r_s = P/(2*Pi)$ (ft)	R_o	$R_o + r_s$	Q (cf/day)	Q (gpm)	Q (gpm) from upwelling	Q (gpm) Total Dewater Rate
N/A	N/A	N/A	N/A	N/A	NA	NA
N/A	N/A	N/A	N/A	N/A	NA	NA
N/A	N/A	N/A	N/A	N/A	NA	NA
N/A	N/A	N/A	N/A	N/A	NA	NA
N/A	N/A	N/A	N/A	N/A	NA	NA
N/A	N/A	N/A	N/A	N/A	NA	NA
N/A	N/A	N/A	N/A	N/A	NA	NA
N/A	N/A	N/A	N/A	N/A	NA	NA
N/A	N/A	N/A	N/A	N/A	NA	NA
N/A	N/A	N/A	N/A	N/A	NA	NA
N/A	N/A	N/A	N/A	N/A	NA	NA
79.58	12.47	92.05	498.41	**2.6**	**3.1**	**5.7**
79.58	14.25	93.83	488.08	**2.5**	**3.1**	**5.7**
79.58	10.69	90.27	508.40	**2.6**	**3.1**	**5.8**
79.58	16.04	95.61	477.43	**2.5**	**3.1**	**5.6**
47.75	14.25	62.00	307.85	**1.6**	**1.0**	**2.6**
47.75	21.38	69.13	285.24	**1.5**	**1.0**	**2.5**
47.75	17.82	65.57	297.18	**1.5**	**1.0**	**2.6**
47.75	7.13	54.87	325.15	**1.7**	**0.6**	**2.3**
39.79	7.13	46.92	274.54	**1.4**	**0.8**	**2.2**
47.75	16.04	63.78	302.68	**1.6**	**1.0**	**2.6**
55.70	3.56	59.27	385.02	**2.0**	**1.0**	**3.0**

Table 2: Normal Monthly Precipitation Summary

Location	Data Set (years)	Normal Monthly Precipitation (inches) (Note 1)												Annual
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Batavia, New York	30	2.11	1.97	2.23	2.98	3.31	3.65	3.44	3.16	3.83	3.14	2.96	2.56	35.34

Notes:

1. Source: National Oceanic and Atmospheric Administration (NOAA) National Climatic Data Center (NCDC) [https://www.ncdc.noaa.gov/cdo-web] Data Set from 1981 to 2010
2. Estimated Construction Period

Prepared By: AFlynn Date: 7/13/2020
Checked By: MPeters Date: 9/22/2020

Table 3: Maximum Daily Precipitation Summary

Location	Data Set (years)	Maximum Daily Precipitation (inches) (Note 1)												Maximum Daily Precipitation during Construction
		Jan 08 1998	Feb 19 1981	Mar 04 1991	Apr 05 1982	May 23 2001	Jun 26 1998	Jul 15 1992	Aug 31 2005	Sep 16 2005	Oct 21 1995	Nov 23 2007	Dec 04 2007	
Batavia, New York	30	2.25	3.40	1.85	4.10	2.00	3.10	2.35	2.16	2.25	2.32	2.04	3.01	3.10

Notes:

1. Source: National Oceanic and Atmospheric Administration (NOAA) National Climatic Data Center (NCDC). [https://www.ncdc.noaa.gov/cdo-web] Data set from 1981 to 2010
2. Estimated Construction Period

Prepared By: AFlynn Date: 7/13/2020
Checked By: MPeters Date: 9/22/2020

Table 4: Stormwater Runoff from Probabilistic, 24-Hour Duration, Storm Events During Construction

24-hr storm	Precipitation Note 1	Runoff Area, A	RCN	Runoff, Q Note 2	Total Volume of Stormwater Runoff, V_r	
1-yr	1.96 in	15,000 sf	98	1.73 in	2,168 cf	16,220 gal
2-yr	2.30 in	15,000 sf	98	2.07 in	2,590 cf	19,370 gal
Max	3.10 in	15,000 sf	98	2.87 in	3,585 cf	26,810 gal

Notes:

1. Source: Technical Paper No. 40, Rainfall Frequency Atlas of the United States for Durations from 30 Minutes to 24 Hours and Return Periods from 1 to 100 Years, US. Department of Commerce, Weather Bureau, 1963.[http://www.nws.noaa.gov/oh/hdsc/PF_documents/TechnicalPaper_No40.pdf]
2. A weighted curve number (RCN) of 98 for the estimated disturbed area was used based on assuming the bottom of the excavation is saturated. Runoff depth and volume calculated using TR-55.
3. Abbreviations: yr, year; hr, hour; A, runoff area; sf, square feet; Q, runoff; in, inches; cf, cubic feet; V, runoff volume; gal, gallon; RCN, runoff curve number; max, maximum daily precipitation.

Prepared By: AFlynn Date: 7/13/2020
Checked By: MPeters Date: 9/23/2020

Table 5: Estimated Daily Construction Water Volume Generation

Assumed Site Conditions Contributing to Construction Water Generation	Minimum Dewater Rate per Cell (gpm)	Average Open Area (sf)	Average Dewater Rate per Cell (gpm)	Maximum Open Area (sf)	Maximum Dewater Rate per Cell (gpm)	Min Daily Total Volume (gal)	Average Daily Total Volume (gal)	Max Daily Total Volume (gal)
Assume 1 cell is open on a given day awaiting confirmation sample analytical results	2.2	10,487.5	3.7	15,000.0	5.8	Note 1	Note 1	Note 1
Assume the excavated soil/sediment volume from 1 cell is being dewatered in the staging/storage area on a given day	-	-	-	-	-	0	46,410	100,990
Assume 1 confirmed clean cell is being backfilled and requires dewatering during the 10-hr work day	-	-	-	-	-	1,323	2,217	3,455
Assume 1 cell is being excavated during the 10-hr work day	-	-	-	-	-	0	46,410	100,990
Total Estimated Daily Groundwater Dewater Generation:						1,323	95,037	205,435
Total Estimated Likely Daily Stormwater Generation (Note 2):						16,220	16,220	16,220
Total Estimated Maximum Daily Stormwater Generation (Note 3):						26,810	26,810	26,810
Total Estimated Daily Construction Water to be Managed (Lower Limit, Note 4):						**1,323**	**95,037**	**205,435**
Total Estimated Daily Construction Water to be Managed (Upper Limit, Note 5):						**17,543**	**111,257**	**221,655**
Total Estimated Additive Daily Contingency Construction Water to be Managed (Note 6):						**10,590**	**10,590**	**10,590**
Total Estimated Number Range of 20,000 gal Frac Tanks (Note 7, 8):						**1 1**	**5 6**	**11 12**
Total Estimated Number of 20,000 gal Contingency Frac Tanks (Note 9):						**1**	**1**	**1**

Notes:

1. GW infiltration is left to accumulate in open cells during the hold period provided the sidewalls of the excavation can remain stable.
2. For the likely total daily stormwater volume, assume the 1-year, 24-hour duration storm event (Table 4) occurs over an open area equal to a 15,000 sf excavation area.
3. For the maximum daily stormwater volume, assume the maximum recorded daily precipitation (Table 4) occurs over an open area equal to a 15,000 sf excavation area.
4. Lower limit of daily construction water generation assumes no contribution from a storm event (i.e., no rainfall occurs on that day).
5. Upper limit of daily construction water generation assumes a probabilistic 1-yr, 24-hr duration storm event occurs (i.e., rainfall occurs on that day).
6. Contingency daily construction water generation assumes that the maximum recorded daily precipitation event occurs during the construction period. This volume is greater than and added to the probabilistic likely volume associated with the 1-year, 24-hour duration storm.
7. The range of frac tanks is based on the estimated lower and upper limit daily construction water volumes.
8. Assumes total storage requirements without ongoing on-site treatment and disposal.
9. The additional contingency frac tanks required to store the additional stormwater volume associated with the maximum daily precipitation.

Prepared By: AFlynn Date: 7/13/2020
Checked By: MPeters Date: 9/23/2020

Table 6: Estimated Total Stormwater Volume Generation

Construction Period	Normal Monthly Precipitation (inches), Note 1	Open Excavation Area (sf), Note 2	Volume of Stormwater Generated (cf), Note 3	Volume of Stormwater Generated (gal), Note 3
May	3.31	57,680	15,910	119,010
June	3.65	57,680	17,540	131,200
July	3.44	57,680	16,530	123,640
August	3.16	57,680	15,190	113,620
September	3.83	57,680	18,410	137,710
October	3.14	57,680	15,090	112,870
November	2.96	57,680	14,230	106,440
December	2.56	57,680	12,310	92,080
Estimated Total Stormwater Volume Generated (gal)				**936,570**

Notes:

1. Normal monthly precipitation value from Table 3.
2. Assume that a maximum of 25 percent of the total excavation area calculated in Table 1 is open or contributing runon into open areas during any given storm event. The volume of precipitation for this contributing area will be collected as construction water.
3. Stormwater volume assumes 100 percent generation of runoff with no evapotranspiration or infiltration hydrologic components.
4. Abbreviations: sf, square feet; cf, cubic feet; gal, gallon

Prepared By: AFlynn Date: 7/13/2020
Checked By: MPeters Date: 9/23/2020

Table 7: Estimated Total Construction Water Volume Generation

Description	Volume Generated (gal)	
Estimated Total Groundwater Dewater Volume Generated (gal):	593,460	(Note 3)
Estimated Total Stormwater Volume Generated (gal):	936,570	(Note 4)
Estimated Total Construction Water Generated (gal):	**1,530,030**	**(Note 5)**

Notes:

1. Assumes an 8 month construction period.
2. Assumes any single cell is not open and active for a period longer than 34 hours (24-hour hold plus 10-hour backfill duration). Longer open/active durations may increase the groundwater dewater volume generation.
3. Calculated in Table 1 based on the volume of saturated soil below the estimated groundwater depth, groundwater inflow generated during the 24-hour hold period while confirmatory testing is completed, and a 10-hour dewatering duration during backfilling.
4. Calculated in Table 6 based on the collection of stormwater runoff for an open and active area equivalent to 25 percent of the total excavation area on any given day of any given month. The volume of stomwater generation assumes 100 percent capture of the normal monthly precipitation total without consideration of hydrologic losses associated with evapotranspiration or infiltration.
5. Total construction water generated during the construction period is considered to be the sum total of groundwater dewater and stormwater.

Prepared By: AFlynn Date: 7/13/2020
Checked By: MPeters Date: 9/23/2020

Table 8: Estimated On-Site Treatment System

On-Site Treatment System Discharge Rate (Note 1)	20 gpm
Gallons Treated and Disposed per Hour	1,200 gph
Gallons Treated and Disposed per 24 hr Day	28,800 gpd
Equivalent 20,000 gal Tank Volumes Treated and Disposed per Day	1.44 tanks

Notes:

1. Maximum discharge rate of 20 gpm per municipal discahrge permit.

Table 9: Estimated Daily Construction Water Storage

Description	Min Daily Total Volume (gal)		Average Daily Total Volume (gal)		Max Daily Total Volume (gal)	
Total Estimated Daily Construction Water to be Managed (Lower Limit, Note 1):	1,323		95,037		205,435	
Total Estimated Daily Construction Water to be Managed (Upper Limit, Note 1):	17,543		111,257		221,655	
Total Estimated Additive Daily Contingency Construction Water to be Managed (Note 1):	10,590		10,590		10,590	
Total Estimated Number Range of 20,000-gal Frac Tanks (Note 2, 3):	**1**	**1**	**3**	**4**	**8**	**9**
Total Estimated Number of 20,000-gal Contingency Frac Tanks (Note 4):		**1**		**1**		**1**

Notes:

1. Calculated in Table 5.
2. The range of frac tanks is based on the estimated lower and upper limit daily construction water volumes.
3. Assumes total storage requirements are offset with ongoing treatment and disposal calculated in Table 8.
4. The additional contingency frac tanks required to store the additional stormwater volume associated with the maximum daily precipitation

Prepared By: AFlynn Date: 7/13/2020
Checked By: MPeters Date: 9/23/2020

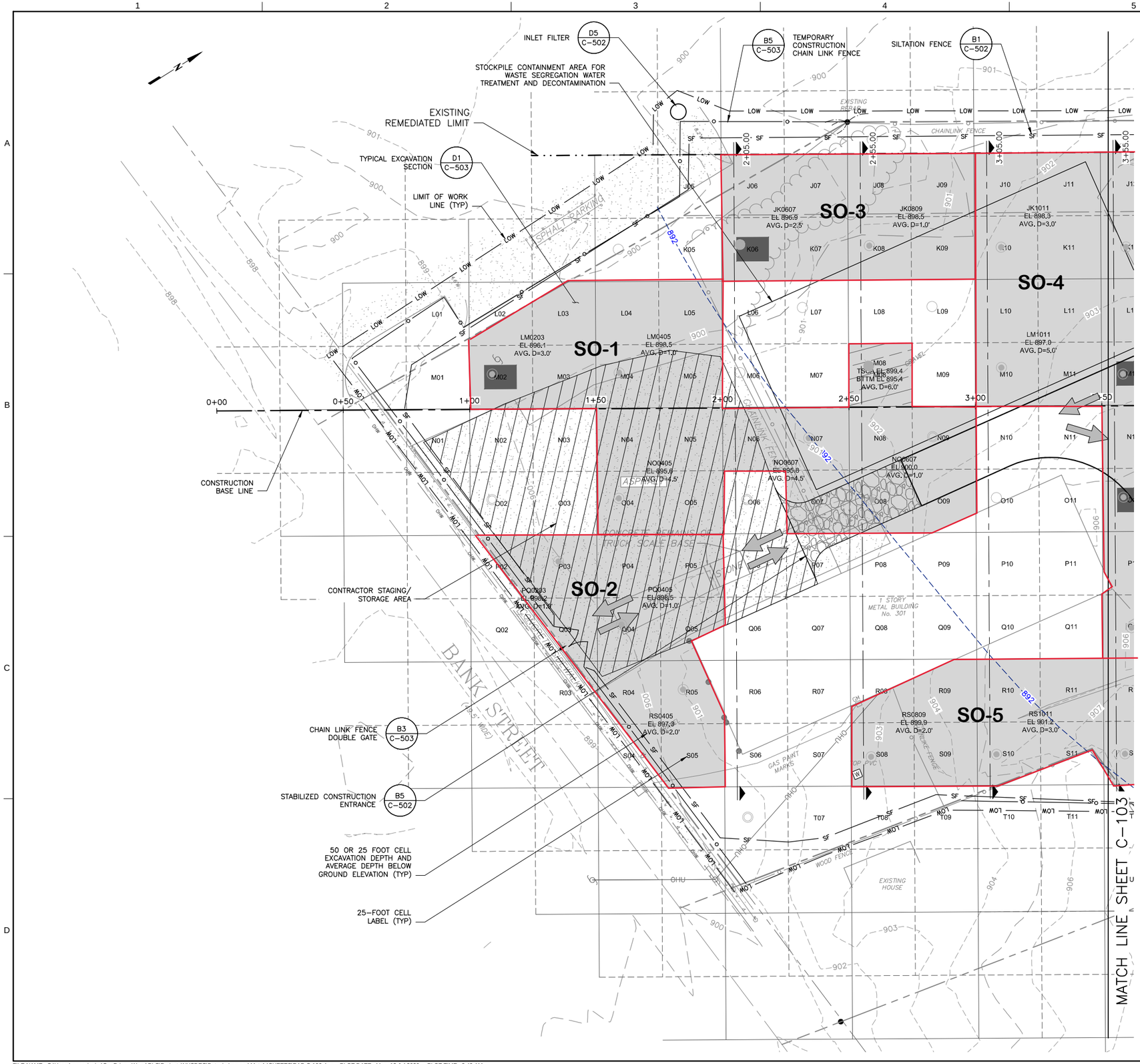
MACTEC

engineering and constructing a better tomorrow

ATTACHMENT 1

Excavation Plans with Groundwater Contours and Work Areas

MACTEC Engineering and Geology, P.C.
511 Congress Street • Portland, Maine 04101 • Phone: 207-775-5401 • Fax: 207-772-4762
www.mactec.com



NOTES:

1. EACH GRID CELL IDENTIFIED WITH A UNIQUE ALPHANUMERIC LABEL IS AN APPROXIMATE 625 SQUARE FOOT AREA (25' X 25') WHERE INVESTIGATION HAS CONFIRMED THAT THE SOIL WITHIN CONTAINS, OR IS LIKELY TO CONTAIN, PCB REMEDIATION WASTE. REMEDIATION REQUIRES EXCAVATION OF THE SOIL WITH THE CELL AND PROPER OFF-SITE DISPOSAL. ALL PCB IMPACTED WASTES WILL REQUIRE OFF-SITE DISPOSAL AT A TSCA PERMITTED FACILITY.

2. ACTUAL EXCAVATION LIMITS (HORIZONTAL AND VERTICAL) SHALL BE DETERMINED THROUGH FIELD SURVEY AND CONFIRMATION TESTING. THE CELL'S EXCAVATED BOTTOM AND SIDEWALL SHALL BE SAMPLED AND TESTED TO VERIFY THAT THE SOIL CLEANUP OBJECTIVE (SCO), PCB < 1.0 PPM, HAS BEEN MET. IF THE CONFIRMATION TEST RESULTS INDICATE THE SCO HAS NOT BEEN ACHIEVED, AN ADDITIONAL 6 INCHES (0.5 FEET) SHALL BE REMOVED WITHIN THE APPROXIMATE 156.25 SQUARE FOOT SUBPART (12.5' X 12.5' GRID QUADRANT) OR TO THE LIMITS DEFINED BY ADJACENT TESTING AS AGREED TO BY THE ENGINEER. THE EXCAVATION AND CONFIRMATION SEQUENCE SHALL BE REPEATED UNTIL CONFIRMATION TESTING VERIFIES THAT THE SCO HAS BEEN ACHIEVED.

3. ADJACENT CELLS WITH BOTTOM EXCAVATION ELEVATION DIFFERENCES OF 0.5 FEET OR LESS SHALL BE CONSIDERED NOT TO HAVE AN EXCAVATION SIDEWALL BETWEEN THEM. THEREFORE, NO EXCAVATION SIDEWALL TESTING BETWEEN THE CELLS IS REQUIRED; OTHERWISE, EXCAVATION SIDEWALL TESTING BETWEEN CELLS IS REQUIRED.

4. THE VERTICAL EXCAVATION LIMIT FOR ALL CELLS SHALL BE TO THE ELEVATIONS INDICATED ON THE DRAWINGS AT A MINIMUM. DEEPER EXCAVATIONS MAY BE REQUIRED AS DETERMINED BY SURVEY AND CONFIRMATION TESTING. THE CONTRACTOR SHALL PROVIDE NECESSARY SHEETING AND SHORING AND/OR SHALL SLOPE AND BENCH THE EXCAVATION TO PERFORM THE WORK IN A SAFE MANNER AND TO SUPPORT THE REQUIRED FINAL DEPTH OF EXCAVATION.]

5. EXCAVATION DEPTHS (D=X') NOTED IN EACH EXCAVATION CELL ARE PROVIDED FOR GENERAL REFERENCE ONLY. ALL VERTICAL EXCAVATIONS LIMITS SHALL BE BASED ON THE ELEVATIONS PROVIDED AND THE RESULTS OF CONFIRMATION TEST RESULTS. PROPOSED VERTICAL EXCAVATION LIMITS OF GRID CELLS ENCOMPASSING INVESTIGATION SAMPLE LOCATIONS ARE 0.5 FEET BELOW THE KNOWN ELEVATION OF IMPACTED SOIL. PROPOSED VERTICAL EXCAVATION LIMITS OF GRID CELLS WITHOUT PREVIOUS INVESTIGATION SAMPLE LOCATIONS ARE 0.5 FEET BELOW THE MEAN ELEVATION CALCULATED WITHIN EACH GRID CELL BASED ON SURFACE ANALYSIS OF EXISTING CONDITIONS BASE SURVEY.

NO.	DATE	DSGN	DR	CHK	REVISION	BY	APVD
A	04/30/20	M. PETERS	R. RIQUIER	M. PETERS	30% DESIGN SUBMISSION	MAP	MJS

M. STELMACK

Department of Environmental Conservation

REMEDIAL ACTION PLAN
BATAVIA IRON AND METAL SITE
BATAVIA, NEW YORK
NYSDEC SITE NO. - 819018
NYSDEC CONTRACT NO. - D007619-25

MACTEC Engineering and Consulting, P.C.
511Congress Street , P.O. Box 7050,
Portland, Maine 04112-7050
(207) 775-5401

MACTEC

EXCAVATION PLAN 1

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.

0 1"

DATE	
PROJ	3617-13-7301
DWG	C-106
SHEET	8 OF 19

FILE NAME: C:\Users\roger.riquier\OneDrive - Wood PLC\Projects\NYSDEC\Batavia Iron and Metals\SHEETS\RAP-C-106.dwg PLOT DATE: Mon, 13 Jul 2020 PLOT TIME: 8:49 AM

EXISTING REMEDIATED LIMIT

STOCKPILE CONTAINMENT AREA FOR WASTE SEGREGATION WATER TREATMENT AND DECONTAMINATION

CONSTRUCTION BASE LINE

SILTATION FENCE — B1 / C-502

TYPICAL EXCAVATION SECTION — D1 / C-503

EXISTING CONCRETE FOUNDATION (SEE NOTE)

SO-4 | SO-5 | SO-6 | SO-7 | SO-8 | SO-9 | SO-10 | SO-11

GW-1 | GW-2 | GW-3 | GW-4

MATCH LINE SHEET C-102

MATCH LINE SHEET C-104

50 OR 25 FOOT CELL EXCAVATION DEPTH AND AVERAGE DEPTH BELOW GROUND ELEVATION (TYP)

25-FOOT CELL LABEL (TYP)

TREE CLEARING LIMIT (TYP)

D3 / C-502 VEHICLE DECONTAMINATION PAD

B5 / C-503 TEMPORARY CONSTRUCTION CHAIN LINK FENCE

NOTES:

1. SEE EXCAVATION NOTES ON DRAWING C-106.

SCALE IN FEET: 0 10 20 40

NO.	DATE	DSGN	DR	CHK	APVD
A	03/01/2020	M. PETERS	R. RIQUIER	M. PETERS	M. STELMACK

30% DESIGN SUBMISSION

REVISION

MAP MJS BY APVD

Department of Environmental Conservation

NEW YORK STATE OF OPPORTUNITY

REMEDIAL ACTION PLAN
BATAVIA IRON AND METAL SITE
BATAVIA, NEW YORK
NYSDEC SITE NO. - 819018
NYSDEC CONTRACT NO. - D007619-25

MACTEC Engineering and Consulting, P.C.
511 Congress Street, P.O. Box 7050,
Portland, Maine 04112-7050
(207) 775-5401

MACTEC

EXCAVATION PLAN

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

DATE

PROJ 3617-13-7301

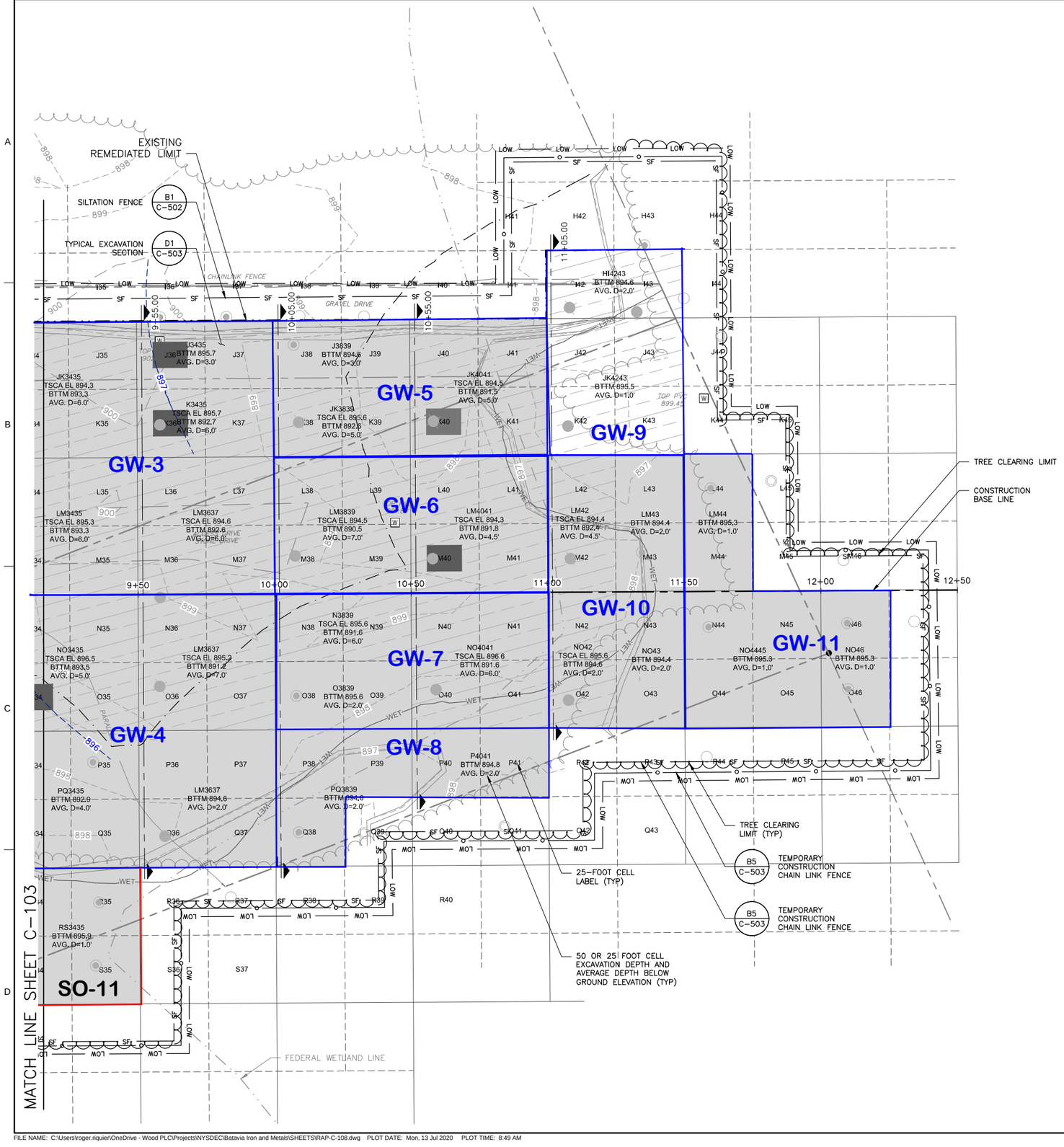
DWG C-107

SHEET 9 OF 19

FILE NAME: C:\Users\roger.riquier\OneDrive - Wood PLC\Projects\NYSDEC\Batavia Iron and Metals\SHEETS\RAP-C-107.dwg PLOT DATE: Mon, 13 Jul 2020 PLOT TIME: 8:49 AM

NOTES:

1. SEE EXCAVATION NOTES ON DRAWING C-106.



0 10 20 40
SCALE IN FEET

NO.	DATE	DSGN	DR	CHK	APVD
A	03/01/2020	M. PETERS	R. RIQUIER	M. PETERS	M. STELMACK

30% DESIGN SUBMISSION

REVISION	BY	APVD
MAP	MJS	

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

REMEDIAL ACTION PLAN
BATAVIA IRON AND METAL SITE
BATAVIA, NEW YORK
NYSDEC SITE NO. - 819018
NYSDEC CONTRACT NO. - D007619-25

MACTEC Engineering and Consulting, P.C.
511 Congress Street - P.O. Box 7050.
Portland, Maine 04112-7050
(207) 775-5401

MACTEC

EXCAVATION PLAN

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	3617-13-7301
DWG	C-108
SHEET	10 OF 19

FILE NAME: C:\Users\roger.riquier\OneDrive - Wood PLC\Projects\NYSDEC\Batavia Iron and Metals\SHEETS\RAP-C-108.dwg PLOT DATE: Mon, 13 Jul 2020 PLOT TIME: 8:49 AM

APPENDIX E

TCLP Lead Comparison

Appendix E contains a memo summarizing the comparison between total lead concentrations and lead concentrations using the toxicity characteristic leaching procedure (TCLP) method. This information is offered for consideration when planning the remedial work.

Memo

To: Contract/Project File

Prepared By: Charles Staples, P.G., MACTEC Engineering and Geology, PC (MACTEC) 12/2/20 *CRS*

Checked By: Mark Stelmack, P.E., MACTEC 12/11/20 *MJS*

Subject: Lead TCLP results, Batavia Iron and Metals Site, Batavia, NY

Toxicity Characteristic Leaching Procedure (TCLP) results for metals in soil at the Batavia Iron and Metals Site were reviewed to evaluate the potential for soil at the property to be considered a characteristic hazardous waste due to metals exceeding their TCLP limits. Samples for TCLP analysis were collected during the 2019 sampling event. Of the samples collected for total metals analysis, a subset of 33 were analyzed for TCLP metals to evaluate the reported range of total metals concentrations. Total lead concentrations in the compared samples ranged from 9.4 milligrams per kilogram [mg/Kg] to 70,000 mg/kg).

Within the 33 samples analyzed, lead was the only compound to exceed its TCLP criteria of 5 milligrams per liter (mg/L); however, there was not a clear linear relationship between total lead and TCLP lead. Sixteen of the 33 samples had concentrations of total lead greater than 1,000 mg/kg. Only samples with concentrations of lead greater than 5,000 mg/kg had corresponding TCLP results that failed for TCLP (i.e., greater than 5 mg/L). The attached Table 1 shows a comparison of total lead results to TCLP lead results.

Based on this comparison, it can be assumed that total lead concentrations greater than 5,000 mg/kg have the potential to exceed TCLP criteria and be considered a characteristic hazardous waste. The attached Figure 1 shows the 2018 and 2019 sample locations indicating the PCB concentration ranges and highlights in purple grids where total lead concentrations exceed 5,000 mg/kg. Metals sample locations coincide with the PCB sample locations. Therefore, grids that show PCB results, but are not highlighted in purple, contained lead at concentrations less than 5,000 mg/kg. Exceptions to this are the six grids that contain results for PCBs, but where metals samples were not collected, i.e., grids L09, N07, N09, N21, O19, and R33.

Lead was only detected at concentrations greater than 5,000 mg/kg at depths shallower than three feet below ground surface (bgs); most lead detections were at ground surface. The one exception was in the historic building foundation (sample collected in grid L27), where lead was greater than 5,000 mg/kg at the bottom of the foundation, located around at between 4-5 ft bgs.

Table 2 presents the 25-foot by 25-foot gridded areas within which lead was detected at concentrations greater than 5,000 mg/kg. Table 2 includes the estimated depth from ground surface where lead exceeds 5,000 mg/kg and the resulting estimated volume of soil where lead exceeds 5,000 mg/kg. Where applicable based on sampling results, the volume amount of soil exceeding 5,000 mg/kg within a grid is also designated as being in exceedance of 50 mg/kg PCBs. The volumes include only those grids where lead was sampled and do not extrapolate volumes for non-sampled grids.

Table 1: Soil Total and TCLP Metals Results

		Location	HA-L27		HA-N36		HA-O32		HA-R05		HA-R35		HA-R35		HA-T31		TP-J34		TP-J34	
		Sample Date	8/1/2019		8/1/2019		8/1/2019		8/1/2019		8/1/2019		8/1/2019		8/1/2019		7/29/2019		7/29/2019	
		Sample ID	819018-HAL2702		819018-HAN3600		819018-HAO3200		819018-HAR0501		819018-HAR3500		819018-HAR3502		819018-HAT3100		819018-TPJ3400		819018-TPJ3404	
		Sample Depth (ft bgs)	2		0		0		1		0		2		0		0		4	
		QC Code	FS		FS		FS		FS		FS		FS		FS		FS		FS	
Parameter	**RES**	**COM**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Metals (mg/kg)																				
Lead - Total (mg/Kg)	400	1000	**20300**		**4980**		**70000**		**385**		**343**		**9.4**		**466**		**1200**		**1860**	
Lead - TCLP (mg/L)	5	--	**58.7**		**1.1**		**8**		**0.57**		**0.067**		0.02	U	**0.11**		**0.73**		**1.1**	

Notes:

ft bgs = feet below ground surface

QC code: FS= field sample, FD = field duplicate

Samples analyzed for:

Metals by USEPA Method 6010

Toxicity Characteristic Leaching Procedure (TCLP) metals by USEPA Method 1311

Results in milligrams per kilogram or liter (mg/kg or mg/L)

Only detected compounds shown (detections in bold);

Qualifiers: U=not detected;

J=estimated value (+/- = biased high/low)

Criteria:

RES = Part 375 Protection for Residential Use

COM = Part 375 Protection for Commercial Use

Highlighted cell exceeds criteria

Blue highlighted result exceeds TCLP criteria

Table 1: Soil Total and TCLP Metals Results

			Location	TP-L07		TP-L26		TP-L26		TP-L26		TP-L28		TP-L28	TP-L28		TP-L31		TP-M43		TP-M43	
			Sample Date	7/31/2019		7/30/2019		7/30/2019		7/30/2019		7/30/2019		7/30/2019	7/30/2019		7/30/2019		7/29/2019		7/29/2019	
			Sample ID	819018-TPL0700		819018-TPL2600		819018-TPL2602		819018-TPL2608		819018-TPL2800		018-TPL2	018-TPL2		819018-TPL3100		819018-TPM4300		819018-TPM4304	
			Sample Depth (ft bgs)	0		0		2		8		0		2	2		0		0		4	
			QC Code	FS		FS		FS		FS		FS		FS	FS		FS		FS		FS	
Parameter	**RES**	**COM**		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result		Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Metals (mg/kg)																						
Lead - Total (mg/Kg)	400	1000		**11.5**		**2050**		**46.5**		**3.9**		**4780**		**107**			**1380**		**334**		**4.8**	
Lead - TCLP (mg/L)	5	--		0.02	U	**0.37**		**0.0058**	J	0.02	U	**0.57**		**0.0045**	J		**0.29**		**0.66**		0.02	U

Notes:

ft bgs = feet below ground surface

QC code: FS= field sample, FD = field duplicate

Samples analyzed for:

Metals by USEPA Method 6010

Toxicity Characteristic Leaching Procedure (TCLP) metals by USEPA Method 1311

Results in milligrams per kilogram or liter (mg/kg or mg/L)

Only detected compounds shown (detections in bold);

Qualifiers: U=not detected;

J=estimated value (+/- = biased high/low)

Criteria:

RES = Part 375 Protection for Residential Use

COM = Part 375 Protection for Commercial Use

Highlighted cell exceeds criteria

Blue highlighted result exceeds TCLP criteria

Table 1: Soil Total and TCLP Metals Results

		Location	TP-N15		TP-N15		TP-N27		TP-N27		TP-N27		TP-P29		TP-P29		TP-P29		TP-P31	
		Sample Date	7/31/2019		7/31/2019		7/30/2019		7/30/2019		7/30/2019		7/29/2019		7/29/2019		7/29/2019		7/29/2019	
		Sample ID	819018-TPN1500		819018-TPN1502		819018-TPN2700		819018-TPN2702		819018-TPN2704		819018-TPP2900		819018-TPP2902		819018-TPP2904		819018-TPP3100	
		Sample Depth (ft bgs)	0		2		0		2		4		0		2		4		0	
		QC Code	FS		FS		FS		FS		FS		FS		FS		FS		FS	
Parameter	**RES**	**COM**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Metals (mg/kg)																				
Lead - Total (mg/Kg)	400	1000	**2230**		**857**		**1060**		**20.3**		**118**		**5060**		**324**		**5.9**		**392**	
Lead - TCLP (mg/L)	5	--	**1.8**		**0.79**		**0.95**		0.02	U	**0.074**		**26.9**		**0.025**		0.02	U	**0.14**	

Notes:

ft bgs = feet below ground surface

QC code: FS= field sample, FD = field duplicate

Samples analyzed for:

Metals by USEPA Method 6010

Toxicity Characteristic Leaching Procedure (TCLP) metals by USEPA Method 1311

Results in milligrams per kilogram or liter (mg/kg or mg/L)

Only detected compounds shown (detections in bold);

Qualifiers: U=not detected;

J=estimated value (+/- = biased high/low)

Criteria:

RES = Part 375 Protection for Residential Use

COM = Part 375 Protection for Commercial Use

Highlighted cell exceeds criteria

Blue highlighted result exceeds TCLP criteria

Table 1: Soil Total and TCLP Metals Results

			Location	TP-P31		TP-P35		TP-P35		TP-R15		TP-R17		TP-R31	
			Sample Date	7/29/2019		7/29/2019		7/29/2019		7/31/2019		7/31/2019		7/29/2019	
			Sample ID	819018-TPP3102		819018-TPP3500		819018-TPP3502		819018-TPR1500		819018-TPR1700		819018-TPR3100	
			Sample Depth (ft bgs)	2		0		2		0		0		0	
			QC Code	FS		FS		FS		FS		FS		FS	
Parameter	**RES**	**COM**		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Metals (mg/kg)															
Lead - Total (mg/Kg)	400	1000		**7020**		**3880**		**864**		**1800**		**4280**		**1620**	
Lead - TCLP (mg/L)	5	--		**18.1**		**4.2**		**0.53**		**1.7**		**2.2**		**0.64**	

Notes:

ft bgs = feet below ground surface

QC code: FS= field sample, FD = field duplicate

Samples analyzed for:

Metals by USEPA Method 6010

Toxicity Characteristic Leaching Procedure (TCLP) metals by USEPA Method 1311

Results in milligrams per kilogram or liter (mg/kg or mg/L)

Only detected compounds shown (detections in bold);

Qualifiers: U=not detected;

J=estimated value (+/- = biased high/low)

Criteria:

RES = Part 375 Protection for Residential Use

COM = Part 375 Protection for Commercial Use

Highlighted cell exceeds criteria

Blue highlighted result exceeds TCLP criteria

Table 2: Soil Volume for Cells with Lead Detected Greater than 5,000 mg/kg

Grid/Cell ID	Estimated Depth (ft) of Lead Concentrations > 5,000 mg/kg	PCBs > 50 mg/kg Within Grid	Volume (cubic yard)
J20	2	No	46.3
J36	3	No	69.4
K06	1	No	23.1
K16	3	No	69.4
K36	3	Yes	69.4
K40	1	Yes	23.1
L27	4.5	Yes	104.2
L31	3	No	69.4
M02	2	No	46.3
M12	4	No	92.6
M32	1	Yes	23.1
N32	3	Yes	69.4
N33	1	Yes	23.1
O12	2	No	46.3
O22	1	No	23.1
O28	1	Yes	23.1
O29	1	Yes	23.1
O32	1	Yes	23.1
O33	1	Yes	23.1
O34	2	Yes	46.3
P19	1	No	23.1
P29	1	Yes	23.1
P31	3	No	69.4
R19	1	Yes	23.1
Total soil volume where PCBs are less than 50 mg/kg and lead is greater than 5,000 mg/kg =			**578.4**
Total soil volume where PCBs are more than 50 mg/kg and lead is greater than 5,000 mg/kg			**497.2**

Notes:

mg/kg = miligrams per kilogram

PCBs = polychlorinated biphenyls

Depth = depth of lead exceedence from ground surface in feet (ft).

Grid is surface is 25 by 25 feet

Volume estimate is only for grids with lead sample results. Adjacent cells that were not sampled may also contain lead concentrations greater than 5,000 mg/kg.