Periodic Review Report

Former Consolidated Iron and Metal

EPA Site Number: NY0002455756
NYSDEC Site Number: 336055

Washington Avenue
City of Newburgh
Orange County, New York

THE Chazen COMPANIES®
Proud to be Employee Owned
Engineers
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Landscape Architects

Prepared for:

City of Newburgh
83 Broadway
Newburgh, NY 12550

June 1, 2020

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Prepared by:

Chazen Engineering, Land Surveying & Landscape Architecture Co., D.P.C..

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1.0 INTRODUCTION

At the request of the City of Newburgh, Chazen Engineering, Land Surveying & Landscape Architecture Co., D.P.C. (Chazen) has prepared this Periodic Review Report (PRR) for submission to the United States Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (NYSDEC). The report was prepared for the Former Consolidated Iron and Metal Property (the "Site"), located at 1 Washington Street, City of Newburgh, Orange County, New York. A Site Location Map is included as Figure 1.

The PRR was prepared in compliance with NYSDEC DER-10 and the general requirements of the Site Management Plan (SMP) prepared by CT Male, Inc. as approved by the EPA on June 27, 2014. This is the third PRR prepared for the Site since completion of the Remedial Action Program.

The sampling event was originally intended to be completed in the 4th quarter of 2019. However, delays with scheduling the 2019 sampling event due to contract funding issues and the COVID-19 pause resulted in the sampling event not being performed until May 2020. A second sampling event is scheduled for the 4th quarter of 2020 with the 2020 PRR scheduled for submittal in May 2021.

The Site is an approximately 8.3-acre parcel of vacant land abutting the western shore of the Hudson River. It is bounded by an active marina to the north, CSX railway and Water Street to the west, and the City Sewer Treatment plant to the south. The site is relatively flat with a slight gentle slope from west to east and an 8-foot high steep embankment at the river's edge.

1.1 SITE HISTORY

An extensive history of Site operations, investigations, and remedial actions performed to date is included in the approved Site Management Plan. A brief summary is included below:

The Site was historically used as a shipyard from the early 1900's through the 1940's and then for scrap metal collection and reclamation until 1999. The scrap metal operation resulted in the on-site accumulation of hazardous compounds that included volatile and semi-volatile organic compounds, polychlorinated biphenyls, and EPA Priority Pollutant metals.

A number of investigations and removal actions were performed by EPA and NYSDEC between 1998 and 2013 resulting in the removal of above-grade waste and debris, and targeted excavation and off-site disposal of impacted soils from grade to six feet below grade or the water table.

A demarcation barrier-layer and protective clean soil cover system was placed across the site to restrict potential human contact with, residually-impacted soils. In areas where excavation was not required, residual soil impacts at grade remain at concentrations less than or equal to the Restricted-Residential Use Soil Clean-up Objectives pf 6 NYCRR 375-6.8(b).

Residual groundwater impacts remain at the Site that exceed ambient water quality standards. Groundwater in the area is not used for potable drinking water and there are no significant downgradient ecological resources.

Potential Soil Vapor Intrusion (SVI) was evaluated. There are no on-site buildings at this time, and the potential for SVI to adversely impact off-site buildings was determined to be insignificant.

Based on the remedial work completed, the Site was reclassified in August 2014 from Class 2 to Class 4 in the New York State Registry of Inactive Hazardous Waste Sites. This indicates that remediation has been completed to the point where the site no longer poses an immediate threat to human health or the environment. However, continued site management is required until all on-site media achieve the Remedial Action Objectives established in the ROD.

1.2 SITE MANAGEMENT

The detailed requirements for Site Management are specified in the SMP and summarized as follows:

- Periodic visual inspection of approved Engineering Controls and appropriate maintenance as warranted;
- Compliance with the approved Institutional Controls with appropriate notification and implementation of protective measures if site uses are altered;
- Periodic monitoring of environmental media to evaluate the continued effectiveness of the remedy; and,
- Periodic reporting

Based on the currently approved schedule included in the SMP, each of the above tasks is to be completed once annually or more frequently as warranted.

2.0 ENGINEERING AND INSTITUTIONAL CONTROLS

A detailed description of the Engineering and Institutional Controls (EC/ICs) for the Site is included in the SMP and summarized below.

The ECs include:

- A soil cover system (including the shoreline erosion control blanket and drainage); and,
- A site perimeter fence to restrict site access.

The ICs include:

- An environmental easement that requires;
    - Periodic inspection and maintenance (as required) of the ECs,
    - Periodic monitoring of on-site media;
    - Restrictions on future Site development and uses;
    - Requirements for modifications to future site uses;
    - Requirements for notification and approval of modifications/disturbance to the ECs;
    - Requirements for evaluation of potential vapor impacts associated with future redevelopment of the Site; and,
- Periodic evaluation of the effectiveness of the remedy.

Visual assessment of ECs for the site were conducted by Chazen personnel on May 12, 2020 and are described in Section 2.1. Periodic sampling of the groundwater monitoring network on May 12, 2020. The sampling methods and procedures are described in Section 2.2.

Laboratory analysis was provided by York Environmental Laboratories. The laboratory results are discussed in Section 3.

The required EC/IC certification is attached in **Appendix A**.

2.1 SITE INSPECTION

The site is rectangular vacant parcel approximately 450 feet wide (east to west) and 800 feet long (north to south) abutting the western shore of the Hudson River. It is a relatively planar site with a gentle dip from west to east. There is a standard 96”-high perimeter security fence on the upland northern, western, and southern property boundary with access gates near the northwest and southwest corners. The shoreline along the river is open but not readily accessible (no landing, with a steep rip-rap embankment). A public access gate is located along the northern security fence, and remained open while Chazen was on site.

Visual inspection of the site was performed by Chazen personnel on May 12, 2020. Commencing at the northwest corner of the site, the site perimeter was followed in a counter-clockwise direction to observe the condition of the perimeter fence and erosion control blanket along the river front.

Interior areas were inspected while traversing the site to access the monitoring wells for sampling. A site map with approximate locations of the traverses and photos are included in **Appendix B**.

The following observations were noted during the site walk:

- The perimeter fence appeared to be intact with no evidence of tampering or damage. Vegetation in some areas could damage the fence if allowed to continue to grow but have not yet caused an issue.

- The eastern boundary abutting the Hudson is steeply sloped with a heavy rip-rap erosion blanket approximately 25 feet wide. Based on the topographic survey, the rip-rap extends from an elevation 8 feet AMSL to approximately 0 feet AMSL. Some evidence of flooding by the river is visible parallel to the shoreline with large pieces of driftwood deposited along the eastern shore and on-site up to about 9 feet AMSL. No evidence of significant scouring or sloughing of the soils from surface drainage or development of surface drainage channels or swales were observed.

- The perimeter of the site is vegetated with small trees and shrubs along the fence line and top of bank along the riverfront. The interior is predominantly an open field with wild grass, flowers, and weeds with a few small scrub bushes. No heavy growth or deep rooting brush, thickets, or trees were observed in the field.

- A continuous gravel walking path installed in 2017 is accessed via a public gate along on the northern fence line. The path follows the perimeter along the fence line and shore. Several picnic tables with grills and bleacher seats are located within field areas. The footpaths do not appear to have had any adverse impact of the soil cover system.

- There is a fenced in sanitary sewer pumping station on the site near the southwest corner within the perimeter. Chazen understands this station was installed as part a municipal sewer system upgrade completed by the City of Newburgh in 2017.

No evidence of vermin, burrows, or warrens that could potentially damage the protective cover were observed on-site.

2.2 SITE MONITORING

One round of groundwater samples was collected from eight of the ten existing on-site groundwater monitoring wells. All wells were sampled on May 12, 2020. Two wells, MW-05 and MW-10 were removed from the sampling network in September 2019 with the consent of NYSDEC.

Prior to sampling, all of the wells were visually inspected for evidence of damage and/or tampering and appeared to be intact with no evidence of damage and were secured with locks, locking caps, and friction caps in-place. The depths to water and depths to bottom were then measured with an electronic interface probe to the nearest 0.01 feet and recorded on the field sampling logs.

The depth to bottom measurements were compared to the 2010 construction logs prepared by Geologic. The data indicates no significant siltation in the wells.

Monitoring wells were sampled using low-flow methods using a peristaltic pump at a pumping rate ranging from 0.10 to 0.12 gallons per minute, limiting drawdown and allowing sample collection upon documentation of stabilized field parameters. Dedicated sample tubing was used for purging and sample collection at each well.

During the low-flow sampling, the depth to water in the well and Water Quality Parameters (WQPs) were measured and recorded every five-minutes. The WQPs (temperature, pH, specific conductance, oxidation-reduction potential, and dissolved oxygen) were measured with an YSI Professional Plus multi-parameter water quality meter. Pumping continued until drawdown and the WQPs stabilized. The data was recorded on the sampling logs attached in **Appendix C**.

Groundwater samples were collected from the well in laboratory supplied sample containers, recorded on the chain-of-custody, and placed in ice filled coolers, then transferred to a secure sample refrigerator. Samples were transported directly to the laboratory by courier service. The lab reported that all samples arrived at the lab within the specified holding time and at appropriate temperature.

The groundwater samples were submitted for laboratory analysis in compliance with the sampling and analysis plan included in the SMP. With the approval of NYSDEC effective September 2019, the sampling parameters and methods required for monitoring were changed to include:

CP-51 list of VOCs by Method 8260C
CP-51 list of SVOCs by Method 8270D
Total lead

Samples were analyzed using ASP methods with standard Class A deliverable data deliverables.

Quality Control/Quality Assurance samples were collected to evaluate data quality. One Trip Blank, a field duplicate, and a Matrix Spike and Matrix Spike Duplicate were collected during the sampling event.

The TB supplied by the laboratory was included in each shipment of samples for VOC analysis.

A Field Duplicate and the MS/MSD samples for VOCs and SVOCS were collected from MW-01.

3.0 MONITORING RESULTS

3.1 WATER TABLE

The depths to water from the surveyed measuring point elevations for each well was used to determine the water table elevation in each well. The results are included in the table below.

Water Table 12-May-20					
Well	**Measuring Point (ft AMSL)**	**Ground (Surface (ft AMSL)**	**Stick-Up (feet)**	**Depth To Water (ft)**	**Water Table Elevation**
MW-01	18.01	15.00	3.01	14.07	3.94
MW-02	13.99	11.17	2.82	12.75	1.24
MW-03	13.26	10.15	3.10	12.79	0.47
MW-04	11.74	8.77	2.98	11.27	0.47
MW-05	11.52	8.45	3.07	nm	-
MW-06	10.50	7.84	2.66	10.11	0.39
MW-07	10.76	7.99	2.77	10.50	0.26
MW-08	10.85	8.14	2.71	10.47	0.38
MW-09	15.69	12.35	3.34	13.48	2.21
MW-10	11.13	8.47	2.66	nm	-
Elevation in NAVD 88 AMSL = Above Mean Sea Level					

The data (shaded yellow) were plotted on the site survey map to show the distribution of water elevations across the site. An annotated site survey is included as **Figure 2**.

Based on available Hudson River tidal data for Newburgh, NY the tidal range for May 12 was:

high tide:	4:31am	3.24 ft
low tide:	11:16am	0.12 ft
high tide:	5:15pm	2.73 ft

Tidal influences on water levels have not been evaluated. However, all groundwater elevations fall within the tidal range except for the upland most well MW-01. This suggests net groundwater flow is consistently from west to east through the site towards the Hudson River.

3.2 WATER QUALITY PARAMETERS

Water quality parameters were collected multiple times at each sample location during the sampling event using a hand-held YSI multi-parameter water quality meter. The results are included on the sampling data sheets included in Appendix C.

The final WQPs collected at each well just prior to sampling are included in the table below.

Well ID	Temp (°C)	pH	SC (µS/cm)	ORP (mV)	DO (mg/l)
MW-01	11.8	6.81	2,013	51.2	0.51
MW-02	11.2	6.51	1,254	-59.1	0.39
MW-03	11.1	6.70	625.3	-53.4	0.21
MW-04	11.2	6.57	1,084	-86.9	0.19
MW-05					
MW-06	11.0	7.20	665.9	134.9	3.87
MW-07	11.1	6.91	653.8	-115.2	0.22
MW-08	10.6	6.74	607.8	-78.8	0.19
MW-09	14.0	7.02	1,183	-104.8	0.16
MW-10					

The groundwater chemistry has been historically divided geographically into two groups of five, separated by the deep soil excavation area running east-west across the middle of the Site. In the May 2020 sampling event, the average WQPs in the north and south groups were very similar with the exception of the DO which was higher in the northern group.

3.3 VOLATILE ORGANIC COMPOUNDS

A "hit" summary table for VOCs is included below.

Sample ID	AWQS	MW-1		MW-2		MW-3		MW-4		MW-7		MW-9	
Compound		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
CP-51 VOCs	ug/L	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Benzene	1	**2.1**		0.2	U	0.2	U	0.2	U	0.2	U	**2.3**	
Ethyl Benzene	5	**23**		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Isopropylbenzene	5	**5.8**		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
MTBE	10	0.23	J	0.42	J	1.1		2.3		3.9		0.2	U
Naphthalene	10	6		1	U	1	U	1	U	1	U	1	U
n-Butylbenzene	5	0.64		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
n-Propylbenzene	5	**11**		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
sec-Butylbenzene	5	1.3		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Toluene	5	0.42	J	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U

The table includes any VOC compound detected at any concentration that exceeded the method detection limits, including estimated concentrations.

The laboratory results for all VOCs and qualifier descriptions are included in **Table 1**.

3.4 SEMI-VOLATILE ORGANIC COMPOUNDS

No SVOC was reported in any sample at a concentration that exceeded its applicable standard. However, the laboratory method detection limit (MDL) of 0.0541 µg/l was greater than the applicable AWQS of 0.002 µg/l for six of the polyaromatic hydrocarbons.

The laboratory results for all SVOCs and qualifier descriptions are included in **Table 2**.

3.5 LEAD

Lead was detected in six of the eight samples at concentrations exceeding the quantification limit of 1.11 µg/l. The results for five of the samples were less than the applicable standard. The sample collected from MW-08 reported a concentration of 54 µg/l, more than 2 times the standard of 25 µg/l.

3.6 PCBS & PESTICIDES

Sample analysis for PCBS and/or pesticides was not performed nor required. These parameters were removed from the monitoring program in September 2019 with NYSDEC's approval.

3.7 QA/QC Sampling Results

No VOCs were reported in the Trip Blank,

The results for the field duplicate (CIM-MW-FD) and the parent sample (CIM-MW-01) were very similar within approximately 10%.

Analysis of MS/MSD samples indicated good recoveries and comparable results.

The data appears to be representative of actual groundwater conditions on the date of the sampling event, however, the data has not been independently validated by a third-party chemist nor is it required.

4.0 DATA REVEIW

The identified site related compounds of concern specified in the original SMP include BTEX and MTBE, SVOCs, PCBs, lead and cadmium. The three prior annual sampling events included analyses for TCL-VOCs, TCL-SVOCs, and TAL-Metals, and PCBs. Based on the results of three years of monitoring, the well network was analyzed for the CP-51 lists of VOCs and SVOCs, and Lead only.

Results for the last four sampling events, November 2015, June 2017, and October 2018, and May 2020 are compared in the following sections.

4.1 VOCS

No significant concentrations of VOCs except gasoline-related compounds have been detected in three consecutive annual sampling events in samples collected from MW-01. The results for May 2020 from this well suggest that the concentrations of these compounds have reduced by one or more orders of magnitude in the period from October 2018 through May 2020. Although there had been some concern over the increasing concentrations reported in previous events, the most recent results indicate a substantial reduction. Additional data is necessary to establish a definitive trend.

Monitoring Well ID / Sampling Date / Compound	AWQS (µg/L)	MW-01							
		11/10/2015		6/14/2017		10/2/2018		5/12/2020	
		Result	Q	Result	Q	Result	Q	Result	Q
Benzene	1	**37**		**17**	**D**	**26**		**2.1**	
Ethyl Benzene	5	**55**		**210**	**D**	**400**	**D**	**23**	
Isopropylbenzene	5	1.6		**41**	**D**	**110**		**5.8**	
p- & m- Xylenes	5	**5.1**		**12**	**U**	**9.2**		<0.60	
Toluene	5	**5.3**		5	U	**6.2**		0.42	J

The MTBE historically detected in wells MW-03 and MW-07 at concentrations greater than the applicable standard 10 µg/l have been less the AWQS standard since 2015 as summarized below. The MTBE concentrations appear to be decreasing.

Date	AWQS (µg/L)	MW-03 (µg/L)	MW-07 (µg/L)
11/10/2015	10	**11**	**12**
6/13/2017		8.2	6.9
10/2/2018		1.7	5.9
5/12/2020		1.1	3.9

4.2 SVOCS

Several PAHs were reported both at ultra-trace (< 0.1 µg/l) concentrations in samples collected from MW-03, MW-04, MW-07 and MW-08 and at concentrations greater than their applicable standards. In general, parameter concentrations are stable over time.

Naphthalene, a gasoline-range SVOC, was reported at 14 µg/L in 2018 in the sample collected from MW-01. This result is lower than the prior two events but within the same order of magnitude-an indication of seasonal/temporal variability. Naphthalene, along with associated BTEX (benzene, toluene, ethyl benzene, xylenes) compounds, have consistently remained below standards in on-site wells located downgradient from MW-01, suggesting controlled natural attenuation of organic compounds is occurring.

4.3 Lead

The concentration of lead for the last four consecutive sampling events are included below. The lead is compared to the AWQS of 25 µg/L with concentrations in excess of the standard highlighted. Concentrations marked with a "B" flag were identified at trace concentrations in the analytical method blank.

LEAD: AWQS = 25 µg/L								
Monitoring Well	**Nov 2015**		**Jun 2017**		**Oct 2018**		**May-20**	
MW-01	8		3	U	2.380		1.11	U
MW-02	3	U	3	U	1.11	U	1.11	U
MW-03	5		9	B	23.8		4.51	
MW-04	**47**		5	B	**53.3**		5.37	
MW-05	4		3	U	1.49		NS	
MW-06	17		**29**	**B**	**99.6**		3.37	
MW-07	15		3	U	13.3		4.75	
MW-08	**45**		**43**	**B**	**32.1**		**54.0**	
MW-09	3	U	3	U	1.11	U	1.45	
MW-10	3	U	3	U	1.11	U	NS	
Hits	2		2		3		1	
Total	141		86		226		73	
Average	20		22		32		12	

The 2020 results for lead indicate the concentration has declined in all samples except MW-08. Lead in MW-08, which is the most downgradient of the wells located nearest the disturbed remedial excavation area, had been declining since 2015, but has increased to its highest reported concentration in the last sampling event. Cursory graphic analysis suggests that the data is variable about an average of 43 µg/l with a very slight increasing trend bit more data is needed to confirm a trend.

Other metals that are not site contaminants of concern that had consistently been reported at levels exceeding AWQSs include magnesium, manganese, and sodium. The source of these metals has not been confirmed; however, they were generally considered benign and have been removed from the monitoring requirements for the Site.

5.0 SITE EVALUATION

5.1 CONCLUSIONS

The Remedial Action Objectives for the site was to reduce or eliminate the potential threat to human health and the environment from direct contact with impacted soils and to protect groundwater and surface water from the migration of dissolved site related COCs.

The ECs/ICs implemented appear to be functioning as anticipated.

The soil cover system remains in-place with no evidence of excess erosion, the erosion blanket along the river is intact with no observable evidence of failure or excess erosion. Since the last PRR was completed in 2018, no evidence of soil disturbance was observed within a fenced-in area.

Overall groundwater quality with respect to site related compounds of concern has remained stable since the remedy was completed.

There are no active remediation units or systems on site that require evaluation, modification, or maintenance.

The lack of detection of BTEX compounds downgradient from upgradient perimeter wells MW-01 and MW-09 suggests that the standards will be achieved site-wide for BTEX once they are achieved at these wells.

MTBE has not been detected or has remained below the groundwater standard in all site wells since 2015. MTBE concentrations in wells MW-03 and MW-07 have been steadily decreasing, and indication that natural attenuation is occurring at the site with no evidence of a sustaining source.

Elevated lead remains in only one (MW-08) of the eight on-site wells. The most recent data indicates an increase in the apparent lead concentration in this well but a clearly discernible trend cannot be implied. Additional site monitoring is needed to define a trend.

The existing ICs for the site prohibit the use of on-site groundwater as potable water. Additionally, the immediately downgradient receptor of groundwater discharge is the Hudson River. Consequently, site-wide groundwater impacts that exceed applicable AWQSs do not pose a potential threat to human health from potential contact or consumption.

There are no known/previously identified sensitive ecological resources downgradient of the site that could be impacted by the migration of the groundwater. Consequently, site-wide groundwater impacts that exceed applicable AWQSs do not pose a potential threat to the environment.

Based on the data and known site conditions, the EC/ICs for the site are protective and effective at meeting the Remedial Action Goals for the Site. Continued monitoring to document stable or improving conditions is warranted and sufficient.

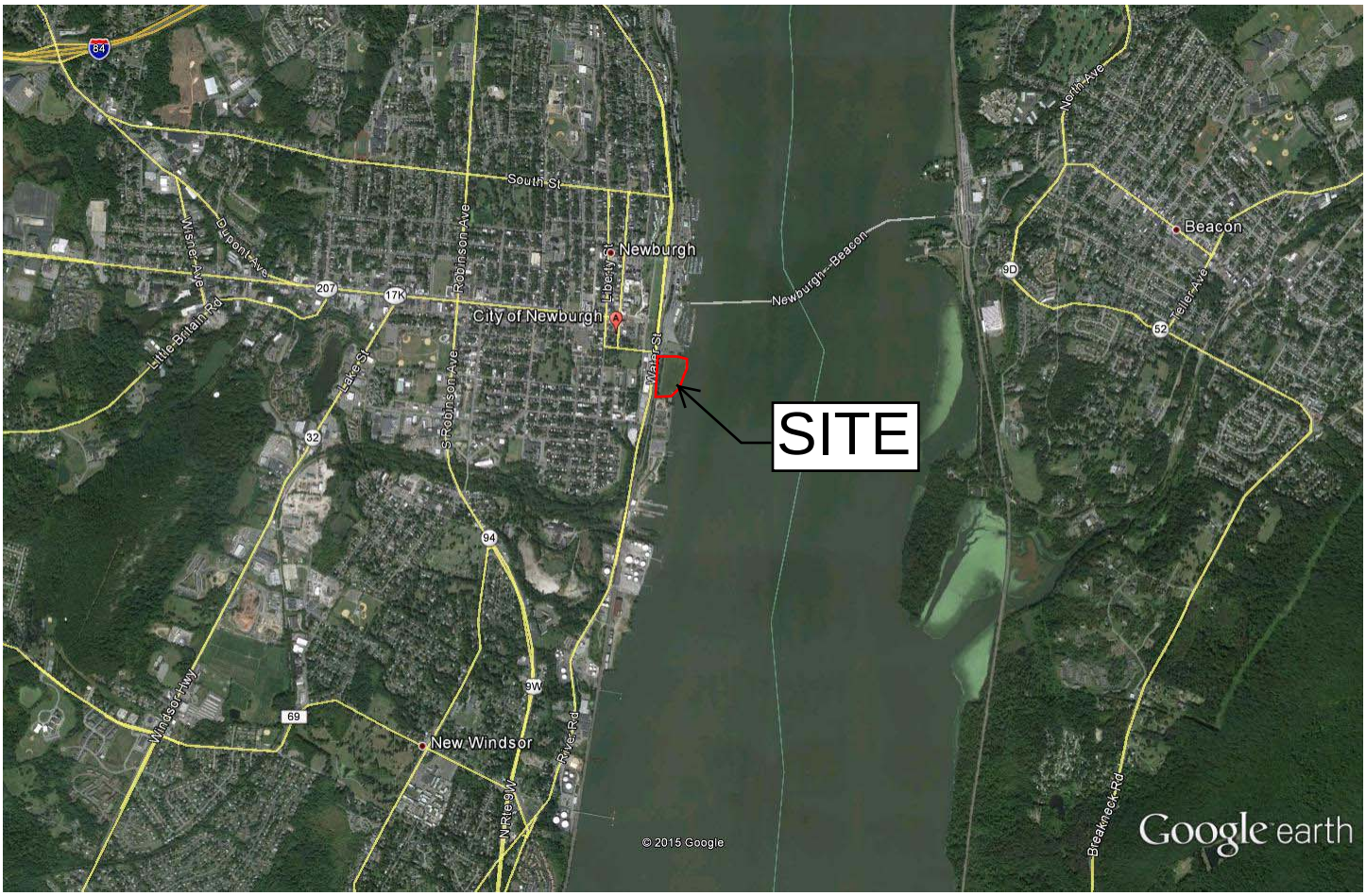
5.2 RECOMMENDATIONS

Significant modifications to the SMP were recommended in the 2018 PRR and approved in September 2019. No additional changes are recommended at this time except,

1. Resume analysis of Arsenic (in addition to lead) for the sample from MW-02 to track changes in concentration at the location.

2. Prepare and submit an updated/modified SMP for final approval prior to the November 2020 scheduled sampling event.

FIGURES



Google earth

miles 2
km 4

THE Chazen COMPANIES®

FIGURE 1
SITE LOCATION MAP

Former Consolidated Iron Site
Washington Street
Newburgh, NY

Drawing Name: X:\AS1520-41548.001 Newburgh Consolidated Iron site\SVY\Dwg\06_SVY_41548-00_TOPO.dwg
Plotted: Dec 08, 2015 - 11:36am
Date Printed: Dec 08, 2015, 11:36am

SOUTH WATER STREET

RAILROAD TRACKS

CONC. MONUMENT FOUND

SEE MAP REFERENCE #3 FOR DISTANCE

WASHINGTON STREET (60' WIDE)

BENCHMARK XCUT EB HYD ELEV.=17.35

BENCHMARK RR SPIKE 24"COTTONWOOD ELEV.=8.15

POINT OF BEGINNING

IRON ROD SET

S85°13'06"E 327.00'

N17°26'54"E 87.60'

N17°26'54"E 222.73'

N07°25'24"E

PROPERTY CORNER WITHIN 8" SPRUCE

UP NYT #10

UP CP# 23452 & TEL PEDISTAL

UP CHGE #47395

UP CHGE #47380

#88305

#44034

#48516B

IRON ROD SET ON LINE

IRON ROD FOUND SOUTH 0.7'

PIPE & RAIL FENCE

CHAIN LINK FENCE

CONCRETE

GRAVEL

SWALE

EDGE PAVEMENT

24" CMP FLOW

18" BOX CUL

15" CIP (ORIGIN UNKNOWN) INVERT =-14.68

DMH T.R.=19.54' INVERT IN=12.3' INVERT OUT=12.2'

DMH T.R.=7.39' INVERT IN=2.6' INVERT OUT=2.5'

INVERT =-1.94

78.43'

405.43'

MW#01 TOP PVC:18.01

MW#02 TOP PVC:13.99

MW#03 TOP PVC:13.26

MW#04 TOP PVC:11.74

MW#05 TOP PVC:11.52

MW#06 TOP PVC:10.50

MW#07 TOP PVC:10.76

MW#08 TOP PVC:10.85

MW#09 TOP PVC:15.69

MW#10 TOP PVC:11.13

Lands Formerly of ISAAC STANTON & JAS. H. MALLERY Letters Patent granted January 16, 1855

Lands Formerly of WASHINGTON IRON WORKS Letters Patent granted June 28, 1865

Lands Formerly of HOMER RAMSDELL Letters Patent granted JUNE 28, 1865

Lands Formerly of HOMER RAMSDELL Letters Patent granted OCTOBER 18, 1882

Lands Now or Formerly of NEW YORK CENTRAL LINES LLC Liber 5154 Page 183 Section 40 , Block 3, Lot 2

APPROX. WATER GRANT LINE

APPROX. WATER GRANT LINE

APPROX. WATER GRANT LINE

APPROX. WATER GRANT LINE

APPROX. WATER GRANT LINE

APPROX. WATER GRANT LINE

APPROX. WATER GRANT LINE

S71°07'35"W 820.77'TIE COURSE

DISTANCE ALONG SHORELINE APPROX. 1023'

FLOOD LINE "OTHER FLOOD AREAS ZONE X" (SCALED)

FLOOD LINE "FLOOD ZONE AE" (EL7)

LIMITS OF CHAZEN NOV. 2015 TOPO

"OTHER AREAS ZONE X"

"OTHER FLOOD AREAS ZONE X"

"FLOOD ZONE AE"

WATERS EDGE

RIP RAP

HUDSON RIVER

NYS PLANE EAST ZONE

N84°24'02"W 297.92'

S84°24'02"E 340.29'

42.37'

SOUTH WILLIAM STREET (50' WIDE)

DMH INVERTS IN AND OUT ARE UNOBTAINABLE (RECESSED) BOTTOM OF CHAMBER ELEV.=0.2

DMH INVERTS IN AND OUT ARE UNOBTAINABLE (RECESSED) BOTTOM OF CHAMBER ELEV.=-3.1'

24" & 72" CIP FLOW

24" CIP INVERT =-1.6

75" CIP INVERT =-5.1

FLOW

LEGEND:

- NO PHYSICAL BOUNDS
- ADJACENT PROPERTY LINE
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING OVERHEAD WIRES
- EXISTING WATER LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING SPOT GRADE
- EXISTING EDGE OF WATER
- EXISTING TREE W/ WIRE
- EXISTING UNKNOWN MANHOLE
- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EXISTING HYDRANT
- EXISTING IRON ROD
- EXISTING LIGHT POLE
- EXISTING MONUMENT
- EXISTING SANITARY MANHOLE
- EXISTING WATER VALVE
- EXISTING SIGN
- EXISTING MONITORING WELL

MAP REFERENCES:

1. REFERENCE IS HEREBY MADE TO A MAP ENTITLED "LANDS OF THE CITY OF NEWBURG TAX LOT 4 IN SECTION 37 BLOCK 4", PREPARED BY GREVAS AND HILDRETH, P.C., DATED JULY 17, 1989 AND ON FILE IN THE CITY OF NEWBURGH OFFICE OF MAP ARCHIVES.

2. REFERENCE IS HEREBY MADE TO A MAP ENTITLED "PLAT PLAN OF SURVEY FOR REAL ESTATE ACQUISITION BY CITY OF NEWBURGH, NEW YORK", PREPARED BY HERBERT L. KARTIGANER P.E., L.S., DATED MARCH 20, 1961 AND ON FILE IN THE CITY OF NEWBURGH OFFICE OF MAP ARCHIVES.

3. REFERENCE IS HEREBY MADE TO A MAP ENTITLED "CONSOLIDATED IRON", MAP 61-13-29. DATED 1898 AND ON FILE IN THE CITY OF NEWBURGH OFFICE OF MAP ARCHIVES.

4. REFERENCE IS HEREBY MADE TO A MAP ENTITLED "CONSOLIDATED IRON", DEPICTING WATER GRANT PARCELS BEING A MAP OBTAINED FROM THE NYS OFFICE OF GENERAL SERVICES AND ON FILE IN THE CITY OF NEWBURGH OFFICE OF MAP ARCHIVES.

5. REFERENCE IS HEREBY MADE TO A MAP ENTITLED "STATION MAP-TRACK & STRUCTURES, ERIE RAILROAD COMPANY, NEW YORK DIVISION, NEWBURGH BRANCH", DATED OCT 17, 1960.

6. REFERENCE IS HEREBY MADE TO A MAP ENTITLED " RIGHT OF WAY MAP, WEST SHORE RAILROAD:, DATED JUNE 17, 1917.

7. REFERENCE IS HEREBY MADE TO A MAP ENTITLED " TOPOGRAPHIC SURVEY CONSOLIDATED IRON AND METAL SITE" COMPLETED BY LARSEN ENGINEERS IN 2004. TOPOGRAPHY FOR THE SPIT OF LAND JUTTING IN TO THE HUDSON RIVER WAS TAKEN FROM THIS MAP.

FLOOD ZONE NOTE:

PORTIONS OF SUBJECT PARCEL ARE LOCATED IN
1. FLOOD ZONE AE (EL7)
2. OTHER FLOOD AREAS ZONE X &
3. OTHER AREAS ZONE X
AS SHOWN ON FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) NATIONAL FLOOD INSURANCE PROGRAM (NFIP) FLOOD INSURANCE RATE MAP (FIRM) ORANGE COUNTY, CITY OF NEWBURGH COMMUNITY NUMBER 360626, MAP NUMBER 36071C0332E, EFFECTIVE DATE AUGUST 3, 2009.

NOTES:

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S INKED SEAL OR HIS EMBOSSED SEAL SHALL BE CONSIDERED TO BE VALID TRUE COPIES.

THE CONTRACTOR SHALL COMPLY WITH NEW YORK STATE INDUSTRIAL CODE RULE 53 - 48 HOURS PRIOR TO DIGGING CALL DIG SAFE NEW YORK 1-800-962-7962 TO HAVE PUBLIC UTILITY LOCATIONS PAINTED.

UNDERGROUND WATERLINE AND ELECTRIC FACILITIES SHOWN HEREON WERE TAKEN FROM DATA OBTAINED FROM UTILITY MARKOUT OF UNKNOWN SOURCE. ALL ABOVE GROUND STRUCTURES AND SURFACE FEATURES SHOWN HEREON ARE THE RESULT OF A FIELD SURVEY UNLESS OTHERWISE NOTED.

THERE MAY BE OTHER UNDERGROUND UTILITIES, THE EXISTENCE OF WHICH ARE NOT KNOWN OR CERTIFIED BY THE UNDERSIGNED. SIZE AND LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES MUST BE VERIFIED BY THE APPROPRIATE AUTHORITIES. THE UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION MUST BE NOTIFIED PRIOR TO CONDUCTING TEST BORINGS, EXCAVATION AND CONSTRUCTION.

TOPOGRAPHY SHOWN HEREON WITHIN THE LIMIT LIMIT LINE "LIMITS OF CHAZEN NOV. 2015 TOPO" IS A RESULT OF A FIELD SURVEY COMPLETED BY THE CHAZEN COMPANIES ON NOVEMBER 12, 2015, TOPOGRAPHY OUTSIDE THOSE LIMITS ALSO COMPLETED BY THE CHAZEN COMPANIES ON MARCH 17, 2008. CONTOUR INTERVAL IS ONE FOOT. VERTICAL DATUM IS NAVD88. (CONVERSION TO NGVD 29 VERTICAL DATUM IS +0.91 FEET.)

DEED REFERENCE:

CITY OF NEWBURGH, (TAX SALE)
TO
CITY OF NEWBURGH
APRIL 12, 2005
LIBER 11808 PAGE 1648

TAX PARCEL NUMBER:

CITY OF NEWBURGH, ORANGE COUNTY, NEW YORK
SECTION 40, BLOCK 3, LOT 3

AREA:

8.33 ACRES

CERTIFICATIONS:

TO:
CITY OF NEWBURGH

DRAFT

sheet no. SV1 1OF 1
project no. 41548.00
date 12/02/15
scale 1"=30'
drawn CJS
checked SJA

FORMER CONSOLIDATED IRON AND METAL CO. FACILITY

MAP OF TOPOGRAPHIC SURVEY PREPARED FOR CITY OF NEWBURGH

CITY OF NEWBURGH, ORANGE COUNTY, NEW YORK

rev.	date	description

CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE CO., D.P.C.

Office Locations:

Dutchess County Office:
21 Fox Street
Poughkeepsie, New York 12601
Phone: (845) 454-3980

Capital District Office:
547 River Street
Troy, New York 12180
Phone: (518) 273-0055

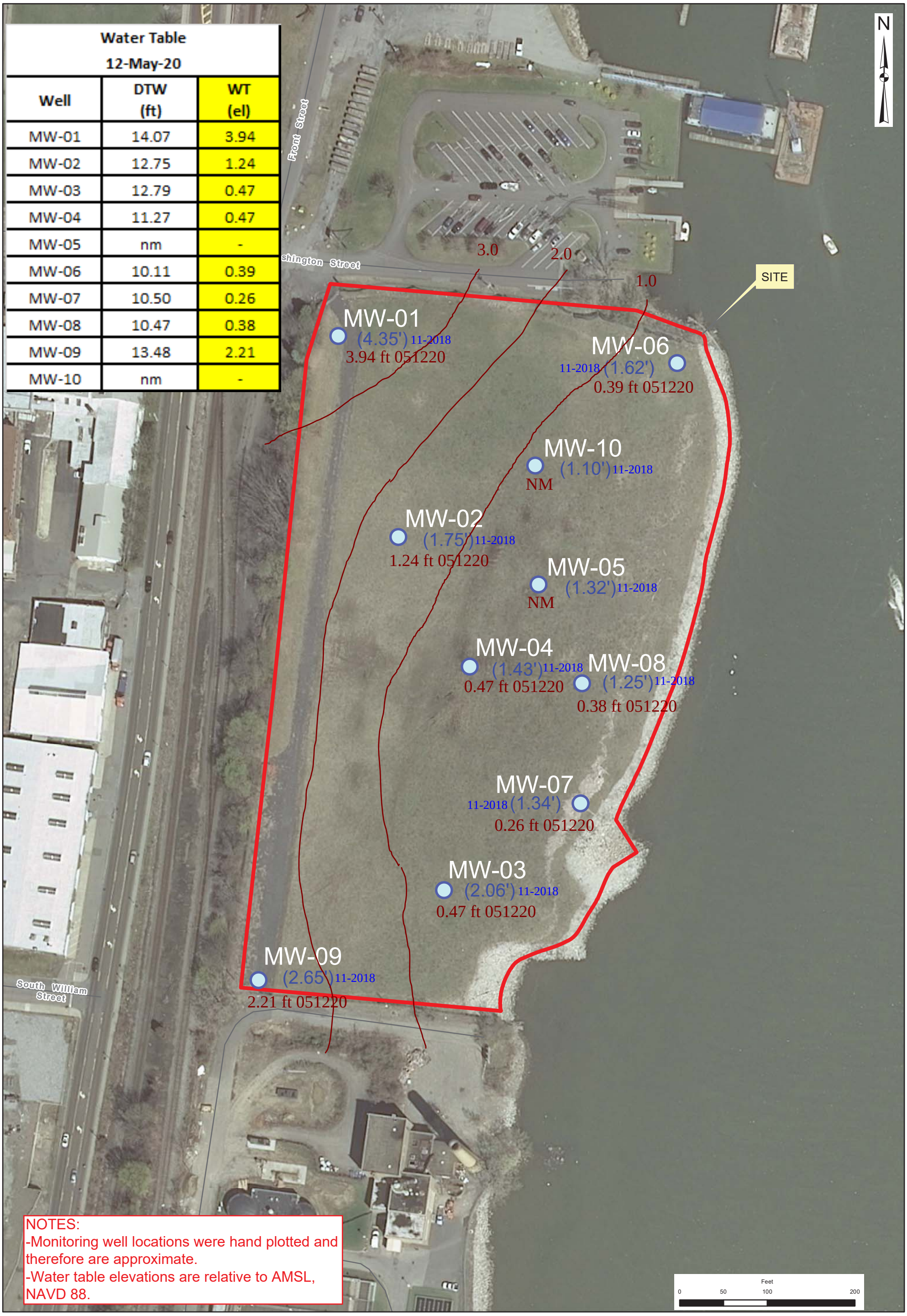
North Country Office:
375 Bay Road
Queensbury, New York 12804
Phone: (518) 812-0513

I HEREBY CERTIFY THAT THIS SURVEY MAP IS BASED ON AN ACTUAL FIELD SURVEY COMPLETED NOV. 12, 2015 AND THAT THIS SURVEY MAP WAS MADE BY ME OR UNDER MY DIRECTION, AND CONFORMS WITH THE MINIMUM STANDARD OF PRACTICE ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS.

STEVEN J ALEX, L.S. #50016

6155

Water Table 12-May-20		
Well	DTW (ft)	WT (el)
MW-01	14.07	3.94
MW-02	12.75	1.24
MW-03	12.79	0.47
MW-04	11.27	0.47
MW-05	nm	-
MW-06	10.11	0.39
MW-07	10.50	0.26
MW-08	10.47	0.38
MW-09	13.48	2.21
MW-10	nm	-



NOTES:
-Monitoring well locations were hand plotted and therefore are approximate.
-Water table elevations are relative to AMSL, NAVD 88.

THE Chazen COMPANIES
Proud to be Employee Owned
Environmental Scientists
Landscape Architects

CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE CO., D.P.C.

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Phone: (518) 812-0513

Former Consolidated Iron and Metal Site

Groundwater Elevations

MAY 12, 2020

Washington Street
City of Newburgh, Orange County, New York

Source: Orange County 2016 Parcel Data; NYS Department of Transportation 2008 Roads Dataset; NYS Office of Technology 2013 Orthophoto Data

Drawn:	STF
Date:	11/28/2018
Scale:	1 inch equals 100 feet
Project:	41548.00
Figure:	3

Document Path: Z:\projects\41500-41599\41548.00 Newburgh Consolidated Iron site\GIS\Maps\41548-Orthophoto.mxd

TABLES

TABLE 1 CP-51 VOC RESULTS

Sample ID		AWQS *	MW-01		MW-02		MW-03		MW-04		MW-06		MW-07		MW-08		MW-09		MW-DUP		Trip Blank	
York ID			20E0371-01		20E0371-02		20E0371-03		20E0371-04		20E0371-05		20E0371-06		20E0371-07		20E0371-08		20E0371-09		20E0371-10	
Sampling Date			12-May-20		12-May-20		12-May-20		12-May-20		12-May-20		12-May-20		12-May-20		12-May-20		12-May-20		12-May-20	
Client Matrix			Water		Water		Water		Water		Water		Water		Water		Water		Water		Water	
Compound	AS Numbe		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
CP-51 VOCS		ug/L	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Dilution Factor			1		1		1		1		1		1		1		1		1		1	
1,2,4-Trimethylbenzene	95-63-6	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
1,3,5-Trimethylbenzene	108-67-8	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
Benzene	71-43-2	1	**2.100**		0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	**2.300**		**1.900**		0.200	U
Ethyl Benzene	100-41-4	5	**23**		0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	**21**		0.200	U
Isopropylbenzene	98-82-8	5	**5.800**		0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	**5.300**		0.200	U
MTBE	1634-04-4	10	0.230	J	0.420	J	1.100		2.300		0.200	U	3.900		0.200	U	0.200	U	0.220	J	0.200	U
Naphthalene	91-20-3	10	6		1	U	1	U	1	U	1	U	1	U	1	U	1	U	5.500		1	U
n-Butylbenzene	104-51-8	5	0.640		0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.530		0.200	U
n-Propylbenzene	103-65-1	5	**11**		0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	**9.800**		0.200	U
o-Xylene	95-47-6	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
p- & m- Xylenes	79601-23-	5	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
p-Isopropyltoluene	99-87-6	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
sec-Butylbenzene	135-98-8	5	1.300		0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	1.200		0.200	U
tert-Butylbenzene	98-06-6	5	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
Toluene	108-88-3	5	0.420	J	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.400	J	0.200	U
Xylenes, Total	1330-20-7	5	0.600	U	0.600	U	0.600	U	0.600	U	0.600	U	0.600	U	0.600	U	0.600	U	0.600	U	0.600	U

NOTES:

Any Regulatory Exceedences are color coded by Regulation

AWQS* = ambient Water Quality standards, Togs v 1.1.1

Q is the Qualifier Column with definitions as follows:

D=result is from an analysis that required a dilution

J=analyte detected at or above the MDL (method detection limit) but below the RL (Reporting Limit) - data is estimated

U=analyte not detected at or above the level indicated

B=analyte found in the analysis batch blank

E=result is estimated and cannot be accurately reported due to levels encountered or interferences

NT=this indicates the analyte was not a target for this sample

~=this indicates that no regulatory limit has been established for this analyte

TABLE 2 CP-51 SVOC Results

Sample ID York ID Sampling Date		AWQS	MW-01 20E0371-01 5/12/2020		DUP (MW-01) 20E0371-09 5/12/2020		MW-02 20E0371-02 5/12/2020		MW-03 20E0371-03 5/12/2020		MW-04 20E0371-04 5/12/2020		MW-06 20E0371-05 5/12/2020		MW-07 20E0371-06 5/12/2020		MW-08 20E0371-07 5/12/2020		MW-09 20E0371-08 5/12/2020	
Compound	**CAS**		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
CP-51 SVOCs		ug/L	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Acenaphthene	83-32-9	20	0.0541	U	0.0513	U	0.0526	U	0.0541	U	0.0513	U	0.0526	U	0.589		0.0526	U	0.0526	U
Acenaphthylene	208-96-8	~	0.0541	U	0.0513	U	0.0526	U	0.0541	U	0.0513	U	0.0526	U	0.126		0.0526	U	0.0526	U
Anthracene	120-12-7	50	0.0541	U	0.0513	U	0.0526	U	0.0541	U	0.0513	U	0.0526	U	0.126		0.0526	U	0.0526	U
Benzo(a)anthracene	56-55-3	0.002	**0.0541**	U	**0.0513**	U	**0.0526**	U	**0.0541**	U	**0.0513**	U	**0.0526**	U	**0.0526**	U	**0.0526**	U	**0.0526**	U
Benzo(a)pyrene	50-32-8	0.002	**0.0541**	U	**0.0513**	U	**0.0526**	U	**0.0541**	U	**0.0513**	U	**0.0526**	U	**0.0526**	U	**0.0526**	U	**0.0526**	U
Benzo(b)fluoranthene	205-99-2	0.002	**0.0541**	U	**0.0513**	U	**0.0526**	U	**0.0541**	U	**0.0513**	U	**0.0526**	U	**0.0526**	U	**0.0526**	U	**0.0526**	U
Benzo(g,h,i)perylene	191-24-2	~	0.0541	U	0.0513	U	0.0526	U	0.0541	U	0.0513	U	0.0526	U	0.0526	U	0.0526	U	0.0526	U
Benzo(k)fluoranthene	207-08-9	0.002	**0.0541**	U	**0.0513**	U	**0.0526**	U	**0.0541**	U	**0.0513**	U	**0.0526**	U	**0.0526**	U	**0.0526**	U	**0.0526**	U
Chrysene	218-01-9	0.002	**0.0541**	U	**0.0513**	U	**0.0526**	U	**0.0541**	U	**0.0513**	U	**0.0526**	U	**0.0526**	U	**0.0526**	U	**0.0526**	U
Dibenzo(a,h)anthracene	53-70-3	~	0.0541	U	0.0513	U	0.0526	U	0.0541	U	0.0513	U	0.0526	U	0.0526	U	0.0526	U	0.0526	U
Fluoranthene	206-44-0	50	0.0541	U	0.0513	U	0.0526	U	0.0541	U	0.0513	U	0.0526	U	0.337		0.0842		0.0526	U
Fluorene	86-73-7	50	0.0541	U	0.0513	U	0.0526	U	0.0541	U	0.0513	U	0.0526	U	0.432		0.0526	U	0.0526	U
Indeno(1,2,3-cd)pyrene	193-39-5	0.002	**0.0541**	U	**0.0513**	U	**0.0526**	U	**0.0541**	U	**0.0513**	U	**0.0526**	U	**0.0526**	U	**0.0526**	U	**0.0526**	U
Naphthalene	91-20-3	10	0.584		1.310		0.0526	U	0.0541	U	0.0513	U	0.0526	U	0.0842		0.0526	U	0.0526	U
Phenanthrene	85-01-8	50	0.0541	U	0.0513	U	0.0526	U	0.0541	U	0.0513	U	0.0526	U	0.705		0.0526	J	0.0526	U
Pyrene	129-00-0	50	0.0541	U	0.0513	J	0.0526	U	0.0541	U	0.0513	U	0.0526	U	0.253		0.0632		0.0526	U

NOTES:

Any Regulatory Exceedences are color coded by Regulation

Q is the Qualifier Column with definitions as follows:

D=result is from an analysis that required a dilution

J=analyte detected at or above the MDL (method detection limit) but below the RL (Reporting Limit) - data is estimated

U=analyte not detected at or above the level indicated

~=this indicates that no regulatory limit has been established for this analyte

TABLE 3 Results for Lead

Sample Date	12-May-20	
Lead by EPA 6020		
AWQS	25	µg/l

Well ID	R	Q
MW-01	1.110	U
Dup (MW-01)	1.110	U
MW-02	1.110	U
MW-03	4.510	
MW-04	5.370	
MW-05	NS	
MW-06	3.370	
MW-07	4.750	
MW-08	**54**	
MW-09	1.45	
MW-10	NS	

NOTES:
Regulatory Exceedences bold and shaded
NS = No sample

Q is the Qualifier Column with definitions as follows:
U=analyte not detected at or above the level indicated

APPENDICIES

Appendix A

EC/C Certification Form

THE Chazen COMPANIES®
Civil Engineers
Land Surveyors
Planners
Environmental & Safety Professionals
Landscape Architects
Transportation Planners & Engineers
Proud to be Employee Owned

HUDSON VALLEY OFFICE
21 Fox Street
Poughkeepsie, NY 12601
P: 845.454.3980 or 888.539.9073
www.chazencompanies.com

May 29, 2019

Jason C. Morris, PE
City Engineer
83 Broadway
Newburgh, New York 12550

Re: Former Consolidated & Metals Site
EPA Site Number: NY0002455756
NYSDEC Site Number: 336055

EC/IC Certification
Chazen Project No. 41548.00

Dear Mr. Morris;

The following certification is required by NYSDEC for the EC/ICs for the above referenced site. As there are no active remedial systems requiring engineering oversight or review, certification is provided by me, as a Qualified Environmental Professional and NYS Professional Geologist.

For each institutional or engineering control identified for the site, I certify that all of the following statements are true:

- The inspection of the site and sampling data appears to confirm the effectiveness of the institutional and engineering controls required by the remedial program. The inspections conducted during the recent sampling events were performed under my direction;
- The institutional control and/or engineering control employed at this site appear unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has otherwise occurred that would have the obvious potential to impair the ability of the engineering control to protect the public health and environment;
- Nothing has occurred to my knowledge that would constitute a violation or failure to comply with any site management plan for this control;
- The City has indicated that access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- Use of the site appears compliant with the environmental easement;
- The sampling data suggest the engineering control systems are performing as designed and are effective;

- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program; and,

- The information presented in this report is accurate and complete.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Russell Urban-Mead of The Chazen Companies, am certifying as Remedial Party's Designated Site Representative. I have been authorized and designated by all site owners/remedial parties to sign this certification for the site.

Sincerely,

Russell Urban-Mead, NYS Professional Geologist No. 412
Senior Hydrogeologist and VP Chazen Environmental Services

cc: Kevin P. McGrath, PG, Chazen

Appendix B

Visual Inspection Logs

CONSOLIDATED IRON AND METAL SITE
SITE MANAGEMENT PLAN SITE WIDE INSPECTION FORM

Date: 5/12/2020

Inspection Personnel: Eric J. Orlowski, P.G.

Weather Conditions: Mostly sunny, windy, 50s.

Subsurface soils are contaminated by cadmium, lead, total PCBs and VOCs (BTEX-MTBE) at levels exceeding restricted residential Soil Cleanup Objectives (SCOs). Currently, protection of public health and the environment to contaminated media is provided by an engineered cover system consisting of between 3.5 and more than 10 feet of clean fill underlain by a demarcation barrier. The location of the cover system is depicted on Figure 1 of the Site Management Plan (SMP). Shoreline stabilization measures have been employed to limit the potential for erosion.

Cover System Inspection

Has the overall condition of the cover system changed from the previous inspection (if first inspection, respond with N/A)? Yes____ No✓

If Yes, provide detail and identify on Site Plan

Is soil cover system adequately vegetated to prevent erosion? Yes✓ No___

If No, identify locations and provide detail on attached Site Plan

CONSOLIDATED IRON AND METAL SITE
SITE MANAGEMENT PLAN SITE WIDE INSPECTION FORM

Is there evidence that the soil cover system has been eroded by wind, water and/or planned or unplanned construction activities? Yes____ No✓

If Yes, identify locations and provide detail on attached Site Plan

Is there evidence that the soil cover system has been breached (i.e., areas where surface appears patched, signs of excavation) Yes____ No✓

If Yes, identify locations and provide detail on attached Site Plan

Is there evidence that the soil cover system has been breached intentionally by planned site activities? Yes____ No✓
(i.e., areas where surface appears patched, signs of excavation)

If Yes, identify locations and provide detail on attached Site Plan

Is there evidence that the shoreline stabilization measures have been breached (i.e., areas where shoreline appears to be eroded our unstabile)? Yes____ No✓

If Yes, identify locations and provide detail on attached Site Plan

CONSOLIDATED IRON AND METAL SITE
SITE MANAGEMENT PLAN SITE WIDE INSPECTION FORM

Have photographs been taken of the cover system and shoreline for inclusion in the site inspection report. Yes ✓ No___

If No, give reason

Are the existing groundwater monitoring wells intact and accessible? Yes ✓ No___
If No, please describe the condition

Were the groundwater monitoring wells sampled during this inspection? Yes ✓ No___
If No, why and when is the next scheduled monitoring well sampling event?

Are there any violations of the use restrictions observed Yes___ No ✓
(e.g., non-community vegetable gardens)?Are the remedy components post-construction, such as institutional controls, and that shall also

Has there been any change in the use restrictions on the site or Yes___ No ✓
the necessary provisions for ensuring that the easement covenant remains in place and is effective?
If No, list and/or identify

No changes - site appears stable, remedy appears to remain effective

CONSOLIDATED IRON AND METAL SITE
SITE MANAGEMENT PLAN SITE WIDE INSPECTION FORM

Are there any changes to site operations and maintenance requirements for the components of the remedy? Yes____ No✓___

If Yes, please describe

Appendix C

Site Sampling Logs

The Chazen Companies

FIELD DATA SHEET

SAMPLE INFORMATION:

Sample ID: CIM-MW-01
Well ID: MW-01
Project Name: Consolidated Iron
Sample Location: Newburgh, NY

Sample Time: 0848
Sample Date: 5/12/2020
Sample Tech(s): EJO
Project and Task #: 41548.00
Project Manager: KM

Sample Matrix *(circle)*: **Groundwater** Surface Water Drinking Water Soil Air Other:

WELL INFORMATION:

Well Condition: Good

Lock Type: Master Key #: 3303

PURGE DATA:

Measuring Point: TOC-PVC
Depth to Bottom: 22.46
Depth to Water: 14.07
Water Column Height: *(A)* 8.39
(depth to bottom - depth to water)

# of Volumes to be Purged: *(C)*

Gal. to be Purged: *(AxBxC)*

Pipe Width	*(B)* Gal/Foot
1.0"	0.041
1.5"	0.092
2.0"	0.163
2.5"	0.255
3.0"	0.367
(4.0")	(0.653)
6.0"	1.469
8.0"	2.611

Purge Method: Peristaltic-Low Flow
Start Date: 5/12/2020
Start Time: 0822
Stop Time: 0847
Purge Rate (gpm):
Elapsed Time (min): 25
Well Vol. Purged (#): <1
Purge Vol. (gal): ~1.4
Well went dry? (No) Yes
Conditions: No Odor (Odor)
(Clear) Slightly-Turbid Turbid

FIELD RESULTS:

Gal purged (gal)	Date & Time	Depth to Water (ft)	Temp (deg C)	SpCond (uS/cm^c)	Cond. (uS/cm)	turbidity	TDS (g/L)	odor	DO (mg/L)	pH	ORP (mV)	
START	0822	14.07	11.7	1976	1475	clear	1.2870	petrol.	8.46	7.13	128.4	
	0827	14.10	11.7	2009	1500	clear	1.3065	petrol.	0.98	6.75	83.9	
	0832	14.11	11.9	2010	1508	clear	1.3065	petrol.	0.76	6.75	67.8	
	0837	14.11	11.7	2011	1504	clear	1.3065	petrol.	0.68	6.77	57.7	
	0842	14.12	11.8	2014	1504	clear	1.3065	petrol.	0.56	6.80	55.4	
	0847	14.12	11.8	2013	1503	clear	1.3065	petrol.	0.51	6.81	51.2	

SAMPLE INFORMATION:

Sample Method: Peristaltic *(Peristaltic, Submersible, Dedicated or Disp. Bailer, Waterra, Dir. Instrument Reading, etc.)*
Sample Type: **Grab** Composite
Weather: mostly sunny
Notes:

Sample Depth(ft): ~18' bTOC
Barometric Pres.:
Air Temp.(°F): 40s
Wind: breezy

LAB REQUESTS:

Laboratory Name: York

Analysis/Method:
CP-51 VOC
CP-51 SVOC
Total Pb

Turn Around Time:

QA/QC: (Duplicate) Equip. Blank Field Blank (Trip Blank)

+ MS/MSD

The Chazen Companies

FIELD DATA SHEET

SAMPLE INFORMATION:

Sample ID:	CIM-MW-02	Sample Time:	1048	Sample Matrix *(circle)*:	
Well ID:	MW-02	Sample Date:	5/12/2020	**Groundwater**	Soil
Project Name:	Consolidated Iron	Sample Tech(s):	EJO	Surface Water	Air
Sample Location:	Newburgh, NY	Project and Task #:	41548.00	Drinking Water	Other:
		Project Manager:	KM		

WELL INFORMATION:

Well Condition: Good

Lock Type: Master Key #: 3303

PURGE DATA:

Measuring Point: TOC-PVC

Depth to Bottom: 19.63

Depth to Water: 12.75

Water Column Height: *(A)* 6.88

(depth to bottom - depth to water)

# of Volumes to be Purged: *(C)*

Gal. to be Purged: *(AxBxC)*

Pipe Width	*(B)* Gal/Foot
1.0"	0.041
1.5"	0.092
2.0"	0.163
2.5"	0.255
3.0"	0.367
4.0"	**0.653**
6.0"	1.469
8.0"	2.611

Purge Method: Peristaltic-Low Flow

Start Date: 5/12/2020

Start Time: 0952

Stop Time: 1047

Purge Rate (gpm):

Elapsed Time (min): 55

Well Vol. Purged (#): <1

Purge Vol. (gal): 2.4

Well went dry? **No** Yes

Conditions: **No Odor** **Odor**

Clear w/ bits of black debris Slightly-Turbid Turbid

FIELD RESULTS:

Gal purged (gal)	Date & Time	Depth to Water (ft)	Temp (deg C)	SpCond (uS/cm^c)	Cond. (uS/cm)	turbidity	TDS (g/L)	odor	DO (mg/L)	pH	ORP (mV)	
START	0952	12.75	11.4	1277	944	clear	0.8320	swampy	2.49	6.65	139.0	
	0957	12.88	11.2	1250	920	clear	0.8125	swampy	0.79	6.46	56.5	
	1002	12.89	11.3	1253	925	clear	0.8190	swampy	0.53	6.47	22.4	
	1007	12.89	11.2	1255	925	clear	0.8190	swampy	0.49	6.48	-0.6	
	1012	12.89	11.2	1255	924	clear	0.8125	swampy	0.52	6.48	-21.7	
	1017	12.90	11.2	1249	920	clear	0.8125	swampy	0.42	6.49	-42.4	
	1022	12.91	11.2	1254	923	clear	0.8125	swampy	0.39	6.51	-59.1	
	1027	12.91	11.2	1250	919	clear	0.8125	swampy	0.41	6.52	-78.1	
	1032	12.91	11.3	1246	919	clear	0.8125	swampy	0.34	6.53	-89.8	
	1037	12.91	11.3	1246	920	clear	0.8125	swampy	0.27	6.53	-98.5	
	1042	12.91	11.2	1247	919	clear	0.8125	swampy	0.30	6.54	-106.7	
	1047	12.91	11.2	1255	922	clear	0.8125	swampy	0.31	6.56	-112.4	

SAMPLE INFORMATION:

Sample Method: Peristaltic *(Peristaltic, Submersible, Dedicated or Disp. Bailer, Waterra, Dir. Instrument Reading, etc.)*

Sample Type: **Grab** Composite

Weather: Mostly Sunny

Notes:

Sample Depth(ft): ~16.1' bTOC

Barometric Pres.:

Air Temp.(°F): 50s

Wind: breezy

LAB REQUESTS:

Laboratory Name: York

Analysis/Method: CP-51 VOC; CP-51 SVOC; Total Pb

Turn Around Time: Std

QA/QC: Duplicate Equip. Blank Field Blank **Trip Blank**

The Chazen Companies

FIELD DATA SHEET

SAMPLE INFORMATION:

Sample ID:	CIM-MW-03	Sample Time:	1215	Sample Matrix *(circle)*:	
Well ID:	MW-03	Sample Date:	5/12/2020	**Groundwater**	Soil
Project Name:	Consolidated Iron	Sample Tech(s):	EJO	Surface Water	Air
Sample Location:	Newburgh, NY	Project and Task #:	41548.00	Drinking Water	Other:
		Project Manager:	KM		

WELL INFORMATION:

Well Condition: Good

Lock Type: Master Key #: 3303

PURGE DATA:

Measuring Point: TOC-PVC

Depth to Bottom: 19.50

Depth to Water: 12.79

Water Column Height: *(A)* 6.71

(depth to bottom - depth to water)

# of Volumes to be Purged: *(C)*

Gal. to be Purged: *(AxBxC)* /

Pipe Width	Gal/Foot *(B)*
1.0"	0.041
1.5"	0.092
2.0"	0.163
2.5"	0.255
3.0"	0.367
4.0"	**0.653**
6.0"	1.469
8.0"	2.611

Purge Method: Peristaltic-Low Flow

Start Date: 5/12/2020

Start Time: 1119

Stop Time: 1214

Purge Rate (gpm):

Elapsed Time (min): 55

Well Vol. Purged (#): <1

Purge Vol. (gal): 2.8

Well went dry? (No) Yes

Conditions: No Odor (Odor)

(Clear) w/ bits of black debris Slightly-Turbid Turbid

FIELD RESULTS:

Gal purged (gal)	Date & Time	Depth to Water (ft)	Temp (deg C)	SpCond (uS/cm)	Cond. (uS/cm)	turbidity	TDS (g/L)	odor	DO (mg/L)	pH	ORP (mV)
START	1119	12.79	12.3	605.7	448.4	clear	0.3900	swampy	2.82	6.79	201.8
	1124	13.27	11.3	586.2	433.4	clear	0.3809	swampy	0.50	6.76	107.2
	1129	13.38	11.2	585.9	433.1	clear	0.3809	swampy	0.26	6.72	49.6
	1134	13.41	11.2	583.7	432.8	clear	0.3829	swampy	0.22	6.71	18.4
	1139	13.41	11.3	585.8	440.2	clear	0.3874	swampy	0.20	6.72	-18.7
	1144	13.41	11.0	607.7	445.4	clear	0.3752	swampy	0.19	6.70	-34.9
	1149	13.41	11.1	625.3	459.2	clear	0.4063	swampy	0.21	6.70	-53.4
	1154	13.41	11.1	624.5	458.6	clear	0.4063	swampy	0.18	6.70	-61.6
	1159	13.41	11.1	626.7	460.0	clear	0.4069	swampy	0.17	6.72	-68.8
	1204	13.41	11.3	622.3	459.6	clear	0.4043	swampy	0.15	6.72	-77.7

SAMPLE INFORMATION:

Sample Method: Peristaltic *(Peristaltic, Submersible, Dedicated or Disp. Bailer, Waterra, Dir. Instrument Reading, etc.)*

Sample Type: **Grab** Composite

Weather: Mostly Sunny

Sample Depth(ft): ~16.1' bTOC

Barometric Pres.:

Air Temp.(°F): 50s

Wind: windy

Notes:

LAB REQUESTS:

Laboratory Name: York

Analysis/Method: CP-51 VOCs; CP-51 SVOCs; Total Pb

Turn Around Time: Std

QA/QC: Duplicate Equip. Blank Field Blank (Trip Blank)

1209	13.42	11.2	624.7	459.6	clear	0.4063	swampy	0.15	6.71	-83.9
1214	13.42	11.1	636.4	467.5	clear	0.4139	swampy	0.16	6.75	-89.9

The Chazen Companies

FIELD DATA SHEET

SAMPLE INFORMATION:

Sample ID:	CIM-MW-04	Sample Time:	1548	Sample Matrix *(circle)*:	
Well ID:	MW-04	Sample Date:	5/12/2020	**Groundwater**	Soil
Project Name:	Consolidated Iron	Sample Tech(s):	EJO	Surface Water	Air
Sample Location:	Newburgh, NY	Project and Task #:	41548.00	Drinking Water	Other:
		Project Manager:	KM		

WELL INFORMATION:

Well Condition: Good

Lock Type: Master Key #: 3303

PURGE DATA:

Measuring Point: TOC-PVC

Depth to Bottom: 18.45

Depth to Water: 11.27

Water Column Height: *(A)* 7.18

(depth to bottom - depth to water)

# of Volumes to be Purged: *(C)*

Gal. to be Purged: *(AxBxC)*

(B)

Pipe Width	Gal/Foot
1.0"	0.041
1.5"	0.092
2.0"	0.163
2.5"	0.255
3.0"	0.367
4.0"	0.653
6.0"	1.469
8.0"	2.611

Purge Method: Peristaltic - Low Flow

Start Date: 5/12/2020

Start Time: 1512

Stop Time: 1547

Purge Rate (gpm):

Elapsed Time (min): 35

Well Vol. Purged (#): 2T

Purge Vol. (gal): 2.5

Well went dry? (No) Yes

Conditions: No Odor (Odor)

(Clear) -w/ bits of black debris Slightly-Turbid Turbid

FIELD RESULTS:

Gal purged gal	Date & Time	Depth to Water ft	Temp deg C	SpCond uS/cm	Cond. uS/cm	turbidity	TDS g/L	odor	DO mg/L	pH	ORP mV	
START	1512	11.27	12.3	1079	812	clear	0.7020	swampy	4.68	6.49	186.0	
	1517	11.65	11.2	1089	802	clear	0.7085	swampy	0.74	6.48	70.6	
	1522	11.65	11.2	1091	803	clear	0.7085	swampy	0.41	6.50	-4.8	
	1527	11.65	11.0	1093	800	clear	0.7085	swampy	0.29	6.50	-46.5	
	1532	11.65	11.0	1090	798	clear	0.7085	swampy	0.24	6.52	-66.7	
	1537		11.2	1085	797	clear	0.7020	swampy	0.20	6.55	-79.6	
	1542		11.2	1084	798	clear	0.7020	swampy	0.19	6.57	-86.9	
	1547		11.2	1074	789	clear	0.6955	swampy	0.19	6.62	-94.7	

SAMPLE INFORMATION:

Sample Method: Peristaltic *(Peristaltic, Submersible, Dedicated or Disp. Bailer, Waterra, Dir. Instrument Reading, etc.)*

Sample Type: **Grab** Composite

Sample Depth(ft): ~15' bTOC

Weather: mostly sunny

Barometric Pres.:

Wind: windy

Air Temp.(°F): 50s

Notes:

LAB REQUESTS:

Laboratory Name: York

Analysis/Method: CP-51 VOCs; CP-51 SVOCs; Total Pb

Turn Around Time: Std

QA/QC: Duplicate Equip. Blank Field Blank (Trip Blank)

The Chazen Companies

FIELD DATA SHEET

SAMPLE INFORMATION:

Sample ID:	CIM-MW-06	Sample Time:	1718	Sample Matrix *(circle)*:	
Well ID:	MW-06	Sample Date:	5/12/2020	**Groundwater**	Soil
Project Name:	Consolidated Iron	Sample Tech(s):	EJO	Surface Water	Air
Sample Location:	Newburgh, NY	Project and Task #:	41548.00	Drinking Water	Other:
		Project Manager:	KM		

WELL INFORMATION:

Well Condition: Good

Lock Type: Master Key #: 3303

PURGE DATA:

Measuring Point: TOC-PVC

Depth to Bottom: 16.90

Depth to Water: 10.11

Water Column Height: *(A)* 6.79

(depth to bottom - depth to water)

# of Volumes to be Purged: *(C)*

Gal. to be Purged: *(AxBxC)*

(B)

Pipe Width	Gal/Foot
1.0"	0.041
1.5"	0.092
2.0"	0.163
2.5"	0.255
3.0"	0.367
(4.0")	(0.653)
6.0"	1.469
8.0"	2.611

Purge Method: Peristaltic - Low Flow

Start Date: 5/12/2020

Start Time: 1657

Stop Time: 1717

Purge Rate (gpm):

Elapsed Time (min): 20

Well Vol. Purged (#): <1

Purge Vol. (gal): 1.6

Well went dry? (No) Yes

Conditions: (No Odor) Odor

(Clear) Slightly-Turbid Turbid

FIELD RESULTS:

Gal purged (gal)	Date & Time	Depth to Water (ft)	Temp (deg C)	SpCond (uS/cm^c)	Cond. (uS/cm)	turbidity	TDS (g/L)	odor	DO (mg/L)	pH	ORP (mV)	
START	1657	10.11	11.5	679	500	clear	0.4414	none	4.86	6.93	203.7	
	1702	10.46	11.0	681.3	498.5	clear	0.4427	none	3.51	7.06	141.5	
	1707	10.67	10.9	679.9	496.4	clear	0.4420	none	3.39	7.15	120.7	
	1712	10.79	10.8	676.1	492.5	clear	0.4388	none	3.56	7.19	123.6	
	1717	10.89	11.0	665.9	487.1	clear	0.4329	none	3.87	7.20	134.9	
	~~1722~~											

SAMPLE INFORMATION:

Sample Method: Peristaltic *(Peristaltic, Submersible, Dedicated or Disp. Bailer, Waterra, Dir. Instrument Reading, etc.)*

Sample Type: **Grab** Composite

Sample Depth(ft): ~13.5 'bTOC

Weather: mostly sunny

Barometric Pres.:

Wind: Windy

Air Temp.(°F): 50s

Notes:

LAB REQUESTS:

Laboratory Name:	Analysis/Method:	Turn Around Time:
York	CP-51 VOCs	Std
	CP-51 SVOCs	
	Total Pb	

QA/QC: Duplicate Equip. Blank Field Blank (Trip Blank)

The Chazen Companies

FIELD DATA SHEET

SAMPLE INFORMATION:

Sample ID: CIH-MW-07
Well ID: MW-07
Project Name: Consolidated Iron
Sample Location: Newburgh, NY

Sample Time: 1451
Sample Date: 5/12/2020
Sample Tech(s): EJO
Project and Task #: 41548.00
Project Manager: KM

Sample Matrix *(circle)*: **Groundwater** Surface Water Drinking Water Soil Air Other:

WELL INFORMATION:

Well Condition: Good

Lock Type: Master Key #: 3303

PURGE DATA:

Measuring Point: TOC- PVC
Depth to Bottom: 18.52
Depth to Water: 10.50
Water Column Height: *(A)* 8.02
(depth to bottom - depth to water)

# of Volumes to be Purged: *(C)*

Gal. to be Purged: *(AxBxC)*

Pipe Width	*(B)* Gal/Foot
1.0"	0.041
1.5"	0.092
2.0"	0.163
2.5"	0.255
3.0"	0.367
(4.0")	0.653
6.0"	1.469
8.0"	2.611

Purge Method: Peristaltic - Low Flow
Start Date: 5/12/2020
Start Time: 1415
Stop Time: 1450
Purge Rate (gpm):
Elapsed Time (min): 35
Well Vol. Purged (#): <1
Purge Vol. (gal): 1.5
Well went dry? (No) Yes
Conditions: No Odor (Odor) Slightly-Turbid Turbid (Clear)

FIELD RESULTS:

Gal purged (gal)	Date & Time	Depth to Water (ft)	Temp (deg C)	SpCond (uS/cm^c)	Cond. (uS/cm)	turbidity	TDS (g/L)	odor	DO (mg/L)	pH	ORP (mV)	
START	1415	10.50	11.4	625.9	463.1	clear	0.4063	swampy	3.50	7.13	178.0	
	1420	10.76	11.8	619.2	462.8	clear	0.4024	swampy	0.64	7.01	57.9	
	1425	10.79	11.6	615.1	457.0	clear	0.3991	swampy	0.40	6.96	-23.5	
	1430	10.81	11.5	616.7	457.7	clear	0.4004	swampy	0.31	6.93	-72.8	
	1435	10.81	11.2	631.8	465.2	clear	0.4108	swampy	0.27	6.94	-97.6	
	1440	10.81	11.2	642.1	472.6	clear	0.4179	swampy	0.24	6.91	-108.9	
	1445	10.81	11.1	653.8	480.4	clear	0.4251	swampy	0.22	6.91	-115.2	
	1450	10.81	10.8	656.0	485.2	clear	0.4329	swampy	0.20	6.90	-119.6	

SAMPLE INFORMATION:

Sample Method: Peristaltic *(Peristaltic, Submersible, Dedicated or Disp. Bailer, Waterra, Dir. Instrument Reading, etc.)*
Sample Type: **Grab** Composite
Weather: Mostly Sunny
Sample Depth(ft): ~14.5' bTOC
Barometric Pres.:
Wind: windy
Air Temp.(°F): 50s
Notes:

LAB REQUESTS:

Laboratory Name: York
Analysis/Method: CP-51 VOCs; CP-51 SVOCs; Total Pb
Turn Around Time: Std

QA/QC: Duplicate Equip. Blank Field Blank (Trip Blank)

The Chazen Companies

FIELD DATA SHEET

SAMPLE INFORMATION:

Sample ID: CIM-MW-08
Well ID: MW-08
Project Name: Consolidated Iron
Sample Location: Newburgh, NY

Sample Time:
Sample Date: 5/12/2020
Sample Tech(s): EJO
Project and Task #: 41548.00
Project Manager: KM

Sample Matrix *(circle)*: **Groundwater** Soil Air Surface Water Drinking Water Other:

WELL INFORMATION:

Well Condition: Good

Lock Type: Master Key #: 3303

PURGE DATA:

Measuring Point: TOC - PVC
Depth to Bottom: 17.60
Depth to Water: 10.47
Water Column Height: *(A)* 7.13
(depth to bottom - depth to water)

# of Volumes to be Purged: *(C)*

Gal. to be Purged: *(AxBxC)*

Pipe Width	Gal/Foot *(B)*
1.0"	0.041
1.5"	0.092
2.0"	0.163
2.5"	0.255
3.0"	0.367
4.0"	0.653
6.0"	1.469
8.0"	2.611

Purge Method: Peristaltic - Low Flow
Start Date: 5/12/2020
Start Time: 1605
Stop Time: 1640
Purge Rate (gpm):
Elapsed Time (min): 35
Well Vol. Purged (#): <1
Purge Vol. (gal): 2.2
Well went dry? (No) Yes
Conditions: (No Odor) Odor
(Clear) Slightly-Turbid Turbid

FIELD RESULTS:

Gal purged gal	Date & Time	Depth to Water ft	Temp deg C	SpCond uS/cm^c	Cond. uS/cm	turbidity	TDS g/L	odor	DO mg/L	pH	ORP mV	
START	1605	10.47	12.2	573.8	429.8	clear	0.3705	none	2.91	6.92	162.7	
	1610	10.62	10.3	569.5	409.5	clear	0.3698	none	0.46	6.79	54.6	
	1615	10.62	10.6	573.7	416.3	clear	0.3737	none	0.33	6.76	-4.9	
	1620	10.62	10.6	579.5	420.6	clear	0.3783	none	0.26	6.75	-36.5	
	1625	10.62	10.6	587.1	425.3	clear	0.3829	none	0.22	6.74	-54.2	
	1630	10.62	10.6	596.3	432.1	clear	0.3887	none	0.20	6.75	-68.1	
	1635	10.62	10.6	602.6	436.6	clear	0.3919	none	0.19	6.75	-74.5	
	1640	10.62	10.6	607.8	440.6	clear	0.3952	none	0.19	6.74	-78.8	

SAMPLE INFORMATION:

Sample Method: Peristaltic *(Peristaltic, Submersible, Dedicated or Disp. Bailer, Waterra, Dir. Instrument Reading, etc.)*
Sample Type: **Grab** Composite
Weather: Mostly Sunny
Notes:

Sample Depth(ft): ~14.1 'bTOC
Barometric Pres.:
Air Temp.(°F): 50s
Wind: breezy/windy

LAB REQUESTS:

Laboratory Name: York

Analysis/Method: CP-51 VOCs; CP-51 SVOCs; Total Pb

Turn Around Time: Std

QA/QC: Duplicate Equip. Blank Field Blank (Trip Blank)

The Chazen Companies

FIELD DATA SHEET

SAMPLE INFORMATION:

Sample ID: CIM-MW-09
Well ID: MW-09
Project Name: Consolidated Iron
Sample Location: Newburgh, NY

Sample Time: 1337
Sample Date: 5/12/2020
Sample Tech(s): EJO
Project and Task #: 41548.00
Project Manager: KM

Sample Matrix *(circle)*: **Groundwater** Surface Water Drinking Water Soil Air Other:

WELL INFORMATION:

Well Condition: Good

Lock Type: Master Key #: 3303

PURGE DATA:

Measuring Point: TOC-PVC
Depth to Bottom: 20.88
Depth to Water: 13.48
Water Column Height: *(A)* 7.40
(depth to bottom - depth to water)

# of Volumes to be Purged: *(C)*

Gal. to be Purged: *(AxBxC)*

Pipe Width	Gal/Foot *(B)*
1.0"	0.041
1.5"	0.092
2.0"	0.163
2.5"	0.255
3.0"	0.367
4.0"	0.653
6.0"	1.469
8.0"	2.611

Purge Method: Peristaltic-Low Flow
Start Date: 5/12/2020
Start Time: 1251
Stop Time: 1336
Purge Rate (gpm):
Elapsed Time (min): 45
Well Vol. Purged (#): 2
Purge Vol. (gal): 2.7
Well went dry? No Yes
Conditions: No Odor Odor
Clear - w/ b its of black debris Slightly-Turbid Turbid

FIELD RESULTS:

Gal purged (gal)	Date & Time	Depth to Water (ft)	Temp (deg C)	SpCond (uS/cm^c)	Cond. (uS/cm)	turbidity	TDS (g/L)	odor	DO (mg/L)	pH	ORP (mV)	
START	1251	13.48	14.0	1203	948	clear	0.7800	none	2.15	6.92	208.1	
	1256	13.53	14.0	1185	935	clear	0.7735	none	0.54	6.91	112.6	
	1301	13.53	14.0	1185	936	clear	0.7735	none	0.35	6.95	35.6	
	1306	13.53	14.1	1184	938	clear	0.7670	none	0.28	6.98	-13.5	
	1311	13.53	14.0	1181	935	clear	0.7670	none	0.24	6.99	-45.6	
	1316	13.53	14.2	1178	936	clear	0.7670	none	0.20	7.00	-63.8	
	1321	13.53	14.2	1183	938	clear	0.7670	none	0.19	7.01	-78.6	
	1326	13.53	14.4	1181	942	clear	0.7670	none	0.18	7.02	-88.9	
	1331	13.53	14.2	1183	938	clear	0.7670	none	0.17	7.02	-97.3	
	1336	13.53	14.0	1183	935	clear	0.7670	none	0.16	7.02	-104.8	

SAMPLE INFORMATION:

Sample Method: Peristaltic *(Peristaltic, Submersible, Dedicated or Disp. Bailer, Waterra, Dir. Instrument Reading, etc.)*
Sample Type: **Grab** Composite
Weather: mostly sunny
Notes:

Sample Depth(ft): ~17.2 ft BTOC
Barometric Pres.:
Air Temp.(°F): 50s
Wind: windy

LAB REQUESTS:

Laboratory Name: York

Analysis/Method: CP-51 VOCs; CP-51 SVOCs; Total Pb

Turn Around Time: Std

QA/QC: Duplicate Equip. Blank Field Blank **Trip Blank**

Appendix D

Laboratory Report

Table of Contents for York SDG 20E0371

Technical Report

prepared for:

Posillico Wash Plant
1750 New Highway
Farmingdale NY, 11735
Attention: Mohammad Ramin

Report Date: 05/26/2020
Client Project ID: Filter Cake - 4/14/2020
York Project (SDG) No.: 20D0371

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Posillico Wash Plant
1750 New Highway
Farmingdale NY, 11735
Attention: Mohammad Ramin

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on April 14, 2020 and listed below. The project was identified as your project: **Filter Cake - 4/14/2020**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
20D0371-01	FC01	Soil	04/14/2020	04/14/2020

General Notes for York Project (SDG) No.: 20D0371

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: **Date:** 05/26/2020

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: FC01 **York Sample ID:** 20D0371-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0371	Filter Cake - 4/14/2020	Soil	April 14, 2020 12:00 am	04/14/2020

Volatile Organics, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
123-91-1	1,4-Dioxane	ND		ug/kg dry	57	110	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
78-93-3	2-Butanone	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
67-64-1	Acetone	ND		ug/kg dry	5.7	11	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
71-43-2	Benzene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
56-23-5	Carbon tetrachloride	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
108-90-7	Chlorobenzene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
67-66-3	Chloroform	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
100-41-4	Ethyl Benzene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
75-09-2	Methylene chloride	ND		ug/kg dry	5.7	11	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
91-20-3	Naphthalene	ND		ug/kg dry	2.8	11	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
104-51-8	n-Butylbenzene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
103-65-1	n-Propylbenzene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			

Sample Information

Client Sample ID: FC01 **York Sample ID:** 20D0371-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0371	Filter Cake - 4/14/2020	Soil	April 14, 2020 12:00 am	04/14/2020

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-47-6	o-Xylene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP			
179601-23-1	p- & m- Xylenes	ND		ug/kg dry	5.7	11	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP			
135-98-8	sec-Butylbenzene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
98-06-6	tert-Butylbenzene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
127-18-4	Tetrachloroethylene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
108-88-3	Toluene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
79-01-6	Trichloroethylene	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
75-01-4	Vinyl Chloride	ND		ug/kg dry	2.8	5.7	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP,NJDEP			
1330-20-7	Xylenes, Total	ND		ug/kg dry	8.5	17	1	EPA 8260C	04/15/2020 09:30	04/15/2020 15:42	SS
							Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP			

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*104 %*	*77-125*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*100 %*	*85-120*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*93.5 %*	*76-130*

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-48-7	2-Methylphenol	ND		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
65794-96-9	3- & 4-Methylphenols	ND		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
83-32-9	**Acenaphthene**	**77.9**	J	ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
208-96-8	Acenaphthylene	ND		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
120-12-7	**Anthracene**	**157**		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
56-55-3	**Benzo(a)anthracene**	**358**		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
50-32-8	**Benzo(a)pyrene**	**335**		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
205-99-2	**Benzo(b)fluoranthene**	**322**		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			

Sample Information

Client Sample ID: FC01 **York Sample ID:** 20D0371-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0371	Filter Cake - 4/14/2020	Soil	April 14, 2020 12:00 am	04/14/2020

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
191-24-2	**Benzo(g,h,i)perylene**	**218**		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
207-08-9	**Benzo(k)fluoranthene**	**290**		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
218-01-9	**Chrysene**	**357**		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
53-70-3	**Dibenzo(a,h)anthracene**	**92.5**	J	ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
132-64-9	Dibenzofuran	ND		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
206-44-0	**Fluoranthene**	**691**		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
86-73-7	**Fluorene**	**77.9**	J	ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	NELAC-NY10854,NJDEP,PADEP			
118-74-1	Hexachlorobenzene	ND		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
193-39-5	**Indeno(1,2,3-cd)pyrene**	**210**		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
91-20-3	**Naphthalene**	**113**		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
87-86-5	Pentachlorophenol	ND		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
85-01-8	**Phenanthrene**	**494**		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
108-95-2	Phenol	ND		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
129-00-0	**Pyrene**	**653**		ug/kg dry	56.8	113	2	EPA 8270D	04/15/2020 13:43	04/16/2020 10:12	OW
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: SURR: 2-Fluorophenol*	*69.7 %*	*20-108*
4165-62-2	*Surrogate: SURR: Phenol-d5*	*76.0 %*	*23-114*
4165-60-0	*Surrogate: SURR: Nitrobenzene-d5*	*85.8 %*	*22-108*
321-60-8	*Surrogate: SURR: 2-Fluorobiphenyl*	*50.2 %*	*21-113*
118-79-6	*Surrogate: SURR: 2,4,6-Tribromophenol*	*99.6 %*	*19-110*
1718-51-0	*Surrogate: SURR: Terphenyl-d14*	*61.5 %*	*24-116*

Pesticides, NYSDEC Part 375 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		mg/kg dry	0.00164	5	EPA 8081B	04/15/2020 10:02	04/17/2020 09:24	CM
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
72-55-9	4,4'-DDE	ND		mg/kg dry	0.00164	5	EPA 8081B	04/15/2020 10:02	04/17/2020 09:24	CM
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			

Sample Information

Client Sample ID: FC01 **York Sample ID:** 20D0371-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0371	Filter Cake - 4/14/2020	Soil	April 14, 2020 12:00 am	04/14/2020

Pesticides, NYSDEC Part 375 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
50-29-3	4,4'-DDT	ND		mg/kg dry	0.00164	5	EPA 8081B	04/15/2020 10:02	04/17/2020 09:24	CM
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
309-00-2	Aldrin	ND		mg/kg dry	0.00164	5	EPA 8081B	04/15/2020 10:02	04/17/2020 09:24	CM
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
319-84-6	alpha-BHC	ND		mg/kg dry	0.00164	5	EPA 8081B	04/15/2020 10:02	04/17/2020 09:24	CM
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
5103-71-9	alpha-Chlordane	ND		mg/kg dry	0.00164	5	EPA 8081B	04/15/2020 10:02	04/17/2020 09:24	CM
						Certifications:	NELAC-NY10854,NJDEP			
319-85-7	beta-BHC	ND		mg/kg dry	0.00164	5	EPA 8081B	04/15/2020 10:02	04/17/2020 09:24	CM
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
319-86-8	delta-BHC	ND		mg/kg dry	0.00164	5	EPA 8081B	04/15/2020 10:02	04/17/2020 09:24	CM
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
60-57-1	Dieldrin	ND		mg/kg dry	0.00164	5	EPA 8081B	04/15/2020 10:02	04/17/2020 09:24	CM
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
959-98-8	Endosulfan I	ND		mg/kg dry	0.00164	5	EPA 8081B	04/15/2020 10:02	04/17/2020 09:24	CM
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
33213-65-9	Endosulfan II	ND		mg/kg dry	0.00164	5	EPA 8081B	04/15/2020 10:02	04/17/2020 09:24	CM
						Certifications:	CTDOH,NELAC-NY10854			
1031-07-8	Endosulfan sulfate	ND		mg/kg dry	0.00164	5	EPA 8081B	04/15/2020 10:02	04/17/2020 09:24	CM
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
72-20-8	Endrin	ND		mg/kg dry	0.00164	5	EPA 8081B	04/15/2020 10:02	04/17/2020 09:24	CM
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
58-89-9	gamma-BHC (Lindane)	ND		mg/kg dry	0.00164	5	EPA 8081B	04/15/2020 10:02	04/17/2020 09:24	CM
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
76-44-8	Heptachlor	ND		mg/kg dry	0.00164	5	EPA 8081B	04/15/2020 10:02	04/17/2020 09:24	CM
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			

	Surrogate Recoveries	Result	Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*72.2 %*	*30-150*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*46.0 %*	*30-150*

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0227	1	EPA 8082A	04/15/2020 10:02	04/16/2020 14:42	BJ
						Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP			
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0227	1	EPA 8082A	04/15/2020 10:02	04/16/2020 14:42	BJ
						Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP			
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0227	1	EPA 8082A	04/15/2020 10:02	04/16/2020 14:42	BJ
						Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP			
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0227	1	EPA 8082A	04/15/2020 10:02	04/16/2020 14:42	BJ
						Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP			
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0227	1	EPA 8082A	04/15/2020 10:02	04/16/2020 14:42	BJ
						Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP			
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0227	1	EPA 8082A	04/15/2020 10:02	04/16/2020 14:42	BJ
						Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP			

Sample Information

Client Sample ID: FC01 **York Sample ID:** 20D0371-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0371	Filter Cake - 4/14/2020	Soil	April 14, 2020 12:00 am	04/14/2020

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0227	1	EPA 8082A	04/15/2020 10:02	04/16/2020 14:42	BJ
						Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP			
1336-36-3	* Total PCBs	ND		mg/kg dry	0.0227	1	EPA 8082A	04/15/2020 10:02	04/16/2020 14:42	BJ
						Certifications:				

	Surrogate Recoveries	Result	Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*59.5 %*	*30-140*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*46.5 %*	*30-140*

Herbicides, NYSDEC Part 375 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C/8151A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
93-72-1	2,4,5-TP (Silvex)	ND		mg/kg dry	0.0273	1	EPA 8151A	04/15/2020 07:44	04/15/2020 18:31	BJ
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			

	Surrogate Recoveries	Result	Acceptance Range
19719-28-9	*Surrogate: 2,4-Dichlorophenylacetic acid (I*	*78.8 %*	*21-150*

Metals, NYSDEC Part 375

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	**Arsenic**	**25.4**		mg/kg dry	2.05	1	EPA 6010D	04/15/2020 07:24	04/17/2020 12:07	KML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-39-3	**Barium**	**109**		mg/kg dry	3.42	1	EPA 6010D	04/15/2020 07:24	04/17/2020 12:07	KML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-41-7	Beryllium	ND		mg/kg dry	0.068	1	EPA 6010D	04/15/2020 07:24	04/17/2020 12:07	KML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-43-9	**Cadmium**	**0.663**		mg/kg dry	0.411	1	EPA 6010D	04/15/2020 07:24	04/17/2020 12:07	KML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-47-3	**Chromium**	**39.6**		mg/kg dry	0.684	1	EPA 6010D	04/15/2020 07:24	04/17/2020 12:07	KML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-50-8	**Copper**	**89.0**		mg/kg dry	2.74	1	EPA 6010D	04/15/2020 07:24	04/17/2020 12:07	KML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-92-1	**Lead**	**129**		mg/kg dry	0.684	1	EPA 6010D	04/15/2020 07:24	04/17/2020 12:07	KML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-96-5	**Manganese**	**553**		mg/kg dry	0.684	1	EPA 6010D	04/15/2020 07:24	04/17/2020 12:07	KML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-02-0	**Nickel**	**35.3**		mg/kg dry	1.37	1	EPA 6010D	04/15/2020 07:24	04/17/2020 12:07	KML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7782-49-2	Selenium	ND		mg/kg dry	3.42	1	EPA 6010D	04/15/2020 07:24	04/17/2020 12:07	KML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-22-4	Silver	ND		mg/kg dry	0.684	1	EPA 6010D	04/15/2020 07:24	04/17/2020 12:07	KML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			

Sample Information

Client Sample ID: FC01 **York Sample ID:** 20D0371-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0371	Filter Cake - 4/14/2020	Soil	April 14, 2020 12:00 am	04/14/2020

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-66-6	**Zinc**	**267**		mg/kg dry	3.42	1	EPA 6010D	04/15/2020 07:24	04/17/2020 12:07	KML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	**Mercury**	**0.416**		mg/kg dry	0.0411	1	EPA 7473	04/15/2020 07:26	04/15/2020 11:57	SY
						Certifications:	CTDOH,NJDEP,NELAC-NY10854,PADEP			

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	ND		mg/kg dry	0.684	1	EPA 7196A	04/14/2020 17:54	04/14/2020 22:01	ZTS
						Certifications:	NJDEP,CTDOH,NELAC-NY10854,PADEP			

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	* **Chromium, Trivalent**	**39.6**		mg/kg	0.500	1	Calculation	04/17/2020 10:57	04/17/2020 12:56	PAM
						Certifications:				

Cyanide, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation Soil

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
57-12-5	Cyanide, total	ND		mg/kg dry	0.684	1	EPA 9014/9010C	04/15/2020 07:50	04/15/2020 11:41	JAG
						Certifications:	NELAC-NY10854,CTDOH,NJDEP,PADEP			

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* **% Solids**	**73.1**		%	0.100	1	SM 2540G	04/15/2020 08:09	04/15/2020 19:55	MAO
						Certifications:	CTDOH			

CASE NARRATIVE

York Project/SDG No.: 20D0371
Client: Posillico Wash Plant
Client Project ID: Filter Cake - 4/14/2020
Prepared for: Mohammad Ramin

Introduction

This Case Narrative applies only to the samples submitted to our laboratory on **04/14/2020 15:54** as detailed on the chain-of-custody form.

The 1 sample(s) were received intact in a custody-sealed cooler(s), unless otherwise noted.
Upon receipt, cooler temperature(s) was determined using a NIST traceable digital infrared thermometer. The cooler temperature was acceptable (≤ 6°C) and documented as:

Cooler	Temp C°
Default Cooler	**3.3**

Chain-of-custody was maintained from receipt through analysis in the laboratory.

Methodology

All preparation and analyses were conducted according to the appropriate EPA methods detailed in the report.

Client Sample Information and Non-Conformances

Laboratory ID	Sample Name	Matrix
20D0371-01	FC01	Soil

Any additional Client Sample Non-conformances are detailed in the proceeding Case Narrative Non-Conformance Summary tables.

No other problems were encountered during analysis.

QC Sample Non-Conformances

Any QC sample Non-conformances (SCV, CCV, BS, BSD, SRM, PS, MS, MSD, DUP) are detailed in the proceeding Case Narrative Non-Conformance Summary tables.

No other problems were encountered during analysis.

York Project/SDG no.: Statement

We certify that these data are in compliance with SOP requirements both technically and for completeness for other than the conditions stated above. Release of the data contained in the hard copy report and any electronic data deliverables has been authorized by the Laboratory Manager as verified by the signature on this laboratory report.

Approved by: *Ben Gulizia*
Laboratory Director

Date: 5/26/2020

York Analytical Laboratories, Inc.

Formulae Used for Sample Calculations

1. **Volatile Organics (Water-ug/L or Soil-ug/Kg)**

Soils/Waters

$$Cx = \frac{(Ax)(IS)(DF)}{(Ais)(RRF)(V)(\%\ solids)}$$

Medium Level Soils

$$Cx = \frac{(Ax)(IS)(VT)(1000)(DF)}{(Ais)(RRF)(VA)(V)(\%\ solids)}$$

2. Semi-Volatiles (Water-ug/L or Soil-ug/Kg)

$$Cx = \frac{(Ax)(IS)(VE)(DF)}{(Ais)(RRF)(Volume\ injected,\ uL)(V)(\%\ solids)}$$

3. Pesticides/PCB, DRO, EPH, CTETPH (Water-ug/L or Soil-ug/Kg)

$$Cx = \frac{(Ax)(VE)(DF)}{(CF)(Volume\ injected,\ uL)(V)(\%\ solids)}$$

4. Inorganics (Water or Soil-ug/mL)

$$Cx = \frac{(Conc.)(VE)}{(V)(\%\ solids/100)}$$

WHERE:

Cx = concentration of analyte as ug/L or ug/kg
Ax = Area of the characteristic ion for the compound to be measured, counts
Ais = Area of the characteristic ion for the specific internal standard, counts
IS = Concentration of the internal standard spiking mixture, ng
RRF = Mean relative response factor from the initial calibration
DF = Dilution factor calculated as described in section 2. If no dilution is performed, DF= 1
V = Volume for liquids in mL, weight for soils/solids in grams
VA = volume of MeOH aliquot for medium level soils
VE = final volume of concentrated extract or digestate
VT = volume of MeOH for volatiles medium level soils
CF = calibration factor for external calibration used in GC pest/pcb
Cis = Concentration of the internal standard spiking mixture, ppbv

Case Narrative Non-Conformance Summary

Laboratory:	York Analytical Laboratories, Inc.	Client:	
Project:		Lab Project No:	
Laboratory Sample ID(s):	-01	Sampling Date(s):	04/14/2020
Review Date(s):	-	Laboratory Reviewer(s):	

QC Sample Nonconformances

Batch ID: BD00631 **Affected Samples:** **See Batch Summary**

QC Sample ID	Analyte - CAS No.	Result	Type of QC Nonconformance	%REC	%REC Limits	Bias	RPD	RPD Limit	Bias	Notes
BD00631-BS1	tert-Butylbenzene - 98-06-6	37 ug/L	LCS	73.9	80-127	Low Bias				
BD00631-BS1	Vinyl Chloride - 75-01-4	24 ug/L	LCS	48.0	52-130	Low Bias				
BD00631-BSD1	tert-Butylbenzene - 98-06-6	37 ug/L	LCS Dup	73.9	80-127	Low Bias	0.0271	30		
BD00631-BSD1	Vinyl Chloride - 75-01-4	21 ug/L	LCS Dup	43.0	52-130	Low Bias	11.1	30		

Batch ID: Y0D1718 **Affected Samples:** **See Batch Summary**

QC Sample ID	Analyte - CAS No.	Result	Type of QC Nonconformance	%REC	%REC Limits	Bias	RPD	RPD Limit	Bias	Notes
Y0D1718-CCV1	Phenol - 108-95-2	36.7 ug/mL	Calibration Check	122	80-120	High Bias				

Batch ID: Y0D2001 **Affected Samples:** **See Batch Summary**

QC Sample ID	Analyte - CAS No.	Result	Type of QC Nonconformance	%REC	%REC Limits	Bias	RPD	RPD Limit	Bias	Notes
Y0D2001-CCV1	Surrogate: Tetrachloro-m-xylene	200 ng/mL	Surrogate	125	80-120	High Bias				
Y0D2001-CCV4	Surrogate: Tetrachloro-m-xylene	205 ng/mL	Surrogate	128	80-120	High Bias				

Batch ID: Y0D1715 **Affected Samples:** **See Batch Summary**

QC Sample ID	Analyte - CAS No.	Result	Type of QC Nonconformance	%REC	%REC Limits	Bias	RPD	RPD Limit	Bias	Notes
Y0D1715-CRL1	Zinc - 7440-66-6	0.042 ug/mL	Instrument RL Check	168	70-130	High Bias				
Y0D1715-CRL2	Lead - 7439-92-1	0.005 ug/mL	Instrument RL Check	195	70-130	High Bias				
Y0D1715-CRL2	Nickel - 7440-02-0	0.008 ug/mL	Instrument RL Check	157	70-130	High Bias				
Y0D1715-CRL2	Zinc - 7440-66-6	0.034 ug/mL	Instrument RL Check	276	70-130	High Bias				

Batch ID: BD00599 **Affected Samples:** **See Batch Summary**

QC Sample ID	Analyte - CAS No.	Result	Type of QC Nonconformance	%REC	%REC Limits	Bias	RPD	RPD Limit	Bias	Notes
BD00599-MS1	Chromium, Hexavalent - 18540-29-9	5.31 mg/kg dry	Matrix Spike (FC01)	19.4	75-125	Low Bias				

Batch ID: BD00599 **General Method:** Wet Chemistry Parameters

YORK Sample ID	Client Sample ID
20D0371-01	FC01
BD00599-BLK1	Blank
BD00599-DUP1	Duplicate
BD00599-MS1	Matrix Spike
BD00599-SRM1	Reference

Batch ID: BD00631 **General Method:** Volatile Organic Compounds by GC/MS

YORK Sample ID	Client Sample ID
20D0371-01	FC01
BD00631-BLK1	Blank
BD00631-BLK2	Blank
BD00631-BS1	LCS
BD00631-BSD1	LCS Dup

No Sample Nonconformances Found

Notes: Other nonconformances, if any, are detailed in the Data Quality Assessment worksheets.

For multiple surrogate analyses such as semi-volatiles, volatiles, etc, single surrogate excursions do not necessarily indicate a bias in the sample. Samples with multiple surrogate excursions may exhibit a bias in the results.

Definitions:
LCS - Laboratory Control Sample
LCS dup - Laboratory Control Sample Duplicate
MS - Matrix Spike
MSD - Matrix Spike Duplicate
BS - Blank Spike also called LCS
BSD - Blank Spike Duplicate also called LCS dup
SRM - Standard Reference Material
DUP - Duplicate

QC DATA QUALIFIERS

LabID	Analysis	Analyte	Qualifier	Definition
BD00599-MS1	Chromium, Hexavalent	Chromium, Hexavalent	QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

LabID	Analysis	Analyte	Qualifier	Definition
Y0D1718-CCV1	Semi-Volatiles, NYSDEC Part 375 List	Phenol	CCV-H	The value reported is estimated due to its behavior during continuing calibration verification (>20% difference for average RF or >20% drift for linear or quadratic fit.) This value may be biased high.

LabID	Analysis	Analyte	Qualifier	Definition
BD00631-BSD1	Volatile Organics, NYSDEC Part 375 List	tert-Butylbenzene	QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
BD00631-BSD1	Volatile Organics, NYSDEC Part 375 List	Vinyl Chloride	QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
BD00631-BS1	Volatile Organics, NYSDEC Part 375 List	Vinyl Chloride	QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
BD00631-BS1	Volatile Organics, NYSDEC Part 375 List	tert-Butylbenzene	QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.

Analytical Batch Summary

Batch ID: BD00599 **Preparation Method:** EPA SW846-3060 **Prepared By:** ZTS

YORK Sample ID	Client Sample ID	Preparation Date
20D0371-01	FC01	04/14/20
BD00599-BLK1	Blank	04/14/20
BD00599-DUP1	Duplicate	04/14/20
BD00599-MS1	Matrix Spike	04/14/20
BD00599-SRM1	Reference	04/14/20

Batch ID: BD00606 **Preparation Method:** EPA 3050B **Prepared By:** SY

YORK Sample ID	Client Sample ID	Preparation Date
20D0371-01	FC01	04/15/20
BD00606-BLK1	Blank	04/15/20
BD00606-SRM1	Reference	04/15/20

Batch ID: BD00607 **Preparation Method:** EPA 7473 soil **Prepared By:** SY

YORK Sample ID	Client Sample ID	Preparation Date
20D0371-01	FC01	04/15/20
BD00607-BLK1	Blank	04/15/20
BD00607-DUP1	Duplicate	04/15/20
BD00607-MS1	Matrix Spike	04/15/20
BD00607-SRM1	Reference	04/15/20

Batch ID: BD00610 **Preparation Method:** EPA 3550C/8151A **Prepared By:** CTD

YORK Sample ID	Client Sample ID	Preparation Date
20D0371-01	FC01	04/15/20
BD00610-BLK1	Blank	04/15/20
BD00610-BS1	LCS	04/15/20

Batch ID: BD00612 **Preparation Method:** Analysis Preparation Soil **Prepared By:** JAG

YORK Sample ID	Client Sample ID	Preparation Date
20D0371-01	FC01	04/15/20
BD00612-BLK1	Blank	04/15/20
BD00612-SRM1	Reference	04/15/20

Batch ID: BD00621 **Preparation Method:** % Solids Prep **Prepared By:** STN

YORK Sample ID	Client Sample ID	Preparation Date
20D0371-01	FC01	04/15/20

Batch ID: BD00628 **Preparation Method:** EPA 3550C **Prepared By:** LJ

YORK Sample ID	Client Sample ID	Preparation Date
20D0371-01	FC01	04/15/20
20D0371-01	FC01	04/15/20
BD00628-BLK2	Blank	04/15/20
BD00628-BS2	LCS	04/15/20

Batch ID: BD00631 **Preparation Method:** EPA 5035A **Prepared By:** CLS2

YORK Sample ID	Client Sample ID	Preparation Date
20D0371-01	FC01	04/15/20
BD00631-BLK1	Blank	04/15/20
BD00631-BLK2	Blank	04/15/20
BD00631-BS1	LCS	04/15/20
BD00631-BSD1	LCS Dup	04/15/20

Batch ID: BD00636 **Preparation Method:** EPA 3550C **Prepared By:** MAM

YORK Sample ID	Client Sample ID	Preparation Date
20D0371-01	FC01	04/15/20
BD00636-BLK1	Blank	04/15/20
BD00636-BS1	LCS	04/15/20

Batch ID: BD00753 **Preparation Method:** Analysis Preparation **Prepared By:** PAM

YORK Sample ID	Client Sample ID	Preparation Date
20D0371-01	FC01	04/17/20

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD00631 - EPA 5035A											
Blank (BD00631-BLK1)											
Prepared & Analyzed: 04/15/2020											
1,1,1-Trichloroethane	ND	5.0	ug/kg wet								
1,1-Dichloroethane	ND	5.0	"								
1,1-Dichloroethylene	ND	5.0	"								
1,2,4-Trimethylbenzene	ND	5.0	"								
1,2-Dichlorobenzene	ND	5.0	"								
1,2-Dichloroethane	ND	5.0	"								
1,3,5-Trimethylbenzene	ND	5.0	"								
1,3-Dichlorobenzene	ND	5.0	"								
1,4-Dichlorobenzene	ND	5.0	"								
1,4-Dioxane	ND	100	"								
2-Butanone	ND	5.0	"								
Acetone	ND	10	"								
Benzene	ND	5.0	"								
Carbon tetrachloride	ND	5.0	"								
Chlorobenzene	ND	5.0	"								
Chloroform	ND	5.0	"								
cis-1,2-Dichloroethylene	ND	5.0	"								
Ethyl Benzene	ND	5.0	"								
Methyl tert-butyl ether (MTBE)	ND	5.0	"								
Methylene chloride	ND	10	"								
Naphthalene	ND	10	"								
n-Butylbenzene	ND	5.0	"								
n-Propylbenzene	ND	5.0	"								
o-Xylene	ND	5.0	"								
p- & m- Xylenes	ND	10	"								
sec-Butylbenzene	ND	5.0	"								
tert-Butylbenzene	ND	5.0	"								
Tetrachloroethylene	ND	5.0	"								
Toluene	ND	5.0	"								
trans-1,2-Dichloroethylene	ND	5.0	"								
Trichloroethylene	ND	5.0	"								
Vinyl Chloride	ND	5.0	"								
Xylenes, Total	ND	15	"								
Surrogate: SURR: 1,2-Dichloroethane-d4	*50.4*		*ug/L*	*50.0*		*101*	*77-125*				
Surrogate: SURR: Toluene-d8	*49.6*		*"*	*50.0*		*99.3*	*85-120*				
Surrogate: SURR: p-Bromofluorobenzene	*46.6*		*"*	*50.0*		*93.2*	*76-130*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD00631 - EPA 5035A											
Blank (BD00631-BLK2)											
Prepared & Analyzed: 04/15/2020											
1,1,1-Trichloroethane	ND	500	ug/kg wet								
1,1-Dichloroethane	ND	500	"								
1,1-Dichloroethylene	ND	500	"								
1,2,4-Trimethylbenzene	ND	500	"								
1,2-Dichlorobenzene	ND	500	"								
1,2-Dichloroethane	ND	500	"								
1,3,5-Trimethylbenzene	ND	500	"								
1,3-Dichlorobenzene	ND	500	"								
1,4-Dichlorobenzene	ND	500	"								
1,4-Dioxane	ND	10000	"								
2-Butanone	ND	500	"								
Acetone	ND	1000	"								
Benzene	ND	500	"								
Carbon tetrachloride	ND	500	"								
Chlorobenzene	ND	500	"								
Chloroform	ND	500	"								
cis-1,2-Dichloroethylene	ND	500	"								
Ethyl Benzene	ND	500	"								
Methyl tert-butyl ether (MTBE)	ND	500	"								
Methylene chloride	ND	1000	"								
Naphthalene	ND	1000	"								
n-Butylbenzene	ND	500	"								
n-Propylbenzene	ND	500	"								
o-Xylene	ND	500	"								
p- & m- Xylenes	ND	1000	"								
sec-Butylbenzene	ND	500	"								
tert-Butylbenzene	ND	500	"								
Tetrachloroethylene	ND	500	"								
Toluene	ND	500	"								
trans-1,2-Dichloroethylene	ND	500	"								
Trichloroethylene	ND	500	"								
Vinyl Chloride	ND	500	"								
Xylenes, Total	ND	1500	"								
Surrogate: SURR: 1,2-Dichloroethane-d4	*50.2*		*ug/L*	*50.0*		*100*	*77-125*				
Surrogate: SURR: Toluene-d8	*50.0*		*"*	*50.0*		*99.9*	*85-120*				
Surrogate: SURR: p-Bromofluorobenzene	*46.4*		*"*	*50.0*		*92.8*	*76-130*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD00631 - EPA 5035A											
LCS (BD00631-BS1)								Prepared & Analyzed: 04/15/2020			
1,1,1-Trichloroethane	43		ug/L	50.0		86.0	71-137				
1,1-Dichloroethane	44		"	50.0		87.6	75-130				
1,1-Dichloroethylene	36		"	50.0		72.7	64-137				
1,2,4-Trimethylbenzene	44		"	50.0		88.5	84-125				
1,2-Dichlorobenzene	46		"	50.0		91.7	85-122				
1,2-Dichloroethane	47		"	50.0		94.3	71-133				
1,3,5-Trimethylbenzene	44		"	50.0		88.2	82-126				
1,3-Dichlorobenzene	44		"	50.0		88.0	84-124				
1,4-Dichlorobenzene	44		"	50.0		88.9	84-124				
1,4-Dioxane	950		"	1050		90.5	10-228				
2-Butanone	50		"	50.0		100	58-147				
Acetone	43		"	50.0		86.7	36-155				
Benzene	47		"	50.0		94.2	77-127				
Carbon tetrachloride	42		"	50.0		83.0	66-143				
Chlorobenzene	46		"	50.0		92.6	86-120				
Chloroform	47		"	50.0		93.4	76-131				
cis-1,2-Dichloroethylene	46		"	50.0		91.8	74-132				
Ethyl Benzene	47		"	50.0		93.8	84-125				
Methyl tert-butyl ether (MTBE)	44		"	50.0		87.6	74-131				
Methylene chloride	46		"	50.0		91.3	57-141				
Naphthalene	47		"	50.0		94.6	86-141				
n-Butylbenzene	46		"	50.0		93.0	80-130				
n-Propylbenzene	44		"	50.0		87.8	74-136				
o-Xylene	45		"	50.0		90.1	83-123				
p- & m- Xylenes	93		"	100		93.2	82-128				
sec-Butylbenzene	47		"	50.0		94.0	83-125				
tert-Butylbenzene	37		"	50.0		73.9	80-127	Low Bias			
Tetrachloroethylene	43		"	50.0		87.0	80-129				
Toluene	46		"	50.0		92.5	85-121				
trans-1,2-Dichloroethylene	44		"	50.0		87.8	72-132				
Trichloroethylene	44		"	50.0		87.5	84-123				
Vinyl Chloride	24		"	50.0		48.0	52-130	Low Bias			
Surrogate: SURR: 1,2-Dichloroethane-d4	*49.9*		*"*	*50.0*		*99.8*	*77-125*				
Surrogate: SURR: Toluene-d8	*49.7*		*"*	*50.0*		*99.4*	*85-120*				
Surrogate: SURR: p-Bromofluorobenzene	*46.2*		*"*	*50.0*		*92.3*	*76-130*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD00631 - EPA 5035A											
LCS Dup (BD00631-BSD1)							Prepared & Analyzed: 04/15/2020				
1,1,1-Trichloroethane	43		ug/L	50.0		85.4	71-137		0.793	30	
1,1-Dichloroethane	43		"	50.0		86.7	75-130		0.964	30	
1,1-Dichloroethylene	36		"	50.0		71.4	64-137		1.75	30	
1,2,4-Trimethylbenzene	44		"	50.0		88.3	84-125		0.226	30	
1,2-Dichlorobenzene	46		"	50.0		91.2	85-122		0.503	30	
1,2-Dichloroethane	45		"	50.0		90.7	71-133		3.83	30	
1,3,5-Trimethylbenzene	44		"	50.0		87.6	82-126		0.705	30	
1,3-Dichlorobenzene	43		"	50.0		86.8	84-124		1.37	30	
1,4-Dichlorobenzene	44		"	50.0		88.2	84-124		0.723	30	
1,4-Dioxane	940		"	1050		89.4	10-228		1.16	30	
2-Butanone	48		"	50.0		96.7	58-147		3.80	30	
Acetone	40		"	50.0		80.1	36-155		7.94	30	
Benzene	47		"	50.0		93.7	77-127		0.532	30	
Carbon tetrachloride	41		"	50.0		81.6	66-143		1.75	30	
Chlorobenzene	46		"	50.0		91.9	86-120		0.737	30	
Chloroform	46		"	50.0		92.9	76-131		0.515	30	
cis-1,2-Dichloroethylene	45		"	50.0		90.9	74-132		0.898	30	
Ethyl Benzene	47		"	50.0		93.1	84-125		0.749	30	
Methyl tert-butyl ether (MTBE)	43		"	50.0		86.5	74-131		1.33	30	
Methylene chloride	45		"	50.0		90.1	57-141		1.35	30	
Naphthalene	47		"	50.0		94.3	86-141		0.339	30	
n-Butylbenzene	44		"	50.0		87.5	80-130		6.10	30	
n-Propylbenzene	44		"	50.0		87.4	74-136		0.457	30	
o-Xylene	45		"	50.0		89.3	83-123		0.937	30	
p- & m- Xylenes	92		"	100		92.4	82-128		0.948	30	
sec-Butylbenzene	47		"	50.0		94.3	83-125		0.297	30	
tert-Butylbenzene	37		"	50.0		73.9	80-127	Low Bias	0.0271	30	
Tetrachloroethylene	43		"	50.0		85.5	80-129		1.67	30	
Toluene	46		"	50.0		92.2	85-121		0.368	30	
trans-1,2-Dichloroethylene	43		"	50.0		86.8	72-132		1.08	30	
Trichloroethylene	43		"	50.0		86.0	84-123		1.66	30	
Vinyl Chloride	21		"	50.0		43.0	52-130	Low Bias	11.1	30	
Surrogate: SURR: 1,2-Dichloroethane-d4	*50.1*		*"*	*50.0*		*100*	*77-125*				
Surrogate: SURR: Toluene-d8	*49.7*		*"*	*50.0*		*99.5*	*85-120*				
Surrogate: SURR: p-Bromofluorobenzene	*46.3*		*"*	*50.0*		*92.5*	*76-130*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD00636 - EPA 3550C											
Blank (BD00636-BLK1)											Prepared: 04/15/2020 Analyzed: 04/16/2020
2-Methylphenol	ND	41.6	ug/kg wet								
3- & 4-Methylphenols	ND	41.6	"								
Acenaphthene	ND	41.6	"								
Acenaphthylene	ND	41.6	"								
Anthracene	ND	41.6	"								
Benzo(a)anthracene	ND	41.6	"								
Benzo(a)pyrene	ND	41.6	"								
Benzo(b)fluoranthene	ND	41.6	"								
Benzo(g,h,i)perylene	ND	41.6	"								
Benzo(k)fluoranthene	ND	41.6	"								
Chrysene	ND	41.6	"								
Dibenzo(a,h)anthracene	ND	41.6	"								
Dibenzofuran	ND	41.6	"								
Fluoranthene	ND	41.6	"								
Fluorene	ND	41.6	"								
Hexachlorobenzene	ND	41.6	"								
Indeno(1,2,3-cd)pyrene	ND	41.6	"								
Naphthalene	ND	41.6	"								
Pentachlorophenol	ND	41.6	"								
Phenanthrene	ND	41.6	"								
Phenol	ND	41.6	"								
Pyrene	ND	41.6	"								
Surrogate: SURR: 2-Fluorophenol	*973*		*"*	*1660*		*58.6*	*20-108*				
Surrogate: SURR: Phenol-d5	*1060*		*"*	*1660*		*63.7*	*23-114*				
Surrogate: SURR: Nitrobenzene-d5	*625*		*"*	*831*		*75.2*	*22-108*				
Surrogate: SURR: 2-Fluorobiphenyl	*540*		*"*	*831*		*65.0*	*21-113*				
Surrogate: SURR: 2,4,6-Tribromophenol	*1340*		*"*	*1660*		*80.8*	*19-110*				
Surrogate: SURR: Terphenyl-d14	*641*		*"*	*831*		*77.1*	*24-116*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD00636 - EPA 3550C											
LCS (BD00636-BS1)									Prepared: 04/15/2020 Analyzed: 04/16/2020		
2-Methylphenol	416	41.6	ug/kg wet	831		50.0	10-146				
3- & 4-Methylphenols	390	41.6	"	831		47.0	20-109				
Acenaphthene	462	41.6	"	831		55.7	17-124				
Acenaphthylene	441	41.6	"	831		53.0	16-124				
Anthracene	475	41.6	"	831		57.2	24-124				
Benzo(a)anthracene	470	41.6	"	831		56.6	25-134				
Benzo(a)pyrene	473	41.6	"	831		56.9	29-144				
Benzo(b)fluoranthene	495	41.6	"	831		59.6	20-151				
Benzo(g,h,i)perylene	463	41.6	"	831		55.8	10-153				
Benzo(k)fluoranthene	462	41.6	"	831		55.6	10-148				
Chrysene	460	41.6	"	831		55.4	24-116				
Dibenzo(a,h)anthracene	526	41.6	"	831		63.3	17-147				
Dibenzofuran	472	41.6	"	831		56.8	23-123				
Fluoranthene	493	41.6	"	831		59.4	36-125				
Fluorene	482	41.6	"	831		58.0	16-130				
Hexachlorobenzene	468	41.6	"	831		56.4	10-129				
Indeno(1,2,3-cd)pyrene	490	41.6	"	831		59.0	10-155				
Naphthalene	505	41.6	"	831		60.8	20-121				
Pentachlorophenol	436	41.6	"	831		52.4	10-143				
Phenanthrene	476	41.6	"	831		57.3	24-123				
Phenol	457	41.6	"	831		55.0	15-123				
Pyrene	459	41.6	"	831		55.3	24-132				
Surrogate: SURR: 2-Fluorophenol	*850*		"	*1660*		*51.1*	*20-108*				
Surrogate: SURR: Phenol-d5	*910*		"	*1660*		*54.8*	*23-114*				
Surrogate: SURR: Nitrobenzene-d5	*566*		"	*831*		*68.2*	*22-108*				
Surrogate: SURR: 2-Fluorobiphenyl	*547*		"	*831*		*65.8*	*21-113*				
Surrogate: SURR: 2,4,6-Tribromophenol	*1260*		"	*1660*		*75.8*	*19-110*				
Surrogate: SURR: Terphenyl-d14	*535*		"	*831*		*64.4*	*24-116*				

Organochlorine Pesticides by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch Y0C0906 - BA00785											
Performance Mix (Y0C0906-PEM1)							Prepared & Analyzed: 03/08/2020				
4,4'-DDD	4.80		ng/mL	0.00			0-200				
4,4'-DDE	0.964		"	0.00			0-200				
4,4'-DDT	206		"	200		103	0-200				
Endrin	98.0		"	100		98.0	0-200				
Batch Y0D2001 - BD00543											
Performance Mix (Y0D2001-PEM1)							Prepared & Analyzed: 04/17/2020				
4,4'-DDD	13.4		ng/mL	0.00			0-200				
4,4'-DDE	1.95		"	0.00			0-200				
4,4'-DDT	188		"	200		93.9	0-200				
Endrin	106		"	100		106	0-200				

Polychlorinated Biphenyls by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD00628 - EPA 3550C											
Blank (BD00628-BLK2)											Prepared: 04/15/2020 Analyzed: 04/16/2020
Aroclor 1016	ND	0.0166	mg/kg wet								
Aroclor 1221	ND	0.0166	"								
Aroclor 1232	ND	0.0166	"								
Aroclor 1242	ND	0.0166	"								
Aroclor 1248	ND	0.0166	"								
Aroclor 1254	ND	0.0166	"								
Aroclor 1260	ND	0.0166	"								
Total PCBs	ND	0.0166	"								
Surrogate: Tetrachloro-m-xylene	*0.0581*		*"*	*0.0664*		*87.5*	*30-140*				
Surrogate: Decachlorobiphenyl	*0.0648*		*"*	*0.0664*		*97.5*	*30-140*				
LCS (BD00628-BS2)											Prepared: 04/15/2020 Analyzed: 04/16/2020
Aroclor 1016	0.249	0.0166	mg/kg wet	0.332		75.1	40-130				
Aroclor 1260	0.308	0.0166	"	0.332		92.8	40-130				
Surrogate: Tetrachloro-m-xylene	*0.0492*		*"*	*0.0664*		*74.0*	*30-140*				
Surrogate: Decachlorobiphenyl	*0.0478*		*"*	*0.0664*		*72.0*	*30-140*				

Chlorinated Herbicides by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD00610 - EPA 3550C/8151A											
Blank (BD00610-BLK1)									Prepared & Analyzed: 04/15/2020		
2,4,5-TP (Silvex)	ND	0.0200	mg/kg wet								
Surrogate: 2,4-Dichlorophenylacetic acid (DCAA)	*0.547*		*"*	*0.500*		*109*	*21-150*				
LCS (BD00610-BS1)									Prepared & Analyzed: 04/15/2020		
2,4,5-TP (Silvex)	0.159	0.0200	mg/kg wet	0.160		99.4	10-120				
Surrogate: 2,4-Dichlorophenylacetic acid (DCAA)	*0.546*		*"*	*0.500*		*109*	*21-150*				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD00606 - EPA 3050B											
Blank (BD00606-BLK1)											Prepared: 04/15/2020 Analyzed: 04/17/2020
Arsenic	ND	1.50	mg/kg wet								
Barium	ND	2.50	"								
Beryllium	ND	0.050	"								
Cadmium	ND	0.300	"								
Chromium	ND	0.500	"								
Copper	ND	2.00	"								
Lead	ND	0.500	"								
Manganese	ND	0.500	"								
Nickel	ND	1.00	"								
Selenium	ND	2.50	"								
Silver	ND	0.500	"								
Zinc	ND	2.50	"								
Reference (BD00606-SRM1)											Prepared: 04/15/2020 Analyzed: 04/17/2020
Arsenic	132	1.50	mg/kg wet	125		105	69.8-129.6				
Barium	546	2.50	"	529		103	75-125.1				
Beryllium	162	0.050	"	155		104	74.8-125.2				
Cadmium	38.7	0.300	"	37.7		103	74.8-124.9				
Chromium	59.7	0.500	"	58.3		102	70-130				
Copper	83.1	2.00	"	78.0		107	75-125				
Lead	116	0.500	"	111		104	70.9-128.8				
Manganese	331	0.500	"	310		107	74.5-125.2				
Nickel	362	1.00	"	333		109	70-130				
Selenium	243	2.50	"	251		96.8	69.3-131.1				
Silver	26.8	0.500	"	27.2		98.5	67.6-132				
Zinc	366	2.50	"	351		104	69.8-129.9				

Mercury by EPA 7000/200 Series Methods - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD00607 - EPA 7473 soil											
Blank (BD00607-BLK1)								Prepared & Analyzed: 04/15/2020			
Mercury	ND	0.0300	mg/kg wet								
Duplicate (BD00607-DUP1)	*Source sample: 20D0371-01 (FC01)							Prepared & Analyzed: 04/15/2020			
Mercury	0.369	0.0411	mg/kg dry		0.416				12.1	35	
Matrix Spike (BD00607-MS1)	*Source sample: 20D0371-01 (FC01)							Prepared & Analyzed: 04/15/2020			
Mercury	0.788		mg/kg	0.500	0.304	96.7	75-125				
Reference (BD00607-SRM1)								Prepared & Analyzed: 04/15/2020			
Mercury	3.4503		mg/kg	3.71		93.0	65-135				

Wet Chemistry Parameters - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD00599 - EPA SW846-3060											
Blank (BD00599-BLK1)								Prepared & Analyzed: 04/14/2020			
Chromium, Hexavalent	ND	0.500	mg/kg wet								
Duplicate (BD00599-DUP1)	*Source sample: 20D0371-01 (FC01)							Prepared & Analyzed: 04/14/2020			
Chromium, Hexavalent	ND	0.684	mg/kg dry		ND					35	
Matrix Spike (BD00599-MS1)	*Source sample: 20D0371-01 (FC01)							Prepared & Analyzed: 04/14/2020			
Chromium, Hexavalent	5.31	0.684	mg/kg dry	27.4	ND	19.4	75-125	Low Bias			
Reference (BD00599-SRM1)								Prepared & Analyzed: 04/14/2020			
Chromium, Hexavalent	100		mg/L	124		80.8	33.06-167.74				
Batch BD00612 - Analysis Preparation Soil											
Blank (BD00612-BLK1)								Prepared & Analyzed: 04/15/2020			
Cyanide, total	ND	0.500	mg/kg wet								
Reference (BD00612-SRM1)								Prepared & Analyzed: 04/15/2020			
Cyanide, total	95.5		ug/mL	96.2		99.3	42.41-156.96				

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
20D0371-01	FC01	40mL Vial with Stir Bar-Cool 4° C

Sample and Data Qualifiers Relating to This Work Order

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
CCV-H	The value reported is estimated due to its behavior during continuing calibration verification (>20% difference for average RF or >20% drift for linear or quadratic fit.) This value may be biased high.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

Laboratory Chain-of-Custody Record

York Project (SDG) No.: 20D0371

Samples Received: 04/14/2020 15:54 **By:** Kristina M. Blocker **Logged In:** 04/14/2020 11:26 **By:** Paul Grace

Sample Conditions:

- [X] Custody Seals
- [X] Containers Intact
- [X] COC/Labels Agree
- [X] Preservation Confirmed
- [X] Cooler Temperature Confirmed
- [X] COC Complete
- [X] Chain of Custody Form Received
- [X] Appropriate Sample Volumes Received
- [X] Appropriate Sample Containers Submitted
- [X] Samples Submitted within Holding Times
- [ ] Corrective Action Form Required

Preparation Chain-of-Custody

Sample ID	Reason Prep	Prep Start Date	Prep End Date	Prep Analyst
20D0371-01	% Solids Prep	04/15/2020 8:09	04/15/2020 8:09	Son T. Nguyen
20D0371-01	Analysis Preparation	04/17/2020 10:57	04/17/2020 10:57	Philip Murphy
20D0371-01	Analysis Preparation Soil	04/15/2020 7:50	04/15/2020 7:50	Jessica A. Gallegos
20D0371-01	EPA 3050B	04/15/2020 7:24	04/15/2020 7:24	Sarah Yu
20D0371-01	EPA 3550C	04/15/2020 13:43	04/15/2020 13:43	Marc A. Marinuzzi
20D0371-01	EPA 3550C	04/15/2020 10:02	04/15/2020 10:02	Laura Jankowski
20D0371-01	EPA 3550C	04/15/2020 10:02	04/15/2020 10:02	Laura Jankowski
20D0371-01	EPA 3550C/8151A	04/15/2020 7:44	04/15/2020 7:44	Cailee Damico
20D0371-01	EPA 5035A	04/15/2020 9:30	04/15/2020 9:30	Chelsy L. O'Leary
20D0371-01	EPA 7473 soil	04/15/2020 7:26	04/15/2020 7:26	Sarah Yu
20D0371-01	EPA SW846-3060	04/14/2020 17:54	04/14/2020 17:54	Zach T. Scott

Analysis Chain-of-Custody

Sample ID	Reason Analysis	Analysis Start Date	Analysis End Date	Analyst
20D0371-01	Chromium, Hexavalent	04/14/2020 17:54	04/14/2020 22:01	Zach T. Scott
20D0371-01	Chromium, Trivalent	04/17/2020 10:57	04/17/2020 12:56	Philip Murphy
20D0371-01	Cyanide, Total	04/15/2020 7:50	04/15/2020 11:41	Jessica A. Gallegos
20D0371-01	Mercury by 7473	04/15/2020 7:26	04/15/2020 11:57	Sarah Yu
20D0371-01	Metals, NYSDEC Part 375	04/15/2020 7:24	04/17/2020 12:07	Kristin M. Lopez
20D0371-01	Pesticides, NYSDEC Part 375 Target I	04/15/2020 10:02	04/17/2020 9:24	Courtney Mezes
20D0371-01	Semi-Volatiles, NYSDEC Part 375 Lis	04/15/2020 13:43	04/16/2020 10:12	Olivia Watson
20D0371-01	Total Solids	04/15/2020 8:09	04/15/2020 19:55	Margaret A. Ottersen
20D0371-01	Volatile Organics, NYSDEC Part 375	04/15/2020 9:30	04/15/2020 15:42	Steve Swift

York Analytical Laboratories, Inc.
120 Research Drive, Stratford, CT 06615
132-02 89th Ave, Queens, NY 11418
clientservices@yorklab.com
www.yorklab.com

Field Chain-of-Custody Record

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 20D03771

Page _____ of _____

YOUR Information	Report To:	Invoice To:
Company: Posillico Wash Plant	Company:	Company:
Address: 1750 New Highway Farmingdale, NY 11735	Address:	Address:
Phone.:	Phone.:	Phone.:
Contact:	Contact: Mohammad Ramin	Contact: Robert Tassey
E-mail:	E-mail: mramin@posillicoinc.com	E-mail: rtassey@posillicoinc.com

YOUR Project Number: Filter Cake - 4/14/2020

YOUR Project Name:

Turn-Around Time

RUSH - Next Day	
RUSH - Two Day	
RUSH - Three Day	X
RUSH - Four Day	
Standard (5-7 Day)	

YOUR PO#:

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

Mohammad Ramin

Samples Collected by: (print your name above and sign below)

Matrix Codes

S - soil / solid
GW - groundwater
DW - drinking water
WW - wastewater
O - Oil ⋮ Other

Samples From

New York	X
New Jersey	
Connecticut	
Pennsylvania	
Other	

Report / EDD Type (circle selections)

Summary Report	CT RCP	Standard Excel EDD
QA Report	CT RCP DQA/DUE	EQuIS (Standard)
NY ASP A Package	NJDEP Reduced Deliverables	NYSDEC EQuIS
NY ASP B Package	NJDKQP	NJDEP SRP HazSite
		Other:

YORK Reg. Comp.

Compared to the following Regulation(s): (please fill in)

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
FC01	S	4/14/20 -	Part 375 List	3-8oz, 4 voas

Comments:

Preservation: (check all that apply)
HCl ___ MeOH ___ HNO_3 ___ H_2SO_4 ___ NaOH ___ ZnAc ___
Ascorbic Acid ___ Other: _____

Special Instruction
Field Filtered ____
Lab to Filter ____

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
Mohammad Ramin	4/14/20 11AM	KBarkwell	4/14/20 11AM	KBarkwell	4/14/20 1554
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by / Date/Time	Temp. Received at Lab
				KBlackman 4/14/20 1554	3.3 Degrees C

York Analytical Laboratories, Inc.

SDG: 20D0371

CLASS: VOA

METHOD: EPA 8260C

DATA PACKAGE COVER PAGE

EPA 8260C

Laboratory: York Analytical Laboratories, Inc.
SDG: 20D0371
Client: Posillico Wash Plant
Project: Filter Cake - 4/14/2020

Client Sample Id:	Lab Sample Id:
FC01	20D0371-01

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: 
Name: Benjamin Gulizia

Date: 5/26/2020
Title: Laboratory Director

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8260C

FC01

Laboratory:	York Analytical Laboratories, Inc.			SDG:	20D0371
Client:	Posillico Wash Plant			Project:	Filter Cake - 4/14/2020
Matrix:	Soil	Laboratory ID:	20D0371-01	File ID:	V5408622.D
Sampled:	04/14/20 00:00	Prepared:	04/15/20 09:30	Analyzed:	04/15/20 15:42
Solids:	73.07	Preparation:	EPA 5035A	Initial/Final:	6.01 g / 5 ml
Batch:	BD00631	Sequence:	Y0D1609	Calibration:	YD00013
Instrument:	VOA No. 5				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
71-55-6	1,1,1-Trichloroethane	1	5.7	U
75-34-3	1,1-Dichloroethane	1	5.7	U
75-35-4	1,1-Dichloroethylene	1	5.7	U
95-63-6	1,2,4-Trimethylbenzene	1	5.7	U
95-50-1	1,2-Dichlorobenzene	1	5.7	U
107-06-2	1,2-Dichloroethane	1	5.7	U
108-67-8	1,3,5-Trimethylbenzene	1	5.7	U
541-73-1	1,3-Dichlorobenzene	1	5.7	U
106-46-7	1,4-Dichlorobenzene	1	5.7	U
123-91-1	1,4-Dioxane	1	110	U
78-93-3	2-Butanone	1	5.7	U
67-64-1	Acetone	1	11	U
71-43-2	Benzene	1	5.7	U
56-23-5	Carbon tetrachloride	1	5.7	U
108-90-7	Chlorobenzene	1	5.7	U
67-66-3	Chloroform	1	5.7	U
156-59-2	cis-1,2-Dichloroethylene	1	5.7	U
100-41-4	Ethyl Benzene	1	5.7	U
1634-04-4	Methyl tert-butyl ether (MTBE)	1	5.7	U
75-09-2	Methylene chloride	1	11	U
91-20-3	Naphthalene	1	11	U
104-51-8	n-Butylbenzene	1	5.7	U
103-65-1	n-Propylbenzene	1	5.7	U
95-47-6	o-Xylene	1	5.7	U
179601-23-1	p- & m- Xylenes	1	11	U
135-98-8	sec-Butylbenzene	1	5.7	U
98-06-6	tert-Butylbenzene	1	5.7	U
127-18-4	Tetrachloroethylene	1	5.7	U
108-88-3	Toluene	1	5.7	U
156-60-5	trans-1,2-Dichloroethylene	1	5.7	U
79-01-6	Trichloroethylene	1	5.7	U
75-01-4	Vinyl Chloride	1	5.7	U
1330-20-7	Xylenes, Total	1	17	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
SURR: 1,2-Dichloroethane-d4	50.0	51.8	104	77 - 125	
SURR: Toluene-d8	50.0	50.2	100	85 - 120	
SURR: p-Bromofluorobenzene	50.0	46.8	93.5	76 - 130	

* Values outside of QC limits

York Analytical Laboratories, Inc.

SDG: 20D0371

CLASS: SVOA

METHOD: EPA 8270D

DATA PACKAGE COVER PAGE

EPA 8270D

Laboratory: York Analytical Laboratories, Inc.

SDG: 20D0371

Client: Posillico Wash Plant

Project: Filter Cake - 4/14/2020

Client Sample Id:	Lab Sample Id:
FC01	20D0371-01

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Signature: 

Name: Benjamin Gulizia

Date: 5/26/2020

Title: Laboratory Director

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8270D

FC01

Laboratory:	York Analytical Laboratories, Inc.			SDG:	20D0371
Client:	Posillico Wash Plant			Project:	Filter Cake - 4/14/2020
Matrix:	Soil	Laboratory ID:	20D0371-01	File ID:	SV3405466.D
Sampled:	04/14/20 00:00	Prepared:	04/15/20 13:43	Analyzed:	04/16/20 10:12
Solids:	73.07	Preparation:	EPA 3550C	Initial/Final:	30.2 g / 1 mL
Batch:	BD00636	Sequence:	Y0D1718	Calibration:	YB00007
Instrument:	BNA #3				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
95-48-7	2-Methylphenol	2	113	U
65794-96-9	3- & 4-Methylphenols	2	113	U
83-32-9	Acenaphthene	2	77.9	JD
208-96-8	Acenaphthylene	2	113	U
120-12-7	Anthracene	2	157	D
56-55-3	Benzo(a)anthracene	2	358	D
50-32-8	Benzo(a)pyrene	2	335	D
205-99-2	Benzo(b)fluoranthene	2	322	D
191-24-2	Benzo(g,h,i)perylene	2	218	D
207-08-9	Benzo(k)fluoranthene	2	290	D
218-01-9	Chrysene	2	357	D
53-70-3	Dibenzo(a,h)anthracene	2	92.5	JD
132-64-9	Dibenzofuran	2	113	U
206-44-0	Fluoranthene	2	691	D
86-73-7	Fluorene	2	77.9	JD
118-74-1	Hexachlorobenzene	2	113	U
193-39-5	Indeno(1,2,3-cd)pyrene	2	210	D
91-20-3	Naphthalene	2	113	D
87-86-5	Pentachlorophenol	2	113	U
85-01-8	Phenanthrene	2	494	D
108-95-2	Phenol	2	113	U
129-00-0	Pyrene	2	653	D

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
SURR: 2-Fluorophenol	2270	1580	69.7	20 - 108	
SURR: Phenol-d5	2270	1720	76.0	23 - 114	
SURR: Nitrobenzene-d5	1130	973	85.8	22 - 108	
SURR: 2-Fluorobiphenyl	1130	569	50.2	21 - 113	
SURR: 2,4,6-Tribromophenol	2270	2260	99.6	19 - 110	
SURR: Terphenyl-d14	1130	697	61.5	24 - 116	

* Values outside of QC limits

York Analytical Laboratories, Inc.

SDG: 20D0371

CLASS: PEST

METHOD: EPA 8081B

DATA PACKAGE COVER PAGE

EPA 8081B

Laboratory: York Analytical Laboratories, Inc.
SDG: 20D0371

Client: Posillico Wash Plant
Project: Filter Cake - 4/14/2020

Client Sample Id:	Lab Sample Id:
FC01	20D0371-01

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Signature: 

Name: Benjamin Gulizia

Date: 5/26/2020

Title: Laboratory Director

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8081B

FC01

Laboratory: York Analytical Laboratories, Inc. SDG: 20D0371

Client: Posillico Wash Plant Project: Filter Cake - 4/14/2020

Matrix: Soil Laboratory ID: 20D0371-01 File ID: P60002925.D

Sampled: 04/14/20 00:00 Prepared: 04/15/20 10:02 Analyzed: 04/17/20 09:24

Solids: 73.07 Preparation: EPA 3550C Initial/Final: 30.2 g / 10 mL

Batch: BD00628 Sequence: Y0D2001 Calibration: YC00005 Instrument: GCECD6

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg dry)	Q
72-54-8	4,4'-DDD	5	0.00164	U
72-55-9	4,4'-DDE	5	0.00164	U
50-29-3	4,4'-DDT	5	0.00164	U
309-00-2	Aldrin	5	0.00164	U
319-84-6	alpha-BHC	5	0.00164	U
5103-71-9	alpha-Chlordane	5	0.00164	U
319-85-7	beta-BHC	5	0.00164	U
319-86-8	delta-BHC	5	0.00164	U
60-57-1	Dieldrin	5	0.00164	U
959-98-8	Endosulfan I	5	0.00164	U
33213-65-9	Endosulfan II	5	0.00164	U
1031-07-8	Endosulfan sulfate	5	0.00164	U
72-20-8	Endrin	5	0.00164	U
58-89-9	gamma-BHC (Lindane)	5	0.00164	U
76-44-8	Heptachlor	5	0.00164	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	0.0906	0.0654	72.2	30 - 150	
Tetrachloro-m-xylene	0.0906	0.0417	46.0	30 - 150	

* Values outside of QC limits

York Analytical Laboratories, Inc.

SDG: 20D0371

CLASS: ARO

METHOD: EPA 8082A

DATA PACKAGE COVER PAGE

EPA 8082A

Laboratory:	York Analytical Laboratories, Inc.	SDG:	20D0371
Client:	Posillico Wash Plant	Project:	Filter Cake - 4/14/2020

Client Sample Id:	Lab Sample Id:
FC01	20D0371-01

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Signature: 

Name: Benjamin Gulizia

Date: 5/26/2020

Title: Laboratory Director

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8082A

FC01

Laboratory:	York Analytical Laboratories, Inc.			SDG:	20D0371
Client:	Posillico Wash Plant			Project:	Filter Cake - 4/14/2020
Matrix:	Soil	Laboratory ID:	20D0371-01	File ID:	P1066396.D
Sampled:	04/14/20 00:00	Prepared:	04/15/20 10:02	Analyzed:	04/16/20 14:42
Solids:	73.07	Preparation:	EPA 3550C	Initial/Final:	30.2 g / 10 mL
Batch:	BD00628	Sequence:	Y0D1614	Calibration:	YB00033
Instrument:	ECD#1				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg dry)	Q
12674-11-2	Aroclor 1016	1	0.0227	U
11104-28-2	Aroclor 1221	1	0.0227	U
11141-16-5	Aroclor 1232	1	0.0227	U
53469-21-9	Aroclor 1242	1	0.0227	U
12672-29-6	Aroclor 1248	1	0.0227	U
11097-69-1	Aroclor 1254	1	0.0227	U
11096-82-5	Aroclor 1260	1	0.0227	U
1336-36-3	Total PCBs	1	0.0227	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.0906	0.0539	59.5	30 - 140	
Decachlorobiphenyl	0.0906	0.0421	46.5	30 - 140	

* Values outside of QC limits

York Analytical Laboratories, Inc.

SDG: 20D0371

CLASS: HERB

METHOD: EPA 8151A

DATA PACKAGE COVER PAGE

EPA 8151A

Laboratory: York Analytical Laboratories, Inc.
SDG: 20D0371

Client: Posillico Wash Plant
Project: Filter Cake - 4/14/2020

Client Sample Id:	Lab Sample Id:
FC01	20D0371-01

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Signature: 

Name: Benjamin Gulizia

Date: 5/26/2020

Title: Laboratory Director

FORM I **ORGANIC ANALYSIS DATA SHEET**

EPA 8151A

FC01

Laboratory:	York Analytical Laboratories, Inc.			SDG:	20D0371
Client:	Posillico Wash Plant			Project:	Filter Cake - 4/14/2020
Matrix:	Soil	Laboratory ID:	20D0371-01	File ID:	PS426804.d
Sampled:	04/14/20 00:00	Prepared:	04/15/20 07:44	Analyzed:	04/15/20 18:31
Solids:	73.07	Preparation:	EPA 3550C/8151A	Initial/Final:	25.1 g / 25 mL
Batch:	BD00610	Sequence:	Y0D1604	Calibration:	YC00012
Instrument:	GCECD4				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg dry)	Q
93-72-1	2,4,5-TP (Silvex)	1	0.0273	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
2,4-Dichlorophenylacetic acid (DCAA)	0.682	0.537	78.8	21 - 150	

* Values outside of QC limits

York Analytical Laboratories, Inc.
SDG: 20D0371
CLASS: METALS
METHOD: EPA 6010D

DATA PACKAGE COVER PAGE

EPA 6010D

Laboratory: York Analytical Laboratories, Inc.
SDG: 20D0371
Client: Posillico Wash Plant
Project: Filter Cake - 4/14/2020

Client Sample Id:	Lab Sample Id:
FC01	20D0371-01

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Signature: 
Name: Benjamin Gulizia

Date: 5/26/2020
Title: Laboratory Director

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 6010D

FC01

Laboratory: York Analytical Laboratories, Inc. SDG: 20D0371

Client: Posillico Wash Plant Project: Filter Cake - 4/14/2020

Matrix: Soil Laboratory ID: 20D0371-01 File ID: qbi041720ARE_1-015

Sampled: 04/14/20 00:00 Prepared: 04/15/20 07:24 Analyzed: 04/17/20 12:07

Solids: 73.07 Preparation: EPA 3050B Initial/Final: 0.5 g / 50 mL

Batch: BD00606 Sequence: Y0D1715 Calibration: UNASSIGNED Instrument: WinLabICP

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	Q	Method
7440-38-2	Arsenic	25.4	1		EPA 6010D
7440-39-3	Barium	109	1		EPA 6010D
7440-41-7	Beryllium	0.068	1	U	EPA 6010D
7440-43-9	Cadmium	0.663	1		EPA 6010D
7440-47-3	Chromium	39.6	1		EPA 6010D
7440-50-8	Copper	89.0	1		EPA 6010D
7439-92-1	Lead	129	1		EPA 6010D
7439-96-5	Manganese	553	1		EPA 6010D
7440-02-0	Nickel	35.3	1		EPA 6010D
7782-49-2	Selenium	3.42	1	U	EPA 6010D
7440-22-4	Silver	0.684	1	U	EPA 6010D
7440-66-6	Zinc	267	1		EPA 6010D

York Analytical Laboratories, Inc.

SDG: 20D0371

CLASS: HG

METHOD: EPA 7473

DATA PACKAGE COVER PAGE

EPA 7473

Laboratory: York Analytical Laboratories, Inc.

SDG: 20D0371

Client: Posillico Wash Plant

Project: Filter Cake - 4/14/2020

Client Sample Id:	Lab Sample Id:
FC01	20D0371-01

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Signature: 

Name: Benjamin Gulizia

Date: 5/26/2020

Title: Laboratory Director

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 7473

FC01

Laboratory: York Analytical Laboratories, Inc. SDG: 20D0371

Client: Posillico Wash Plant Project: Filter Cake - 4/14/2020

Matrix: Soil Laboratory ID: 20D0371-01 File ID: QBHGDMA80-02 041520A-024

Sampled: 04/14/20 00:00 Prepared: 04/15/20 07:26 Analyzed: 04/15/20 11:57

Solids: 73.07 Preparation: EPA 7473 soil Initial/Final: 0.2 g / 0.2 g

Batch: BD00607 Sequence: Y0D1602 Calibration: UNASSIGNED Instrument: DMA 80-02

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	Q	Method
7439-97-6	Mercury	0.416	1		EPA 7473

York Analytical Laboratories, Inc.
SDG: 20D0371
CLASS: WET
METHOD: Calculation

DATA PACKAGE COVER PAGE

Calculation

Laboratory: York Analytical Laboratories, Inc.

SDG: 20D0371

Client: Posillico Wash Plant

Project: Filter Cake - 4/14/2020

Client Sample Id:	Lab Sample Id:
FC01	20D0371-01

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Signature: 

Name: Benjamin Gulizia

Date: 5/26/2020

Title: Laboratory Director

FORM I **INORGANIC ANALYSIS DATA SHEET**

Calculation

FC01

Laboratory: York Analytical Laboratories, Inc. SDG: 20D0371

Client: Posillico Wash Plant Project: Filter Cake - 4/14/2020

Matrix: Soil Laboratory ID: 20D0371-01 File ID:

Sampled: 04/14/20 00:00 Prepared: 04/17/20 10:57 Analyzed: 04/17/20 12:56

Solids: 73.07 Preparation: Analysis Preparation Initial/Final: 2.5 g / 100 mL

Batch: BD00753 Sequence: Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
16065-83-1	Chromium, Trivalent	39.6	1		Calculation

York Analytical Laboratories, Inc.

SDG: 20D0371

CLASS: WET

METHOD: EPA 7196A

DATA PACKAGE COVER PAGE

EPA 7196A

Laboratory: York Analytical Laboratories, Inc.

SDG: 20D0371

Client: Posillico Wash Plant

Project: Filter Cake - 4/14/2020

Client Sample Id:	Lab Sample Id:
FC01	20D0371-01

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: 

Name: Benjamin Gulizia

Date: 5/26/2020

Title: Laboratory Director

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 7196A

FC01

Laboratory: York Analytical Laboratories, Inc. SDG: 20D0371

Client: Posillico Wash Plant Project: Filter Cake - 4/14/2020

Matrix: Soil Laboratory ID: 20D0371-01 File ID:

Sampled: 04/14/20 00:00 Prepared: 04/14/20 17:54 Analyzed: 04/14/20 22:01

Solids: 73.07 Preparation: EPA SW846-3060 Initial/Final: 2.5 g / 100 mL

Batch: BD00599 Sequence: Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	Q	Method
18540-29-9	Chromium, Hexavalent	0.684	1	U	EPA 7196A

York Analytical Laboratories, Inc.

SDG: 20D0371

CLASS: WET

METHOD: EPA 9014/9010C

DATA PACKAGE COVER PAGE

EPA 9014/9010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 20D0371
Client: Posillico Wash Plant
Project: Filter Cake - 4/14/2020

Client Sample Id:	Lab Sample Id:
FC01	20D0371-01

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Signature: 
Name: Benjamin Gulizia

Date: 5/26/2020
Title: Laboratory Director

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 9014/9010C

FC01

Laboratory: York Analytical Laboratories, Inc. SDG: 20D0371

Client: Posillico Wash Plant Project: Filter Cake - 4/14/2020

Matrix: Soil Laboratory ID: 20D0371-01 File ID:

Sampled: 04/14/20 00:00 Prepared: 04/15/20 07:50 Analyzed: 04/15/20 11:41

Solids: 73.07 Preparation: Analysis Preparation Soil Initial/Final: 1 g / 50 mL

Batch: BD00612 Sequence: Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	Q	Method
57-12-5	Cyanide, total	0.684	1	U	EPA 9014/9010C

York Analytical Laboratories, Inc.

SDG: 20D0371

CLASS: WET

METHOD: SM 2540G

DATA PACKAGE COVER PAGE

SM 2540G

Laboratory: York Analytical Laboratories, Inc.
SDG: 20D0371

Client: Posillico Wash Plant
Project: Filter Cake - 4/14/2020

Client Sample Id:	Lab Sample Id:
FC01	20D0371-01

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Signature: 

Name: Benjamin Gulizia

Date: 5/26/2020

Title: Laboratory Director

FORM I **INORGANIC ANALYSIS DATA SHEET**

SM 2540G

FC01

Laboratory: York Analytical Laboratories, Inc. SDG: 20D0371

Client: Posillico Wash Plant Project: Filter Cake - 4/14/2020

Matrix: Soil Laboratory ID: 20D0371-01 File ID:

Sampled: 04/14/20 00:00 Prepared: 04/15/20 08:09 Analyzed: 04/15/20 19:55

Solids: 73.07 Preparation: % Solids Prep Initial/Final: 5 g / 5 g

Batch: BD00621 Sequence: Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (%)	Dilution Factor	Q	Method
solids	% Solids	73.1	1		SM 2540G