PERIODIC REVIEW REPORT

APRIL 14, 2021 TO APRIL 14, 2022
QUEEN CITY LANDING SITE
(BCP SITE NO. C915304)

BUFFALO, NEW YORK

May 2022 0424-022-001

Prepared for:

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1.0 INTRODUCTION

Benchmark Civil/Environmental Engineering and Geology, PLLC (Benchmark), in association with TurnKey Environmental Restoration, LLC (TurnKey) has prepared this Periodic Review Report (PRR) to summarize the post-remedial status of the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) Queen City Landing Site, Site No. C915304, located in the City of Buffalo, Erie County, New York (see Figures 1 and 2).

This PRR has been prepared in accordance with the NYSDEC DER-10 *Technical Guidance for Site Investigation and Remediation* (May 2010; Ref. 1) and the NYSDEC's Institutional and Engineering Controls (IC/EC) Certification Form has been prepared for the Site. This PRR and the associated IC/EC Form (see Appendix A) have been completed for the post-remedial period from April 14, 2021 to April 14, 2022.

1.1 Site Background

Queen City Landing, LLC (QCL) entered into a Brownfield Cleanup Agreement (BCA) with NYSDEC on June 29, 2016, to investigate and remediate the approximate ±7.75-acre Site which is identified as the eastern portion (7.27 acres) of 975 Fuhrmann Boulevard (SBL No. 132.06-1-1.1) and 1005 Fuhrmann Boulevard (0.48 acres; SBL No. 132.06-1-1.2), in the City of Buffalo, County of Erie, New York. BCP site activities were performed in accordance with BCA Index#C915304-06-16.

The Site is identified as the eastern portion of Section 132.06 Block 1, Lot 1.1 (975 Fuhrmann Boulevard, ±7.27 acres) and Section 132.06 Block 1, Lot 1.2 (1005 Fuhrmann Boulevard, ±0.48 acres) on the Erie County Tax Map. The Site is an approximately ±7.75-acres and is bounded by vacant commercial property to the north, Lake Erie/Small boat Harbor to the south, Fuhrmann Boulevard to the east, and vacant land/Lake Erie to the west (see Figure 2).

The Site was the former Freezer Queen facility and operated as a manufacturer and warehouse of frozen foods for approximately 75 years, until food operations ceased in 2004. QCL purchased the property in November 2007. The Site is scheduled for redevelopment as a mixed residential and commercial use. The former structures associated with the

Freezer Queen operations have been demolished and the Site remediated to a Track 4 Restricted Residential cleanup to prepare for redevelopment activities.

1.2 Remedial History

Three (3) buildings were formerly present on the Site associated with Freezer Queen operations: a large 6-story masonry manufacturing building, a 1-story administration building, and a small 1-story guard house. ACM abatement activities were completed within the three (3) buildings, as necessary, in accordance with 12 NYCRR Part 56 and approved variance (16-0083) between July and October 2016 followed by building demolition which was completed in January 2017.

The majority of the large 6-story masonry manufacturing building was processed on-site and stockpiled for reuse as backfill under the cover system. However, an approximate 8-foot by 8-foot piece of the western exterior wall contained painted graffiti. It was removed and sent to Waste Management's Chaffee Landfill for non-hazardous disposal. Other waste streams from the demolition of the three (3) buildings consisted of friable ACM, non-friable ACM, and non-hazardous C&D debris. Steel and other metals were taken off-site for recycling. The stockpiled material from the 6-story building was screened on-site for reuse in accordance with the Crushed Concrete Management Plan (Ref. 2, CCMP) and associated CCMP Addendum (Ref. 3). Approximately 4,705 tons of concrete fines generated from screening the processed concrete stockpiles were taken to the Tonawanda Landfill for non-hazardous disposal.

The steel above ground storage tanks associated with the former wastewater treatment system on the northern portion of the Site were also decommissioned. ACM abatement was completed on the insulation associated with the tanks and they were sent off-site for recycling.

A Remedial Investigation (RI) was completed in accordance with a NYSDEC-approved Remedial Investigation/Interim Remedial Measures/Alternative Analysis Work Plan (RI/IRM/AA WP, Ref. 4) by C&S Engineers (C&S) between January 2016 and January 2017. The RI included the performance of a geophysical survey, and the sampling of surface soil/fill, subsurface soil/fill material, native soil, groundwater, and outdoor air. The urban fill at the Site was found to contain concentrations of certain SVOCs and metals above the

restricted-residential soil cleanup objectives (RRSCOs) while the concentrations in the underlying construction fill and native soils were generally below the soil cleanup objectives (SCOs). Impacts to groundwater were minimal (low-level VOCs, SVOC and metals) and the outdoor air samples did not identify a concern.

In September 2017 and December 2017, additional investigation activities were completed at the request of NYSDEC to address data validation issues associated with VOC data generated from the initial RI activities and to delineate areas where elevated SVOCs and metals were present. The additional work was done by Benchmark. The delineation work was done under an NYSDEC-approved Additional Hotspot Sampling & Soil Disposal Work Plan (Ref. 5) and were documented in the RI Report (Ref. 6).

An IRM was completed at the Site from August 2017 through November 2017. Prior to starting the IRM activities, Benchmark requested a deviation in the confirmatory sampling plan identified in the RI/IRM/AA WP. Benchmark requested to analyze the confirmation sidewall and bottom of excavation samples for Target Compound List (TCL) volatile organic compounds (VOCs) and NYSDEC Part 375 List semi-volatile organic compounds (SVOCs) rather than the full list of parameters (VOCs, SVOCs, metals, PCBs and pesticides) identified in the RI/IRM/AA WP. This deviation was approved by NYSDEC in an email dated October 6, 2017. The IRM activities were documented in an IRM Report (Ref. 7) submitted and approved by NYSDEC.

The IRM activities involved the removal of three (3) underground storage tanks (USTs) (approximately 5,000-gallons each in size) and approximately 4,956-tons of petroleum-impacted soil/fill which was taken to the Tonawanda Landfill in Tonawanda, New York for non-hazardous disposal.

Once the analytical results indicated that the petroleum-impacts had been removed, the excavation was backfilled. The excavation backfill consisted of the on-site crushed concrete screened in accordance with CCMP Addendum and clay soil imported from an off-site source (Quaker Crossing in Orchard Park, New York). A NYSDEC Request to Import was submitted for the Quaker Crossing soil along with the required analytical testing which was approved for import to the Site by NYSDEC via email on October 3, 2017.

Based on the findings of the RI and completed IRM, an Alternatives Analysis Report (AAR, Ref. 8) was completed. The AAR outlined the Remedial Action Objectives (RAOs) and required remedial activities to be completed to achieve a Track 4 Restricted-Residential

Use cleanup. The remedial actions described in the AAR, Decision Document (Ref. 9) and Remedial Action Work Plan (RAWP, Ref. 10) were as follows:

- Removal and proper landfill disposal of the polycyclic aromatic hydrocarbon-(PAH) impacted soil/fill present in the vicinity of RI sample Boundary-SS2.
- Removal and proper landfill disposal of the soil/fill stockpile present in the vicinity of RI sample F6.
- Removal and proper landfill disposal of petroleum-impacted soil/fill present in the vicinity of RI sample D7.
- Backfilling the excavations with material that met the requirements of 6NYCRR Part 375-6.7(d) or otherwise NYSDEC-approved material (e.g., crushed concrete greater than ⅛-inch after on-site screening of the former masonry building).
- Preparation and implementation of a Site Management Plan (SMP, Ref. 11).
- Filing an Environmental Easement (EE) with Erie County, which was done on August 30, 2017.

The RAWP also identified the following site-specific cleanup criteria established for the remedial actions:

- Arsenic - 24 mg/kg;
- Lead - 1,000 mg/kg;
- Chromium – 1,500 mg/kg; and
- Manganese – 10,000 mg/kg.

A total of 674 tons of additional petroleum-, PAH-, and metal-impacted soil/fill were removed and disposed of off-site at the Tonawanda Landfill.

To meet the final grades of the redevelopment plan, the Site grades were raised across the majority of the Site using:

- the on-site processed and screened concrete (greater than ⅛-inch in size);
- existing soil/fill from the northern, southern, and eastern areas that were excavated along the perimeter of the Site to allow 2-feet of the compliant soil cover system to be installed;
- existing soil/fill from the installation of the concrete walkway and retaining wall along the southern portion of the Site; or

- imported soil/fill material meeting the requirements of 6NYCRR Part 375-6.7(d) approved by NYSDEC.

The cover system that was installed was DER-10 compliant material which consisted of a minimum of 2-foot soil/stone cover system across most of the Site with a concrete walking path and stabilizing retaining wall (to stabilize fill remaining at depth and protect from erosion and/or sidewall collapse) along the southern portion of the Site. A demarcation layer (e.g., orange plastic netting) was installed beneath the cover system that was designed to meet the existing Site grades along the northern and eastern boundaries of the Site. Figure 3 identities the current cover system for the Site.

The remedial action and cover system installation work were completed between August and October 2018 and documented in the NYSDEC-approved Final Engineering Report (FER, Ref. 12).

1.3 Compliance

The Site is in compliance as the cover system is in place. See Section 4.0 for additional details on compliance.

1.4 Recommendations

Any future redevelopment activities to be conducted will be completed in accordance with the SMP and documented in the associated PRR reporting period. The SMP will be updated to include the redevelopment/cover system changes once they are completed.

2.0 SITE OVERVIEW

The Site was remediated under the BCP (as discussed in Section 1.2). The remediated property is subject to a comprehensive, site-wide SMP which identifies requirements for monitoring and maintenance of engineering and institutional controls, post-remedial media (groundwater) monitoring and sampling, and procedures for post-remedial excavation and related activities.

As documented in the 2020 PRR, the cover system along the southern portion of the site was partly damaged by above-average high-water levels and associated wave action of Lake Erie/Small Boat Harbor and needed repair. A Corrective Measures Work Plan (CMWP, Ref. 13) was prepared and approved by NYSDEC, which was included as Appendix C of the 2020 PRR.

The cover system repairs that were required by the CMWP and completed in July 2020 and were documented in Section 3 of the 2021 PRR.

No other redevelopment activities have occurred at the Site within the April 14, 2021 to April 14, 2022 reporting period. The Site is currently vacant and secured from public access by a chain link fence.

The areas surrounding the Site have not changed.

3.0 REMEDY PERFORMANCE

In July 2020, the cover systems in select areas on the southern portion of the Site were repaired in accordance with a NYSDEC-approved CMWP. The repairs involved placement of additional hardscape (asphalt), surge stone, large limestone blocks, and concrete in areas that high-water and wave action had eroded away the topsoil. The repairs made in July 2020 remain in place with the cover system in compliance with the SMP.

A post-remedial site inspection and groundwater monitoring event were completed at the Site as required by the SMP. Per the June 2, 2021 NYSDEC-approval letter for the May 2021 PRR, groundwater monitoring wells MW-4 and MW-6 were decommissioned per NYSDEC CP-43 and monitoring wells MW-1R and MW-7R were sampled for SVOCs only and termination of the groundwater sampling further evaluated in 2022, as discussed in Section 4.3.

The site inspection involving a walk-over of the Site covered by this PRR was performed to visually observe and document the use of the Site for restricted residential, commercial, and/or industrial use, confirm absence of site groundwater use, inspect the cover system integrity, and verify conformance with other requirements under the SMP. The groundwater monitoring event involved sampling two (2) monitoring wells (MW-1R, and MW-7R) for SVOCs and wells MW-4 and MW-6 were decommissioned, as further discussed in Sections 4.2.4 and 4.3.

The Site is current vacant and secured from public access by a chain link fence. The Site is in compliance and functioning as intended in accordance with the SMP.

The results of the groundwater sampling, as further discussed in Section 4.3, indicate a decrease in the SVOCs contaminant concentrations from pre-IRM and pre-remedial actions completed prior to issuance of the COC.

The completed IC/EC Certification forms and site photographs are included in Appendices A and B, respectively.

4.0 SITE MANAGEMENT PLAN

A site-wide SMP was prepared for the Site and approved by the Department in November 2018. Key components of the SMP are described below.

4.1 Institutional and Engineering Control (IC/EC) Plan

Since remaining contaminated soil/fill exists beneath the site, Institutional Controls and Engineering Controls (IC/ECs) are required to protect human health and the environment. The Engineering and Institutional Control Plan describes the procedures for the implementation and management of all IC/ECs at the Site. At the time of the site inspection, the Site is compliant with all institutional and engineering control requirements.

4.1.1 Institutional Controls (ICs)

The Site has a series of Institutional Controls in the form of site restrictions. Adherence to these Institutional Controls is required by the Environmental Easement. Site restrictions that apply to the Controlled Property are:

- The property may be used for restricted residential; commercial, industrial uses, subject to local zoning laws;
- All ECs must be operated and maintained as specified in the SMP;
- All ECs must be inspected at a frequency and in a manner defined in the SMP.
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the New York State Department of Health or the Erie Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;
- Operation, maintenance, monitoring, inspection, and reporting of the soil cover system shall be performed as defined in the SMP;

- Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement; and
- Vegetable gardens and farming on the property are prohibited.

4.1.2 Engineering Controls (ECs)

Engineering controls at the Site include:

- Cover System – Exposure to remaining contamination in soil/fill at the Site is prevented by a final cover system placed over the site. This cover system is comprised of a minimum of 24 inches of clean vegetated soil (with demarcation layer), asphalt pavement, concrete-covered sidewalks, concrete retaining wall, surge stone, limestone block, or crushed stone. The cover system must be maintained in compliance with the SMP.

4.2 Excavation Work Plan

An Excavation Work Plan (EWP) was included in the NYSDEC-approved SMP for the Site. The EWP provides guidelines for the management of soil/fill material during intrusive actives. Future intrusive work that will penetrate the cover or cap, or encounter or disturb the remaining contamination, including any modifications or repairs to the existing cover system, will be performed in compliance with the EWP.

4.2.1 Site Redevelopment Activities

No redevelopment activities occurred during the past reporting period and the Site is currently vacant and secured by a chain-link fence. As discussed in Section 3.0, repairs to the cover system were made in July 2020, in accordance with CMWP. The repairs made to the cover system remain intact.

4.2.2 Exported Materials

No materials were exported from the Site during the past reporting period.

4.2.3 Imported Materials

No materials were imported to the Site during the past reporting period.

4.2.4 Monitoring Well Decommissioning

The NYSDEC 2021 PRR approval letter indicated that post-remedial groundwater sampling would be required at two (2) monitoring well locations, MW-1R and MW-7R and that the other two (2) monitoring wells locations, MW-4 and MW-6 could be decommissioning in accordance with the NYSDEC CP-43 Groundwater Monitoring Well Decommissioning Policy. The groundwater sampling is discussed in more detail in Section 4.3 below.

Two (2) monitoring wells, MW-4 and MW-6, were grouted in place and the PVC riser pipes were removed at ground surface. The grout, a mixture of Portland Cement, bentonite, and water was installed to the bottom of the wells via tremie pipe until grout was observed above ground surface and the riser pipes cut off at ground surface. Existing cover material in the vicinity of the wells was used to cover over the grouted riser pipe at ground surface. The well decommissioning logs are included in Appendix C.

4.3 Post-Remediation Media Monitoring and Sampling

Two (2) monitoring wells, MW-1R and MW-7R (see Figure 4), were sampled as part of the post-remedial media monitoring and sampling requirements of the SMP. The wells were sampled for Part 375 List SVOCs only, per NYSDEC approval. The results of the groundwater samples are summarized on Table 1 and the laboratory report is included in Appendix D. Table 1 also includes the historic sample results from these well locations from 2016 and 2017, which represent pre-remedial conditions, and 2020 through 2022, which represent post-remedial conditions for comparative purposes. The results of the sampling are discussed below by location.

MW-1/-1R: SVOCs: Six (6) SVOCs have been detected at concentrations above their respective GWQS in the 2017, 2020, 2021 and 2022 sampling events. The total SVOC concentrations in 2017 prior to remediation were approximately 11.5 ug/l. Post-remedial monitoring concentrations have been 5.4 ug/l in

2020, 0.52 ug/l in 2021, and 0.77 ug/l in 2022, a decrease of about 93%. The results of the groundwater sampling continue to show a decrease in post-remedial concentrations with shown over a 90% reduction in total SVOCs. since completion of the remedial work.

MW-7/-7R: SVOCs: Seven (7) SVOCs were detected above their GWQS in the 2022 sampling event. The total SVOC concentrations detected have decreased since 2017 (30 ug/l). The average Total SVOC concentration from the three (3) events from 2020 through 2022 is 14.8 ug/l which is an approximate 51% decrease since completion of the remedial work.

The results of the 2022 post-remediation groundwater sampling indicate improvement in the groundwater quality at the Site since the IRM and remedial action have been completed. Two (2) of the four (4) wells designated for the monitoring program have been approved for decommissioning by NYSDEC.

The presence of SVOCs in groundwater is not uncommon due to the amount of fill material underlying the Site from historic import activities completed to raise grades in the outer harbor area and not uncommon at other sites surrounding QCL. Based in the RI completed at the Site, fill thickness can ranged between 8 and 17 fbgs.

Although there are a few SVOCs that exceed their respective GWQS, the detected concentration of Total SVOCs at MW-1R have been less that 1 ug/l the past two (2) sampling events and the average concentration of Total SVOC for MW-7R from the past three (3) events is 14.8 ug/l. Based on the favorable results of the 2020 through 2022 groundwater sampling, QCL requests that the annual groundwater sampling requirements of the SMP be terminated.

4.4 Annual Inspection and Certification Program

The Annual Inspection and Certification Program outlines requirements for certifying and attesting that the institutional controls and engineering controls employed on the Site are unchanged from the original design and/or previous certification. The Annual Certification includes a Site Inspection and completion of the NYSDEC's IC/EC Certification Form. The Site inspection is intended to verify that:

- the IC/ECs are in place, effective, performing as designed,
- nothing has occurred that would impair the ability of the controls to protect the public health and environment,
- nothing has occurred that would constitute a violation or failure to comply with any operation and maintenance plan for such controls, and
- access is available to the Site to evaluate continued maintenance of such controls.

Inspection of the Site was conducted by Mr. Christopher Boron. P.G. of TurnKey Environmental Restoration, LLC on March 18, 2022, a Qualified Environmental Professional (QEP) per 6NYCRR Part 375.12. At the time of the inspection, no redevelopment activities had occurred, and the Site is vacant. As previously discussed, the cover system was repaired in July 2020 in accordance with the NYSDEC-approve CMWP. The cover system repairs remain intact, and the remaining portions of the cover system are in place. Any future redevelopment activities that disturb the existing cover system are subject to the NYSDEC-approved SMP.

No observable indication of intrusive activities that disturbed subsurface soil/fill were noted during the Site inspection beyond those described in Section 4.2.

The completed Site Management Periodic Review Report Notice – Institutional and Engineering Controls Certification Form is included in Appendix A. A photographic log of the Site inspection is included in Appendix B. The groundwater sampling information and analytical report are included in Appendix D.

4.5 Operation, Monitoring and Maintenance Plan

The remedy for the Site does not rely on any mechanical systems such as sub-slab depressurization or soil vapor extraction, to protect public health and the environment. Therefore, an Operation and Maintenance Plan is not required.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions for this reporting period and recommendations for the next reporting period are as follows:

- No redevelopment activities occurred during the past reporting period and the Site is currently vacant. The existing cover systems repair made in July 2020 are intact along with the remaining portions of the cover system and are performing as intended.
- Future redevelopment activities involving cover system modification or import/export of soil or stone materials will be subject to the SMP. In areas subject to redevelopment, Site access will be restricted via construction fencing and will be limited to authorized construction personnel.
- Groundwater monitoring wells MW-4 and MW-6 were decommissioned with NYSDEC-approval
- Groundwater sampling performed during the reporting period, as required by the SMP, indicates that there has been improvement in the groundwater quality at the Site since the IRM and remedial action have been completed.
    - Total SVOC concentrations at MW-1R are less than 1 ug/l, which is over a 90% reduction in Total SVOCs detected.
    - Total SVOC concentrations at MW-7R have average 14.8 ug/l over the past 3 annual sampling events which is a 50% reduction in Total SVOCs detected.
    - The presence of SVOCs in groundwater is not uncommon due to the amount of fill material present underlying the Site from historic import activities completed to raise grades in outer harbor area and not uncommon at other sites surrounding QCL. The detected concentrations are considered to be very low.

The following modifications are recommended for the Site:

- Groundwater monitoring is "subject to evaluation after year 1", as stated in Table 7 of Section 7 of the SMP. Based on the favorable decreasing results from the 2020 through 2022 groundwater sampling completed post-remedial action, QCL requests that the annual groundwater sampling requirements of the SMP be terminated.

6.0 DECLARATION/LIMITATION

Personnel under direct supervision of Benchmark conducted the annual site inspection for BCP Site No. C915304, located in Buffalo, New York, according to generally accepted practices. This report complied with the scope of work provided to Queen City Landing, LLC by Benchmark.

This report has been prepared for the exclusive use of the Queen City Landing, LLC. The contents of this report are limited to information available at the time of the site inspection. The findings herein may be relied upon only at the discretion of Queen City Landing, LLC. Use of or reliance upon this report or its findings by any other person or entity is prohibited without written permission of Benchmark.

7.0 REFERENCES

1. New York State Department of Environmental Conservation. *DER-10; Technical Guidance for Site Investigation and Remediation.* May 2010.
2. C&S Engineers, Inc. *Crushed Concrete Management Plan, Queen City Landing, Eastern Parcel, BCP Site No. C915304.* March 1, 2017.
3. Benchmark Environmental Engineering and Sciences, PLLC. *Queen City Landing (BCP Site: C915304), Crushed Concrete Management Plan Addendum.* August 3, 2017.
4. C&S Engineers, Inc. *Remedial Investigation/Interim Remedial Measures/Alternatives Analysis Work Plan, Queen City Landing, 1005 Fuhrmann Blvd (SBL: 132.06-1-1.2) and a Portion of 975 Fuhrmann Blvd (SBL: 132.06-1-1.1), City of Buffalo, Erie County, New York, Site No. C915304.* December 2016.
5. Benchmark Environmental Engineering and Science, PLLC. *Additional Hotspot Sampling & Soil Disposal Work Plan, Queen City Landing Site, BCP Site No. C915304.* December 7, 2017.
6. Benchmark Environmental Engineering and Science, PLLC. *Queen City Landing, BCP Site No. C915304, Revised Remedial Investigation Submittal.* January 26, 2018.
7. Benchmark Environmental Engineering and Science, PLLC. *Interim Remedial Measure Report, Petroleum Contamination Cleanup, Queen City Landing Site BCP Site No. C915304, 975 and 1005 Fuhrmann Boulevard, Buffalo, New York.* January 25, 2018.
8. Benchmark Environmental Engineering and Science, PLLC. *Alternative Analysis Report, Queen City Landing Site, Buffalo, New York, BCP Site No. C915304.* May 2018.
9. New York State Department of Environmental Conservation. *Decision Document, Queen City Landing, Brownfield Cleanup Program, Buffalo, Erie County, Site No. C915304.* June 2018.
10. Benchmark Environmental Engineering and Science, PLLC. *Queen City Landing (BCP Site: C915304), Remedial Action Work Plan.* July 20, 2018.
11. Benchmark Environmental Engineering and Science. *Site Management Plan, Queen City Landing Site, Erie County, Buffalo, New York, NYSDEC Site No. C9152304.* November 2018.
12. Benchmark Environmental Engineering and Science. *Final Engineering Report, Queen City Landing Site, Buffalo, New York, NYSDEC Site No. C9152304.* December 2018.
13. Benchmark Environmental Engineering and Science. *Corrective Measures Work Plan for Queen City Landing Brownfield Cleanup Program Site (No. 915304), Periodic Review Report Certifying Period December 14, 2018 to April 14, 2020.* June 12, 2020.

TABLES

TABLE 1

SUMMARY OF REMEDIAL INVESTIGATION GROUNDWATER SAMPLE ANALYTICAL RESULTS
PERIODIC REVIEW REPORT
QUEEN CITY LANDING SITE
BUFFALO, NEW YORK

PARAMETER [1]	GWQS [2]	MW-1		MW-1		MW-1R [3]		MW-1R [3]		MW-1R [3]		MW-7		MW-7		MW-7R [3]		MW-7R [3]		MW-7R [3]	
		3/30/2016		2/7/2017		4/3/2020		4/16/2021		3/8/2022		3/30/2016		2/7/2017		4/3/2020		4/16/2021		3/8/2022	
Volatile Organic Compounds (VOCs) - ug/l																					
2-Butanone (MEK)	**50**	ND		ND		ND		ND		NS		ND		ND		ND		ND		NS	
Acetone	**50**	ND		ND		ND		1.6	J	NS		ND		1.7	J	ND		2.2	J	NS	
Benzene	**1**	**1.95**		**4.2**		0.74		0.63		NS		ND		ND		ND		ND		NS	
Cyclohexane	**--**	ND		ND		ND		ND		NS		ND		ND		ND		ND		NS	
Dichlorodifluoromethane (Freon-12)	**5**	ND		ND		ND		ND		NS		ND		ND		ND		ND		NS	
Methyl acetate	**--**	ND		ND		ND		ND		NS		ND		ND		ND		ND		NS	
Methyl tert butyl ether (MTBE)	**10**	ND		0.95	J	ND		ND		NS		**20.7**		**39**		3.1		1.8	J	NS	
Methylcyclohexane	**--**	ND		ND		ND		ND		NS		ND		ND		ND		ND		NS	
Naphthalene	**10**	6.04		ND		ND		ND		NS		**29.5**		ND		ND		ND		NS	
Total VOCs		7.99		5.15		0.74		2.23		0		50.2		40.7		3.1		4		NS	
Semi-Volatile Organic Compounds (SVOCs) - ug/l																					
Acenaphthene	**20**	ND		0.99		0.17		ND		0.03	J	ND		9.3		5.8		4.3		6.1	
Acenaphthylene	**--**	ND		0.07	J	0.02	J	ND		ND		ND		0.22		0.13		0.09	J	0.1	J
Anthracene	**50**	ND		0.17	J	0.17		0.02	J	0.03	J	ND		1.1		0.45		0.14		0.51	
Benzo(a)anthracene	**0.002**	ND		**0.1**	J	**0.38**		**0.04**	J	**0.07**	J	ND		**0.07**	J	**0.07**	J	**0.03**	J	**0.14**	
Benzo(a)pyrene	**MDL**	ND		**0.08**	J	**0.32**		**0.03**	J	**0.05**	J	ND		ND		**0.05**	J	ND		**0.06**	J
Benzo(b)fluoranthene	**0.002**	ND		**0.12**	J	**0.44**		**0.06**	J	**0.07**	J	ND		**0.05**	J	**0.06**	J	**0.02**	J	**0.31**	
Benzo(ghi)perylene	**--**	ND		0.07	J	0.2		0.02	J	0.03	J	ND		ND		0.04	J	ND		0.32	
Benzo(k)fluoranthene	**0.002**	ND		**0.04**	J	**0.16**		**0.02**	J	**0.03**	J	ND		ND		**0.03**	J	ND		**0.28**	
Chrysene	**0.002**	ND		**0.11**	J	**0.33**		**0.04**	J	**0.06**	J	ND		**0.07**	J	**0.06**	J	**0.02**	J	**0.25**	
Dibenzo(a,h)anthracene	**--**	ND		ND		0.06	J	ND		ND		ND		ND		0.02	J	ND		0.37	
Dibenzofuran	**0.0000007**	ND		ND		ND		ND		ND		ND		ND		**2.1**		**1.2**	J	**2.5**	
Fluoranthene	**50**	ND		0.39		0.82		0.1		0.14		ND		2.1		1.1		1.5		1.5	
Fluorene	**50**	ND		0.94		0.19		0.02	J	0.02	J	ND		6.9		3.5		1.4		3.4	
Indeno(1,2,3-cd)pyrene	**0.002**	ND		**0.07**	J	**0.23**		**0.02**	J	**0.04**	J	ND		ND		**0.05**	J	ND		**0.35**	
2-Methylnapthalene	**--**	ND		0.81		ND		ND		ND		ND		0.13	J	ND		ND		ND	
Naphthalene	**10**	ND		5.8		0.37		ND		ND		ND		1.9		0.96		0.07	JB	0.09	J
Pentachlorophenol	**1**	ND		ND		ND		ND		ND		ND		ND		ND		ND		0.12	J
Phenanthrene	**50**	ND		1.4		0.88		0.06	J	0.07	J	ND		7		1.6		0.03	J	0.55	
Pyrene	**50**	ND		0.29		0.66		0.09	J	0.13		ND		1.3		0.69		0.97		0.97	
Total SVOCs		0		11.45		5.4		0.52		0.77		0		30.14		16.71		9.77		17.92	
Total Metals - ug/l																					
Aluminum	**--**	NT		278		NT		NT		NS		NT		782		NT		NT		NS	
Antimony	**3**	NT		ND		NT		NT		NS		NT		ND		NT		NT		NS	
Arsenic	**25**	ND		4.11		1.92		3.95		NS		16.8	J-	1.34		1.23		0.69		NS	
Barium	**1000**	270	J-	395.8		172.6		224		NS		ND		36.1		33.28		34.68		NS	
Cadmium	**5**	ND		0.09	J	0.07	J	ND		NS		ND		ND		ND		ND		NS	
Calcium	**--**	NT		149000		NT		NT		NS		NT		51200		NT		NT		NS	
Hexavalent Chromium	**50**	NT		NT		NT		ND		NS		NT		NT		NT		ND		NS	
Chromium	**50**	ND		1.66		0.83	J	0.4	J	NS		ND		1.48		0.36	J	0.54	J	NS	
Cobalt	**--**	NT		0.31	J	NT		NT		NS		NT		0.71		NT		NT		NS	
Copper	**200**	16.2	J-	8.07		4.55		1.23		NS		ND		2.77		0.75	J	0.42	J	NS	
Iron	**300**	NT		**8800**		NT		NT		NS		NT		**1370**		NT		NT		NS	
Cyanide	**200**	NT		3	J	4	J	ND		NS		NT		3	J	ND		ND		NS	
Lead	**25**	18.4	J-	17.85		15.98		3.21		NS		20.4	J-	9.47		9.82		1.69		NS	
Magnesium	**35000**	NT		**48300**		NT		NT		NS		NT		15400		NT		NT		NS	
Manganese	**300**	**625**	J-	253		**639.1**		**920.6**		NS		51	J-	51.39		44.17		47.33		NS	
Mercury	**0.7**	ND		ND		0.11	J	ND		NS		ND		ND		ND		ND		NS	
Nickel	**100**	ND		2.21		2.61		2.2		NS		ND		2.56		0.76		ND		NS	
Potassium	**--**	NT		11600		NT		NT		NS		NT		9720		NT		NT		NS	
Selenium	**10**	ND		ND		ND		ND		NS		ND		ND		ND		ND		NS	
Sodium	**20000**	NT		**49800**		NT		NT		NS		NT		**74300**		ND		NT		NS	
Vanadium	**--**	NT		ND		NT		NT		NS		NT		2.9	J	NT		NT		NS	
Zinc	**2000**	50.9	J-	22.63		31.49		11.38		NS		ND		14.23		9		ND		NS	
Polychlorinated biphenyls (PCBs) - ug/l																					
Total PCBs		ND		ND		NS		NS		NS		ND		ND		NS		NS		NS	
Pesticides and Herbicides - ug/l																					
		ND		ND		NS		NS		NS		ND		ND		NS		NS		NS	

Notes:

1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Values per NYSDEC Division of Water Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations - Class GA (TOGS 1.1.1)
3. Monitoring wells MW-1 and MW-7 could not be located and likely damaged during cover system installation. MW-1R and MW-7R are replacement wells installed within the same general area.

Definitions:

ND = Parameter not detected above laboratory detection limit.
NT = Parameter was not analyzed for.
"--" = No value available for the parameter; Parameter not analysed for.
J = Estimated value; result is less than the sample quantitation limit but greater than zero.
J+ = Analyte was positively identifed; the associated numerical value is an estimated quantity that may be biased high.
J- = Analyte was positively identifed; the associated numerical value is an estimated quantity that may be biased low.
Bold = Result exceeds GWQS.

FIGURES

FIGURE 1

N

2,500' 0' 2,500' 5,000'

SCALE: 1 INCH = 2,500 FEET
SCALE IN FEET
(approximate)

LEGEND:

BCP SITE BOUNDARY

*BASEMAP ADAPTED FROM BING MAPS

BENCHMARK

2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

PROJECT NO.: 0424-020-001

DATE: MAY 2022

DRAFTED BY: RFL

SITE LOCATION AND VICINITY MAP

PERIODIC REVIEW REPORT

BROWNFIELD CLEANUP PROGRAM
QUEEN CITY LANDING SITE (BCP SITE NO. 915304)
BUFFALO, NEW YORK

PREPARED FOR

QUEEN CITY LANDING, LLC

LEGEND:

BCP SITE BOUNDARY

NOTES:
1. AERIAL IMAGE FROM GOOGLE EARTH PRO 2021.

N

150' 0' 150' 300'

SCALE: 1 INCH = 150 FEET
SCALE IN FEET
(approximate)

DATE: MAY 2022
DRAFTED BY: RFL

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(716) 856-0599

JOB NO.: 0424-020-001

SITE LAYOUT MAP

PERIODIC REVIEW REPORT
BROWNFIELD CLEANUP PROGRAM
QUEEN CITY LANDING SITE (BCP SITE NO. C915304)
BUFFALO, NEW YORK
PREPARED FOR
QUEEN CITY LANDING, LLC

FIGURE 2

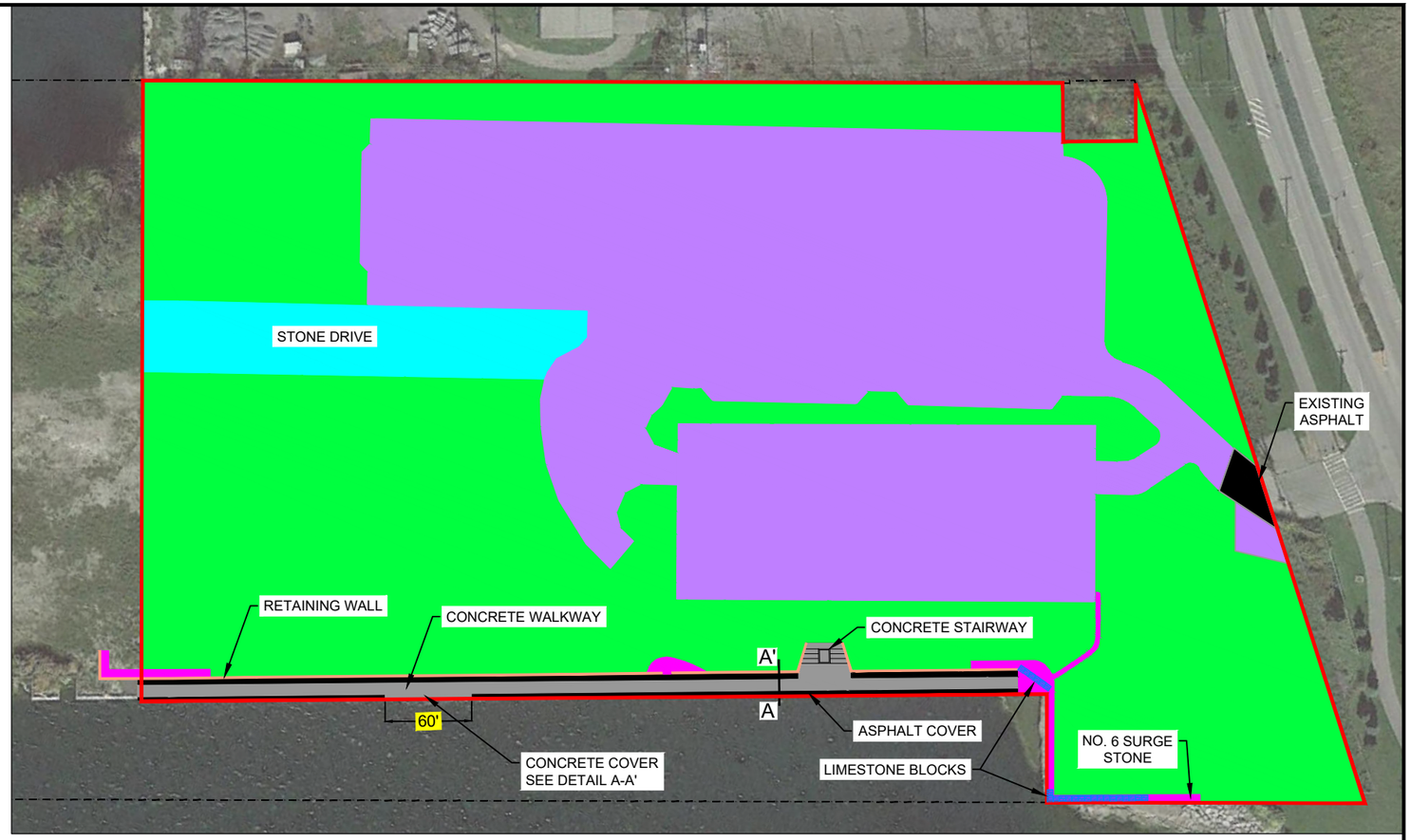
LEGEND:

- BCP SITE BOUNDARY
- PROPERTY LINE BOUNDARY
- SOIL COVER SYSTEM
- EXISTING OR NEW HARDSCAPE (CONCRETE)
- EXISTING OR NEW HARDSCAPE (ASPHALT)
- STONE PARKING COVER SYSTEM
- STONE DRIVE COVER SYSTEM
- SURGE STONE COVER SYSTEM
- LIMESTONE BLOCKS OVER SURGE STONE

NOTES:
1. AERIAL IMAGE FROM GOOGLE EARTH PRO 2021.

100' 0' 100' 200'

SCALE: 1 INCH = 100 FEET
SCALE IN FEET
(approximate)

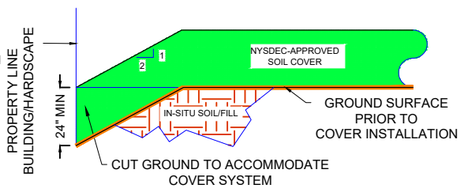


COVER SYSTEM DETAILS

NTS

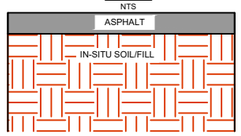
VEGETATED SOIL COVER SYSTEM DETAIL
NTS

TIE-IN DETAIL
NTS

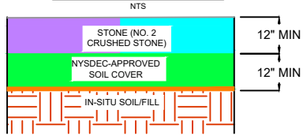


DEMARCATION LAYER

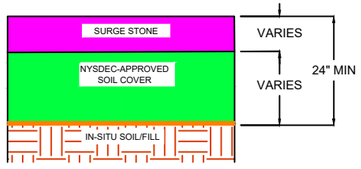
EXISTING ASPHALT DRIVE COVER SYSTEM DETAIL
NTS



STONE COVER AND PARKING SYSTEM DETAIL
NTS

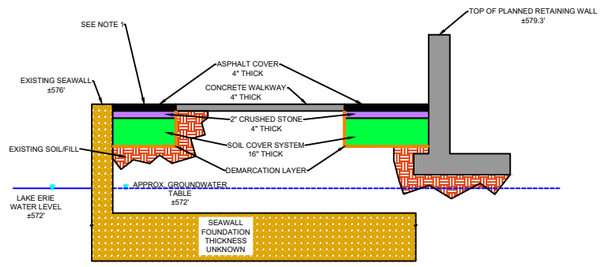


SURGE STONE COVER SYSTEM DETAIL
NTS



DETAIL A-A'

NTS



NOTE:
1. A 60-FOOT SECTION OF VEGETATED COVER ALONG THE SEAWALL WAS REPLACED BY 6" OF STONE AND 6" OF CONCRETE AT THE LOCATION SHOWN IN THE DRAWING.

DATE: MAY 2022
DRAFTED BY: RFL

F:\CAD\Benchmark\Queen City Landing\Periodic Review Reports\2022 PRR\Figure 3: Institutional and Engineering Control Locations - Cover System Map.dwg, 5/3/2022 12:01:25 PM, DWG To PDF.pc3

BENCHMARK

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(716) 856-0599

JOB NO.: 0424-021-001

INSTITUTIONAL AND ENGINEERING CONTROL LOCATIONS - COVER SYSTEM MAP

PERIODIC REVIEW REPORT

BROWNFIELD CLEANUP PROGRAM
QUEEN CITY LANDING SITE (BCP SITE NO. C915304)
BUFFALO, NEW YORK

PREPARED FOR
QUEEN CITY LANDING, LLC

FIGURE 3

LEGEND:

BCP SITE BOUNDARY

MW-1R — MONITORING WELL

WELL DESIGNATION AND DATE SAMPLED

Parameter	MW-1		MW-1R		
	3/30/3016	2/7/2017	4/3/2020	4/16/2021	3/8/2022
VOCs (ug/l)					
Benzene	**1.95**	**4.2**	0.74	0.63	NT
SVOCs (ug/l)					
Benzo(a)anthracene	ND	**0.1**	**0.38**	**0.04**	**0.07**

ANALYTE DETECTED

CONCENTRATION DETECTED (ug/l). HIGHLIGHTED VALUES EXCEED GWQS.

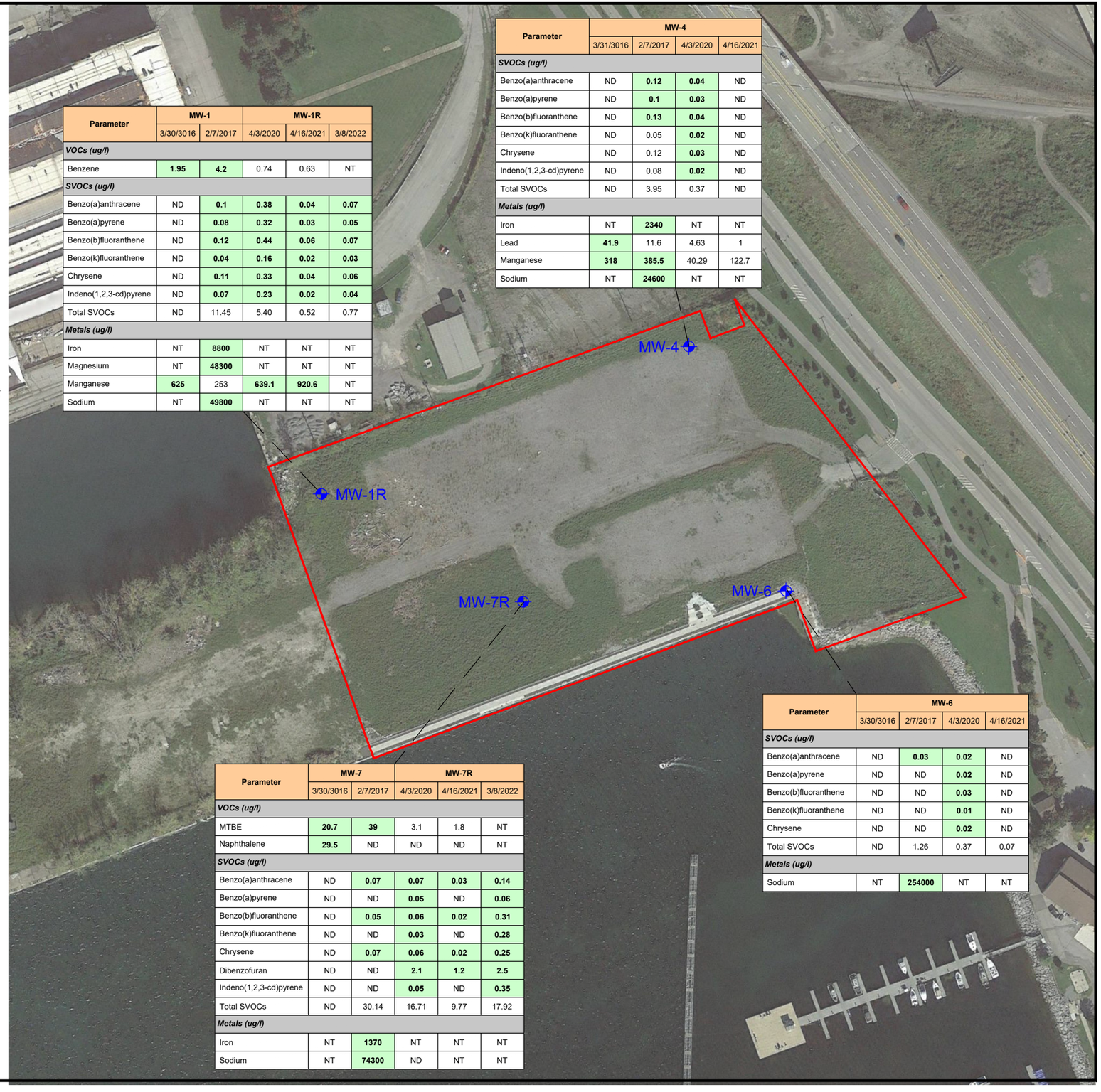
NOTES:
1. UG/L = MICROGRAMS PER LITER.
2. GROUNDWATER QUALITY STANDARDS (GWQS) PER NEW YORK STATE TOGS 1.1.1. AMBIENT WATER QUALITY STANDARDS AND GUIDANCE CRITERIA.
3. MW-1 AND MW-7 COULD NOT BE LOCATED AND WERE LIKELY DAMAGED DURING COVER SYSTEM INSTALLATION. MW-1R AND MW-7R ARE REPLACEMENT WELLS INSTALLED WITHIN THE SAME GENERAL AREA.
4. MW-4 AND MW-6 WERE DECOMMISSIONED PER NYSDEC APPROVAL ON MARCH 8, 2022.
5. ND = NOT DETECTED, NT = NOT TESTED.
6. VOCs = VOLATILE ORGANIC COMPOUNDS.
7. SVOCs = SEMI-VOLATILE ORGANIC COMPOUNDS.
8. MTBE = METHYL TERT BUTYL ETHER.
9. AERIAL IMAGE FROM GOOGLE EARTH PHOTOGRAPHY 2021.

N

150' 0' 150' 300'

SCALE: 1 INCH = 150 FEET
SCALE IN FEET
(approximate)

DATE: MAY 2022
DRAFTED BY: CNK



Parameter	MW-1		MW-1R		
	3/30/3016	2/7/2017	4/3/2020	4/16/2021	3/8/2022
VOCs (ug/l)					
Benzene	**1.95**	**4.2**	0.74	0.63	NT
SVOCs (ug/l)					
Benzo(a)anthracene	ND	**0.1**	**0.38**	**0.04**	**0.07**
Benzo(a)pyrene	ND	**0.08**	**0.32**	**0.03**	**0.05**
Benzo(b)fluoranthene	ND	**0.12**	**0.44**	**0.06**	**0.07**
Benzo(k)fluoranthene	ND	**0.04**	**0.16**	**0.02**	**0.03**
Chrysene	ND	**0.11**	**0.33**	**0.04**	**0.06**
Indeno(1,2,3-cd)pyrene	ND	**0.07**	**0.23**	**0.02**	**0.04**
Total SVOCs	ND	11.45	5.40	0.52	0.77
Metals (ug/l)					
Iron	NT	**8800**	NT	NT	NT
Magnesium	NT	**48300**	NT	NT	NT
Manganese	**625**	253	**639.1**	**920.6**	NT
Sodium	NT	**49800**	NT	NT	NT

Parameter	MW-4			
	3/31/3016	2/7/2017	4/3/2020	4/16/2021
SVOCs (ug/l)				
Benzo(a)anthracene	ND	**0.12**	**0.04**	ND
Benzo(a)pyrene	ND	**0.1**	**0.03**	ND
Benzo(b)fluoranthene	ND	**0.13**	**0.04**	ND
Benzo(k)fluoranthene	ND	0.05	**0.02**	ND
Chrysene	ND	0.12	**0.03**	ND
Indeno(1,2,3-cd)pyrene	ND	0.08	**0.02**	ND
Total SVOCs	ND	3.95	0.37	ND
Metals (ug/l)				
Iron	NT	**2340**	NT	NT
Lead	**41.9**	11.6	4.63	1
Manganese	**318**	**385.5**	40.29	122.7
Sodium	NT	**24600**	NT	NT

Parameter	MW-7		MW-7R		
	3/30/3016	2/7/2017	4/3/2020	4/16/2021	3/8/2022
VOCs (ug/l)					
MTBE	**20.7**	**39**	3.1	1.8	NT
Naphthalene	**29.5**	ND	ND	ND	NT
SVOCs (ug/l)					
Benzo(a)anthracene	ND	**0.07**	**0.07**	**0.03**	**0.14**
Benzo(a)pyrene	ND	ND	**0.05**	ND	**0.06**
Benzo(b)fluoranthene	ND	**0.05**	**0.06**	**0.02**	**0.31**
Benzo(k)fluoranthene	ND	ND	**0.03**	ND	**0.28**
Chrysene	ND	**0.07**	**0.06**	**0.02**	**0.25**
Dibenzofuran	ND	ND	**2.1**	**1.2**	**2.5**
Indeno(1,2,3-cd)pyrene	ND	ND	**0.05**	ND	**0.35**
Total SVOCs	ND	30.14	16.71	9.77	17.92
Metals (ug/l)					
Iron	NT	**1370**	NT	NT	NT
Sodium	NT	**74300**	ND	NT	NT

Parameter	MW-6			
	3/30/3016	2/7/2017	4/3/2020	4/16/2021
SVOCs (ug/l)				
Benzo(a)anthracene	ND	**0.03**	**0.02**	ND
Benzo(a)pyrene	ND	ND	**0.02**	ND
Benzo(b)fluoranthene	ND	ND	**0.03**	ND
Benzo(k)fluoranthene	ND	ND	**0.01**	ND
Chrysene	ND	ND	**0.02**	ND
Total SVOCs	ND	1.26	0.37	0.07
Metals (ug/l)				
Sodium	NT	**254000**	NT	NT

BENCHMARK
2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218.
(716) 856-0599

JOB NO.: 0424-021-001

POST REMEDIAL SAMPLING LOCATIONS AND GROUNDWATER QUALITY EXCEEDANCES

PERIODIC REVIEW REPORT
BROWNFIELD CLEANUP PROGRAM
QUEEN CITY LANDING SITE (BCP SITE NO. C915304)
BUFFALO, NEW YORK
PREPARED FOR
QUEEN CITY LANDING, LLC

FIGURE 4

APPENDIX A

INSTITUTIONAL & ENGINEERING CONTROLS CERTIFICATION FORMS

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. **C915304**

Site Name Queen City Landing

Site Address: 975 and 1005 Fuhrmann Boulevard Zip Code: 14203
City/Town: Buffalo
County: Erie
Site Acreage: 7.750

Reporting Period: April 14, 2021 to April 14, 2022

	YES	NO
1. Is the information above correct?	X	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	X
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	X
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	X
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	X

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Restricted-Residential, Commercial, and Industrial	X	☐
7. Are all ICs in place and functioning as designed?	X	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

Box 2A

	YES	NO
8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	☐	X

If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.

9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years)	☐	X

If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.

SITE NO. C915304 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
132.06-1-1.1	Queen City Landing, LLC	Ground Water Use Restriction Landuse Restriction Site Management Plan Monitoring Plan Soil Management Plan IC/EC Plan

. Prohibition of use of groundwater.
. Restricted Residential Use.
. Soil Vapor Intrusion Evaluation for any future structures.
. Groundwater monitoring.
. Soil Management or Excavation Work Plan for any future intrusive work.

132.06-1-1.2	Queen City Landing, LLC	Soil Management Plan Ground Water Use Restriction Landuse Restriction Monitoring Plan Site Management Plan IC/EC Plan

. Prohibition of use of groundwater.
. Restricted Residential Use.
. Soil Vapor Intrusion Evaluation for any future structures.
. Groundwater monitoring.
. Soil Management or Excavation Work Plan for any future intrusive work.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
132.06-1-1.1	Cover System Monitoring Wells

. Maintenance of the cover system.

132.06-1-1.2	Cover System Monitoring Wells

. Maintenance of the cover system.

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the Engineering Control certification;

b) 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 generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
X	☐

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

(a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) 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;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
X	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. C915304

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 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 Gerald A. Buchheit, Jr. at 3275 N. Benzing Road, Orchard Park, NY 14127,
print name print business address

am certifying as Owner (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Gerald A Buchheit 5/10/22

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification — Date

EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 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 Thomas H. Forbes, P.E. at 2558 Hamburg Turnpike, buffalo, NY 14218,
print name print business address

am certifying as a Professional Engineer for the Owner (Owner or Remedial Party)

STATE OF NEW YORK
THOMAS H. FORBES
No. 70950-1
LICENSED PROFESSIONAL ENGINEER

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

5-11-22
Date

APPENDIX B

PHOTOGRAPHIC LOG

SITE PHOTOGRAPHS

Photo 1:

Photo 2:

Photo 3:

Photo 4:

Photo 1: Cover system in the southeastern portion of the Site. Erosion rill repaired with large over-sized stone in 2020 to allow surface water runoff is still intact, looking south.

Photo 2: Cover system in central portion of the Site, looking northwest.

Photo 3: Cover system in the central portion of the Site, looking northwest.

Photo 4: Cover system along the western boundary of BCP Site, looking south.

SITE PHOTOGRAPHS

Photo 5:

Photo 6:

Photo 7:

Photo 8:

Photo 5: Cover system in the northwestern portion of the Site, MW-1R shown in center of photograph, looking west.

Photo 6: Hardscape cover system in southwestern portion of the Site, looking east.

Photo 7: Hardscape cover system in south-central portion of the Site. 2020 repair area behind wall still intact, looking east.

Photo 8: Cover system on eastern portion of the Site, looking south.

APPENDIX C

WELL DECOMMISSIONING INFORMATION

ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

DAILY L NO. 3 of 22
SHEET OF

FIELD ACTIVITY DAILY LOG

PROJECT NAME: Queen City Landfill	PROJECT NO.
PROJECT LOCATION: Buffalo NY	CLIENT:
FIELD ACTIVITY: Well Decommissioning	

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

TIME	DESCRIPTION
1600	Onsite -
	Made ~7 gallons of grout
	30lbs portland cement
	3lbs Bentonite Crumbles
	5gallons of water
~1618	Cut Risers on MW-4 Poured Ingrout through 1 inch threaded PVC Filled from Bottom up
~1630	Followed Same steps for MW-6 ~7gallons of grout used

VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:
WEATHER CONDITIONS: A.M.: Sunny Wind 10-15mph low 30's Wind same P.M.:	IMPORTANT TELEPHONE CALLS:
PERSONNEL ON SITE:	
SIGNATURE	DATE: 3/8/22

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

WELL ABANDONMENT/ DECOMMISSIONING LOG

DECOMMISSIONING PROCEDURES (per NYSDEC DER-10) - continued

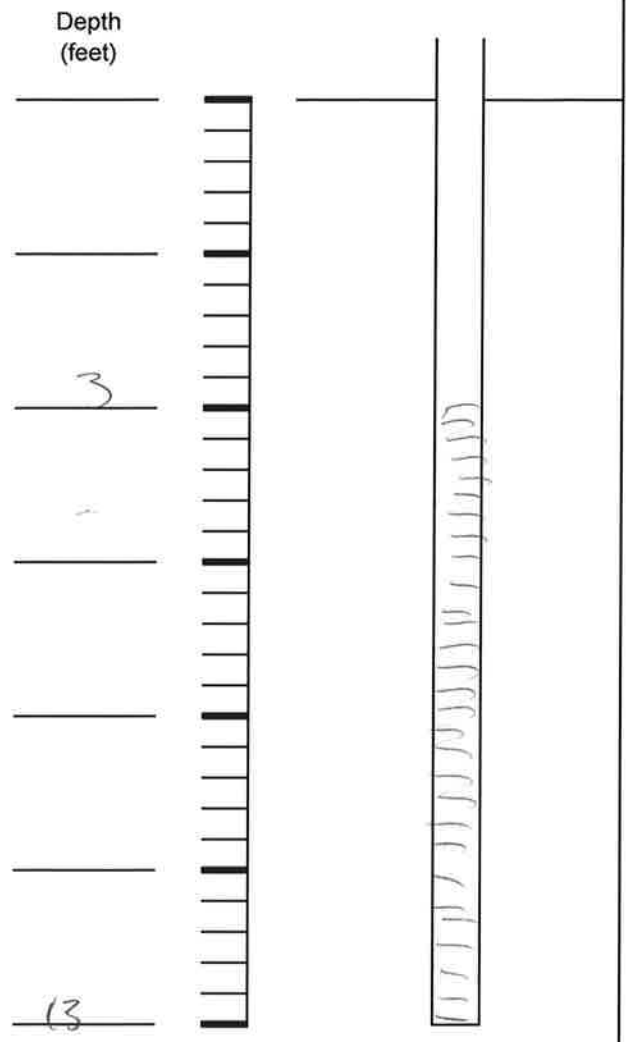
PROJECT/SITE NAME:

WELL I.D.: MW-6

Decommissioning Data (Fill in all that apply)	
Overdrillling	
Interval Drilled	X
Drilling Method(s)	
Borehole Diameter (in.)	
Temp. Casing Installed? (Y/N)	
Depth temp. casing installed	
Casing type/diam (in.)	
Method of Installation	
Casing Pulling	
Method employed	X
Casing retrieved (feet)	
Casing type/diam. (in.)	
Casing Perforating	
Equipment used	X
Number of perforaitons/foot	
Size of perforations	
Interval perforated	
Grouting	
Interval grouted (fbgs)	13 - 1 grade
No. of batches prepared	
For each batch record:	
Quantity of water used (gal.)	5 gallons
Quantity of cement used (lbs.)	35 lbs
Cement type	Portland
Quantity of bentonite used (lbs.)	3 lbs
Quantity of calcium chloride used (lbs.)	—
Volume of grout prepared (gal.)	7 gallons
Volume of grount used (gal.)	7 gallons
Comments	

Cut PVC Riser off at grade

Well Schematic*



* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor:

Department Rep.:

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

WELL ABANDONMENT/ DECOMMISSIONING LOG

DECOMMISSIONING PROCEDURES (per NYSDEC DER-10) - continued

PROJECT/SITE NAME:

WELL I.D.: MW-4

Decommissioning Data (Fill in all that apply)

Overdrillling
- Interval Drilled
- Drilling Method(s)
- Borehole Diameter (in.)
- Temp. Casing Installed? (Y/N)
- Depth temp. casing installed
- Casing type/diam (in.)
- Method of Installation

Casing Pulling
- Method employed
- Casing retrieved (feet)
- Casing type/diam. (in.)

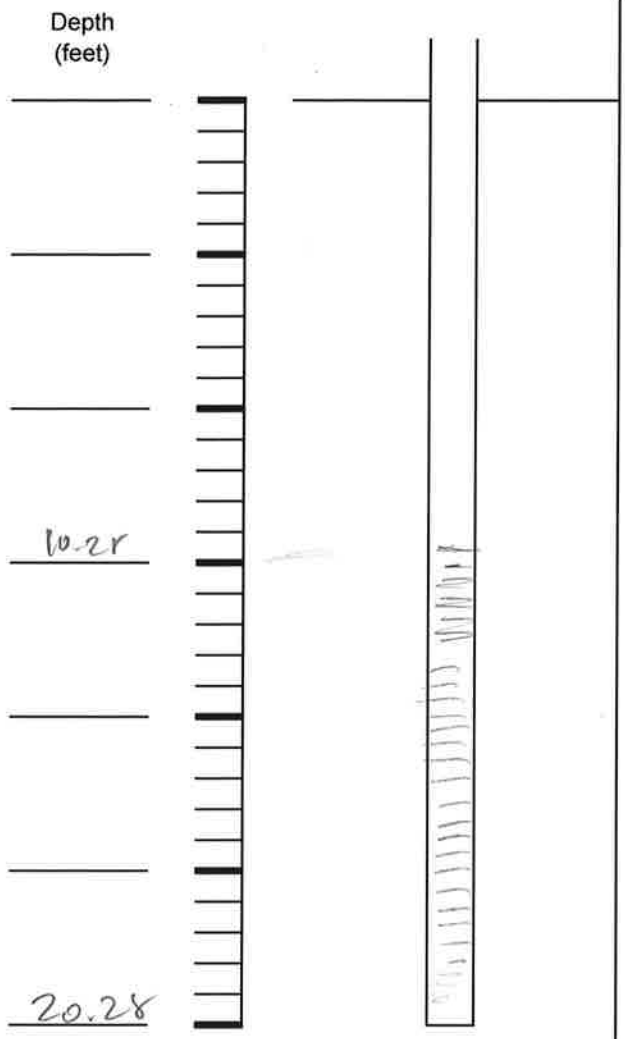
Casing Perforating
- Equipment used
- Number of perforaitons/foot
- Size of perforations
- Interval perforated

Grouting
- Interval grouted (fbgs): 20.28 to grade
- No. of batches prepared: 1 7 gallon
- For each batch record:
  - Quantity of water used (gal.): 5
  - Quantity of cement used (lbs.): 30
  - Cement type: Portland
  - Quantity of bentonite used (lbs.): 3
  - Quantity of calcium chloride used (lbs.): —
  - Volume of grout prepared (gal.): 7 gallons
  - Volume of grount used (gal.): 7 gallons

Comments

Cutt of PVC Riser grouted 20 - 0 ft

Well Schematic*



* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor:

Department Rep.:

APPENDIX D

GROUNDWATER SAMPLING INFORMATION

ANALYTICAL REPORT

Lab Number:	L2212151
Client:	Benchmark & Turnkey Companies 2558 Hamburg Turnpike Suite 300 Buffalo, NY 14218
ATTN:	Chris Boron
Phone:	(716) 856-0599
Project Name:	QUEEN CITY LANDING
Project Number:	B0424-022-001-003
Report Date:	03/28/22

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: QUEEN CITY LANDING
Project Number: B0424-022-001-003

Lab Number: L2212151
Report Date: 03/28/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2212151-01	MW-1R	WATER	BUFFALO, NY	03/08/22 12:30	03/08/22
L2212151-02	MW-7R	WATER	BUFFALO, NY	03/08/22 13:23	03/08/22
L2212151-03	BLIND DUP	WATER	BUFFALO, NY	03/08/22 12:00	03/08/22

Project Name:	QUEEN CITY LANDING	**Lab Number:**	L2212151
Project Number:	B0424-022-001-003	**Report Date:**	03/28/22

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	QUEEN CITY LANDING	**Lab Number:**	L2212151
Project Number:	B0424-022-001-003	**Report Date:**	03/28/22

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 03/28/22

ORGANICS

SEMIVOLATILES

Project Name: QUEEN CITY LANDING
Project Number: B0424-022-001-003
Lab Number: L2212151
Report Date: 03/28/22

SAMPLE RESULTS

Lab ID: L2212151-01
Client ID: MW-1R
Sample Location: BUFFALO, NY

Date Collected: 03/08/22 12:30
Date Received: 03/08/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 03/16/22 03:09
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 03/14/22 15:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Hexachlorobenzene	ND		ug/l	2.0	0.46	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		21-120
Phenol-d6	59		10-120
Nitrobenzene-d5	73		23-120
2-Fluorobiphenyl	69		15-120
2,4,6-Tribromophenol	73		10-120
4-Terphenyl-d14	74		41-149

Project Name: QUEEN CITY LANDING
Project Number: B0424-022-001-003
Lab Number: L2212151
Report Date: 03/28/22

SAMPLE RESULTS

Lab ID: L2212151-01
Client ID: MW-1R
Sample Location: BUFFALO, NY

Date Collected: 03/08/22 12:30
Date Received: 03/08/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 03/15/22 11:19
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 03/14/22 15:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	0.03	J	ug/l	0.10	0.01	1
Fluoranthene	0.14		ug/l	0.10	0.02	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.07	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.05	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.07	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.03	J	ug/l	0.10	0.01	1
Chrysene	0.06	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.03	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.03	J	ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	0.07	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.04	J	ug/l	0.10	0.01	1
Pyrene	0.13		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		21-120
Phenol-d6	52		10-120
Nitrobenzene-d5	81		23-120
2-Fluorobiphenyl	78		15-120
2,4,6-Tribromophenol	70		10-120
4-Terphenyl-d14	81		41-149

Project Name: QUEEN CITY LANDING
Project Number: B0424-022-001-003
Lab Number: L2212151
Report Date: 03/28/22

SAMPLE RESULTS

Lab ID: L2212151-02
Client ID: MW-7R
Sample Location: BUFFALO, NY

Date Collected: 03/08/22 13:23
Date Received: 03/08/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 03/16/22 03:31
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 03/14/22 15:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Hexachlorobenzene	ND		ug/l	2.0	0.46	1
Dibenzofuran	2.5		ug/l	2.0	0.50	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	50		21-120
Phenol-d6	44		10-120
Nitrobenzene-d5	60		23-120
2-Fluorobiphenyl	56		15-120
2,4,6-Tribromophenol	83		10-120
4-Terphenyl-d14	74		41-149

Project Name: QUEEN CITY LANDING
Project Number: B0424-022-001-003
Lab Number: L2212151
Report Date: 03/28/22

SAMPLE RESULTS

Lab ID: L2212151-02
Client ID: MW-7R
Sample Location: BUFFALO, NY

Date Collected: 03/08/22 13:23
Date Received: 03/08/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 03/15/22 12:55
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 03/14/22 15:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	6.1		ug/l	0.10	0.01	1
Fluoranthene	1.5		ug/l	0.10	0.02	1
Naphthalene	0.09	J	ug/l	0.10	0.05	1
Benzo(a)anthracene	0.14		ug/l	0.10	0.02	1
Benzo(a)pyrene	0.06	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.31		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.28		ug/l	0.10	0.01	1
Chrysene	0.25		ug/l	0.10	0.01	1
Acenaphthylene	0.10	J	ug/l	0.10	0.01	1
Anthracene	0.51		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.32		ug/l	0.10	0.01	1
Fluorene	3.4		ug/l	0.10	0.01	1
Phenanthrene	0.55		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.37		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.35		ug/l	0.10	0.01	1
Pyrene	0.97		ug/l	0.10	0.02	1
Pentachlorophenol	0.12	J	ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		21-120
Phenol-d6	43		10-120
Nitrobenzene-d5	69		23-120
2-Fluorobiphenyl	68		15-120
2,4,6-Tribromophenol	74		10-120
4-Terphenyl-d14	80		41-149

Project Name: QUEEN CITY LANDING
Project Number: B0424-022-001-003
Lab Number: L2212151
Report Date: 03/28/22

SAMPLE RESULTS

Lab ID: L2212151-03
Client ID: BLIND DUP
Sample Location: BUFFALO, NY

Date Collected: 03/08/22 12:00
Date Received: 03/08/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 03/16/22 03:54
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 03/15/22 09:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Hexachlorobenzene	ND		ug/l	2.0	0.46	1
Dibenzofuran	3.0		ug/l	2.0	0.50	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	72		21-120
Phenol-d6	56		10-120
Nitrobenzene-d5	81		23-120
2-Fluorobiphenyl	78		15-120
2,4,6-Tribromophenol	109		10-120
4-Terphenyl-d14	92		41-149

Project Name: QUEEN CITY LANDING
Project Number: B0424-022-001-003
Lab Number: L2212151
Report Date: 03/28/22

SAMPLE RESULTS

Lab ID: L2212151-03
Client ID: BLIND DUP
Sample Location: BUFFALO, NY

Date Collected: 03/08/22 12:00
Date Received: 03/08/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 03/16/22 12:57
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 03/15/22 09:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	7.4		ug/l	0.10	0.01	1
Fluoranthene	1.8		ug/l	0.10	0.02	1
Naphthalene	0.11		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.04	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.01	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	0.03	J	ug/l	0.10	0.01	1
Acenaphthylene	0.11		ug/l	0.10	0.01	1
Anthracene	0.53		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	4.3		ug/l	0.10	0.01	1
Phenanthrene	0.71		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	1.2		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		21-120
Phenol-d6	56		10-120
Nitrobenzene-d5	90		23-120
2-Fluorobiphenyl	90		15-120
2,4,6-Tribromophenol	96		10-120
4-Terphenyl-d14	100		41-149

Project Name: QUEEN CITY LANDING
Project Number: B0424-022-001-003
Lab Number: L2212151
Report Date: 03/28/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 03/14/22 23:41
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 03/13/22 18:32

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1615107-1					
Hexachlorobenzene	ND		ug/l	2.0	0.46
Dibenzofuran	ND		ug/l	2.0	0.50
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.49
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		21-120
Phenol-d6	42		10-120
Nitrobenzene-d5	75		23-120
2-Fluorobiphenyl	70		15-120
2,4,6-Tribromophenol	63		10-120
4-Terphenyl-d14	81		41-149

Project Name: QUEEN CITY LANDING
Project Number: B0424-022-001-003
Lab Number: L2212151
Report Date: 03/28/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 03/14/22 15:57
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 03/13/22 18:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1615109-1					
Acenaphthene	ND		ug/l	0.10	0.01
Fluoranthene	ND		ug/l	0.10	0.02
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	0.02	J	ug/l	0.10	0.02
Benzo(a)pyrene	0.02	J	ug/l	0.10	0.02
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01
Benzo(k)fluoranthene	0.02	J	ug/l	0.10	0.01
Chrysene	0.03	J	ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	0.02	J	ug/l	0.10	0.01
Fluorene	0.02	J	ug/l	0.10	0.01
Phenanthrene	0.03	J	ug/l	0.10	0.02
Dibenzo(a,h)anthracene	0.02	J	ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	0.02	J	ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.01
Hexachlorobenzene	ND		ug/l	0.80	0.01

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		21-120
Phenol-d6	38		10-120
Nitrobenzene-d5	68		23-120
2-Fluorobiphenyl	71		15-120
2,4,6-Tribromophenol	59		10-120
4-Terphenyl-d14	78		41-149

Project Name: QUEEN CITY LANDING
Project Number: B0424-022-001-003
Lab Number: L2212151
Report Date: 03/28/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 03/16/22 00:09
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 03/15/22 09:19

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1615752-1					
Hexachlorobenzene	ND		ug/l	2.0	0.46
Dibenzofuran	ND		ug/l	2.0	0.50
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.49
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	61		21-120
Phenol-d6	50		10-120
Nitrobenzene-d5	78		23-120
2-Fluorobiphenyl	78		15-120
2,4,6-Tribromophenol	85		10-120
4-Terphenyl-d14	97		41-149

Project Name: QUEEN CITY LANDING
Project Number: B0424-022-001-003
Lab Number: L2212151
Report Date: 03/28/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 03/17/22 18:14
Analyst: RP

Extraction Method: EPA 3510C
Extraction Date: 03/15/22 09:19

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 03 Batch: WG1615753-1					
Acenaphthene	ND		ug/l	0.10	0.01
Fluoranthene	ND		ug/l	0.10	0.02
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.01
Hexachlorobenzene	ND		ug/l	0.80	0.01

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	55		21-120
Phenol-d6	45		10-120
Nitrobenzene-d5	79		23-120
2-Fluorobiphenyl	79		15-120
2,4,6-Tribromophenol	75		10-120
4-Terphenyl-d14	91		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: QUEEN CITY LANDING

Project Number: B0424-022-001-003

Lab Number: L2212151

Report Date: 03/28/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1615107-2 WG1615107-3								
Hexachlorobenzene	82		66		40-140	22		30
Dibenzofuran	75		61		40-140	21		30
Phenol	59		45		12-110	27		30
2-Methylphenol	74		62		30-130	18		30
3-Methylphenol/4-Methylphenol	78		66		30-130	17		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	77		63		21-120
Phenol-d6	59		47		10-120
Nitrobenzene-d5	84		69		23-120
2-Fluorobiphenyl	74		62		15-120
2,4,6-Tribromophenol	100		84		10-120
4-Terphenyl-d14	81		74		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: QUEEN CITY LANDING
Project Number: B0424-022-001-003

Lab Number: L2212151
Report Date: 03/28/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1615109-2 WG1615109-3								
Acenaphthene	71		89		40-140	23		40
Fluoranthene	73		95		40-140	26		40
Naphthalene	68		84		40-140	21		40
Benzo(a)anthracene	71		92		40-140	26		40
Benzo(a)pyrene	65		84		40-140	26		40
Benzo(b)fluoranthene	68		90		40-140	28		40
Benzo(k)fluoranthene	75		94		40-140	22		40
Chrysene	72		90		40-140	22		40
Acenaphthylene	72		91		40-140	23		40
Anthracene	75		94		40-140	22		40
Benzo(ghi)perylene	78		98		40-140	23		40
Fluorene	88		97		40-140	10		40
Phenanthrene	75		90		40-140	18		40
Dibenzo(a,h)anthracene	82		106		40-140	26		40
Indeno(1,2,3-cd)pyrene	73		93		40-140	24		40
Pyrene	73		94		40-140	25		40
Pentachlorophenol	110		136		40-140	21		40
Hexachlorobenzene	69		86		40-140	22		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: QUEEN CITY LANDING
Project Number: B0424-022-001-003

Lab Number: L2212151
Report Date: 03/28/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1615109-2 WG1615109-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	60		74		21-120
Phenol-d6	51		63		10-120
Nitrobenzene-d5	81		101		23-120
2-Fluorobiphenyl	81		102		15-120
2,4,6-Tribromophenol	82		107		10-120
4-Terphenyl-d14	83		107		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: QUEEN CITY LANDING

Project Number: B0424-022-001-003

Lab Number: L2212151

Report Date: 03/28/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1615752-2 WG1615752-3								
Hexachlorobenzene	100		98		40-140	2		30
Dibenzofuran	87		81		40-140	7		30
Phenol	63		56		12-110	12		30
2-Methylphenol	88		79		30-130	11		30
3-Methylphenol/4-Methylphenol	89		81		30-130	9		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	82		61		21-120
Phenol-d6	64		59		10-120
Nitrobenzene-d5	89		81		23-120
2-Fluorobiphenyl	84		70		15-120
2,4,6-Tribromophenol	118		98		10-120
4-Terphenyl-d14	92		86		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: QUEEN CITY LANDING
Project Number: B0424-022-001-003

Lab Number: L2212151
Report Date: 03/28/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 03 Batch: WG1615753-2 WG1615753-3								
Acenaphthene	82		74		40-140	10		40
Fluoranthene	84		79		40-140	6		40
Naphthalene	77		70		40-140	10		40
Benzo(a)anthracene	84		78		40-140	7		40
Benzo(a)pyrene	79		71		40-140	11		40
Benzo(b)fluoranthene	84		81		40-140	4		40
Benzo(k)fluoranthene	86		82		40-140	5		40
Chrysene	79		74		40-140	7		40
Acenaphthylene	76		75		40-140	1		40
Anthracene	86		75		40-140	14		40
Benzo(ghi)perylene	85		81		40-140	5		40
Fluorene	86		79		40-140	8		40
Phenanthrene	80		73		40-140	9		40
Dibenzo(a,h)anthracene	91		88		40-140	3		40
Indeno(1,2,3-cd)pyrene	82		80		40-140	2		40
Pyrene	82		78		40-140	5		40
Pentachlorophenol	97		101		40-140	4		40
Hexachlorobenzene	78		69		40-140	12		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: QUEEN CITY LANDING

Project Number: B0424-022-001-003

Lab Number: L2212151

Report Date: 03/28/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 03 Batch: WG1615753-2 WG1615753-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	69		63		21-120
Phenol-d6	56		51		10-120
Nitrobenzene-d5	89		80		23-120
2-Fluorobiphenyl	86		76		15-120
2,4,6-Tribromophenol	89		83		10-120
4-Terphenyl-d14	89		84		41-149

Matrix Spike Analysis

Batch Quality Control

Project Name: QUEEN CITY LANDING

Project Number: B0424-022-001-003

Lab Number: L2212151

Report Date: 03/28/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1615107-4 WG1615107-5 QC Sample: L2212151-01 Client ID: MW-1R												
Hexachlorobenzene	ND	18.2	14	77		14	77		40-140	0		30
Dibenzofuran	ND	18.2	12	66		12	66		40-140	0		30
Phenol	ND	18.2	11	61		12	66		12-110	9		30
2-Methylphenol	ND	18.2	12	66		15	83		30-130	22		30
3-Methylphenol/4-Methylphenol	ND	18.2	14	77		16	88		30-130	13		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	86		86		10-120
2-Fluorobiphenyl	59		64		15-120
2-Fluorophenol	63		66		21-120
4-Terphenyl-d14	67		72		41-149
Nitrobenzene-d5	69		82		23-120
Phenol-d6	56		61		10-120

Matrix Spike Analysis

Batch Quality Control

Project Name: QUEEN CITY LANDING
Project Number: B0424-022-001-003
Lab Number: L2212151
Report Date: 03/28/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1615109-4 WG1615109-5 QC Sample: L2212151-01 Client ID: MW-1R												
Acenaphthene	0.03J	18.2	12	66		13	72		40-140	8		40
Fluoranthene	0.14	18.2	13	71		14	76		40-140	7		40
Naphthalene	ND	18.2	11	61		13	72		40-140	17		40
Benzo(a)anthracene	0.07J	18.2	12	66		14	77		40-140	15		40
Benzo(a)pyrene	0.05J	18.2	11	61		12	66		40-140	9		40
Benzo(b)fluoranthene	0.07J	18.2	12	66		13	72		40-140	8		40
Benzo(k)fluoranthene	0.03J	18.2	12	66		14	77		40-140	15		40
Chrysene	0.06J	18.2	11	61		13	72		40-140	17		40
Acenaphthylene	ND	18.2	12	66		13	72		40-140	8		40
Anthracene	0.03J	18.2	12	66		13	72		40-140	8		40
Benzo(ghi)perylene	0.03J	18.2	13	72		14	77		40-140	7		40
Fluorene	0.02J	18.2	12	66		14	77		40-140	15		40
Phenanthrene	0.07J	18.2	12	66		13	72		40-140	8		40
Dibenzo(a,h)anthracene	ND	18.2	13	72		15	83		40-140	14		40
Indeno(1,2,3-cd)pyrene	0.04J	18.2	13	72		15	83		40-140	14		40
Pyrene	0.13	18.2	12	65		13	71		40-140	8		40
Pentachlorophenol	ND	18.2	13	72		14	77		40-140	7		40
Hexachlorobenzene	ND	18.2	12	66		13	72		40-140	8		40

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	65		80		10-120
2-Fluorobiphenyl	62		73		15-120

Matrix Spike Analysis

Batch Quality Control

Project Name: QUEEN CITY LANDING
Project Number: B0424-022-001-003

Lab Number: L2212151
Report Date: 03/28/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1615109-4 WG1615109-5 QC Sample: L2212151-01 Client ID: MW-1R												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2-Fluorophenol	56		65		21-120
4-Terphenyl-d14	64		76		41-149
Nitrobenzene-d5	65		75		23-120
Phenol-d6	49		58		10-120

Project Name: QUEEN CITY LANDING
Project Number: B0424-022-001-003

Lab Number: L2212151
Report Date: 03/28/22

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2212151-01A	Amber 250ml unpreserved	A	7	7	4.2	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2212151-01A1	Amber 250ml unpreserved	A	7	7	4.2	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2212151-01A2	Amber 250ml unpreserved	A	7	7	4.2	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2212151-01B	Amber 250ml unpreserved	A	7	7	4.2	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2212151-01B1	Amber 250ml unpreserved	A	7	7	4.2	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2212151-01B2	Amber 250ml unpreserved	A	7	7	4.2	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2212151-02A	Amber 250ml unpreserved	A	7	7	4.2	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2212151-02B	Amber 250ml unpreserved	A	7	7	4.2	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2212151-03A	Amber 250ml unpreserved	A	7	7	4.2	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2212151-03B	Amber 250ml unpreserved	A	7	7	4.2	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)

*Values in parentheses indicate holding time in days

Project Name:	QUEEN CITY LANDING	**Lab Number:**	L2212151
Project Number:	B0424-022-001-003	**Report Date:**	03/28/22

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	QUEEN CITY LANDING	**Lab Number:**	L2212151
Project Number:	B0424-022-001-003	**Report Date:**	03/28/22

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	QUEEN CITY LANDING	**Lab Number:**	L2212151
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Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: DU Report with 'J' Qualifiers

Project Name:	QUEEN CITY LANDING	**Lab Number:**	L2212151
Project Number:	B0424-022-001-003	**Report Date:**	03/28/22

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 3/9/22

ALPHA Job #: L2212151

Client Information
Client: Benchmark Eng
Address: 2558 Hamburg Turnpike
Lackawanna NY 14218
Phone: (716) 818-8358
Fax:
Email: BehrendS@TurnkeyNA.com

Project Information
Project Name: Queen City Landing
Project Location: Buffalo NY
Project #: B0434-022-001-003
(Use Project name as Project #)
Project Manager: Chris Boron
ALPHAQuote #:

Turn-Around Time
Standard: ☒ Due Date:
Rush (only if pre approved): ☐ # of Days:

Deliverables
☐ ASP-A ☒ ASP-B
☐ EQuIS (1 File) ☒ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☐ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS
Pt 375 8 VOC

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Pt 375 8 VOC	Sample Specific Comments	Total Bottle
12151-01	MW-1R MS/MSD	3/8/22	1230	Water	TAB	X		2
-02	MW-7R	"	1323	"	"	X		2
-03	Blind Dup	"	1200	"	"	X		2

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type: A
Preservative: A

Relinquished By:	Date/Time	Received By:	Date/Time
TAB	3/8/22 1440	BL/AL	3/08/22 16:10
BL/AL	3/08/22 16:10		3/9/22 0025

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

EQUIPMENT CALIBRATION LOG

PROJECT INFORMATION:

Project Name: Queen city landy

Date: 3/8/22

Project No.:

Client:

Instrument Source: ☐ BM ☐ Rental

METER TYPE	UNITS	TIME	MAKE/MODEL	SERIAL NUMBER	CAL. BY	STANDARD	POST CAL. READING	SETTINGS
☑ pH meter	units	850	Myron L Company Ultra Meter 6P	6213516 ☐ 6243084 ☐ 6212375 ☑ 6243003 ☐ 6223973 ☐		4.00	4.01	4
						7.00	6.97	7
						10.01	10.98	10
☑ Turbidity meter	NTU	850	Hach 2100P or 2100Q Turbidimeter	06120C020523 (P) ☑ 13120C030432 (Q) ☐ 17110C062619 (Q) ☐		10 NTU verification		
						< 0.4	0.21	0.1
						20	21.4	20
						100	94.6	100
						800	792	800
☑ Sp. Cond. meter	uS mS	850	Myron L Company Ultra Meter 6P	6213516 ☐ 6243084 ☐ 6212375 ☑ 6243003 ☐ 6223973 ☐		7.00 mS @ 25 °C	7,068	7,000
☐ PID	ppm		MinRAE 2000			open air zero ____ ppm Iso. Gas		MIBK response factor = 1.0
☑ Dissolved Oxygen	ppm	850	HACH Model HQ30d	080700023281 ☐ 100500041867 ☐ 140200100319 ☑		100% Satuartion	✓	97.6% slow
☐ Particulate meter	mg/m³					zero air		
☐ Radiation Meter	uR/H					background area		

ADDITIONAL REMARKS:

PREPARED BY: DAB **DATE:** 3/8/22

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER FIELD FORM

Project Name: Date: 3/8/22

Location: Project No.: Field Team:

Well No. MW-1R			Diameter (inches): 2"			Sample Date / Time:			
Product Depth (fbTOR): -			Water Column (ft): 7.72			DTW when sampled:			
DTW (static) (fbTOR): 8.48			One Well Volume (gal): 0.31			Purpose: ☐ Development ☐ Sample ☐ Purge & Sample			
Total Depth (fbTOR): 16.20			Total Volume Purged (gal):			Purge Method: peristaltic			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1217	0 Initial	0	7.12	16.3	1538	235	1.42	-69	Turbid No odor
1220	1 -	0.3	7.27	9.4	1398	58.0	1.92	-73	sl Turbid "
1223	2 -	0.75	7.22	8.2	1376	20.7	2.21	-65	"
1227	3 -	1.0	7.24	8.1	1363	9.87	1.96	-52	"
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:			MS/MSD collected						
1230	S1 -	1.25	7.24	8.5	1364	8.64	2.24	-67	"
1234	S2 -	1.50	7.20	8.8	1338	4.99	4.06	-61	

Well No. MW-7R			Diameter (inches): 2"			Sample Date / Time:			
Product Depth (fbTOR):			Water Column (ft): 11.5			DTW when sampled:			
DTW (static) (fbTOR): 9.88			One Well Volume (gal): 0.47			Purpose: ☐ Development ☐ Sample ☐ Purge & Sample			
Total Depth (fbTOR): 21.38			Total Volume Purged (gal):			Purge Method:			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1308	0 Initial	0	8.11	8.4	7081	>1000	1.33	-143	cloudy sulfur odor
1312	1	0.5	8.35	9.6	636.2	114	1.44	-143	sl Turbid Sulfur odor
1317	2	1.0	8.43	9.7	633.4	94.7	1.54	-145	" "
1323	3	1.50	8.48	9.3	634.5	28.1	1.60	-45	"
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
1327	S1	1.75	8.47	9.3	639.9	16.0	2.03	-139	"
1336	S2	2.0	8.49	9.5	636.9	13.8	1.35	-127	"

REMARKS:

Note: All water level measurements are in feet, distance from top of riser.

Volume Calculation

Diam.	Vol. (g/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	± 0.1 unit
SC	± 3%
Turbidity	± 10%
DO	± 0.3 mg/L
ORP	± 10 mV

PREPARED BY: