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Subject:
Pre-Design Investigation Results
Rensselaer Non-Owned Former MGP Site (#V00488)

ENVIRONMENTAL

Dear Mr. Spellman:

On behalf of National Grid, this letter presents a summary of the Phase I pre-design investigation (PDI) completed at National Grid's Non-Owned Former Manufactured Gas Plant (MGP) site (the Site) located in Rensselaer, New York (Site No. V00488). The overall objective of the Phase I PDI was to obtain data to support the remedial design for the New York State Department of Environmental Conservation- (NYSDEC-) selected site remedy.

Date:
March 13, 2018

Contact:
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Our ref:
B0036730.0000 #10

The following sections present a description of the PDI activities and results, proposed modification to the extent of remedial construction activities, and a schedule for preparing the remedial design.

PHASE I PDI ACTIVITIES AND RESULTS

Phase I PDI activities were generally conducted from November 2016 through December 2017 in accordance with the NYSDEC-approved July 2016 *Remedial Design Work Plan* (RDWP) and supporting documents. Prior to conducting the Phase I PDI activities, Arcadis conducted a site meeting on September 19, 2016 to discuss PDI activities with the Office of Child and Family Services (OCFS). In accordance with OCFS's request, intrusive activities (e.g., monitoring well decommissioning/installation, soil boring drilling, and test pit excavation) were generally conducted on dates when the OCFS was closed (e.g., on holidays and weekends), including:

- November 10 to 11, 2016
- January 14 to 17, 2017
- February 19 to 20, 2017
- July 8 to 9, 2017

In accordance with the RDWP, Arcadis conducted community air monitoring for volatile organic compounds (VOCs) and particulate matter with a diameter of 10 micrometers or less (PM₁₀) during intrusive activities (i.e., monitoring well

installation, soil boring drilling, and test pit excavation). Action levels (as defined in the RDWP) for VOCs and PM₁₀ were not exceeded during the PDI activities. Upwind and downwind VOC and dust levels recorded during the PDI activities are provided as Attachment 1. Note that VOC data from November 11 to November 12, 2016 and from July 8 to July 9, 2017 could not be retrieved due to an equipment malfunction; manual readings for PDI activities conducted in November 2016 are provided in lieu of the electronic data.

PDI locations are shown on Figure 1.

Cultural Resources Investigation

Based on the results of the Phase IA Cultural Resources Investigation (as presented in the May 2014 *Remedial Investigation Report* [RI Report]), the site overburden strata between the fill and the glacial till has the potential to contain cultural materials. Therefore, Arcadis submitted a request for consultation to the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) on October 20, 2016 to determine if any additional cultural resource investigation activities were required (e.g., a Phase IB subsurface investigation) and to further assess the presence/absence of archeological or historic artifacts at the site prior to the implementation of the NYSDEC-selected remedy. Arcadis also contacted the Office of Indian Nations Affairs on October 25, 2016 to determine if Native American consultation was required.

As indicated in OPRHP's correspondence (dated November 3, 2016), no additional subsurface investigations to assess potential cultural resources are required, as the extent of the anticipated remedial activities will have no impact on historical properties/places. Additionally, during a November 3, 2016 telephone conversation with NYSDEC's Native American liaison (Mr. David Witt), NYSDEC indicated that a Native American consultation is also not required. Relevant correspondence with OPRHP and Office of Indian Nations Affairs is included as Attachment 2.

Utility Coordination and Markout

In support of each PDI mobilization, Arcadis contacted Dig Safety New York (DigSafe) to perform a public utility markout, prior to conducting intrusive activities. Additionally, Arcadis subcontracted with National GPR Service, Inc. (National GPR) to conduct an independent private utility markout. National GPR utilized ground-penetrating radar (GPR) to further evaluate the potential presence of subsurface utilities and obstructions, as well as to confirm the location of the former gas holders/tar well prior to conducting PDI activities.

It should be noted that during the utility markout, an 8-inch cast iron gas main was identified in Huyck Square. Based on a February 15, 2017 telephone conversation with representatives of public utility locator USIC, LLC, the 8-inch gas main is currently inactive and is capped at Washington Street.

NAPL Investigation

Arcadis conducted NAPL investigation activities to further assess the absence/presence of mobile NAPL in the area immediately north of the northern gas holder and the tar well (i.e., near or within Huyck Square). NAPL investigation activities consisted of decommissioning select existing monitoring wells, installing new NAPL monitoring wells, and conducting periodic NAPL monitoring activities. Existing monitoring wells were decommissioned and replaced with new monitoring wells because the existing wells were not constructed with sumps. Therefore, the existing wells were unable to verify the absence or

presence of NAPL. Additionally, the new wells were located to provide better spatial distribution along the property boundary to evaluate NAPL mobility.

Monitoring Well Decommissioning

Arcadis' drilling subcontractor (Parratt-Wolff, Inc. [Parratt-Wolff]) decommissioned monitoring wells MW-102-05 and MW-103-05 (located immediately north of the northern gas holder and the tar well, respectively) in accordance with NYSDEC's November 3, 2009 guidance CP-43 *Groundwater Monitoring Well Decommissioning Policy*. Well decommissioning activities consisted of pulling the upper five feet of well casing and grouting the wells in place (to ground surface) with a non-shrink grout. Well decommissioning logs are included as Attachment 3.

Note that approximately $\frac{1}{4}$ to $\frac{1}{2}$ gallon of a NAPL/water mixture was recovered from monitoring well MW-102-05 prior to decommissioning.

Monitoring Well Installation

Parratt-Wolff installed three new NAPL monitoring wells (i.e., MW-116 to MW-118) in the area immediately north of the northern gas holder and the tar well. New NAPL monitoring wells MW-116 and MW-118 were installed adjacent to the previously decommissioned monitoring wells MW-103-05 and MW-102-05, respectively, and new NAPL monitoring well MW-117 was installed between these locations to provide spatial distribution of the new wells along Huyck Square. The borings for the new NAPL monitoring wells were drilled using hollow-stem auger (HSA) techniques. Well construction included 2-inch diameter schedule 40 PVC installed to the top of till (depths ranging from approximately 20 to 23 feet below grade), with a 2-foot long sump installed into the till, and a flush-mount curb box. Monitoring well construction/soil boring logs are included as Attachment 4.

During drilling, NAPL (i.e., brownish-black oil-like NAPL) was only observed at monitoring well MW-117 from approximately 13.2 to 13.7 feet below grade. Field observations from the soil borings completed to during installation of the new wells are summarized in Table 1.

Approximately 24 hours following installation, Arcadis developed the new NAPL monitoring wells using a positive displacement pump and dedicated polyethylene tubing. The wells were developed by alternately surging and purging the well screen until the water removed from the wells was reasonably free of visible sediment (50 nephelometric turbidity units [NTUs]).

NAPL Monitoring

Following installation and development of the new monitoring wells, Arcadis conducted periodic NAPL monitoring of the entire well monitoring network (i.e., new and existing wells) to assess the absence/presence of mobile NAPL, specifically in the area immediately north of the northern gas holder and the tar well. NAPL monitoring activities generally consisted of gauging monitoring wells for the presence and thickness of NAPL using an oil-water interface probe.

NAPL monitoring was initially conducted approximately one week following the installation and development of the new NAPL monitoring wells and then monthly for a period of eight months. Arcadis (on behalf of National Grid) then requested (via an August 22, 2017 letter to NYSDEC) to discontinue NAPL monitoring activities, as no significant quantities of NAPL accumulated in any of the wells during the initial 8-month monitoring period. In accordance with NYSDEC's September 8, 2017 response letter,

NAPL monitoring frequency was reduced to bi-monthly and conducted two more times; in October and December 2017.

Significant quantities of NAPL were not observed in any of the wells, including the newly installed monitoring wells along Huyck Square. Minor amounts of NAPL (i.e., from blebs on the probe/tape up to 0.1 feet of NAPL) were periodically observed in monitoring wells MW-102R-10, MW-106D-08, and MW-118. However, NAPL was not consistently observed and quantities were not recoverable, indicating that mobile NAPL is not present. NAPL monitoring results are presented in the attached Table 2.

Soil Investigation

Arcadis conducted soil investigation activities in support of developing the design for soil excavation activities. Specifically, soil investigation activities were conducted to:

- Obtain geotechnical data necessary to evaluate and design soil excavation support systems.
- Confirm holder and tar well locations.
- Obtain waste characterization data to support profiling for off-site treatment/disposal (and facilitate direct-loading) of excavated materials during the remedial design.

Geotechnical Sampling

Parratt-Wolff drilled four geotechnical soil borings (B-134 to B-137) using HSA methods to depths up to 24.2 feet below grade (i.e., to refusal). Soil sampling was performed continuously at each geotechnical soil boring to the top of bedrock using 2-inch diameter split spoon sampling devices. Standard Penetration Testing (SPT) was conducted to assess the relative density of the in-place soils following ASTM D1586. Additionally, five (5) feet of bedrock coring (ASTM D2113) was completed at soil borings B-136 and B-137 to evaluate rock strength. Bedrock was continuously cored using HQ-sized coring equipment resulting in a 3.8-inch diameter borehole. Once completed, each borehole was grouted to the existing grade, with the exception of B-135 which was completed to facilitate the installation of monitoring well MW-118. During drilling, a NAPL coating (i.e., brownish-black oil-like NAPL) was only observed at soil boring B-136 from approximately 10 to 12 feet below grade. Field observations from the geotechnical soil borings are summarized on Table 1. Soil boring logs are included as part of Attachment 4.

A total of 21 soil samples were submitted for geotechnical testing to Kenney Geotechnical Engineering Services, PLLC. The results of the geotechnical testing will be used during preparation of the remedial design. Geotechnical testing reports are included as Attachment 5.

Test Pits

Parratt-Wolff excavated eight test pits (i.e., TP-106, TP-107, and TP-109 through TP-114) to confirm the location of the former gas holders/tar well, as well as to locate/identify shallow foundations, obstructions and/or other subsurface features. Relative to the RDWP, variations in the test pits excavated during the PDI included:

- TP-108 was not completed because a large section of the northern gas holder was located and observed to be structurally competent at TP-107.
- TP-111 through TP-114 were completed (in addition to the test pits proposed in the RDWP) to further investigate the location of the southern holder wall.

Parratt-Wolff saw-cut the asphalt pavement prior to excavating the test pits. Excavated material was temporarily staged on polyethylene sheeting adjacent to the test pits. Parratt-Wolff backfilled each test pit by replacing the excavated material in the reverse order that it was removed (i.e., excavated materials were placed back into the test pits at approximately the same depths and locations from which they were removed). Visually clean soils were used to cover visually impacted material (when encountered).

Relevant observations were documented and photographed, and include:

- **Tar Well** – The wall of the tar well was encountered at approximately 5.5 feet below grade at the northern portion of test pit TP-106. Pockets of viscous NAPL were observed on top of the uncovered tar well structure.
- **Northern Gas Holder** – The wall of the northern gas holder (consisting of red brick) was initially encountered at approximately 2 feet below grade east of the southern wall of TP-107A. Test pit TP-107B was then excavated perpendicular to test pit TP-107A to further uncover the holder wall. The holder wall appears to be structurally competent based on visual observations; water appears to be contained inside holder wall at a higher elevation compared with water outside the wall.
- **Southern Gas Holder** – The wall of the southern gas holder was not encountered during excavation of test pits TP-109 through TP-113. A small section of red brick wall was initially encountered at approximately 1.3 feet below grade at test pit TP-114A; which was excavated within the limits of TP-102-05 (where the holder wall was reportedly encountered during the RI). TP-114B was then excavated to further investigate the brick wall; however, the brick wall was not structurally competent or continuous based on visual observations. Stone/concrete structures were encountered at test pits TP-109 and TP-110 at depths of approximately 9 feet and 3 feet below grade, respectively. A pocket of NAPL (1 foot in diameter) was observed approximately 9 to 10 feet below grade at the bottom of TP-109, south of the encountered stone structure. In test pit TP-111, NAPL saturated soil was observed approximately 3.5 to 6 feet below grade and pockets of NAPL (4 to 8 inches in diameter) were observed approximately 6 to 9 feet below grade throughout the bottom of the test pit. NAPL was also observed, in varying amounts from blebs to saturated soils, approximately 5 to 10 feet below grade on the northern portion of test pit TP-113.

Test pit logs are included as Attachment 6 and an associated photo log is included as Attachment 7.

Soil Boring Drilling

As noted above, the southern gas holder wall was not encountered during excavation of the test pits. Based on a review of historic and PDI field observations, the excavation limits for the southern gas holder were defined except for the area immediately north of the holder. Therefore, additional soil borings were drilled to support the delineation of the soil removal limits in the area north of the southern gas holder, in accordance with the Arcadis, May 30, 2017 letter to the NYSDEC and NYSDEC's June 2, 2017 approval letter.

Parratt-Wolff drilled five soil borings (B-138 to B-142) using HSA methods to depths up to 18 feet below grade (i.e., to refusal). During the PDI activities, soil boring B-138 was moved approximately 15 feet north from its proposed location due to the presence of obstructions. Soil sampling was performed continuously at each soil boring to the top of bedrock using 2-inch diameter split spoon sampling devices. SPT was conducted, in accordance with ASTM D1586, to assess the relative density of the in-place soils on soil borings B-141 and B-142. Once completed, each borehole was grouted to the existing grade. No

significant visual impacts (i.e., NAPL in quantities greater than blebs) were observed in any of the five soil borings. Field observations from the confirmation soil borings are summarized on Table 1. Soil boring logs are included in Attachment 4.

Waste Characterization Sampling

Arcadis collected six waste characterization samples to evaluate treatment/disposal requirements of materials to be excavated during remedial construction. Composite soil samples were collected from 1) visually clean material excavated from the upper portion of test pits TP-106, TP-107, TP-109, and TP-110 and 2) visually impacted material excavated from the lower portion of test pits TP-109 and TP-110. Waste characterization samples were submitted to SGS Accutest Laboratories (SGS Accutest) for chemical analysis in accordance with the City of Albany Landfill and ESMI's Fort Edward, New York facility analytical requirements, respectively. Waste characterization analytical results are summarized in Table 3. Analytical reports are included as Attachment 8.

Investigation Derived Waste

Arcadis containerized all IDW generated during PDI activities on-site. Soil cuttings, personal protective equipment, spent disposable sampling materials, and water generated during sampling and decontamination activities were segregated by waste type and placed in DOT-approved 55-gallon steel drums. Each drum/container was appropriately labeled (i.e., with the contents, generator, location, and date). National Grid's waste disposal vendors, Clean Harbors and Capitol Environmental, Inc, transported the generated IDW for off-site treatment/disposal. Disposal documentation is included as Attachment 9.

Site Survey

Arcadis' surveying subcontractor (Paul James Olszewski, PLS, PLLC) completed a site survey to document Phase I PDI sampling locations and develop a one-foot contour topographic map of the site. The site survey is included as Attachment 10 and will be used as the base map for the forthcoming remedial design.

Site Restoration

As the existing asphalt pavement has been significantly disturbed as the result of several investigations conducted at the site (an active parking lot) over the past several years, the entire asphalt surface was resurfaced in September 2017.

REVISED SOIL REMOVAL LIMITS

As indicated in the September 2015 Decision Document, tar saturated (or tar coated) soil with total polycyclic aromatic hydrocarbons (PAHs) concentrations greater than 500 milligrams per kilogram (mg/kg) will be excavated as part of the site remedy.

Based on the results of the Phase I PDI, proposed revised soil removal limits are shown on Figure 2. Rationale for establishing the limits for each of the proposed removal areas is presented below:

- Tar well – During the excavation of RI test pit TP-105-8, viscous black tar was observed in the interior of the tar well and seeping from a perforation in the wall of the tar well. Based on the results of the Phase I PDI, the limits of this removal area have not significantly changed relative to the limits

presented in the Decision Document and RDWP. The limits of this removal area are defined based on the following:

- Northern Limit – The northern limit of this removal area is defined by geotechnical soil boring B-134. No visual impacts were observed at geotechnical soil boring B-134.
- Southern Limit – The southern limit of this removal area is defined by the tar well structure encountered during the excavation of Phase I PDI test pit TP-106. Pockets of NAPL were observed at this test pit from approximately 2.5 to 4 feet below grade on top of uncovered tar well wall at approximately 5.5 feet below grade; no impacts were observed outside the tar well structure (i.e., south of the tar well).
- Eastern Limit – The eastern limit of this removal area is defined by RI test pit TP-103-05. No visual impacts were observed in this test pit.
- Northern Gas Holder – NAPL/tar was initially observed in soil borings B-104-05 and B-128-10, installed during the RI. Based on the results of the Phase I PDI, the limits of this removal area have not changed relative to the limits presented in the RDWP. Based on visual observations during excavation of TP-107, the holder wall appeared to be structurally competent and the water level inside the holder wall appeared to be at a different elevation as compared with water outside the wall. Therefore, the limits of removal are defined by the holder walls.
- Southern Gas Holder – NAPL/tar was initially observed in RI soil boring B-127-10. Based on the results of the Phase I PDI activities, this removal area has been revised relative to the limits presented in the RDWP. The limits of this removal area are defined based on the following:
 - Northern Limit – The northern portion of this removal area is defined by soil borings B-139, B-140, B-142, and by the northern gas holder. During drilling of B-136, oil-like NAPL was observed from approximately 10 to 12 feet below grade. Additionally, NAPL was observed approximately 3.5 to 9 feet below grade during the excavation of the test pit TP-111. NAPL was also observed approximately 5 to 10 feet below grade on the northern portion of test pit TP-113. NAPL was not observed at soil borings B-139, B-140, and B-142.
 - Eastern Limit – The eastern limit of this removal area is defined by test pit TP-114. Visual impacts were not observed at this test pit.
 - Southern Limit – The southern limit of this removal area is defined by test pit TP-112. Small NAPL blebs were observed in the northern end of this test pit; however, visual impacts were not observed at the southern end of TP-112.

Although NAPL was sporadically observed during installation of the new monitoring wells immediately south of Huyck Square, no recoverable NAPL was observed in any of the wells during the year-long NAPL monitoring program. Therefore, consistent with the RDWP and as noted below, additional remedial activities are not warranted in the area of Huyck Square as part of the forthcoming remedial construction.

Additionally, the results of the Phase I PDI activities will be used during the remedial design to evaluate potential excavation support system(s).

PHASE II PDI

As discussed above, and as indicated in the RDWP, in-situ soil solidification (ISS) or targeted excavation would be completed in the area of Huyck Square if significant quantities of NAPL were observed in the newly installed monitoring wells. However, since significant NAPL was not observed during the PDI monitoring events, additional investigation (Phase II PDI) and remedial construction activities in the vicinity of Huyck Square are not warranted.

REMEDIAL DESIGN SCHEDULE

Based on the results of the Phase I PDI activities presented herein, sufficient site data exists to proceed with the remedial design. An anticipated schedule for the remedial design and construction of the site remedy is presented in the following table.

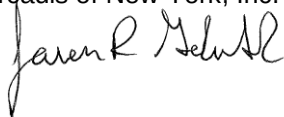
Schedule Component	Date
Submit Preliminary Remedial Design Report to NYSDEC	October 2018
Receive NYSDEC comments	February 2019
Submit Draft Final Remedial Design Report to NYSDEC	May 2019
Receive NYSDEC comments	August 2019
Submit Final Remedial Design Report to NYSDEC	October 2019
Bid Document Preparation and Remedial Contractor Procurement	October 2019 – February 2020
Remedial Construction	Summer 2020

This schedule for preparing remedial design documents and construction of the selected remedy is dependent on several factors, including receipt of NYSDEC approvals on project submittals.

Please do not hesitate to contact me at 315.671.9114 or National Grid's project manager, Mr. Steve Beam, at 315.428.5690 or steve.beam@nationalgrid.com, if you have any questions concerning the information presented herein.

Sincerely,

Arcadis of New York, Inc.



Jason Golubski, P.E.
Senior Environmental Engineer

Mr. John Spellman

March 13, 2018

Copies:

Steve Beam, National Grid

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David Rodriguez, Arcadis

Enclosures:

Tables

- 1 Summary of Phase I PDI Field Observations
- 2 Summary of NAPL Gauging Activities
- 3 Waste Characterization Analytical Results

Figures

- 1 PDI Locations
- 2 Proposed Soil Removal

Attachments

- 1 Community Air Monitoring Data
- 2 Correspondence from OPRHP/the Office of Indian Nations Affairs
- 3 Well Decommissioning Logs
- 4 Soil Boring/Well Construction Logs
- 5 Geotechnical Results
- 6 Test Pit Logs
- 7 Test Pit Photo Log
- 8 Waste Characterization Analytical Results
- 9 Waste Disposal Documentation
- 10 Site Survey

TABLES



Table 1
Summary of Phase I PDI Field Observations

National Grid - Non-Owned Former MGP Site - Rensselaer, New York
Phase I PDI Summary Report

Test Pit / Boring ID	Date	Field Observations					Description
		Odor	Sheens	Staining	Blebs/ Coating	NAPL	
B-134	1/15/2017- 1/16/17	No	No	No	No	No	No observed impacts
B-136	1/14/2017	Yes	Yes	No	No	Yes	6.5 - 10 ft bgs: iridescent sheen, strong tar-like odor 10 - 12 ft bgs: brownish-black oil-like NAPL, strong tar-like odor 12 - 14 ft bgs: iridescent sheen, strong tar-like odor
B-137	1/14/2017	No	No	No	No	No	No observed impacts
B-138	7/8/2017	Yes	No	Yes	No	No	8 - 9.5 ft bgs: reddish-brown staining, slight tarlike odor
B-139	7/8/2017	Yes	No	Yes	No	No	5 ft bgs slight tar-like odor 7 ft bgs slight tar-like odor 9 ft bgs reddish-brown staining
B-140	7/8/2017	Yes	No	Yes	No	No	6 - 9 ft bgs reddish-brown staining, moderate tar-like odor (no staining at 7.5 ft bgs) 9 - 11 ft bgs slight tar-like odor (strong tar-like odor at 10.2 ft bgs)
B-141	7/9/2017	Yes	No	Yes	No	No	7 ft bgs reddish-brown staining, strong tar-like odor 7.5 ft bgs slight tar-like odor 8.5 ft bgs reddish-brown staining, strong tar-like odor 9 ft bgs slight tar-like odor
B-142	7/9/2017	Yes	No	Yes	No	No	8 - 11 ft bgs reddish-brown staining, and strong tar-like odor
MW-116	1/15/2017	Yes	Yes	Yes	No	No	12 - 14 ft bgs: slight tar-like odor, reddish brown staining 16 - 17.5 ft bgs: iridescent sheen, slight tar-like odor
MW-117	1/14/2017	Yes	Yes	Yes	Yes	Yes	7.2 - 10 ft bgs: NAPL blebs (quarter size), strong tar-like odor 9.3 - 9.4 ft bgs: seam of brownish-black oil-like NAPL 12 ft bgs: reddish-brown to black staining 13.2 - 13.7 ft bgs: brownish-black oil-like NAPL, strong tar-like odor 14 - 16 ft bgs: iridescent sheen, slight tar-like odor 17 - 18 ft bgs: browning-black oil-like NAPL, slight tar like odor 16 - 19 ft bgs: iridescent sheen 19 - 20 ft bgs: browning-black oil-like NAPL

Table 1
Summary of Phase I PDI Field Observations

National Grid - Non-Owned Former MGP Site - Rensselaer, New York
Phase I PDI Summary Report

Test Pit / Boring ID	Date	Field Observations					Description
		Odor	Sheens	Staining	Blebs/ Coating	NAPL	
MW-118/B-135	1/14/2017	Yes	Yes	No	No	No	11 - 22 ft bgs: Iridescent sheen 16 - 20 ft bgs: strong tar-like odor
TP-106	11/10/2016	Yes	Yes	No	No	Yes	0.8 - 2.5 ft bgs: slight tar-like odor 2.5 - 4 ft bgs: pockets of viscous coal tar 4 - 6 ft bgs slight tar-like odor
TP-107(A)	11/10/2016	Yes	No	Yes	No	No	1.5 - 3.5 ft bgs: staining, strong tar-like odor 3.5 - 10.5 ft bgs: gasoline-like odor
TP-107(B)	11/11/2016	Yes	No	No	No	No	0.5 - 4 ft bgs: Slight tar-like odor
TP-109	1/16/2017	Yes	No	Yes	No	Yes	5 - 9 ft bgs: staining, tar-like odor 9 - 10 ft bgs: NAPL, heavy staining, strong tar-like odor
TP-110	11/11/2016	Yes	No	Yes	No	No	1.5 - 4 ft bgs: staining, strong tar-like odor 4 - 5 ft bgs: moderate tar-like odor
TP-111	2/19/2017	Yes	Yes	No	No	Yes	3.5 - 6 ft bgs: NAPL, sheen, strong tar-like odor 6 - 9 ft bgs: NAPL, sheen, strong tar-like odor
TP-112	2/19/2017	Yes	Yes	No	Yes	No	0.5 - 6 ft bgs: small blebs, sheen, faint tar-like odor
TP-113	2/20/2017	Yes	Yes	No	Yes	Yes	5 - 10 ft bgs: NAPL, blebs, sheen, strong tar-like and petroleum-like odor
TP-114	2/20/2017	No	No	No	No	No	No observed impacts

Notes:

bgs = below ground surface

ft = feet, foot

NAPL = non-aqueous phase liquid

Table 2
Summary of NAPL Gauging Activities

National Grid - Non-Owned Former MGP Site - Rensselaer, New York
Phase I PDI Summary Report

Well ID/Date	Depth to Water (ft bgs)	Depth to NAPL (ft bgs)	Depth to Bottom (ft bgs)	PID (ppm)	Approximate NAPL Volume Removed (gallon)
MW-101-05					
1/25/2017	Car parked over well	---	---	---	0.0
2/15/2017	5.14	---	13.49	0.00	0.0
3/21/2017	5.67	---	13.49	0.00	0.0
4/26/2017	5.17	---	13.48	0.00	0.0
5/23/2017	5.45	---	13.48	0.00	0.0
6/19/2017	5.80	---	13.48	0.00	0.0
7/8/2017	5.71	---	13.48	0.00	0.0
8/14/2017	5.82	---	13.48	1.30	0.0
10/12/2017	5.72	---	13.48	0.00	0.0
12/27/2017	6.20	---	13.48	0.00	0.0
Approximate Volume Removed from well					0.0
MW-102R-10					
1/25/2017	5.35	39.50	39.52	0.00	0.0
2/15/2017	6.26	39.49	39.52	1.30	0.0
3/21/2017	6.75	---	39.55	1.20	0.0
4/26/2017	6.59	---	39.50	2.10	0.0
5/23/2017	6.76	---	39.54	2.70	0.0
6/19/2017	6.72	---	39.54	3.20	0.0
7/8/2017	6.70	---	39.54	1.00	0.0
8/14/2017	6.68	---	39.54	4.40	0.0
10/12/2017	6.78	---	39.54	0.00	0.0
12/27/2017	7.18	---	39.54	3.00	0.0
Approximate Volume Removed from well					0.0
MW-104-08					
1/25/2017	Car parked over well	---	---	---	0.0
2/15/2017	7.31	---	15.71	0.00	0.0
3/21/2017	7.16	---	15.73	0.00	0.0
4/26/2017	6.92	---	15.73	0.00	0.0
5/23/2017	7.01	---	15.73	0.00	0.0
6/19/2017	7.40	---	15.73	0.00	0.0
7/8/2017	7.55	---	15.73	0.00	0.0
8/14/2017	7.41	---	15.73	0.30	0.0
10/12/2017	7.92	---	15.73	0.00	0.0
12/27/2017	8.08	---	15.73	0.00	0.0
Approximate Volume Removed from well					0.0
MW-104R-10					
1/25/2017	Car parked over well	---	---	---	0.0
2/15/2017	8.56	---	41.77	0.00	0.0
3/21/2017	Car parked over well	---	---	---	0.0
4/26/2017	8.22	---	41.78	0.00	0.0
5/23/2017	Car parked over well	---	---	---	0.0
6/19/2017	---	---	---	---	0.0
7/8/2017	Car parked over well	---	---	---	0.0
8/14/2017	Car parked over well	---	---	---	0.0
10/12/2017	Car parked over well	---	---	---	0.0
12/27/2017	9.40	---	41.78	0.00	0.0
Approximate Volume Removed from well					0.0

Table 2
Summary of NAPL Gauging Activities

National Grid - Non-Owned Former MGP Site - Rensselaer, New York
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Well ID/Date	Depth to Water (ft bgs)	Depth to NAPL (ft bgs)	Depth to Bottom (ft bgs)	PID (ppm)	Approximate NAPL Volume Removed (gallon)
MW-105-08					
1/25/2017	Well locked	---	---	---	0.0
2/15/2017	11.45	---	18.88	0.00	0.0
3/21/2017	11.44	---	20.62	0.00	0.0
4/26/2017	11.30	---	20.60	0.00	0.0
5/23/2017	11.45	---	20.62	0.00	0.0
6/19/2017	11.79	---	20.62	0.10	0.0
7/8/2017	11.90	---	20.62	0.00	0.0
8/14/2017	12.15	---	20.62	0.00	0.0
10/12/2017	12.40	---	20.62	0.00	0.0
12/27/2017	Frozen	---	---	---	0.0
Approximate Volume Removed from well					0.0
MW-106D-08					
1/25/2017	Well locked	---	---	---	0.0
2/15/2017	10.13	27.69	27.70	187	0.0
3/21/2017	10.31	---	27.88	382	0.0
4/26/2017	10.13	---	27.88	26.8	0.0
5/23/2017	10.35	---	27.78	154	0.0
6/19/2017	10.70	---	27.78	172	0.0
7/8/2017	10.71	---	27.78	96.1	0.0
8/14/2017	11.05	---	27.78	270	0.0
10/12/2017	11.32	---	27.78	175	0.0
12/27/2017	11.03	---	27.78	480.00	0.0
Approximate Volume Removed from well					0.0
MW-106S-08					
1/25/2017	Well locked	---	---	---	0.0
2/15/2017	10.87	---	22.32	72.0	0.0
3/21/2017	10.91	---	22.32	79.9	0.0
4/26/2017	10.89	---	22.32	47.0	0.0
5/23/2017	11.02	---	22.33	36.0	0.0
6/19/2017	11.32	---	22.33	62.0	0.0
7/8/2017	11.41	---	22.33	30.0	0.0
8/14/2017	11.76	---	22.33	52.9	0.0
10/12/2017	11.81	---	22.33	3.30	0.0
12/27/2017	11.25	---	22.33	31.00	0.0
Approximate Volume Removed from well					0.0
MW-106R-10					
1/25/2017	Well locked	---	---	0.00	0.0
2/15/2017	9.00	---	44.18	0.00	0.0
3/21/2017	9.21	---	44.48	0.00	0.0
4/26/2017	9.00	---	44.48	0.00	0.0
5/23/2017	9.34	---	44.48	1.40	0.0
6/19/2017	9.60	---	44.48	0.00	0.0
7/8/2017	9.65	---	44.48	0.00	0.0
8/14/2017	10.02	---	44.48	0.00	0.0
10/12/2017	10.32	---	44.48	0.00	0.0
12/27/2017	10.09	---	44.48	0.30	0.0
Approximate Volume Removed from well					0.0

Table 2
Summary of NAPL Gauging Activities

National Grid - Non-Owned Former MGP Site - Rensselaer, New York
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Well ID/Date	Depth to Water (ft bgs)	Depth to NAPL (ft bgs)	Depth to Bottom (ft bgs)	PID (ppm)	Approximate NAPL Volume Removed (gallon)
MW-107-08					
1/25/2017	Car parked over well	---	---	---	0.0
2/15/2017	3.90	---	15.80	0.00	0.0
3/21/2017	7.16	---	15.73	0.00	0.0
4/26/2017	5.10	---	15.88	0.00	0.0
5/23/2017	5.14	---	15.88	0.00	0.0
6/19/2017	5.41	---	15.88	0.00	0.0
7/8/2017	5.56	---	15.88	0.00	0.0
8/14/2017	5.85	---	15.88	0.30	0.0
10/12/2017	5.95	---	15.88	0.00	0.0
12/27/2017	5.45	---	15.88	0.00	0.0
Approximate Volume Removed from well					0.0
MW-108-09					
1/25/2017	7.95	---	17.28	0.00	0.0
2/15/2017	8.01	---	17.26	0.00	0.0
3/21/2017	8.00	---	17.28	0.00	0.0
4/26/2017	7.71	---	17.26	0.00	0.0
5/23/2017	7.82	---	17.26	0.00	0.0
6/19/2017	8.15	---	17.26	0.00	0.0
7/8/2017	8.46	---	17.26	0.00	0.0
8/14/2017	8.82	---	17.26	0.00	0.0
10/12/2017	9.28	---	17.26	0.00	0.0
12/27/2017	9.10	---	17.26	0.00	0.0
Approximate Volume Removed from well					0.0
MW-108R-10					
1/25/2017	9.67	---	54.51	0.00	0.0
2/15/2017	9.32	---	54.54	0.30	0.0
3/21/2017	9.60	---	54.48	0.60	0.0
4/26/2017	8.75	---	54.50	0.00	0.0
5/23/2017	8.97	---	54.50	0.00	0.0
6/19/2017	9.27	---	54.50	0.30	0.0
7/8/2017	9.71	---	54.50	0.00	0.0
8/14/2017	9.47	---	54.50	0.00	0.0
10/12/2017	9.51	---	54.50	0.00	0.0
12/27/2017	9.42	---	54.50	0.00	0.0
Approximate Volume Removed from well					0.0
MW-109D-09					
1/25/2017	7.48	---	37.15	0.00	0.0
2/15/2017	7.20	---	37.16	0.00	0.0
3/21/2017	7.91	---	37.30	0.00	0.0
4/26/2017	7.04	---	37.23	0.00	0.0
5/23/2017	7.30	---	37.20	0.50	0.0
6/19/2017	7.42	---	37.20	0.00	0.0
7/8/2017	7.32	---	37.36	0.00	0.0
8/14/2017	8.05	---	37.36	0.00	0.0
10/12/2017	8.38	---	37.36	0.00	0.0
12/27/2017	8.65	---	37.36	0.00	0.0
Approximate Volume Removed from well					0.0

Table 2
Summary of NAPL Gauging Activities

National Grid - Non-Owned Former MGP Site - Rensselaer, New York
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Well ID/Date	Depth to Water (ft bgs)	Depth to NAPL (ft bgs)	Depth to Bottom (ft bgs)	PID (ppm)	Approximate NAPL Volume Removed (gallon)
MW-109S-09					
1/25/2017	7.55	---	17.14	0.00	0.0
2/15/2017	6.94	---	17.14	0.00	0.0
3/21/2017	7.26	---	17.16	0.00	0.0
4/26/2017	6.91	---	17.16	0.00	0.0
5/23/2017	6.83	---	17.16	0.00	0.0
6/19/2017	7.45	---	17.16	0.00	0.0
7/8/2017	7.65	---	17.16	0.00	0.0
8/14/2017	8.21	---	17.16	0.00	0.0
10/12/2017	8.55	---	17.16	0.00	0.0
12/27/2017	8.53	---	17.16	0.00	0.0
Approximate Volume Removed from well					0.0
MW-110-08					
1/25/2017	8.00	---	17.01	0.00	0.0
2/15/2017	7.68	---	17.02	0.00	0.0
3/21/2017	7.95	---	17.05	0.00	0.0
4/26/2017	6.80	---	17.06	0.00	0.0
5/23/2017	7.81	---	17.06	0.00	0.0
7/8/2017	8.06	---	17.06	0.00	0.0
8/14/2017	8.50	---	17.06	0.00	0.0
10/12/2017	8.92	---	17.06	0.00	0.0
12/27/2017	8.70	---	17.06	0.00	0.0
Approximate Volume Removed from well					0.0
MW-110R-10					
1/25/2017	7.00	---	44.49	0.00	0.0
2/15/2017	6.92	---	44.48	0.00	0.0
3/21/2017	7.02	---	44.50	0.00	0.0
4/26/2017	7.70	---	44.50	0.00	0.0
5/23/2017	7.81	---	44.50	0.00	0.0
7/8/2017	8.06	---	44.50	0.00	0.0
8/14/2017	7.70	---	44.50	0.00	0.0
10/12/2017	7.95	---	44.50	0.00	0.0
12/27/2017	7.60	---	44.50	0.00	0.0
Approximate Volume Removed from well					0.0
MW-111-09					
1/25/2017	7.48	---	15.98	0.00	0.0
2/15/2017	7.42	---	15.92	0.00	0.0
3/21/2017	7.47	---	16.03	0.00	0.0
4/26/2017	7.46	---	16.02	0.00	0.0
5/23/2017	7.60	---	16.03	0.00	0.0
6/19/2017	7.85	---	16.03	0.00	0.0
7/8/2017	7.87	---	16.03	0.00	0.0
8/14/2017	8.15	---	16.03	0.00	0.0
10/12/2017	8.31	---	16.03	0.00	0.0
12/27/2017	8.02	---	16.03	0.00	0.0
Approximate Volume Removed from well					0.0

Table 2
Summary of NAPL Gauging Activities

National Grid - Non-Owned Former MGP Site - Rensselaer, New York
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Well ID/Date	Depth to Water (ft bgs)	Depth to NAPL (ft bgs)	Depth to Bottom (ft bgs)	PID (ppm)	Approximate NAPL Volume Removed (gallon)
MW-112-10					
1/25/2017	8.61	---	18.65	0.00	0.0
2/15/2017	8.78	---	18.60	0.00	0.0
3/21/2017	8.68	---	18.65	0.00	0.0
4/26/2017	8.28	---	16.60	0.00	0.0
5/23/2017	8.32	---	18.64	0.00	0.0
6/19/2017	8.85	---	18.64	0.00	0.0
7/8/2017	9.03	---	18.64	0.00	0.0
8/14/2017	9.21	---	18.64	0.00	0.0
10/12/2017	10.61	---	18.64	0.00	0.0
12/27/2017	9.53	---	18.64	0.00	0.0
Approximate Volume Removed from well					0.0
MW-112R-10					
1/25/2017	8.61	---	38.90	0.00	0.0
2/15/2017	8.65	---	38.90	0.00	0.0
3/21/2017	8.81	---	38.51	0.00	0.0
4/26/2017	8.30	---	38.62	0.00	0.0
5/23/2017	5.54	---	38.62	0.00	0.0
6/19/2017	8.85	---	38.62	0.00	0.0
7/8/2017	8.83	---	38.62	0.00	0.0
8/14/2017	9.15	---	38.62	0.20	0.0
10/12/2017	9.55	---	38.62	0.00	0.0
12/27/2017	9.60	---	38.62	0.00	0.0
Approximate Volume Removed from well					0.0
MW-113R-10					
1/25/2017	4.91	---	46.12	0.00	0.0
2/15/2017	7.00	---	46.12	0.00	0.0
3/21/2017	7.64	---	46.12	0.00	0.0
4/26/2017	7.60	---	46.12	0.00	0.0
5/23/2017	7.76	---	46.12	0.00	0.0
6/19/2017	7.74	---	46.12	0.20	0.0
7/8/2017	7.60	---	46.12	0.00	0.0
8/14/2017	7.62	---	46.12	0.20	0.0
10/12/2017	7.44	---	46.12	0.00	0.0
12/27/2017	7.70	---	46.12	0.00	0.0
Approximate Volume Removed from well					0.0
MW-114-12					
1/25/2017	Well locked	---	---	---	0.0
2/15/2017	3.52	---	7.63	0.00	0.0
3/21/2017	3.52	---	7.70	0.30	0.0
4/26/2017	3.38	---	7.70	0.00	0.0
5/23/2017	3.51	---	7.68	0.00	0.0
6/19/2017	---	---	---	---	0.0
7/8/2017	3.70	---	7.68	0.00	0.0
8/14/2017	3.92	---	7.68	0.00	0.0
10/12/2017	3.90	---	7.68	0.00	0.0
12/27/2017	Frozen	---	---	---	0.0
Approximate Volume Removed from well					0.0

Table 2
Summary of NAPL Gauging Activities

National Grid - Non-Owned Former MGP Site - Rensselaer, New York
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Well ID/Date	Depth to Water (ft bgs)	Depth to NAPL (ft bgs)	Depth to Bottom (ft bgs)	PID (ppm)	Approximate NAPL Volume Removed (gallon)
MW-115-12					
1/25/2017	Well locked	---	---	---	0.0
2/15/2017	2.85	---	7.38	0.00	0.0
3/21/2017	2.91	---	5.10	0.09	0.0
4/26/2017	2.82	---	7.46	0.00	0.0
5/23/2017	2.94	---	7.49	0.00	0.0
6/19/2017	---	---	---	---	0.0
7/8/2017	3.16	---	7.49	0.00	0.0
8/14/2017	3.35	---	7.49	0.00	0.0
10/12/2017	3.40	---	7.49	0.00	0.0
12/27/2017	Frozen	---	---	---	0.0
Approximate Volume Removed from well					0.0
MW-116					
1/25/2017	Car parked over well	---	---	---	0.0
2/15/2017	Car parked over well	---	---	---	0.0
3/21/2017	frozen	---	---	---	0.0
4/26/2017	6.14	---	21.71	0.00	0.0
5/23/2017	7.60	---	21.71	0.50	0.0
6/19/2017	8.22	---	22.71	0.70	0.0
7/8/2017	8.38	---	21.71	0.00	0.0
8/14/2017	8.82	---	21.71	1.00	0.0
10/12/2017	9.75	---	21.71	2.00	0.0
12/27/2017	Frozen	---	---	---	0.0
Approximate Volume Removed from well					0.0
MW-117					
1/25/2017	6.74	---	22.40	100	0.0
2/15/2017	6.60	---	22.35	100	0.0
3/21/2017	6.75	---	22.60	489	0.0
4/26/2017	6.62	---	22.60	20.0	0.0
5/23/2017	6.70	---	22.60	20.8	0.0
6/19/2017	7.10	---	22.60	6.70	0.0
7/8/2017	7.20	---	22.60	7.80	0.0
8/14/2017	7.53	---	22.60	11.30	0.0
10/12/2017	7.90	---	22.60	2.30	0.0
12/27/2017	7.80	---	22.60	2.10	0.0
Approximate Volume Removed from well					0.0
MW-118					
1/25/2017	5.57	---	23.60	285	0.0
2/15/2017	5.42	---	23.55	500	0.0
3/21/2017	5.58	23.60	23.65	250	0.0
4/26/2017	5.35	23.57	23.65	160	0.0
5/23/2017	5.56	23.55	23.65	139	0.0
6/19/2017	6.05	23.63	23.65	134	0.0
7/8/2017	6.05	---	23.65	145	0.0
8/14/2017	6.38	---	23.65	78	0.0
10/12/2017	6.57	---	23.65	75	0.0
12/27/2017	6.28	---	23.65	52.00	0.0
Approximate Volume Removed from well					0.0

Table 2
Summary of NAPL Gauging Activities

National Grid - Non-Owned Former MGP Site - Rensselaer, New York
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Well ID/Date	Depth to Water (ft bgs)	Depth to NAPL (ft bgs)	Depth to Bottom (ft bgs)	PID (ppm)	Approximate NAPL Volume Removed (gallon)
SG-4-10					
1/25/2017	11.18	---	---	---	0.0
2/15/2017	Frozen	---	---	---	0.0
3/21/2017	Frozen	---	---	---	0.0
4/26/2017	10.10	---	---	---	0.0
5/23/2017	10.20	---	---	---	0.0
6/19/2017	10.10	---	---	---	0.0
7/8/2017	10.30	---	---	---	0.0
8/14/2017	10.45	---	---	---	0.0
10/12/2017	10.40	---	---	---	0.0
12/27/2017	10.30	---	---	---	0.0
Approximate Volume Removed from well					0.0

Notes:

Bgs = below ground surface

ft = feet, foot

NAPL = Non-Aqueous Phase Liquid

PID = Photoionization detector

ppm = parts per million

Table 3
Waste Characterization Analytical Results

National Grid - Non-Owned Former MGP Site - Rensselaer, New York
Phase I PDI Summary Report

Location ID: Sample Depth(Feet): Date Collected:	Units	TP-106 3 11/10/16	TP-107 3 11/11/16	TP-109 0 - 5 01/16/17	TP-109 5 - 10 01/16/17	TP-110 0 - 3 11/11/16	TP-110 3 - 3.5 11/11/16
VOCs							
1,1,1-Trichloroethane	mg/kg	0.0016 U	0.0016 U	NA	0.11 U	NA	0.21 U
1,1,2,2-Tetrachloroethane	mg/kg	0.004 U	0.0041 U	NA	0.11 U	NA	0.53 U
1,1,2-Trichloroethane	mg/kg	0.0016 U	0.0016 U	NA	0.11 U	NA	0.21 U
1,1-Dichloroethane	mg/kg	0.0016 U	0.0016 U	NA	0.055 U	NA	0.21 U
1,1-Dichloroethene	mg/kg	0.0016 U	0.0016 U	NA	0.055 U	NA	0.21 U
1,2,3-Trichlorobenzene	mg/kg	NA	NA	NA	0.28 U	NA	NA
1,2,4-Trichlorobenzene	mg/kg	NA	NA	NA	0.28 U	NA	NA
1,2-Dibromo-3-chloropropane	mg/kg	NA	NA	NA	0.11 U	NA	NA
1,2-Dibromoethane	mg/kg	NA	NA	NA	0.055 U	NA	NA
1,2-Dichlorobenzene	mg/kg	NA	NA	NA	0.055 U	NA	NA
1,2-Dichloroethane	mg/kg	0.0016 U	0.0016 U	NA	0.055 U	NA	0.21 U
1,2-Dichloropropane	mg/kg	0.0016 U	0.0016 U	NA	0.11 U	NA	0.21 U
1,3-Dichlorobenzene	mg/kg	NA	NA	NA	0.055 U	NA	NA
1,4-Dichlorobenzene	mg/kg	NA	NA	NA	0.055 U	NA	NA
2-Butanone (MEK)	mg/kg	0.008 U	0.0082 U	NA	0.55 U	NA	1.1 U
2-Hexanone	mg/kg	0.004 U	0.0041 U	NA	0.28 U	NA	0.53 U
4-Methyl-2-pentanone (MIBK)	mg/kg	0.004 U	0.0041 U	NA	0.28 U	NA	0.53 U
Acetone	mg/kg	0.0202 B	0.0153 B	NA	0.55 U	NA	1.1 U
Benzene	mg/kg	0.0121	0.0023	NA	0.0234 J	NA	0.11 U
Bromochloromethane	mg/kg	NA	NA	NA	0.28 U	NA	NA
Bromodichloromethane	mg/kg	0.0016 U	0.0016 U	NA	0.11 U	NA	0.21 U
Bromoform	mg/kg	0.0016 U	0.0016 U	NA	0.28 U	NA	0.21 U
Bromomethane	mg/kg	0.008 U	0.0082 U	NA	0.28 U	NA	1.1 U
Carbon disulfide	mg/kg	0.0187	0.0017 J	NA	0.0427 J	NA	0.53 U
Carbon tetrachloride	mg/kg	0.0016 U	0.0016 U	NA	0.11 U	NA	0.21 U
Chlorobenzene	mg/kg	0.0016 U	0.0016 U	NA	0.11 U	NA	0.21 U
Chloroethane	mg/kg	0.008 U	0.0082 U	NA	0.28 U	NA	1.1 U
Chloroform	mg/kg	0.0016 U	0.0016 U	NA	0.11 U	NA	0.21 U
Chloromethane	mg/kg	0.004 U	0.0041 U	NA	0.28 U	NA	0.53 U
cis-1,2-Dichloroethene	mg/kg	0.0016 U	0.0016 U	NA	0.055 U	NA	0.21 U
cis-1,3-Dichloropropene	mg/kg	0.0016 U	0.0016 U	NA	0.11 U	NA	0.21 U
Cyclohexane	mg/kg	NA	NA	NA	0.0514 J	NA	NA
Dibromochloromethane	mg/kg	0.004 U	0.0041 U	NA	0.11 U	NA	0.53 U
Dichlorodifluoromethane	mg/kg	NA	NA	NA	0.28 U	NA	NA
Ethylbenzene	mg/kg	0.0009 J	0.0016 U	NA	7.22	NA	1.33
Freon 113	mg/kg	NA	NA	NA	0.28 U	NA	NA
Isopropylbenzene	mg/kg	NA	NA	NA	1.56	NA	NA
m,p-Xylene	mg/kg	NA	NA	NA	0.236	NA	NA
Methyl Acetate	mg/kg	NA	NA	NA	0.28 U	NA	NA
Methyl Tert Butyl Ether	mg/kg	NA	NA	NA	0.055 U	NA	NA
Methylcyclohexane	mg/kg	NA	NA	NA	0.49	NA	NA
Methylene chloride	mg/kg	0.0016 U	0.0016 U	NA	0.28 U	NA	0.21 U
o-Xylene	mg/kg	NA	NA	NA	2.73	NA	NA
Styrene	mg/kg	0.004 U	0.0041 U	NA	0.11 U	NA	0.53 U
Tetrachloroethene	mg/kg	0.0016 U	0.0016 U	NA	0.0324 J	NA	0.21 U
Toluene	mg/kg	0.0032 JB	0.00073 JB	NA	0.0683	NA	0.077 J
trans-1,2-Dichloroethene	mg/kg	0.0016 U	0.0016 U	NA	0.055 U	NA	0.21 U
trans-1,3-Dichloropropene	mg/kg	0.0016 U	0.0016 U	NA	0.11 U	NA	0.21 U
Trichloroethene	mg/kg	0.0016 U	0.0016 U	NA	0.055 U	NA	0.21 U
Trichlorofluoromethane	mg/kg	NA	NA	NA	0.28 U	NA	NA
Vinyl chloride	mg/kg	0.008 U	0.0082 U	NA	0.11 U	NA	1.1 U

Table 3
Waste Characterization Analytical Results

National Grid - Non-Owned Former MGP Site - Rensselaer, New York
Phase I PDI Summary Report

Location ID: Sample Depth(Feet): Date Collected:	Units	TP-106 3 11/10/16	TP-107 3 11/11/16	TP-109 0 - 5 01/16/17	TP-109 5 - 10 01/16/17	TP-110 0 - 3 11/11/16	TP-110 3 - 3.5 11/11/16
VOCs (cont.)							
Xylene (total)	mg/kg	0.0029	0.0016 U	NA	2.97	NA	1.46
VOCs-TCLP							
1,1-Dichloroethene	mg/L	0.2 U	0.2 U	0.005 U	NA	0.2 U	NA
1,2-Dichloroethane	mg/L	0.2 U	0.2 U	0.005 U	NA	0.2 U	NA
1,4-Dichlorobenzene	mg/L	0.2 U	0.2 U	0.005 U	NA	0.2 U	NA
2-Butanone (MEK)	mg/L	1 U	1 U	0.1 U	NA	1 U	NA
Benzene	mg/L	0.0586 J	0.1 U	0.0025 U	NA	0.1 U	NA
Carbon tetrachloride	mg/L	0.2 U	0.2 U	0.005 U	NA	0.2 U	NA
Chlorobenzene	mg/L	0.2 U	0.2 U	0.005 U	NA	0.2 U	NA
Chloroform	mg/L	0.2 U	0.2 U	0.005 U	NA	0.2 U	NA
Tetrachloroethene	mg/L	0.2 U	0.2 U	0.005 U	NA	0.0248 J	NA
Trichloroethene	mg/L	0.2 U	0.2 U	0.005 U	NA	0.2 U	NA
Vinyl chloride	mg/L	0.2 U	0.2 U	0.005 U	NA	0.2 U	NA
SVOCS							
1,1'-Biphenyl	mg/kg	NA	NA	NA	3.34	NA	NA
1,2,4,5-Tetrachlorobenzene	mg/kg	NA	NA	NA	0.19 U	NA	NA
1,2,4-Trichlorobenzene	mg/kg	0.31 U	0.27 U	NA	NA	NA	0.3 U
1,2-Dichlorobenzene	mg/kg	0.31 U	0.27 U	NA	NA	NA	0.3 U
1,3-Dichlorobenzene	mg/kg	0.31 U	0.27 U	NA	NA	NA	0.3 U
1,4-Dichlorobenzene	mg/kg	0.31 U	0.27 U	NA	NA	NA	0.3 U
1,4-Dioxane	mg/kg	NA	NA	NA	0.038 U	NA	NA
2,3,4,6-Tetrachlorophenol	mg/kg	NA	NA	NA	0.19 U	NA	NA
2,4,5-Trichlorophenol	mg/kg	0.62 U	0.54 U	NA	0.19 U	NA	0.61 U
2,4,6-Trichlorophenol	mg/kg	0.62 U	0.54 U	NA	0.19 U	NA	0.61 U
2,4-Dichlorophenol	mg/kg	0.62 U	0.54 U	NA	0.19 U	NA	0.61 U
2,4-Dimethylphenol	mg/kg	0.62 U	0.54 U	NA	0.19 U	NA	0.61 U
2,4-Dinitrophenol	mg/kg	0.62 U	0.54 U	NA	0.19 U	NA	0.61 U
2,4-Dinitrotoluene	mg/kg	0.62 U	0.54 U	NA	0.038 U	NA	0.61 U
2,6-Dinitrotoluene	mg/kg	0.62 U	0.54 U	NA	0.038 U	NA	0.61 U
2-Chloronaphthalene	mg/kg	0.31 U	0.27 U	NA	0.075 U	NA	0.3 U
2-Chlorophenol	mg/kg	0.31 U	0.27 U	NA	0.075 U	NA	0.3 U
2-Methylnaphthalene	mg/kg	0.461	0.0775 J	NA	1.16	NA	4.46
2-Methylphenol	mg/kg	0.62 U	0.54 U	NA	0.075 U	NA	0.61 U
2-Nitroaniline	mg/kg	0.62 U	0.54 U	NA	0.19 U	NA	0.61 U
2-Nitrophenol	mg/kg	0.62 U	0.54 U	NA	0.19 U	NA	0.61 U
3&4-Methylphenol	mg/kg	0.62 U	0.54 U	NA	0.075 U	NA	0.61 U
3,3'-Dichlorobenzidine	mg/kg	0.62 U	0.54 U	NA	0.075 U	NA	0.61 U
3-Nitroaniline	mg/kg	0.62 U	0.54 U	NA	0.19 U	NA	0.61 U
4,6-Dinitro-o-cresol	mg/kg	0.62 U	0.54 U	NA	0.19 U	NA	0.61 U
4-Bromophenyl phenyl ether	mg/kg	0.31 U	0.27 U	NA	0.075 U	NA	0.3 U
4-Chloro-3-methyl phenol	mg/kg	0.62 U	0.54 U	NA	0.19 U	NA	0.61 U
4-Chloroaniline	mg/kg	0.62 U	0.54 U	NA	0.19 U	NA	0.61 U
4-Chlorophenyl phenyl ether	mg/kg	0.31 U	0.27 U	NA	0.075 U	NA	0.3 U
4-Nitroaniline	mg/kg	0.62 U	0.54 U	NA	0.19 U	NA	0.61 U
4-Nitrophenol	mg/kg	0.62 U	0.54 U	NA	0.38 U	NA	0.61 U
Acenaphthene	mg/kg	0.448	0.0446 J	NA	18	NA	3.27
Acenaphthylene	mg/kg	0.918	0.435	NA	2.83	NA	0.958
Acetophenone	mg/kg	NA	NA	NA	0.19 U	NA	NA
Anthracene	mg/kg	1.3	0.674	NA	10.6	NA	2.2
Atrazine	mg/kg	NA	NA	NA	0.075 U	NA	NA
Benzaldehyde	mg/kg	NA	NA	NA	0.19 U	NA	NA

Table 3
Waste Characterization Analytical Results

National Grid - Non-Owned Former MGP Site - Rensselaer, New York
Phase I PDI Summary Report

Location ID: Sample Depth(Feet): Date Collected:	Units	TP-106 3 11/10/16	TP-107 3 11/11/16	TP-109 0 - 5 01/16/17	TP-109 5 - 10 01/16/17	TP-110 0 - 3 11/11/16	TP-110 3 - 3.5 11/11/16
VOCs-TCLP (cont.)							
Benzo(a)anthracene	mg/kg	5.26	2.03	NA	8.93	NA	2.91
Benzo(a)pyrene	mg/kg	5.48	2.27	NA	9.18	NA	2.9
Benzo(b)fluoranthene	mg/kg	4.98	1.82	NA	7.89	NA	1.91
Benzo(g,h,i)perylene	mg/kg	2.46	1.26	NA	4.42	NA	1.4
Benzo(k)fluoranthene	mg/kg	3.85	1.81	NA	1.47	NA	2.07
bis(2-Chloroethoxy)methane	mg/kg	0.31 U	0.27 U	NA	0.075 U	NA	0.3 U
bis(2-Chloroethyl)ether	mg/kg	0.31 U	0.27 U	NA	0.075 U	NA	0.3 U
bis(2-Chloroisopropyl)ether	mg/kg	0.31 U	0.27 U	NA	0.075 U	NA	0.3 U
bis(2-Ethylhexyl)phthalate	mg/kg	0.31 U	0.27 U	NA	0.075 U	NA	0.3 U
Butyl benzyl phthalate	mg/kg	0.31 U	0.276	NA	0.075 U	NA	0.3 U
Caprolactam	mg/kg	NA	NA	NA	0.075 U	NA	NA
Carbazole	mg/kg	0.421	0.0765 J	NA	0.224	NA	0.22
Chrysene	mg/kg	4.62	1.78	NA	8.16	NA	2.7
Dibenzo(a,h)anthracene	mg/kg	0.866	0.37	NA	1.17	NA	0.367
Dibenzofuran	mg/kg	0.629	0.223	NA	0.827	NA	0.316
Diethyl phthalate	mg/kg	0.31 U	0.27 U	NA	0.075 U	NA	0.3 U
Dimethyl phthalate	mg/kg	0.31 U	0.27 U	NA	0.075 U	NA	0.3 U
Di-n-butyl phthalate	mg/kg	0.31 U	0.0234 J	NA	0.075 U	NA	0.3 U
Di-n-octyl phthalate	mg/kg	0.31 U	0.27 U	NA	0.075 U	NA	0.3 U
Fluoranthene	mg/kg	7.47	2.91	NA	14.1	NA	5.16
Fluorene	mg/kg	0.642	0.196	NA	9.3	NA	1.72
Hexachlorobenzene	mg/kg	0.31 U	0.27 U	NA	0.075 U	NA	0.3 U
Hexachlorobutadiene	mg/kg	0.31 U	0.27 U	NA	0.038 U	NA	0.3 U
Hexachlorocyclopentadiene	mg/kg	0.62 U	0.54 U	NA	0.38 U	NA	0.61 U
Hexachloroethane	mg/kg	0.31 U	0.27 U	NA	0.19 U	NA	0.3 U
Indeno(1,2,3-cd)pyrene	mg/kg	2.91	1.35	NA	3.67	NA	1.41
Isophorone	mg/kg	0.31 U	0.27 U	NA	0.075 U	NA	0.3 U
Naphthalene	mg/kg	3.2	0.151	NA	3.39	NA	7.58
Nitrobenzene	mg/kg	0.31 U	0.27 U	NA	0.075 U	NA	0.3 U
N-Nitroso-di-n-propylamine	mg/kg	0.31 U	0.27 U	NA	0.075 U	NA	0.3 U
N-Nitrosodiphenylamine	mg/kg	0.31 U	0.27 U	NA	0.19 U	NA	0.3 U
Pentachlorophenol	mg/kg	0.62 U	0.54 U	NA	0.15 U	NA	0.61 U
Phenanthrene	mg/kg	3.48	1.54	NA	30.8	NA	7.47
Phenol	mg/kg	0.31 U	0.27 U	NA	0.075 U	NA	0.3 U
Pyrene	mg/kg	6.75	2.78	NA	21.2	NA	7.4
SVOCs-TCLP							
1,4-Dichlorobenzene	mg/L	0.05 U	0.05 U	0.02 U	NA	0.05 U	NA
2,4,5-Trichlorophenol	mg/L	0.1 U	0.1 U	0.05 U	NA	0.1 U	NA
2,4,6-Trichlorophenol	mg/L	0.1 U	0.1 U	0.05 U	NA	0.1 U	NA
2,4-Dinitrotoluene	mg/L	0.1 U	0.1 U	0.02 U	NA	0.1 U	NA
2-Methylphenol	mg/L	0.1 U	0.1 U	0.02 U	NA	0.1 U	NA
3&4-Methylphenol	mg/L	0.1 U	0.1 U	0.02 U	NA	0.1 U	NA
Hexachlorobenzene	mg/L	0.05 U	0.05 U	0.02 U	NA	0.05 U	NA
Hexachlorobutadiene	mg/L	0.05 U	0.05 U	0.01 U	NA	0.05 U	NA
Hexachloroethane	mg/L	0.05 U	0.05 U	0.05 U	NA	0.05 U	NA
Nitrobenzene	mg/L	0.05 U	0.05 U	0.02 U	NA	0.05 U	NA
Pentachlorophenol	mg/L	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA
Pyridine	mg/L	0.1 U	0.1 U	0.02 U	NA	0.1 U	NA
Pesticides							
4,4'-DDD	mg/kg	NA	NA	0.0008 U	NA	NA	NA
4,4'-DDE	mg/kg	NA	NA	0.0008 U	NA	NA	NA

Table 3
Waste Characterization Analytical Results

National Grid - Non-Owned Former MGP Site - Rensselaer, New York
Phase I PDI Summary Report

Location ID: Sample Depth(Feet): Date Collected:	Units	TP-106 3 11/10/16	TP-107 3 11/11/16	TP-109 0 - 5 01/16/17	TP-109 5 - 10 01/16/17	TP-110 0 - 3 11/11/16	TP-110 3 - 3.5 11/11/16
Pesticides (cont.)							
4,4'-DDT	mg/kg	NA	NA	0.0137	NA	NA	NA
Aldrin	mg/kg	NA	NA	0.0008 U	NA	NA	NA
alpha-BHC	mg/kg	NA	NA	0.0008 U	NA	NA	NA
alpha-Chlordane	mg/kg	NA	NA	0.0008 U	NA	NA	NA
beta-BHC	mg/kg	NA	NA	0.0008 U	NA	NA	NA
delta-BHC	mg/kg	NA	NA	0.0008 U	NA	NA	NA
Dieldrin	mg/kg	NA	NA	0.0008 U	NA	NA	NA
Endosulfan sulfate	mg/kg	NA	NA	0.0008 U	NA	NA	NA
Endosulfan-I	mg/kg	NA	NA	0.0008 U	NA	NA	NA
Endosulfan-II	mg/kg	NA	NA	0.0008 U	NA	NA	NA
Endrin	mg/kg	NA	NA	0.0008 U	NA	NA	NA
Endrin aldehyde	mg/kg	NA	NA	0.0008 U	NA	NA	NA
Endrin ketone	mg/kg	NA	NA	0.0008 U	NA	NA	NA
gamma-BHC (Lindane)	mg/kg	NA	NA	0.0008 U	NA	NA	NA
gamma-Chlordane	mg/kg	NA	NA	0.0008 U	NA	NA	NA
Heptachlor	mg/kg	NA	NA	0.0008 U	NA	NA	NA
Heptachlor epoxide	mg/kg	NA	NA	0.0008 U	NA	NA	NA
Methoxychlor	mg/kg	NA	NA	0.0016 U	NA	NA	NA
Toxaphene	mg/kg	NA	NA	0.02 U	NA	NA	NA
Pesticide-TCLP							
Chlordane	mg/L	0.005 U	0.005 U	NA	NA	0.005 U	NA
Endrin	mg/L	0.0005 U	0.0005 U	NA	NA	0.0005 U	NA
gamma-BHC (Lindane)	mg/L	0.0005 U	0.0005 U	NA	NA	0.0005 U	NA
Heptachlor	mg/L	0.0005 U	0.0005 U	NA	NA	0.0005 U	NA
Heptachlor epoxide	mg/L	0.0005 U	0.0005 U	NA	NA	0.0005 U	NA
Methoxychlor	mg/L	0.0005 U	0.0005 U	NA	NA	0.0005 U	NA
Toxaphene	mg/L	0.025 U	0.025 U	NA	NA	0.025 U	NA
PCB							
Aroclor 1016	mg/kg	0.043 U	0.037 U	0.04 U	0.036 U	NA	0.04 U
Aroclor 1221	mg/kg	0.043 U	0.037 U	0.04 U	0.036 U	NA	0.04 U
Aroclor 1232	mg/kg	0.043 U	0.037 U	0.04 U	0.036 U	NA	0.04 U
Aroclor 1242	mg/kg	0.043 U	0.037 U	0.04 U	0.036 U	NA	0.04 U
Aroclor 1248	mg/kg	0.043 U	0.037 U	0.04 U	0.036 U	NA	0.04 U
Aroclor 1254	mg/kg	0.043 U	0.037 U	0.04 U	0.036 U	NA	0.04 U
Aroclor 1260	mg/kg	0.043 U	0.037 U	0.04 U	0.036 U	NA	0.04 U
Total PCBs	mg/kg	0.043 U	0.037 U	0.04 U	0.036 U	NA	0.04 U
PCB-TCLP							
Aroclor 1016	mg/L	0.0025 U	0.0025 U	NA	NA	NA	NA
Aroclor 1221	mg/L	0.0025 U	0.0025 U	NA	NA	NA	NA
Aroclor 1232	mg/L	0.0025 U	0.0025 U	NA	NA	NA	NA
Aroclor 1242	mg/L	0.0025 U	0.0025 U	NA	NA	NA	NA
Aroclor 1248	mg/L	0.0025 U	0.0025 U	NA	NA	NA	NA
Aroclor 1254	mg/L	0.0025 U	0.0025 U	NA	NA	NA	NA
Aroclor 1260	mg/L	0.0025 U	0.0025 U	NA	NA	NA	NA
Herbicides							
2,4,5-T	mg/kg	NA	NA	0.0132	NA	NA	NA
2,4,5-TP (Silvex)	mg/kg	NA	NA	0.0081 U	NA	NA	NA
2,4-D	mg/kg	NA	NA	0.041 U	NA	NA	NA
2,4-DB	mg/kg	NA	NA	0.041 U	NA	NA	NA
Dalapon	mg/kg	NA	NA	0.0081 U	NA	NA	NA
Dicamba	mg/kg	NA	NA	0.0081 U	NA	NA	NA

Table 3
Waste Characterization Analytical Results

National Grid - Non-Owned Former MGP Site - Rensselaer, New York
Phase I PDI Summary Report

Location ID: Sample Depth(Feet): Date Collected:	Units	TP-106 3 11/10/16	TP-107 3 11/11/16	TP-109 0 - 5 01/16/17	TP-109 5 - 10 01/16/17	TP-110 0 - 3 11/11/16	TP-110 3 - 3.5 11/11/16
Herbicides (cont.)							
Dichloroprop	mg/kg	NA	NA	0.041 U	NA	NA	NA
Dinoseb	mg/kg	NA	NA	0.041 U	NA	NA	NA
MCPA	mg/kg	NA	NA	4.1 U	NA	NA	NA
MCPP	mg/kg	NA	NA	4.1 U	NA	NA	NA
Pentachlorophenol	mg/kg	NA	NA	0.0041 U	NA	NA	NA
Herb-TCLP							
2,4,5-TP (Silvex)	mg/L	0.01 U	0.01 U	NA	NA	0.01 U	NA
2,4-D	mg/L	0.01 U	0.01 U	NA	NA	0.01 U	NA
TPH							
TPH-DRO (Semi-VOA)	mg/kg	525	101	NA	2,250	NA	2,200
TPH-GRO (VOA)	mg/kg	4.46 J	3.66 J	NA	338	NA	68.1
Metals							
Aluminum	mg/kg	NA	NA	NA	14,300	NA	NA
Antimony	mg/kg	1 U	0.91 U	NA	2.4 U	NA	0.99 U
Arsenic	mg/kg	7	8.6	NA	9.2	NA	4.6
Barium	mg/kg	103	92.7	NA	77	NA	83.6
Beryllium	mg/kg	0.88	0.63	NA	0.68	NA	0.47
Cadmium	mg/kg	0.19 B	0.22 B	NA	0.59 U	NA	0.12 B
Calcium	mg/kg	NA	NA	NA	2,840	NA	NA
Chromium	mg/kg	17.4	14.6	NA	19	NA	13.1
Cobalt	mg/kg	NA	NA	NA	11	NA	NA
Copper	mg/kg	NA	NA	NA	31.7	NA	NA
Iron	mg/kg	NA	NA	NA	27,400	NA	NA
Lead	mg/kg	28	46.1	NA	22	NA	34.9
Magnesium	mg/kg	NA	NA	NA	4,990	NA	NA
Manganese	mg/kg	NA	NA	NA	475	NA	NA
Mercury	mg/kg	0.057	0.21	NA	0.12	NA	0.3
Nickel	mg/kg	26.3	20.6	NA	25.1	NA	19.2
Potassium	mg/kg	NA	NA	NA	1,550	NA	NA
Selenium	mg/kg	1 U	0.91 U	NA	2.4 U	NA	0.99 U
Silver	mg/kg	0.5 U	0.46 U	NA	0.59 U	NA	0.49 U
Sodium	mg/kg	NA	NA	NA	1,200 U	NA	NA
Thallium	mg/kg	1 U	0.11 B	NA	1.2 U	NA	0.99 U
Vanadium	mg/kg	26.7	22.1	NA	22.1	NA	17
Zinc	mg/kg	69.7	76.4	NA	79.8	NA	61.7
Metals-TCLP							
Arsenic	mg/L	0.0044 B	0.002 B	0.5 U	NA	0.0037 B	NA
Barium	mg/L	0.65	0.37 B	1 U	NA	0.75	NA
Cadmium	mg/L	0.0012 B	0.0012 B	0.025 U	NA	0.0013 B	NA
Chromium	mg/L	0.01 U	0.0012 B	0.05 U	NA	0.01 U	NA
Lead	mg/L	0.0012 B	0.0039 B	0.5 U	NA	1.5	NA
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	NA	0.0002 U	NA
Selenium	mg/L	0.025 U	0.025 U	0.5 U	NA	0.025 U	NA
Silver	mg/L	0.005 U	0.005 U	0.05 U	NA	0.005 U	NA
General Chemistry							
Cyanide	mg/kg	2.6	0.62	NA	1.6	NA	1.1
Heat Content, BTU	BTU/LB	NA	NA	NA	1,260	NA	NA
Percent Sulfur	%	NA	NA	NA	0.13 U	NA	NA

Table 3
Waste Characterization Analytical Results



National Grid - Non-Owned Former MGP Site - Rensselaer, New York
Phase I PDI Summary Report

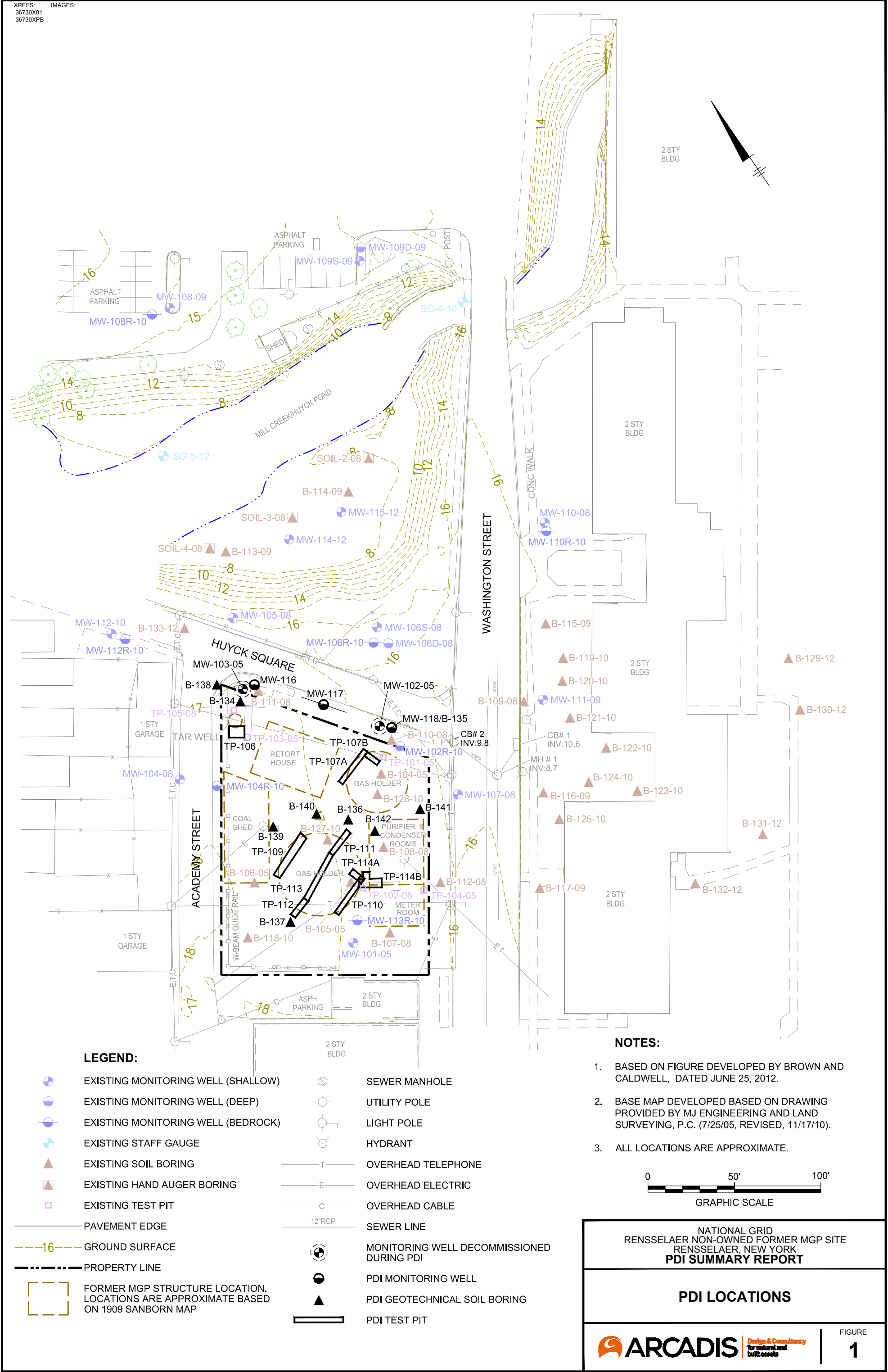
Notes:

1. Samples collected by ARCADIS on the date indicated.
2. Samples collected in November 2016 were analyzed by SGS Accutest Laboratories located in Marlborough, MA.
3. Samples collected in January 2017 were analyzed by SGS Accutest Laboratories located in New Jersey, NJ.
4. B - Indicates the analyte was found in associated method blank.
5. J - Indicates the associated numerical value is an estimated concentration.
6. NA - Indicates the compound was not analyzed.
7. U - Indicates the compound was analyzed for but not detected. The associated value is the compound quantitation limit.

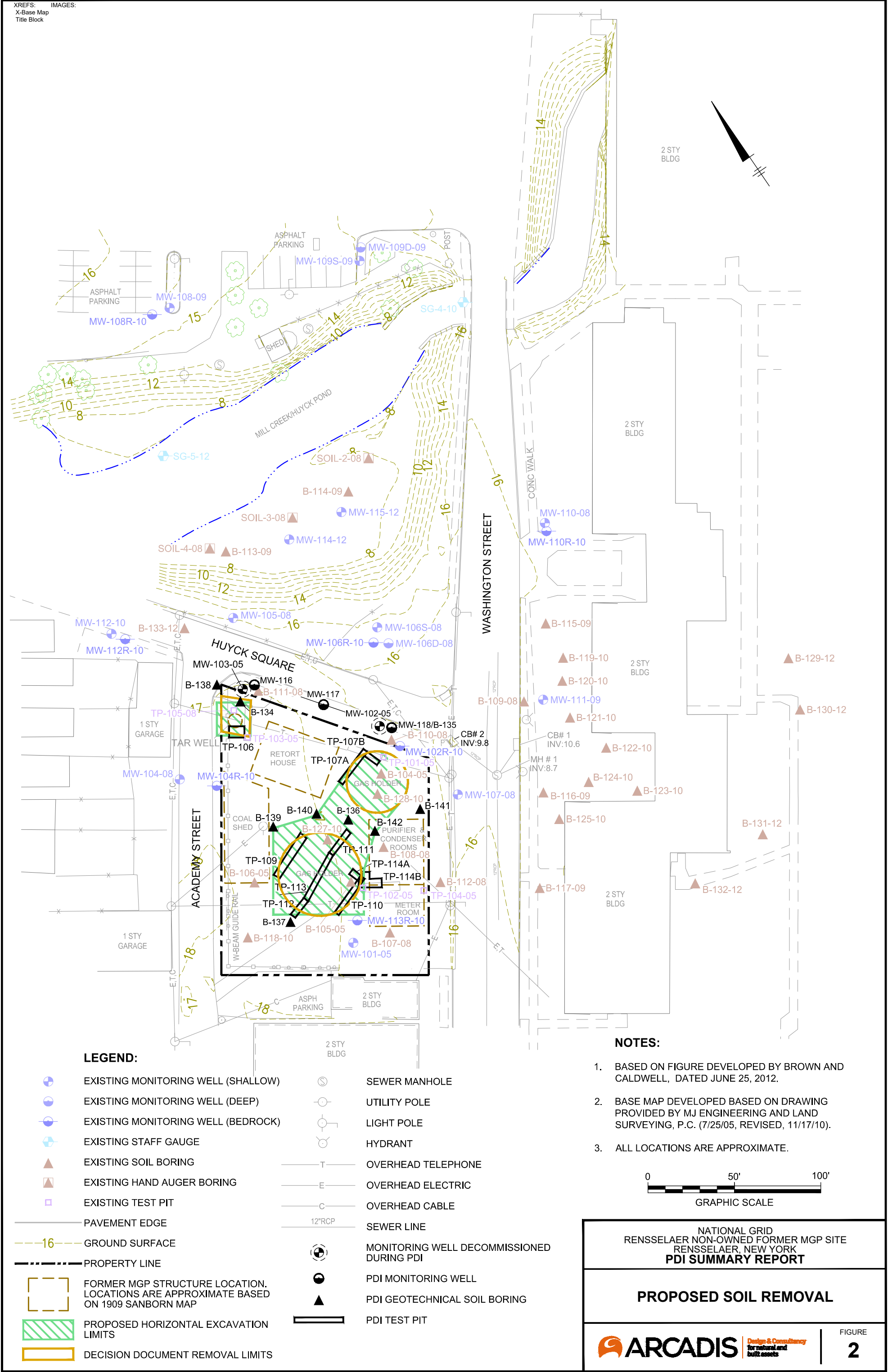
FIGURES



XREFS: IMAGES:
36730X01
36730XPB



XREFS: IMAGES:
X-Base Map
Title Block



**ATTACHMENT 1 - COMMUNITY AIR
MONITORING DATA**



Upwind Dust CAMP Data



Upwind Dust CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Upwind Dust	
Date of Monitoring:	11/10/2016	
DustTrak II Model 8530		
Log Interval (mm:ss):	15:00	
Number of points:	28	
Statistics	Average:	0.016
	Minimum:	0.012
	Maximum:	0.041
Date	Time (hh:mm:ss)	Aerosol (mg/m ³)
11/10/2016	9:33:22	0.018
11/10/2016	9:48:22	0.015
11/10/2016	10:03:22	0.014
11/10/2016	10:18:22	0.014
11/10/2016	10:33:22	0.013
11/10/2016	10:48:22	0.018
11/10/2016	11:03:22	0.017
11/10/2016	11:18:22	0.015
11/10/2016	11:33:22	0.014
11/10/2016	11:48:22	0.012
11/10/2016	12:03:22	0.012
11/10/2016	12:18:22	0.012
11/10/2016	12:33:22	0.014
11/10/2016	12:48:22	0.013
11/10/2016	13:03:22	0.012
11/10/2016	13:18:22	0.012
11/10/2016	13:33:22	0.012
11/10/2016	13:48:22	0.012
11/10/2016	14:03:22	0.013
11/10/2016	14:18:22	0.013
11/10/2016	14:33:22	0.012
11/10/2016	14:48:22	0.012
11/10/2016	15:03:22	0.031
11/10/2016	15:18:22	0.041
11/10/2016	15:33:22	0.026
11/10/2016	15:48:22	0.017
11/10/2016	16:03:22	0.013
11/10/2016	16:18:22	0.013

Upwind Dust CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Upwind Dust	
Date of Monitoring:	11/11/2016	
DustTrak II Model 8530		
Log Interval (mm:ss):	15:00	
Number of points:	25	
Statistics	Average:	0.01
	Minimum:	0.006
	Maximum:	0.021
Date	Time (hh:mm:ss)	Aerosol (mg/m ³)
11/11/2016	7:32:57	0.021
11/11/2016	7:47:57	0.02
11/11/2016	8:02:57	0.019
11/11/2016	8:17:57	0.016
11/11/2016	8:32:57	0.008
11/11/2016	8:47:57	0.007
11/11/2016	9:02:57	0.007
11/11/2016	9:17:57	0.007
11/11/2016	9:32:57	0.007
11/11/2016	9:47:57	0.007
11/11/2016	10:02:57	0.006
11/11/2016	10:17:57	0.008
11/11/2016	10:32:57	0.007
11/11/2016	10:47:57	0.008
11/11/2016	11:02:57	0.008
11/11/2016	11:17:57	0.007
11/11/2016	11:32:57	0.008
11/11/2016	11:47:57	0.009
11/11/2016	12:02:57	0.01
11/11/2016	12:17:57	0.01
11/11/2016	12:32:57	0.011
11/11/2016	12:47:57	0.009
11/11/2016	13:02:57	0.009
11/11/2016	13:17:57	0.009
11/11/2016	13:32:57	0.009

Upwind Dust CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Upwind Dust	
Date of Monitoring:	1/14/2017	
DustTrak II Model 8530		
Log Interval (mm:ss):	15:00	
Number of points:	23	
Statistics	Average:	0.017
	Minimum:	0.01
	Maximum:	0.056
Date	Time (hh:mm:ss)	Aerosol (mg/m ³)
1/14/2017	10:17:59	0.015
1/14/2017	10:32:59	0.012
1/14/2017	10:47:59	0.019
1/14/2017	11:02:59	0.011
1/14/2017	11:17:59	0.01
1/14/2017	11:32:59	0.01
1/14/2017	11:47:59	0.01
1/14/2017	12:02:59	0.01
1/14/2017	12:17:59	0.011
1/14/2017	12:32:59	0.014
1/14/2017	12:47:59	0.012
1/14/2017	13:02:59	0.016
1/14/2017	13:17:59	0.028
1/14/2017	13:32:59	0.01
1/14/2017	13:47:59	0.011
1/14/2017	14:02:59	0.011
1/14/2017	14:17:59	0.011
1/14/2017	14:32:59	0.029
1/14/2017	14:47:59	0.017
1/14/2017	15:02:59	0.056
1/14/2017	15:17:59	0.025
1/14/2017	15:32:59	0.011
1/14/2017	15:47:59	0.021

Upwind Dust CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Upwind Dust	
Date of Monitoring:	1/15/2017	
DustTrak II Model 8530		
Log Interval (mm:ss):	15:00	
Number of points:	38	
Statistics	Average:	0.022
	Minimum:	0
	Maximum:	0.06
Date	Time (hh:mm:ss)	Aerosol (mg/m ³)
1/15/2017	7:15:18	0.026
1/15/2017	7:30:18	0.029
1/15/2017	7:45:18	0.026
1/15/2017	8:00:18	0.024
1/15/2017	8:15:18	0.032
1/15/2017	8:30:18	0.034
1/15/2017	8:45:18	0.026
1/15/2017	9:00:18	0.053
1/15/2017	9:15:18	0.06
1/15/2017	9:30:18	0.044
1/15/2017	9:45:18	0.02
1/15/2017	10:00:18	0.022
1/15/2017	10:15:18	0.018
1/15/2017	10:30:18	0.018
1/15/2017	10:45:18	0.017
1/15/2017	11:00:18	0.017
1/15/2017	11:15:18	0.017
1/15/2017	11:30:18	0.02
1/15/2017	11:45:18	0.021
1/15/2017	12:00:18	0.019
1/15/2017	12:15:18	0.019
1/15/2017	12:30:18	0.02
1/15/2017	12:45:18	0.018
1/15/2017	13:00:18	0.02
1/15/2017	13:15:18	0.018
1/15/2017	13:30:18	0.02
1/15/2017	13:45:18	0.02
1/15/2017	14:00:18	0.016
1/15/2017	14:15:18	0.015
1/15/2017	14:30:18	0.015
1/15/2017	14:45:18	0.016
1/15/2017	15:00:18	0.013
1/15/2017	15:15:18	0.017
1/15/2017	15:30:18	0.019
1/15/2017	15:45:18	0.02
1/15/2017	16:00:18	0.013
1/15/2017	16:15:18	0.017
1/15/2017	16:30:18	0

Upwind Dust CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Upwind Dust	
Date of Monitoring:	1/16/2017	
DustTrak II Model 8530		
Log Interval (mm:ss):	15:00	
Number of points:	37	
Statistics	Average:	0.05
	Minimum:	0.015
	Maximum:	0.347
Date	Time (hh:mm:ss)	Aerosol (mg/m ³)
1/16/2017	6:55:19	0.067
1/16/2017	7:10:19	0.035
1/16/2017	7:25:19	0.035
1/16/2017	7:40:19	0.04
1/16/2017	7:55:19	0.055
1/16/2017	8:10:19	0.046
1/16/2017	8:25:19	0.04
1/16/2017	8:40:19	0.044
1/16/2017	8:55:19	0.071
1/16/2017	9:10:19	0.093
1/16/2017	9:25:19	0.059
1/16/2017	9:40:19	0.084
1/16/2017	9:55:19	0.098
1/16/2017	10:10:19	0.347
1/16/2017	10:25:19	0.228
1/16/2017	10:40:19	0.036
1/16/2017	10:55:19	0.03
1/16/2017	11:10:19	0.046
1/16/2017	11:25:19	0.033
1/16/2017	11:40:19	0.033
1/16/2017	11:55:19	0.025
1/16/2017	12:10:19	0.025
1/16/2017	12:25:19	0.018
1/16/2017	12:40:19	0.017
1/16/2017	12:55:19	0.019
1/16/2017	13:10:19	0.019
1/16/2017	13:25:19	0.023
1/16/2017	13:40:19	0.021
1/16/2017	13:55:19	0.017
1/16/2017	14:10:19	0.019
1/16/2017	14:25:19	0.016
1/16/2017	14:40:19	0.018
1/16/2017	14:55:19	0.016
1/16/2017	15:10:19	0.015
1/16/2017	15:25:19	0.017
1/16/2017	15:40:19	0.02
1/16/2017	15:55:19	0.018

Upwind Dust CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Upwind Dust	
Date of Monitoring:	2/19/2017	
DustTrak II Model 8533		
Log Interval (mm:ss):	15:00	
Number of points:	23	
Statistics	Average:	0.014
	Minimum:	0.011
	Maximum:	0.018
Date	Time (hh:mm:ss)	Aerosol (mg/m ³)
2/19/2017	9:48:46	0.012
2/19/2017	10:03:46	0.012
2/19/2017	10:18:46	0.015
2/19/2017	10:33:46	0.014
2/19/2017	10:48:46	0.013
2/19/2017	11:03:46	0.012
2/19/2017	11:18:46	0.013
2/19/2017	11:33:46	0.013
2/19/2017	11:48:46	0.016
2/19/2017	12:03:46	0.019
2/19/2017	12:18:46	0.012
2/19/2017	12:33:46	0.013
2/19/2017	12:48:46	0.015
2/19/2017	13:03:46	0.012
2/19/2017	13:18:46	0.016
2/19/2017	13:33:46	0.018
2/19/2017	13:48:46	0.012
2/19/2017	14:03:46	0.012
2/19/2017	14:18:46	0.012
2/19/2017	14:33:46	0.011
2/19/2017	14:48:46	0.016
2/19/2017	15:03:46	0.016
2/19/2017	15:18:46	0.013

Upwind Dust CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Upwind Dust	
Date of Monitoring:	2/20/2017	
DustTrak II Model 8533		
Log Interval (mm:ss):	15:00	
Number of points:	25	
Statistics	Average:	0.017
	Minimum:	0.01
	Maximum:	0.038
Date	Time (hh:mm:ss)	Aerosol (mg/m ³)
2/20/2017	9:48:46	0.03
2/20/2017	10:03:46	0.032
2/20/2017	10:18:46	0.038
2/20/2017	10:33:46	0.025
2/20/2017	10:48:46	0.023
2/20/2017	11:03:46	0.012
2/20/2017	11:18:46	0.011
2/20/2017	11:33:46	0.012
2/20/2017	11:48:46	0.01
2/20/2017	12:03:46	0.012
2/20/2017	12:18:46	0.014
2/20/2017	12:33:46	0.019
2/20/2017	12:48:46	0.018
2/20/2017	13:03:46	0.018
2/20/2017	13:18:46	0.015
2/20/2017	13:33:46	0.015
2/20/2017	13:48:46	0.015
2/20/2017	14:03:46	0.013
2/20/2017	14:18:46	0.014
2/20/2017	14:33:46	0.014
2/20/2017	14:48:46	0.012
2/20/2017	15:03:46	0.017
2/20/2017	15:18:46	0.013
2/20/2017	15:33:46	0.013
2/20/2017	15:48:46	0.013

Upwind Dust CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Upwind Dust	
Date of Monitoring:	7/8/2017	
DustTrak II Model 8533		
Log Interval (mm:ss):	1:00	
Number of points:	202	
Statistics	Average:	0.001
	Minimum:	0
	Maximum:	0.007
Date	Time (hh:mm:ss)	Aerosol (mg/m ³)
7/8/2017	11:55:53	0.007
7/8/2017	11:56:53	0.005
7/8/2017	11:57:53	0.004
7/8/2017	11:58:53	0.004
7/8/2017	11:59:53	0.004
7/8/2017	12:00:53	0.003
7/8/2017	12:01:53	0.003
7/8/2017	12:02:53	0.003
7/8/2017	12:03:53	0.003
7/8/2017	12:04:53	0.002
7/8/2017	12:05:53	0.002
7/8/2017	12:06:53	0.002
7/8/2017	12:07:53	0.002
7/8/2017	12:08:53	0.002
7/8/2017	12:09:53	0.002
7/8/2017	12:10:53	0.002
7/8/2017	12:11:53	0.002
7/8/2017	12:12:53	0.002
7/8/2017	12:13:53	0.002
7/8/2017	12:14:53	0.002
7/8/2017	12:15:53	0.002
7/8/2017	12:16:53	0.002
7/8/2017	12:17:53	0.001
7/8/2017	12:18:53	0.001
7/8/2017	12:19:53	0.001
7/8/2017	12:20:53	0.001
7/8/2017	12:21:53	0.001
7/8/2017	12:22:53	0.002
7/8/2017	12:23:53	0.001
7/8/2017	12:24:53	0
7/8/2017	12:25:53	0
7/8/2017	12:26:53	0
7/8/2017	12:27:53	0
7/8/2017	12:28:53	0.006
7/8/2017	12:29:53	0.003
7/8/2017	12:30:53	0
7/8/2017	12:31:53	0
7/8/2017	12:32:53	0
7/8/2017	12:33:53	0
7/8/2017	12:34:53	0
7/8/2017	12:35:53	0
7/8/2017	12:36:53	0.001
7/8/2017	12:37:53	0
7/8/2017	12:38:53	0

7/8/2017	12:39:53	0
7/8/2017	12:40:53	0
7/8/2017	12:41:53	0
7/8/2017	12:42:53	0
7/8/2017	12:43:53	0
7/8/2017	12:44:53	0
7/8/2017	12:45:53	0
7/8/2017	12:46:53	0
7/8/2017	12:47:53	0
7/8/2017	12:48:53	0
7/8/2017	12:49:53	0
7/8/2017	12:50:53	0
7/8/2017	12:51:53	0
7/8/2017	12:52:53	0
7/8/2017	12:53:53	0
7/8/2017	12:54:53	0
7/8/2017	12:55:53	0
7/8/2017	12:56:53	0
7/8/2017	12:57:53	0
7/8/2017	12:58:53	0
7/8/2017	12:59:53	0
7/8/2017	13:00:53	0
7/8/2017	13:01:53	0
7/8/2017	13:02:53	0
7/8/2017	13:03:53	0
7/8/2017	13:04:53	0
7/8/2017	13:05:53	0
7/8/2017	13:06:53	0
7/8/2017	13:07:53	0
7/8/2017	13:08:53	0
7/8/2017	13:09:53	0
7/8/2017	13:10:53	0
7/8/2017	13:11:53	0
7/8/2017	13:12:53	0
7/8/2017	13:13:53	0
7/8/2017	13:14:53	0
7/8/2017	13:15:53	0
7/8/2017	13:16:53	0
7/8/2017	13:17:53	0
7/8/2017	13:18:53	0
7/8/2017	13:19:53	0
7/8/2017	13:20:53	0
7/8/2017	13:21:53	0
7/8/2017	13:22:53	0
7/8/2017	13:23:53	0
7/8/2017	13:24:53	0
7/8/2017	13:25:53	0
7/8/2017	13:26:53	0
7/8/2017	13:27:53	0
7/8/2017	13:28:53	0
7/8/2017	13:29:53	0
7/8/2017	13:30:53	0
7/8/2017	13:31:53	0.001
7/8/2017	13:32:53	0
7/8/2017	13:33:53	0.001
7/8/2017	13:34:53	0.001
7/8/2017	13:35:53	0.001
7/8/2017	13:36:53	0.001

7/8/2017	13:37:53	0
7/8/2017	13:38:53	0
7/8/2017	13:39:53	0.001
7/8/2017	13:40:53	0.001
7/8/2017	13:41:53	0.001
7/8/2017	13:42:53	0.001
7/8/2017	13:43:53	0
7/8/2017	13:44:53	0
7/8/2017	13:45:53	0
7/8/2017	13:46:53	0
7/8/2017	13:47:53	0
7/8/2017	13:48:53	0.001
7/8/2017	13:49:53	0.001
7/8/2017	13:50:53	0
7/8/2017	13:51:53	0.001
7/8/2017	13:52:53	0.001
7/8/2017	13:53:53	0.001
7/8/2017	13:54:53	0.001
7/8/2017	13:55:53	0.001
7/8/2017	13:56:53	0.001
7/8/2017	13:57:53	0.001
7/8/2017	13:58:53	0.001
7/8/2017	13:59:53	0.001
7/8/2017	14:00:53	0.001
7/8/2017	14:01:53	0.001
7/8/2017	14:02:53	0.002
7/8/2017	14:03:53	0.001
7/8/2017	14:04:53	0.001
7/8/2017	14:05:53	0.001
7/8/2017	14:06:53	0.001
7/8/2017	14:07:53	0.001
7/8/2017	14:08:53	0.001
7/8/2017	14:09:53	0.001
7/8/2017	14:10:53	0.001
7/8/2017	14:11:53	0.001
7/8/2017	14:12:53	0.001
7/8/2017	14:13:53	0.001
7/8/2017	14:14:53	0.002
7/8/2017	14:15:53	0.002
7/8/2017	14:16:53	0.002
7/8/2017	14:17:53	0.003
7/8/2017	14:18:53	0.002
7/8/2017	14:19:53	0.001
7/8/2017	14:20:53	0.002
7/8/2017	14:21:53	0.001
7/8/2017	14:22:53	0.001
7/8/2017	14:23:53	0.001
7/8/2017	14:24:53	0.001
7/8/2017	14:25:53	0.001
7/8/2017	14:26:53	0.001
7/8/2017	14:27:53	0.001
7/8/2017	14:28:53	0.002
7/8/2017	14:29:53	0.002
7/8/2017	14:30:53	0.002
7/8/2017	14:31:53	0.001
7/8/2017	14:32:53	0.002
7/8/2017	14:33:53	0.002
7/8/2017	14:34:53	0.002

7/8/2017	14:35:53	0.002
7/8/2017	14:36:53	0.001
7/8/2017	14:37:53	0.001
7/8/2017	14:38:53	0.001
7/8/2017	14:39:53	0.001
7/8/2017	14:40:53	0.002
7/8/2017	14:41:53	0.002
7/8/2017	14:42:53	0.002
7/8/2017	14:43:53	0.002
7/8/2017	14:44:53	0.002
7/8/2017	14:45:53	0.003
7/8/2017	14:46:53	0.003
7/8/2017	14:47:53	0.003
7/8/2017	14:48:53	0.003
7/8/2017	14:49:53	0.003
7/8/2017	14:50:53	0.003
7/8/2017	14:51:53	0.003
7/8/2017	14:52:53	0.003
7/8/2017	14:53:53	0.004
7/8/2017	14:54:53	0.003
7/8/2017	14:55:53	0.003
7/8/2017	14:56:53	0.003
7/8/2017	14:57:53	0.003
7/8/2017	14:58:53	0.003
7/8/2017	14:59:53	0.003
7/8/2017	15:00:53	0.003
7/8/2017	15:01:53	0.003
7/8/2017	15:02:53	0.002
7/8/2017	15:03:53	0.002
7/8/2017	15:04:53	0.003
7/8/2017	15:05:53	0.003
7/8/2017	15:06:53	0.003
7/8/2017	15:07:53	0.003
7/8/2017	15:08:53	0.003
7/8/2017	15:09:53	0.003
7/8/2017	15:10:53	0.003
7/8/2017	15:11:53	0.003
7/8/2017	15:12:53	0.003
7/8/2017	15:13:53	0.004
7/8/2017	15:14:53	0.003
7/8/2017	15:15:53	0.004
7/8/2017	15:16:53	0.003

Upwind Dust CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Upwind Dust	
Date of Monitoring:	7/9/2017	
DustTrak II Model 8533		
Log Interval (mm:ss):	1:00	
Number of points:	237	
Statistics	Average:	0.001
	Minimum:	0
	Maximum:	0.007
Date	Time (hh:mm:ss)	Aerosol (mg/m ³)
7/9/2017	7:21:31	0.029
7/9/2017	7:22:31	0.036
7/9/2017	7:23:31	0.024
7/9/2017	7:24:31	0.024
7/9/2017	7:25:31	0.026
7/9/2017	7:26:31	0.024
7/9/2017	7:27:31	0.037
7/9/2017	7:28:31	0.024
7/9/2017	7:29:31	0.025
7/9/2017	7:30:31	0.026
7/9/2017	7:31:31	0.023
7/9/2017	7:32:31	0.022
7/9/2017	7:33:31	0.028
7/9/2017	7:34:31	0.023
7/9/2017	7:35:31	0.022
7/9/2017	7:36:31	0.031
7/9/2017	7:37:31	0.021
7/9/2017	7:38:31	0.023
7/9/2017	7:39:31	0.022
7/9/2017	7:40:31	0.027
7/9/2017	7:41:31	0.039
7/9/2017	7:42:31	0.024
7/9/2017	7:43:31	0.025
7/9/2017	7:44:31	0.024
7/9/2017	7:45:31	0.032
7/9/2017	7:46:31	0.028
7/9/2017	7:47:31	0.027
7/9/2017	7:48:31	0.026
7/9/2017	7:49:31	0.029
7/9/2017	7:50:31	0.025
7/9/2017	7:51:31	0.024
7/9/2017	7:52:31	0.036
7/9/2017	7:53:31	0.024
7/9/2017	7:54:31	0.02
7/9/2017	7:55:31	0.022
7/9/2017	7:56:31	0.021
7/9/2017	7:57:31	0.029
7/9/2017	7:58:31	0.022
7/9/2017	7:59:31	0.024
7/9/2017	8:00:31	0.022
7/9/2017	8:01:31	0.022
7/9/2017	8:02:31	0.02
7/9/2017	8:03:31	0.019
7/9/2017	8:04:31	0.019

7/9/2017	8:05:31	0.03
7/9/2017	8:06:31	0.021
7/9/2017	8:07:31	0.024
7/9/2017	8:08:31	0.021
7/9/2017	8:09:31	0.026
7/9/2017	8:10:31	0.019
7/9/2017	8:11:31	0.023
7/9/2017	8:12:31	0.018
7/9/2017	8:13:31	0.017
7/9/2017	8:14:31	0.017
7/9/2017	8:15:31	0.018
7/9/2017	8:16:31	0.017
7/9/2017	8:17:31	0.016
7/9/2017	8:18:31	0.015
7/9/2017	8:19:31	0.014
7/9/2017	8:20:31	0.019
7/9/2017	8:21:31	0.016
7/9/2017	8:22:31	0.014
7/9/2017	8:23:31	0.015
7/9/2017	8:24:31	0.015
7/9/2017	8:25:31	0.015
7/9/2017	8:26:31	0.014
7/9/2017	8:27:31	0.014
7/9/2017	8:28:31	0.014
7/9/2017	8:29:31	0.016
7/9/2017	8:30:31	0.016
7/9/2017	8:31:31	0.015
7/9/2017	8:32:31	0.017
7/9/2017	8:33:31	0.015
7/9/2017	8:34:31	0.014
7/9/2017	8:35:31	0.014
7/9/2017	8:36:31	0.014
7/9/2017	8:37:31	0.014
7/9/2017	8:38:31	0.015
7/9/2017	8:39:31	0.016
7/9/2017	8:40:31	0.016
7/9/2017	8:41:31	0.015
7/9/2017	8:42:31	0.015
7/9/2017	8:43:31	0.015
7/9/2017	8:44:31	0.015
7/9/2017	8:45:31	0.014
7/9/2017	8:46:31	0.014
7/9/2017	8:47:31	0.015
7/9/2017	8:48:31	0.016
7/9/2017	8:49:31	0.014
7/9/2017	8:50:31	0.015
7/9/2017	8:51:31	0.015
7/9/2017	8:52:31	0.014
7/9/2017	8:53:31	0.015
7/9/2017	8:54:31	0.013
7/9/2017	8:55:31	0.012
7/9/2017	8:56:31	0.012
7/9/2017	8:57:31	0.014
7/9/2017	8:58:31	0.013
7/9/2017	8:59:31	0.013
7/9/2017	9:00:31	0.015
7/9/2017	9:01:31	0.013
7/9/2017	9:02:31	0.013

7/9/2017	9:03:31	0.013
7/9/2017	9:04:31	0.013
7/9/2017	9:05:31	0.013
7/9/2017	9:06:31	0.012
7/9/2017	9:07:31	0.012
7/9/2017	9:08:31	0.03
7/9/2017	9:09:31	0.029
7/9/2017	9:10:31	0.016
7/9/2017	9:11:31	0.01
7/9/2017	9:12:31	0.009
7/9/2017	9:13:31	0.009
7/9/2017	9:14:31	0.012
7/9/2017	9:15:31	0.009
7/9/2017	9:16:31	0.009
7/9/2017	9:17:31	0.009
7/9/2017	9:18:31	0.009
7/9/2017	9:19:31	0.009
7/9/2017	9:20:31	0.009
7/9/2017	9:21:31	0.009
7/9/2017	9:22:31	0.009
7/9/2017	9:23:31	0.009
7/9/2017	9:24:31	0.009
7/9/2017	9:25:31	0.009
7/9/2017	9:26:31	0.009
7/9/2017	9:27:31	0.01
7/9/2017	9:28:31	0.013
7/9/2017	9:29:31	0.009
7/9/2017	9:30:31	0.009
7/9/2017	9:31:31	0.009
7/9/2017	9:32:31	0.009
7/9/2017	9:33:31	0.009
7/9/2017	9:34:31	0.009
7/9/2017	9:35:31	0.009
7/9/2017	10:23:31	0.044
7/9/2017	10:24:31	0.012
7/9/2017	10:25:31	0.012
7/9/2017	10:26:31	0.01
7/9/2017	10:27:31	0.01
7/9/2017	10:28:31	0.009
7/9/2017	10:29:31	0.009
7/9/2017	10:30:31	0.009
7/9/2017	10:31:31	0.009
7/9/2017	10:32:31	0.009
7/9/2017	10:33:31	0.01
7/9/2017	10:34:31	0.009
7/9/2017	10:35:31	0.009
7/9/2017	10:36:31	0.009
7/9/2017	10:37:31	0.009
7/9/2017	10:38:31	0.009
7/9/2017	10:39:31	0.009
7/9/2017	10:40:31	0.009
7/9/2017	10:41:31	0.009
7/9/2017	10:42:31	0.008
7/9/2017	10:43:31	0.009
7/9/2017	10:44:31	0.009
7/9/2017	10:45:31	0.009
7/9/2017	10:46:31	0.009
7/9/2017	10:47:31	0.008

7/9/2017	10:48:31	0.011
7/9/2017	10:49:31	0.013
7/9/2017	10:50:31	0.01
7/9/2017	10:51:31	0.012
7/9/2017	10:52:31	0.018
7/9/2017	10:53:31	0.023
7/9/2017	10:54:31	0.017
7/9/2017	10:55:31	0.01
7/9/2017	10:56:31	0.01
7/9/2017	10:57:31	0.022
7/9/2017	10:58:31	0.012
7/9/2017	10:59:31	0.009
7/9/2017	11:00:31	0.012
7/9/2017	11:01:31	0.01
7/9/2017	11:02:31	0.009
7/9/2017	11:03:31	0.009
7/9/2017	11:04:31	0.009
7/9/2017	11:05:31	0.008
7/9/2017	11:06:31	0.008
7/9/2017	11:07:31	0.007
7/9/2017	11:08:31	0.008
7/9/2017	11:09:31	0.008
7/9/2017	11:10:31	0.008
7/9/2017	11:11:31	0.009
7/9/2017	11:12:31	0.009
7/9/2017	11:13:31	0.008
7/9/2017	11:14:31	0.008
7/9/2017	11:15:31	0.009
7/9/2017	11:16:31	0.008
7/9/2017	11:17:31	0.008
7/9/2017	11:18:31	0.019
7/9/2017	11:19:31	0.008
7/9/2017	11:20:31	0.008
7/9/2017	11:21:31	0.007
7/9/2017	11:22:31	0.008
7/9/2017	11:23:31	0.008
7/9/2017	11:24:31	0.007
7/9/2017	11:25:31	0.008
7/9/2017	11:26:31	0.007
7/9/2017	11:27:31	0.007
7/9/2017	11:28:31	0.007
7/9/2017	11:29:31	0.007
7/9/2017	11:30:31	0.007
7/9/2017	11:31:31	0.007
7/9/2017	11:32:31	0.008
7/9/2017	11:33:31	0.008
7/9/2017	11:34:31	0.008
7/9/2017	11:35:31	0.008
7/9/2017	11:36:31	0.007
7/9/2017	11:37:31	0.007
7/9/2017	11:38:31	0.007
7/9/2017	11:39:31	0.007
7/9/2017	11:40:31	0.007
7/9/2017	11:41:31	0.007
7/9/2017	11:42:31	0.008
7/9/2017	11:43:31	0.008
7/9/2017	11:44:31	0.008
7/9/2017	11:45:31	0.007

7/9/2017	11:46:31	0.007
7/9/2017	11:47:31	0.007
7/9/2017	11:48:31	0.007
7/9/2017	11:49:31	0.008
7/9/2017	11:50:31	0.007
7/9/2017	11:51:31	0.008
7/9/2017	11:52:31	0.007
7/9/2017	11:53:31	0.008
7/9/2017	11:54:31	0.007
7/9/2017	11:55:31	0.009
7/9/2017	11:56:31	0.008
7/9/2017	11:57:31	0.008
7/9/2017	11:58:31	0.008
7/9/2017	11:59:31	0.008
7/9/2017	12:00:31	0.025
7/9/2017	12:01:31	0.013
7/9/2017	12:02:31	0.008
7/9/2017	12:03:31	0.008
7/9/2017	12:04:31	0.007

Upwind VOC CAMP Data



Upwind VOC CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York

PDI Summary Report

Location:	Upwind VOC			
Date of Monitoring:	1/14/2017			
MiniRAE 3000 (PGM7320)				
Data Points: 24		Sample Period: 900 sec		
Last Calibration Time: 1/13/2017 12:53:00 PM				
	Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
	High Alarm Levels:	100	100	100
	Low Alarm Levels:	50	50	50
Date	Time (hh:mm:ss)	Min(ppm)	Avg(ppm)	Max(ppm)
1/14/2017	10:29:12	0	0	0
1/14/2017	10:44:12	0	0.004	0.02
1/14/2017	10:59:12	0	0	0
1/14/2017	11:14:12	0	0	0
1/14/2017	11:29:12	0.003	0.088	0.186
1/14/2017	11:44:12	0	0.004	0.02
1/14/2017	11:59:12	0	0	0.007
1/14/2017	12:14:12	0	0	0
1/14/2017	12:29:12	0	0	0
1/14/2017	12:44:12	0	0.001	0.022
1/14/2017	12:59:12	0	0	0
1/14/2017	13:14:12	0	0.194	0.732
1/14/2017	13:29:12	0	0	0
1/14/2017	13:44:12	0	0	0
1/14/2017	13:59:12	0	0	0
1/14/2017	14:14:12	0	0	0
1/14/2017	14:29:12	0	0	0
1/14/2017	14:44:12	0	0	0
1/14/2017	14:59:12	0	0	0
1/14/2017	15:14:12	0	0.002	0.012
1/14/2017	15:29:12	0	0.003	0.03
1/14/2017	15:44:12	0	0.009	0.052
1/14/2017	15:59:12	0	0	0.001
1/14/2017	16:14:12	0	0	0.003

Upwind VOC CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Upwind VOC			
Date of Monitoring:	1/15/2017			
MiniRAE 3000 (PGM7320)				
Data Points: 38		Sample Period: 900 sec		
Last Calibration Time: 1/14/2017 4:22:00 PM				
	Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
	High Alarm Levels:	100	100	100
	Low Alarm Levels:	50	50	50
Date	Time (hh:mm:ss)	Min(ppm)	Avg(ppm)	Max(ppm)
1/15/2017	7:21:04	0	0	0
1/15/2017	7:36:04	0	0	0
1/15/2017	7:51:04	0	0	0
1/15/2017	8:06:04	0	0	0
1/15/2017	8:21:04	0	0.007	0.038
1/15/2017	8:36:04	0	0	0.002
1/15/2017	8:51:04	0	0	0
1/15/2017	9:06:04	0	0	0.022
1/15/2017	9:21:04	0	0.006	0.054
1/15/2017	9:36:04	0	0.021	0.069
1/15/2017	9:51:04	0.033	0.038	0.045
1/15/2017	10:06:04	0.008	0.009	0.011
1/15/2017	10:21:04	0.048	0.095	0.271
1/15/2017	10:36:04	0.014	0.019	0.061
1/15/2017	10:51:04	0.007	0.01	0.016
1/15/2017	11:06:04	0.006	0.014	0.034
1/15/2017	11:21:04	0	0.007	0.019
1/15/2017	11:36:04	0.04	0.057	0.087
1/15/2017	11:51:04	0.015	0.027	0.05
1/15/2017	12:06:04	0.007	0.016	0.058
1/15/2017	12:21:04	0.009	0.014	0.023
1/15/2017	12:36:04	0.016	0.023	0.038
1/15/2017	12:51:04	0.015	0.024	0.046
1/15/2017	13:06:04	0.016	0.042	0.067
1/15/2017	13:21:04	0.013	0.022	0.041
1/15/2017	13:36:04	0.015	0.03	0.071
1/15/2017	13:51:04	0.016	0.027	0.039
1/15/2017	14:06:04	0.014	0.017	0.022
1/15/2017	14:21:04	0.013	0.022	0.046
1/15/2017	14:36:04	0.015	0.019	0.028
1/15/2017	14:51:04	0.019	0.028	0.058
1/15/2017	15:06:04	0.022	0.053	0.122
1/15/2017	15:21:04	0.012	0.014	0.017
1/15/2017	15:36:04	0.009	0.042	0.287
1/15/2017	15:51:04	0.052	0.152	0.375
1/15/2017	16:06:04	0.064	0.07	0.088
1/15/2017	16:21:04	0.044	0.055	0.079
1/15/2017	16:36:04	0.039	0.054	0.089

Upwind VOC CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Upwind VOC			
Date of Monitoring:	1/16/2017			
MiniRAE 3000 (PGM7320)				
Data Points: 38		Sample Period: 900 sec		
Last Calibration Time: 1/15/2017 4:48:00 PM				
	Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
	High Alarm Levels:	100	100	100
	Low Alarm Levels:	50	50	50
Date	Time (hh:mm:ss)	Min(ppm)	Avg(ppm)	Max(ppm)
1/16/2017	7:01:14	0	0	0
1/16/2017	7:16:14	0	0	0
1/16/2017	7:31:14	0	0	0
1/16/2017	7:46:14	0.006	0.008	0.01
1/16/2017	8:01:14	0.017	0.019	0.022
1/16/2017	8:16:14	0.022	0.028	0.039
1/16/2017	8:31:14	0.022	0.024	0.027
1/16/2017	8:46:14	0.027	0.032	0.038
1/16/2017	9:01:14	0.085	0.151	0.316
1/16/2017	9:16:14	0.1	0.104	0.113
1/16/2017	9:31:14	0.09	0.099	0.133
1/16/2017	9:46:14	0.105	0.157	0.297
1/16/2017	10:01:14	0.092	0.109	0.137
1/16/2017	10:16:14	0.046	0.054	0.068
1/16/2017	10:31:14	0.194	0.282	0.43
1/16/2017	10:46:14	0.101	0.125	0.166
1/16/2017	11:01:14	0.059	0.073	0.104
1/16/2017	11:16:14	0.084	0.096	0.115
1/16/2017	11:31:14	0.062	0.139	0.231
1/16/2017	11:46:14	0.071	0.087	0.105
1/16/2017	12:01:14	0.066	0.071	0.075
1/16/2017	12:16:14	0.06	0.062	0.067
1/16/2017	12:31:14	0.105	0.13	0.155
1/16/2017	12:46:14	0.142	0.161	0.206
1/16/2017	13:01:14	0.125	0.13	0.139
1/16/2017	13:16:14	0.261	0.423	0.515
1/16/2017	13:31:14	0.107	0.122	0.151
1/16/2017	13:46:14	0.142	0.182	0.3
1/16/2017	14:01:14	0.108	0.134	0.189
1/16/2017	14:16:14	0.084	0.092	0.106
1/16/2017	14:31:14	0.122	0.15	0.176
1/16/2017	14:46:14	0.081	0.084	0.088
1/16/2017	15:01:14	0.078	0.094	0.114
1/16/2017	15:16:14	0.054	0.059	0.067
1/16/2017	15:31:14	0.05	0.051	0.053
1/16/2017	15:46:14	0.056	0.058	0.065
1/16/2017	16:01:14	0.05	0.05	0.052
1/16/2017	16:16:14	0.049	0.05	0.053

Upwind VOC CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Upwind VOC			
Date of Monitoring:	2/19/2017			
MiniRAE 3000 (PGM7320)				
Data Points: 24		Sample Period: 900 sec		
Last Calibration Time: 2/9/2017 9:25:00 AM				
	Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
	High Alarm Levels:	100	100	100
	Low Alarm Levels:	50	50	50
Date	Time (hh:mm:ss)	Min(ppm)	Avg(ppm)	Max(ppm)
2/19/2017	9:55:35	0	0.013	0.026
2/19/2017	10:10:35	0.045	0.066	0.087
2/19/2017	10:25:35	0.012	0.029	0.046
2/19/2017	10:40:35	0.059	0.08	0.101
2/19/2017	10:55:35	0.096	0.111	0.126
2/19/2017	11:10:35	0.116	0.136	0.156
2/19/2017	11:25:35	0.151	0.17	0.189
2/19/2017	11:40:35	0.12	0.147	0.174
2/19/2017	11:55:35	0.121	0.136	0.151
2/19/2017	12:10:35	0.099	0.136	0.173
2/19/2017	12:25:35	0.099	0.136	0.173
2/19/2017	12:40:35	0.087	0.124	0.161
2/19/2017	12:55:35	0.13	0.15	0.17
2/19/2017	13:10:35	0.118	0.152	0.186
2/19/2017	13:25:35	0.117	0.153	0.189
2/19/2017	13:40:35	0.117	0.154	0.191
2/19/2017	13:55:35	0.118	0.158	0.198
2/19/2017	14:10:35	0.115	0.193	0.271
2/19/2017	14:25:35	0.144	0.157	0.17
2/19/2017	14:40:35	0.115	0.13	0.145
2/19/2017	14:55:35	0.113	0.122	0.131
2/19/2017	15:10:35	0.112	0.132	0.152
2/19/2017	15:25:35	0.109	0.126	0.143
2/19/2017	15:40:35	0.125	0.139	0.153

Upwind VOC CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York

PDI Summary Report

Location:	Upwind VOC			
Date of Monitoring:	2/20/2017			
MiniRAE 3000 (PGM7320)				
Data Points: 22		Sample Period: 900 sec		
Last Calibration Time: 2/9/2017 9:25:00 AM				
	Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
	High Alarm Levels:	100	100	100
	Low Alarm Levels:	50	50	50
Date	Time (hh:mm:ss)	Min(ppm)	Avg(ppm)	Max(ppm)
2/20/2017	7:45:08	0.003	0.062	0.121
2/20/2017	8:00:08	0.089	0.1	0.111
2/20/2017	8:15:08	0.107	0.119	0.131
2/20/2017	8:30:08	0.131	0.143	0.155
2/20/2017	8:45:08	0.133	0.153	0.173
2/20/2017	9:00:08	0.139	0.158	0.177
2/20/2017	9:15:08	0.144	0.164	0.184
2/20/2017	9:30:08	0.164	0.177	0.19
2/20/2017	9:45:08	0.162	0.18	0.198
2/20/2017	10:00:08	0.172	0.189	0.206
2/20/2017	10:15:08	N/A	N/A	N/A
2/20/2017	10:30:08	N/A	N/A	N/A
2/20/2017	10:45:08	N/A	N/A	N/A
2/20/2017	11:00:08	N/A	N/A	N/A
2/20/2017	11:15:08	N/A	N/A	N/A
2/20/2017	11:30:08	N/A	N/A	N/A
2/20/2017	11:45:08	N/A	N/A	N/A
2/20/2017	12:00:08	0.117	0.126	0.135
2/20/2017	12:15:08	0.15	0.16	0.17
2/20/2017	12:30:08	0.139	0.155	0.171
2/20/2017	12:45:08	0.162	0.173	0.184
2/20/2017	13:00:08	0.156	0.17	0.184

Downwind Dust CAMP Data



Downwind Dust CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Downwind Dust	
Date of Monitoring:	11/10/2016	
DustTrak II Model 8530		
Log Interval (mm:ss):	15:00	
Number of points:	29	
Statistics	Average:	0.005
	Minimum:	0.001
	Maximum:	0.01
Date	Time (hh:mm:ss)	Aerosol (mg/m ³)
11/10/2016	9:31:29	0.002
11/10/2016	9:46:29	0.001
11/10/2016	10:01:29	0.001
11/10/2016	10:16:29	0.002
11/10/2016	10:31:29	0.002
11/10/2016	10:46:29	0.003
11/10/2016	11:01:29	0.01
11/10/2016	11:16:29	0.004
11/10/2016	11:31:29	0.003
11/10/2016	11:46:29	0.005
11/10/2016	12:01:29	0.006
11/10/2016	12:16:29	0.008
11/10/2016	12:31:29	0.005
11/10/2016	12:46:29	0.005
11/10/2016	13:01:29	0.004
11/10/2016	13:16:29	0.006
11/10/2016	13:31:29	0.005
11/10/2016	13:46:29	0.005
11/10/2016	14:01:29	0.006
11/10/2016	14:16:29	0.007
11/10/2016	14:31:29	0.007
11/10/2016	14:46:29	0.007
11/10/2016	15:01:29	0.005
11/10/2016	15:16:29	0.009
11/10/2016	15:31:29	0.007
11/10/2016	15:46:29	0.005
11/10/2016	16:01:29	0.004
11/10/2016	16:16:29	0.004
11/10/2016	16:31:29	0.005

Downwind Dust CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Downwind Dust	
Date of Monitoring:	11/11/2016	
DustTrak II Model 8530		
Log Interval (mm:ss):	15:00	
Number of points:	24	
Statistics	Average:	0.004
	Minimum:	0
	Maximum:	0.015
Date	Time (hh:mm:ss)	Aerosol (mg/m ³)
11/11/2016	7:29:23	0.015
11/11/2016	7:44:23	0.013
11/11/2016	7:59:23	0.012
11/11/2016	9:11:50	0.011
11/11/2016	9:26:50	0.004
11/11/2016	9:41:50	0
11/11/2016	9:56:50	0
11/11/2016	10:11:50	0
11/11/2016	10:26:50	0
11/11/2016	10:41:50	0
11/11/2016	10:56:50	0
11/11/2016	11:11:50	0.001
11/11/2016	11:26:50	0
11/11/2016	11:41:50	0
11/11/2016	11:56:50	0
11/11/2016	12:11:50	0
11/11/2016	12:26:50	0
11/11/2016	12:41:50	0
11/11/2016	12:56:50	0
11/11/2016	13:11:50	0
11/11/2016	13:26:50	0.002
11/11/2016	13:41:50	0
11/11/2016	13:56:50	0.001
11/11/2016	14:11:50	0.001

Downwind Dust CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Downwind Dust	
Date of Monitoring:	1/14/2017	
DustTrak II Model 8530		
Log Interval (mm:ss):	15:00	
Number of points:	23	
Statistics	Average:	0.016
	Minimum:	0.01
	Maximum:	0.06
Date	Time (hh:mm:ss)	Aerosol (mg/m ³)
1/14/2017	10:17:13	0.021
1/14/2017	10:32:13	0.01
1/14/2017	10:47:13	0.012
1/14/2017	11:02:13	0.01
1/14/2017	11:17:13	0.01
1/14/2017	11:32:13	0.011
1/14/2017	11:47:13	0.012
1/14/2017	12:02:13	0.012
1/14/2017	12:17:13	0.012
1/14/2017	12:32:13	0.012
1/14/2017	12:47:13	0.017
1/14/2017	13:02:13	0.012
1/14/2017	13:17:13	0.012
1/14/2017	13:32:13	0.013
1/14/2017	13:47:13	0.013
1/14/2017	14:02:13	0.013
1/14/2017	14:17:13	0.013
1/14/2017	14:32:13	0.012
1/14/2017	14:47:13	0.012
1/14/2017	15:02:13	0.012
1/14/2017	15:17:13	0.025
1/14/2017	15:32:13	0.031
1/14/2017	15:47:13	0.06

Downwind Dust CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Downwind Dust	
Date of Monitoring:	1/15/2017	
DustTrak II Model 8530		
Log Interval (mm:ss):	15:00	
Number of points:	38	
Statistics	Average:	0.025
	Minimum:	0.014
	Maximum:	0.036
Date	Time (hh:mm:ss)	Aerosol (mg/m ³)
1/15/2017	7:13:01	0.036
1/15/2017	7:28:01	0.028
1/15/2017	7:43:01	0.027
1/15/2017	7:58:01	0.026
1/15/2017	8:13:01	0.026
1/15/2017	8:28:01	0.03
1/15/2017	8:43:01	0.026
1/15/2017	8:58:01	0.025
1/15/2017	9:13:01	0.025
1/15/2017	9:28:01	0.029
1/15/2017	9:43:01	0.023
1/15/2017	9:58:01	0.025
1/15/2017	10:13:01	0.024
1/15/2017	10:28:01	0.025
1/15/2017	10:43:01	0.022
1/15/2017	10:58:01	0.022
1/15/2017	11:13:01	0.025
1/15/2017	11:28:01	0.028
1/15/2017	11:43:01	0.029
1/15/2017	11:58:01	0.025
1/15/2017	12:13:01	0.024
1/15/2017	12:28:01	0.025
1/15/2017	12:43:01	0.024
1/15/2017	12:58:01	0.023
1/15/2017	13:13:01	0.03
1/15/2017	13:28:01	0.031
1/15/2017	13:43:01	0.028
1/15/2017	13:58:01	0.02
1/15/2017	14:13:01	0.021
1/15/2017	14:28:01	0.036
1/15/2017	14:43:01	0.019
1/15/2017	14:58:01	0.017
1/15/2017	15:13:01	0.019
1/15/2017	15:28:01	0.029
1/15/2017	15:43:01	0.016
1/15/2017	15:58:01	0.016
1/15/2017	16:13:01	0.015
1/15/2017	16:28:01	0.014

Downwind Dust CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Downwind Dust	
Date of Monitoring:	1/16/2017	
DustTrak II Model 8530		
Log Interval (mm:ss):	15:00	
Number of points:	37	
Statistics	Average:	0.029
	Minimum:	0.022
	Maximum:	0.07
Date	Time (hh:mm:ss)	Aerosol (mg/m³)
1/16/2017	6:55:19	0.07
1/16/2017	7:10:19	0.032
1/16/2017	7:25:19	0.034
1/16/2017	7:40:19	0.039
1/16/2017	7:55:19	0.038
1/16/2017	8:10:19	0.036
1/16/2017	8:25:19	0.037
1/16/2017	8:40:19	0.037
1/16/2017	8:55:19	0.036
1/16/2017	9:10:19	0.033
1/16/2017	9:25:19	0.03
1/16/2017	9:40:19	0.029
1/16/2017	9:55:19	0.031
1/16/2017	10:10:19	0.028
1/16/2017	10:25:19	0.028
1/16/2017	10:40:19	0.029
1/16/2017	10:55:19	0.025
1/16/2017	11:10:19	0.025
1/16/2017	11:25:19	0.025
1/16/2017	11:40:19	0.025
1/16/2017	11:55:19	0.023
1/16/2017	12:10:19	0.025
1/16/2017	12:25:19	0.025
1/16/2017	12:40:19	0.024
1/16/2017	12:55:19	0.024
1/16/2017	13:10:19	0.024
1/16/2017	13:25:19	0.024
1/16/2017	13:40:19	0.023
1/16/2017	13:55:19	0.023
1/16/2017	14:10:19	0.023
1/16/2017	14:25:19	0.023
1/16/2017	14:40:19	0.023
1/16/2017	14:55:19	0.023
1/16/2017	15:10:19	0.022
1/16/2017	15:25:19	0.023
1/16/2017	15:40:19	0.023
1/16/2017	15:55:19	0.024

Downwind Dust CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Downwind Dust	
Date of Monitoring:	2/19/2017	
DustTrak II Model 8533		
Log Interval (mm:ss):	15:00	
Number of points:	20	
Statistics	Average:	0.02
	Minimum:	0.012
	Maximum:	0.042
Date	Time (hh:mm:ss)	Aerosol (mg/m ³)
2/19/2017	10:15:46	0.042
2/19/2017	10:30:46	0.033
2/19/2017	10:45:46	0.034
2/19/2017	11:00:46	0.035
2/19/2017	11:15:46	0.023
2/19/2017	11:30:46	0.012
2/19/2017	11:45:46	0.012
2/19/2017	12:00:46	0.012
2/19/2017	12:15:46	0.012
2/19/2017	12:30:46	0.012
2/19/2017	12:45:46	0.017
2/19/2017	13:00:46	0.012
2/19/2017	13:15:46	0.013
2/19/2017	13:30:46	0.013
2/19/2017	13:45:46	0.023
2/19/2017	14:00:46	0.033
2/19/2017	14:15:46	0.032
2/19/2017	14:30:46	0.013
2/19/2017	14:45:46	0.013
2/19/2017	15:00:46	0.012

Downwind Dust CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Downwind Dust	
Date of Monitoring:	2/20/2017	
DustTrak II Model 8533		
Log Interval (mm:ss):	15:00	
Number of points:	25	
Statistics	Average:	0.016
	Minimum:	0.011
	Maximum:	0.023
Date	Time (hh:mm:ss)	Aerosol (mg/m ³)
2/20/2017	8:03:40	0.011
2/20/2017	8:18:40	0.013
2/20/2017	8:33:40	0.012
2/20/2017	8:48:40	0.016
2/20/2017	9:03:40	0.02
2/20/2017	9:18:40	0.023
2/20/2017	9:33:40	0.021
2/20/2017	9:48:40	0.021
2/20/2017	10:03:40	0.021
2/20/2017	10:18:40	0.019
2/20/2017	10:33:40	0.017
2/20/2017	10:48:40	0.018
2/20/2017	11:03:40	0.018
2/20/2017	11:18:40	0.019
2/20/2017	11:33:40	0.015
2/20/2017	11:48:40	0.015
2/20/2017	12:03:40	0.015
2/20/2017	12:18:40	0.015
2/20/2017	12:33:40	0.014
2/20/2017	12:48:40	0.013
2/20/2017	13:03:40	0.015
2/20/2017	13:18:40	0.016
2/20/2017	13:33:40	0.011
2/20/2017	13:48:40	0.012
2/20/2017	14:03:40	0.011

Downwind Dust CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Downwind Dust	
Date of Monitoring:	7/8/2017	
DustTrak II Model 8533		
Log Interval (mm:ss):	15:00	
Number of points:	13	
Statistics	Average:	0.009
	Minimum:	0.003
	Maximum:	0.013
Date	Time (hh:mm:ss)	Aerosol (mg/m³)
7/8/2017	11:50:24	0.012
7/8/2017	12:05:24	0.006
7/8/2017	12:20:24	0.006
7/8/2017	12:35:24	0.008
7/8/2017	12:50:24	0.003
7/8/2017	13:05:24	0.01
7/8/2017	13:20:24	0.012
7/8/2017	13:35:24	0.011
7/8/2017	13:50:24	0.011
7/8/2017	14:05:24	0.01
7/8/2017	14:20:24	0.01
7/8/2017	14:35:24	0.011
7/8/2017	14:50:24	0.013

Downwind Dust CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York PDI Summary Report

Location:	Downwind Dust	
Date of Monitoring:	7/9/2017	
DustTrak II Model 8533		
Log Interval (mm:ss):	15:00	
Number of points:	14	
Statistics	Average:	0.018
	Minimum:	0.013
	Maximum:	0.024
Date	Time (hh:mm:ss)	Aerosol (mg/m ³)
7/9/2017	7:17:42	0.022
7/9/2017	7:32:42	0.024
7/9/2017	7:47:42	0.024
7/9/2017	8:02:42	0.021
7/9/2017	8:17:42	0.02
7/9/2017	8:32:42	0.021
7/9/2017	8:47:42	0.019
7/9/2017	9:02:42	0.019
7/9/2017	10:20:58	0.018
7/9/2017	10:35:58	0.013
7/9/2017	10:50:58	0.014
7/9/2017	11:05:58	0.017
7/9/2017	11:20:58	0.015
7/9/2017	11:35:58	0.014

Downwind VOC CAMP Data



Downwind VOC CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York

PDI Summary Report

Location:	Downwind VOC			
Date of Monitoring:	1/14/2017			
MiniRAE 3000 (PGM7320)				
Data Points: 24		Sample Period: 900 sec		
Last Calibration Time: 1/13/2017 12:46:00 PM				
	Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
	High Alarm Levels:	100	100	100
	Low Alarm Levels:	50	50	50
Date	Time (hh:mm:ss)	Min(ppm)	Avg(ppm)	Max(ppm)
1/14/2017	10:23:56	0	0	0
1/14/2017	10:38:56	0.063	0.103	0.19
1/14/2017	10:53:56	0.241	0.32	0.466
1/14/2017	11:08:56	0.375	0.392	0.417
1/14/2017	11:23:56	0.357	0.363	0.371
1/14/2017	11:38:56	0.369	0.378	0.388
1/14/2017	11:53:56	0.388	0.411	0.438
1/14/2017	12:08:56	0.397	0.401	0.406
1/14/2017	12:23:56	0.317	0.324	0.338
1/14/2017	12:38:56	0.239	0.244	0.253
1/14/2017	12:53:56	0.204	0.217	0.291
1/14/2017	13:08:56	0.202	0.216	0.233
1/14/2017	13:23:56	0.188	0.194	0.201
1/14/2017	13:38:56	0.199	0.207	0.215
1/14/2017	13:53:56	0.22	0.24	0.277
1/14/2017	14:08:56	0.248	0.255	0.263
1/14/2017	14:23:56	0.282	0.289	0.306
1/14/2017	14:38:56	0.251	0.255	0.262
1/14/2017	14:53:56	0.266	0.272	0.285
1/14/2017	15:08:56	0.288	0.295	0.302
1/14/2017	15:23:56	0.295	0.308	0.342
1/14/2017	15:38:56	0.37	0.53	0.789
1/14/2017	15:53:56	0.33	0.428	0.629
1/14/2017	16:08:56	0.341	0.348	0.356

Downwind VOC CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York

PDI Summary Report

Location:	Downwind VOC			
Date of Monitoring:	1/15/2017			
MiniRAE 3000 (PGM7320)				
Data Points: 38		Sample Period: 900 sec		
Last Calibration Time: 1/14/2017 4:19:00 PM				
	Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
	High Alarm Levels:	100	100	100
	Low Alarm Levels:	50	50	50
Date	Time (hh:mm:ss)	Min(ppm)	Avg(ppm)	Max(ppm)
1/15/2017	7:16:06	0.002	0.002	0.002
1/15/2017	7:31:06	0.002	0.002	0.002
1/15/2017	7:46:06	0.002	0.002	0.002
1/15/2017	8:01:06	0.002	0.002	0.002
1/15/2017	8:16:06	0.002	0.002	0.002
1/15/2017	8:31:06	0.002	0.002	0.002
1/15/2017	8:46:06	0.002	0.002	0.002
1/15/2017	9:01:06	0.002	0.002	0.002
1/15/2017	9:16:06	0.002	0.002	0.002
1/15/2017	9:31:06	0.002	0.006	0.062
1/15/2017	9:46:06	0.001	0.002	0.003
1/15/2017	10:01:06	0.005	0.007	0.009
1/15/2017	10:16:06	0.014	0.023	0.048
1/15/2017	10:31:06	0.02	0.028	0.034
1/15/2017	10:46:06	0.009	0.013	0.024
1/15/2017	11:01:06	0.018	0.039	0.068
1/15/2017	11:16:06	0.017	0.027	0.038
1/15/2017	11:31:06	0.021	0.024	0.034
1/15/2017	11:46:06	0.021	0.026	0.034
1/15/2017	12:01:06	0.023	0.027	0.031
1/15/2017	12:16:06	0.024	0.025	0.027
1/15/2017	12:31:06	0.038	0.042	0.047
1/15/2017	12:46:06	0.037	0.047	0.061
1/15/2017	13:01:06	0.031	0.034	0.04
1/15/2017	13:16:06	0.052	0.119	0.285
1/15/2017	13:31:06	0.044	0.05	0.058
1/15/2017	13:46:06	0.04	0.044	0.053
1/15/2017	14:01:06	0.041	0.041	0.045
1/15/2017	14:16:06	0.05	0.059	0.077
1/15/2017	14:31:06	0.047	0.062	0.084
1/15/2017	14:46:06	0.044	0.052	0.062
1/15/2017	15:01:06	0.043	0.048	0.061
1/15/2017	15:16:06	0.043	0.044	0.059
1/15/2017	15:31:06	0.045	0.072	0.433
1/15/2017	15:46:06	0.047	0.048	0.049
1/15/2017	16:01:06	0.049	0.05	0.052
1/15/2017	16:16:06	0.049	0.052	0.055
1/15/2017	16:31:06	0.053	0.054	0.056

Downwind VOC CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York

PDI Summary Report

Location:		Downwind VOC		
Date of Monitoring:		1/16/2017		
MiniRAE 3000 (PGM7320)				
Data Points: 38		Sample Period: 900 sec		
Last Calibration Time: 1/15/2017 4:47:00 PM				
	Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
	High Alarm Levels:	100	100	100
	Low Alarm Levels:	50	50	50
Date	Time (hh:mm:ss)	Min(ppm)	Avg(ppm)	Max(ppm)
1/16/2017	6:55:25	0	0	0
1/16/2017	7:10:25	0	0	0
1/16/2017	7:25:25	0	0	0
1/16/2017	7:40:25	0	0	0
1/16/2017	7:55:25	0	0	0
1/16/2017	8:10:25	0	0	0
1/16/2017	8:25:25	0	0	0
1/16/2017	8:40:25	0	0	0
1/16/2017	8:55:25	0.033	0.044	0.062
1/16/2017	9:10:25	0.046	0.048	0.05
1/16/2017	9:25:25	0.028	0.03	0.033
1/16/2017	9:40:25	0.013	0.014	0.016
1/16/2017	9:55:25	0.011	0.026	0.036
1/16/2017	10:10:25	0	0.003	0.009
1/16/2017	10:25:25	0.007	0.009	0.013
1/16/2017	10:40:25	0.013	0.015	0.017
1/16/2017	10:55:25	0.004	0.006	0.009
1/16/2017	11:10:25	0.002	0.003	0.005
1/16/2017	11:25:25	0.006	0.008	0.012
1/16/2017	11:40:25	0.009	0.009	0.011
1/16/2017	11:55:25	0.021	0.022	0.023
1/16/2017	12:10:25	0.019	0.019	0.022
1/16/2017	12:25:25	0.027	0.028	0.031
1/16/2017	12:40:25	0.031	0.033	0.034
1/16/2017	12:55:25	0.032	0.034	0.037
1/16/2017	13:10:25	0.032	0.036	0.041
1/16/2017	13:25:25	0.034	0.035	0.037
1/16/2017	13:40:25	0.041	0.042	0.047
1/16/2017	13:55:25	0.048	0.05	0.054
1/16/2017	14:10:25	0.044	0.046	0.048
1/16/2017	14:25:25	0.044	0.045	0.049
1/16/2017	14:40:25	0.049	0.052	0.057
1/16/2017	14:55:25	0.053	0.054	0.055
1/16/2017	15:10:25	0.059	0.061	0.062
1/16/2017	15:25:25	0.056	0.057	0.058
1/16/2017	15:40:25	0.056	0.057	0.058
1/16/2017	15:55:25	0.06	0.061	0.063
1/16/2017	16:10:25	0.063	0.064	0.065

Downwind VOC CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York

PDI Summary Report

Location:	Downwind VOC			
Date of Monitoring:	2/19/2017			
MiniRAE 3000 (PGM7600)				
Data Points: 24		Sample Period: 900 sec		
Last Calibration Time: 2/17/2017 11:24:00 AM				
	Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
	High Alarm Levels:	100	100	100
	Low Alarm Levels:	50	50	50
Date	Time (hh:mm:ss)	Min(ppm)	Avg(ppm)	Max(ppm)
2/19/2017	9:51:54	0	0	0
2/19/2017	10:06:54	0	0	0
2/19/2017	10:21:54	0	0	0
2/19/2017	10:36:54	0	0	0
2/19/2017	10:51:54	0	0	0
2/19/2017	11:06:54	0	0	0
2/19/2017	11:21:54	0	0	0
2/19/2017	11:36:54	0	0	0
2/19/2017	11:51:54	0	0	0
2/19/2017	12:06:54	0	0	0
2/19/2017	12:21:54	0	0	0
2/19/2017	12:36:54	0	0	0
2/19/2017	12:51:54	0	0	0
2/19/2017	13:06:54	0	0	0
2/19/2017	13:21:54	0	0	0
2/19/2017	13:36:54	0	0	0
2/19/2017	13:51:54	0	0	0
2/19/2017	14:06:54	0	0	0
2/19/2017	14:21:54	0	0	0
2/19/2017	14:36:54	0	0	0
2/19/2017	14:51:54	0	0	0
2/19/2017	15:06:54	0	0	0
2/19/2017	15:21:54	0	0	0
2/19/2017	15:36:54	0	0	0

Downwind VOC CAMP Data

National Grid - Non-Owned Former MGP Site - Rensselaer, New York

PDI Summary Report

Location:	Downwind VOC			
Date of Monitoring:	2/20/2017			
MiniRAE 3000 (PGM7600)				
Data Points: 22		Sample Period: 900 sec		
Last Calibration Time: 2/17/2017 11:24:00 AM				
	Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
	High Alarm Levels:	100	100	100
	Low Alarm Levels:	50	50	50
Date	Time (hh:mm:ss)	Min(ppm)	Avg(ppm)	Max(ppm)
2/20/2017	7:43:36	0	0	0
2/20/2017	7:58:36	0	0	0
2/20/2017	8:13:36	0	0	0
2/20/2017	8:28:36	0	0	0
2/20/2017	8:43:36	0	0	0
2/20/2017	8:58:36	0	0	0
2/20/2017	9:13:36	0	0	0
2/20/2017	9:28:36	0	0	0
2/20/2017	9:43:36	0	0	0
2/20/2017	9:58:36	0	0	0
2/20/2017	10:13:36	0	0	0
2/20/2017	10:28:36	0	0	0
2/20/2017	10:43:36	0	0	0
2/20/2017	10:58:36	0	0	0
2/20/2017	11:13:36	0	0	0
2/20/2017	11:28:36	0	0	0
2/20/2017	11:43:36	0	0	0
2/20/2017	11:58:36	0	0	0
2/20/2017	12:13:36	0	0	0
2/20/2017	12:28:36	0	0	0
2/20/2017	12:43:36	0	0	0
2/20/2017	12:58:36	0	0	0

Air Monitoring Documentation Form

PID Model: _____

Monitor Frequency: EVERY HOUR / WHEN ABLE

LEL/O₂ Model:

CIT Model: _____

Dust Mon. Model: _____

Air Monitoring Results

[illegible]

PID	Photoionization Detector
LEL	Lower Explosive Limit
O2	Oxygen
CIT	Colorimetric Indicator Tube

ppm	Part per million
%	Percent
mg/m3	Miligram per cubic meter

ATTACHMENT 2 - CORRESPONDENCE FROM OPRHP/THE OFFICE OF INDIAN NATIONS AFFAIRS



OPRHP Response Letter





Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

November 03, 2016

Mr. David Rodriguez
Arcadis of New York, Inc.
6723 Towpath Road
PO Box 66
Syracuse, NY 13214

Re: DEC
Rensselaer Manufactured Gas Plant Remediation
City of Rensselaer, Rensselaer County
13PR01012

Dear Mr. Rodriguez:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6NYCRR Part 617).

OPRHP has received additional documentation regarding the proposed remedial action at the above-referenced project area, based on the Voluntary Cleanup Program Decision Document (September 2015). Given the limits of the areas of ground disturbance described in the submitted materials, this office recommends that the planned actions will have **No Impact** on historic properties listed or eligible for listing on the State and National Registers of Historic Places. This recommendation pertains only to the actions described in the submitted materials. Should the project design change, we recommend further consultation with this office.

If you have any questions please don't hesitate to contact me.

Sincerely,

Philip A. Perazio, Historic Preservation Program Analyst - Archaeology Unit
Phone: 518-268-2175
e-mail: philip.perazio@parks.ny.gov

via email only

cc: Charles Vandrei and David Witt, DEC
James Morgan, National Grid

Division for Historic Preservation

P.O. Box 189, Waterford, New York 12188-0189 • (518) 237-8643 • www.nysparks.com

OINA Response Letter



Rodriguez Alcocer, David

From: Witt, David E (DEC) <david.witt@dec.ny.gov>
Sent: Friday, November 4, 2016 12:59 PM
To: Rodriguez Alcocer, David
Cc: Golubski, Jason
Subject: RE: Project we discussed over the phone yesterday

Thanks for following up, David. And yes, please contact me in case the project design changes.

Have a good weekend.

David E. Witt, Ph.D.

Indian Nations Affairs Coordinator, Office of Environmental Justice

New York State Department of Environmental Conservation

625 Broadway, Albany, NY 12233-1500

P: (518) 402-9512 | F: (518) 402-9018 | david.witt@dec.ny.gov

www.dec.ny.gov |  | 

From: Rodriguez Alcocer, David [mailto:david.rodriguez@arcadis.com]
Sent: Friday, November 04, 2016 12:57 PM
To: Witt, David E (DEC) <david.witt@dec.ny.gov>
Cc: Golubski, Jason <Jason.Golubski@arcadis.com>
Subject: RE: Project we discussed over the phone yesterday

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

David,

I want to thank you expediting the review of our submittal for the National Grid site located in Rensselaer, NY (Project Review # 13PR01012).

Based on our phone conversation on Thursday November 3, 2016, Native American consultation will not be required given the limits of the areas of ground disturbance described in the submitted materials. Arcadis will consult with your office should the project design changes.

Please respond to this email to confirm the above for my records.

Thank you in advance and have a nice weekend,

David

David Rodriguez, PhD | Staff Environmental Engineer | david.rodriguez@arcadis.com
Arcadis of New York, Inc. | 6723 Towpath Road, PO Box 66, Syracuse, NY | 13214 | USA
T. +1 315 671 9619 | M. +1 315 657 2261

Connect with us! www.arcadis.com | [LinkedIn](#) | [Twitter](#) | [Facebook](#)





Reduce your footprint.

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From: Witt, David E (DEC) [<mailto:david.witt@dec.ny.gov>]
Sent: Wednesday, October 26, 2016 8:14 AM
To: Rodriguez Alcocer, David <david.rodriquez@arcadis.com>
Subject: Project we discussed over the phone yesterday

David,

I checked CRIS and didn't notice any new projects, so I wanted to send you an email just to ensure you have the correct email. Alternatively, you can email them to me here. I believe I have a 30 mb limit on attachments.

Thanks.

David E. Witt, Ph.D.

Indian Nations Affairs Coordinator, Office of Environmental Justice

New York State Department of Environmental Conservation

625 Broadway, Albany, NY 12233-1500

P: (518) 402-9512 | F: (518) 402-9018 | david.witt@dec.ny.gov

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ATTACHMENT 3 - WELL DECOMMISSIONING LOGS



FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: NG Former MGP Site	Well I.D.: MW-102-05
Site Location: Rensselaer, New York	Driller: Layne Pech
Drilling Co.: Parratt-Wolff, Inc.	Inspector:
	Date: 1/14/17

DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*																																																
<u>OVERDRILLING</u> <table style="width: 100%;"> <tr><td>Interval Drilled</td><td style="text-align: center;">NA</td></tr> <tr><td>Drilling Method(s)</td><td style="text-align: center;">NA</td></tr> <tr><td>Borehole Dia. (in.)</td><td style="text-align: center;">NA</td></tr> <tr><td>Temporary Casing Installed? (y/n)</td><td style="text-align: center;">N</td></tr> <tr><td>Depth temporary casing installed</td><td style="text-align: center;">NA</td></tr> <tr><td>Casing type/dia. (in.)</td><td style="text-align: center;">NA</td></tr> <tr><td>Method of installing</td><td style="text-align: center;">NA</td></tr> </table> <u>CASING PULLING</u> <table style="width: 100%;"> <tr><td>Method employed</td><td style="text-align: center;">Cut & Pull</td></tr> <tr><td>Casing retrieved (feet)</td><td style="text-align: center;">5.0'</td></tr> <tr><td>Casing type/dia. (in)</td><td style="text-align: center;">PVC / 2"</td></tr> </table> <u>CASING PERFORATING</u> <table style="width: 100%;"> <tr><td>Equipment used</td><td style="text-align: center;">NA</td></tr> <tr><td>Number of perforations/foot</td><td style="text-align: center;">NA</td></tr> <tr><td>Size of perforations</td><td style="text-align: center;">NA</td></tr> <tr><td>Interval perforated</td><td style="text-align: center;">NA</td></tr> </table> <u>GROUTING</u> <table style="width: 100%;"> <tr><td>Interval grouted (FBLs)</td><td style="text-align: center;">0 - 20</td></tr> <tr><td># of batches prepared</td><td style="text-align: center;">1</td></tr> <tr><td colspan="2">For each batch record:</td></tr> <tr><td>Quantity of water used (gal.)</td><td style="text-align: center;">19.5</td></tr> <tr><td>Quantity of cement used (lbs.)</td><td style="text-align: center;">235</td></tr> <tr><td>Cement type</td><td style="text-align: center;">Portland</td></tr> <tr><td>Quantity of bentonite used (lbs.)</td><td style="text-align: center;">10</td></tr> <tr><td>Quantity of calcium chloride used (lbs.)</td><td style="text-align: center;">NA</td></tr> <tr><td>Volume of grout prepared (gal.)</td><td style="text-align: center;">25</td></tr> <tr><td>Volume of grout used (gal.)</td><td style="text-align: center;">5</td></tr> </table>	Interval Drilled	NA	Drilling Method(s)	NA	Borehole Dia. (in.)	NA	Temporary Casing Installed? (y/n)	N	Depth temporary casing installed	NA	Casing type/dia. (in.)	NA	Method of installing	NA	Method employed	Cut & Pull	Casing retrieved (feet)	5.0'	Casing type/dia. (in)	PVC / 2"	Equipment used	NA	Number of perforations/foot	NA	Size of perforations	NA	Interval perforated	NA	Interval grouted (FBLs)	0 - 20	# of batches prepared	1	For each batch record:		Quantity of water used (gal.)	19.5	Quantity of cement used (lbs.)	235	Cement type	Portland	Quantity of bentonite used (lbs.)	10	Quantity of calcium chloride used (lbs.)	NA	Volume of grout prepared (gal.)	25	Volume of grout used (gal.)	5	Depth (feet)
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COMMENTS: Removed protective cover	* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.																																																

Drilling Contractor

Department Representative

FIGURE 3
WELL DECOMMISSIONING RECORD

Site Name: NG Former MGP Site	Well I.D.: MW-103-05
Site Location: Rensselaer, New York	Driller: Layne Pech
Drilling Co.: Parratt-Wolff, Inc.	Inspector:
	Date: 1/14/17

DECOMMISSIONING DATA (Fill in all that apply)	WELL SCHEMATIC*																																																
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Interval Drilled	NA																																																
Drilling Method(s)	NA																																																
Borehole Dia. (in.)	NA																																																
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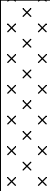
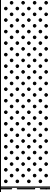
Drilling Contractor

Department Representative

**ATTACHMENT 4 - SOIL BORING/WELL
CONSTRUCTION LOGS**



Date Start/Finish: 1/15-16/17 Drilling Company: Parratt-Wolfe Driller's Name: Glenn Lansing Drilling Method: HSA Auger Size: 4.25" (ID), 8.3" (OD) Rig Type: CME-55 Sampling Method: 2" SS Sampler/3" RC	Northing: 1387683.87 Easting: 695301.00 Casing Elevation: NA Borehole Depth: 24.2 ft bgs Surface Elevation: NA Descriptions By: Lacey Pitman	Well/Boring ID: B-134 Client: National Grid Location: 89 Washington St, Rensselaer, NY
---	---	---

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0									
		NA	HC	NA	NA	NA	0.0		Asphalt surface	 Borehole backfilled with Bentonite to grade
									Brown, FILL, moist	
									Brown, CLAY, some f. Sand and Silt, trace brick (fragments), soft, loose, moist	
5	-5	S-1	SS	1	1-1	1	0.0		Brown, Clayey f. SAND, trace Silt, loose, low plasticity, very loose to loose, moist	
		S-2	SS	1.5	1-2 2-3	4	0.0			
		S-3	SS	1.4	3-4 4-3	8	0.0		Brown, CLAY, trace Silt, soft, low plasticity, medium stiff, moist	
10	-10								Greenish Gray, m.f. SAND, trace Silt, loose, wet	
		S-4	SS	0.4	3-3 5-5	8	0.0			
		S-5	SS	2	5-5 5-6	10	0.0		moist @ 12 ft	
									Brownish-orange, f. SAND, trace Silt and Clay, medium dense, moist	
15	-15	S-6	SS	1	6-7 9-11	16	0.0		trace f. Gravel	

	Remarks: bgs = below ground surface; ft = feet; " = inch; HC = Hand Clear; SS = Split Spoon; HSA = Hollow Stem Auger; OD = Outer Diameter; ID = Inner Diameter; ppm = parts per million; NA = Not Applicable/Available; f = fine; m = medium; c = coarse; Vacuum truck used to HC 0-5 ft, remaining depths were cleared by a HSA. Horizontal Datum NAD83 New York State Plane, East Zone, US Foot.			Water Level Data		
				Date	Depth	Elev.
				1/15/17	*9.1	NA
				*Depth measured from bgs (ft)		
				Depth measured from top of casing		

Well/Boring ID: B-134

Borehole Depth: 24.2 ft bgs

89 Washington St, Rensselaer, NY

[illegible]

Remarks:

bgs = below ground surface; ft = feet; " = inch; HC = Hand Clear; SS = Split Spoon; HSA = Hollow Stem Auger;
OD = Outer Diameter; ID = Inner Diameter; ppm = parts per million;
NA = Not Applicable/Available; f = fine; m = medium; c = coarse;
Vacuum truck used to HC 0-5 ft, remaining depths were cleared by a
HSA. Horizontal Datum NAD83 New York State Plane, East Zone,
US Foot.

Water Level Data

Date	Depth	Elev.
1/15/17	*9.1	NA
*Depth measured from bgs (ft)		
Depth measured from top of casing		

Date Start/Finish: 1/14-17/17 Drilling Company: Parratt-Wolfe Driller's Name: Layne Pech Drilling Method: Hollow Stem Auger Auger Size: 4.25" (ID), 8.13" (OD) Rig Type: CME-55 Sampling Method: 2" SS Sampler	Northing: 1387622.69 Easting: 695365.21 Casing Elevation: 15.27 ft AMSL Borehole Depth: 24.2 ft bgs Surface Elevation: 15.55 ft AMSL Descriptions By: Molly Barker	Well/Boring ID: MW-118/B-135 Client: National Grid Location: 89 Washington St, Rensselaer, NY
---	---	--

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0									
		NA	HC	NA	NA	NA			Asphalt	Steel Flush Mount (8" Diameter)
							1.5	x x x	Brown, FILL, weak cementation, soft, moist	2" Locking J-Plug
							3.6	x x x		Concrete Pad
							0.7	x x x	Red, BRICK (fragmented), some fill (brown), soft, dry	#2 Sand Drain
							2.9	x x x	Brown FILL, some Clay, trace Silt, very soft, moist	
-5	-5						4.2	x x x	wet @ 5 ft bgs	Grout
		S-1	SS	2.0	4-4 8-15	12	13		Brown, Sandy Silty Clay, stiff to soft, low plasticity, wet	2" Diameter Schedule 40 PVC Riser (0.5-12 ft bgs)
		S-2	SS	2.0	2-4 6-6	10	1.1			Medium Grade Chips (8-10 ft bgs)
-10	-10	S-3	SS	1.5	3-3 3-6	6	2.3		Iridescent sheen @ 11 ft bgs, medium stiff	
		S-4	SS	1.5	3-5 7-6	12	NA		Brown, CLAY, trace Silt, iridescent sheen, stiff, wet	#2 Sand (10-22 ft bgs)
-15	-15	S-5	SS	1.6	4-4 9-14	13	416		Brown, Sandy CLAY, some cmf. Gravel, stiff, iridescent sheen, wet	0.02" slot, 2" Diameter Schedule 40 PVC Screen (12-22 ft bgs)

 ARCADIS Design & Consultancy for natural and built assets	Remarks: AMSL = Above Mean Sea Level; bgs = below ground surface; ft = feet; " = inch; HC = Hand Clear; SS = Split Spoon; OD = Outer Diameter; ID = Inner Diameter; ppm = parts per million; NA = Not Applicable/Available; f = fine; m = medium; c = coarse; Vacuum truck used to HC 0-6 ft. Horizontal Datum NAD83 New York State Plane, East Zone, US Foot. Development of Well - Completed on 1/14/17; 30 gallons removed; tagged bottom of well: 23.52 ft bgs	Water Level Data		
		Date	Depth	Elev.
		1/15/17	*5.00	NA
		1/17/17	6.19	9.08
		*Depth measured from bgs (ft)		
		Depth measured from top of casing		

Client: National Grid

Well/Boring ID: MW-118/B-135

Site Location:

89 Washington St, Rensselaer, NY

Borehole Depth: 24.2 ft bgs

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
		S-6	SS	0.9	21-38 39-55	>50	697		Brown, Sandy CLAY, trace Sand and Silt, stiff to hard, iridescent sheen, strong tar-like odor, wet to moist	0.02" slot, 2" Diameter Schedule 40 PVC Screen (12-22 ft bgs) #2 Sand (10-22 ft bgs) SUMP (22-24 ft bgs) Medium Grade Chips (22-24.2 ft bgs)
		S-7	SS	1.5	17-50 55	>50	148		Brown, f. SAND and f. GRAVEL, trace Silt, very dense, iridescent sheen, strong tar-like odor, moist	
20	-20	S-8	SS	1.5	28-53 53	>50	216		Red to gray, Sandy CLAY, hard, iridescent sheen, wet to moist	
		S-9	SS	1.2	20-31 50/2"	>50	55		Black to gray, CLAY, hard, moist	
		S-10	SS	0.2	100/ 0.2 ft	>50	NA		Dark gray, f. CLAY, shale (fragments)	
25	-25								Refusal at 24.2 ft bgs. End of boring at 24.2 ft bgs.	
30	-30									
35	-35									

Remarks:

AMSL = Above Mean Sea Level; bgs = below ground surface; ft = feet; " = inch; HC = Hand Clear; SS = Split Spoon; OD = Outer Diameter; ID = Inner Diameter; ppm = parts per million; NA = Not Applicable/Available; f = fine; m = medium; c = coarse; Vacuum truck used to HC 0-6 ft. Horizontal Datum NAD83 New York State Plane, East Zone, US Foot. Development of Well - Completed on 1/14/17; 30 gallons removed; tagged bottom of well: 23.52 ft bgs

Water Level Data

Date	Depth	Elev.
1/15/17	*5.00	NA
1/17/17	6.19	9.08
*Depth measured from bgs (ft)		
Depth measured from top of casing		



Date Start/Finish: 1/14-16/17 Drilling Company: Parratt-Wolfe Driller's Name: Layne Pach Drilling Method: HSA Auger Size: 4.25" (ID), 8.13" (OD) Rig Type: CME-55 Sampling Method: 2" SS Sampler/3" RC	Northing: 1387592.25 Easting: 695313.97 Casing Elevation: NA Borehole Depth: 25.5 ft bgs Surface Elevation: NA Descriptions By: Molly Barker	Well/Boring ID: B-136 Client: National Grid Location: 89 Washington St, Rensselaer, NY
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								Asphalt surface.	
								NA		
								1.9	Brown- Black, (FILL) Sandy SILT, soft, moist	
								3.5	Brown, CLAY, trace Silt, soft, low plasticity, moist	
		NA	HC	NA	NA	NA		14.1		
								18.9		
5	-5	S-1	SS	0	WOH/18"	WOH	NA			
		S-2	SS	1.5	WOH/18"	WOH	47.5		Brown, Clayey f. SAND, trace Silt and Clay, very loose, iridescent sheen, strong tar-like odor, wet	
		S-3	SS	1.5	WOH-1 2-3	3	18.8		Brown, CLAY and SILT, trace f. Gravel (angular, poorly sorted), soft, iridescent sheen, strong tar-like odor, wet	
10	-10								Some f. Gravel (angular, poorly sorted) @ 10 ft bgs	
		S-4	SS	1.5	4-6 10-17	16	205		Dark brown-gray, CLAY, some f. Gravel (angular, poorly sorted), trace Silt, very stiff, brownish-black oil-like NAPL, strong tar-like odor, wet	
		S-5	SS	1	42-50/3"	>50	34		Dark brown, mf. SAND and some f. Gravel (subrounded, poorly sorted), medium dense, brownish-black oil-like NAPL coating, strong tar-like odor, wet	
									Dark brown, mf. SAND and f. GRAVEL (subrounded, poorly sorted), medium dense, iridescent sheen, strong tar-like odor, wet	
15	-15	S-6	SS	0.8	44-50/3"	>50	12		Dark Gray, Silty SAND (TILL), some gravel (angular), very dense, non-plastic to low plasticity, moist to dry (top ft of sample appears to be sluff from above).	

 ARCADIS	Remarks: bgs = below ground surface; ft = feet; " = inch; HC = Hand Clear; RC = Rock Core; SS = Split Spoon; HSA = Hollow Stem Auger; OD = Outer Diameter; ID = Inner Diameter; ppm = parts per million; NA = Not Applicable/Available; f = fine; m = medium; c = coarse; Vacuum truck used to HC 0-5 ft, remaining depths were cleared by a HSA. Horizontal Datum NAD83 New York State Plane, East Zone, US Foot.		Water Level Data		
			Date	Depth	Elev.
			1/16/17	*6.5	NA
			*Depth measured from bgs (ft)		
			Depth measured from top of casing		

Well/Boring ID: B-136

Borehole Depth: 25.5 ft bgs

89 Washington St, Rensselaer, NY

 Design & Consultancy for natural and built assets	Remarks: bgs = below ground surface; ft = feet; " = inch; HC = Hand Clear; RC = Rock Core; SS = Split Spoon; HSA = Hollow Stem Auger; OD = Outer Diameter; ID = Inner Diameter; ppm = parts per million; NA = Not Applicable/Available; f = fine; m = medium; c = coarse; Vacuum truck used to HC 0-5 ft, remaining depths were cleared by a HSA. Horizontal Datum NAD83 New York State Plane, East Zone, US Foot.	Water Level Data <table> <tr> <th>Date</th><th>Depth</th><th>Elev.</th></tr> <tr> <td>1/16/17</td><td>*6.5</td><td>NA</td></tr> <tr> <td colspan="3">*Depth measured from bgs (ft)</td></tr> <tr> <td colspan="3">Depth measured from top of casing</td></tr> </table>	Date	Depth	Elev.	1/16/17	*6.5	NA	*Depth measured from bgs (ft)			Depth measured from top of casing		
Date	Depth	Elev.												
1/16/17	*6.5	NA												
*Depth measured from bgs (ft)														
Depth measured from top of casing														

Date Start/Finish: 1/14-15/17 Drilling Company: Parratt-Wolfe Driller's Name: Layne Pach Drilling Method: HSA Auger Size: 4.25" (ID), 8.13" (OD) Rig Type: CME-55 Sampling Method: 2" SS Sampler/3" RC	Northing: 1387562.27 Easting: 695252.94 Casing Elevation: NA Borehole Depth: 25.3 ft bgs Surface Elevation: NA Descriptions By: Molly Barker	Well/Boring ID: B-137 Client: National Grid Location: 89 Washington St, Rensselaer, NY
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0									
		NA	HC	NA	NA	NA			Asphalt surface.	
							3.5		Brown- black, FILL, soft, moist	
							3.4			
							4.5			
5	-5						7.8			
		S-1	SS	1.2	WOH/ 12"-2	2	NA		Dark-brown, CLAY, some f. SAND, soft, moist	
		S-2	SS	1.5	4-4 4	8	4.6		Dark-brown and white, Sandy Lean CLAY, little gravel (angular, poorly sorted), loose to very dense, moist	
		S-3	SS	1.3	3-19 50/.3 ft	>50	0.0		(pocket of f. Gravel @ 8 ft bgs)	
10	-10								Dark-gray, GRAVEL (angular, poorly sorted) and c. SAND (TILL), very dense, moist	
		S-4	SS	1.9	21-41 41-50/ .4 ft	82	0.0			
		S-5	SS	1.8	7-49 29-26	78	1.2			
15	-15	S-6	SS	1.9	11-16 15-16	31	0.0		Dark brown, Sandy Silty CLAY (TILL), few gravel (angular, poorly sorted), dense, moist	

Borehole backfilled with Bentonite to grade

 Design & Consultancy for natural and built assets	Remarks: bgs = below ground surface; ft = feet; " = inch; HC = Hand Clear; RC = Rock Core; SS = Split Spoon; HSA = Hollow Stem Auger; OD = Outer Diameter; ID = Inner Diameter; ppm = parts per million; NA = Not Applicable/Available; f = fine; m = medium; c = coarse; Vacuum truck used to HC 0-5 ft, remaining depths were cleared by a HSA. Horizontal Datum NAD83 New York State Plane, East Zone, US Foot.			Water Level Data		
	Date	Depth	Elev.	Date	Depth	Elev.
	NA	NA	NA			

*Depth measured from bgs (ft)
 Depth measured from top of casing

Client: National Grid

Well/Boring ID: B-137

Site Location:

Borehole Depth: 25.3 ft bgs

89 Washington St, Rensselaer, NY

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
		S-7	SS	1.7	27-50/ .4 ft	>50	0.0		Dark brown to black, CLAY, some f. Gravel (angular, poorly sorted) and f. Sand, trace Silt (TILL), very dense, moist	Borehole backfilled with Bentonite to grade
									Dark gray, c. GRAVEL (angular), some f. Sand (TILL), very dense, moist	
20	-20	S-8	SS	1.8	28-50/ .4 ft	>50	0.0		Dark gray, Shale (fragments), fissile, trace Clay and f. Gravel, very dense, moist	
		S-9	SS	0.3	100/ 0.3 ft	>50	0.0		SHALE, weak, gray, fine-grained, no obviouse bedding or structures, competent, intensely fractured (45-90 degrees). @ 23 ft and 25 ft bgs fracture zone RQD: 15"/38" = 39% Poor	
		RC-1	RC	3.2	~80 minutes (Run #1)	NA	NA			
25	-25								Split spoon and auger refusal at 20.3 ft bgs. End of boring at 25.3 ft bgs.	
30	-30									
35	-35									

Remarks:

bgs = below ground surface; ft = feet; " = inch; HC = Hand Clear; RC = Rock Core; SS = Split Spoon; HSA = Hollow Stem Auger; OD = Outer Diameter; ID = Inner Diameter; ppm = parts per million; NA = Not Applicable/Available; f = fine; m = medium; c = coarse; Vacuum truck used to HC 0-5 ft, remaining depths were cleared by a HSA. Horizontal Datum NAD83 New York State Plane, East Zone, US Foot.

Water Level Data

Date	Depth	Elev.
NA	NA	NA

*Depth measured from bgs (ft)

Depth measured from top of casing



Date Start/Finish: 7/8/17 Drilling Company: Parratt-Wolfe Driller's Name: Jolaan Price Drilling Method: HSA Auger Size: 4.25" (ID), 8.3" (OD) Rig Type: Ingersoll Rand (A300)- with geoprobe Sampling Method: 2" SS Sampler	Northing: 1387699.60 Easting: 695295.26 Casing Elevation: NA Borehole Depth: 16 ft bgs Surface Elevation: NA Descriptions By: Lacey Mikochik	Well/Boring ID: B-138 Client: National Grid Location: 89 Washington St, Rensselaer, NY
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0									
									Asphalt surface	
								x x x x x x x x x x x x x	Brown, Clayey SILT, trace f. Sand, low plasticity, moist	
		NA	HC	NA	NA	NA	0.0		Brown, CLAY, some f. Sand and Silt, moist	
5	-5								Brown, Clayey f. SAND, trace Silt, low plasticity, moist	
		S-1	SS	2.0	NA	NA	19		Greenish Gray, m.f. SAND, trace Silt, loose, reddish-brown staining, slight tar-like odor, wet	Borehole backfilled with Bentonite to grade
10	-10								Brownish-orange, f. SAND, trace Silt, Clay, and f. Gravel, medium dense, moist	
		S-2	SS	0.9	NA	NA	0.0		Black to dark Gray, Silty, Clayey m.f. SAND (TILL), little Gravel (subrounded), poorly sorted, very dense, moist	
		S-3	SS	1.0	NA	NA	0.0			
									Dark gray, Shale (fragments), fissile, very dense, dry	
15	-15	S-4	SS	0.2	NA	NA	0.0		Auger refusal at 16 ft bgs. End of boring at 16 ft bgs.	

	Remarks: bgs = below ground surface; ft = feet; " = inch; HC = Hand Clear; SS = Split Spoon; HSA = Hollow Stem Auger; OD = Outer Diameter; ID = Inner Diameter; ppm = parts per million; NA = Not Applicable/Available; f = fine; m = medium; c = coarse; Vacuum truck used to HC 0-8.0 ft, remaining depths were cleared by a HSA. Horizontal Datum NAD83 New York State Plane, East Zone, US Foot.			Water Level Data		
				Date	Depth	Elev.
				7/8/17	*8	NA
				*Depth measured from bgs (ft)		
				Depth measured from top of casing		

Date Start/Finish: 7/8/17 Drilling Company: Parratt-Wolfe Driller's Name: Jolaan Price Drilling Method: HSA Auger Size: 4.25" (ID), 8.3" (OD) Rig Type: Ingersoll Rand (A300)- with geoprobe Sampling Method: 2" SS Sampler	Northing: 1387613.44 Easting: 695275.81 Casing Elevation: NA Borehole Depth: 18 ft bgs Surface Elevation: NA Descriptions By: Lacey Mikochik	Well/Boring ID: B-139 Client: National Grid Location: 89 Washington St, Rensselaer, NY
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								Asphalt surface	
		NA	HC	NA	NA	NA	0.0	x x x x x x	Brown to Black, Sandy SILT, some f. Sand and f.m. Gravel (subrounded), poorly sorted, low plasticity, moist	
									Brown, f. SAND and f.m. GRAVEL (subrounded), poorly sorted, loose, moist	
5	-5	S-1	SS	1.3	NA	NA	0.0		Some Clay, and slight tar-like odor @ 5 ft bgs.	
									Strong tar-like odor @ 7 ft bgs.	
		S-2	SS	0.7	NA	NA	5.0		Brown to greenish gray, Clayey SILT, little f. Gravel (subrounded), poorly sorted, hard, moist	
									Soft, reddish-brown staining, wet @ 9 ft bgs.	
10	-10	S-3	SS	1.5	NA	NA	20.3		Brown to greenish gray, CLAY (TILL), some f.m. Sand, trace f. gravel (subrounded), poorly sorted, hard, moist	
		S-4	SS	1.5	NA	NA	20.0			
		S-5	SS	2.0	NA	NA	0.0			
15	-15	S-6	SS	1.3	NA	NA	0.0		Dark gray, Shale (fragments), fissile, very dense, dry	

	Remarks: bgs = below ground surface; ft = feet; " = inch; HC = Hand Clear; SS = Split Spoon; HSA = Hollow Stem Auger; OD = Outer Diameter; ID = Inner Diameter; ppm = parts per million; NA = Not Applicable/Available; f = fine; m = medium; c = coarse; Vacuum truck used to HC 0-5.0 ft, remaining depths were cleared by a HSA. Horizontal Datum NAD83 New York State Plane, East Zone, US Foot.		Water Level Data		
			Date	Depth	Elev.
			7/8/17	*9	NA
			*Depth measured from bgs (ft)		
			Depth measured from top of casing		

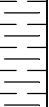
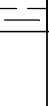
Client: National Grid

Well/Boring ID: B-139

Site Location:

Borehole Depth: 18 ft bgs

89 Washington St, Rensselaer, NY

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
		S-7	SS	1.3	NA	NA	0.0		Dark gray, Shale (fragments), fissile, very dense, dry	
		S-8	SS	0.8	NA	NA	0.0		Auger refusal at 18 ft bgs.	 Borehole backfilled with Bentonite to grade
20	-20								End of boring at 18 ft bgs.	
25	-25									
30	-30									
35	-35									

Remarks:

bgs = below ground surface; ft = feet; " = inch; HC = Hand Clear; SS = Split Spoon; HSA = Hollow Stem Auger; OD = Outer Diameter; ID = Inner Diameter; ppm = parts per million; NA = Not Applicable/Available; f = fine; m = medium; c = coarse; Vacuum truck used to HC 0-5.0 ft, remaining depths were cleared by a HSA. Horizontal Datum NAD83 New York State Plane, East Zone, US Foot.

Water Level Data

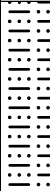
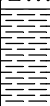
Date	Depth	Elev.
7/8/17	*9	NA

*Depth measured from bgs (ft)

Depth measured from top of casing

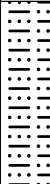


Date Start/Finish: 7/9/17 Drilling Company: Parratt-Wolfe Driller's Name: Jolaan Price Drilling Method: HSA Auger Size: 4.25" (ID), 8.3" (OD) Rig Type: Ingersoll Rand (A300)- with hammer Sampling Method: 2" SS Sampler	Northing: 1387573.81 Easting: 695351.75 Casing Elevation: NA Borehole Depth: 12.7 ft bgs Surface Elevation: NA Descriptions By: Lacey Mikochik	Well/Boring ID: B-141 Client: National Grid Location: 89 Washington St, Rensselaer, NY
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0									
		NA	HC	NA	NA	NA	0.0		Asphalt surface	
									Red, BRICK (fragmented), brown Silty Clay (fill), dry to moist	
									Brown to Black, Sandy SILT, some f. Sand and f.m. Gravel (subrounded), poorly sorted, low plasticity, moist	
5	-5	S-1	SS	0.8	2-3	3	0.0		Brown, f. SAND and f.m. GRAVEL (subrounded), little Silt and Clay, poorly sorted, very loose, moist	
		S-2	SS	1.9	2-4 4-6	8	0.0		Loose, reddish-brown staining, strong tar-like odor, wet @ 7.0 ft bgs. No reddish-brown staining, slight tar-like odor, moist @7.5 ft bgs.	
		S-3	SS	1.6	2-7 15-20	22	20.0		Medium dense, reddish-brown staining, strong tar-like odor, @ 8.5 ft bgs. No reddish-brown staining, slight tar-like odor @ 9.0 ft bgs. No reddish-brown staining or tar-like odor @ 9.5 ft bgs. Very dense @ 10.0 ft bgs.	
10	-10	S-4	SS	1.0	6-24 26-30	50	0.0		Brown to greenish gray, CLAY (TILL), some f.m.Sand, trace f. Gravel (subrounded), poorly sorted, very hard, moist	
		S-5	SS	0.2	47- 50/0.2	>50	0.0		Split spoon and auger refusal at 12.7 ft bgs.	
									End of boring at 12.7 ft bgs.	
15	-15									

 Design & Consultancy for natural and built assets	Remarks: bgs = below ground surface; ft = feet; " = inch; HC = Hand Clear; SS = Split Spoon; HSA = Hollow Stem Auger; OD = Outer Diameter; ID = Inner Diameter; ppm = parts per million; NA = Not Applicable/Available; f = fine; m = medium; c = coarse; Vacuum truck used to HC 0-5.0 ft, remaining depths were cleared by a HSA. Horizontal Datum NAD83 New York State Plane, East Zone, US Foot. Hammer Size = 140 pounds, 30" drop distance		Water Level Data		
			Date	Depth	Elev.
			7/9/17	*7	NA
			*Depth measured from bgs (ft)		
			Depth measured from top of casing		

Date Start/Finish: 7/9/17 Drilling Company: Parratt-Wolfe Driller's Name: Jolaan Price Drilling Method: HSA Auger Size: 4.25" (ID), 8.3" (OD) Rig Type: Ingersoll Rand (A300)- with hammer Sampling Method: 2" SS Sampler	Northing: 1387578.14 Easting: 695322.99 Casing Elevation: NA Borehole Depth: 12.1 ft bgs Surface Elevation: NA Descriptions By: Lacey Mikochik	Well/Boring ID: B-142 Client: National Grid Location: 89 Washington St, Rensselaer, NY
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								Asphalt surface	
		NA	HC	NA	NA	NA	0.0		Red, BRICK (fragmented), brown Silty Clay (fill), dry to moist	
									Brown to Black, Sandy SILT, some f. Sand and f.m. Gravel (subrounded), poorly sorted, low plasticity, moist	
5	-5	S-1	SS	1.0	3-4	4	15.6		Brown to gray, CLAY, trace f. Gravel (subrounded), well sorted, soft, moist	
		S-2	SS	2.0	7-7 8-12	15	30.0		Stiff @ 6 ft bgs.	
		S-3	SS	1.5	11-16 12-12	28	29.0		Brown, f. SAND and f.m. GRAVEL (subrounded), little Silt and Clay, poorly sorted, medium dense, reddish-brown staining, strong odor, moist	
10	-10	S-4	SS	2.0	6-20 33-40	53	90.0		No reddish-brown staining, no strong tar-like odor, and wet @ 9.0 ft bgs. Very dense, reddish-brown staining, and strong tar-like odor @ 10.0 ft bgs.	
		S-5	SS	0.1	50/0.1	>50	0.0		Brown to greenish gray, CLAY (TILL), some f.m.Sand, trace f. Gravel (subrounded), poorly sorted, very hard, moist	
									Split spoon and auger refusal at 12.1 ft bgs. End of boring at 12.1 ft bgs.	
15	-15									

	Remarks: bgs = below ground surface; ft = feet; " = inch; HC = Hand Clear; SS = Split Spoon; HSA = Hollow Stem Auger; OD = Outer Diameter; ID = Inner Diameter; ppm = parts per million; NA = Not Applicable/Available; f = fine; m = medium; c = coarse; Vacuum truck used to HC 0-5.0 ft, remaining depths were cleared by a HSA. Horizontal Datum NAD83 New York State Plane, East Zone, US Foot. Hammer Size = 140 pounds, 30" drop distance		Water Level Data		
			Date	Depth	Elev.
			7/9/17	*9	NA
			*Depth measured from bgs (ft)		
			Depth measured from top of casing		

Date Start/Finish: 1/15/17 Drilling Company: Parratt-Wolfe Driller's Name: Glenn Lansing Drilling Method: Hollow Stem Auger Auger Size: 4.25" (ID), 8.13" (OD) Rig Type: CME-55 Sampling Method: 2" SS Sampler	Northing: 1387687.98 Easting: 695313.65 Casing Elevation: 16.18 ft AMSL Borehole Depth: 22.2 ft bgs Surface Elevation: 16.40 ft AMSL Descriptions By: Lacey Pitman	Well/Boring ID: MW-116 Client: National Grid Location: 89 Washington St, Rensselaer, NY
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0									Steel Flush Mount (8" Diameter)
									Asphalt	2" Locking J-Plug
									Black, Clayey SILT, trace f. Sand, soft, low plasticity, moist	Concrete Pad
										#2 Sand Drain
		NA	HC	NA	NA	NA			Light brown, CLAY, trace Silt and f. Sand, very stiff/hard, moist, medium plasticity	Grout
									Concrete slab	
5	-5	S-1	SS	1	2-2	2	7.0		Brown, Clayey f. SAND, trace f. Gravel (subrounded, poorly sorted), trace Silt and Clay, very loose, moist	2" Diameter Schedule 40 PVC Riser (0.2-10.2 ft bgs)
									Orangish red, BRICK fragments (subangular, poorly sorted)	
		S-2	SS	2	2-2 3-4	5	0		Brown, Clayey f. SAND, trace f. Gravel (subrounded, poorly sorted), Silt and Clay, loose, wet	Medium Grade Chips (6-8 ft bgs)
									Loose and moist @ 7 ft bgs	
		S-3	SS	1.5	3-3 4-4	7	0		Light brown, Clayey f. SAND, trace f. Gravel (subrounded, poorly sorted), and Silt, loose, medium plasticity, moist wet @ 10 ft bgs	
10	-10	S-4	SS	1.6	18-19 11-15	30	5.4		Grayish green, f. SAND and fm. GRAVEL (subrounded, poorly sorted), trace Silt and Clay, medium dense, moist	
		S-5	SS	0.8	10-11 12-12	23	5.0		Grayish green, c. SAND and m. GRAVEL (subrounded, poorly sorted), medium dense, redish-brown staining, slight tar-like odor, wet	#2 Sand (8-20.2 ft bgs)
									Grayish green, f. SAND, trace Silt and Clay, loose, wet	0.02" slot, 2" Diameter Schedule 40 PVC Screen (10.2-20.2 ft bgs)
15	-15	S-6	SS	1.9	7-4 6-6	10	3 12 6.0		Grayish green, f. GRAVEL (subangular, poorly sorted), loose, redish-brown staining, slight tar-like odor, moist	
									Light brown, Clayey f. SAND, some Silt, loose, moist	

 ARCADIS Design & Consultancy for natural and built assets	Remarks: AMSL = Above Mean Sea Level; bgs = below ground surface; ft = feet; " = inch; HC = Hand Clear; SS = Split Spoon; OD = Outer Diameter; ID = Inner Diameter; ppm = parts per million; NA = Not Applicable/Available; f = fine; m = medium; c = coarse; Vacuum truck used to HC 0-5 ft. Horizontal Datum NAD83 New York State Plane, East Zone, US Foot. Well Development (1/17/17); 35 gallons removed; tagged bottom of well: 21.7 ft bgs		Water Level Data		
	Date	Depth	Elev.		
	1/15/17	*6.00	NA		
	1/17/17	8.19	7.99		
	*Depth measured from bgs (ft)				
	Depth measured from top of casing				

Client: National Grid

Well/Boring ID: MW-116

Site Location:

Borehole Depth: 22.2 ft bgs

89 Washington St, Rensselaer, NY

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
		S-7	SS	2	5-6 7-6	13	0.0		Light brown, f. SAND and SILT, trace f. Gravel, medium dense, iridescent sheen, slight tar-like odor, wet	#2 Sand (8-20.2 ft bgs) 0.02" slot, 2" Diameter Schedule 40 PVC Screen (10.2-20.2 ft bgs) SUMP (20.2-22.2 ft bgs) Medium Grade Chips (20.2-22.2 ft bgs)
		S-8	SS	1.3	29-48 50/4"	>50	0		Gray, f. SAND, some Silt and f. Gravel (subrounded, poorly sorted), medium dense, moist	
									Brown, f. SAND and f. GRAVEL (subrounded, poorly sorted) (TILL), very dense, moist	
20	-20	S-9	SS	0.6	47- 50/1"	>50	0			
		S-10	SS	0.2	50/2"	NA	0		Gray, SHALE (fragmented), fissile, refusal	
									Split spoon and auger refusal at 22.2 ft bgs. End of boring at 22.2 ft bgs.	
25	-25									
30	-30									
35	-35									

Remarks:

AMSL = Above Mean Sea Level; bgs = below ground surface; ft = feet; " = inch; HC = Hand Clear; SS = Split Spoon; OD = Outer Diameter; ID = Inner Diameter; ppm = parts per million; NA = Not Applicable/Available; f = fine; m = medium; c = coarse; Vacuum truck used to HC 0-5 ft. Horizontal Datum NAD83 New York State Plane, East Zone, US Foot. Well Development (1/17/17); 35 gallons removed; tagged bottom of well: 21.7 ft bgs

Water Level Data

Date	Depth	Elev.
1/15/17	*6.00	NA
1/17/17	8.19	7.99
*Depth measured from bgs (ft)		
Depth measured from top of casing		



Date Start/Finish: 1/14/17 Drilling Company: Parratt-Wolfe Driller's Name: Glenn Lansing Drilling Method: Hollow Stem Auger Auger Size: 4.25" (ID), 8.13" (OD) Rig Type: CME-55 Sampling Method: 2" SS Sampler	Northing: 1387655.93 Easting: 695340.22 Casing Elevation: 15.22 ft AMSL Borehole Depth: 22.7 ft bgs Surface Elevation: 15.52 ft AMSL Descriptions By: Lacey Pitman	Well/Boring ID: MW-117 Client: National Grid Location: 89 Washington St, Rensselaer, NY
---	---	--

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0									
		NA	HC	NA	NA	NA			Asphalt	Steel Flush Mount (8" Diameter)
							NA			2" Locking J-Plug
							3.7		Brown to black, Clayey SILT, trace f. Sand, soft, low plasticity, moist	Concrete Pad
							3.0		Light brown, CLAY, trace Silt and f. Sand, very stiff/hard, medium plasticity, moist	#2 Sand Drain
							3.0			
							5.5		Red brick (fragmented)	Medium Grade Chips
5	-5	S-1	SS	1	2-2	2	3.4		Gray, CLAY, trace Silt and f. Sand, medium stiff, moist	2" Diameter Schedule 40 PVC Riser (0.7-10.7 ft bgs)
		S-2	SS	2	2-2 4-5	6	39		NAPL Blebs and tar-like odor @ 7.2 ft bgs	Medium Grade Chips (7-9 ft bgs)
							40			
		S-3	SS	1.6	11-7 6-5	13	50		Light brown to gray, Clayey SILT, trace f. Sand and f. Gravel (subrounded, poorly sorted), stiff, NAPL blebs (quarter size and redish brown), strong tar-like odor, moist A seem of brownish-black oil-like NAPL @ 9.3-9.4 ft bgs	
10	-10						50 100 105			
		S-4	SS	0.1	4-5 6-6	11	20		Dark brownish gray, Clayey f. SAND, some Silt and Clay, medium dense, moderate plasticity, moist	
									Redish-brown to black staining @ 12 ft bgs	
		S-5	SS	1.7	7-5 6-7	11	54		Brownish-black oil-like NAPL and very strong tar-like odor @ 13.2-13.7 ft bgs	#2 Sand (9-21 ft bgs)
							90			0.02" slot, 2" Diameter Schedule 40 PVC Screen (10.7-20.7 ft bgs)
15	-15	S-6	SS	0.8	2-3 4-4	7	3		Gray, f. SAND and f. GRAVEL (subangular, poorly sorted), some Clay and Silt, loose, iridescent sheen, slight tar-like odor, moist	

 ARCADIS Design & Consultancy for natural and built assets	Remarks: AMSL = Above Mean Sea Level; bgs = below ground surface; ft = feet; " = inch; HC = Hand Clear; SS = Split Spoon; OD = Outer Diameter; ID = Inner Diameter; ppm = parts per million; NA = Not Applicable/Available; f = fine; m = medium; c = coarse; Vacuum truck used to HC 0-5 ft. Horizontal Datum NAD83 New York State Plane, East Zone, US Foot. Development of Well - Completed on 1/16/17; 21 gallons removed; tagged bottom of well: 22.4 ft bgs	Water Level Data		
		Date	Depth	Elev.
		1/14/17	*16.00	NA
		1/17/17	8.19	7.03
		*Depth measured from bgs (ft)		
		Depth measured from top of casing		

Client: National Grid

Well/Boring ID: MW-117

Site Location:

Borehole Depth: 22.7 ft bgs

89 Washington St, Rensselaer, NY

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	Blow Counts	N - Value	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
20	-20	S-7	SS	2	3-4 4-4	8	3		Dark Gray, cm. SAND, trace Silt and Clay, loose, iridescent sheen, wet	0.02" slot, 2" Diameter Schedule 40 PVC Screen (10.7-20.7 ft bgs) #2 Sand (9-21 ft bgs) SUMP (20.7-22.7 ft bgs) Medium Grade Chips (21-22.7 ft bgs)
									Dark Gray, CLAY, trace Silt and f. Sand, medium stiff, brownish-black oil-like NAPL, slight tar-like odor, wet	
		S-8	SS	2	8-10 8-8	18	2.5 4.5		Dark Gray, f. SAND, some Silt, trace Clay, medium dense, iridescent sheen, wet	
							7.5		Dark Gray, f. SAND, and Silt, trace f. Gravel, medium dense, brownish-black oil-like NAPL, wet	
		S-9	SS	1.5	20-25 35-37	60	5.0		Dark gray, fm. SAND, some mf. GRAVEL (subrounded, poorly sorted) (TILL), very dense, dry	
		S-10	SS	0.2	48- 50/2"	>50	1.0			
25	-25								Split spoon and auger refusal at 22.7 ft bgs. End of boring at 22.7 ft bgs.	
30	-30									
35	-35									

Remarks:

AMSL = Above Mean Sea Level; bgs = below ground surface; ft = feet; " = inch; HC = Hand Clear; SS = Split Spoon; OD = Outer Diameter; ID = Inner Diameter; ppm = parts per million; NA = Not Applicable/Available; f = fine; m = medium; c = coarse; Vacuum truck used to HC 0-5 ft. Horizontal Datum NAD83 New York State Plane, East Zone, US Foot. Development of Well - Completed on 1/16/17; 21 gallons removed; tagged bottom of well: 22.4 ft bgs

Water Level Data

Date	Depth	Elev.
1/14/17	*16.00	NA
1/17/17	8.19	7.03
*Depth measured from bgs (ft)		
Depth measured from top of casing		



ATTACHMENT 5 - GEOTECHNICAL RESULTS

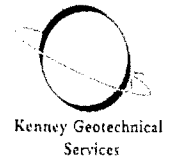


Kenney Geotechnical Engineering Services, PLLC

Office: 6901 Herman Road, Syracuse, NY 13209

Mail: P.O. Box 117 Warners, NY 13164

Phone: (315) 638-2706 Fax: (315) 638-1544



Project : National Grid Rensselaer

Client: Arcadis

Test: Natural Moisture Content

Standard: ASTM D2216

Boring, Sample & Depth	Moisture Content As A Percent of Dry Weight
B-134,S-3, 12-14'	13.9
B-134, S-6, 16-18	8.0
B-134, S-9, 22-22.9	8.1
MMW-118/B-135, S-2,9-11	15.0
B-136, S-6,14-14.8	10.0
B-137, S-2, 6.5-8	22.6
B-137, S-6, 14-16	9.1

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Project: National Grid Rensselaer

Client: Arcadis

SPECIFIC GRAVITY - Method B

ASTM D854

Boring, Sample & Depth	Specific Gravity
B-134, S-9, 22-22.9	2.72
MMW-118/B-135, S-2,9-11	2.72
B-136, S-6,14-14.8	2.63
B-137, S-6, 14-16	2.72



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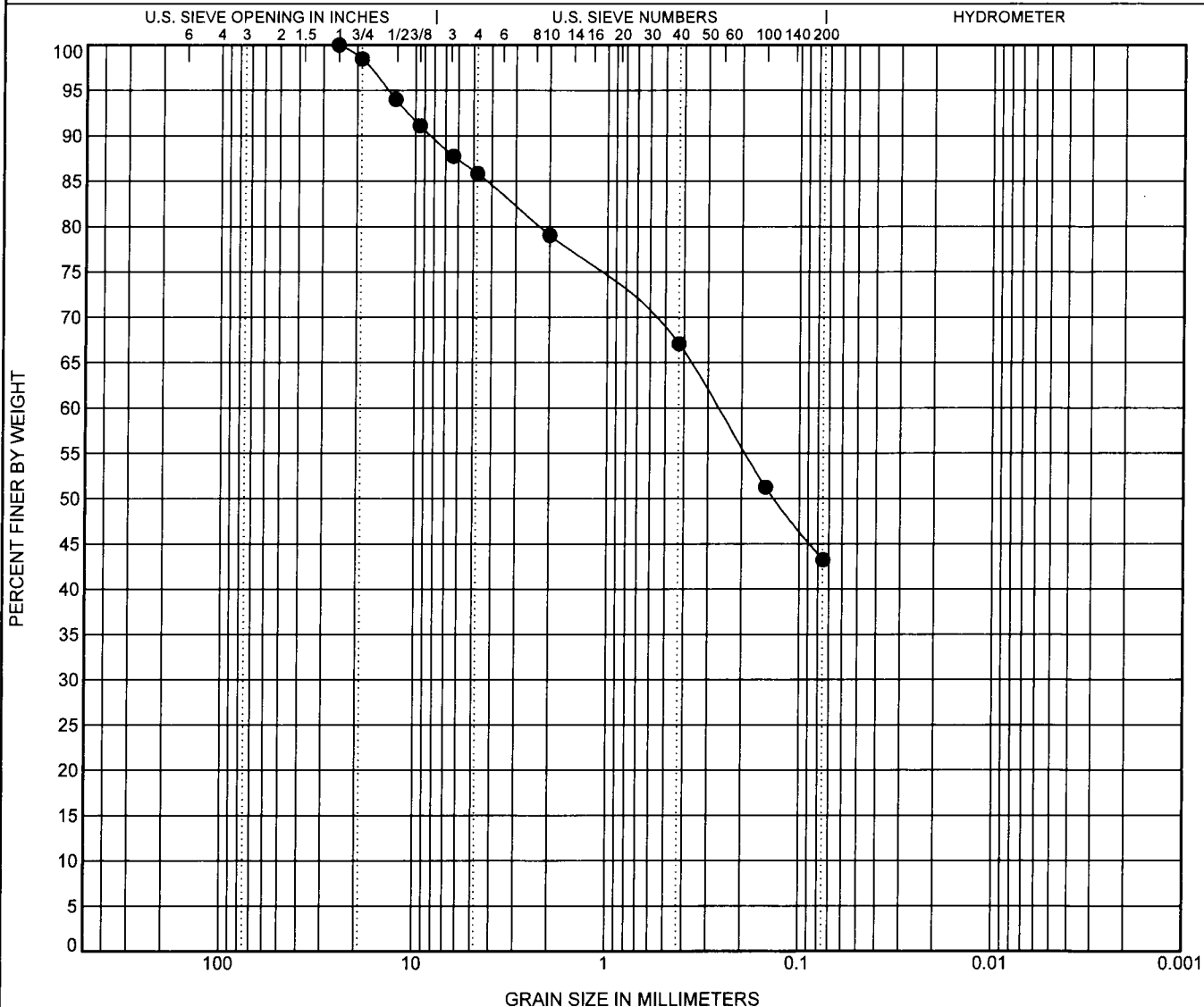
GRAIN SIZE DISTRIBUTION

CLIENT ARCADIS

PROJECT NAME NATIONAL GRID RENSSELAER

PROJECT NUMBER 16-158

PROJECT LOCATION RENSSELAER, NY



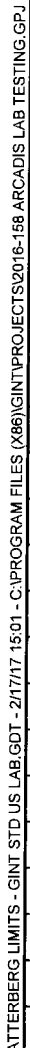
COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification					LL	PL	PI	Cc	Cu
● MMW-118/B-135 S-2 9-11 11.0	SILTY, CLAYEY SAND(SC-SM)					26	19	7		
Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt		%Clay	
● MMW-118/B-135 S-2 9-11 11.0	25	0.267			14.2	42.6	43.2			

GRAIN SIZE - GINT STD US LAB GDT - 2/17/17 15:00 - C:\PROGRAM FILES (X86)\GINT\PROJECTS\2016-158 ARCADIS LAB TESTING.GPJ

ATTERBERG LIMITS' RESULTS

PROJECT LOCATION RENSSELAER, NY

[illegible]



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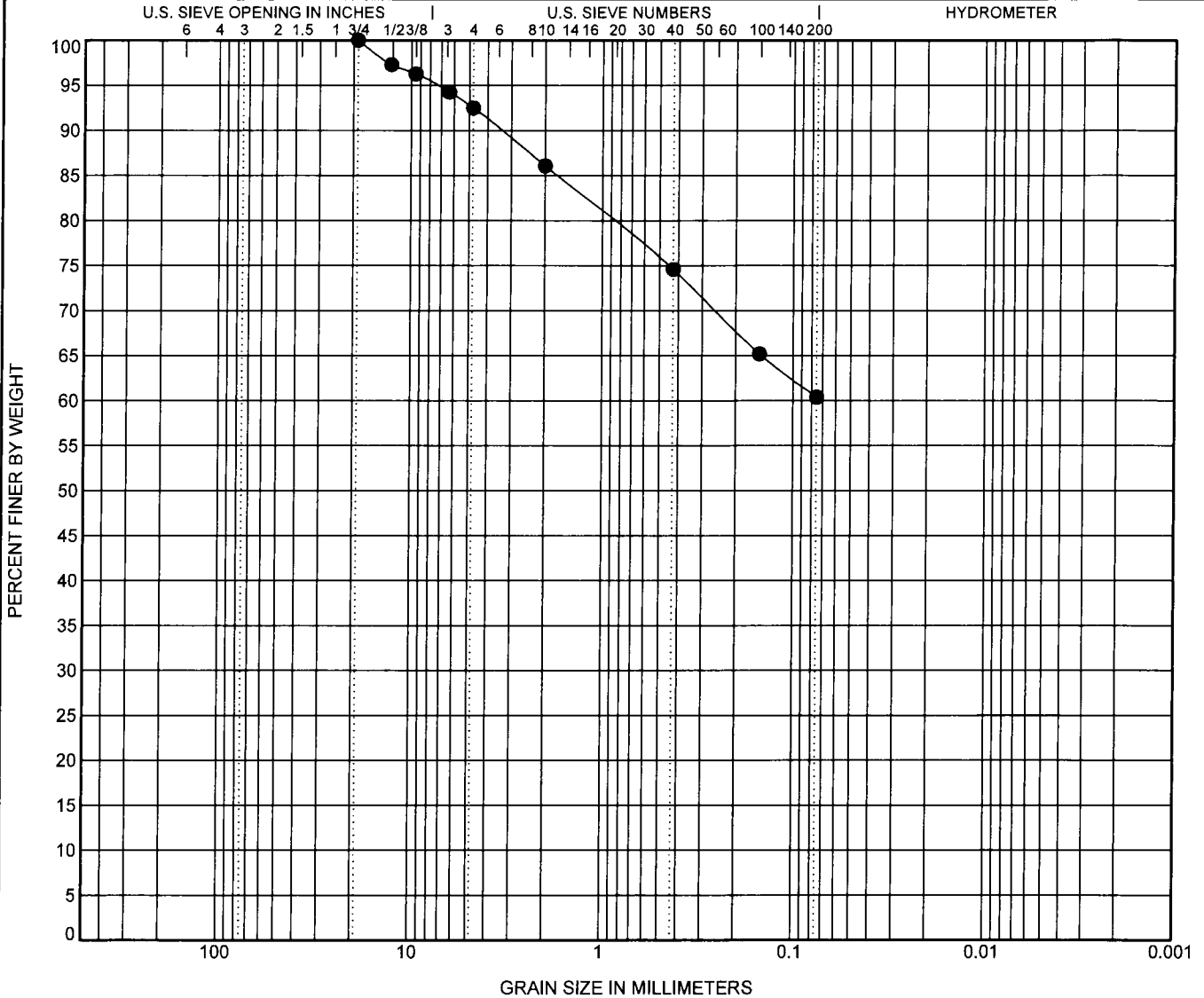
GRAIN SIZE DISTRIBUTION

CLIENT ARCADIS

PROJECT NAME NATIONAL GRID RENSSELAER

PROJECT NUMBER 16-158

PROJECT LOCATION RENSSELAER, NY



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification		Classification					LL	PL	PI	Cc	Cu
● B-137 S-6 14-16	16.0										
Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt		%Clay	
● B-137 S-6 14-16	16.0	19				7.5	32.1	60.4			

GRAIN SIZE - GINT STD US LAB.GDT - 2/17/17 15:04 - C:\PROGRAM FILES (X86)\GINT\PROJECTS\2016-158 ARCADIS LAB TESTING.GPJ

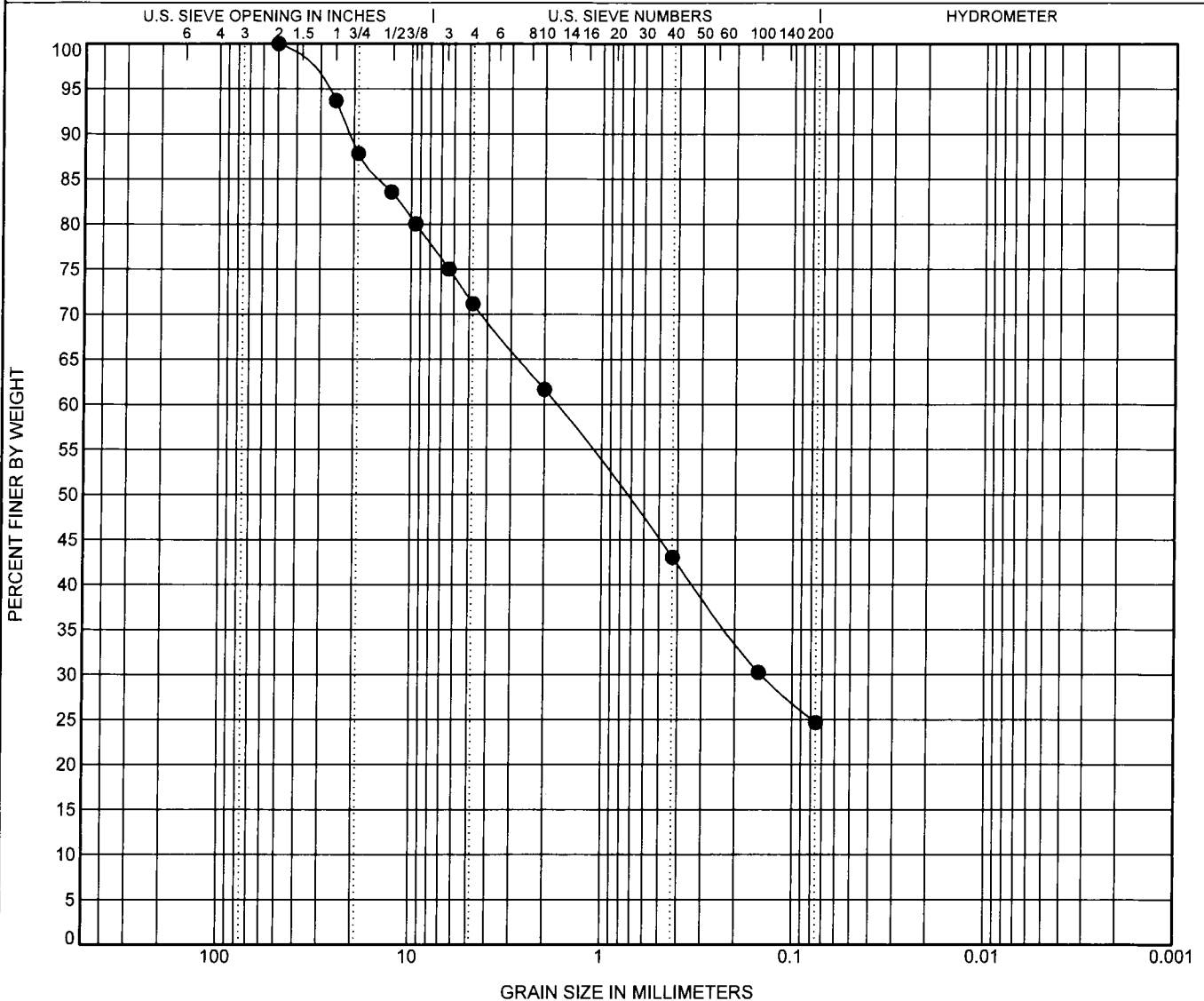
GRAIN SIZE DISTRIBUTION

CLIENT ARCADIS

PROJECT NAME NATIONAL GRID RENSSELAER

PROJECT NUMBER 16-158

PROJECT LOCATION RENSSELAER, NY



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

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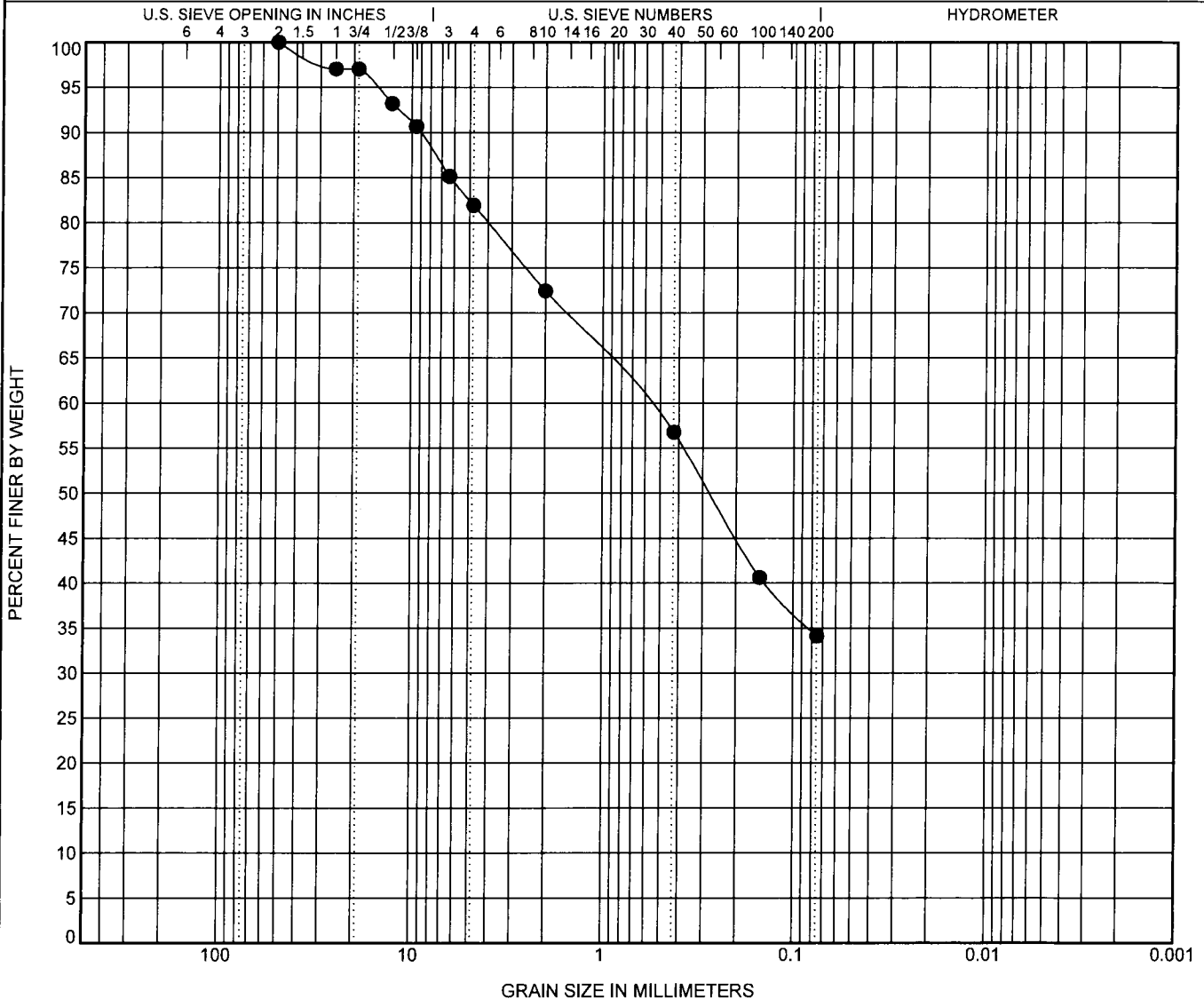
GRAIN SIZE DISTRIBUTION

CLIENT ARCADIS

PROJECT NAME NATIONAL GRID RENSSELAER

PROJECT NUMBER 16-158

PROJECT LOCATION RENSSELAER, NY



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification		Classification					LL	PL	PI	Cc	Cu	
●	B-134 S-6 16-18	18.0										
Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay			
●	B-134 S-6 16-18	18.0	50	0.586		18.1	47.8	34.1				

GRAIN SIZE - GINT STD US LAB.GDT - 2/17/17 14:59 - C:\PROGRAM FILES (X86)\GINT\PROJECTS\2016-158 ARCADIS LAB TESTING.GPJ



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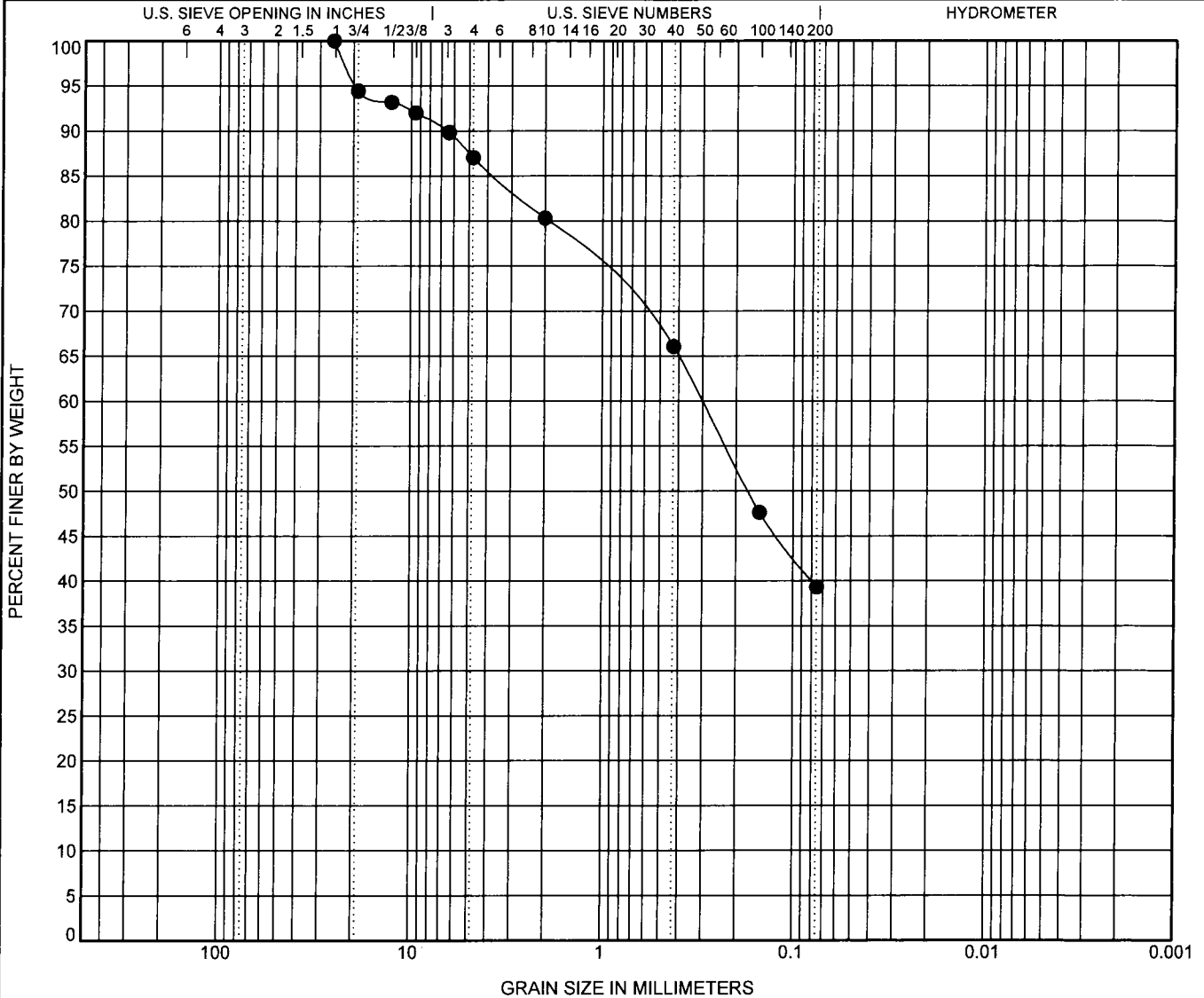
GRAIN SIZE DISTRIBUTION

CLIENT ARCADIS

PROJECT NAME NATIONAL GRID RENSSELAER

PROJECT NUMBER 16-158

PROJECT LOCATION RENSSELAER, NY





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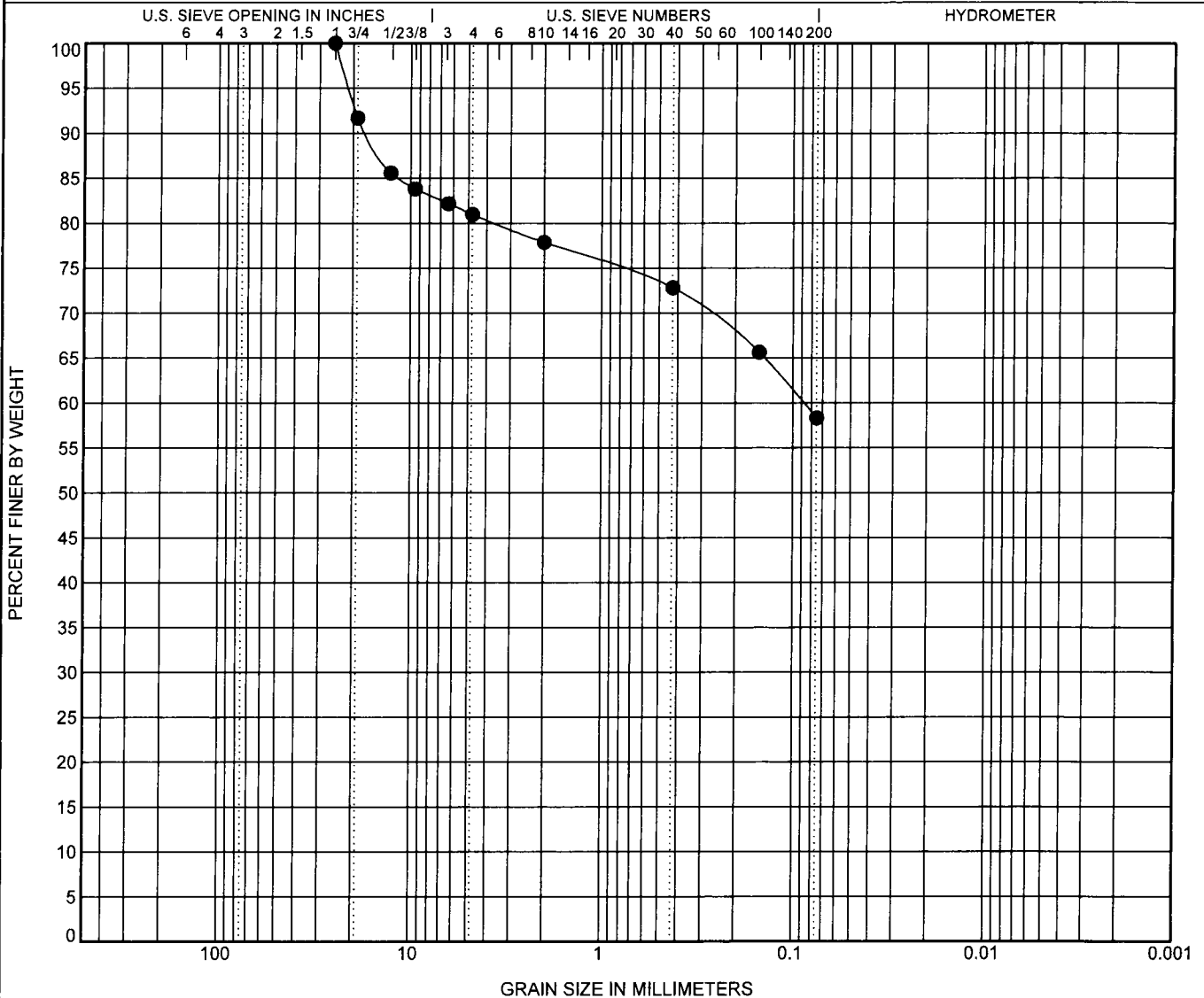
GRAIN SIZE DISTRIBUTION

CLIENT ARCADIS

PROJECT NAME NATIONAL GRID RENSSELAER

PROJECT NUMBER 16-158

PROJECT LOCATION RENSSELAER, NY



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification		Classification				LL	PL	PI	Cc	Cu
● B-137 S-2 6.5-8		8.0	SANDY LEAN CLAY with GRAVEL(CL)				35	24	11	
Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt		%Clay
● B-137 S-2 6.5-8		8.0	25	0.088		19.0	22.6	58.3		

GRAIN SIZE - GINT STD US LAB GDT - 2/17/17 15:03 - C:\PROGRAM FILES (X86)\GINT\PROJECTS\2016-158 ARCADIS LAB TESTING.GPJ

ATTERBERG LIMITS' RESULTS

PROJECT LOCATION RENSSELAER, NY

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Kenney Geotechnical Services
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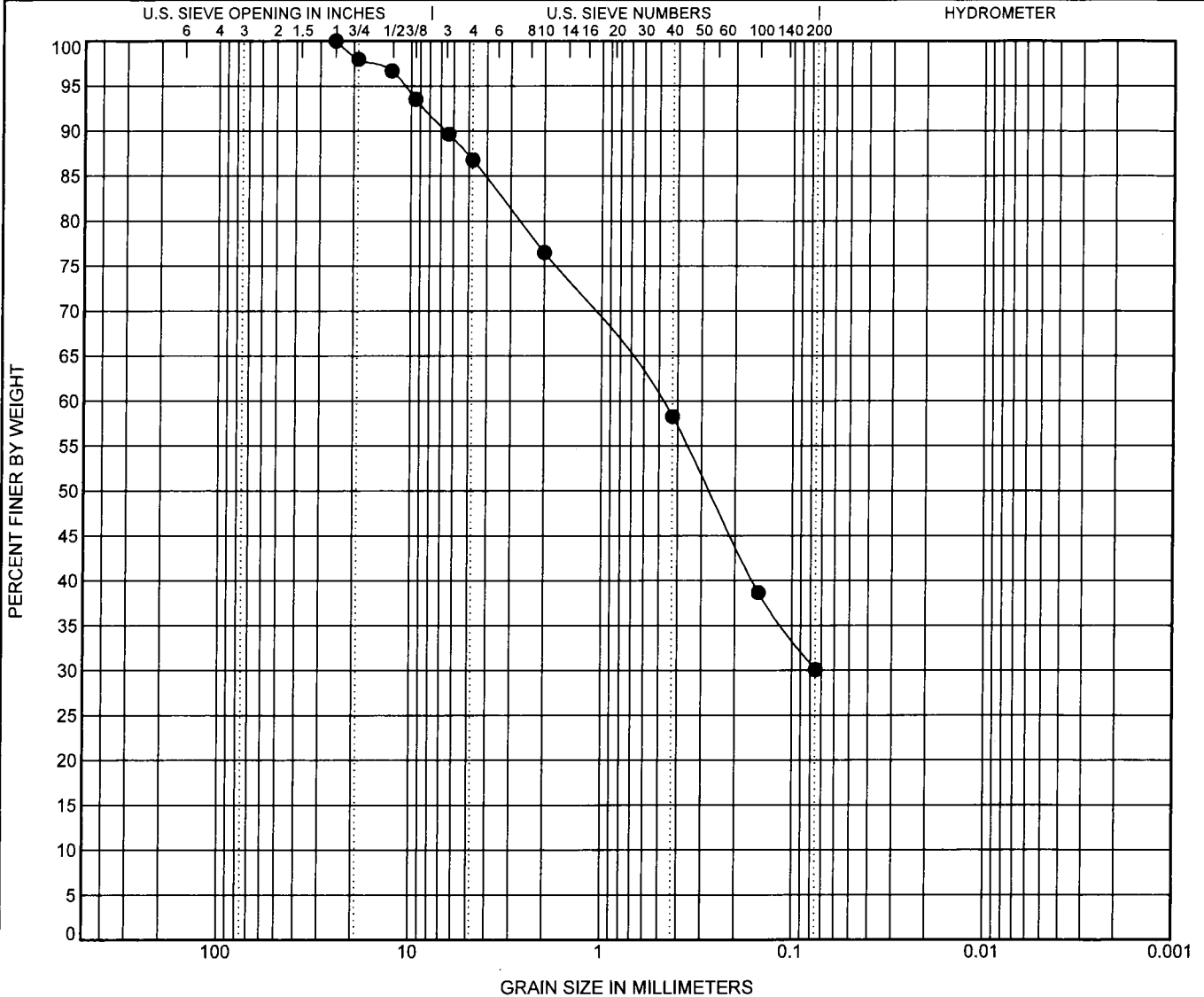
GRAIN SIZE DISTRIBUTION

CLIENT **ARCADIS**

PROJECT NAME **NATIONAL GRID RENSSELAER**

PROJECT NUMBER **16-158**

PROJECT LOCATION **RENSSELAER, NY**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification		Classification					LL	PL	PI	Cc	Cu
● B-134 S-9 22- 22.9	22.9										
Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt		%Clay	
● B-134 S-9 22- 22.9	22.9	25	0.493			13.2	56.7	30.1			

GRAIN SIZE - GINT STD US LAB GDT - 2/17/17 15:06 - C:\PROGRAM FILES (X86)\GINT\PROJECTS\2016-158 ARCADIS LAB TESTING.GPJ

ATTACHMENT 6 - TEST PIT LOGS

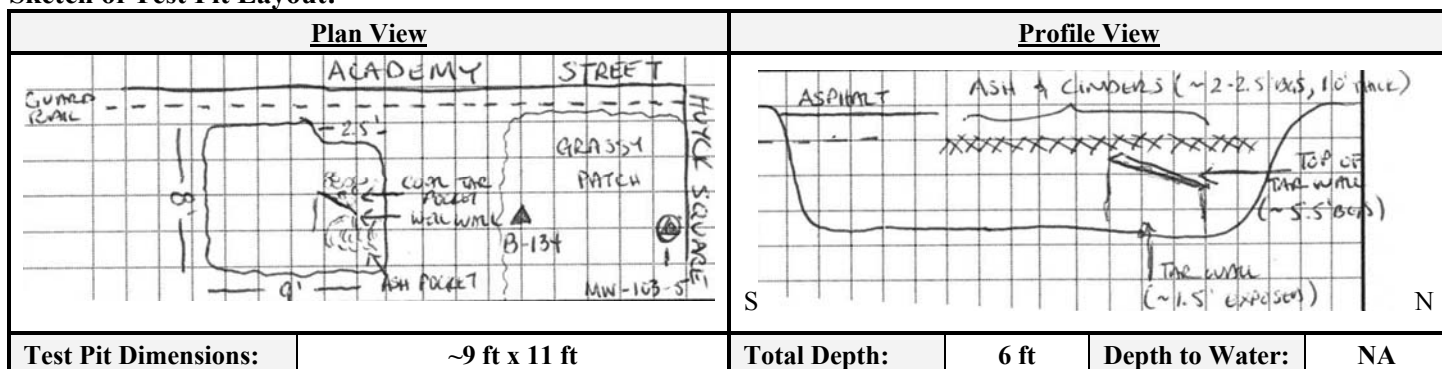


Test Pit Log

Test Pit ID: TP-106

Client:	National Grid	Date/Day:	11/10/2016
Project:	Former Rensselaer MGP Site	Weather:	Sunny
Location:	Rensselaer, NY	Temperature:	40°F
Project #:	B0036730.0000	Wind:	Blowing to the South
Logged By:	J. LeMessurier	Subcontractor:	Parratt-Wolff
Coordinates:	NA	Equipment:	Takeuchi Mini Excavator

Sketch of Test Pit Layout:



Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material
0-0.8	0.0	Asphalt
0.8-2.5	1.5	(Fill Material) Brown cmf SAND, little clay, trace ash and cinders, moist, loose, slight tar-like odor
2.5-4.0	15-20.0	(Fill Material) Gravelly CLAY, little cmf sand, trace debris (red brick, metal, plastic), pockets of viscous coal-tar throughout, moist
4.0-6.0	7.0	Brown CLAY, little silt, little very fine sand, moist, medium dense to soft, slight tar-like odor, medium plasticity.

Notes:

- Sample taken at 3 feet bgs. (TP-106 3.0 feet) at 1330.
- Coal tar pocket, above uncovered tar well structure; 5.5 feet bgs and 1.0 feet wide (see profile view).
- bgs – below ground surface

Photo Summary:

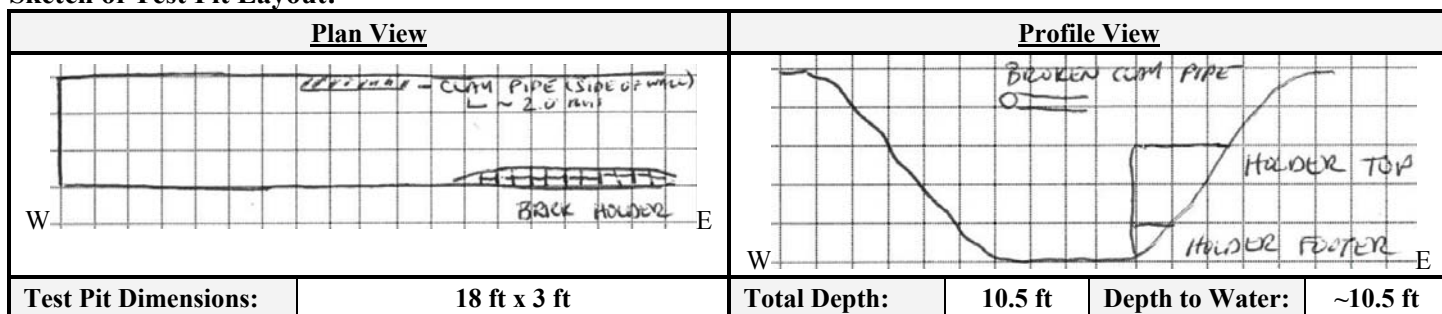
1	Looking at bottom of TP-106, facing North
2	Looking at bottom of TP-106, facing South

Test Pit Log

Test Pit ID: TP-107 (A)

Client:	National Grid	Date/Day:	11/10/2016
Project:	Former Rensselaer MGP Site	Weather:	Overcast
Location:	Rensselaer, NY	Temperature:	40°F
Project #:	B0036730.0000	Wind:	Calm
Logged By:	J. LeMessurier	Subcontractor:	Parratt-Wolff
Coordinates:	NA	Equipment:	Takeuchi Mini Excavator

Sketch of Test Pit Layout:



Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material
0-0.5	0.0	Asphalt
0.5-1.5	100.0	Clean Brown mf SAND, some cmf gravel, little debris (brick), trace cobble, loose, moist, no odor.
1.5-3.5	100.0	Same as above, grey staining, strong tar-like odor.
3.5-10.5	106.0	Grey-Green Sandy CLAY, little mf sand, trace cobble, rounded, odor smelled more of gasoline-like as compared to tar-like odor.

Notes:

- 3.5 feet to 10.5 feet bgs color described due to staining.
- No samples were taken on the outside of the holder.
- bgs – below ground surface

Photo Summary:

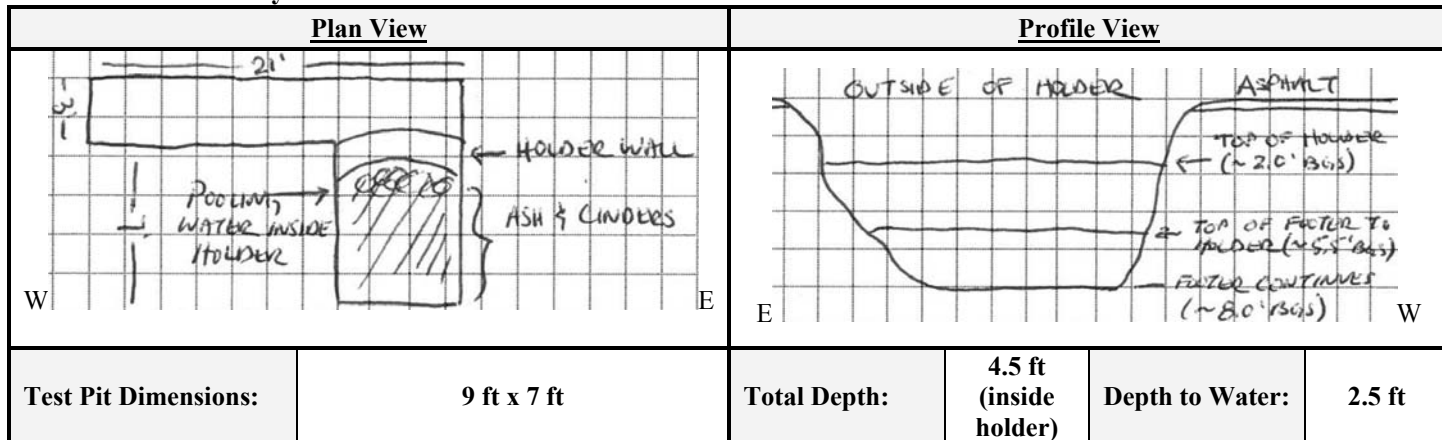
3	Looking at bottom of TP-107A, facing east
4	Brick holder wall exposed during TP-107A excavation, facing east
5	Clay pipe uncovered during TP-107A excavation, facing north

Test Pit Log

Test Pit ID: TP-107 (B)

Client:	National Grid	Date/Day:	11/11/2016
Project:	Former Rensselaer MGP Site	Weather:	Overcast, Breezy
Location:	Rensselaer, NY	Temperature:	50°F
Project #:	B0036730.0000	Wind:	From the North 0-10 MPH
Logged By:	J. LeMessurier	Subcontractor:	Parratt-Wolff
Coordinates:	NA	Equipment:	Takeuchi Mini Excavator

Sketch of Test Pit Layout:



Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material
0-0.5	0.0	Asphalt
0.5-4.0	5.5	(Fill Material) Red-Brown Ash and Cinders, little cobble, rounded, trace cmf sand, trace red brick, very loose, wet, slight tar-like odor.

Notes:

- Inside of holder is holding water at a level approximately 1.5 feet below top of holder wall. Outside of holder has slight tar-like odor and staining present. Water present at approximate 10-10.5 feet below grade, which is most likely the surrounding water level.
- Integrity of holder appears to be competent based on visual observation and water holding inside holder wall at different level than outside of holder wall.
- Sample taken at 3.0 feet bgs (TP-107 3.0 feet)
- bgs – below ground surface

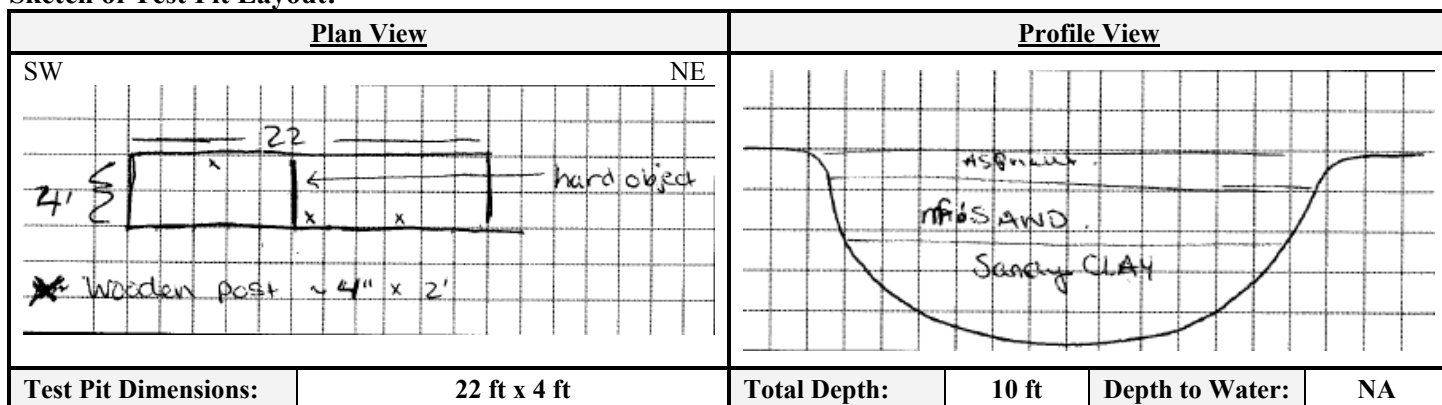
Photo Summary:

Test Pit Log

Test Pit ID: TP-109

Client:	National Grid	Date/Day:	1/16/2017
Project:	Former Rensselaer MGP Site	Weather:	Cloudy
Location:	Rensselaer, NY	Temperature:	30°F
Project #:	B0036730.0000	Wind:	---
Logged By:	L. Pitman	Subcontractor:	Parratt-Wolff
Coordinates:	NA	Equipment:	Takeuchi Mini Excavator

Sketch of Test Pit Layout:



Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material
0-0.5	0.0	Asphalt
0.5-5.0	0.0	(Fill Material) Brown mf SAND, some cmf gravel, little brick, moist, no odor
5.0-9.0	100	Grey-Green cmf Sandy CLAY, trace silt, staining present throughout interval, tar-like odor
9.0-10.0	100+	SAA, saturated with NAPL, heavy staining, strong tar-like odor

Notes:

- At 5 feet bgs, top of wooden posts. Posts appeared to go to termination depth of TP-109.
- 9.0-10.0 feet bgs, a pocket of NAPL saturated soil (1' x 1') on the southern portion of TP-109 adjacent to stone structure.
- Stone structure observed 5 feet below grade
- bgs – below ground surface

Photo Summary:

6	Pocket of NAPL saturated soil and sheen on pooling groundwater at bottom of TP-109, facing south.
7	Pocket of NAPL saturated soil at bottom of TP-109. Concrete obstruction encountered during TP-109 excavation, facing west.

Test Pit Log

Test Pit ID: TP-110

Client:	National Grid	Date/Day:	11/11/2016
Project:	Former Rensselaer MGP Site	Weather:	Overcast, Windy
Location:	Rensselaer, NY	Temperature:	50°F
Project #:	B0036730.0000	Wind:	From the North 10-20 MPH
Logged By:	J. LeMessurier	Subcontractor:	Parratt-Wolff
Coordinates:	NA	Equipment:	Takeuchi Mini Excavator

Sketch of Test Pit Layout:

Plan View	Profile View
Test Pit Dimensions:	22 ft x 4 ft
Total Depth:	5.5 ft
Depth to Water:	NA

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material
0-0.5	0.0	Asphalt
0.5-1.5	0.0	Brown cmf SAND, some cmf gravel, rounded to subrounded, trace silt, loose, moist, no odor.
1.5-4.0	106	Grey to dark grey, cmf SAND, some ash and cinders, little mf gravel, subrounded, trace red brick, moist to wet, loose, strong tar-like odor, staining throughout interval
4.0-5.0	95	Grey-green Sandy CLAY, little mf sand, soft, moist, moderate tar-like odor, piles (wood) encountered at 4 feet bgs.

Notes:

- Concrete structure (written as holder wall on profile view) was located on the western edge of TP-110. 4 feet was exposed, appears to continue in the western direction.
- Structure appears to be made of concrete, as compared to the anticipated brick and mortar.
- Wood piles were exposed (3) at a depth of 4.0 feet bgs
- Samples collected 0.5-3.0 feet bgs (TP-110 0.0-3.0 at 1215) and 3.0-5.0 feet bgs (TP-110 3.0-5.0 at 1215).
- bgs – below ground surface

Photo Summary:

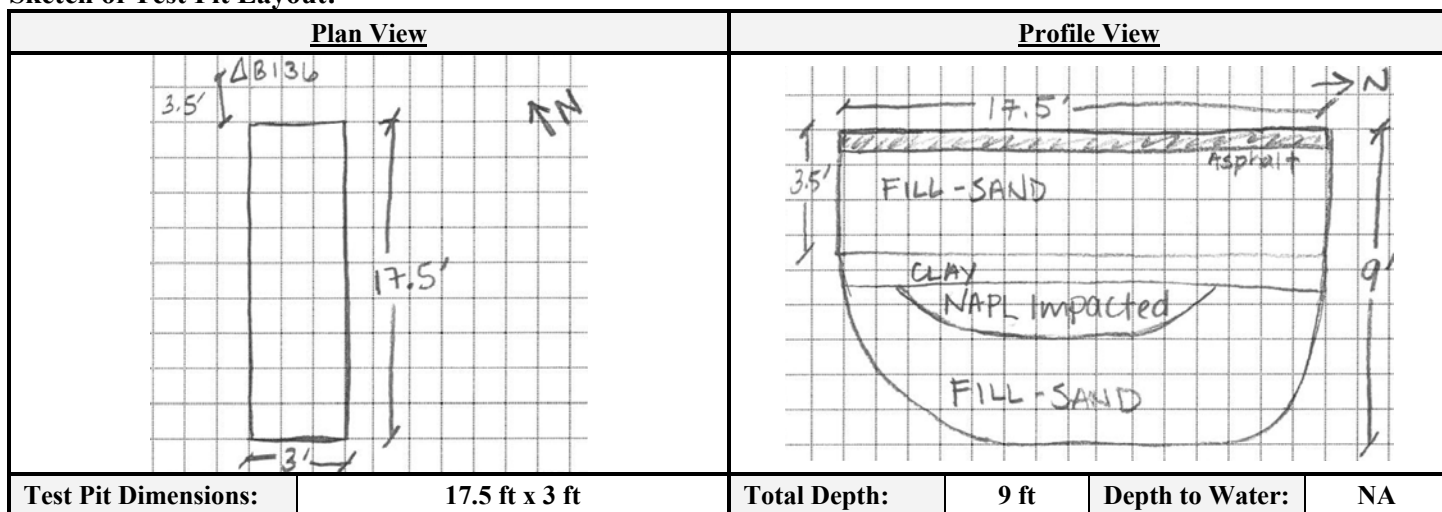
8	Water pooling in the east end of TP-110, facing north.
9	Staining in west wall of test pit, facing west.
10	Wood pile hole, facing west.

Test Pit Log

Test Pit ID: TP-111

Client:	National Grid	Date/Day:	02/19/2017
Project:	Former Rensselaer MGP Site	Weather:	Sunny
Location:	Rensselaer, NY	Temperature:	40°F
Project #:	B0036730.0000	Wind:	Slight wind
Logged By:	K. Warren	Subcontractor:	Parratt-Wolff
Coordinates:	NA	Equipment:	Takeuchi Mini Excavator

Sketch of Test Pit Layout:



Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material
0-0.5	0.0	Asphalt and Subbase Material
0.5-3.5	20	(Fill Material) Brown SAND, some silt/clay, few gravel, moist
3.5-6.0	120	Dark grey CLAY, some sand, strong tar-like odor, sheens, saturated with NAPL, moist, low to medium plasticity
6.0-9.0	200+	Dark brown SAND, some gravel, little silt/clay, strong tar-like odor, large NAPL pockets (4-8" in diameter), sheen, moist.

Notes:

- Very little debris and brick observed during excavation.
- Pockets of NAPL saturated soil observed underlying clay unit from 4 feet to 6 feet below grade. Pockets range from 4" to 8" in diameter. Sheen and staining present surrounding NAPL saturated soil throughout the 3.5 feet to 8 feet below grade interval.
- bgs – below ground surface

Photo Summary:

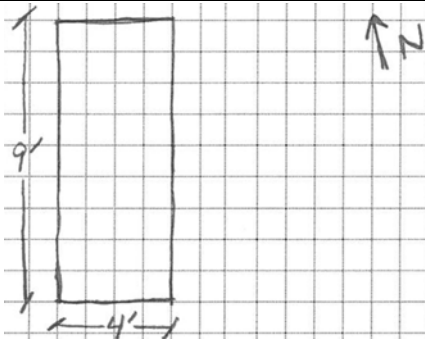
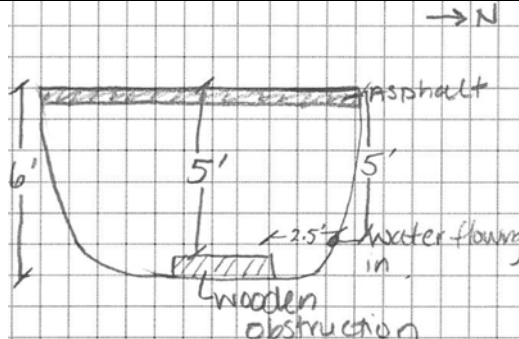
11	Water pooling with NAPL in bottom of the north portion of TP-111, facing north.
12	Stained soil from bottom of TP-111.

Test Pit Log

Test Pit ID: TP-112

Client:	National Grid	Date/Day:	02/19/2017
Project:	Former Rensselaer MGP Site	Weather:	Sunny
Location:	Rensselaer, NY	Temperature:	50°F
Project #:	B0036730.0000	Wind:	Slight northern wind
Logged By:	K. Warren	Subcontractor:	Parratt-Wolff
Coordinates:	NA	Equipment:	Takeuchi Mini Excavator

Sketch of Test Pit Layout:

Plan View		Profile View	
			
Test Pit Dimensions:	9 ft x 4 ft	Total Depth:	6 ft
		Depth to Water:	5 ft

Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material
0-0.5	0.0	Asphalt and Subbase Material
0.5-6.0	35	(Fill Material) Dark brown and dark grey Clayey SAND, some gravel, little debris (concrete pieces/brick), moist, faint tar-like odor, sheen, small blebs (0.5" to 2" in diameter). Wooden obstruction encountered at 5 feet below grade.

Notes:

- Water flowing into TP-112 at northern excavation wall at 5 feet below grade.
- Excavator broke down during excavation of TP-112; hydraulic line in excavator disengaged. TP-112 terminated at 6 feet below grade when no holder wall or holder wall components were encountered.
- TP-112 left open during excavator repair, water filled TP-112 to 5 feet below grade. Sheen collected on top of water flowing into TP-112.
- Wooden obstruction encountered at 5 feet below grade, unable to uncover further due to excavator breakdown.
- bgs – below ground surface

Photo Summary:

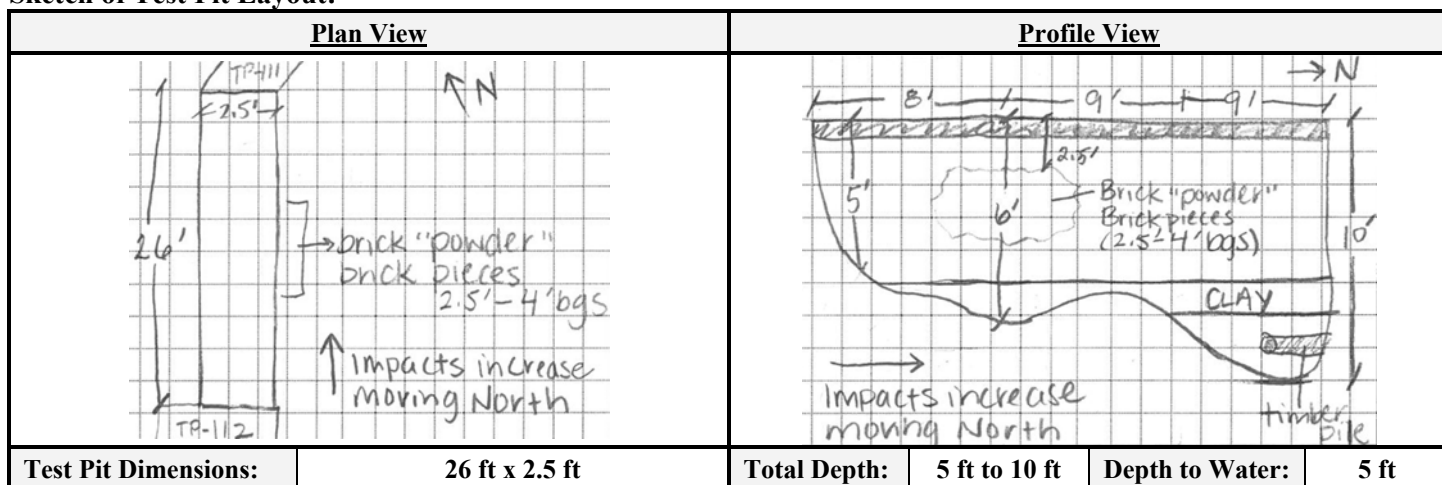
13	Sheen and staining on the east and west side walls of TP-112.
14	Water pooling with sheen at the bottom of the north end of TP-112, facing west.

Test Pit Log

Test Pit ID: TP-113

Client:	National Grid	Date/Day:	02/20/2017
Project:	Former Rensselaer MGP Site	Weather:	Partly Cloudy
Location:	Rensselaer, NY	Temperature:	35°F
Project #:	B0036730.0000	Wind:	Slightly windy
Logged By:	K. Warren	Subcontractor:	Parratt-Wolff
Coordinates:	NA	Equipment:	Takeuchi Mini Excavator

Sketch of Test Pit Layout:



Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material
0-0.5	0.0	Asphalt and Subbase Material
0.5-3.0	0-5	(Fill Material) Brown SAND, some gravel, little debris (brick/concrete pieces), little silt/clay, moist. Brick "powder" area encountered at 2.5 feet below grade in center of TP-113 (see plan view).
3.0-5.0	20-35	(Fill Material) Light brown SAND and CLAY, some gravel, little debris (brick/concrete pieces), moist, low plasticity.
5.0-10.0	45-200+	Brown and dark grey Clayey SAND, little gravel, wet, strong impacts including areas saturated in NAPL, sheen and blebs (0.5" to 2" in diameter) surrounding saturated soil, and strong tar-like and petroleum-like odors.

Notes:

- North end of TP-113 is adjacent to TP-111. South end of TP is adjacent to TP-112. Total length of all 3 TPs is ~55 feet.
- Timber pile encountered in northern end of TP-113 at 9 feet below grade.
- Excavator at arm length limit at 10 feet bgs. Excavator bucket teeth scraping on something hard, assumed to be holder foundation.
- Impacts appear to increase moving north starting at encountered "brick powder" area (see plan view).
- bgs – below ground surface

Photo Summary:

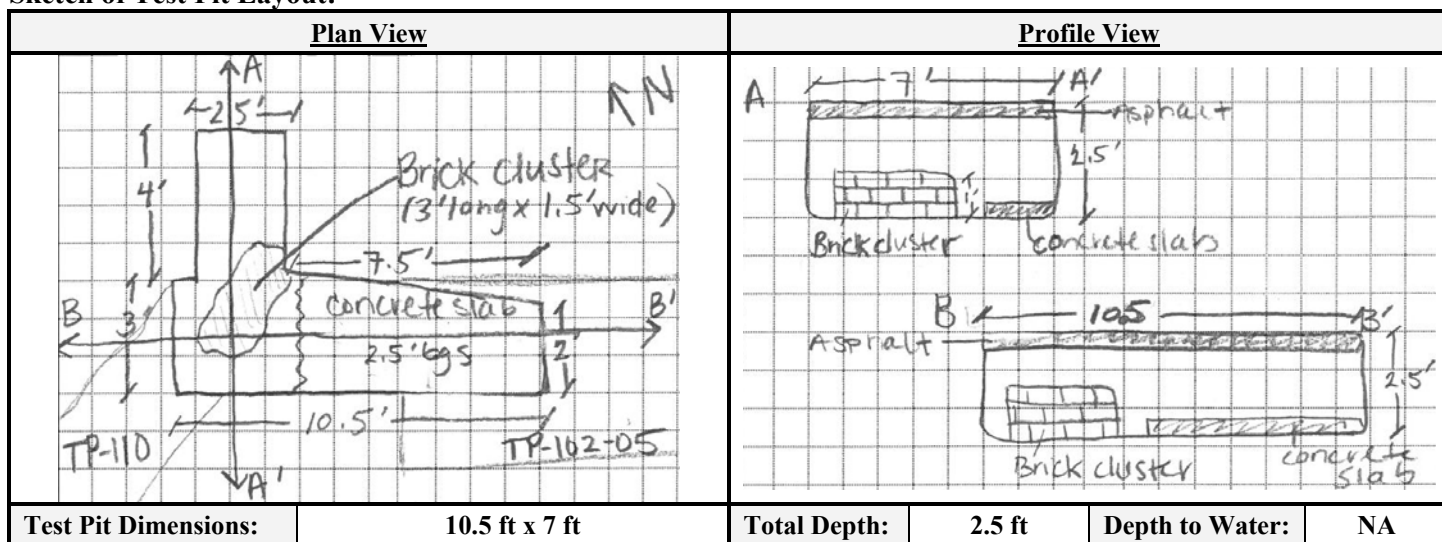
15	Stained soil and brick fill, facing east.
16	Stained soil, and sheen and NAPL from bottom of TP-113.
17	Stained soil and sheen from bottom and sides of TP-113, facing east.

Test Pit Log

Test Pit ID: TP-114

Client:	National Grid	Date/Day:	02/20/2017
Project:	Former Rensselaer MGP Site	Weather:	Partly Cloudy
Location:	Rensselaer, NY	Temperature:	40°F
Project #:	B0036730.0000	Wind:	Slightly windy
Logged By:	K. Warren	Subcontractor:	Parratt-Wolff
Coordinates:	NA	Equipment:	Takeuchi Mini Excavator

Sketch of Test Pit Layout:



Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material
0-0.5	0.0	Asphalt and Subbase Material
0.5-2.5	0.0	(Fill Material) Brown SAND, some gravel, little asphalt pieces (from previous test pit TP-102-05, excavated in 2005), moist. Holder wall component encountered on western side of TP-114, adjacent to TP-110.

Notes:

- TP-114 connects previously excavated TPs (TP-102-05 and TP-110).
- Brick cluster (holder wall component) encountered in west side of TP-114, does not extend, only 2.5 feet long. Not fully indicative of holder wall original built location.
- bgs – below ground surface

Photo Summary:

18	Brick cluster piece discovered in northern portion of TP-114, facing east.
19	Brick cluster piece discovered in northern portion of TP-114, facing east.

ATTACHMENT 7 - TEST PIT PHOTO LOG



Project Photographs

Rensselaer Former MGP Site
Rensselaer, NY

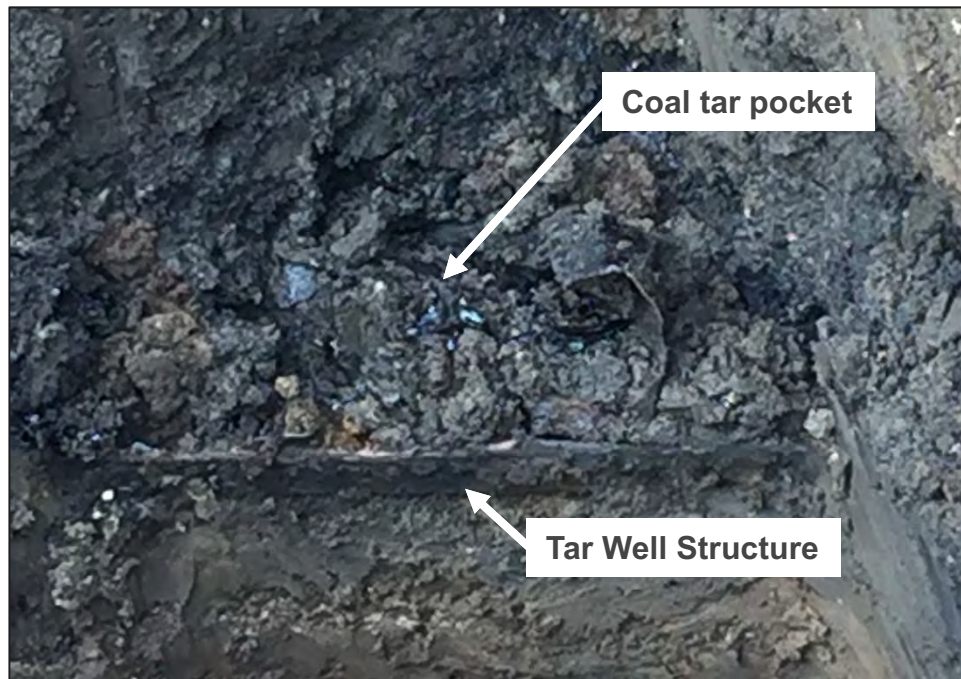


Photo: 1

Date:

2016.11.10

Description:

Looking at bottom of TP-106,
facing North.

Location:

TP-106



Photo: 2

Date:

2016.11.10

Description:

Looking at bottom of TP-106,
facing South.

Location:

TP-106

Project Photographs

Rensselaer Former MGP Site
Rensselaer, NY



Photo: 3

Date:

2016.11.10

Description:

Looking at bottom of TP-107A, facing east.

Location:

TP-107A



Photo: 4

Date:

2016.11.10

Description:

Brick Holder wall exposed during TP-107A excavation, facing east.

Location:

TP-107A

Project Photographs

Rensselaer Former MGP Site
Rensselaer, NY



Photo: 5

Date:

2016.11.10

Description:

Clay pipe uncovered during TP-107 excavation, facing north.

Location:

TP-107A



Photo: 6

Date:

2017.01.16

Description:

Pocket of NAPL saturated soil and sheen on pooling groundwater at bottom of TP-109, facing south.

Location:

TP-109

Project Photographs

Rensselaer Former MGP Site
Rensselaer, NY

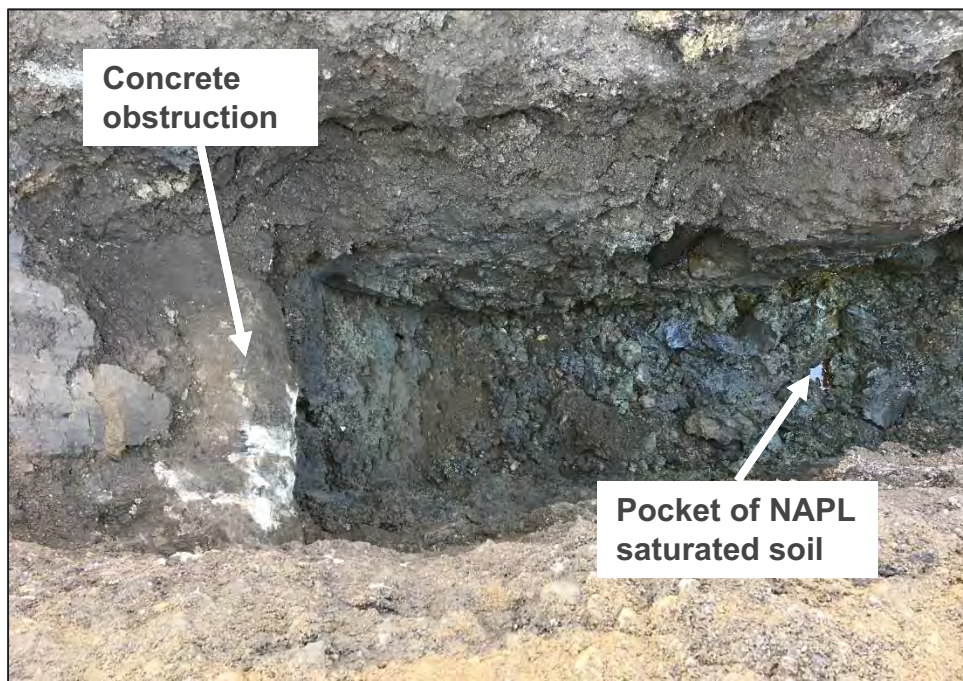


Photo: 7

Date:

2017.01.16

Description:

Pocket of NAPL saturated soil at bottom of TP-109. Concrete obstruction encountered during TP-109 excavation, facing west.

Location:

TP-109



Photo: 8

Date:

2016.11.11

Description:

Water pooling in the east end of TP-110, facing north.

Location:

TP-110

Project Photographs

Rensselaer Former MGP Site
Rensselaer, NY

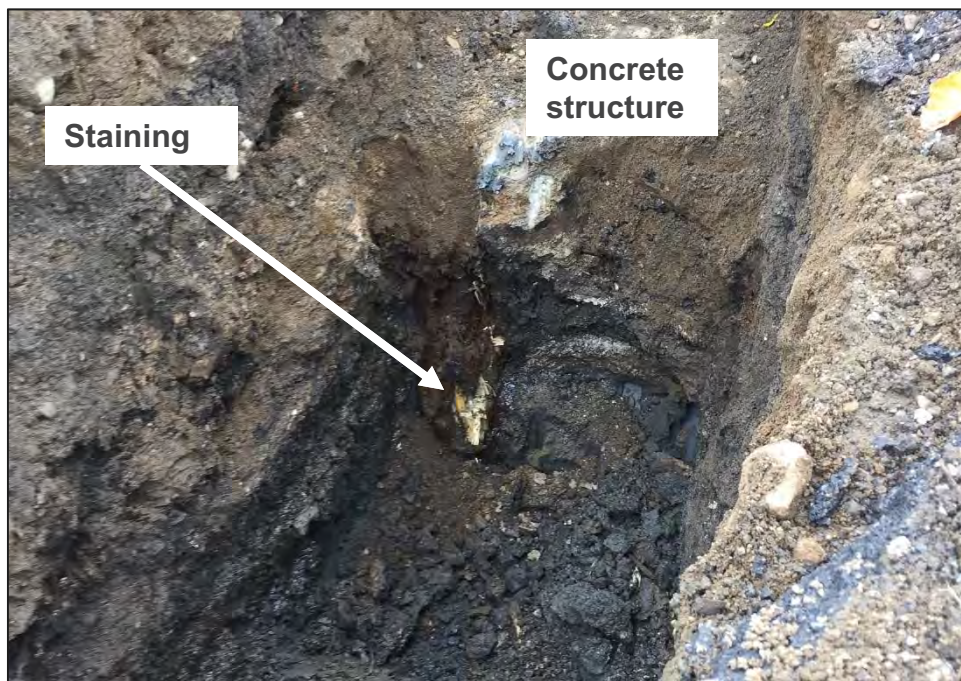


Photo: 9

Date:

2016.11.11

Description:

Staining in west wall of test pit, facing west.

Location:

TP-110



Photo: 10

Date:

2016.11.11

Description:

Wood pile hole at the bottom of TP-110, facing west.

Location:

TP-110

Project Photographs

Rensselaer Former MGP Site
Rensselaer, NY

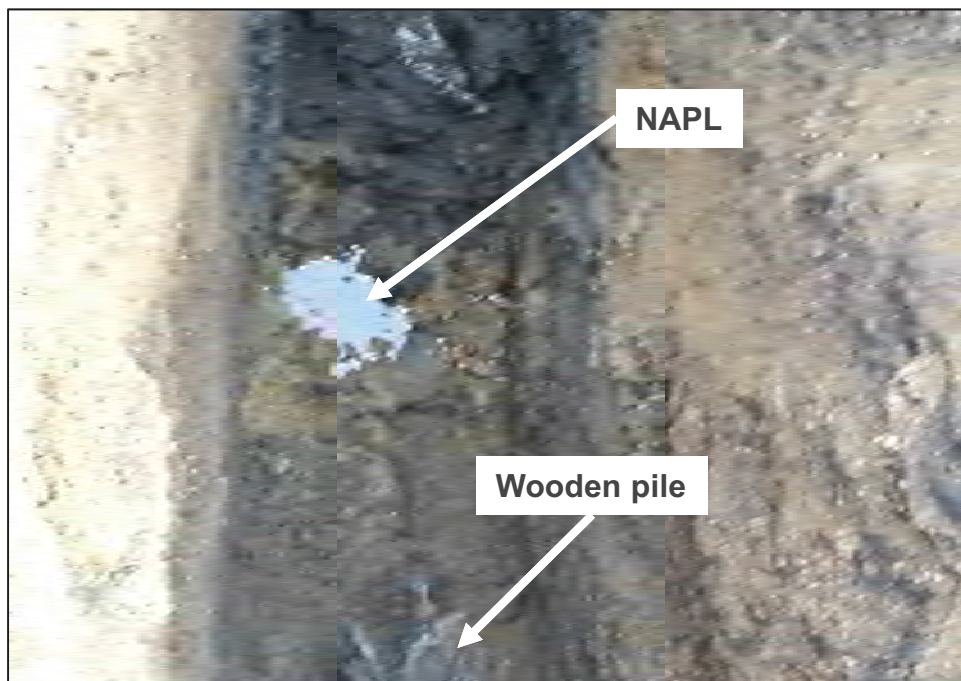


Photo: 11

Date:
2017.02.19

Description:
Water pooling with NAPL in
bottom of the north portion
of TP-111, facing north.

Location:
TP-111



Photo: 12

Date:
2017.02.19

Description:
Stained soil from bottom of
TP-111.

Location:
TP-111

Project Photographs

Rensselaer Former MGP Site
Rensselaer, NY



Photo: 13

Date:

2017.02.19

Description:

Sheen and staining on the east and west side walls of TP-112.

Location:

TP-112

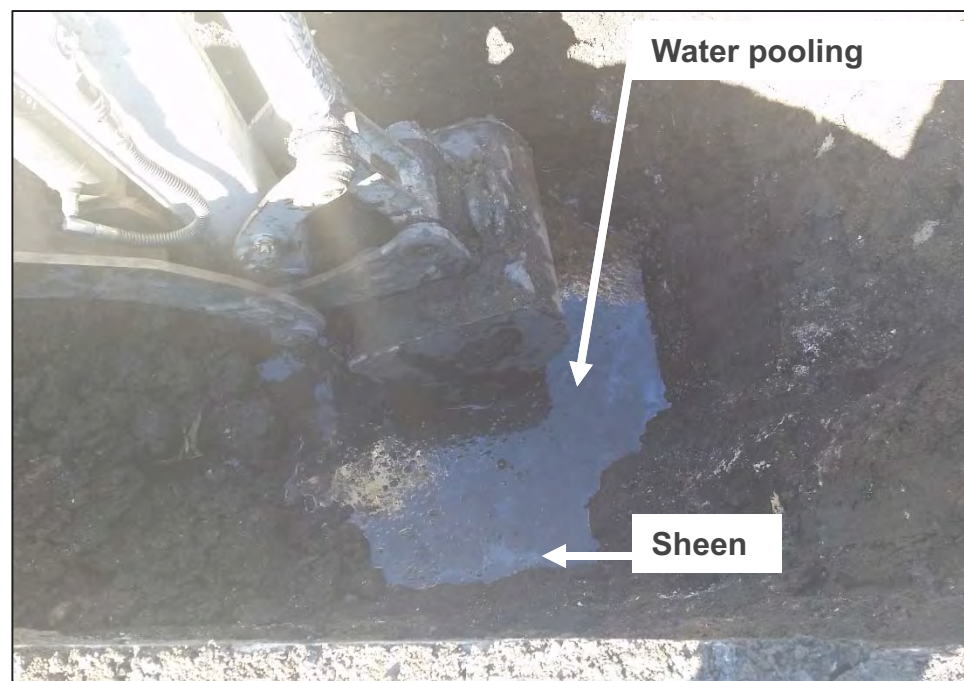


Photo: 14

Date:

2017.02.19

Description:

Water pooling with sheen in bottom of TP-112, facing west.

Location:

TP-112

Project Photographs

Rensselaer Former MGP Site
Rensselaer, NY



Photo: 15

Date:

2017.02.20

Description:

Stained soil and brick fill, facing east.

Location:

TP-113



Photo: 16

Date:

2017.02.20

Description:

Stained soil, and sheen and NAPL from bottom of TP-113.

Location:

TP-113

Project Photographs

Rensselaer Former MGP Site
Rensselaer, NY



Photo: 17

Date:
2017.02.20

Description:
Stained soil and sheen from bottom and sides of TP-113, facing east.

Location:
TP-113



Photo: 18

Date:
2017.02.20

Description:
Brick cluster piece discovered in northern portion of TP-114, facing east.

Location:
TP-114

Project Photographs

Rensselaer Former MGP Site
Rensselaer, NY



Photo: 19

Date:
2017.02.20

Description:
Brick cluster piece discovered
in northern portion of TP-114,
facing east.

Location:
TP-114

ATTACHMENT 8 - WASTE CHARACTERIZATION ANALYTICAL RESULTS



Technical Report for

Arcadis

National Grid, Washington Street, Rensselaer, NY

B0036730

SGS Accutest Job Number: MC48722

Sampling Dates: 11/10/16 - 11/11/16



Report to:

Arcadis U.S.
6723 Towpath Road, Box 66
Syracuse, NY 13214-0066
jason.golubski@arcadis.com

ATTN: Jason Golubski

Total number of pages in report: 175



Test results contained within this data package meet the requirements
of the National Environmental Laboratory Accreditation Program
and/or state specific certification programs as applicable.



H. (Brad) Madadian
Lab Director

Client Service contact: Jeremy Vienneau 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) FL (E87579) NY (11791)
NJ (MA926) PA (6801121) ND (R-188) CO (MA00136) MN (11546AA) NC (653) IL (002337) WI (399080220)
DoD ELAP (L-A-B L2235)

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Test results relate only to samples analyzed.

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Sample Summary

Arcadis

Job No: MC48722

National Grid, Washington Street, Rensselaer, NY
Project No: B0036730

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
MC48722-1	11/10/16	13:30 JDL	11/12/16	SO	Soil	TP-106(3.0')
MC48722-1A	11/10/16	13:30 JDL	11/12/16	SO	Soil	TP-106(3.0')
MC48722-2	11/11/16	08:30 JDL	11/12/16	SO	Soil	TP-107(3.0')
MC48722-2A	11/11/16	08:30 JDL	11/12/16	SO	Soil	TP-107(3.0')
MC48722-3	11/11/16	12:15 JDL	11/12/16	SO	Soil	TP-110(0-3.0')
MC48722-4	11/11/16	12:15 JDL	11/12/16	SO	Soil	TP-110(3.0-3.5')

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: MC48722
Account: Arcadis
Project: National Grid, Washington Street, Rensselaer, NY
Collected: 11/10/16 thru 11/11/16

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC48722-1	TP-106(3.0')					
Acetone		20.2 B	8.0	2.6	ug/kg	SW846 8260C
Benzene		12.1	0.80	0.30	ug/kg	SW846 8260C
Carbon disulfide ^a		18.7	4.0	0.33	ug/kg	SW846 8260C
Ethylbenzene		0.90 J	1.6	0.30	ug/kg	SW846 8260C
Toluene		3.2 JB	4.0	0.32	ug/kg	SW846 8260C
Xylene (total)		2.9	1.6	0.28	ug/kg	SW846 8260C
Acenaphthene		448	120	8.6	ug/kg	SW846 8270D
Acenaphthylene		918	120	9.9	ug/kg	SW846 8270D
Anthracene		1300	120	10	ug/kg	SW846 8270D
Benzo(a)anthracene		5260	120	12	ug/kg	SW846 8270D
Benzo(a)pyrene		5480	310	11	ug/kg	SW846 8270D
Benzo(b)fluoranthene		4980	120	14	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		2460	120	12	ug/kg	SW846 8270D
Benzo(k)fluoranthene		3850	120	17	ug/kg	SW846 8270D
Carbazole		421	120	11	ug/kg	SW846 8270D
Chrysene		4620	120	9.7	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		866	120	10	ug/kg	SW846 8270D
Dibenzofuran		629	120	9.8	ug/kg	SW846 8270D
Fluoranthene		7470	120	11	ug/kg	SW846 8270D
Fluorene		642	120	14	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		2910	310	35	ug/kg	SW846 8270D
2-Methylnaphthalene		461	120	15	ug/kg	SW846 8270D
Naphthalene		3200	120	11	ug/kg	SW846 8270D
Phenanthrene		3480	120	9.3	ug/kg	SW846 8270D
Pyrene		6750	120	12	ug/kg	SW846 8270D
TPH-GRO (VOA)		4.46 J	12	2.2	mg/kg	SW846 8015
TPH-DRO (Semi-VOA)		525	20	5.1	mg/kg	SW846-8015
Arsenic		7.0	1.0	0.20	mg/kg	SW846 6010C
Barium		103	5.0	0.077	mg/kg	SW846 6010C
Beryllium		0.88	0.40	0.015	mg/kg	SW846 6010C
Cadmium		0.19 B	0.40	0.031	mg/kg	SW846 6010C
Chromium		17.4	1.0	0.047	mg/kg	SW846 6010C
Lead		28.0	1.0	0.11	mg/kg	SW846 6010C
Mercury		0.057	0.041	0.0069	mg/kg	SW846 7471B
Nickel		26.3	4.0	0.057	mg/kg	SW846 6010C
Vanadium		26.7	1.0	0.040	mg/kg	SW846 6010C
Zinc		69.7	2.0	0.17	mg/kg	SW846 6010C
Cyanide		2.6	0.15	0.042	mg/kg	SW846 9012 M
Heat Content, BTU ^b		3260	100		BTU/lb	ASTM D240-92
Percent Sulfur ^b		0.17 B	0.21	0.054	%	ASTM D129-95

Summary of Hits

Job Number: MC48722
Account: Arcadis
Project: National Grid, Washington Street, Rensselaer, NY
Collected: 11/10/16 thru 11/11/16

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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MC48722-1A TP-106(3.0')

Benzene	0.0586 J	0.10	0.027	mg/l	SW846 8260C
Arsenic	0.0044 B	0.010	0.0020	mg/l	SW846 6010C
Barium	0.65	0.50	0.00057	mg/l	SW846 6010C
Cadmium	0.0012 B	0.0040	0.00030	mg/l	SW846 6010C
Lead	0.0012 B	0.010	0.0011	mg/l	SW846 6010C

MC48722-2 TP-107(3.0')

Acetone	15.3 B	8.2	2.7	ug/kg	SW846 8260C
Benzene	2.3	0.82	0.31	ug/kg	SW846 8260C
Carbon disulfide ^a	1.7 J	4.1	0.33	ug/kg	SW846 8260C
Toluene	0.73 JB	4.1	0.33	ug/kg	SW846 8260C
Acenaphthene	44.6 J	110	7.3	ug/kg	SW846 8270D
Acenaphthylene	435	110	8.5	ug/kg	SW846 8270D
Anthracene	674	110	8.6	ug/kg	SW846 8270D
Benzo(a)anthracene	2030	110	11	ug/kg	SW846 8270D
Benzo(a)pyrene	2270	270	9.1	ug/kg	SW846 8270D
Benzo(b)fluoranthene	1820	110	12	ug/kg	SW846 8270D
Benzo(g,h,i)perylene	1260	110	10	ug/kg	SW846 8270D
Benzo(k)fluoranthene	1810	110	15	ug/kg	SW846 8270D
Butyl benzyl phthalate	276	270	14	ug/kg	SW846 8270D
Carbazole	76.5 J	110	9.3	ug/kg	SW846 8270D
Chrysene	1780	110	8.3	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene	370	110	8.8	ug/kg	SW846 8270D
Dibenzofuran	223	110	8.4	ug/kg	SW846 8270D
Di-n-butyl phthalate	23.4 J	270	11	ug/kg	SW846 8270D
Fluoranthene	2910	110	9.8	ug/kg	SW846 8270D
Fluorene	196	110	12	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	1350	270	30	ug/kg	SW846 8270D
2-Methylnaphthalene	77.5 J	110	13	ug/kg	SW846 8270D
Naphthalene	151	110	9.1	ug/kg	SW846 8270D
Phenanthrene	1540	110	8.0	ug/kg	SW846 8270D
Pyrene	2780	110	10	ug/kg	SW846 8270D
TPH-GRO (VOA)	3.66 J	9.3	1.7	mg/kg	SW846 8015
TPH-DRO (Semi-VOA)	101	18	4.6	mg/kg	SW846-8015
Arsenic	8.6	0.91	0.18	mg/kg	SW846 6010C
Barium	92.7	4.6	0.070	mg/kg	SW846 6010C
Beryllium	0.63	0.37	0.014	mg/kg	SW846 6010C
Cadmium	0.22 B	0.37	0.028	mg/kg	SW846 6010C
Chromium	14.6	0.91	0.043	mg/kg	SW846 6010C
Lead	46.1	0.91	0.10	mg/kg	SW846 6010C
Mercury	0.21	0.034	0.0057	mg/kg	SW846 7471B
Nickel	20.6	3.7	0.052	mg/kg	SW846 6010C

Summary of Hits

Job Number: MC48722
Account: Arcadis
Project: National Grid, Washington Street, Rensselaer, NY
Collected: 11/10/16 thru 11/11/16

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
--------------------------	------------------	-----------------	----	-----	-------	--------

Thallium		0.11 B	0.91	0.10	mg/kg	SW846 6010C
Vanadium		22.1	0.91	0.037	mg/kg	SW846 6010C
Zinc		76.4	1.8	0.16	mg/kg	SW846 6010C
Cyanide		0.62	0.13	0.037	mg/kg	SW846 9012 M
Heat Content, BTU ^b		1800	100		BTU/lb	ASTM D240-92

MC48722-2A TP-107(3.0')

Arsenic		0.0020 B	0.010	0.0020	mg/l	SW846 6010C
Barium		0.37 B	0.50	0.00057	mg/l	SW846 6010C
Cadmium		0.0012 B	0.0040	0.00030	mg/l	SW846 6010C
Chromium		0.0012 B	0.010	0.0011	mg/l	SW846 6010C
Lead		0.0039 B	0.010	0.0011	mg/l	SW846 6010C

MC48722-3 TP-110(0-3.0')

Tetrachloroethene		0.0248 J	0.20	0.021	mg/l	SW846 8260C
Arsenic		0.0037 B	0.010	0.0020	mg/l	SW846 6010C
Barium		0.75	0.50	0.00057	mg/l	SW846 6010C
Cadmium		0.0013 B	0.0040	0.00030	mg/l	SW846 6010C
Lead		1.5	0.010	0.0011	mg/l	SW846 6010C

MC48722-4 TP-110(3.0-3.5')

Ethylbenzene		1330	210	40	ug/kg	SW846 8260C
Toluene		77.0 J	530	42	ug/kg	SW846 8260C
Xylene (total)		1460	210	37	ug/kg	SW846 8260C
Acenaphthene		3270	120	8.3	ug/kg	SW846 8270D
Acenaphthylene		958	120	9.6	ug/kg	SW846 8270D
Anthracene		2200	120	9.8	ug/kg	SW846 8270D
Benzo(a)anthracene		2910	120	12	ug/kg	SW846 8270D
Benzo(a)pyrene		2900	300	10	ug/kg	SW846 8270D
Benzo(b)fluoranthene		1910	120	14	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		1400	120	12	ug/kg	SW846 8270D
Benzo(k)fluoranthene		2070	120	17	ug/kg	SW846 8270D
Carbazole		220	120	11	ug/kg	SW846 8270D
Chrysene		2700	120	9.4	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		367	120	10	ug/kg	SW846 8270D
Dibenzofuran		316	120	9.5	ug/kg	SW846 8270D
Fluoranthene		5160	120	11	ug/kg	SW846 8270D
Fluorene		1720	120	13	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		1410	300	34	ug/kg	SW846 8270D
2-Methylnaphthalene		4460	120	14	ug/kg	SW846 8270D
Naphthalene		7580	120	10	ug/kg	SW846 8270D
Phenanthrene		7470	120	9.1	ug/kg	SW846 8270D

Summary of Hits

Job Number: MC48722
Account: Arcadis
Project: National Grid, Washington Street, Rensselaer, NY
Collected: 11/10/16 thru 11/11/16

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Pyrene		7400	120	12	ug/kg	SW846 8270D
TPH-GRO (VOA)		68.1	11	2.0	mg/kg	SW846 8015
TPH-DRO (Semi-VOA)		2200	20	4.9	mg/kg	SW846-8015
Arsenic		4.6	0.99	0.20	mg/kg	SW846 6010C
Barium		83.6	4.9	0.075	mg/kg	SW846 6010C
Beryllium		0.47	0.39	0.015	mg/kg	SW846 6010C
Cadmium		0.12 B	0.39	0.031	mg/kg	SW846 6010C
Chromium		13.1	0.99	0.046	mg/kg	SW846 6010C
Lead		34.9	0.99	0.11	mg/kg	SW846 6010C
Mercury		0.30	0.038	0.0064	mg/kg	SW846 7471B
Nickel		19.2	3.9	0.056	mg/kg	SW846 6010C
Vanadium		17.0	0.99	0.039	mg/kg	SW846 6010C
Zinc		61.7	2.0	0.17	mg/kg	SW846 6010C
Cyanide		1.1	0.14	0.039	mg/kg	SW846 9012 M
Heat Content, BTU ^b		1510	100		BTU/lb	ASTM D240-92
Percent Sulfur ^b		0.11 B	0.20	0.054	%	ASTM D129-95

(a) Continuing Calibration outside of acceptance criteria. Result may be biased low.

(b) Analysis performed at SGS Accutest, Dayton, NJ.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	TP-106(3.0')	Date Sampled:	11/10/16
Lab Sample ID:	MC48722-1	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	77.0
Method:	SW846 8260C		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M82033.D	1	11/21/16	KP	n/a	n/a	MSM2942
Run #2							

	Initial Weight	Final Volume
Run #1	8.09 g	5.0 ml
Run #2		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	20.2	8.0	2.6	ug/kg	B
71-43-2	Benzene	12.1	0.80	0.30	ug/kg	
75-27-4	Bromodichloromethane	ND	1.6	0.34	ug/kg	
75-25-2	Bromoform	ND	1.6	0.38	ug/kg	
74-83-9	Bromomethane	ND	8.0	1.3	ug/kg	
78-93-3	2-Butanone (MEK)	ND	8.0	2.7	ug/kg	
75-15-0	Carbon disulfide ^a	18.7	4.0	0.33	ug/kg	
56-23-5	Carbon tetrachloride	ND	1.6	0.33	ug/kg	
108-90-7	Chlorobenzene	ND	1.6	0.76	ug/kg	
75-00-3	Chloroethane	ND	8.0	1.7	ug/kg	
67-66-3	Chloroform	ND	1.6	0.40	ug/kg	
74-87-3	Chloromethane	ND	4.0	0.60	ug/kg	
124-48-1	Dibromochloromethane	ND	4.0	0.86	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.6	0.32	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.6	0.30	ug/kg	
75-35-4	1,1-Dichloroethene ^b	ND	1.6	0.55	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.6	0.29	ug/kg	
156-60-5	trans-1,2-Dichloroethene ^b	ND	1.6	0.32	ug/kg	
78-87-5	1,2-Dichloropropane	ND	1.6	0.35	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	1.6	0.98	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	1.6	1.1	ug/kg	
100-41-4	Ethylbenzene	0.90	1.6	0.30	ug/kg	J
591-78-6	2-Hexanone	ND	4.0	0.54	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	4.0	0.52	ug/kg	
75-09-2	Methylene chloride	ND	1.6	0.34	ug/kg	
100-42-5	Styrene	ND	4.0	0.25	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.0	1.5	ug/kg	
127-18-4	Tetrachloroethene	ND	1.6	0.24	ug/kg	
108-88-3	Toluene	3.2	4.0	0.32	ug/kg	JB
71-55-6	1,1,1-Trichloroethane	ND	1.6	0.28	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	1.6	1.1	ug/kg	
79-01-6	Trichloroethene	ND	1.6	0.25	ug/kg	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')	Date Sampled:	11/10/16
Lab Sample ID:	MC48722-1	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	77.0
Method:	SW846 8260C		
Project:	National Grid, Washington Street, Rensselaer, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	8.0	2.7	ug/kg	
1330-20-7	Xylene (total)	2.9	1.6	0.28	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	118%		65-141%
2037-26-5	Toluene-D8	103%		65-129%
460-00-4	4-Bromofluorobenzene	95%		63-137%

- (a) Continuing Calibration outside of acceptance criteria. Result may be biased low.
(b) Continuing Calibration outside of acceptance criteria. Reporting Limit response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')	Date Sampled:	11/10/16
Lab Sample ID:	MC48722-1	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	77.0
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R50715.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.8 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	310	14	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	620	14	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	620	33	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	620	260	ug/kg	
51-28-5	2,4-Dinitrophenol ^a	ND	620	130	ug/kg	
534-52-1	4,6-Dinitro-o-cresol ^a	ND	620	62	ug/kg	
95-48-7	2-Methylphenol	ND	620	66	ug/kg	
	3&4-Methylphenol	ND	620	54	ug/kg	
88-75-5	2-Nitrophenol	ND	620	49	ug/kg	
100-02-7	4-Nitrophenol	ND	620	72	ug/kg	
87-86-5	Pentachlorophenol	ND	620	71	ug/kg	
108-95-2	Phenol	ND	310	14	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	620	19	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	620	11	ug/kg	
83-32-9	Acenaphthene	448	120	8.6	ug/kg	
208-96-8	Acenaphthylene	918	120	9.9	ug/kg	
120-12-7	Anthracene	1300	120	10	ug/kg	
56-55-3	Benzo(a)anthracene	5260	120	12	ug/kg	
50-32-8	Benzo(a)pyrene	5480	310	11	ug/kg	
205-99-2	Benzo(b)fluoranthene	4980	120	14	ug/kg	
191-24-2	Benzo(g,h,i)perylene	2460	120	12	ug/kg	
207-08-9	Benzo(k)fluoranthene	3850	120	17	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	310	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	310	16	ug/kg	
91-58-7	2-Chloronaphthalene	ND	310	12	ug/kg	
106-47-8	4-Chloroaniline	ND	620	14	ug/kg	
86-74-8	Carbazole	421	120	11	ug/kg	
218-01-9	Chrysene	4620	120	9.7	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	310	12	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	310	11	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	310	15	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	310	15	ug/kg	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')	Date Sampled:	11/10/16
Lab Sample ID:	MC48722-1	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	77.0
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	310	11	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	310	9.3	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	310	13	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	620	15	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	620	14	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	620	41	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	866	120	10	ug/kg	
132-64-9	Dibenzofuran	629	120	9.8	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	310	13	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	310	11	ug/kg	
84-66-2	Diethyl phthalate	ND	310	9.9	ug/kg	
131-11-3	Dimethyl phthalate	ND	310	9.9	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	310	12	ug/kg	
206-44-0	Fluoranthene	7470	120	11	ug/kg	
86-73-7	Fluorene	642	120	14	ug/kg	
118-74-1	Hexachlorobenzene	ND	310	16	ug/kg	
87-68-3	Hexachlorobutadiene	ND	310	12	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	620	15	ug/kg	
67-72-1	Hexachloroethane	ND	310	30	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	2910	310	35	ug/kg	
78-59-1	Isophorone	ND	310	22	ug/kg	
91-57-6	2-Methylnaphthalene	461	120	15	ug/kg	
88-74-4	2-Nitroaniline	ND	620	15	ug/kg	
99-09-2	3-Nitroaniline	ND	620	15	ug/kg	
100-01-6	4-Nitroaniline	ND	620	15	ug/kg	
91-20-3	Naphthalene	3200	120	11	ug/kg	
98-95-3	Nitrobenzene	ND	310	34	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	310	18	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	310	41	ug/kg	
85-01-8	Phenanthrene	3480	120	9.3	ug/kg	
129-00-0	Pyrene	6750	120	12	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	310	16	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	36%		25-109%
4165-62-2	Phenol-d5	50%		29-113%
118-79-6	2,4,6-Tribromophenol	81%		20-141%
4165-60-0	Nitrobenzene-d5	42%		27-115%
321-60-8	2-Fluorobiphenyl	70%		34-118%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')	Date Sampled:	11/10/16
Lab Sample ID:	MC48722-1	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	77.0
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1718-51-0	Terphenyl-d14	88%		42-139%

(a) Continuing Calibration outside of acceptance criteria. Reporting Limit Response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')		
Lab Sample ID:	MC48722-1	Date Sampled:	11/10/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846 8015	Percent Solids:	77.0
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	WX78128.D	1	11/17/16	AF	n/a	n/a	GWX3867
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.33 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	4.46	12	2.2	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	102%		64-127%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')	Date Sampled:	11/10/16
Lab Sample ID:	MC48722-1	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	77.0
Method:	SW846 8082A SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK63163.D	1	11/17/16	TA	11/15/16	OP49147	GBK1996
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	43	4.4	ug/kg	
11104-28-2	Aroclor 1221	ND	43	19	ug/kg	
11141-16-5	Aroclor 1232	ND	43	13	ug/kg	
53469-21-9	Aroclor 1242	ND	43	9.8	ug/kg	
12672-29-6	Aroclor 1248	ND	43	7.4	ug/kg	
11097-69-1	Aroclor 1254	ND	43	19	ug/kg	
11096-82-5	Aroclor 1260	ND	43	3.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	83%		25-145%
877-09-8	Tetrachloro-m-xylene	74%		25-145%
2051-24-3	Decachlorobiphenyl	76%		25-179%
2051-24-3	Decachlorobiphenyl	76%		25-179%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')		
Lab Sample ID:	MC48722-1	Date Sampled:	11/10/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846-8015 SW846 3546	Percent Solids:	77.0
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IR3264.D	1	11/18/16	MD	11/16/16	OP49158	GIR226
Run #2							

	Initial Weight	Final Volume
Run #1	15.8 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (Semi-VOA)	525	20	5.1	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	91%		17-130%		

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TP-106(3.0')

Lab Sample ID: MC48722-1

Matrix: SO - Soil

Date Sampled: 11/10/16

Date Received: 11/12/16

Percent Solids: 77.0

Project: National Grid, Washington Street, Rensselaer, NY

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Antimony	ND	1.0	0.17	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Arsenic	7.0	1.0	0.20	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Barium	103	5.0	0.077	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Beryllium	0.88	0.40	0.015	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Cadmium	0.19 B	0.40	0.031	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Chromium	17.4	1.0	0.047	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Lead	28.0	1.0	0.11	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Mercury	0.057	0.041	0.0069	mg/kg	1	11/15/16	11/15/16 JM	SW846 7471B ¹	SW846 7471B ³
Nickel	26.3	4.0	0.057	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Selenium	ND	1.0	0.30	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Silver	ND	0.50	0.061	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Thallium	ND	1.0	0.11	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Vanadium	26.7	1.0	0.040	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Zinc	69.7	2.0	0.17	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴

(1) Instrument QC Batch: MA19626

(2) Instrument QC Batch: MA19629

(3) Prep QC Batch: MP27019

(4) Prep QC Batch: MP27020

RL = Reporting Limit

MDL = Method Detection Limit

ND = Not detected

B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: TP-106(3.0')**Lab Sample ID:** MC48722-1**Matrix:** SO - Soil**Project:** National Grid, Washington Street, Rensselaer, NY**Date Sampled:** 11/10/16**Date Received:** 11/12/16**Percent Solids:** 77.0

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	2.6	0.15	0.042	mg/kg	1	11/23/16 20:54 CF	SW846	9012 M
Heat Content, BTU ^a	3260	100		BTU/lb	1	11/18/16 21:00 ANJ	ASTM	D240-92
Percent Sulfur ^a	0.17 B	0.21	0.054	%	1	11/18/16 21:00 ANJ	ASTM	D129-95
Solids, Percent	77			%	1	11/15/16	JM	SM 2540G-97 MOD

(a) Analysis performed at SGS Accutest, Dayton, NJ.

RL = Reporting Limit
MDL = Method Detection Limit

ND = Not detected
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TP-106(3.0')		
Lab Sample ID:	MC48722-1A	Date Sampled:	11/10/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846 8260C SW846 1311	Percent Solids:	77.0
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N106527.D	100	11/23/16	AD	11/15/16	GP21107	MSN3919
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	0.0586	D018	0.50	0.10	0.027	mg/l	J
78-93-3	2-Butanone (MEK)	ND	D035	200	1.0	0.30	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.20	0.034	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.20	0.024	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.20	0.040	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.20	0.058	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.20	0.068	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.20	0.028	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.20	0.021	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.20	0.025	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.20	0.045	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		74-135%
2037-26-5	Toluene-D8	102%		83-116%
460-00-4	4-Bromofluorobenzene	102%		76-124%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')		
Lab Sample ID:	MC48722-1A	Date Sampled:	11/10/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846 8270D SW846 3510C	Percent Solids:	77.0
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R50881.D	1	11/26/16	DRY	11/16/16	OP49119	MSR1897
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.10	0.0032	mg/l	
	3&4-Methylphenol	ND	D024	200	0.10	0.0054	mg/l	
87-86-5	Pentachlorophenol ^a	ND	D037	100	0.10	0.0059	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.10	0.0052	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.10	0.0038	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.050	0.0035	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.10	0.012	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.050	0.0041	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.050	0.0043	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0036	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.050	0.0042	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.10	0.013	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		10-73%
4165-62-2	Phenol-d5	30%		10-58%
118-79-6	2,4,6-Tribromophenol	83%		15-125%
4165-60-0	Nitrobenzene-d5	73%		23-120%
321-60-8	2-Fluorobiphenyl	78%		31-102%
1718-51-0	Terphenyl-d14	94%		42-124%

(a) Continuing Calibration outside of acceptance criteria. Reporting Limit Response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 6/96) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')	
Lab Sample ID:	MC48722-1A	Date Sampled: 11/10/16
Matrix:	SO - Soil	Date Received: 11/12/16
Method:	SW846 8151 SW846 3510C SPLP	Percent Solids: 77.0
Project:	National Grid, Washington Street, Rensselaer, NY	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ98717.D	1	11/29/16	TA	11/16/16	OP49161	GYZ8038
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	5.0 ml
Run #2		

Herbicide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.010	0.0034	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.010	0.0040	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	57%		30-150%
19719-28-9	2,4-DCAA	45%		30-150%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')		
Lab Sample ID:	MC48722-1A	Date Sampled:	11/10/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846 8081B SW846 3510C SPLP	Percent Solids:	77.0
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BE53426.D	1	11/21/16	TA	11/16/16	OP49159	GBE2688
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	5.0 ml
Run #2		

Pesticide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00050	0.000044	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00050	0.00012	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00050	0.00011	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00050	0.000051	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00050	0.00021	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.025	0.0013	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	50%		30-150%
877-09-8	Tetrachloro-m-xylene	53%		30-150%
2051-24-3	Decachlorobiphenyl	82%		30-150%
2051-24-3	Decachlorobiphenyl	75%		30-150%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')		
Lab Sample ID:	MC48722-1A	Date Sampled:	11/10/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846 8082A SW846 3510C SPLP	Percent Solids:	77.0
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK63184.D	1	11/18/16	TA	11/16/16	OP49160	GBK1997
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	5.0 ml
Run #2		

PCB List

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND			0.0025	0.0016	mg/l	
11104-28-2	Aroclor 1221	ND			0.0025	0.0016	mg/l	
11141-16-5	Aroclor 1232	ND			0.0025	0.0018	mg/l	
53469-21-9	Aroclor 1242	ND			0.0025	0.0019	mg/l	
12672-29-6	Aroclor 1248	ND			0.0025	0.0012	mg/l	
11097-69-1	Aroclor 1254	ND			0.0025	0.0016	mg/l	
11096-82-5	Aroclor 1260	ND			0.0025	0.0019	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	85%		30-150%
877-09-8	Tetrachloro-m-xylene	72%		30-150%
2051-24-3	Decachlorobiphenyl	109%		30-150%
2051-24-3	Decachlorobiphenyl	112%		30-150%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TP-106(3.0')**Lab Sample ID:** MC48722-1A**Matrix:** SO - Soil**Date Sampled:** 11/10/16**Date Received:** 11/12/16**Percent Solids:** 77.0**Project:** National Grid, Washington Street, Rensselaer, NY**Metals Analysis, TCLP Leachate SW846 1311**

Analyte	Result	HW#	MCL	RL	MDL	Units	DF	Prep	Analyzed By	Method
Arsenic	0.0044 B	D004	5.0	0.010	0.0020	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Barium	0.65	D005	100	0.50	0.00057	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Cadmium	0.0012 B	D006	1.0	0.0040	0.00030	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Chromium	ND	D007	5.0	0.010	0.0011	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Lead	0.0012 B	D008	5.0	0.010	0.0011	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Mercury	ND	D009	0.20	0.00020	0.000034	mg/l	1	11/17/16	11/17/16	JM SW846 7470A ²
Selenium	ND	D010	1.0	0.025	0.0034	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Silver	ND	D011	5.0	0.0050	0.0014	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹

(1) Instrument QC Batch: MA19631

(2) Instrument QC Batch: MA19634

(3) Prep QC Batch: MP27025

(4) Prep QC Batch: MP27030

RL = Reporting Limit

MDL = Method Detection Limit

ND = Not detected

MCL = Maximum Contamination Level (40 CFR 261.6/96)

B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TP-107(3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-2	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	88.9
Method:	SW846 8260C		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M82034.D	1	11/21/16	KP	n/a	n/a	MSM2942
Run #2							

	Initial Weight	Final Volume
Run #1	6.87 g	5.0 ml
Run #2		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	15.3	8.2	2.7	ug/kg	B
71-43-2	Benzene	2.3	0.82	0.31	ug/kg	
75-27-4	Bromodichloromethane	ND	1.6	0.35	ug/kg	
75-25-2	Bromoform	ND	1.6	0.39	ug/kg	
74-83-9	Bromomethane	ND	8.2	1.3	ug/kg	
78-93-3	2-Butanone (MEK)	ND	8.2	2.8	ug/kg	
75-15-0	Carbon disulfide ^a	1.7	4.1	0.33	ug/kg	J
56-23-5	Carbon tetrachloride	ND	1.6	0.34	ug/kg	
108-90-7	Chlorobenzene	ND	1.6	0.77	ug/kg	
75-00-3	Chloroethane	ND	8.2	1.7	ug/kg	
67-66-3	Chloroform	ND	1.6	0.41	ug/kg	
74-87-3	Chloromethane	ND	4.1	0.61	ug/kg	
124-48-1	Dibromochloromethane	ND	4.1	0.88	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.6	0.33	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.6	0.30	ug/kg	
75-35-4	1,1-Dichloroethene ^b	ND	1.6	0.56	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.6	0.30	ug/kg	
156-60-5	trans-1,2-Dichloroethene ^b	ND	1.6	0.33	ug/kg	
78-87-5	1,2-Dichloropropane	ND	1.6	0.36	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	1.6	1.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	1.6	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	1.6	0.31	ug/kg	
591-78-6	2-Hexanone	ND	4.1	0.55	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	4.1	0.54	ug/kg	
75-09-2	Methylene chloride	ND	1.6	0.34	ug/kg	
100-42-5	Styrene	ND	4.1	0.26	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.1	1.6	ug/kg	
127-18-4	Tetrachloroethene	ND	1.6	0.24	ug/kg	
108-88-3	Toluene	0.73	4.1	0.33	ug/kg	JB
71-55-6	1,1,1-Trichloroethane	ND	1.6	0.29	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	1.6	1.1	ug/kg	
79-01-6	Trichloroethene	ND	1.6	0.25	ug/kg	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-2	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	88.9
Method:	SW846 8260C		
Project:	National Grid, Washington Street, Rensselaer, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	8.2	2.8	ug/kg	
1330-20-7	Xylene (total)	ND	1.6	0.29	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		65-141%
2037-26-5	Toluene-D8	103%		65-129%
460-00-4	4-Bromofluorobenzene	104%		63-137%

- (a) Continuing Calibration outside of acceptance criteria. Result may be biased low.
(b) Continuing Calibration outside of acceptance criteria. Reporting Limit response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-2	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	88.9
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R50716.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
Run #2							

Run #	Initial Weight	Final Volume
Run #1	21.0 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	270	12	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	540	12	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	540	29	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	540	220	ug/kg	
51-28-5	2,4-Dinitrophenol ^a	ND	540	110	ug/kg	
534-52-1	4,6-Dinitro-o-cresol ^a	ND	540	53	ug/kg	
95-48-7	2-Methylphenol	ND	540	57	ug/kg	
	3&4-Methylphenol	ND	540	47	ug/kg	
88-75-5	2-Nitrophenol	ND	540	42	ug/kg	
100-02-7	4-Nitrophenol	ND	540	62	ug/kg	
87-86-5	Pentachlorophenol	ND	540	61	ug/kg	
108-95-2	Phenol	ND	270	12	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	540	16	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	540	9.8	ug/kg	
83-32-9	Acenaphthene	44.6	110	7.3	ug/kg	J
208-96-8	Acenaphthylene	435	110	8.5	ug/kg	
120-12-7	Anthracene	674	110	8.6	ug/kg	
56-55-3	Benzo(a)anthracene	2030	110	11	ug/kg	
50-32-8	Benzo(a)pyrene	2270	270	9.1	ug/kg	
205-99-2	Benzo(b)fluoranthene	1820	110	12	ug/kg	
191-24-2	Benzo(g,h,i)perylene	1260	110	10	ug/kg	
207-08-9	Benzo(k)fluoranthene	1810	110	15	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	270	11	ug/kg	
85-68-7	Butyl benzyl phthalate	276	270	14	ug/kg	
91-58-7	2-Chloronaphthalene	ND	270	11	ug/kg	
106-47-8	4-Chloroaniline	ND	540	12	ug/kg	
86-74-8	Carbazole	76.5	110	9.3	ug/kg	J
218-01-9	Chrysene	1780	110	8.3	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	270	10	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	270	9.7	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	270	13	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	270	13	ug/kg	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-2	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	88.9
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	270	9.1	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	270	8.0	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	270	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	540	13	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	540	12	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	540	35	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	370	110	8.8	ug/kg	
132-64-9	Dibenzofuran	223	110	8.4	ug/kg	
84-74-2	Di-n-butyl phthalate	23.4	270	11	ug/kg	J
117-84-0	Di-n-octyl phthalate	ND	270	9.1	ug/kg	
84-66-2	Diethyl phthalate	ND	270	8.5	ug/kg	
131-11-3	Dimethyl phthalate	ND	270	8.5	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	270	11	ug/kg	
206-44-0	Fluoranthene	2910	110	9.8	ug/kg	
86-73-7	Fluorene	196	110	12	ug/kg	
118-74-1	Hexachlorobenzene	ND	270	14	ug/kg	
87-68-3	Hexachlorobutadiene	ND	270	10	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	540	13	ug/kg	
67-72-1	Hexachloroethane	ND	270	25	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	1350	270	30	ug/kg	
78-59-1	Isophorone	ND	270	19	ug/kg	
91-57-6	2-Methylnaphthalene	77.5	110	13	ug/kg	J
88-74-4	2-Nitroaniline	ND	540	12	ug/kg	
99-09-2	3-Nitroaniline	ND	540	13	ug/kg	
100-01-6	4-Nitroaniline	ND	540	13	ug/kg	
91-20-3	Naphthalene	151	110	9.1	ug/kg	
98-95-3	Nitrobenzene	ND	270	30	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	270	15	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	270	36	ug/kg	
85-01-8	Phenanthrene	1540	110	8.0	ug/kg	
129-00-0	Pyrene	2780	110	10	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	270	14	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	57%		25-109%
4165-62-2	Phenol-d5	66%		29-113%
118-79-6	2,4,6-Tribromophenol	81%		20-141%
4165-60-0	Nitrobenzene-d5	59%		27-115%
321-60-8	2-Fluorobiphenyl	80%		34-118%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-2	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	88.9
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1718-51-0	Terphenyl-d14	87%		42-139%

(a) Continuing Calibration outside of acceptance criteria. Reporting Limit Response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-2	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	88.9
Method:	SW846 8015		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	WX78127.D	1	11/17/16	AF	n/a	n/a	GWX3867
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.48 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	3.66	9.3	1.7	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
	2,3,4-Trifluorotoluene	102%		64-127%		

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-2	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	88.9
Method:	SW846 8082A SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK63165.D	1	11/17/16	TA	11/15/16	OP49147	GBK1996
Run #2							

	Initial Weight	Final Volume
Run #1	15.3 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	37	3.8	ug/kg	
11104-28-2	Aroclor 1221	ND	37	16	ug/kg	
11141-16-5	Aroclor 1232	ND	37	11	ug/kg	
53469-21-9	Aroclor 1242	ND	37	8.5	ug/kg	
12672-29-6	Aroclor 1248	ND	37	6.3	ug/kg	
11097-69-1	Aroclor 1254	ND	37	16	ug/kg	
11096-82-5	Aroclor 1260	ND	37	3.3	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	99%		25-145%
877-09-8	Tetrachloro-m-xylene	106%		25-145%
2051-24-3	Decachlorobiphenyl	91%		25-179%
2051-24-3	Decachlorobiphenyl	99%		25-179%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-2	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	88.9
Method:	SW846-8015 SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IR3263.D	1	11/18/16	MD	11/16/16	OP49158	GIR226
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (Semi-VOA)	101	18	4.6	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	70%		17-130%		

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TP-107(3.0')

Lab Sample ID: MC48722-2

Matrix: SO - Soil

Date Sampled: 11/11/16

Date Received: 11/12/16

Percent Solids: 88.9

Project: National Grid, Washington Street, Rensselaer, NY

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analized By	Method	Prep Method
Antimony	ND	0.91	0.16	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Arsenic	8.6	0.91	0.18	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Barium	92.7	4.6	0.070	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Beryllium	0.63	0.37	0.014	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Cadmium	0.22 B	0.37	0.028	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Chromium	14.6	0.91	0.043	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Lead	46.1	0.91	0.10	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Mercury	0.21	0.034	0.0057	mg/kg	1	11/15/16	11/15/16 JM	SW846 7471B ¹	SW846 7471B ³
Nickel	20.6	3.7	0.052	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Selenium	ND	0.91	0.27	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Silver	ND	0.46	0.056	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Thallium	0.11 B	0.91	0.10	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Vanadium	22.1	0.91	0.037	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Zinc	76.4	1.8	0.16	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴

(1) Instrument QC Batch: MA19626

(2) Instrument QC Batch: MA19629

(3) Prep QC Batch: MP27019

(4) Prep QC Batch: MP27020

RL = Reporting Limit

MDL = Method Detection Limit

ND = Not detected

B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: TP-107(3.0')**Lab Sample ID:** MC48722-2**Matrix:** SO - Soil**Project:** National Grid, Washington Street, Rensselaer, NY**Date Sampled:** 11/11/16**Date Received:** 11/12/16**Percent Solids:** 88.9

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	0.62	0.13	0.037	mg/kg	1	11/23/16 20:55 CF	SW846	9012 M
Heat Content, BTU ^a	1800	100		BTU/lb	1	11/18/16 21:00 ANJ	ASTM	D240-92
Percent Sulfur ^a	ND	0.17	0.054	%	1	11/18/16 21:00 ANJ	ASTM	D129-95
Solids, Percent	88.9			%	1	11/16/16	JM	SM 2540G-97 MOD

(a) Analysis performed at SGS Accutest, Dayton, NJ.

RL = Reporting Limit
MDL = Method Detection Limit

ND = Not detected
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TP-107(3.0')		
Lab Sample ID:	MC48722-2A	Date Sampled:	11/11/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846 8260C SW846 1311	Percent Solids:	88.9
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N106528.D	100	11/23/16	AD	11/15/16	GP21107	MSN3919
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.10	0.027	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	1.0	0.30	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.20	0.034	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.20	0.024	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.20	0.040	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.20	0.058	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.20	0.068	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.20	0.028	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.20	0.021	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.20	0.025	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.20	0.045	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		74-135%
2037-26-5	Toluene-D8	101%		83-116%
460-00-4	4-Bromofluorobenzene	101%		76-124%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6(g))
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')		
Lab Sample ID:	MC48722-2A	Date Sampled:	11/11/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846 8270D SW846 3510C	Percent Solids:	88.9
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R50882.D	1	11/26/16	DRY	11/16/16	OP49119	MSR1897
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.10	0.0032	mg/l	
	3&4-Methylphenol	ND	D024	200	0.10	0.0054	mg/l	
87-86-5	Pentachlorophenol ^a	ND	D037	100	0.10	0.0059	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.10	0.0052	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.10	0.0038	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.050	0.0035	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.10	0.012	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.050	0.0041	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.050	0.0043	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0036	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.050	0.0042	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.10	0.013	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		10-73%
4165-62-2	Phenol-d5	29%		10-58%
118-79-6	2,4,6-Tribromophenol	79%		15-125%
4165-60-0	Nitrobenzene-d5	74%		23-120%
321-60-8	2-Fluorobiphenyl	80%		31-102%
1718-51-0	Terphenyl-d14	94%		42-124%

(a) Continuing Calibration outside of acceptance criteria. Reporting Limit Response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261.6/96) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')						
Lab Sample ID:	MC48722-2A					Date Sampled:	11/11/16
Matrix:	SO - Soil					Date Received:	11/12/16
Method:	SW846 8151 SW846 3510C SPLP					Percent Solids:	88.9
Project:	National Grid, Washington Street, Rensselaer, NY						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ98718.D	1	11/29/16	TA	11/16/16	OP49161	GYZ8038
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	5.0 ml
Run #2		

Herbicide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.010	0.0034	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.010	0.0040	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	60%		30-150%
19719-28-9	2,4-DCAA	47%		30-150%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')						
Lab Sample ID:	MC48722-2A					Date Sampled:	11/11/16
Matrix:	SO - Soil					Date Received:	11/12/16
Method:	SW846 8081B SW846 3510C SPLP					Percent Solids:	88.9
Project:	National Grid, Washington Street, Rensselaer, NY						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BE53427.D	1	11/21/16	TA	11/16/16	OP49159	GBE2688
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	5.0 ml
Run #2		

Pesticide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00050	0.000044	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00050	0.00012	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00050	0.00011	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00050	0.000051	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00050	0.00021	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.025	0.0013	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	47%		30-150%
877-09-8	Tetrachloro-m-xylene	61%		30-150%
2051-24-3	Decachlorobiphenyl	32%		30-150%
2051-24-3	Decachlorobiphenyl	65%		30-150%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')						
Lab Sample ID:	MC48722-2A					Date Sampled:	11/11/16
Matrix:	SO - Soil					Date Received:	11/12/16
Method:	SW846 8082A SW846 3510C SPLP					Percent Solids:	88.9
Project:	National Grid, Washington Street, Rensselaer, NY						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK63185.D	1	11/18/16	TA	11/16/16	OP49160	GBK1997
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	5.0 ml
Run #2		

PCB List

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND			0.0025	0.0016	mg/l	
11104-28-2	Aroclor 1221	ND			0.0025	0.0016	mg/l	
11141-16-5	Aroclor 1232	ND			0.0025	0.0018	mg/l	
53469-21-9	Aroclor 1242	ND			0.0025	0.0019	mg/l	
12672-29-6	Aroclor 1248	ND			0.0025	0.0012	mg/l	
11097-69-1	Aroclor 1254	ND			0.0025	0.0016	mg/l	
11096-82-5	Aroclor 1260	ND			0.0025	0.0019	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	68%		30-150%
877-09-8	Tetrachloro-m-xylene	70%		30-150%
2051-24-3	Decachlorobiphenyl	92%		30-150%
2051-24-3	Decachlorobiphenyl	96%		30-150%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TP-107(3.0')**Lab Sample ID:** MC48722-2A**Matrix:** SO - Soil**Date Sampled:** 11/11/16**Date Received:** 11/12/16**Percent Solids:** 88.9**Project:** National Grid, Washington Street, Rensselaer, NY**Metals Analysis, TCLP Leachate SW846 1311**

Analyte	Result	HW#	MCL	RL	MDL	Units	DF	Prep	Analyzed By	Method
Arsenic	0.0020 B	D004	5.0	0.010	0.0020	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Barium	0.37 B	D005	100	0.50	0.00057	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Cadmium	0.0012 B	D006	1.0	0.0040	0.00030	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Chromium	0.0012 B	D007	5.0	0.010	0.0011	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Lead	0.0039 B	D008	5.0	0.010	0.0011	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Mercury	ND	D009	0.20	0.00020	0.000034	mg/l	1	11/17/16	11/17/16	JM SW846 7470A ²
Selenium	ND	D010	1.0	0.025	0.0034	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Silver	ND	D011	5.0	0.0050	0.0014	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹

(1) Instrument QC Batch: MA19631

(2) Instrument QC Batch: MA19634

(3) Prep QC Batch: MP27025

(4) Prep QC Batch: MP27030

RL = Reporting Limit

MDL = Method Detection Limit

ND = Not detected

MCL = Maximum Contamination Level (40 CFR 261.6/96)

B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TP-110(0-3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-3	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	n/a
Method:	SW846 8260C SW846 1311		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N106529.D	100	11/23/16	AD	11/15/16	GP21107	MSN3919
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.10	0.027	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	1.0	0.30	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.20	0.034	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.20	0.024	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.20	0.040	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.20	0.058	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.20	0.068	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.20	0.028	mg/l	
127-18-4	Tetrachloroethene	0.0248	D039	0.70	0.20	0.021	mg/l	J
79-01-6	Trichloroethene	ND	D040	0.50	0.20	0.025	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.20	0.045	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		74-135%
2037-26-5	Toluene-D8	100%		83-116%
460-00-4	4-Bromofluorobenzene	102%		76-124%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-110(0-3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-3	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R50883.D	1	11/26/16	DRY	11/16/16	OP49119	MSR1897
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.10	0.0032	mg/l	
	3&4-Methylphenol	ND	D024	200	0.10	0.0054	mg/l	
87-86-5	Pentachlorophenol ^a	ND	D037	100	0.10	0.0059	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.10	0.0052	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.10	0.0038	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.050	0.0035	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.10	0.012	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.050	0.0041	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.050	0.0043	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0036	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.050	0.0042	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.10	0.013	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	46%		10-73%
4165-62-2	Phenol-d5	29%		10-58%
118-79-6	2,4,6-Tribromophenol	79%		15-125%
4165-60-0	Nitrobenzene-d5	76%		23-120%
321-60-8	2-Fluorobiphenyl	82%		31-102%
1718-51-0	Terphenyl-d14	94%		42-124%

(a) Continuing Calibration outside of acceptance criteria. Reporting Limit Response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261.6/96) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-110(0-3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-3	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	n/a
Method:	SW846 8151 SW846 3510C SPLP		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ98719.D	1	11/29/16	TA	11/16/16	OP49161	GYZ8038
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	5.0 ml
Run #2		

Herbicide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.010	0.0034	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.010	0.0040	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	59%		30-150%
19719-28-9	2,4-DCAA	48%		30-150%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-110(0-3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-3	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	n/a
Method:	SW846 8081B SW846 3510C SPLP		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BE53428.D	1	11/21/16	TA	11/16/16	OP49159	GBE2688
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	5.0 ml
Run #2		

Pesticide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00050	0.000044	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00050	0.00012	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00050	0.00011	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00050	0.000051	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00050	0.00021	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.025	0.0013	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	68%		30-150%
877-09-8	Tetrachloro-m-xylene	70%		30-150%
2051-24-3	Decachlorobiphenyl	82%		30-150%
2051-24-3	Decachlorobiphenyl	76%		30-150%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TP-110(0-3.0')**Lab Sample ID:** MC48722-3**Matrix:** SO - Soil**Date Sampled:** 11/11/16**Date Received:** 11/12/16**Percent Solids:** n/a**Project:** National Grid, Washington Street, Rensselaer, NY**Metals Analysis, TCLP Leachate SW846 1311**

Analyte	Result	HW#	MCL	RL	MDL	Units	DF	Prep	Analyzed By	Method
Arsenic	0.0037 B	D004	5.0	0.010	0.0020	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Barium	0.75	D005	100	0.50	0.00057	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Cadmium	0.0013 B	D006	1.0	0.0040	0.00030	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Chromium	ND	D007	5.0	0.010	0.0011	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Lead	1.5	D008	5.0	0.010	0.0011	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Mercury	ND	D009	0.20	0.00020	0.000034	mg/l	1	11/17/16	11/17/16	JM SW846 7470A ²
Selenium	ND	D010	1.0	0.025	0.0034	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Silver	ND	D011	5.0	0.0050	0.0014	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹

(1) Instrument QC Batch: MA19631

(2) Instrument QC Batch: MA19634

(3) Prep QC Batch: MP27025

(4) Prep QC Batch: MP27030

RL = Reporting Limit

MDL = Method Detection Limit

ND = Not detected

MCL = Maximum Contamination Level (40 CFR 261.6/96)

B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TP-110(3.0-3.5')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-4	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	80.4
Method:	SW846 8260C		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L101580.D	1	11/18/16	TB	n/a	n/a	MSL4385
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.64 g	10.0 ml	100 ul
Run #2			

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	1100	350	ug/kg	
71-43-2	Benzene	ND	110	40	ug/kg	
75-27-4	Bromodichloromethane	ND	210	45	ug/kg	
75-25-2	Bromoform	ND	210	50	ug/kg	
74-83-9	Bromomethane	ND	1100	170	ug/kg	
78-93-3	2-Butanone (MEK)	ND	1100	360	ug/kg	
75-15-0	Carbon disulfide	ND	530	43	ug/kg	
56-23-5	Carbon tetrachloride	ND	210	43	ug/kg	
108-90-7	Chlorobenzene	ND	210	100	ug/kg	
75-00-3	Chloroethane	ND	1100	220	ug/kg	
67-66-3	Chloroform	ND	210	53	ug/kg	
74-87-3	Chloromethane	ND	530	79	ug/kg	
124-48-1	Dibromochloromethane	ND	530	110	ug/kg	
75-34-3	1,1-Dichloroethane	ND	210	42	ug/kg	
107-06-2	1,2-Dichloroethane	ND	210	39	ug/kg	
75-35-4	1,1-Dichloroethene	ND	210	72	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	210	38	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	210	43	ug/kg	
78-87-5	1,2-Dichloropropane	ND	210	46	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	210	130	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	210	140	ug/kg	
100-41-4	Ethylbenzene	1330	210	40	ug/kg	
591-78-6	2-Hexanone	ND	530	71	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	530	69	ug/kg	
75-09-2	Methylene chloride	ND	210	44	ug/kg	
100-42-5	Styrene	ND	530	33	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	530	200	ug/kg	
127-18-4	Tetrachloroethene	ND	210	31	ug/kg	
108-88-3	Toluene	77.0	530	42	ug/kg	J
71-55-6	1,1,1-Trichloroethane	ND	210	37	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	210	150	ug/kg	
79-01-6	Trichloroethene	ND	210	33	ug/kg	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TP-110(3.0-3.5')**Lab Sample ID:** MC48722-4**Matrix:** SO - Soil**Method:** SW846 8260C**Project:** National Grid, Washington Street, Rensselaer, NY**Date Sampled:** 11/11/16**Date Received:** 11/12/16**Percent Solids:** 80.4

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1100	360	ug/kg	
1330-20-7	Xylene (total)	1460	210	37	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		65-141%
2037-26-5	Toluene-D8	100%		65-129%
460-00-4	4-Bromofluorobenzene	98%		63-137%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-110(3.0-3.5')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-4	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	80.4
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R50717.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.4 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	300	14	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	610	14	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	610	33	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	610	250	ug/kg	
51-28-5	2,4-Dinitrophenol ^a	ND	610	130	ug/kg	
534-52-1	4,6-Dinitro-o-cresol ^a	ND	610	60	ug/kg	
95-48-7	2-Methylphenol	ND	610	65	ug/kg	
	3&4-Methylphenol	ND	610	53	ug/kg	
88-75-5	2-Nitrophenol	ND	610	47	ug/kg	
100-02-7	4-Nitrophenol	ND	610	70	ug/kg	
87-86-5	Pentachlorophenol	ND	610	69	ug/kg	
108-95-2	Phenol	ND	300	13	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	610	18	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	610	11	ug/kg	
83-32-9	Acenaphthene	3270	120	8.3	ug/kg	
208-96-8	Acenaphthylene	958	120	9.6	ug/kg	
120-12-7	Anthracene	2200	120	9.8	ug/kg	
56-55-3	Benzo(a)anthracene	2910	120	12	ug/kg	
50-32-8	Benzo(a)pyrene	2900	300	10	ug/kg	
205-99-2	Benzo(b)fluoranthene	1910	120	14	ug/kg	
191-24-2	Benzo(g,h,i)perylene	1400	120	12	ug/kg	
207-08-9	Benzo(k)fluoranthene	2070	120	17	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	300	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	300	16	ug/kg	
91-58-7	2-Chloronaphthalene	ND	300	12	ug/kg	
106-47-8	4-Chloroaniline	ND	610	14	ug/kg	
86-74-8	Carbazole	220	120	11	ug/kg	
218-01-9	Chrysene	2700	120	9.4	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	300	12	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	300	11	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	300	15	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	300	14	ug/kg	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TP-110(3.0-3.5')

Lab Sample ID: MC48722-4

Matrix: SO - Soil

Method: SW846 8270D SW846 3546

Project: National Grid, Washington Street, Rensselaer, NY

Date Sampled: 11/11/16

Date Received: 11/12/16

Percent Solids: 80.4

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	300	10	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	300	9.0	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	300	12	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	610	15	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	610	14	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	610	40	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	367	120	10	ug/kg	
132-64-9	Dibenzofuran	316	120	9.5	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	300	13	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	300	10	ug/kg	
84-66-2	Diethyl phthalate	ND	300	9.7	ug/kg	
131-11-3	Dimethyl phthalate	ND	300	9.6	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	300	12	ug/kg	
206-44-0	Fluoranthene	5160	120	11	ug/kg	
86-73-7	Fluorene	1720	120	13	ug/kg	
118-74-1	Hexachlorobenzene	ND	300	16	ug/kg	
87-68-3	Hexachlorobutadiene	ND	300	12	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	610	14	ug/kg	
67-72-1	Hexachloroethane	ND	300	29	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	1410	300	34	ug/kg	
78-59-1	Isophorone	ND	300	22	ug/kg	
91-57-6	2-Methylnaphthalene	4460	120	14	ug/kg	
88-74-4	2-Nitroaniline	ND	610	14	ug/kg	
99-09-2	3-Nitroaniline	ND	610	14	ug/kg	
100-01-6	4-Nitroaniline	ND	610	14	ug/kg	
91-20-3	Naphthalene	7580	120	10	ug/kg	
98-95-3	Nitrobenzene	ND	300	34	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	300	17	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	300	40	ug/kg	
85-01-8	Phenanthrene	7470	120	9.1	ug/kg	
129-00-0	Pyrene	7400	120	12	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	300	15	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	60%		25-109%
4165-62-2	Phenol-d5	68%		29-113%
118-79-6	2,4,6-Tribromophenol	82%		20-141%
4165-60-0	Nitrobenzene-d5	66%		27-115%
321-60-8	2-Fluorobiphenyl	82%		34-118%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-110(3.0-3.5')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-4	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	80.4
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1718-51-0	Terphenyl-d14	89%		42-139%

(a) Continuing Calibration outside of acceptance criteria. Reporting Limit Response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-110(3.0-3.5')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-4	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	80.4
Method:	SW846 8015		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	WX78125.D	1	11/17/16	AF	n/a	n/a	GWX3867
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.64 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	68.1	11	2.0	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
	2,3,4-Trifluorotoluene	107%		64-127%		

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-110(3.0-3.5')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-4	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	80.4
Method:	SW846 8082A SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK63166.D	1	11/17/16	TA	11/15/16	OP49147	GBK1996
Run #2							

	Initial Weight	Final Volume
Run #1	15.6 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	40	4.1	ug/kg	
11104-28-2	Aroclor 1221	ND	40	17	ug/kg	
11141-16-5	Aroclor 1232	ND	40	12	ug/kg	
53469-21-9	Aroclor 1242	ND	40	9.2	ug/kg	
12672-29-6	Aroclor 1248	ND	40	6.9	ug/kg	
11097-69-1	Aroclor 1254	ND	40	17	ug/kg	
11096-82-5	Aroclor 1260	ND	40	3.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	101%		25-145%
877-09-8	Tetrachloro-m-xylene	74%		25-145%
2051-24-3	Decachlorobiphenyl	69%		25-179%
2051-24-3	Decachlorobiphenyl	68%		25-179%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-110(3.0-3.5')		
Lab Sample ID:	MC48722-4	Date Sampled:	11/11/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846-8015 SW846 3546	Percent Solids:	80.4
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IR3257.D	1	11/18/16	MD	11/16/16	OP49158	GIR226
Run #2							

	Initial Weight	Final Volume
Run #1	15.9 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (Semi-VOA)	2200	20	4.9	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	91%		17-130%		

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TP-110(3.0-3.5')

Lab Sample ID: MC48722-4

Matrix: SO - Soil

Date Sampled: 11/11/16

Date Received: 11/12/16

Percent Solids: 80.4

Project: National Grid, Washington Street, Rensselaer, NY

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Antimony	ND	0.99	0.17	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Arsenic	4.6	0.99	0.20	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Barium	83.6	4.9	0.075	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Beryllium	0.47	0.39	0.015	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Cadmium	0.12 B	0.39	0.031	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Chromium	13.1	0.99	0.046	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Lead	34.9	0.99	0.11	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Mercury	0.30	0.038	0.0064	mg/kg	1	11/15/16	11/15/16 JM	SW846 7471B ¹	SW846 7471B ³
Nickel	19.2	3.9	0.056	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Selenium	ND	0.99	0.30	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Silver	ND	0.49	0.060	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Thallium	ND	0.99	0.11	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Vanadium	17.0	0.99	0.039	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Zinc	61.7	2.0	0.17	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴

(1) Instrument QC Batch: MA19626

(2) Instrument QC Batch: MA19629

(3) Prep QC Batch: MP27019

(4) Prep QC Batch: MP27020

RL = Reporting Limit

MDL = Method Detection Limit

ND = Not detected

B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: TP-110(3.0-3.5')**Lab Sample ID:** MC48722-4**Matrix:** SO - Soil**Project:** National Grid, Washington Street, Rensselaer, NY**Date Sampled:** 11/11/16**Date Received:** 11/12/16**Percent Solids:** 80.4

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	1.1	0.14	0.039	mg/kg	1	11/23/16 20:56 CF	SW846	9012 M
Heat Content, BTU ^a	1510	100		BTU/lb	1	11/18/16 21:00 ANJ	ASTM	D240-92
Percent Sulfur ^a	0.11 B	0.20	0.054	%	1	11/18/16 21:00 ANJ	ASTM	D129-95
Solids, Percent	80.4			%	1	11/16/16	JM	SM 2540G-97 MOD

(a) Analysis performed at SGS Accutest, Dayton, NJ.

RL = Reporting Limit
MDL = Method Detection Limit

ND = Not detected
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS Accutest of New England
50 D'Angelo Drive, Building One Marlborough, MA 01752
TEL: 508-481-6200 FAX: 508-481-7753
www.accutest.com

[illegible]

MC48722: Chain of Custody

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SGS Accutest Sample Receipt Summary

Job Number: MC48722

Client: ARCADIS

Project: NATIONAL GRID

Date / Time Received: 11/12/2016 10:20:00 AM

Delivery Method: FEDX

Airbill #'s: 784623131115

Cooler Temps (Initial/Adjusted): #1: (3.5/3.5);

Cooler Security

	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Custody Seals Present:	☒		☐	3. COC Present:	☒		☐
2. Custody Seals Intact:	☒		☐	4. Smpl Dates/Time OK	☒		☐

Cooler Temperature

	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	☒		☐
2. Thermometer ID:	<u>IRGUN1;</u>		
3. Cooler media:	<u>Ice (Bag)</u>		
4. No. Coolers:	<u>1</u>		

Quality Control Preservation

	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	☐		☒	☐
2. Trip Blank listed on COC:	☐		☒	☐
3. Samples preserved properly:	☒		☐	
4. VOCs headspace free:	☐		☐	☒

Comments

Sample Integrity - Documentation

	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	☒		☐
2. Container labeling complete:	☒		☐
3. Sample container label / COC agree:	☒		☐

Sample Integrity - Condition

	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	☒		☐
2. All containers accounted for:	☒		☐
3. Condition of sample:	<u>Intact</u>		

Sample Integrity - Instructions

	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	☒		☐	
2. Bottles received for unspecified tests	☐		☒	
3. Sufficient volume recvd for analysis:	☒		☐	
4. Compositing instructions clear:	☐		☐	☒
5. Filtering instructions clear:	☐		☐	☒

MC48722: Chain of Custody

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GC/MS Volatiles

5

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Page 1 of 2

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4385-MB	L101570.D	1	11/18/16	TB	n/a	n/a	MSL4385

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	500	160	ug/kg	
71-43-2	Benzene	ND	50	19	ug/kg	
75-27-4	Bromodichloromethane	ND	100	21	ug/kg	
75-25-2	Bromoform	ND	100	24	ug/kg	
74-83-9	Bromomethane	ND	500	80	ug/kg	
78-93-3	2-Butanone (MEK)	ND	500	170	ug/kg	
75-15-0	Carbon disulfide	ND	250	20	ug/kg	
56-23-5	Carbon tetrachloride	ND	100	21	ug/kg	
108-90-7	Chlorobenzene	ND	100	47	ug/kg	
75-00-3	Chloroethane	ND	500	100	ug/kg	
67-66-3	Chloroform	ND	100	25	ug/kg	
74-87-3	Chloromethane	ND	250	38	ug/kg	
124-48-1	Dibromochloromethane	ND	250	54	ug/kg	
75-34-3	1,1-Dichloroethane	ND	100	20	ug/kg	
107-06-2	1,2-Dichloroethane	ND	100	18	ug/kg	
75-35-4	1,1-Dichloroethene	ND	100	34	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	100	18	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	100	20	ug/kg	
78-87-5	1,2-Dichloropropane	ND	100	22	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	100	61	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	100	66	ug/kg	
100-41-4	Ethylbenzene	ND	100	19	ug/kg	
591-78-6	2-Hexanone	ND	250	34	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	250	33	ug/kg	
75-09-2	Methylene chloride	ND	100	21	ug/kg	
100-42-5	Styrene	ND	250	16	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	95	ug/kg	
127-18-4	Tetrachloroethene	ND	100	15	ug/kg	
108-88-3	Toluene	ND	250	20	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	100	17	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	100	69	ug/kg	
79-01-6	Trichloroethene	ND	100	15	ug/kg	
75-01-4	Vinyl chloride	ND	500	170	ug/kg	
1330-20-7	Xylene (total)	ND	100	17	ug/kg	

Method Blank Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4385-MB	L101570.D	1	11/18/16	TB	n/a	n/a	MSL4385

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-4

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	108% 65-141%
2037-26-5	Toluene-D8	98% 65-129%
460-00-4	4-Bromofluorobenzene	104% 63-137%

Method Blank Summary

Page 1 of 2

Job Number: MC48722**Account:** BBLNYS Arcadis**Project:** National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2942-MB	M82027.D	1	11/21/16	KP	n/a	n/a	MSM2942

The QC reported here applies to the following samples:**Method:** SW846 8260C

MC48722-1, MC48722-2

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	4.2	10	3.3	ug/kg	J
71-43-2	Benzene	ND	1.0	0.37	ug/kg	
75-27-4	Bromodichloromethane	ND	2.0	0.43	ug/kg	
75-25-2	Bromoform	ND	2.0	0.48	ug/kg	
74-83-9	Bromomethane	ND	10	1.6	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	3.4	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	0.41	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.0	0.41	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.94	ug/kg	
75-00-3	Chloroethane	ND	10	2.1	ug/kg	
67-66-3	Chloroform	ND	2.0	0.50	ug/kg	
74-87-3	Chloromethane	ND	5.0	0.75	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.1	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.0	0.40	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2.0	0.37	ug/kg	
75-35-4	1,1-Dichloroethene	ND	2.0	0.68	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	2.0	0.36	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	0.40	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.0	0.44	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	1.2	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	1.3	ug/kg	
100-41-4	Ethylbenzene	ND	2.0	0.38	ug/kg	
591-78-6	2-Hexanone	ND	5.0	0.67	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.65	ug/kg	
75-09-2	Methylene chloride	ND	2.0	0.42	ug/kg	
100-42-5	Styrene	ND	5.0	0.31	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.9	ug/kg	
127-18-4	Tetrachloroethene	ND	2.0	0.30	ug/kg	
108-88-3	Toluene	0.68	5.0	0.40	ug/kg	J
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.35	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.0	1.4	ug/kg	
79-01-6	Trichloroethene	ND	2.0	0.31	ug/kg	
75-01-4	Vinyl chloride	ND	10	3.4	ug/kg	
1330-20-7	Xylene (total)	ND	2.0	0.35	ug/kg	

Method Blank Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2942-MB	M82027.D	1	11/21/16	KP	n/a	n/a	MSM2942

The QC reported here applies to the following samples: Method: SW846 8260C
MC48722-1, MC48722-2

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	114% 65-141%
2037-26-5	Toluene-D8	104% 65-129%
460-00-4	4-Bromofluorobenzene	97% 63-137%

Method Blank Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3919-MB	N106520.D	1	11/23/16	AD	n/a	n/a	MSN3919

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.3	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.73	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.31	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.32	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.57	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.74	ug/l	
127-18-4	Tetrachloroethene	0.37	1.0	0.26	ug/l	J
79-01-6	Trichloroethene	ND	1.0	0.70	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	101% 76-129%
2037-26-5	Toluene-D8	100% 83-114%
460-00-4	4-Bromofluorobenzene	101% 75-124%

Leachate Blank Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GP21107-LB1	N106524.D	10	11/23/16	AD	11/15/16	GP21107	MSN3919

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	2.7	ug/l	
78-93-3	2-Butanone (MEK)	ND	100	30	ug/l	
56-23-5	Carbon tetrachloride	ND	10	3.4	ug/l	
108-90-7	Chlorobenzene	ND	10	2.4	ug/l	
67-66-3	Chloroform	ND	10	4.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	10	5.8	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	6.8	ug/l	
75-35-4	1,1-Dichloroethene	ND	10	2.8	ug/l	
127-18-4	Tetrachloroethene	2.4	10	2.1	ug/l	J
79-01-6	Trichloroethene	ND	10	2.5	ug/l	
75-01-4	Vinyl chloride	ND	10	4.5	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	99% 74-135%
2037-26-5	Toluene-D8	102% 83-116%
460-00-4	4-Bromofluorobenzene	102% 76-124%

Blank Spike Summary

Page 1 of 2

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4385-B5	L101567.D	1	11/18/16	TB	n/a	n/a	MSL4385

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	2500	3690	148	24-179
71-43-2	Benzene	2500	2510	100	73-115
75-27-4	Bromodichloromethane	2500	2350	94	76-122
75-25-2	Bromoform	2500	2560	102	67-151
74-83-9	Bromomethane	2500	2200	88	52-139
78-93-3	2-Butanone (MEK)	2500	3500	140	32-151
75-15-0	Carbon disulfide	2500	2630	105	57-143
56-23-5	Carbon tetrachloride	2500	2230	89	73-129
108-90-7	Chlorobenzene	2500	2550	102	79-123
75-00-3	Chloroethane	2500	2490	100	51-159
67-66-3	Chloroform	2500	2460	98	72-122
74-87-3	Chloromethane	2500	1980	79	57-143
124-48-1	Dibromochloromethane	2500	2520	101	74-139
75-34-3	1,1-Dichloroethane	2500	2490	100	70-128
107-06-2	1,2-Dichloroethane	2500	2300	92	70-126
75-35-4	1,1-Dichloroethene	2500	2570	103	71-136
156-59-2	cis-1,2-Dichloroethene	2500	2830	113	78-128
156-60-5	trans-1,2-Dichloroethene	2500	2420	97	71-131
78-87-5	1,2-Dichloropropane	2500	2570	103	79-124
10061-01-5	cis-1,3-Dichloropropene	2500	2480	99	75-126
10061-02-6	trans-1,3-Dichloropropene	2500	2290	92	75-128
100-41-4	Ethylbenzene	2500	2620	105	76-122
591-78-6	2-Hexanone	2500	4170	167	26-169
108-10-1	4-Methyl-2-pentanone (MIBK)	2500	2790	112	43-166
75-09-2	Methylene chloride	2500	2670	107	74-125
100-42-5	Styrene	2500	2710	108	79-124
79-34-5	1,1,2,2-Tetrachloroethane	2500	2700	108	66-134
127-18-4	Tetrachloroethene	2500	2480	99	76-125
108-88-3	Toluene	2500	2400	96	76-119
71-55-6	1,1,1-Trichloroethane	2500	2390	96	70-130
79-00-5	1,1,2-Trichloroethane	2500	2520	101	75-124
79-01-6	Trichloroethene	2500	2360	94	74-127
75-01-4	Vinyl chloride	2500	1900	76	33-166
1330-20-7	Xylene (total)	7500	8350	111	78-122

* = Outside of Control Limits.

Blank Spike Summary

Page 2 of 2

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4385-BS	L101567.D	1	11/18/16	TB	n/a	n/a	MSL4385

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-4

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	65-141%
2037-26-5	Toluene-D8	98%	65-129%
460-00-4	4-Bromofluorobenzene	96%	63-137%

* = Outside of Control Limits.

Blank Spike Summary

Page 1 of 2

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2942-BS	M82024.D	1	11/21/16	KP	n/a	n/a	MSM2942

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-1, MC48722-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	50	80.9	162	24-179
71-43-2	Benzene	50	50.9	102	73-115
75-27-4	Bromodichloromethane	50	49.8	100	76-122
75-25-2	Bromoform	50	45.3	91	67-151
74-83-9	Bromomethane	50	40.5	81	52-139
78-93-3	2-Butanone (MEK)	50	74.0	148	32-151
75-15-0	Carbon disulfide	50	59.0	118	57-143
56-23-5	Carbon tetrachloride	50	54.0	108	73-129
108-90-7	Chlorobenzene	50	45.3	91	79-123
75-00-3	Chloroethane	50	40.3	81	51-159
67-66-3	Chloroform	50	51.5	103	72-122
74-87-3	Chloromethane	50	54.1	108	57-143
124-48-1	Dibromochloromethane	50	44.8	90	74-139
75-34-3	1,1-Dichloroethane	50	51.4	103	70-128
107-06-2	1,2-Dichloroethane	50	51.4	103	70-126
75-35-4	1,1-Dichloroethene	50	52.9	106	71-136
156-59-2	cis-1,2-Dichloroethene	50	53.3	107	78-128
156-60-5	trans-1,2-Dichloroethene	50	47.8	96	71-131
78-87-5	1,2-Dichloropropane	50	50.0	100	79-124
10061-01-5	cis-1,3-Dichloropropene	50	48.5	97	75-126
10061-02-6	trans-1,3-Dichloropropene	50	49.0	98	75-128
100-41-4	Ethylbenzene	50	48.6	97	76-122
591-78-6	2-Hexanone	50	65.2	130	26-169
108-10-1	4-Methyl-2-pentanone (MIBK)	50	48.4	97	43-166
75-09-2	Methylene chloride	50	56.5	113	74-125
100-42-5	Styrene	50	47.0	94	79-124
79-34-5	1,1,2,2-Tetrachloroethane	50	45.4	91	66-134
127-18-4	Tetrachloroethene	50	48.0	96	76-125
108-88-3	Toluene	50	50.2	100	76-119
71-55-6	1,1,1-Trichloroethane	50	53.8	108	70-130
79-00-5	1,1,2-Trichloroethane	50	47.7	95	75-124
79-01-6	Trichloroethene	50	49.0	98	74-127
75-01-4	Vinyl chloride	50	43.9	88	33-166
1330-20-7	Xylene (total)	150	144	96	78-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2942-BS	M82024.D	1	11/21/16	KP	n/a	n/a	MSM2942

The QC reported here applies to the following samples: Method: SW846 8260C
MC48722-1, MC48722-2

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	65-141%
2037-26-5	Toluene-D8	102%	65-129%
460-00-4	4-Bromofluorobenzene	96%	63-137%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3919-BS	N106517.D	1	11/23/16	AD	n/a	n/a	MSN3919
MSN3919-BSD	N106518.D	1	11/23/16	AD	n/a	n/a	MSN3919

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	50	44.3	89	49.6	99	11	66-123/25
78-93-3	2-Butanone (MEK)	50	46.0	92	51.1	102	11	45-171/25
56-23-5	Carbon tetrachloride	50	46.1	92	51.5	103	11	54-151/25
108-90-7	Chlorobenzene	50	45.5	91	52.0	104	13	75-117/25
67-66-3	Chloroform	50	45.7	91	52.1	104	13	65-127/25
106-46-7	1,4-Dichlorobenzene	50	46.0	92	51.0	102	10	77-117/25
107-06-2	1,2-Dichloroethane	50	44.3	89	50.3	101	13	68-126/25
75-35-4	1,1-Dichloroethene	50	40.7	81	46.1	92	12	44-148/25
127-18-4	Tetrachloroethene	50	46.7	93	52.9	106	12	68-133/25
79-01-6	Trichloroethene	50	46.0	92	51.9	104	12	73-120/25
75-01-4	Vinyl chloride	50	43.5	87	44.3	89	2	49-154/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	101%	100%	76-129%
2037-26-5	Toluene-D8	101%	101%	83-114%
460-00-4	4-Bromofluorobenzene	99%	98%	75-124%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 2

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC48725-1MS	L101581.D	1	11/18/16	TB	n/a	n/a	MSL4385
MC48725-1MSD	L101582.D	1	11/18/16	TB	n/a	n/a	MSL4385
MC48725-1 ^a	L101571.D	1	11/18/16	TB	n/a	n/a	MSL4385

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-4

CAS No.	Compound	MC48725-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	3080	3100	101	3080	3660	119	17	10-200/30
71-43-2	Benzene	ND	3080	2990	97	3080	2950	96	1	38-135/30
75-27-4	Bromodichloromethane	ND	3080	3370	109	3080	2740	89	21	45-136/30
75-25-2	Bromoform	ND	3080	3450	112	3080	3060	99	12	42-150/30
74-83-9	Bromomethane	ND	3080	3690	120	3080	2750	89	29	20-159/30
78-93-3	2-Butanone (MEK)	ND	3080	3210	104	3080	3690	120	14	10-187/30
75-15-0	Carbon disulfide	ND	3080	2840	92	3080	2960	96	4	29-157/30
56-23-5	Carbon tetrachloride	ND	3080	3550	115	3080	2640	86	29	42-148/30
108-90-7	Chlorobenzene	ND	3080	2960	96	3080	3060	99	3	33-148/30
75-00-3	Chloroethane	ND	3080	3060	99	3080	3080	100	1	32-162/30
67-66-3	Chloroform	ND	3080	3130	102	3080	2780	90	12	46-136/30
74-87-3	Chloromethane	ND	3080	4470	145	3080	2360	77	62* ^b	33-152/30
124-48-1	Dibromochloromethane	ND	3080	3140	102	3080	2990	97	5	46-147/30
75-34-3	1,1-Dichloroethane	ND	3080	2910	94	3080	2810	91	3	49-134/30
107-06-2	1,2-Dichloroethane	ND	3080	3400	110	3080	2580	84	27	46-135/30
75-35-4	1,1-Dichloroethene	ND	3080	2870	93	3080	2930	95	2	46-148/30
156-59-2	cis-1,2-Dichloroethene	ND	3080	3110	101	3080	3270	106	5	46-144/30
156-60-5	trans-1,2-Dichloroethene	ND	3080	2670	87	3080	2800	91	5	44-145/30
78-87-5	1,2-Dichloropropane	ND	3080	3010	98	3080	2960	96	2	48-138/30
10061-01-5	cis-1,3-Dichloropropene	ND	3080	3270	106	3080	2920	95	11	34-149/30
10061-02-6	trans-1,3-Dichloropropene	ND	3080	3130	102	3080	2630	85	17	28-151/30
100-41-4	Ethylbenzene	ND	3080	3190	103	3080	3130	102	2	32-150/30
591-78-6	2-Hexanone	ND	3080	3510	114	3080	3960	128	12	10-184/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	3080	3550	115	3080	3160	102	12	35-164/30
75-09-2	Methylene chloride	ND	3080	2860	93	3080	3030	98	6	48-140/30
100-42-5	Styrene	ND	3080	3260	106	3080	3290	107	1	17-160/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	3080	2210	72	3080	3150	102	35* ^b	30-157/30
127-18-4	Tetrachloroethene	ND	3080	2950	96	3080	2940	95	0	40-146/30
108-88-3	Toluene	ND	3080	3080	100	3080	2900	94	6	33-145/30
71-55-6	1,1,1-Trichloroethane	ND	3080	3400	110	3080	2750	89	21	41-147/30
79-00-5	1,1,2-Trichloroethane	ND	3080	3050	99	3080	3020	98	1	40-148/30
79-01-6	Trichloroethene	ND	3080	3160	102	3080	2860	93	10	36-155/30
75-01-4	Vinyl chloride	ND	3080	3390	110	3080	2260	73	40* ^b	11-183/30
1330-20-7	Xylene (total)	ND	9250	10000	108	9250	10200	110	2	33-150/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 2 of 2

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC48725-1MS	L101581.D	1	11/18/16	TB	n/a	n/a	MSL4385
MC48725-1MSD	L101582.D	1	11/18/16	TB	n/a	n/a	MSL4385
MC48725-1 ^a	L101571.D	1	11/18/16	TB	n/a	n/a	MSL4385

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-4

CAS No.	Surrogate Recoveries	MS	MSD	MC48725-1	Limits
1868-53-7	Dibromofluoromethane	101%	97%	112%	65-141%
2037-26-5	Toluene-D8	102%	99%	101%	65-129%
460-00-4	4-Bromofluorobenzene	70%	100%	99%	63-137%

(a) Analytical results based on analysis of intact sample. Sample results may be biased low due to sample not being preserved according to 5035-L/5035A-L specifications.

(b) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 2

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC48777-1MS	M82046.D	1	11/21/16	KP	n/a	n/a	MSM2942
MC48777-1MSD	M82047.D	1	11/21/16	KP	n/a	n/a	MSM2942
MC48777-1	M82031.D	1	11/21/16	KP	n/a	n/a	MSM2942

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-1, MC48722-2

CAS No.	Compound	MC48777-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	51.6	38.6	75	49.5	41.3	83	7	10-200/30
71-43-2	Benzene	ND	51.6	50.2	97	49.5	48.1	97	4	38-135/30
75-27-4	Bromodichloromethane	ND	51.6	48.8	95	49.5	46.8	95	4	45-136/30
75-25-2	Bromoform	ND	51.6	43.9	85	49.5	41.7	84	5	42-150/30
74-83-9	Bromomethane	ND	51.6	39.6	77	49.5	39.2	79	1	20-159/30
78-93-3	2-Butanone (MEK)	ND	51.6	33.4	65	49.5	41.9	85	23	10-187/30
75-15-0	Carbon disulfide	ND	51.6	57.9	112	49.5	53.0	107	9	29-157/30
56-23-5	Carbon tetrachloride	ND	51.6	55.0	107	49.5	51.2	103	7	42-148/30
108-90-7	Chlorobenzene	ND	51.6	42.0	81	49.5	40.6	82	3	33-148/30
75-00-3	Chloroethane	ND	51.6	42.9	83	49.5	39.5	80	8	32-162/30
67-66-3	Chloroform	ND	51.6	52.0	101	49.5	48.6	98	7	46-136/30
74-87-3	Chloromethane	ND	51.6	54.8	106	49.5	50.2	101	9	33-152/30
124-48-1	Dibromochloromethane	ND	51.6	42.7	83	49.5	41.3	83	3	46-147/30
75-34-3	1,1-Dichloroethane	ND	51.6	51.1	99	49.5	48.1	97	6	49-134/30
107-06-2	1,2-Dichloroethane	ND	51.6	51.7	100	49.5	49.0	99	5	46-135/30
75-35-4	1,1-Dichloroethene	ND	51.6	52.0	101	49.5	49.2	99	6	46-148/30
156-59-2	cis-1,2-Dichloroethene	ND	51.6	51.9	101	49.5	49.0	99	6	46-144/30
156-60-5	trans-1,2-Dichloroethene	ND	51.6	46.9	91	49.5	44.3	89	6	44-145/30
78-87-5	1,2-Dichloropropane	ND	51.6	49.5	96	49.5	46.8	95	6	48-138/30
10061-01-5	cis-1,3-Dichloropropene	ND	51.6	44.6	86	49.5	43.6	88	2	34-149/30
10061-02-6	trans-1,3-Dichloropropene	ND	51.6	45.9	89	49.5	44.1	89	4	28-151/30
100-41-4	Ethylbenzene	ND	51.6	44.4	86	49.5	42.7	86	4	32-150/30
591-78-6	2-Hexanone	ND	51.6	36.0	70	49.5	36.5	74	1	10-184/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	51.6	45.9	89	49.5	44.0	89	4	35-164/30
75-09-2	Methylene chloride	ND	51.6	59.8	116	49.5	54.4	110	9	48-140/30
100-42-5	Styrene	ND	51.6	41.4	80	49.5	40.1	81	3	17-160/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	51.6	44.9	87	49.5	43.3	87	4	30-157/30
127-18-4	Tetrachloroethene	ND	51.6	42.4	82	49.5	41.0	83	3	40-146/30
108-88-3	Toluene	0.98	51.6	48.0	91	49.5	46.1	91	4	33-145/30
71-55-6	1,1,1-Trichloroethane	ND	51.6	54.7	106	49.5	51.2	103	7	41-147/30
79-00-5	1,1,2-Trichloroethane	ND	51.6	47.6	92	49.5	45.3	91	5	40-148/30
79-01-6	Trichloroethene	ND	51.6	47.0	91	49.5	45.4	92	3	36-155/30
75-01-4	Vinyl chloride	ND	51.6	43.9	85	49.5	41.4	84	6	11-183/30
1330-20-7	Xylene (total)	ND	155	125	81	149	121	81	3	33-150/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC48777-1MS	M82046.D	1	11/21/16	KP	n/a	n/a	MSM2942
MC48777-1MSD	M82047.D	1	11/21/16	KP	n/a	n/a	MSM2942
MC48777-1	M82031.D	1	11/21/16	KP	n/a	n/a	MSM2942

The QC reported here applies to the following samples: Method: SW846 8260C

MC48722-1, MC48722-2

CAS No.	Surrogate Recoveries	MS	MSD	MC48777-1	Limits
1868-53-7	Dibromofluoromethane	105%	102%	118%	65-141%
2037-26-5	Toluene-D8	105%	103%	105%	65-129%
460-00-4	4-Bromofluorobenzene	94%	97%	97%	63-137%

* = Outside of Control Limits.

Leachate Spike Summary

Page 1 of 1

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GP21107-LS1	N106538.D	1	11/23/16	AD	11/15/16	GP21107	MSN3919
MC48722-1A	N106527.D	100	11/23/16	AD	11/15/16	GP21107	MSN3919

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	MC48722-1ASpike ug/l	Q	ug/l	LS ug/l	LS %	Limits
71-43-2	Benzene	58.6	J	50	45.3	-27* a	63-125
78-93-3	2-Butanone (MEK)	ND		50	47.7	95	10-158
56-23-5	Carbon tetrachloride	ND		50	42.2	84	48-153
108-90-7	Chlorobenzene	ND		50	45.0	90	68-117
67-66-3	Chloroform	ND		50	47.2	94	57-137
106-46-7	1,4-Dichlorobenzene	ND		50	44.3	89	66-114
107-06-2	1,2-Dichloroethane	ND		50	46.8	94	48-146
75-35-4	1,1-Dichloroethene	ND		50	40.6	81	47-150
127-18-4	Tetrachloroethene	ND		50	42.2	84	71-117
79-01-6	Trichloroethene	ND		50	44.1	88	67-121
75-01-4	Vinyl chloride	ND		50	49.0	98	49-151

CAS No.	Surrogate Recoveries	LS	MC48722-1ALimits
1868-53-7	Dibromofluoromethane	102%	101% 74-135%
2037-26-5	Toluene-D8	101%	102% 83-116%
460-00-4	4-Bromofluorobenzene	100%	102% 76-124%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846 8260C	Matrix: LEACHATE
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC48722-3	N106529.D	100	100	102
MC48722-1A	N106527.D	101	102	102
MC48722-2A	N106528.D	101	101	101
GP21107-LB1	N106524.D	99	102	102
GP21107-LS1	N106538.D	102	101	100
MSN3919-BS	N106517.D	101	101	99
MSN3919-BSD	N106518.D	100	101	98
MSN3919-MB	N106520.D	101	100	101

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	74-135%
S2 = Toluene-D8	83-116%
S3 = 4-Bromofluorobenzene	76-124%

5.7.1
5

Volatile Surrogate Recovery Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846 8260C	Matrix: SO
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC48722-1	M82033.D	118	103	95
MC48722-2	M82034.D	115	103	104
MC48722-4	L101580.D	107	100	98
MC48725-1MS	L101581.D	101	102	70
MC48725-1MSD	L101582.D	97	99	100
MC48777-1MS	M82046.D	105	105	94
MC48777-1MSD	M82047.D	102	103	97
MSL4385-BS	L101567.D	102	98	96
MSL4385-MB	L101570.D	108	98	104
MSM2942-BS	M82024.D	103	102	96
MSM2942-MB	M82027.D	114	104	97

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	65-141%
S2 = Toluene-D8	65-129%
S3 = 4-Bromofluorobenzene	63-137%

5.7.2
5



GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Page 1 of 3

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49144-MB	R50705.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	240	11	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	480	11	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	480	26	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	480	200	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	480	100	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	480	47	ug/kg	
95-48-7	2-Methylphenol	ND	480	51	ug/kg	
	3&4-Methylphenol	ND	480	42	ug/kg	
88-75-5	2-Nitrophenol	ND	480	37	ug/kg	
100-02-7	4-Nitrophenol	ND	480	55	ug/kg	
87-86-5	Pentachlorophenol	ND	480	54	ug/kg	
108-95-2	Phenol	ND	240	10	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	480	14	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	480	8.7	ug/kg	
83-32-9	Acenaphthene	ND	95	6.5	ug/kg	
208-96-8	Acenaphthylene	ND	95	7.5	ug/kg	
120-12-7	Anthracene	ND	95	7.7	ug/kg	
56-55-3	Benzo(a)anthracene	ND	95	9.4	ug/kg	
50-32-8	Benzo(a)pyrene	ND	240	8.1	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	95	11	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	95	9.2	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	95	13	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	240	9.9	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	240	12	ug/kg	
91-58-7	2-Chloronaphthalene	ND	240	9.5	ug/kg	
106-47-8	4-Chloroaniline	ND	480	11	ug/kg	
86-74-8	Carbazole	ND	95	8.2	ug/kg	
218-01-9	Chrysene	ND	95	7.4	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	240	9.3	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	240	8.6	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	240	12	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	240	11	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	240	8.1	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	240	7.1	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	240	9.6	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	480	12	ug/kg	

Method Blank Summary

Page 2 of 3

Job Number: MC48722**Account:** BBLNYS Arcadis**Project:** National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49144-MB	R50705.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889

The QC reported here applies to the following samples:**Method:** SW846 8270D

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Result	RL	MDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	480	11	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	480	31	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	95	7.8	ug/kg	
132-64-9	Dibenzofuran	ND	95	7.4	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	240	10	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	240	8.1	ug/kg	
84-66-2	Diethyl phthalate	ND	240	7.6	ug/kg	
131-11-3	Dimethyl phthalate	ND	240	7.5	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	240	9.5	ug/kg	
206-44-0	Fluoranthene	ND	95	8.7	ug/kg	
86-73-7	Fluorene	ND	95	11	ug/kg	
118-74-1	Hexachlorobenzene	ND	240	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	240	9.2	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	480	11	ug/kg	
67-72-1	Hexachloroethane	ND	240	23	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	240	26	ug/kg	
78-59-1	Isophorone	ND	240	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	95	11	ug/kg	
88-74-4	2-Nitroaniline	ND	480	11	ug/kg	
99-09-2	3-Nitroaniline	ND	480	11	ug/kg	
100-01-6	4-Nitroaniline	ND	480	11	ug/kg	
91-20-3	Naphthalene	ND	95	8.1	ug/kg	
98-95-3	Nitrobenzene	ND	240	26	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	240	13	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	240	32	ug/kg	
85-01-8	Phenanthrene	ND	95	7.1	ug/kg	
129-00-0	Pyrene	ND	95	9.2	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	240	12	ug/kg	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	30% 25-109%
4165-62-2	Phenol-d5	34% 29-113%
118-79-6	2,4,6-Tribromophenol	57% 20-141%
4165-60-0	Nitrobenzene-d5	29% 27-115%

Method Blank Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49144-MB	R50705.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889

The QC reported here applies to the following samples: Method: SW846 8270D
MC48722-1, MC48722-2, MC48722-4

CAS No.	Surrogate Recoveries	Limits
321-60-8	2-Fluorobiphenyl	43% 34-118%
1718-51-0	Terphenyl-d14	81% 42-139%

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-MB1	R50878.D	1	11/26/16	DRY	11/16/16	OP49119	MSR1897

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	100	3.2	ug/l	
	3&4-Methylphenol	ND	100	5.4	ug/l	
87-86-5	Pentachlorophenol	ND	100	5.9	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	100	5.2	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	100	3.8	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	3.5	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	100	12	ug/l	
118-74-1	Hexachlorobenzene	ND	50	4.1	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	4.3	ug/l	
67-72-1	Hexachloroethane	ND	50	3.6	ug/l	
98-95-3	Nitrobenzene	ND	50	4.2	ug/l	
110-86-1	Pyridine	ND	100	13	ug/l	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	41% 10-73%
4165-62-2	Phenol-d5	25% 10-58%
118-79-6	2,4,6-Tribromophenol	76% 15-125%
4165-60-0	Nitrobenzene-d5	65% 23-120%
321-60-8	2-Fluorobiphenyl	69% 31-102%
1718-51-0	Terphenyl-d14	101% 42-124%

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-MB	W30954.D	1	11/11/16	MR	11/10/16	OP49119	MSW1256

The QC reported here applies to the following samples:

Method: SW846 8270D

OP49119-MS, OP49119-MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	100	3.2	ug/l	
	3&4-Methylphenol	ND	100	5.4	ug/l	
87-86-5	Pentachlorophenol	ND	100	5.9	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	100	5.2	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	100	3.8	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	3.5	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	100	12	ug/l	
118-74-1	Hexachlorobenzene	ND	50	4.1	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	4.3	ug/l	
67-72-1	Hexachloroethane	ND	50	3.6	ug/l	
98-95-3	Nitrobenzene	ND	50	4.2	ug/l	
110-86-1	Pyridine	ND	100	13	ug/l	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	38% 10-73%
4165-62-2	Phenol-d5	24% 10-58%
118-79-6	2,4,6-Tribromophenol	88% 15-125%
4165-60-0	Nitrobenzene-d5	62% 23-120%
321-60-8	2-Fluorobiphenyl	67% 31-102%
1718-51-0	Terphenyl-d14	85% 42-124%

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-MB2	R50865.D	1	11/23/16	MR	11/22/16	OP49119	MSR1896

The QC reported here applies to the following samples:

Method: SW846 8270D

OP49119-LS2, OP49119-LS3

CAS No.	Compound	Result	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	100	3.2	ug/l	
	3&4-Methylphenol	ND	100	5.4	ug/l	
87-86-5	Pentachlorophenol	ND	100	5.9	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	100	5.2	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	100	3.8	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	3.5	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	100	12	ug/l	
118-74-1	Hexachlorobenzene	ND	50	4.1	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	4.3	ug/l	
67-72-1	Hexachloroethane	ND	50	3.6	ug/l	
98-95-3	Nitrobenzene	ND	50	4.2	ug/l	
110-86-1	Pyridine	ND	100	13	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	32%	10-73%
4165-62-2	Phenol-d5	22%	10-58%
118-79-6	2,4,6-Tribromophenol	70%	15-125%
4165-60-0	Nitrobenzene-d5	52%	23-120%
321-60-8	2-Fluorobiphenyl	57%	31-102%
1718-51-0	Terphenyl-d14	93%	42-124%

6.1.4

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-LB1	R50878A.D	1	11/26/16	DRY	11/16/16	OP49119	MSR1897

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	100	3.2	ug/l	
	3&4-Methylphenol	ND	100	5.4	ug/l	
87-86-5	Pentachlorophenol	ND	100	5.9	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	100	5.2	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	100	3.8	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	3.5	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	100	12	ug/l	
118-74-1	Hexachlorobenzene	ND	50	4.1	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	4.3	ug/l	
67-72-1	Hexachloroethane	ND	50	3.6	ug/l	
98-95-3	Nitrobenzene	ND	50	4.2	ug/l	
110-86-1	Pyridine	ND	100	13	ug/l	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	41% 10-73%
4165-62-2	Phenol-d5	25% 10-58%
118-79-6	2,4,6-Tribromophenol	76% 15-125%
4165-60-0	Nitrobenzene-d5	65% 23-120%
321-60-8	2-Fluorobiphenyl	69% 31-102%
1718-51-0	Terphenyl-d14	101% 42-124%

6.2.1

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-LB	W30954A.D	1	11/11/16	MR	11/10/16	OP49119	MSW1256

The QC reported here applies to the following samples:

Method: SW846 8270D

OP49119-MS, OP49119-MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	100	3.2	ug/l	
	3&4-Methylphenol	ND	100	5.4	ug/l	
87-86-5	Pentachlorophenol	ND	100	5.9	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	100	5.2	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	100	3.8	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	3.5	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	100	12	ug/l	
118-74-1	Hexachlorobenzene	ND	50	4.1	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	4.3	ug/l	
67-72-1	Hexachloroethane	ND	50	3.6	ug/l	
98-95-3	Nitrobenzene	ND	50	4.2	ug/l	
110-86-1	Pyridine	ND	100	13	ug/l	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	38% 10-73%
4165-62-2	Phenol-d5	24% 10-58%
118-79-6	2,4,6-Tribromophenol	88% 15-125%
4165-60-0	Nitrobenzene-d5	62% 23-120%
321-60-8	2-Fluorobiphenyl	67% 31-102%
1718-51-0	Terphenyl-d14	85% 42-124%

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-LB2	R50865A.D	1	11/23/16	MR	11/22/16	OP49119	MSR1896

The QC reported here applies to the following samples:

Method: SW846 8270D

OP49119-LS2, OP49119-LS3

CAS No.	Compound	Result	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	100	3.2	ug/l	
	3&4-Methylphenol	ND	100	5.4	ug/l	
87-86-5	Pentachlorophenol	ND	100	5.9	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	100	5.2	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	100	3.8	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	3.5	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	100	12	ug/l	
118-74-1	Hexachlorobenzene	ND	50	4.1	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	4.3	ug/l	
67-72-1	Hexachloroethane	ND	50	3.6	ug/l	
98-95-3	Nitrobenzene	ND	50	4.2	ug/l	
110-86-1	Pyridine	ND	100	13	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	32%	10-73%
4165-62-2	Phenol-d5	22%	10-58%
118-79-6	2,4,6-Tribromophenol	70%	15-125%
4165-60-0	Nitrobenzene-d5	52%	23-120%
321-60-8	2-Fluorobiphenyl	57%	31-102%
1718-51-0	Terphenyl-d14	93%	42-124%

Blank Spike Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-BS1	R50879.D	1	11/26/16	DRY	11/16/16	OP49119	MSR1897

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-48-7	2-Methylphenol	500	365	73	20-112
	3&4-Methylphenol	1000	650	65	19-102
87-86-5	Pentachlorophenol	500	351	70	28-117
95-95-4	2,4,5-Trichlorophenol	500	532	106	56-112
88-06-2	2,4,6-Trichlorophenol	500	525	105	54-112
106-46-7	1,4-Dichlorobenzene	500	405	81	30-90
121-14-2	2,4-Dinitrotoluene	500	535	107	62-121
118-74-1	Hexachlorobenzene	500	522	104	49-128
87-68-3	Hexachlorobutadiene	500	406	81	22-96
67-72-1	Hexachloroethane	500	368	74	22-86
98-95-3	Nitrobenzene	500	425	85	50-117
110-86-1	Pyridine	500	178	36	10-86

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	50%	10-73%
4165-62-2	Phenol-d5	32%	10-58%
118-79-6	2,4,6-Tribromophenol	90%	15-125%
4165-60-0	Nitrobenzene-d5	78%	23-120%
321-60-8	2-Fluorobiphenyl	87%	31-102%
1718-51-0	Terphenyl-d14	94%	42-124%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49144-BS	R50706.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
OP49144-BSD	R50714.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	2400	1580	66	2200	89	33* a	39-104/30
59-50-7	4-Chloro-3-methyl phenol	2400	1640	68	2150	87	27	51-110/30
120-83-2	2,4-Dichlorophenol	2400	1660	69	2240	90	30	47-109/30
105-67-9	2,4-Dimethylphenol	2400	1630	68	2200	89	30	43-105/30
51-28-5	2,4-Dinitrophenol	2400	610	25	703	28	14	10-130/30
534-52-1	4,6-Dinitro-o-cresol	2400	1190	50	941	38	23	16-140/30
95-48-7	2-Methylphenol	2400	1590	66	2220	90	33* a	40-105/30
	3&4-Methylphenol	4800	3130	65	4300	87	31* a	39-113/30
88-75-5	2-Nitrophenol	2400	1520	63	2030	82	29	41-112/30
100-02-7	4-Nitrophenol	2400	1750	73	2450	99	33* a	28-134/30
87-86-5	Pentachlorophenol	2400	1410	59	1910	77	30	22-123/30
108-95-2	Phenol	2400	1550	65	2060	83	28	40-107/30
95-95-4	2,4,5-Trichlorophenol	2400	1930	80	2450	99	24	54-115/30
88-06-2	2,4,6-Trichlorophenol	2400	1890	79	2440	99	25	51-110/30
83-32-9	Acenaphthene	2400	1800	75	2300	93	24	49-108/30
208-96-8	Acenaphthylene	2400	1660	69	2150	87	26	37-102/30
120-12-7	Anthracene	2400	1690	70	2230	90	28	54-111/30
56-55-3	Benzo(a)anthracene	2400	1760	73	2380	96	30	56-117/30
50-32-8	Benzo(a)pyrene	2400	1730	72	2320	94	29	57-117/30
205-99-2	Benzo(b)fluoranthene	2400	1750	73	2280	92	26	55-122/30
191-24-2	Benzo(g,h,i)perylene	2400	1660	69	2210	89	28	52-123/30
207-08-9	Benzo(k)fluoranthene	2400	1760	73	2370	96	30	54-117/30
101-55-3	4-Bromophenyl phenyl ether	2400	2070	86	2670	108	25	54-118/30
85-68-7	Butyl benzyl phthalate	2400	1990	83	2800	113	34* a	54-121/30
91-58-7	2-Chloronaphthalene	2400	1840	77	2400	97	26	46-114/30
106-47-8	4-Chloroaniline	2400	1320	55	666	27	66* a	12-88/30
86-74-8	Carbazole	2400	1730	72	2300	93	28	56-116/30
218-01-9	Chrysene	2400	1720	72	2290	92	28	56-114/30
111-91-1	bis(2-Chloroethoxy)methane	2400	1540	64	2090	84	30	41-106/30
111-44-4	bis(2-Chloroethyl)ether	2400	1690	70	2310	93	31* a	28-113/30
108-60-1	bis(2-Chloroisopropyl)ether	2400	1790	75	2480	100	32* a	30-132/30
7005-72-3	4-Chlorophenyl phenyl ether	2400	2100	87	2730	110	26	54-114/30
95-50-1	1,2-Dichlorobenzene	2400	1750	73	2330	94	28	34-100/30
541-73-1	1,3-Dichlorobenzene	2400	1740	72	2360	95	30	35-99/30
106-46-7	1,4-Dichlorobenzene	2400	1690	70	2270	92	29	35-98/30
121-14-2	2,4-Dinitrotoluene	2400	1920	80	2480	100	25	50-121/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49144-BS	R50706.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
OP49144-BSD	R50714.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
606-20-2	2,6-Dinitrotoluene	2400	1830	76	2360	95	25	52-115/30
91-94-1	3,3'-Dichlorobenzidine	2400	1260	52	1420	57	12	17-120/30
53-70-3	Dibenzo(a,h)anthracene	2400	1650	69	2210	89	29	54-121/30
132-64-9	Dibenzofuran	2400	1830	76	2370	96	26	52-109/30
84-74-2	Di-n-butyl phthalate	2400	1940	81	2640	107	31* a	55-113/30
117-84-0	Di-n-octyl phthalate	2400	1850	77	2470	100	29	53-126/30
84-66-2	Diethyl phthalate	2400	2080	87	2730	110	27	54-111/30
131-11-3	Dimethyl phthalate	2400	2060	86	2690	109	27	53-111/30
117-81-7	bis(2-Ethylhexyl)phthalate	2400	1870	78	2590	105	32* a	55-125/30
206-44-0	Fluoranthene	2400	1790	75	2350	95	27	55-116/30
86-73-7	Fluorene	2400	1950	81	2520	102	26	52-111/30
118-74-1	Hexachlorobenzene	2400	1880	78	2440	99	26	52-117/30
87-68-3	Hexachlorobutadiene	2400	1700	71	2310	93	30	36-108/30
77-47-4	Hexachlorocyclopentadiene	2400	1240	52	1290	52	4	10-99/30
67-72-1	Hexachloroethane	2400	1580	66	2120	86	29	33-100/30
193-39-5	Indeno(1,2,3-cd)pyrene	2400	1630	68	2200	89	30	55-120/30
78-59-1	Isophorone	2400	1660	69	2200	89	28	37-101/30
91-57-6	2-Methylnaphthalene	2400	1640	68	2200	89	29	38-114/30
88-74-4	2-Nitroaniline	2400	1780	74	2330	94	27	55-120/30
99-09-2	3-Nitroaniline	2400	1600	67	1270	51	23	31-103/30
100-01-6	4-Nitroaniline	2400	1650	69	1900	77	14	50-112/30
91-20-3	Naphthalene	2400	2050	85	2960	120	36* a	27-128/30
98-95-3	Nitrobenzene	2400	1590	66	2150	87	30	33-108/30
621-64-7	N-Nitroso-di-n-propylamine	2400	1750	73	2400	97	31* a	37-112/30
86-30-6	N-Nitrosodiphenylamine	2400	1710	71	2300	93	29	47-114/30
85-01-8	Phenanthrene	2400	1780	74	2340	94	27	54-112/30
129-00-0	Pyrene	2400	1860	77	2540	103	31* a	54-118/30
120-82-1	1,2,4-Trichlorobenzene	2400	1780	74	2430	98	31* a	38-105/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	63%	81%	25-109%
4165-62-2	Phenol-d5	66%	82%	29-113%
118-79-6	2,4,6-Tribromophenol	74%	88%	20-141%
4165-60-0	Nitrobenzene-d5	63%	79%	27-115%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Page 3 of 3

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49144-BS	R50706.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
OP49144-BSD	R50714.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-1, MC48722-2, MC48722-4

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
321-60-8	2-Fluorobiphenyl	74%	88%	34-118%
1718-51-0	Terphenyl-d14	80%	96%	42-139%

(a) Outside control limits. Individual spike recoveries within acceptance limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-MS	W30956.D	1	11/11/16	MR	11/10/16	OP49119	MSW1256
OP49119-MSD	W30957.D	1	11/11/16	MR	11/10/16	OP49119	MSW1256
MC48658-1	W30958.D	1	11/11/16	MR	11/10/16	OP49119	MSW1256

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	MC48658-1 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-48-7	2-Methylphenol	ND	500	314	63	500	299	60	5	30-130/20
	3&4-Methylphenol	ND	1000	582	58	1000	552	55	5	30-130/20
87-86-5	Pentachlorophenol	ND	500	367	73	500	362	72	1	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND	500	469	94	500	454	91	3	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND	500	463	93	500	436	87	6	30-130/20
106-46-7	1,4-Dichlorobenzene	ND	500	315	63	500	266	53	17	40-140/20
121-14-2	2,4-Dinitrotoluene	ND	500	471	94	500	472	94	0	40-140/20
118-74-1	Hexachlorobenzene	ND	500	491	98	500	482	96	2	40-140/20
87-68-3	Hexachlorobutadiene	ND	500	318	64	500	264	53	19	40-140/20
67-72-1	Hexachloroethane	ND	500	281	56	500	243	49	15	40-140/20
98-95-3	Nitrobenzene	ND	500	373	75	500	336	67	10	40-140/20
110-86-1	Pyridine	ND	500	184	37	500	186	37	1	10-86/20

CAS No.	Surrogate Recoveries	MS	MSD	MC48658-1	Limits
367-12-4	2-Fluorophenol	43%	41%	41%	10-73%
4165-62-2	Phenol-d5	27%	26%	26%	10-58%
118-79-6	2,4,6-Tribromophenol	100%	99%	93%	15-125%
4165-60-0	Nitrobenzene-d5	72%	66%	67%	23-120%
321-60-8	2-Fluorobiphenyl	75%	67%	70%	31-102%
1718-51-0	Terphenyl-d14	88%	89%	85%	42-124%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 3

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49144-MS	R50710.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
OP49144-MSD	R50712.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
MC48723-45	R50713.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	MC48723-45 Spike ug/kg	Q	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	ND		3170	1870	59	3040	1510	50	27-112/30
59-50-7	4-Chloro-3-methyl phenol	ND		3170	2380	75	3040	2240	74	30-130/30
120-83-2	2,4-Dichlorophenol	ND		3170	2400	76	3040	2090	69	36-119/30
105-67-9	2,4-Dimethylphenol	ND		3170	2050	65	3040	1790	59	28-118/30
51-28-5	2,4-Dinitrophenol	ND		3170	550	17	3040	481	16	10-149/30
534-52-1	4,6-Dinitro-o-cresol	ND		3170	823	26	3040	489	16	51* a 10-150/30
95-48-7	2-Methylphenol	ND		3170	2040	64	3040	1710	56	18 23-119/30
	3&4-Methylphenol	ND		6330	4120	65	6070	3590	59	14 24-124/30
88-75-5	2-Nitrophenol	ND		3170	1950	62	3040	1470	48	28 23-126/30
100-02-7	4-Nitrophenol	ND		3170	2600	82	3040	2440	80	6 18-141/30
87-86-5	Pentachlorophenol	ND		3170	2010	63	3040	1870	62	7 10-145/30
108-95-2	Phenol	ND		3170	1900	60	3040	1600	53	17 25-119/30
95-95-4	2,4,5-Trichlorophenol	ND		3170	2820	89	3040	2610	86	8 34-128/30
88-06-2	2,4,6-Trichlorophenol	ND		3170	2750	87	3040	2500	82	10 32-124/30
83-32-9	Acenaphthene	ND		3170	2530	80	3040	2340	77	8 27-133/30
208-96-8	Acenaphthylene	ND		3170	2350	74	3040	2180	72	8 25-111/30
120-12-7	Anthracene	ND		3170	2520	80	3040	2430	80	4 25-138/30
56-55-3	Benzo(a)anthracene	ND		3170	2690	85	3040	2590	85	4 23-147/30
50-32-8	Benzo(a)pyrene	ND		3170	2640	83	3040	2540	84	4 24-144/30
205-99-2	Benzo(b)fluoranthene	ND		3170	2600	82	3040	2510	83	4 25-149/30
191-24-2	Benzo(g,h,i)perylene	ND		3170	2710	86	3040	2390	79	13 18-150/30
207-08-9	Benzo(k)fluoranthene	ND		3170	2640	83	3040	2560	84	3 18-143/30
101-55-3	4-Bromophenyl phenyl ether	ND		3170	3040	96	3040	2910	96	4 42-128/30
85-68-7	Butyl benzyl phthalate	ND		3170	3110	98	3040	2960	97	5 39-132/30
91-58-7	2-Chloronaphthalene	ND		3170	2530	80	3040	2300	76	10 39-121/30
106-47-8	4-Chloroaniline	ND		3170	1640	52	3040	1320	43	22 10-105/30
86-74-8	Carbazole	ND		3170	2580	81	3040	2480	82	4 32-134/30
218-01-9	Chrysene	ND		3170	2600	82	3040	2520	83	3 23-145/30
111-91-1	bis(2-Chloroethoxy)methane	ND		3170	2040	64	3040	1750	58	15 32-114/30
111-44-4	bis(2-Chloroethyl)ether	ND		3170	1680	53	3040	1410	46	17 25-111/30
108-60-1	bis(2-Chloroisopropyl)ether	ND		3170	1910	60	3040	1570	52	20 24-136/30
7005-72-3	4-Chlorophenyl phenyl ether	ND		3170	3070	97	3040	2930	96	5 42-123/30
95-50-1	1,2-Dichlorobenzene	ND		3170	1480	47	3040	1310	43	12 25-105/30
541-73-1	1,3-Dichlorobenzene	ND		3170	1390	44	3040	1280	42	8 26-103/30
106-46-7	1,4-Dichlorobenzene	ND		3170	1370	43	3040	1270	42	8 25-104/30
121-14-2	2,4-Dinitrotoluene	ND		3170	2850	90	3040	2600	86	9 34-129/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 2 of 3

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49144-MS	R50710.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
OP49144-MSD	R50712.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
MC48723-45	R50713.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	MC48723-45 Spike ug/kg	Q	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
606-20-2	2,6-Dinitrotoluene	ND		3170	2710	86	3040	2500	82	39-124/30
91-94-1	3,3'-Dichlorobenzidine	ND		3170	1380	44	3040	1320	43	10-139/30
53-70-3	Dibenzo(a,h)anthracene	ND		3170	2630	83	3040	2430	80	35-134/30
132-64-9	Dibenzofuran	ND		3170	2600	82	3040	2450	81	30-131/30
84-74-2	Di-n-butyl phthalate	ND		3170	2970	94	3040	2850	94	41-123/30
117-84-0	Di-n-octyl phthalate	ND		3170	2790	88	3040	2630	87	33-142/30
84-66-2	Diethyl phthalate	ND		3170	3100	98	3040	2960	97	42-119/30
131-11-3	Dimethyl phthalate	ND		3170	3020	95	3040	2910	96	38-122/30
117-81-7	bis(2-Ethylhexyl)phthalate	ND		3170	2890	91	3040	2780	92	35-141/30
206-44-0	Fluoranthene	ND		3170	2700	85	3040	2570	85	17-151/30
86-73-7	Fluorene	ND		3170	2790	88	3040	2640	87	34-128/30
118-74-1	Hexachlorobenzene	ND		3170	2810	89	3040	2650	87	40-125/30
87-68-3	Hexachlorobutadiene	ND		3170	1820	57	3040	1490	49	20 30-113/30
77-47-4	Hexachlorocyclopentadiene	ND		3170	1330	42	3040	798	26	50* a 10-103/30
67-72-1	Hexachloroethane	ND		3170	1320	42	3040	1110	37	17 10-125/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		3170	2600	82	3040	2390	79	8 22-147/30
78-59-1	Isophorone	ND		3170	2140	68	3040	1890	62	12 29-109/30
91-57-6	2-Methylnaphthalene	35.5	J	3170	2160	67	3040	1910	62	12 26-127/30
88-74-4	2-Nitroaniline	ND		3170	2610	82	3040	2470	81	6 40-128/30
99-09-2	3-Nitroaniline	ND		3170	2310	73	3040	2110	69	9 21-116/30
100-01-6	4-Nitroaniline	ND		3170	2350	74	3040	2280	75	3 21-125/30
91-20-3	Naphthalene	ND		3170	2570	81	3040	2290	75	12 18-135/30
98-95-3	Nitrobenzene	ND		3170	1820	57	3040	1560	51	15 29-110/30
621-64-7	N-Nitroso-di-n-propylamine	ND		3170	2150	68	3040	1800	59	18 22-128/30
86-30-6	N-Nitrosodiphenylamine	ND		3170	2520	80	3040	2470	81	2 22-142/30
85-01-8	Phenanthrene	22.3	J	3170	2660	83	3040	2560	84	4 21-141/30
129-00-0	Pyrene	ND		3170	2820	89	3040	2690	89	5 22-148/30
120-82-1	1,2,4-Trichlorobenzene	ND		3170	2010	63	3040	1690	56	17 30-113/30

CAS No.	Surrogate Recoveries	MS	MSD	MC48723-45 Limits
367-12-4	2-Fluorophenol	51%	43%	42% 25-109%
4165-62-2	Phenol-d5	62%	54%	54% 29-113%
118-79-6	2,4,6-Tribromophenol	83%	81%	71% 20-141%
4165-60-0	Nitrobenzene-d5	56%	48%	46% 27-115%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49144-MS	R50710.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
OP49144-MSD	R50712.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
MC48723-45	R50713.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-1, MC48722-2, MC48722-4

CAS No.	Surrogate Recoveries	MS	MSD	MC48723-45 Limits	
321-60-8	2-Fluorobiphenyl	78%	73%	73%	34-118%
1718-51-0	Terphenyl-d14	92%	91%	95%	42-139%

(a) Outside control limits. Individual spike recoveries within acceptance limits.

* = Outside of Control Limits.

Leachate Spike Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-LS1	R50880.D	1	11/26/16	DRY	11/16/16	OP49119	MSR1897
MC48722-2A	R50882.D	1	11/26/16	DRY	11/16/16	OP49119	MSR1897

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	MC48722-2ASpike ug/l	Q	ug/l	LS ug/l	LS %	Limits
95-48-7	2-Methylphenol	ND		500	354	71	30-130
	3&4-Methylphenol	ND		1000	634	63	30-130
87-86-5	Pentachlorophenol	ND		500	338	68	30-130
95-95-4	2,4,5-Trichlorophenol	ND		500	525	105	30-130
88-06-2	2,4,6-Trichlorophenol	ND		500	509	102	30-130
106-46-7	1,4-Dichlorobenzene	ND		500	398	80	40-140
121-14-2	2,4-Dinitrotoluene	ND		500	523	105	40-140
118-74-1	Hexachlorobenzene	ND		500	517	103	40-140
87-68-3	Hexachlorobutadiene	ND		500	405	81	40-140
67-72-1	Hexachloroethane	ND		500	360	72	40-140
98-95-3	Nitrobenzene	ND		500	431	86	40-140
110-86-1	Pyridine	ND		500	226	45	10-86

CAS No.	Surrogate Recoveries	LS	MC48722-2ALimits
367-12-4	2-Fluorophenol	52%	48% 10-73%
4165-62-2	Phenol-d5	34%	29% 10-58%
118-79-6	2,4,6-Tribromophenol	91%	79% 15-125%
4165-60-0	Nitrobenzene-d5	80%	74% 23-120%
321-60-8	2-Fluorobiphenyl	87%	80% 31-102%
1718-51-0	Terphenyl-d14	93%	94% 42-124%

* = Outside of Control Limits.

Leachate Spike Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-LS2	R50867.D	1	11/23/16	MR	11/22/16	OP49119	MSR1896
MC48791-2	R50869.D	1	11/23/16	MR	11/22/16	OP49119	MSR1896

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	MC48791-2 ug/l	Spike Q	LS ug/l	LS %	Limits
95-48-7	2-Methylphenol	ND	500	380	76	30-130
	3&4-Methylphenol	ND	1000	681	68	30-130
87-86-5	Pentachlorophenol	ND	500	420	84	30-130
95-95-4	2,4,5-Trichlorophenol	ND	500	507	101	30-130
88-06-2	2,4,6-Trichlorophenol	ND	500	488	98	30-130
106-46-7	1,4-Dichlorobenzene	ND	500	466	93	40-140
121-14-2	2,4-Dinitrotoluene	ND	500	504	101	40-140
118-74-1	Hexachlorobenzene	ND	500	496	99	40-140
87-68-3	Hexachlorobutadiene	ND	500	448	90	40-140
67-72-1	Hexachloroethane	ND	500	217	43	40-140
98-95-3	Nitrobenzene	ND	500	427	85	40-140
110-86-1	Pyridine	ND	500	206	41	10-86

CAS No.	Surrogate Recoveries	LS	MC48791-2	Limits
367-12-4	2-Fluorophenol	52%	41%	10-73%
4165-62-2	Phenol-d5	37%	26%	10-58%
118-79-6	2,4,6-Tribromophenol	90%	83%	15-125%
4165-60-0	Nitrobenzene-d5	77%	63%	23-120%
321-60-8	2-Fluorobiphenyl	83%	69%	31-102%
1718-51-0	Terphenyl-d14	92%	91%	42-124%

* = Outside of Control Limits.

Leachate Spike Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-LS3	R50897.D	1	11/28/16	MR	11/22/16	OP49119	MSR1898
MC48853-7	R50898.D	1	11/28/16	MR	11/22/16	OP49119	MSR1898

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	MC48853-7 ug/l	Spike Q	LS ug/l	LS %	Limits
95-48-7	2-Methylphenol	ND	500	388	78	30-130
	3&4-Methylphenol	ND	1000	692	69	30-130
87-86-5	Pentachlorophenol	ND	500	367	73	30-130
95-95-4	2,4,5-Trichlorophenol	ND	500	522	104	30-130
88-06-2	2,4,6-Trichlorophenol	ND	500	499	100	30-130
106-46-7	1,4-Dichlorobenzene	ND	500	341	68	40-140
121-14-2	2,4-Dinitrotoluene	ND	500	567	113	40-140
118-74-1	Hexachlorobenzene	ND	500	502	100	40-140
87-68-3	Hexachlorobutadiene	ND	500	340	68	40-140
67-72-1	Hexachloroethane	ND	500	308	62	40-140
98-95-3	Nitrobenzene	ND	500	431	86	40-140
110-86-1	Pyridine	ND	500	167	33	10-86

CAS No.	Surrogate Recoveries	LS	MC48853-7	Limits
367-12-4	2-Fluorophenol	47%	47%	10-73%
4165-62-2	Phenol-d5	33%	30%	10-58%
118-79-6	2,4,6-Tribromophenol	81%	76%	15-125%
4165-60-0	Nitrobenzene-d5	75%	71%	23-120%
321-60-8	2-Fluorobiphenyl	70%	71%	31-102%
1718-51-0	Terphenyl-d14	88%	81%	42-124%

* = Outside of Control Limits.

Semivolatile Surrogate Recovery Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846 8270D

Matrix: LEACHATE

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC48722-3	R50883.D	46	29	79	76	82	94
MC48722-1A	R50881.D	48	30	83	73	78	94
MC48722-2A	R50882.D	48	29	79	74	80	94
OP49119-BS1	R50879.D	50	32	90	78	87	94
OP49119-LB1	R50878A.D	41	25	76	65	69	101
OP49119-LS1	R50880.D	52	34	91	80	87	93
OP49119-LS2	R50867.D	52	37	90	77	83	92
OP49119-LS3	R50897.D	47	33	81	75	70	88
OP49119-MB1	R50878.D	41	25	76	65	69	101
OP49119-MS	W30956.D	43	27	100	72	75	88
OP49119-MSD	W30957.D	41	26	99	66	67	89
OP49119-LB	W30954A.D	38	24	88	62	67	85
OP49119-LB2	R50865A.D	32	22	70	52	57	93
OP49119-MB	W30954.D	38	24	88	62	67	85
OP49119-MB2	R50865.D	32	22	70	52	57	93

Surrogate Compounds

Recovery Limits

S1 = 2-Fluorophenol	10-73%
S2 = Phenol-d5	10-58%
S3 = 2,4,6-Tribromophenol	15-125%
S4 = Nitrobenzene-d5	23-120%
S5 = 2-Fluorobiphenyl	31-102%
S6 = Terphenyl-d14	42-124%

6.7.1

6

Semivolatile Surrogate Recovery Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846 8270D	Matrix: SO
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC48722-1	R50715.D	36	50	81	42	70	88
MC48722-2	R50716.D	57	66	81	59	80	87
MC48722-4	R50717.D	60	68	82	66	82	89
OP49144-BS	R50706.D	63	66	74	63	74	80
OP49144-BSD	R50714.D	81	82	88	79	88	96
OP49144-MB	R50705.D	30	34	57	29	43	81
OP49144-MS	R50710.D	51	62	83	56	78	92
OP49144-MSD	R50712.D	43	54	81	48	73	91

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	25-109%
S2 = Phenol-d5	29-113%
S3 = 2,4,6-Tribromophenol	20-141%
S4 = Nitrobenzene-d5	27-115%
S5 = 2-Fluorobiphenyl	34-118%
S6 = Terphenyl-d14	42-139%



GC Volatiles

QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GWX3867-MB	WX78122.D	1	11/17/16	AF	n/a	n/a	GWX3867

The QC reported here applies to the following samples: Method: SW846 8015

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	5.0	0.94	mg/kg	

CAS No.	Surrogate Recoveries	Limits
	2,3,4-Trifluorotoluene	106% 64-127%

7.1.1
7

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GWX3867-BSP	WX78123.D	1	11/17/16	AF	n/a	n/a	GWX3867
GWX3867-BSD	WX78124.D	1	11/17/16	AF	n/a	n/a	GWX3867

The QC reported here applies to the following samples: Method: SW846 8015

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (VOA)	50	55.1	110	53.4	107	3	80-120/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
	2,3,4-Trifluorotoluene	106%	106%	64-127%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC48722-1MS	WX78129.D	1	11/17/16	AF	n/a	n/a	GWX3867
MC48722-1MSD	WX78130.D	1	11/17/16	AF	n/a	n/a	GWX3867
MC48722-1	WX78128.D	1	11/17/16	AF	n/a	n/a	GWX3867

The QC reported here applies to the following samples: Method: SW846 8015

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	MC48722-1 mg/kg	Spike Q	mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (VOA)	4.46	J	118	130	107	118	132	109	2	54-130/20

CAS No.	Surrogate Recoveries	MS	MSD	MC48722-1	Limits
	2,3,4-Trifluorotoluene	105%	106%	102%	64-127%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846 8015	Matrix: SO
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a
MC48722-1	WX78128.D	102
MC48722-2	WX78127.D	102
MC48722-4	WX78125.D	107
GWX3867-BSD	WX78124.D	106
GWX3867-BSP	WX78123.D	106
GWX3867-MB	WX78122.D	106
MC48722-1MS	WX78129.D	105
MC48722-1MSD	WX78130.D	106

Surrogate Compounds	Recovery Limits
S1 = 2,3,4-Trifluorotoluene	64-127%

(a) Recovery from GC signal #1

GC Semi-volatiles

QC Data Summaries



Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49161-MB	YZ98708.D	1	11/28/16	TA	11/16/16	OP49161	GYZ8038

The QC reported here applies to the following samples: Method: SW846 8151
MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	10	3.4	ug/l	
93-72-1	2,4,5-TP (Silvex)	ND	10	4.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
19719-28-9	2,4-DCAA	75% 30-150%
19719-28-9	2,4-DCAA	68% 30-150%

Method Blank Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49159-MB	BE53422.D	1	11/21/16	TA	11/16/16	OP49159	GBE2688

The QC reported here applies to the following samples:

Method: SW846 8081B

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	0.50	0.044	ug/l	
12789-03-6	Chlordane	ND	5.0	1.1	ug/l	
72-20-8	Endrin	ND	0.50	0.12	ug/l	
76-44-8	Heptachlor	ND	0.50	0.11	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.50	0.051	ug/l	
72-43-5	Methoxychlor	ND	0.50	0.21	ug/l	
8001-35-2	Toxaphene	ND	25	1.3	ug/l	

CAS No.	Surrogate Recoveries	Limits
877-09-8	Tetrachloro-m-xylene	62% 30-150%
877-09-8	Tetrachloro-m-xylene	73% 30-150%
2051-24-3	Decachlorobiphenyl	90% 30-150%
2051-24-3	Decachlorobiphenyl	80% 30-150%

8.1.2

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Method Blank Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49147-MB	BK63151.D	1	11/17/16	TA	11/15/16	OP49147	GBK1996

The QC reported here applies to the following samples:

Method: SW846 8082A

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	25	2.5	ug/kg	
11104-28-2	Aroclor 1221	ND	25	11	ug/kg	
11141-16-5	Aroclor 1232	ND	25	7.6	ug/kg	
53469-21-9	Aroclor 1242	ND	25	5.7	ug/kg	
12672-29-6	Aroclor 1248	ND	25	4.3	ug/kg	
11097-69-1	Aroclor 1254	ND	25	11	ug/kg	
11096-82-5	Aroclor 1260	ND	25	2.3	ug/kg	

CAS No.	Surrogate Recoveries	Limits
877-09-8	Tetrachloro-m-xylene	85% 25-145%
877-09-8	Tetrachloro-m-xylene	87% 25-145%
2051-24-3	Decachlorobiphenyl	86% 25-179%
2051-24-3	Decachlorobiphenyl	87% 25-179%

8.1.3

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Method Blank Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49160-MB	BK63180.D	1	11/18/16	TA	11/16/16	OP49160	GBK1997

The QC reported here applies to the following samples:

Method: SW846 8082A

MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	2.5	1.6	ug/l	
11104-28-2	Aroclor 1221	ND	2.5	1.6	ug/l	
11141-16-5	Aroclor 1232	ND	2.5	1.8	ug/l	
53469-21-9	Aroclor 1242	ND	2.5	1.9	ug/l	
12672-29-6	Aroclor 1248	ND	2.5	1.2	ug/l	
11097-69-1	Aroclor 1254	ND	2.5	1.6	ug/l	
11096-82-5	Aroclor 1260	ND	2.5	1.9	ug/l	

CAS No.	Surrogate Recoveries	Limits
877-09-8	Tetrachloro-m-xylene	86% 30-150%
877-09-8	Tetrachloro-m-xylene	89% 30-150%
2051-24-3	Decachlorobiphenyl	94% 30-150%
2051-24-3	Decachlorobiphenyl	97% 30-150%

8.1.4

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Method Blank Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49158-MB	IR3252.D	1	11/18/16	MD	11/16/16	OP49158	GIR226

The QC reported here applies to the following samples: Method: SW846-8015

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (Semi-VOA)	ND	16	4.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	79% 17-130%

8.1.5
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Leachate Blank Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49161-LB	YZ98708A.D	1	11/28/16	TA	11/16/16	OP49161	GYZ8038

The QC reported here applies to the following samples:

Method: SW846 8151

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	10	3.4	ug/l	
93-72-1	2,4,5-TP (Silvex)	ND	10	4.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
19719-28-9	2,4-DCAA	75% 30-150%
19719-28-9	2,4-DCAA	68% 30-150%

8.2.1

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Leachate Blank Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49159-LB	BE53422A.D	1	11/21/16	TA	11/16/16	OP49159	GBE2688

The QC reported here applies to the following samples:

Method: SW846 8081B

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	0.50	0.044	ug/l	
12789-03-6	Chlordane	ND	5.0	1.1	ug/l	
72-20-8	Endrin	ND	0.50	0.12	ug/l	
76-44-8	Heptachlor	ND	0.50	0.11	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.50	0.051	ug/l	
72-43-5	Methoxychlor	ND	0.50	0.21	ug/l	
8001-35-2	Toxaphene	ND	25	1.3	ug/l	

CAS No.	Surrogate Recoveries	Limits
877-09-8	Tetrachloro-m-xylene	62% 30-150%
877-09-8	Tetrachloro-m-xylene	73% 30-150%
2051-24-3	Decachlorobiphenyl	90% 30-150%
2051-24-3	Decachlorobiphenyl	80% 30-150%

8.2.2

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Leachate Blank Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49160-LB	BK63180A.D	1	11/18/16	TA	11/16/16	OP49160	GBK1997

The QC reported here applies to the following samples:

Method: SW846 8082A

MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	2.5	1.6	ug/l	
11104-28-2	Aroclor 1221	ND	2.5	1.6	ug/l	
11141-16-5	Aroclor 1232	ND	2.5	1.8	ug/l	
53469-21-9	Aroclor 1242	ND	2.5	1.9	ug/l	
12672-29-6	Aroclor 1248	ND	2.5	1.2	ug/l	
11097-69-1	Aroclor 1254	ND	2.5	1.6	ug/l	
11096-82-5	Aroclor 1260	ND	2.5	1.9	ug/l	

CAS No.	Surrogate Recoveries	Limits
877-09-8	Tetrachloro-m-xylene	86% 30-150%
877-09-8	Tetrachloro-m-xylene	89% 30-150%
2051-24-3	Decachlorobiphenyl	94% 30-150%
2051-24-3	Decachlorobiphenyl	97% 30-150%

8.2.3

8

Blank Spike Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49161-BS	YZ98709.D	1	11/28/16	TA	11/16/16	OP49161	GYZ8038

The QC reported here applies to the following samples:

Method: SW846 8151

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
94-75-7	2,4-D	40	43.2	108	40-140
93-72-1	2,4,5-TP (Silvex)	40	40.9	102	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
19719-28-9	2,4-DCAA	101%	30-150%
19719-28-9	2,4-DCAA	96%	30-150%

* = Outside of Control Limits.

Blank Spike Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49159-BS	BE53423.D	1	11/21/16	TA	11/16/16	OP49159	GBE2688

The QC reported here applies to the following samples:

Method: SW846 8081B

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
58-89-9	gamma-BHC (Lindane)	5	4.4	88	40-140
72-20-8	Endrin	5	5.2	104	40-140
76-44-8	Heptachlor	5	4.5	90	40-140
1024-57-3	Heptachlor epoxide	5	4.6	92	40-140
72-43-5	Methoxychlor	5	5.5	110	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	75%	30-150%
877-09-8	Tetrachloro-m-xylene	69%	30-150%
2051-24-3	Decachlorobiphenyl	82%	30-150%
2051-24-3	Decachlorobiphenyl	70%	30-150%

* = Outside of Control Limits.

Blank Spike Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49160-BS	BK63181.D	1	11/18/16	TA	11/16/16	OP49160	GBK1997

The QC reported here applies to the following samples:

Method: SW846 8082A

MC48722-1A, MC48722-2A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	20	21.1	106	40-140
11104-28-2	Aroclor 1221		ND		40-140
11141-16-5	Aroclor 1232		ND		40-140
53469-21-9	Aroclor 1242		ND		40-140
12672-29-6	Aroclor 1248		ND		40-140
11097-69-1	Aroclor 1254		ND		40-140
11096-82-5	Aroclor 1260	20	22.5	113	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	86%	30-150%
877-09-8	Tetrachloro-m-xylene	86%	30-150%
2051-24-3	Decachlorobiphenyl	95%	30-150%
2051-24-3	Decachlorobiphenyl	99%	30-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49158-BS	IR3253.D	1	11/18/16	MD	11/16/16	OP49158	GIR226

The QC reported here applies to the following samples: Method: SW846-8015

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (Semi-VOA)	160	141	88	29-125

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	82%	17-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49147-BS	BK63152.D	1	11/17/16	TA	11/15/16	OP49147	GBK1996
OP49147-BSD	BK63164.D	1	11/17/16	TA	11/15/16	OP49147	GBK1996

The QC reported here applies to the following samples:

Method: SW846 8082A

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	262	263	100	290	113	10	47-144/30
11104-28-2	Aroclor 1221		ND		ND		nc	40-140/30
11141-16-5	Aroclor 1232		ND		ND		nc	40-140/30
53469-21-9	Aroclor 1242		ND		ND		nc	40-140/30
12672-29-6	Aroclor 1248		ND		ND		nc	40-140/30
11097-69-1	Aroclor 1254		ND		ND		nc	40-140/30
11096-82-5	Aroclor 1260	262	262	100	269	105	3	45-156/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	94%	104%	25-145%
877-09-8	Tetrachloro-m-xylene	95%	113%	25-145%
2051-24-3	Decachlorobiphenyl	90%	92%	25-179%
2051-24-3	Decachlorobiphenyl	95%	100%	25-179%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49161-MS	YZ98710.D	1	11/28/16	TA	11/16/16	OP49161	GYZ8038
OP49161-MSD	YZ98713.D	1	11/28/16	TA	11/16/16	OP49161	GYZ8038
MC48722-2A	YZ98718.D	1	11/29/16	TA	11/16/16	OP49161	GYZ8038

The QC reported here applies to the following samples: Method: SW846 8151

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	MC48722-2ASpike ug/l	Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
94-75-7	2,4-D	ND	40	44.3	111	40	42.2	106	5	30-150/30
93-72-1	2,4,5-TP (Silvex)	ND	40	42.4	106	40	40.2	101	5	30-150/30

CAS No.	Surrogate Recoveries	MS	MSD	MC48722-2ALimits
19719-28-9	2,4-DCAA	101%	100%	60% 30-150%
19719-28-9	2,4-DCAA	96%	95%	47% 30-150%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49159-MS	BE53424.D	1	11/21/16	TA	11/16/16	OP49159	GBE2688
OP49159-MSD	BE53425.D	1	11/21/16	TA	11/16/16	OP49159	GBE2688
MC48722-2A	BE53427.D	1	11/21/16	TA	11/16/16	OP49159	GBE2688

The QC reported here applies to the following samples: Method: SW846 8081B

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	MC48722-2ASpike ug/l	Q	ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
58-89-9	gamma-BHC (Lindane)	ND	5		4.7	94	5	3.8	76	21	30-150/30
72-20-8	Endrin	ND	5		5.6	112	5	4.8	96	15	30-150/30
76-44-8	Heptachlor	ND	5		4.9	98	5	4.1	82	18	30-150/30
1024-57-3	Heptachlor epoxide	ND	5		5.0	100	5	4.1	82	20	30-150/30
72-43-5	Methoxychlor	ND	5		6.0	120	5	5.3	106	12	30-150/30

CAS No.	Surrogate Recoveries	MS	MSD	MC48722-2ALimits	
877-09-8	Tetrachloro-m-xylene	75%	57%	47%	30-150%
877-09-8	Tetrachloro-m-xylene	70%	56%	61%	30-150%
2051-24-3	Decachlorobiphenyl	85%	76%	32%	30-150%
2051-24-3	Decachlorobiphenyl	72%	67%	65%	30-150%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49147-MS	BK63153.D	1	11/17/16	TA	11/15/16	OP49147	GBK1996
OP49147-MSD	BK63154.D	1	11/17/16	TA	11/15/16	OP49147	GBK1996
MC48722-1	BK63163.D	1	11/17/16	TA	11/15/16	OP49147	GBK1996

The QC reported here applies to the following samples: Method: SW846 8082A

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	MC48722-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND	333	311	93	344	286	83	8	24-164/50
11104-28-2	Aroclor 1221	ND		ND			ND		nc	40-140/50
11141-16-5	Aroclor 1232	ND		ND			ND		nc	40-140/50
53469-21-9	Aroclor 1242	ND		ND			ND		nc	40-140/50
12672-29-6	Aroclor 1248	ND		ND			ND		nc	40-140/50
11097-69-1	Aroclor 1254	ND		ND			ND		nc	40-140/50
11096-82-5	Aroclor 1260	ND	333	329	99	344	295	86	11	19-177/50

CAS No.	Surrogate Recoveries	MS	MSD	MC48722-1	Limits
877-09-8	Tetrachloro-m-xylene	145%	84%	83%	25-145%
877-09-8	Tetrachloro-m-xylene	97%	73%	74%	25-145%
2051-24-3	Decachlorobiphenyl	83%	78%	76%	25-179%
2051-24-3	Decachlorobiphenyl	75%	80%	76%	25-179%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49160-MS	BK63182.D	1	11/18/16	TA	11/16/16	OP49160	GBK1997
OP49160-MSD	BK63183.D	1	11/18/16	TA	11/16/16	OP49160	GBK1997
MC48722-2A	BK63185.D	1	11/18/16	TA	11/16/16	OP49160	GBK1997

The QC reported here applies to the following samples:

Method: SW846 8082A

MC48722-1A, MC48722-2A

CAS No.	Compound	MC48722-2ASpike ug/l	Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND	20	20.5	103	20	21.4	107	4	40-140/50
11104-28-2	Aroclor 1221	ND		ND			ND		nc	40-140/50
11141-16-5	Aroclor 1232	ND		ND			ND		nc	40-140/50
53469-21-9	Aroclor 1242	ND		ND			ND		nc	40-140/50
12672-29-6	Aroclor 1248	ND		ND			ND		nc	40-140/50
11097-69-1	Aroclor 1254	ND		ND			ND		nc	40-140/50
11096-82-5	Aroclor 1260	ND	20	22.3	112	20	23.3	117	4	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	MC48722-2ALimits
877-09-8	Tetrachloro-m-xylene	83%	80%	68%
877-09-8	Tetrachloro-m-xylene	84%	80%	70%
2051-24-3	Decachlorobiphenyl	105%	102%	92%
2051-24-3	Decachlorobiphenyl	110%	107%	96%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49158-MS	IR3258.D	1	11/18/16	MD	11/16/16	OP49158	GIR226
OP49158-MSD	IR3261.D	1	11/18/16	MD	11/16/16	OP49158	GIR226
MC48722-4	IR3257.D	1	11/18/16	MD	11/16/16	OP49158	GIR226

The QC reported here applies to the following samples:

Method: SW846-8015

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	MC48722-4 mg/kg	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (Semi-VOA)	2200	195	4280	1069* ^a	203	2720	256* ^a	45	10-139/50

CAS No.	Surrogate Recoveries	MS	MSD	MC48722-4	Limits
84-15-1	o-Terphenyl	124%	131%* ^b	91%	17-130%

(a) Outside control limits due to high level in sample relative to spike amount.

(b) Outside control limits due to possible matrix interference.

* = Outside of Control Limits.

Semivolatile Surrogate Recovery Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846 8151	Matrix: LEACHATE
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b
MC48722-3	YZ98719.D	59	48
MC48722-1A	YZ98717.D	57	45
MC48722-2A	YZ98718.D	60	47
OP49161-BS	YZ98709.D	101	96
OP49161-LB	YZ98708A.D	75	68
OP49161-MB	YZ98708.D	75	68
OP49161-MS	YZ98710.D	101	96
OP49161-MSD	YZ98713.D	100	95

Surrogate Compounds	Recovery Limits
---------------------	-----------------

S1 = 2,4-DCAA	30-150%
---------------	---------

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

8.6.1
8

Semivolatile Surrogate Recovery Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846 8081B	Matrix: LEACHATE
---------------------	------------------

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b	S2 ^a	S2 ^b
MC48722-3	BE53428.D	68	70	82	76
MC48722-1A	BE53426.D	50	53	82	75
MC48722-2A	BE53427.D	47	61	32	65
OP49159-BS	BE53423.D	75	69	82	70
OP49159-LB	BE53422A.D	62	73	90	80
OP49159-MB	BE53422.D	62	73	90	80
OP49159-MS	BE53424.D	75	70	85	72
OP49159-MSD	BE53425.D	57	56	76	67

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	30-150%
S2 = Decachlorobiphenyl	30-150%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

8.6.2
8

Semivolatile Surrogate Recovery Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846 8082A	Matrix: LEACHATE
---------------------	------------------

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b	S2 ^a	S2 ^b
MC48722-1A	BK63184.D	85	72	109	112
MC48722-2A	BK63185.D	68	70	92	96
OP49160-BS	BK63181.D	86	86	95	99
OP49160-LB	BK63180A.D	86	89	94	97
OP49160-MB	BK63180.D	86	89	94	97
OP49160-MS	BK63182.D	83	84	105	110
OP49160-MSD	BK63183.D	80	80	102	107

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	30-150%
S2 = Decachlorobiphenyl	30-150%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

8.6.3
8

Semivolatile Surrogate Recovery Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846 8082A	Matrix: SO
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b	S2 ^a	S2 ^b
MC48722-1	BK63163.D	83	74	76	76
MC48722-2	BK63165.D	99	106	91	99
MC48722-4	BK63166.D	101	74	69	68
OP49147-BS	BK63152.D	94	95	90	95
OP49147-BSD	BK63164.D	104	113	92	100
OP49147-MB	BK63151.D	85	87	86	87
OP49147-MS	BK63153.D	145	97	83	75
OP49147-MSD	BK63154.D	84	73	78	80

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	25-145%
S2 = Decachlorobiphenyl	25-179%

- (a) Recovery from GC signal #1
- (b) Recovery from GC signal #2

8.6.4
8

Semivolatile Surrogate Recovery Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846-8015	Matrix: SO
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a
MC48722-1	IR3264.D	91
MC48722-2	IR3263.D	70
MC48722-4	IR3257.D	91
OP49158-BS	IR3253.D	82
OP49158-MB	IR3252.D	79
OP49158-MS	IR3258.D	124
OP49158-MSD	IR3261.D	131* ^b

Surrogate Compounds	Recovery Limits
---------------------	-----------------

S1 = o-Terphenyl 17-130%

(a) Recovery from GC signal #1
(b) Outside control limits due to possible matrix interference.

8.6.5
8

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27019
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 11/15/16

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.033	.0011	.0057	0.0070	<0.033

Associated samples MP27019: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27019
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 11/15/16

Metal	MC48716-3		Spike lot		QC
	Original	MS	HGRWS1	% Rec	Limits
Mercury	0.030	0.53	0.496	100.8	80-120

Associated samples MP27019: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27019
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 11/15/16

Metal	MC48716-3 Original MSD	Spike lot HGRWS1	% Rec	MSD RPD	QC Limit
Mercury	0.030 0.53	0.489	102.3	0.0	20

Associated samples MP27019: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27019
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 11/15/16 11/15/16

Metal	BSP Result	Spike lot HGRWS1	% Rec	QC Limits	BSD Result	Spike lot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	0.50	0.5	100.0	80-120	0.48	0.5	96.0	4.1	20

Associated samples MP27019: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27019
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 11/15/16

Metal	LCS Result	Spike lot HGLCS86	% Rec	QC Limits
Mercury	19.6	20.2	97.0	71-129

Associated samples MP27019: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 11/15/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	20	1.1	1.2		
Antimony	1.0	.13	.17	0.12	<1.0
Arsenic	1.0	.15	.2	-0.070	<1.0
Barium	5.0	.019	.076	0.040	<5.0
Beryllium	0.40	.016	.015	0.0	<0.40
Bismuth	5.0	.095	.15		
Boron	10	.97	.13		
Cadmium	0.40	.019	.031	-0.010	<0.40
Calcium	500	.76	.86		
Chromium	1.0	.039	.047	0.080	<1.0
Cobalt	5.0	.021	.031		
Copper	2.5	.055	.1		
Gold	5.0	.091	.11		
Iron	10	.19	.44		
Lead	1.0	.11	.11	0.030	<1.0
Lithium	50	.13	.18		
Magnesium	500	2.5	4		
Manganese	1.5	.011	.047		
Molybdenum	10	.017	.51		
Nickel	4.0	.033	.057	-0.010	<4.0
Palladium	5.0	.19	.14		
Platinum	5.0	.31	.54		
Potassium	500	2.7	3.4		
Selenium	1.0	.18	.3	0.13	<1.0
Silicon	10	.63	.51		
Silver	0.50	.027	.061	-0.010	<0.50
Sodium	500	.51	1.2		
Sulfur	5.0	.22	.31		
Strontium	1.0	.0079	.022		
Thallium	1.0	.13	.11	-0.080	<1.0
Tin	10	.08	.078		
Titanium	5.0	.032	.054		
Tungsten	10	.33	.93		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 11/15/16

Metal	RL	IDL	MDL	MB raw	final
Vanadium	1.0	.037	.04	-0.010	<1.0
Zinc	2.0	.12	.17	0.22	<2.0
Zirconium	5.0	.032	.17		

Associated samples MP27020: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722

Account: BBLNYS - Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020

Methods: SW846 6010C

Matrix Type: SOLID

Units: mg/kg

Prep Date:

11/15/16

Metal	MC48731-1 Original MS		SpikeLot MPICP7	% Rec	QC Limits
Aluminum					
Antimony	0.26	19.9	44.9	43.7 (a)	75-125
Arsenic	2.6	43.4	44.9	90.9	75-125
Barium	33.9	198	180	91.4	75-125
Beryllium	0.26	40.6	44.9	89.9	75-125
Bismuth					
Boron					
Cadmium	0.082	42.5	44.9	94.5	75-125
Calcium					
Chromium	12.5	52.2	44.9	88.4	75-125
Cobalt					
Copper					
Gold					
Iron					
Lead	19.4	107	89.8	97.6	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	7.6	49.7	44.9	93.8	75-125
Palladium					
Platinum					
Potassium					
Selenium	0.0	40.4	44.9	90.0	75-125
Silicon					
Silver	0.082	15.2	18	84.2	75-125
Sodium					
Sulfur					
Strontium					
Thallium	0.0	42.0	44.9	93.6	75-125
Tin					
Titanium					
Tungsten					

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/15/16

Metal	MC48731-1 Original MS		Spike lot MPICP7	% Rec	QC Limits
Vanadium	22.5	63.7	44.9	91.8	75-125
Zinc	28.2	79.0	44.9	113.2	75-125

Zirconium

Associated samples MP27020: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity. Post spike within acceptable range.

9.2.2

9

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/15/16

Metal	MC48731-1 Original	MSD	Spike/lot MPICP7	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.26	20.3	44.9	44.6 (a)	2.0	20
Arsenic	2.6	43.6	44.9	91.3	0.5	20
Barium	33.9	193	180	88.6	2.6	20
Beryllium	0.26	40.9	44.9	90.5	0.7	20
Bismuth						
Boron						
Cadmium	0.082	42.8	44.9	95.2	0.7	20
Calcium						
Chromium	12.5	50.8	44.9	85.3	2.7	20
Cobalt						
Copper						
Gold						
Iron						
Lead	19.4	105	89.8	95.3	1.9	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	7.6	49.4	44.9	93.1	0.6	20
Palladium						
Platinum						
Potassium						
Selenium	0.0	40.7	44.9	90.7	0.7	20
Silicon						
Silver	0.082	15.2	18	84.2	0.0	20
Sodium						
Sulfur						
Strontium						
Thallium	0.0	42.4	44.9	94.4	0.9	20
Tin						
Titanium						
Tungsten						

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/15/16

Metal	MC48731-1 Original MSD		Spike lot MPICP7	% Rec	MSD RPD	QC Limit
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Vanadium	22.5	62.0	44.9	88.0	2.7	20
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Zinc	28.2	68.3	44.9	89.3	14.5	20
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Zirconium

Associated samples MP27020: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike duplicate recovery indicates possible matrix interference and/or sample nonhomogeneity.

9.2.2

9

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/15/16 11/15/16

Metal	BSP Result	SpikeLot MPICP7	% Rec	QC Limits	BSD Result	SpikeLot MPICP7	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony	47.8	50	95.6	80-120	48.3	50	96.6	1.0	20
Arsenic	48.1	50	96.2	80-120	48.4	50	96.8	0.6	20
Barium	188	200	94.0	80-120	186	200	93.0	1.1	20
Beryllium	46.6	50	93.2	80-120	46.3	50	92.6	0.6	20
Bismuth									
Boron									
Cadmium	49.3	50	98.6	80-120	49.6	50	99.2	0.6	20
Calcium									
Chromium	46.0	50	92.0	80-120	45.9	50	91.8	0.2	20
Cobalt									
Copper									
Gold									
Iron									
Lead	95.5	100	95.5	80-120	96.3	100	96.3	0.8	20
Lithium									
Magnesium									
Manganese									
Molybdenum									
Nickel	47.3	50	94.6	80-120	47.5	50	95.0	0.4	20
Palladium									
Platinum									
Potassium									
Selenium	47.2	50	94.4	80-120	47.5	50	95.0	0.6	20
Silicon									
Silver	17.4	20	87.0	80-120	17.2	20	86.0	1.2	20
Sodium									
Sulfur									
Strontium									
Thallium	48.4	50	96.8	80-120	48.6	50	97.2	0.4	20
Tin									
Titanium									
Tungsten									

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/15/16 11/15/16

Metal	BSP Result	SpikeLot MPICP7	% Rec	QC Limits	BSD Result	SpikeLot MPICP7	% Rec	BSD RPD	QC Limit
Vanadium	47.0	50	94.0	80-120	46.3	50	92.6	1.5	20
Zinc	47.1	50	94.2	80-120	47.4	50	94.8	0.6	20

Zirconium

Associated samples MP27020: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

9.2.3

9

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC48722

Account: BBLNYS - Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020

Methods: SW846 6010C

Matrix Type: SOLID

Units: mg/kg

Prep Date: 11/15/16

Metal	LCS Result	Spike lot MPLCS86	% Rec	QC Limits
Aluminum				
Antimony	52.3	86.5	60.5	1-199
Arsenic	91.7	97.5	94.1	78-122
Barium	290	306	94.8	83-117
Beryllium	90.8	100	90.8	83-118
Bismuth				
Boron				
Cadmium	73.2	76.6	95.6	82-118
Calcium				
Chromium	93.0	103	90.3	80-121
Cobalt				
Copper				
Gold				
Iron				
Lead	89.9	96.7	93.0	82-118
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	141	153	92.2	82-118
Palladium				
Platinum				
Potassium				
Selenium	150	161	93.2	78-123
Silicon				
Silver	43.6	49.3	88.4	75-125
Sodium				
Sulfur				
Strontium				
Thallium	114	119	95.8	79-121
Tin				
Titanium				
Tungsten				

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/15/16

Metal	LCS Result	Spike lot MPLCS86	% Rec	QC Limits
Vanadium	95.2	102	93.3	78-123
Zinc	203	229	88.6	82-118

Zirconium

Associated samples MP27020: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

9.2.3

9

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date: 11/15/16

Metal	MC48731-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	2.90	0.00	100.0(a)	0-10
Arsenic	28.8	24.0	16.7 (a)	0-10
Barium	372	391	5.1	0-10
Beryllium	2.80	2.60	7.1	0-10
Bismuth				
Boron				
Cadmium	0.900	0.00	100.0(a)	0-10
Calcium				
Chromium	137	143	4.5	0-10
Cobalt				
Copper				
Gold				
Iron				
Lead	213	215	0.7	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	83.1	82.6	0.6	0-10
Palladium				
Platinum				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.900	0.00	100.0(a)	0-10
Sodium				
Sulfur				
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Tungsten				

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date: 11/15/16

Metal	MC48731-1		%DIF	QC Limits
	Original	SDL 1:5		
Vanadium	247	260	5.1	0-10
Zinc	310	333	7.6	0-10

Zirconium

Associated samples MP27020: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

9.2.4

9

POST DIGESTATE SPIKE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date:

11/15/16

Metal	Sample ml	Final ml	MC48731-1 Raw	PS ug/l	Corr.**	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	10	10.1	2.9	2.871287	21.8	.1	2	19.80198	95.6	80-120
Arsenic										
Barium										
Beryllium										
Bismuth										
Boron										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Gold										
Iron										
Lead										
Lithium										
Magnesium										
Manganese										
Molybdenum										
Nickel										
Palladium										
Platinum										
Potassium										
Selenium										
Silicon										
Silver										
Sodium										
Sulfur										
Strontium										
Thallium										
Tin										
Titanium										
Tungsten										

POST DIGESTATE SPIKE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date:

11/15/16

Metal	Sample ml	Final ml	MC48731-1 Raw	PS Corr.** ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
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Vanadium

Zinc

Zirconium

Associated samples MP27020: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(**) Corr. sample result = Raw * (sample volume / final volume)

(anr) Analyte not requested

9.2.5

9

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 11/16/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	0.20	.011	.025		
Antimony	0.0060	.0013	.0012		
Arsenic	0.010	.0015	.002	-0.00020	<0.010
Barium	0.50	.00019	.00057	0.00010	<0.50
Beryllium	0.0040	.00016	.00034		
Bismuth	0.050	.00095	.0018		
Boron	0.10	.0097	.0023		
Cadmium	0.0040	.00019	.0003	0.0	<0.0040
Calcium	5.0	.0076	.018		
Chromium	0.010	.00039	.0011	0.00010	<0.010
Cobalt	0.050	.00021	.00041		
Copper	0.025	.00055	.0042		
Gold	0.050	.00091	.0013		
Iron	0.10	.0019	.016		
Lead	0.010	.0011	.0011	0.00010	<0.010
Lithium	0.50	.0013	.0018		
Magnesium	5.0	.025	.056		
Manganese	0.015	.00011	.00041		
Molybdenum	0.10	.00017	.016		
Nickel	0.040	.00033	.00035		
Palladium	0.050	.0019	.0014		
Platinum	0.050	.0031	.0047		
Potassium	5.0	.027	.078		
Selenium	0.025	.0018	.0034	0.00080	<0.025
Silicon	0.10	.0063	.03		
Silver	0.0050	.00027	.0014	0.00010	<0.0050
Sodium	5.0	.0051	.035		
Sulfur	0.050	.0022	.0033		
Strontium	0.010	.000079	.00017		
Thallium	0.0050	.0013	.0018		
Tin	0.10	.0008	.0022		
Titanium	0.050	.00032	.00099		
Tungsten	0.10	.0033	.023		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 11/16/16

Metal	RL	IDL	MDL	MB raw	final
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Vanadium 0.010 .00037 .0004

Zinc 0.10 .0012 .001

Zirconium 0.050 .00032 .0026

Associated samples MP27025: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 11/16/16

Metal	MC48722-1A Original MS		SpikeLot MPICP7	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	0.0044	0.54	0.50	107.1	75-125
Barium	0.65	2.6	2.0	97.5	75-125
Beryllium					
Bismuth					
Boron					
Cadmium	0.0012	0.54	0.50	107.8	75-125
Calcium					
Chromium	0.00060	0.47	0.50	93.9	75-125
Cobalt					
Copper					
Gold					
Iron					
Lead	0.0012	1.0	1.0	99.9	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Palladium					
Platinum					
Potassium					
Selenium	0.0	0.55	0.50	110.0	75-125
Silicon					
Silver	0.00090	0.21	0.20	104.6	75-125
Sodium					
Sulfur					
Strontium					
Thallium					
Tin					
Titanium					
Tungsten					

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 11/16/16

Metal	MC48722-1A Original MS	Spike lot MPICP7	% Rec	QC Limits
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Vanadium

Zinc

Zirconium

Associated samples MP27025: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

9.3.2

9

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 11/16/16

Metal	MC48722-1A Original	MSD	SpikeLot MPICP7	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	0.0044	0.55	0.50	109.1	1.8	20
Barium	0.65	2.6	2.0	97.5	0.0	20
Beryllium						
Bismuth						
Boron						
Cadmium	0.0012	0.55	0.50	109.8	1.8	20
Calcium						
Chromium	0.00060	0.47	0.50	93.9	0.0	20
Cobalt						
Copper						
Gold						
Iron						
Lead	0.0012	1.0	1.0	99.9	0.0	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Palladium						
Platinum						
Potassium						
Selenium	0.0	0.56	0.50	112.0	1.8	20
Silicon						
Silver	0.00090	0.21	0.20	104.6	0.0	20
Sodium						
Sulfur						
Strontium						
Thallium						
Tin						
Titanium						
Tungsten						

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 11/16/16

Metal	MC48722-1A Original MSD	Spike lot MPICP7	% Rec	MSD RPD	QC Limit
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Vanadium

Zinc

Zirconium

Associated samples MP27025: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

9.3.2

9

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 11/16/16 11/16/16

Metal	BSP Result	Spikelot MPICP7	% Rec	QC Limits	BSD Result	Spikelot MPICP7	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony									
Arsenic	0.53	0.50	106.0	80-120	0.52	0.50	104.0	1.9	20
Barium	1.9	2.0	95.0	80-120	1.9	2.0	95.0	0.0	20
Beryllium									
Bismuth									
Boron									
Cadmium	0.52	0.50	104.0	80-120	0.51	0.50	102.0	1.9	20
Calcium									
Chromium	0.48	0.50	96.0	80-120	0.48	0.50	96.0	0.0	20
Cobalt									
Copper									
Gold									
Iron									
Lead	1.0	1.0	100.0	80-120	0.99	1.0	99.0	1.0	20
Lithium									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Palladium									
Platinum									
Potassium									
Selenium	0.54	0.50	108.0	80-120	0.53	0.50	106.0	1.9	20
Silicon									
Silver	0.20	0.20	100.0	80-120	0.20	0.20	100.0	0.0	20
Sodium									
Sulfur									
Strontium									
Thallium									
Tin									
Titanium									
Tungsten									

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 11/16/16 11/16/16

Metal	BSP Result	SpikeLot MPICP7	% Rec	QC Limits	BSD Result	SpikeLot MPICP7	% Rec	BSD RPD	QC Limit
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Vanadium

Zinc

Zirconium

Associated samples MP27025: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

9.3.3

6

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: ug/l

Prep Date: 11/16/16

Metal	MC48722-1A Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	4.40	9.40	113.6(a)	0-10
Barium	649	663	2.1	0-10
Beryllium				
Bismuth				
Boron				
Cadmium	1.20	2.00	66.7 (a)	0-10
Calcium				
Chromium	0.600	0.00	100.0(a)	0-10
Cobalt				
Copper				
Gold				
Iron				
Lead	1.20	0.00	100.0(a)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Palladium				
Platinum				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.900	0.00	100.0(a)	0-10
Sodium				
Sulfur				
Strontium				
Thallium				
Tin				
Titanium				
Tungsten				

9.3.4
9

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: ug/l

Prep Date: 11/16/16

Metal	MC48722-1A	QC	
	Original SDL 1:5	%DIF	Limits

Vanadium

Zinc

Zirconium

Associated samples MP27025: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

9.3.4

9

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27030
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date: 11/17/16

Metal	RL	IDL	MDL	MB raw	final
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Mercury 0.00020 .0000068 .000034 -0.00010 <0.00020

Associated samples MP27030: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27030
 Matrix Type: LEACHATE

Methods: SW846 7470A
 Units: mg/l

Prep Date: 11/17/16

Metal	MC48751-1A Original MS	SpikeLot HGRWS1	% Rec	QC Limits
Mercury	0.0	0.0029	0.0030 96.7	75-125

Associated samples MP27030: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27030
 Matrix Type: LEACHATE

Methods: SW846 7470A
 Units: mg/l

Prep Date: 11/17/16

Metal	MC48751-1A Original MSD	SpikeLot HGRWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	0.0028	0.0030	93.3	3.5

Associated samples MP27030: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27030
 Matrix Type: LEACHATE

Methods: SW846 7470A
 Units: mg/l

Prep Date: 11/17/16

Metal	MC48722-1A		SpikeLot		QC
	Original	LS	HGRWS1	% Rec	Limits
Mercury	0.0	0.0029	0.0030	96.7	75-125

Associated samples MP27030: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27030
 Matrix Type: LEACHATE

Methods: SW846 7470A
 Units: mg/l

Prep Date: 11/17/16 11/17/16

Metal	BSP Result	Spike lot HGRWS1	% Rec	QC Limits	BSD Result	Spike lot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	0.0029	0.0030	96.7	80-120	0.0029	0.0030	96.7	0.0	

Associated samples MP27030: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Cyanide	GP21141/GN55417	0.12	0.0	mg/kg	0.6	0.630	105.0	90-110%
Cyanide	GP21141/GN55417			mg/kg	4.8	4.78	99.6	90-110%

Associated Samples:

Batch GP21141: MC48722-1, MC48722-2, MC48722-4
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Cyanide	GP21141/GN55417	MC48722-1	mg/kg	2.6	2.4	8.0	0-20%
Solids, Percent	GN55333	MC48476-24	%	85.6	88	2.8	0-5%
Solids, Percent	GN55337	MC48745-7	%	90.2	92.2	2.2	0-5%

Associated Samples:

Batch GN55333: MC48722-1

Batch GN55337: MC48722-2, MC48722-4

Batch GP21141: MC48722-1, MC48722-2, MC48722-4

(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Cyanide	GP21141/GN55417	MC48722-1	mg/kg	2.6	1.47	4.8	149.9(a)	75-125%

Associated Samples:

Batch GP21141: MC48722-1, MC48722-2, MC48722-4

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity. Refer to spike blank.

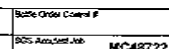
Misc. Forms

Custody Documents and Other Forms

(SGS Accutest New Jersey)

Includes the following where applicable:

- Chain of Custody



III.11.1

SGS Accutest Sample Receipt Summary

Job Number: MC48722

Client: _____

Project: _____

Date / Time Received: 11/15/2016 9:45:00 AM

Delivery Method: _____

Airbill #'s: _____

Cooler Temps (Raw Measured) °C: Cooler 1: (2.1);

Cooler Temps (Corrected) °C: Cooler 1: (3.5);

Cooler Security

Y or N

1. Custody Seals Present: ☒ ☐
2. Custody Seals Intact: ☒ ☐

3. COC Present: ☒ ☐
4. Smp'l Dates/Time OK ☒ ☐

Cooler Temperature

Y or N

1. Temp criteria achieved: ☒ ☐
2. Cooler temp verification: IR Gun
3. Cooler media: Ice (Bag)
4. No. Coolers: 1

Quality Control Preservation

Y or N

N/A

1. Trip Blank present / cooler: ☐ ☒ ☐
2. Trip Blank listed on COC: ☐ ☒ ☐
3. Samples preserved properly: ☒ ☐ ☐
4. VOCs headspace free: ☐ ☐ ☒

Sample Integrity - Documentation

Y or N

1. Sample labels present on bottles: ☒ ☐
2. Container labeling complete: ☒ ☐
3. Sample container label / COC agree: ☒ ☐

Sample Integrity - Condition

Y or N

1. Sample recvd within HT: ☒ ☐
2. All containers accounted for: ☒ ☐
3. Condition of sample: Intact

Sample Integrity - Instructions

Y or N

N/A

1. Analysis requested is clear: ☒ ☐
2. Bottles received for unspecified tests: ☐ ☒
3. Sufficient volume recvd for analysis: ☒ ☐
4. Compositing instructions clear: ☐ ☐ ☒
5. Filtering instructions clear: ☐ ☐ ☒

Comments

MC48722: Chain of Custody

Page 2 of 2

General Chemistry

QC Data Summaries

(SGS Accutest New Jersey)

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC48722
Account: ALNE - SGS Accutest New England
Project: BBLNYS: National Grid, Washington Street, Rensselaer, NY

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Percent Sulfur	GN55368	0.10	0.0	%	xxxxxxx	0.60	90.6	80-120%
Percent Sulfur	GP1330/GN54926	0.10	0.0	%	.667	0.73	109.0	80-120%

Associated Samples:
Batch GP1330: MC48722-1, MC48722-2, MC48722-4
Batch GN55368: MC48722-1, MC48722-4
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC48722
Account: ALNE - SGS Accutest New England
Project: BBLNYS: National Grid, Washington Street, Rensselaer, NY

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Heat Content, BTU	GP1329/GN54841	LA26575-1	BTU/lb	6360	6200	2.5	0-45%
Percent Sulfur	GP1330/GN54926	TC94111-1	%	8.6	8.5	1.2	0-41%

Associated Samples:

Batch GP1329: MC48722-1, MC48722-2, MC48722-4

Batch GP1330: MC48722-1, MC48722-2, MC48722-4

(*) Outside of QC limits

Technical Report for

Arcadis

National Grid, Washington Street, Rensselaer, NY

B0036730

SGS Accutest Job Number: MC48722

Sampling Dates: 11/10/16 - 11/11/16



Report to:

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ATTN: Jason Golubski

Total number of pages in report: 175



Test results contained within this data package meet the requirements
of the National Environmental Laboratory Accreditation Program
and/or state specific certification programs as applicable.


H. (Brad) Madadian
Lab Director

Client Service contact: Jeremy Vienneau 508-481-6200

Certifications: MA (M-MA136, SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) FL (E87579) NY (11791)
NJ (MA926) PA (6801121) ND (R-188) CO (MA00136) MN (11546AA) NC (653) IL (002337) WI (399080220)
DoD ELAP (L-A-B L2235)

This report shall not be reproduced, except in its entirety, without the written approval of SGS Accutest.
Test results relate only to samples analyzed.

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Sample Summary

Arcadis

Job No: MC48722

National Grid, Washington Street, Rensselaer, NY
Project No: B0036730

Sample Number	Collected			Received	Matrix		Client Sample ID
	Date	Time	By		Code	Type	
MC48722-1	11/10/16	13:30	JDL	11/12/16	SO	Soil	TP-106(3.0')
MC48722-1A	11/10/16	13:30	JDL	11/12/16	SO	Soil	TP-106(3.0')
MC48722-2	11/11/16	08:30	JDL	11/12/16	SO	Soil	TP-107(3.0')
MC48722-2A	11/11/16	08:30	JDL	11/12/16	SO	Soil	TP-107(3.0')
MC48722-3	11/11/16	12:15	JDL	11/12/16	SO	Soil	TP-110(0-3.0')
MC48722-4	11/11/16	12:15	JDL	11/12/16	SO	Soil	TP-110(3.0-3.5')

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: MC48722
Account: Arcadis
Project: National Grid, Washington Street, Rensselaer, NY
Collected: 11/10/16 thru 11/11/16

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC48722-1	TP-106(3.0')					
Acetone		20.2 B	8.0	2.6	ug/kg	SW846 8260C
Benzene		12.1	0.80	0.30	ug/kg	SW846 8260C
Carbon disulfide ^a		18.7	4.0	0.33	ug/kg	SW846 8260C
Ethylbenzene		0.90 J	1.6	0.30	ug/kg	SW846 8260C
Toluene		3.2 JB	4.0	0.32	ug/kg	SW846 8260C
Xylene (total)		2.9	1.6	0.28	ug/kg	SW846 8260C
Acenaphthene		448	120	8.6	ug/kg	SW846 8270D
Acenaphthylene		918	120	9.9	ug/kg	SW846 8270D
Anthracene		1300	120	10	ug/kg	SW846 8270D
Benzo(a)anthracene		5260	120	12	ug/kg	SW846 8270D
Benzo(a)pyrene		5480	310	11	ug/kg	SW846 8270D
Benzo(b)fluoranthene		4980	120	14	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		2460	120	12	ug/kg	SW846 8270D
Benzo(k)fluoranthene		3850	120	17	ug/kg	SW846 8270D
Carbazole		421	120	11	ug/kg	SW846 8270D
Chrysene		4620	120	9.7	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		866	120	10	ug/kg	SW846 8270D
Dibenzofuran		629	120	9.8	ug/kg	SW846 8270D
Fluoranthene		7470	120	11	ug/kg	SW846 8270D
Fluorene		642	120	14	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		2910	310	35	ug/kg	SW846 8270D
2-Methylnaphthalene		461	120	15	ug/kg	SW846 8270D
Naphthalene		3200	120	11	ug/kg	SW846 8270D
Phenanthrene		3480	120	9.3	ug/kg	SW846 8270D
Pyrene		6750	120	12	ug/kg	SW846 8270D
TPH-GRO (VOA)		4.46 J	12	2.2	mg/kg	SW846 8015
TPH-DRO (Semi-VOA)		525	20	5.1	mg/kg	SW846-8015
Arsenic		7.0	1.0	0.20	mg/kg	SW846 6010C
Barium		103	5.0	0.077	mg/kg	SW846 6010C
Beryllium		0.88	0.40	0.015	mg/kg	SW846 6010C
Cadmium		0.19 B	0.40	0.031	mg/kg	SW846 6010C
Chromium		17.4	1.0	0.047	mg/kg	SW846 6010C
Lead		28.0	1.0	0.11	mg/kg	SW846 6010C
Mercury		0.057	0.041	0.0069	mg/kg	SW846 7471B
Nickel		26.3	4.0	0.057	mg/kg	SW846 6010C
Vanadium		26.7	1.0	0.040	mg/kg	SW846 6010C
Zinc		69.7	2.0	0.17	mg/kg	SW846 6010C
Cyanide		2.6	0.15	0.042	mg/kg	SW846 9012 M
Heat Content, BTU ^b		3260	100		BTU/lb	ASTM D240-92
Percent Sulfur ^b		0.17 B	0.21	0.054	%	ASTM D129-95

Summary of Hits

Job Number: MC48722
Account: Arcadis
Project: National Grid, Washington Street, Rensselaer, NY
Collected: 11/10/16 thru 11/11/16

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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MC48722-1A TP-106(3.0')

Benzene	0.0586 J	0.10	0.027	mg/l	SW846 8260C
Arsenic	0.0044 B	0.010	0.0020	mg/l	SW846 6010C
Barium	0.65	0.50	0.00057	mg/l	SW846 6010C
Cadmium	0.0012 B	0.0040	0.00030	mg/l	SW846 6010C
Lead	0.0012 B	0.010	0.0011	mg/l	SW846 6010C

MC48722-2 TP-107(3.0')

Acetone	15.3 B	8.2	2.7	ug/kg	SW846 8260C
Benzene	2.3	0.82	0.31	ug/kg	SW846 8260C
Carbon disulfide ^a	1.7 J	4.1	0.33	ug/kg	SW846 8260C
Toluene	0.73 JB	4.1	0.33	ug/kg	SW846 8260C
Acenaphthene	44.6 J	110	7.3	ug/kg	SW846 8270D
Acenaphthylene	435	110	8.5	ug/kg	SW846 8270D
Anthracene	674	110	8.6	ug/kg	SW846 8270D
Benzo(a)anthracene	2030	110	11	ug/kg	SW846 8270D
Benzo(a)pyrene	2270	270	9.1	ug/kg	SW846 8270D
Benzo(b)fluoranthene	1820	110	12	ug/kg	SW846 8270D
Benzo(g,h,i)perylene	1260	110	10	ug/kg	SW846 8270D
Benzo(k)fluoranthene	1810	110	15	ug/kg	SW846 8270D
Butyl benzyl phthalate	276	270	14	ug/kg	SW846 8270D
Carbazole	76.5 J	110	9.3	ug/kg	SW846 8270D
Chrysene	1780	110	8.3	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene	370	110	8.8	ug/kg	SW846 8270D
Dibenzofuran	223	110	8.4	ug/kg	SW846 8270D
Di-n-butyl phthalate	23.4 J	270	11	ug/kg	SW846 8270D
Fluoranthene	2910	110	9.8	ug/kg	SW846 8270D
Fluorene	196	110	12	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	1350	270	30	ug/kg	SW846 8270D
2-Methylnaphthalene	77.5 J	110	13	ug/kg	SW846 8270D
Naphthalene	151	110	9.1	ug/kg	SW846 8270D
Phenanthrene	1540	110	8.0	ug/kg	SW846 8270D
Pyrene	2780	110	10	ug/kg	SW846 8270D
TPH-GRO (VOA)	3.66 J	9.3	1.7	mg/kg	SW846 8015
TPH-DRO (Semi-VOA)	101	18	4.6	mg/kg	SW846-8015
Arsenic	8.6	0.91	0.18	mg/kg	SW846 6010C
Barium	92.7	4.6	0.070	mg/kg	SW846 6010C
Beryllium	0.63	0.37	0.014	mg/kg	SW846 6010C
Cadmium	0.22 B	0.37	0.028	mg/kg	SW846 6010C
Chromium	14.6	0.91	0.043	mg/kg	SW846 6010C
Lead	46.1	0.91	0.10	mg/kg	SW846 6010C
Mercury	0.21	0.034	0.0057	mg/kg	SW846 7471B
Nickel	20.6	3.7	0.052	mg/kg	SW846 6010C

Summary of Hits

Job Number: MC48722
Account: Arcadis
Project: National Grid, Washington Street, Rensselaer, NY
Collected: 11/10/16 thru 11/11/16

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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Thallium		0.11 B	0.91	0.10	mg/kg	SW846 6010C
Vanadium		22.1	0.91	0.037	mg/kg	SW846 6010C
Zinc		76.4	1.8	0.16	mg/kg	SW846 6010C
Cyanide		0.62	0.13	0.037	mg/kg	SW846 9012 M
Heat Content, BTU ^b		1800	100		BTU/lb	ASTM D240-92

MC48722-2A TP-107(3.0')

Arsenic		0.0020 B	0.010	0.0020	mg/l	SW846 6010C
Barium		0.37 B	0.50	0.00057	mg/l	SW846 6010C
Cadmium		0.0012 B	0.0040	0.00030	mg/l	SW846 6010C
Chromium		0.0012 B	0.010	0.0011	mg/l	SW846 6010C
Lead		0.0039 B	0.010	0.0011	mg/l	SW846 6010C

MC48722-3 TP-110(0-3.0')

Tetrachloroethene		0.0248 J	0.20	0.021	mg/l	SW846 8260C
Arsenic		0.0037 B	0.010	0.0020	mg/l	SW846 6010C
Barium		0.75	0.50	0.00057	mg/l	SW846 6010C
Cadmium		0.0013 B	0.0040	0.00030	mg/l	SW846 6010C
Lead		1.5	0.010	0.0011	mg/l	SW846 6010C

MC48722-4 TP-110(3.0-3.5')

Ethylbenzene		1330	210	40	ug/kg	SW846 8260C
Toluene		77.0 J	530	42	ug/kg	SW846 8260C
Xylene (total)		1460	210	37	ug/kg	SW846 8260C
Acenaphthene		3270	120	8.3	ug/kg	SW846 8270D
Acenaphthylene		958	120	9.6	ug/kg	SW846 8270D
Anthracene		2200	120	9.8	ug/kg	SW846 8270D
Benzo(a)anthracene		2910	120	12	ug/kg	SW846 8270D
Benzo(a)pyrene		2900	300	10	ug/kg	SW846 8270D
Benzo(b)fluoranthene		1910	120	14	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		1400	120	12	ug/kg	SW846 8270D
Benzo(k)fluoranthene		2070	120	17	ug/kg	SW846 8270D
Carbazole		220	120	11	ug/kg	SW846 8270D
Chrysene		2700	120	9.4	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		367	120	10	ug/kg	SW846 8270D
Dibenzofuran		316	120	9.5	ug/kg	SW846 8270D
Fluoranthene		5160	120	11	ug/kg	SW846 8270D
Fluorene		1720	120	13	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		1410	300	34	ug/kg	SW846 8270D
2-Methylnaphthalene		4460	120	14	ug/kg	SW846 8270D
Naphthalene		7580	120	10	ug/kg	SW846 8270D
Phenanthrene		7470	120	9.1	ug/kg	SW846 8270D

Summary of Hits

Job Number: MC48722
Account: Arcadis
Project: National Grid, Washington Street, Rensselaer, NY
Collected: 11/10/16 thru 11/11/16

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Pyrene		7400	120	12	ug/kg	SW846 8270D
TPH-GRO (VOA)		68.1	11	2.0	mg/kg	SW846 8015
TPH-DRO (Semi-VOA)		2200	20	4.9	mg/kg	SW846-8015
Arsenic		4.6	0.99	0.20	mg/kg	SW846 6010C
Barium		83.6	4.9	0.075	mg/kg	SW846 6010C
Beryllium		0.47	0.39	0.015	mg/kg	SW846 6010C
Cadmium		0.12 B	0.39	0.031	mg/kg	SW846 6010C
Chromium		13.1	0.99	0.046	mg/kg	SW846 6010C
Lead		34.9	0.99	0.11	mg/kg	SW846 6010C
Mercury		0.30	0.038	0.0064	mg/kg	SW846 7471B
Nickel		19.2	3.9	0.056	mg/kg	SW846 6010C
Vanadium		17.0	0.99	0.039	mg/kg	SW846 6010C
Zinc		61.7	2.0	0.17	mg/kg	SW846 6010C
Cyanide		1.1	0.14	0.039	mg/kg	SW846 9012 M
Heat Content, BTU ^b		1510	100		BTU/lb	ASTM D240-92
Percent Sulfur ^b		0.11 B	0.20	0.054	%	ASTM D129-95

(a) Continuing Calibration outside of acceptance criteria. Result may be biased low.

(b) Analysis performed at SGS Accutest, Dayton, NJ.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	TP-106(3.0')	Date Sampled:	11/10/16
Lab Sample ID:	MC48722-1	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	77.0
Method:	SW846 8260C		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M82033.D	1	11/21/16	KP	n/a	n/a	MSM2942
Run #2							

	Initial Weight	Final Volume
Run #1	8.09 g	5.0 ml
Run #2		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	20.2	8.0	2.6	ug/kg	B
71-43-2	Benzene	12.1	0.80	0.30	ug/kg	
75-27-4	Bromodichloromethane	ND	1.6	0.34	ug/kg	
75-25-2	Bromoform	ND	1.6	0.38	ug/kg	
74-83-9	Bromomethane	ND	8.0	1.3	ug/kg	
78-93-3	2-Butanone (MEK)	ND	8.0	2.7	ug/kg	
75-15-0	Carbon disulfide ^a	18.7	4.0	0.33	ug/kg	
56-23-5	Carbon tetrachloride	ND	1.6	0.33	ug/kg	
108-90-7	Chlorobenzene	ND	1.6	0.76	ug/kg	
75-00-3	Chloroethane	ND	8.0	1.7	ug/kg	
67-66-3	Chloroform	ND	1.6	0.40	ug/kg	
74-87-3	Chloromethane	ND	4.0	0.60	ug/kg	
124-48-1	Dibromochloromethane	ND	4.0	0.86	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.6	0.32	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.6	0.30	ug/kg	
75-35-4	1,1-Dichloroethene ^b	ND	1.6	0.55	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.6	0.29	ug/kg	
156-60-5	trans-1,2-Dichloroethene ^b	ND	1.6	0.32	ug/kg	
78-87-5	1,2-Dichloropropane	ND	1.6	0.35	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	1.6	0.98	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	1.6	1.1	ug/kg	
100-41-4	Ethylbenzene	0.90	1.6	0.30	ug/kg	J
591-78-6	2-Hexanone	ND	4.0	0.54	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	4.0	0.52	ug/kg	
75-09-2	Methylene chloride	ND	1.6	0.34	ug/kg	
100-42-5	Styrene	ND	4.0	0.25	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.0	1.5	ug/kg	
127-18-4	Tetrachloroethene	ND	1.6	0.24	ug/kg	
108-88-3	Toluene	3.2	4.0	0.32	ug/kg	JB
71-55-6	1,1,1-Trichloroethane	ND	1.6	0.28	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	1.6	1.1	ug/kg	
79-01-6	Trichloroethene	ND	1.6	0.25	ug/kg	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')	Date Sampled:	11/10/16
Lab Sample ID:	MC48722-1	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	77.0
Method:	SW846 8260C		
Project:	National Grid, Washington Street, Rensselaer, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	8.0	2.7	ug/kg	
1330-20-7	Xylene (total)	2.9	1.6	0.28	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	118%		65-141%
2037-26-5	Toluene-D8	103%		65-129%
460-00-4	4-Bromofluorobenzene	95%		63-137%

- (a) Continuing Calibration outside of acceptance criteria. Result may be biased low.
(b) Continuing Calibration outside of acceptance criteria. Reporting Limit response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')	Date Sampled:	11/10/16
Lab Sample ID:	MC48722-1	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	77.0
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R50715.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.8 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	310	14	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	620	14	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	620	33	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	620	260	ug/kg	
51-28-5	2,4-Dinitrophenol ^a	ND	620	130	ug/kg	
534-52-1	4,6-Dinitro-o-cresol ^a	ND	620	62	ug/kg	
95-48-7	2-Methylphenol	ND	620	66	ug/kg	
	3&4-Methylphenol	ND	620	54	ug/kg	
88-75-5	2-Nitrophenol	ND	620	49	ug/kg	
100-02-7	4-Nitrophenol	ND	620	72	ug/kg	
87-86-5	Pentachlorophenol	ND	620	71	ug/kg	
108-95-2	Phenol	ND	310	14	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	620	19	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	620	11	ug/kg	
83-32-9	Acenaphthene	448	120	8.6	ug/kg	
208-96-8	Acenaphthylene	918	120	9.9	ug/kg	
120-12-7	Anthracene	1300	120	10	ug/kg	
56-55-3	Benzo(a)anthracene	5260	120	12	ug/kg	
50-32-8	Benzo(a)pyrene	5480	310	11	ug/kg	
205-99-2	Benzo(b)fluoranthene	4980	120	14	ug/kg	
191-24-2	Benzo(g,h,i)perylene	2460	120	12	ug/kg	
207-08-9	Benzo(k)fluoranthene	3850	120	17	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	310	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	310	16	ug/kg	
91-58-7	2-Chloronaphthalene	ND	310	12	ug/kg	
106-47-8	4-Chloroaniline	ND	620	14	ug/kg	
86-74-8	Carbazole	421	120	11	ug/kg	
218-01-9	Chrysene	4620	120	9.7	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	310	12	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	310	11	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	310	15	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	310	15	ug/kg	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')	Date Sampled:	11/10/16
Lab Sample ID:	MC48722-1	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	77.0
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	310	11	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	310	9.3	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	310	13	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	620	15	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	620	14	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	620	41	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	866	120	10	ug/kg	
132-64-9	Dibenzofuran	629	120	9.8	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	310	13	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	310	11	ug/kg	
84-66-2	Diethyl phthalate	ND	310	9.9	ug/kg	
131-11-3	Dimethyl phthalate	ND	310	9.9	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	310	12	ug/kg	
206-44-0	Fluoranthene	7470	120	11	ug/kg	
86-73-7	Fluorene	642	120	14	ug/kg	
118-74-1	Hexachlorobenzene	ND	310	16	ug/kg	
87-68-3	Hexachlorobutadiene	ND	310	12	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	620	15	ug/kg	
67-72-1	Hexachloroethane	ND	310	30	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	2910	310	35	ug/kg	
78-59-1	Isophorone	ND	310	22	ug/kg	
91-57-6	2-Methylnaphthalene	461	120	15	ug/kg	
88-74-4	2-Nitroaniline	ND	620	15	ug/kg	
99-09-2	3-Nitroaniline	ND	620	15	ug/kg	
100-01-6	4-Nitroaniline	ND	620	15	ug/kg	
91-20-3	Naphthalene	3200	120	11	ug/kg	
98-95-3	Nitrobenzene	ND	310	34	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	310	18	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	310	41	ug/kg	
85-01-8	Phenanthrene	3480	120	9.3	ug/kg	
129-00-0	Pyrene	6750	120	12	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	310	16	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	36%		25-109%
4165-62-2	Phenol-d5	50%		29-113%
118-79-6	2,4,6-Tribromophenol	81%		20-141%
4165-60-0	Nitrobenzene-d5	42%		27-115%
321-60-8	2-Fluorobiphenyl	70%		34-118%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')	Date Sampled:	11/10/16
Lab Sample ID:	MC48722-1	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	77.0
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1718-51-0	Terphenyl-d14	88%		42-139%

(a) Continuing Calibration outside of acceptance criteria. Reporting Limit Response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

3.1
3

Client Sample ID:	TP-106(3.0')		
Lab Sample ID:	MC48722-1	Date Sampled:	11/10/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846 8015	Percent Solids:	77.0
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	WX78128.D	1	11/17/16	AF	n/a	n/a	GWX3867
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.33 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	4.46	12	2.2	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
	2,3,4-Trifluorotoluene	102%		64-127%		

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

MDL = Method Detection Limit

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')	Date Sampled:	11/10/16
Lab Sample ID:	MC48722-1	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	77.0
Method:	SW846 8082A SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK63163.D	1	11/17/16	TA	11/15/16	OP49147	GBK1996
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	43	4.4	ug/kg	
11104-28-2	Aroclor 1221	ND	43	19	ug/kg	
11141-16-5	Aroclor 1232	ND	43	13	ug/kg	
53469-21-9	Aroclor 1242	ND	43	9.8	ug/kg	
12672-29-6	Aroclor 1248	ND	43	7.4	ug/kg	
11097-69-1	Aroclor 1254	ND	43	19	ug/kg	
11096-82-5	Aroclor 1260	ND	43	3.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	83%		25-145%
877-09-8	Tetrachloro-m-xylene	74%		25-145%
2051-24-3	Decachlorobiphenyl	76%		25-179%
2051-24-3	Decachlorobiphenyl	76%		25-179%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')		
Lab Sample ID:	MC48722-1	Date Sampled:	11/10/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846-8015 SW846 3546	Percent Solids:	77.0
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IR3264.D	1	11/18/16	MD	11/16/16	OP49158	GIR226
Run #2							

	Initial Weight	Final Volume
Run #1	15.8 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (Semi-VOA)	525	20	5.1	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	91%		17-130%		

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TP-106(3.0')

Lab Sample ID: MC48722-1

Matrix: SO - Soil

Date Sampled: 11/10/16

Date Received: 11/12/16

Percent Solids: 77.0

Project: National Grid, Washington Street, Rensselaer, NY

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Antimony	ND	1.0	0.17	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Arsenic	7.0	1.0	0.20	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Barium	103	5.0	0.077	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Beryllium	0.88	0.40	0.015	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Cadmium	0.19 B	0.40	0.031	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Chromium	17.4	1.0	0.047	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Lead	28.0	1.0	0.11	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Mercury	0.057	0.041	0.0069	mg/kg	1	11/15/16	11/15/16 JM	SW846 7471B ¹	SW846 7471B ³
Nickel	26.3	4.0	0.057	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Selenium	ND	1.0	0.30	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Silver	ND	0.50	0.061	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Thallium	ND	1.0	0.11	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Vanadium	26.7	1.0	0.040	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Zinc	69.7	2.0	0.17	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴

(1) Instrument QC Batch: MA19626

(2) Instrument QC Batch: MA19629

(3) Prep QC Batch: MP27019

(4) Prep QC Batch: MP27020

RL = Reporting Limit

MDL = Method Detection Limit

ND = Not detected

B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TP-106(3.0')	Date Sampled:	11/10/16
Lab Sample ID:	MC48722-1	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	77.0
Project:	National Grid, Washington Street, Rensselaer, NY		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	2.6	0.15	0.042	mg/kg	1	11/23/16 20:54 CF	SW846	9012 M
Heat Content, BTU ^a	3260	100		BTU/lb	1	11/18/16 21:00 ANJ	ASTM	D240-92
Percent Sulfur ^a	0.17 B	0.21	0.054	%	1	11/18/16 21:00 ANJ	ASTM	D129-95
Solids, Percent	77			%	1	11/15/16	JM	SM 2540G-97 MOD

(a) Analysis performed at SGS Accutest, Dayton, NJ.

RL = Reporting Limit
MDL = Method Detection Limit

ND = Not detected
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TP-106(3.0')		
Lab Sample ID:	MC48722-1A	Date Sampled:	11/10/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846 8260C SW846 1311	Percent Solids:	77.0
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N106527.D	100	11/23/16	AD	11/15/16	GP21107	MSN3919
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	0.0586	D018	0.50	0.10	0.027	mg/l	J
78-93-3	2-Butanone (MEK)	ND	D035	200	1.0	0.30	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.20	0.034	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.20	0.024	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.20	0.040	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.20	0.058	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.20	0.068	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.20	0.028	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.20	0.021	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.20	0.025	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.20	0.045	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		74-135%
2037-26-5	Toluene-D8	102%		83-116%
460-00-4	4-Bromofluorobenzene	102%		76-124%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')		
Lab Sample ID:	MC48722-1A	Date Sampled:	11/10/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846 8270D SW846 3510C	Percent Solids:	77.0
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R50881.D	1	11/26/16	DRY	11/16/16	OP49119	MSR1897
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.10	0.0032	mg/l	
	3&4-Methylphenol	ND	D024	200	0.10	0.0054	mg/l	
87-86-5	Pentachlorophenol ^a	ND	D037	100	0.10	0.0059	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.10	0.0052	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.10	0.0038	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.050	0.0035	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.10	0.012	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.050	0.0041	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.050	0.0043	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0036	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.050	0.0042	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.10	0.013	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		10-73%
4165-62-2	Phenol-d5	30%		10-58%
118-79-6	2,4,6-Tribromophenol	83%		15-125%
4165-60-0	Nitrobenzene-d5	73%		23-120%
321-60-8	2-Fluorobiphenyl	78%		31-102%
1718-51-0	Terphenyl-d14	94%		42-124%

(a) Continuing Calibration outside of acceptance criteria. Reporting Limit Response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261.6/96) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')						
Lab Sample ID:	MC48722-1A					Date Sampled:	11/10/16
Matrix:	SO - Soil					Date Received:	11/12/16
Method:	SW846 8151 SW846 3510C SPLP					Percent Solids:	77.0
Project:	National Grid, Washington Street, Rensselaer, NY						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ98717.D	1	11/29/16	TA	11/16/16	OP49161	GYZ8038
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	5.0 ml
Run #2		

Herbicide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.010	0.0034	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.010	0.0040	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	57%		30-150%
19719-28-9	2,4-DCAA	45%		30-150%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')		
Lab Sample ID:	MC48722-1A	Date Sampled:	11/10/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846 8081B SW846 3510C SPLP	Percent Solids:	77.0
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BE53426.D	1	11/21/16	TA	11/16/16	OP49159	GBE2688
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	5.0 ml
Run #2		

Pesticide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00050	0.000044	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00050	0.00012	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00050	0.00011	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00050	0.000051	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00050	0.00021	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.025	0.0013	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	50%		30-150%
877-09-8	Tetrachloro-m-xylene	53%		30-150%
2051-24-3	Decachlorobiphenyl	82%		30-150%
2051-24-3	Decachlorobiphenyl	75%		30-150%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-106(3.0')		
Lab Sample ID:	MC48722-1A	Date Sampled:	11/10/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846 8082A SW846 3510C SPLP	Percent Solids:	77.0
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK63184.D	1	11/18/16	TA	11/16/16	OP49160	GBK1997
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	5.0 ml
Run #2		

PCB List

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND			0.0025	0.0016	mg/l	
11104-28-2	Aroclor 1221	ND			0.0025	0.0016	mg/l	
11141-16-5	Aroclor 1232	ND			0.0025	0.0018	mg/l	
53469-21-9	Aroclor 1242	ND			0.0025	0.0019	mg/l	
12672-29-6	Aroclor 1248	ND			0.0025	0.0012	mg/l	
11097-69-1	Aroclor 1254	ND			0.0025	0.0016	mg/l	
11096-82-5	Aroclor 1260	ND			0.0025	0.0019	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	85%		30-150%
877-09-8	Tetrachloro-m-xylene	72%		30-150%
2051-24-3	Decachlorobiphenyl	109%		30-150%
2051-24-3	Decachlorobiphenyl	112%		30-150%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TP-106(3.0')**Lab Sample ID:** MC48722-1A**Matrix:** SO - Soil**Date Sampled:** 11/10/16**Date Received:** 11/12/16**Percent Solids:** 77.0**Project:** National Grid, Washington Street, Rensselaer, NY**Metals Analysis, TCLP Leachate SW846 1311**

Analyte	Result	HW#	MCL	RL	MDL	Units	DF	Prep	Analyzed By	Method
Arsenic	0.0044 B	D004	5.0	0.010	0.0020	mg/l	1	11/16/16	11/16/16 EAL	SW846 6010C ¹
Barium	0.65	D005	100	0.50	0.00057	mg/l	1	11/16/16	11/16/16 EAL	SW846 6010C ¹
Cadmium	0.0012 B	D006	1.0	0.0040	0.00030	mg/l	1	11/16/16	11/16/16 EAL	SW846 6010C ¹
Chromium	ND	D007	5.0	0.010	0.0011	mg/l	1	11/16/16	11/16/16 EAL	SW846 6010C ¹
Lead	0.0012 B	D008	5.0	0.010	0.0011	mg/l	1	11/16/16	11/16/16 EAL	SW846 6010C ¹
Mercury	ND	D009	0.20	0.00020	0.000034	mg/l	1	11/17/16	11/17/16 JM	SW846 7470A ²
Selenium	ND	D010	1.0	0.025	0.0034	mg/l	1	11/16/16	11/16/16 EAL	SW846 6010C ¹
Silver	ND	D011	5.0	0.0050	0.0014	mg/l	1	11/16/16	11/16/16 EAL	SW846 6010C ¹

(1) Instrument QC Batch: MA19631

(2) Instrument QC Batch: MA19634

(3) Prep QC Batch: MP27025

(4) Prep QC Batch: MP27030

RL = Reporting Limit

MDL = Method Detection Limit

ND = Not detected

MCL = Maximum Contamination Level (40 CFR 261.6/96)

B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TP-107(3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-2	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	88.9
Method:	SW846 8260C		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M82034.D	1	11/21/16	KP	n/a	n/a	MSM2942
Run #2							

	Initial Weight	Final Volume
Run #1	6.87 g	5.0 ml
Run #2		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	15.3	8.2	2.7	ug/kg	B
71-43-2	Benzene	2.3	0.82	0.31	ug/kg	
75-27-4	Bromodichloromethane	ND	1.6	0.35	ug/kg	
75-25-2	Bromoform	ND	1.6	0.39	ug/kg	
74-83-9	Bromomethane	ND	8.2	1.3	ug/kg	
78-93-3	2-Butanone (MEK)	ND	8.2	2.8	ug/kg	
75-15-0	Carbon disulfide ^a	1.7	4.1	0.33	ug/kg	J
56-23-5	Carbon tetrachloride	ND	1.6	0.34	ug/kg	
108-90-7	Chlorobenzene	ND	1.6	0.77	ug/kg	
75-00-3	Chloroethane	ND	8.2	1.7	ug/kg	
67-66-3	Chloroform	ND	1.6	0.41	ug/kg	
74-87-3	Chloromethane	ND	4.1	0.61	ug/kg	
124-48-1	Dibromochloromethane	ND	4.1	0.88	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.6	0.33	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.6	0.30	ug/kg	
75-35-4	1,1-Dichloroethene ^b	ND	1.6	0.56	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.6	0.30	ug/kg	
156-60-5	trans-1,2-Dichloroethene ^b	ND	1.6	0.33	ug/kg	
78-87-5	1,2-Dichloropropane	ND	1.6	0.36	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	1.6	1.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	1.6	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	1.6	0.31	ug/kg	
591-78-6	2-Hexanone	ND	4.1	0.55	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	4.1	0.54	ug/kg	
75-09-2	Methylene chloride	ND	1.6	0.34	ug/kg	
100-42-5	Styrene	ND	4.1	0.26	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.1	1.6	ug/kg	
127-18-4	Tetrachloroethene	ND	1.6	0.24	ug/kg	
108-88-3	Toluene	0.73	4.1	0.33	ug/kg	JB
71-55-6	1,1,1-Trichloroethane	ND	1.6	0.29	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	1.6	1.1	ug/kg	
79-01-6	Trichloroethene	ND	1.6	0.25	ug/kg	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-2	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	88.9
Method:	SW846 8260C		
Project:	National Grid, Washington Street, Rensselaer, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	8.2	2.8	ug/kg	
1330-20-7	Xylene (total)	ND	1.6	0.29	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		65-141%
2037-26-5	Toluene-D8	103%		65-129%
460-00-4	4-Bromofluorobenzene	104%		63-137%

(a) Continuing Calibration outside of acceptance criteria. Result may be biased low.

(b) Continuing Calibration outside of acceptance criteria. Reporting Limit response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-2	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	88.9
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R50716.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
Run #2							

Run #	Initial Weight	Final Volume
Run #1	21.0 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	270	12	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	540	12	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	540	29	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	540	220	ug/kg	
51-28-5	2,4-Dinitrophenol ^a	ND	540	110	ug/kg	
534-52-1	4,6-Dinitro-o-cresol ^a	ND	540	53	ug/kg	
95-48-7	2-Methylphenol	ND	540	57	ug/kg	
	3&4-Methylphenol	ND	540	47	ug/kg	
88-75-5	2-Nitrophenol	ND	540	42	ug/kg	
100-02-7	4-Nitrophenol	ND	540	62	ug/kg	
87-86-5	Pentachlorophenol	ND	540	61	ug/kg	
108-95-2	Phenol	ND	270	12	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	540	16	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	540	9.8	ug/kg	
83-32-9	Acenaphthene	44.6	110	7.3	ug/kg	J
208-96-8	Acenaphthylene	435	110	8.5	ug/kg	
120-12-7	Anthracene	674	110	8.6	ug/kg	
56-55-3	Benzo(a)anthracene	2030	110	11	ug/kg	
50-32-8	Benzo(a)pyrene	2270	270	9.1	ug/kg	
205-99-2	Benzo(b)fluoranthene	1820	110	12	ug/kg	
191-24-2	Benzo(g,h,i)perylene	1260	110	10	ug/kg	
207-08-9	Benzo(k)fluoranthene	1810	110	15	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	270	11	ug/kg	
85-68-7	Butyl benzyl phthalate	276	270	14	ug/kg	
91-58-7	2-Chloronaphthalene	ND	270	11	ug/kg	
106-47-8	4-Chloroaniline	ND	540	12	ug/kg	
86-74-8	Carbazole	76.5	110	9.3	ug/kg	J
218-01-9	Chrysene	1780	110	8.3	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	270	10	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	270	9.7	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	270	13	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	270	13	ug/kg	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-2	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	88.9
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	270	9.1	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	270	8.0	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	270	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	540	13	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	540	12	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	540	35	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	370	110	8.8	ug/kg	
132-64-9	Dibenzofuran	223	110	8.4	ug/kg	
84-74-2	Di-n-butyl phthalate	23.4	270	11	ug/kg	J
117-84-0	Di-n-octyl phthalate	ND	270	9.1	ug/kg	
84-66-2	Diethyl phthalate	ND	270	8.5	ug/kg	
131-11-3	Dimethyl phthalate	ND	270	8.5	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	270	11	ug/kg	
206-44-0	Fluoranthene	2910	110	9.8	ug/kg	
86-73-7	Fluorene	196	110	12	ug/kg	
118-74-1	Hexachlorobenzene	ND	270	14	ug/kg	
87-68-3	Hexachlorobutadiene	ND	270	10	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	540	13	ug/kg	
67-72-1	Hexachloroethane	ND	270	25	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	1350	270	30	ug/kg	
78-59-1	Isophorone	ND	270	19	ug/kg	
91-57-6	2-Methylnaphthalene	77.5	110	13	ug/kg	J
88-74-4	2-Nitroaniline	ND	540	12	ug/kg	
99-09-2	3-Nitroaniline	ND	540	13	ug/kg	
100-01-6	4-Nitroaniline	ND	540	13	ug/kg	
91-20-3	Naphthalene	151	110	9.1	ug/kg	
98-95-3	Nitrobenzene	ND	270	30	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	270	15	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	270	36	ug/kg	
85-01-8	Phenanthrene	1540	110	8.0	ug/kg	
129-00-0	Pyrene	2780	110	10	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	270	14	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	57%		25-109%
4165-62-2	Phenol-d5	66%		29-113%
118-79-6	2,4,6-Tribromophenol	81%		20-141%
4165-60-0	Nitrobenzene-d5	59%		27-115%
321-60-8	2-Fluorobiphenyl	80%		34-118%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-2	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	88.9
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1718-51-0	Terphenyl-d14	87%		42-139%

(a) Continuing Calibration outside of acceptance criteria. Reporting Limit Response verified by low-level standard.

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-2	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	88.9
Method:	SW846 8015		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	WX78127.D	1	11/17/16	AF	n/a	n/a	GWX3867
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.48 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	3.66	9.3	1.7	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	102%		64-127%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-2	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	88.9
Method:	SW846 8082A SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK63165.D	1	11/17/16	TA	11/15/16	OP49147	GBK1996
Run #2							

	Initial Weight	Final Volume
Run #1	15.3 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	37	3.8	ug/kg	
11104-28-2	Aroclor 1221	ND	37	16	ug/kg	
11141-16-5	Aroclor 1232	ND	37	11	ug/kg	
53469-21-9	Aroclor 1242	ND	37	8.5	ug/kg	
12672-29-6	Aroclor 1248	ND	37	6.3	ug/kg	
11097-69-1	Aroclor 1254	ND	37	16	ug/kg	
11096-82-5	Aroclor 1260	ND	37	3.3	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	99%		25-145%
877-09-8	Tetrachloro-m-xylene	106%		25-145%
2051-24-3	Decachlorobiphenyl	91%		25-179%
2051-24-3	Decachlorobiphenyl	99%		25-179%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')		
Lab Sample ID:	MC48722-2	Date Sampled:	11/11/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846-8015 SW846 3546	Percent Solids:	88.9
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IR3263.D	1	11/18/16	MD	11/16/16	OP49158	GIR226
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (Semi-VOA)	101	18	4.6	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	70%		17-130%		

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TP-107(3.0')

Lab Sample ID: MC48722-2

Matrix: SO - Soil

Date Sampled: 11/11/16

Date Received: 11/12/16

Percent Solids: 88.9

Project: National Grid, Washington Street, Rensselaer, NY

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analized By	Method	Prep Method
Antimony	ND	0.91	0.16	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Arsenic	8.6	0.91	0.18	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Barium	92.7	4.6	0.070	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Beryllium	0.63	0.37	0.014	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Cadmium	0.22 B	0.37	0.028	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Chromium	14.6	0.91	0.043	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Lead	46.1	0.91	0.10	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Mercury	0.21	0.034	0.0057	mg/kg	1	11/15/16	11/15/16 JM	SW846 7471B ¹	SW846 7471B ³
Nickel	20.6	3.7	0.052	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Selenium	ND	0.91	0.27	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Silver	ND	0.46	0.056	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Thallium	0.11 B	0.91	0.10	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Vanadium	22.1	0.91	0.037	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Zinc	76.4	1.8	0.16	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴

(1) Instrument QC Batch: MA19626

(2) Instrument QC Batch: MA19629

(3) Prep QC Batch: MP27019

(4) Prep QC Batch: MP27020

RL = Reporting Limit

MDL = Method Detection Limit

ND = Not detected

B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TP-107(3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-2	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	88.9
Project:	National Grid, Washington Street, Rensselaer, NY		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	0.62	0.13	0.037	mg/kg	1	11/23/16 20:55 CF	SW846	9012 M
Heat Content, BTU ^a	1800	100		BTU/lb	1	11/18/16 21:00 ANJ	ASTM	D240-92
Percent Sulfur ^a	ND	0.17	0.054	%	1	11/18/16 21:00 ANJ	ASTM	D129-95
Solids, Percent	88.9			%	1	11/16/16	JM	SM 2540G-97 MOD

(a) Analysis performed at SGS Accutest, Dayton, NJ.

RL = Reporting Limit
MDL = Method Detection Limit

ND = Not detected
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TP-107(3.0')		
Lab Sample ID:	MC48722-2A	Date Sampled:	11/11/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846 8260C SW846 1311	Percent Solids:	88.9
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N106528.D	100	11/23/16	AD	11/15/16	GP21107	MSN3919
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.10	0.027	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	1.0	0.30	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.20	0.034	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.20	0.024	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.20	0.040	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.20	0.058	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.20	0.068	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.20	0.028	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.20	0.021	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.20	0.025	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.20	0.045	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		74-135%
2037-26-5	Toluene-D8	101%		83-116%
460-00-4	4-Bromofluorobenzene	101%		76-124%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6(g))
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')		
Lab Sample ID:	MC48722-2A	Date Sampled:	11/11/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846 8270D SW846 3510C	Percent Solids:	88.9
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R50882.D	1	11/26/16	DRY	11/16/16	OP49119	MSR1897
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.10	0.0032	mg/l	
	3&4-Methylphenol	ND	D024	200	0.10	0.0054	mg/l	
87-86-5	Pentachlorophenol ^a	ND	D037	100	0.10	0.0059	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.10	0.0052	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.10	0.0038	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.050	0.0035	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.10	0.012	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.050	0.0041	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.050	0.0043	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0036	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.050	0.0042	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.10	0.013	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		10-73%
4165-62-2	Phenol-d5	29%		10-58%
118-79-6	2,4,6-Tribromophenol	79%		15-125%
4165-60-0	Nitrobenzene-d5	74%		23-120%
321-60-8	2-Fluorobiphenyl	80%		31-102%
1718-51-0	Terphenyl-d14	94%		42-124%

(a) Continuing Calibration outside of acceptance criteria. Reporting Limit Response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 6/96) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-2A	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	88.9
Method:	SW846 8151 SW846 3510C SPLP		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ98718.D	1	11/29/16	TA	11/16/16	OP49161	GYZ8038
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	5.0 ml
Run #2		

Herbicide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.010	0.0034	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.010	0.0040	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	60%		30-150%
19719-28-9	2,4-DCAA	47%		30-150%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')		
Lab Sample ID:	MC48722-2A	Date Sampled:	11/11/16
Matrix:	SO - Soil	Date Received:	11/12/16
Method:	SW846 8081B SW846 3510C SPLP	Percent Solids:	88.9
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BE53427.D	1	11/21/16	TA	11/16/16	OP49159	GBE2688
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	5.0 ml
Run #2		

Pesticide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00050	0.000044	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00050	0.00012	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00050	0.00011	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00050	0.000051	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00050	0.00021	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.025	0.0013	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	47%		30-150%
877-09-8	Tetrachloro-m-xylene	61%		30-150%
2051-24-3	Decachlorobiphenyl	32%		30-150%
2051-24-3	Decachlorobiphenyl	65%		30-150%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-107(3.0')						
Lab Sample ID:	MC48722-2A					Date Sampled:	11/11/16
Matrix:	SO - Soil					Date Received:	11/12/16
Method:	SW846 8082A SW846 3510C SPLP					Percent Solids:	88.9
Project:	National Grid, Washington Street, Rensselaer, NY						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK63185.D	1	11/18/16	TA	11/16/16	OP49160	GBK1997
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	5.0 ml
Run #2		

PCB List

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND			0.0025	0.0016	mg/l	
11104-28-2	Aroclor 1221	ND			0.0025	0.0016	mg/l	
11141-16-5	Aroclor 1232	ND			0.0025	0.0018	mg/l	
53469-21-9	Aroclor 1242	ND			0.0025	0.0019	mg/l	
12672-29-6	Aroclor 1248	ND			0.0025	0.0012	mg/l	
11097-69-1	Aroclor 1254	ND			0.0025	0.0016	mg/l	
11096-82-5	Aroclor 1260	ND			0.0025	0.0019	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	68%		30-150%
877-09-8	Tetrachloro-m-xylene	70%		30-150%
2051-24-3	Decachlorobiphenyl	92%		30-150%
2051-24-3	Decachlorobiphenyl	96%		30-150%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TP-107(3.0')

Lab Sample ID: MC48722-2A

Matrix: SO - Soil

Date Sampled: 11/11/16

Date Received: 11/12/16

Percent Solids: 88.9

Project: National Grid, Washington Street, Rensselaer, NY

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	MDL	Units	DF	Prep	Analyzed By	Method
Arsenic	0.0020 B	D004	5.0	0.010	0.0020	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Barium	0.37 B	D005	100	0.50	0.00057	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Cadmium	0.0012 B	D006	1.0	0.0040	0.00030	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Chromium	0.0012 B	D007	5.0	0.010	0.0011	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Lead	0.0039 B	D008	5.0	0.010	0.0011	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Mercury	ND	D009	0.20	0.00020	0.000034	mg/l	1	11/17/16	11/17/16	JM SW846 7470A ²
Selenium	ND	D010	1.0	0.025	0.0034	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Silver	ND	D011	5.0	0.0050	0.0014	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹

(1) Instrument QC Batch: MA19631

(2) Instrument QC Batch: MA19634

(3) Prep QC Batch: MP27025

(4) Prep QC Batch: MP27030

RL = Reporting Limit

MDL = Method Detection Limit

ND = Not detected

MCL = Maximum Contamination Level (40 CFR 261.6/96)

B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TP-110(0-3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-3	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	n/a
Method:	SW846 8260C SW846 1311		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N106529.D	100	11/23/16	AD	11/15/16	GP21107	MSN3919
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.10	0.027	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	1.0	0.30	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.20	0.034	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.20	0.024	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.20	0.040	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.20	0.058	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.20	0.068	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.20	0.028	mg/l	
127-18-4	Tetrachloroethene	0.0248	D039	0.70	0.20	0.021	mg/l	J
79-01-6	Trichloroethene	ND	D040	0.50	0.20	0.025	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.20	0.045	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		74-135%
2037-26-5	Toluene-D8	100%		83-116%
460-00-4	4-Bromofluorobenzene	102%		76-124%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261 6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-110(0-3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-3	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R50883.D	1	11/26/16	DRY	11/16/16	OP49119	MSR1897
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.10	0.0032	mg/l	
	3&4-Methylphenol	ND	D024	200	0.10	0.0054	mg/l	
87-86-5	Pentachlorophenol ^a	ND	D037	100	0.10	0.0059	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.10	0.0052	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.10	0.0038	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.050	0.0035	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.10	0.012	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.050	0.0041	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.050	0.0043	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0036	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.050	0.0042	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.10	0.013	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	46%		10-73%
4165-62-2	Phenol-d5	29%		10-58%
118-79-6	2,4,6-Tribromophenol	79%		15-125%
4165-60-0	Nitrobenzene-d5	76%		23-120%
321-60-8	2-Fluorobiphenyl	82%		31-102%
1718-51-0	Terphenyl-d14	94%		42-124%

(a) Continuing Calibration outside of acceptance criteria. Reporting Limit Response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 6/96) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-110(0-3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-3	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	n/a
Method:	SW846 8151 SW846 3510C SPLP		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ98719.D	1	11/29/16	TA	11/16/16	OP49161	GYZ8038
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	5.0 ml
Run #2		

Herbicide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.010	0.0034	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.010	0.0040	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	59%		30-150%
19719-28-9	2,4-DCAA	48%		30-150%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-110(0-3.0')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-3	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	n/a
Method:	SW846 8081B SW846 3510C SPLP		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BE53428.D	1	11/21/16	TA	11/16/16	OP49159	GBE2688
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	5.0 ml
Run #2		

Pesticide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00050	0.000044	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00050	0.00012	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00050	0.00011	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00050	0.000051	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00050	0.00021	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.025	0.0013	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	68%		30-150%
877-09-8	Tetrachloro-m-xylene	70%		30-150%
2051-24-3	Decachlorobiphenyl	82%		30-150%
2051-24-3	Decachlorobiphenyl	76%		30-150%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261.6/96)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TP-110(0-3.0')**Lab Sample ID:** MC48722-3**Matrix:** SO - Soil**Date Sampled:** 11/11/16**Date Received:** 11/12/16**Percent Solids:** n/a**Project:** National Grid, Washington Street, Rensselaer, NY**Metals Analysis, TCLP Leachate SW846 1311**

Analyte	Result	HW#	MCL	RL	MDL	Units	DF	Prep	Analyzed By	Method
Arsenic	0.0037 B	D004	5.0	0.010	0.0020	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Barium	0.75	D005	100	0.50	0.00057	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Cadmium	0.0013 B	D006	1.0	0.0040	0.00030	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Chromium	ND	D007	5.0	0.010	0.0011	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Lead	1.5	D008	5.0	0.010	0.0011	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Mercury	ND	D009	0.20	0.00020	0.000034	mg/l	1	11/17/16	11/17/16	JM SW846 7470A ²
Selenium	ND	D010	1.0	0.025	0.0034	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹
Silver	ND	D011	5.0	0.0050	0.0014	mg/l	1	11/16/16	11/16/16	EAL SW846 6010C ¹

(1) Instrument QC Batch: MA19631

(2) Instrument QC Batch: MA19634

(3) Prep QC Batch: MP27025

(4) Prep QC Batch: MP27030

RL = Reporting Limit

MDL = Method Detection Limit

ND = Not detected

MCL = Maximum Contamination Level (40 CFR 261.6/96)

B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TP-110(3.0-3.5')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-4	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	80.4
Method:	SW846 8260C		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L101580.D	1	11/18/16	TB	n/a	n/a	MSL4385
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.64 g	10.0 ml	100 ul
Run #2			

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	1100	350	ug/kg	
71-43-2	Benzene	ND	110	40	ug/kg	
75-27-4	Bromodichloromethane	ND	210	45	ug/kg	
75-25-2	Bromoform	ND	210	50	ug/kg	
74-83-9	Bromomethane	ND	1100	170	ug/kg	
78-93-3	2-Butanone (MEK)	ND	1100	360	ug/kg	
75-15-0	Carbon disulfide	ND	530	43	ug/kg	
56-23-5	Carbon tetrachloride	ND	210	43	ug/kg	
108-90-7	Chlorobenzene	ND	210	100	ug/kg	
75-00-3	Chloroethane	ND	1100	220	ug/kg	
67-66-3	Chloroform	ND	210	53	ug/kg	
74-87-3	Chloromethane	ND	530	79	ug/kg	
124-48-1	Dibromochloromethane	ND	530	110	ug/kg	
75-34-3	1,1-Dichloroethane	ND	210	42	ug/kg	
107-06-2	1,2-Dichloroethane	ND	210	39	ug/kg	
75-35-4	1,1-Dichloroethene	ND	210	72	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	210	38	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	210	43	ug/kg	
78-87-5	1,2-Dichloropropane	ND	210	46	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	210	130	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	210	140	ug/kg	
100-41-4	Ethylbenzene	1330	210	40	ug/kg	
591-78-6	2-Hexanone	ND	530	71	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	530	69	ug/kg	
75-09-2	Methylene chloride	ND	210	44	ug/kg	
100-42-5	Styrene	ND	530	33	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	530	200	ug/kg	
127-18-4	Tetrachloroethene	ND	210	31	ug/kg	
108-88-3	Toluene	77.0	530	42	ug/kg	J
71-55-6	1,1,1-Trichloroethane	ND	210	37	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	210	150	ug/kg	
79-01-6	Trichloroethene	ND	210	33	ug/kg	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TP-110(3.0-3.5')**Lab Sample ID:** MC48722-4**Matrix:** SO - Soil**Method:** SW846 8260C**Project:** National Grid, Washington Street, Rensselaer, NY**Date Sampled:** 11/11/16**Date Received:** 11/12/16**Percent Solids:** 80.4

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1100	360	ug/kg	
1330-20-7	Xylene (total)	1460	210	37	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		65-141%
2037-26-5	Toluene-D8	100%		65-129%
460-00-4	4-Bromofluorobenzene	98%		63-137%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-110(3.0-3.5')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-4	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	80.4
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R50717.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.4 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	300	14	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	610	14	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	610	33	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	610	250	ug/kg	
51-28-5	2,4-Dinitrophenol ^a	ND	610	130	ug/kg	
534-52-1	4,6-Dinitro-o-cresol ^a	ND	610	60	ug/kg	
95-48-7	2-Methylphenol	ND	610	65	ug/kg	
	3&4-Methylphenol	ND	610	53	ug/kg	
88-75-5	2-Nitrophenol	ND	610	47	ug/kg	
100-02-7	4-Nitrophenol	ND	610	70	ug/kg	
87-86-5	Pentachlorophenol	ND	610	69	ug/kg	
108-95-2	Phenol	ND	300	13	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	610	18	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	610	11	ug/kg	
83-32-9	Acenaphthene	3270	120	8.3	ug/kg	
208-96-8	Acenaphthylene	958	120	9.6	ug/kg	
120-12-7	Anthracene	2200	120	9.8	ug/kg	
56-55-3	Benzo(a)anthracene	2910	120	12	ug/kg	
50-32-8	Benzo(a)pyrene	2900	300	10	ug/kg	
205-99-2	Benzo(b)fluoranthene	1910	120	14	ug/kg	
191-24-2	Benzo(g,h,i)perylene	1400	120	12	ug/kg	
207-08-9	Benzo(k)fluoranthene	2070	120	17	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	300	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	300	16	ug/kg	
91-58-7	2-Chloronaphthalene	ND	300	12	ug/kg	
106-47-8	4-Chloroaniline	ND	610	14	ug/kg	
86-74-8	Carbazole	220	120	11	ug/kg	
218-01-9	Chrysene	2700	120	9.4	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	300	12	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	300	11	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	300	15	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	300	14	ug/kg	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TP-110(3.0-3.5')

Lab Sample ID: MC48722-4

Matrix: SO - Soil

Method: SW846 8270D SW846 3546

Project: National Grid, Washington Street, Rensselaer, NY

Date Sampled: 11/11/16

Date Received: 11/12/16

Percent Solids: 80.4

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	300	10	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	300	9.0	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	300	12	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	610	15	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	610	14	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	610	40	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	367	120	10	ug/kg	
132-64-9	Dibenzofuran	316	120	9.5	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	300	13	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	300	10	ug/kg	
84-66-2	Diethyl phthalate	ND	300	9.7	ug/kg	
131-11-3	Dimethyl phthalate	ND	300	9.6	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	300	12	ug/kg	
206-44-0	Fluoranthene	5160	120	11	ug/kg	
86-73-7	Fluorene	1720	120	13	ug/kg	
118-74-1	Hexachlorobenzene	ND	300	16	ug/kg	
87-68-3	Hexachlorobutadiene	ND	300	12	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	610	14	ug/kg	
67-72-1	Hexachloroethane	ND	300	29	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	1410	300	34	ug/kg	
78-59-1	Isophorone	ND	300	22	ug/kg	
91-57-6	2-Methylnaphthalene	4460	120	14	ug/kg	
88-74-4	2-Nitroaniline	ND	610	14	ug/kg	
99-09-2	3-Nitroaniline	ND	610	14	ug/kg	
100-01-6	4-Nitroaniline	ND	610	14	ug/kg	
91-20-3	Naphthalene	7580	120	10	ug/kg	
98-95-3	Nitrobenzene	ND	300	34	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	300	17	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	300	40	ug/kg	
85-01-8	Phenanthrene	7470	120	9.1	ug/kg	
129-00-0	Pyrene	7400	120	12	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	300	15	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	60%		25-109%
4165-62-2	Phenol-d5	68%		29-113%
118-79-6	2,4,6-Tribromophenol	82%		20-141%
4165-60-0	Nitrobenzene-d5	66%		27-115%
321-60-8	2-Fluorobiphenyl	82%		34-118%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-110(3.0-3.5')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-4	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	80.4
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1718-51-0	Terphenyl-d14	89%		42-139%

(a) Continuing Calibration outside of acceptance criteria. Reporting Limit Response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-110(3.0-3.5')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-4	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	80.4
Method:	SW846 8015		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	WX78125.D	1	11/17/16	AF	n/a	n/a	GWX3867
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.64 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	68.1	11	2.0	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
	2,3,4-Trifluorotoluene	107%		64-127%		

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-110(3.0-3.5')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-4	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	80.4
Method:	SW846 8082A SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK63166.D	1	11/17/16	TA	11/15/16	OP49147	GBK1996
Run #2							

	Initial Weight	Final Volume
Run #1	15.6 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	40	4.1	ug/kg	
11104-28-2	Aroclor 1221	ND	40	17	ug/kg	
11141-16-5	Aroclor 1232	ND	40	12	ug/kg	
53469-21-9	Aroclor 1242	ND	40	9.2	ug/kg	
12672-29-6	Aroclor 1248	ND	40	6.9	ug/kg	
11097-69-1	Aroclor 1254	ND	40	17	ug/kg	
11096-82-5	Aroclor 1260	ND	40	3.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	101%		25-145%
877-09-8	Tetrachloro-m-xylene	74%		25-145%
2051-24-3	Decachlorobiphenyl	69%		25-179%
2051-24-3	Decachlorobiphenyl	68%		25-179%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TP-110(3.0-3.5')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-4	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	80.4
Method:	SW846-8015 SW846 3546		
Project:	National Grid, Washington Street, Rensselaer, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IR3257.D	1	11/18/16	MD	11/16/16	OP49158	GIR226
Run #2							

	Initial Weight	Final Volume
Run #1	15.9 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (Semi-VOA)	2200	20	4.9	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	91%		17-130%		

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TP-110(3.0-3.5')

Lab Sample ID: MC48722-4

Matrix: SO - Soil

Date Sampled: 11/11/16

Date Received: 11/12/16

Percent Solids: 80.4

Project: National Grid, Washington Street, Rensselaer, NY

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analized By	Method	Prep Method
Antimony	ND	0.99	0.17	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Arsenic	4.6	0.99	0.20	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Barium	83.6	4.9	0.075	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Beryllium	0.47	0.39	0.015	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Cadmium	0.12 B	0.39	0.031	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Chromium	13.1	0.99	0.046	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Lead	34.9	0.99	0.11	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Mercury	0.30	0.038	0.0064	mg/kg	1	11/15/16	11/15/16 JM	SW846 7471B ¹	SW846 7471B ³
Nickel	19.2	3.9	0.056	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Selenium	ND	0.99	0.30	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Silver	ND	0.49	0.060	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Thallium	ND	0.99	0.11	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Vanadium	17.0	0.99	0.039	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴
Zinc	61.7	2.0	0.17	mg/kg	1	11/15/16	11/15/16 EAL	SW846 6010C ²	SW846 3050B ⁴

(1) Instrument QC Batch: MA19626

(2) Instrument QC Batch: MA19629

(3) Prep QC Batch: MP27019

(4) Prep QC Batch: MP27020

RL = Reporting Limit

MDL = Method Detection Limit

ND = Not detected

B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	TP-110(3.0-3.5')	Date Sampled:	11/11/16
Lab Sample ID:	MC48722-4	Date Received:	11/12/16
Matrix:	SO - Soil	Percent Solids:	80.4
Project:	National Grid, Washington Street, Rensselaer, NY		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Cyanide	1.1	0.14	0.039	mg/kg	1	11/23/16 20:56 CF	SW846	9012 M
Heat Content, BTU ^a	1510	100		BTU/lb	1	11/18/16 21:00 ANJ	ASTM	D240-92
Percent Sulfur ^a	0.11 B	0.20	0.054	%	1	11/18/16 21:00 ANJ	ASTM	D129-95
Solids, Percent	80.4			%	1	11/16/16	JM	SM 2540G-97 MOD

(a) Analysis performed at SGS Accutest, Dayton, NJ.

RL = Reporting Limit
MDL = Method Detection Limit

ND = Not detected
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS Accutest of New England
50 D'Angelo Drive, Building One Marlborough, MA 01752
TEL: 508-481-6200 FAX: 508-481-7753
www.accutest.com

[illegible]

MC48722: Chain of Custody

Page 1 of 2

SGS Accutest Sample Receipt Summary

Job Number: MC48722

Client: ARCADIS

Project: NATIONAL GRID

Date / Time Received: 11/12/2016 10:20:00 AM

Delivery Method: FEDX

Airbill #'s: 784623131115

Cooler Temps (Initial/Adjusted): #1: (3.5/3.5):

Cooler Security
Y or N

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | ☒ | ☐ | 3. COC Present: | ☒ | ☐ |
| 2. Custody Seals Intact: | ☒ | ☐ | 4. Smpl Dates/Time OK | ☒ | ☐ |

Cooler Temperature
Y or N

- | | | |
|----------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | ☒ | ☐ |
| 2. Thermometer ID: | IRGUN1; | |
| 3. Cooler media: | Ice (Bag) | |
| 4. No. Coolers: | 1 | |

Quality Control Preservation
Y or N
N/A

- | | | | |
|---------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | ☐ | ☒ | ☐ |
| 2. Trip Blank listed on COC: | ☐ | ☒ | ☐ |
| 3. Samples preserved properly: | ☒ | ☐ | |
| 4. VOCs headspace free: | ☐ | ☐ | ☒ |

Comments

Sample Integrity - Documentation
Y or N

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | ☒ | ☐ |
| 2. Container labeling complete: | ☒ | ☐ |
| 3. Sample container label / COC agree: | ☒ | ☐ |

Sample Integrity - Condition
Y or N

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | ☒ | ☐ |
| 2. All containers accounted for: | ☒ | ☐ |
| 3. Condition of sample: | Intact | |

Sample Integrity - Instructions
Y or N N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | ☒ | ☐ | |
| 2. Bottles received for unspecified tests | ☐ | ☒ | |
| 3. Sufficient volume recvd for analysis: | ☒ | ☐ | |
| 4. Compositing instructions clear: | ☐ | ☐ | ☒ |
| 5. Filtering instructions clear: | ☐ | ☐ | ☒ |

MC48722: Chain of Custody

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GC/MS Volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Page 1 of 2

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4385-MB	L101570.D	1	11/18/16	TB	n/a	n/a	MSL4385

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	500	160	ug/kg	
71-43-2	Benzene	ND	50	19	ug/kg	
75-27-4	Bromodichloromethane	ND	100	21	ug/kg	
75-25-2	Bromoform	ND	100	24	ug/kg	
74-83-9	Bromomethane	ND	500	80	ug/kg	
78-93-3	2-Butanone (MEK)	ND	500	170	ug/kg	
75-15-0	Carbon disulfide	ND	250	20	ug/kg	
56-23-5	Carbon tetrachloride	ND	100	21	ug/kg	
108-90-7	Chlorobenzene	ND	100	47	ug/kg	
75-00-3	Chloroethane	ND	500	100	ug/kg	
67-66-3	Chloroform	ND	100	25	ug/kg	
74-87-3	Chloromethane	ND	250	38	ug/kg	
124-48-1	Dibromochloromethane	ND	250	54	ug/kg	
75-34-3	1,1-Dichloroethane	ND	100	20	ug/kg	
107-06-2	1,2-Dichloroethane	ND	100	18	ug/kg	
75-35-4	1,1-Dichloroethene	ND	100	34	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	100	18	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	100	20	ug/kg	
78-87-5	1,2-Dichloropropane	ND	100	22	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	100	61	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	100	66	ug/kg	
100-41-4	Ethylbenzene	ND	100	19	ug/kg	
591-78-6	2-Hexanone	ND	250	34	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	250	33	ug/kg	
75-09-2	Methylene chloride	ND	100	21	ug/kg	
100-42-5	Styrene	ND	250	16	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	95	ug/kg	
127-18-4	Tetrachloroethene	ND	100	15	ug/kg	
108-88-3	Toluene	ND	250	20	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	100	17	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	100	69	ug/kg	
79-01-6	Trichloroethene	ND	100	15	ug/kg	
75-01-4	Vinyl chloride	ND	500	170	ug/kg	
1330-20-7	Xylene (total)	ND	100	17	ug/kg	

Method Blank Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4385-MB	L101570.D	1	11/18/16	TB	n/a	n/a	MSL4385

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-4

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	108% 65-141%
2037-26-5	Toluene-D8	98% 65-129%
460-00-4	4-Bromofluorobenzene	104% 63-137%

Method Blank Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2942-MB	M82027.D	1	11/21/16	KP	n/a	n/a	MSM2942

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-1, MC48722-2

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	4.2	10	3.3	ug/kg	J
71-43-2	Benzene	ND	1.0	0.37	ug/kg	
75-27-4	Bromodichloromethane	ND	2.0	0.43	ug/kg	
75-25-2	Bromoform	ND	2.0	0.48	ug/kg	
74-83-9	Bromomethane	ND	10	1.6	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	3.4	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	0.41	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.0	0.41	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.94	ug/kg	
75-00-3	Chloroethane	ND	10	2.1	ug/kg	
67-66-3	Chloroform	ND	2.0	0.50	ug/kg	
74-87-3	Chloromethane	ND	5.0	0.75	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.1	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.0	0.40	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2.0	0.37	ug/kg	
75-35-4	1,1-Dichloroethene	ND	2.0	0.68	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	2.0	0.36	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	0.40	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.0	0.44	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	1.2	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	1.3	ug/kg	
100-41-4	Ethylbenzene	ND	2.0	0.38	ug/kg	
591-78-6	2-Hexanone	ND	5.0	0.67	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.65	ug/kg	
75-09-2	Methylene chloride	ND	2.0	0.42	ug/kg	
100-42-5	Styrene	ND	5.0	0.31	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.9	ug/kg	
127-18-4	Tetrachloroethene	ND	2.0	0.30	ug/kg	
108-88-3	Toluene	0.68	5.0	0.40	ug/kg	J
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.35	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.0	1.4	ug/kg	
79-01-6	Trichloroethene	ND	2.0	0.31	ug/kg	
75-01-4	Vinyl chloride	ND	10	3.4	ug/kg	
1330-20-7	Xylene (total)	ND	2.0	0.35	ug/kg	

Method Blank Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2942-MB	M82027.D	1	11/21/16	KP	n/a	n/a	MSM2942

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-1, MC48722-2

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	114% 65-141%
2037-26-5	Toluene-D8	104% 65-129%
460-00-4	4-Bromofluorobenzene	97% 63-137%

Method Blank Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3919-MB	N106520.D	1	11/23/16	AD	n/a	n/a	MSN3919

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.3	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.73	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.31	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.32	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.57	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.74	ug/l	
127-18-4	Tetrachloroethene	0.37	1.0	0.26	ug/l	J
79-01-6	Trichloroethene	ND	1.0	0.70	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	101% 76-129%
2037-26-5	Toluene-D8	100% 83-114%
460-00-4	4-Bromofluorobenzene	101% 75-124%

Leachate Blank Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GP21107-LB1	N106524.D	10	11/23/16	AD	11/15/16	GP21107	MSN3919

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	2.7	ug/l	
78-93-3	2-Butanone (MEK)	ND	100	30	ug/l	
56-23-5	Carbon tetrachloride	ND	10	3.4	ug/l	
108-90-7	Chlorobenzene	ND	10	2.4	ug/l	
67-66-3	Chloroform	ND	10	4.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	10	5.8	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	6.8	ug/l	
75-35-4	1,1-Dichloroethene	ND	10	2.8	ug/l	
127-18-4	Tetrachloroethene	2.4	10	2.1	ug/l	J
79-01-6	Trichloroethene	ND	10	2.5	ug/l	
75-01-4	Vinyl chloride	ND	10	4.5	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	99% 74-135%
2037-26-5	Toluene-D8	102% 83-116%
460-00-4	4-Bromofluorobenzene	102% 76-124%

Blank Spike Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4385-BS	L101567.D	1	11/18/16	TB	n/a	n/a	MSL4385

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	2500	3690	148	24-179
71-43-2	Benzene	2500	2510	100	73-115
75-27-4	Bromodichloromethane	2500	2350	94	76-122
75-25-2	Bromoform	2500	2560	102	67-151
74-83-9	Bromomethane	2500	2200	88	52-139
78-93-3	2-Butanone (MEK)	2500	3500	140	32-151
75-15-0	Carbon disulfide	2500	2630	105	57-143
56-23-5	Carbon tetrachloride	2500	2230	89	73-129
108-90-7	Chlorobenzene	2500	2550	102	79-123
75-00-3	Chloroethane	2500	2490	100	51-159
67-66-3	Chloroform	2500	2460	98	72-122
74-87-3	Chloromethane	2500	1980	79	57-143
124-48-1	Dibromochloromethane	2500	2520	101	74-139
75-34-3	1,1-Dichloroethane	2500	2490	100	70-128
107-06-2	1,2-Dichloroethane	2500	2300	92	70-126
75-35-4	1,1-Dichloroethene	2500	2570	103	71-136
156-59-2	cis-1,2-Dichloroethene	2500	2830	113	78-128
156-60-5	trans-1,2-Dichloroethene	2500	2420	97	71-131
78-87-5	1,2-Dichloropropane	2500	2570	103	79-124
10061-01-5	cis-1,3-Dichloropropene	2500	2480	99	75-126
10061-02-6	trans-1,3-Dichloropropene	2500	2290	92	75-128
100-41-4	Ethylbenzene	2500	2620	105	76-122
591-78-6	2-Hexanone	2500	4170	167	26-169
108-10-1	4-Methyl-2-pentanone (MIBK)	2500	2790	112	43-166
75-09-2	Methylene chloride	2500	2670	107	74-125
100-42-5	Styrene	2500	2710	108	79-124
79-34-5	1,1,2,2-Tetrachloroethane	2500	2700	108	66-134
127-18-4	Tetrachloroethene	2500	2480	99	76-125
108-88-3	Toluene	2500	2400	96	76-119
71-55-6	1,1,1-Trichloroethane	2500	2390	96	70-130
79-00-5	1,1,2-Trichloroethane	2500	2520	101	75-124
79-01-6	Trichloroethene	2500	2360	94	74-127
75-01-4	Vinyl chloride	2500	1900	76	33-166
1330-20-7	Xylene (total)	7500	8350	111	78-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4385-BS	L101567.D	1	11/18/16	TB	n/a	n/a	MSL4385

The QC reported here applies to the following samples: Method: SW846 8260C

MC48722-4

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	65-141%
2037-26-5	Toluene-D8	98%	65-129%
460-00-4	4-Bromofluorobenzene	96%	63-137%

* = Outside of Control Limits.

Blank Spike Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2942-BS	M82024.D	1	11/21/16	KP	n/a	n/a	MSM2942

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-1, MC48722-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	50	80.9	162	24-179
71-43-2	Benzene	50	50.9	102	73-115
75-27-4	Bromodichloromethane	50	49.8	100	76-122
75-25-2	Bromoform	50	45.3	91	67-151
74-83-9	Bromomethane	50	40.5	81	52-139
78-93-3	2-Butanone (MEK)	50	74.0	148	32-151
75-15-0	Carbon disulfide	50	59.0	118	57-143
56-23-5	Carbon tetrachloride	50	54.0	108	73-129
108-90-7	Chlorobenzene	50	45.3	91	79-123
75-00-3	Chloroethane	50	40.3	81	51-159
67-66-3	Chloroform	50	51.5	103	72-122
74-87-3	Chloromethane	50	54.1	108	57-143
124-48-1	Dibromochloromethane	50	44.8	90	74-139
75-34-3	1,1-Dichloroethane	50	51.4	103	70-128
107-06-2	1,2-Dichloroethane	50	51.4	103	70-126
75-35-4	1,1-Dichloroethene	50	52.9	106	71-136
156-59-2	cis-1,2-Dichloroethene	50	53.3	107	78-128
156-60-5	trans-1,2-Dichloroethene	50	47.8	96	71-131
78-87-5	1,2-Dichloropropane	50	50.0	100	79-124
10061-01-5	cis-1,3-Dichloropropene	50	48.5	97	75-126
10061-02-6	trans-1,3-Dichloropropene	50	49.0	98	75-128
100-41-4	Ethylbenzene	50	48.6	97	76-122
591-78-6	2-Hexanone	50	65.2	130	26-169
108-10-1	4-Methyl-2-pentanone (MIBK)	50	48.4	97	43-166
75-09-2	Methylene chloride	50	56.5	113	74-125
100-42-5	Styrene	50	47.0	94	79-124
79-34-5	1,1,2,2-Tetrachloroethane	50	45.4	91	66-134
127-18-4	Tetrachloroethene	50	48.0	96	76-125
108-88-3	Toluene	50	50.2	100	76-119
71-55-6	1,1,1-Trichloroethane	50	53.8	108	70-130
79-00-5	1,1,2-Trichloroethane	50	47.7	95	75-124
79-01-6	Trichloroethene	50	49.0	98	74-127
75-01-4	Vinyl chloride	50	43.9	88	33-166
1330-20-7	Xylene (total)	150	144	96	78-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2942-BS	M82024.D	1	11/21/16	KP	n/a	n/a	MSM2942

The QC reported here applies to the following samples: Method: SW846 8260C
MC48722-1, MC48722-2

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	65-141%
2037-26-5	Toluene-D8	102%	65-129%
460-00-4	4-Bromofluorobenzene	96%	63-137%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3919-BS	N106517.D	1	11/23/16	AD	n/a	n/a	MSN3919
MSN3919-BSD	N106518.D	1	11/23/16	AD	n/a	n/a	MSN3919

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	50	44.3	89	49.6	99	11	66-123/25
78-93-3	2-Butanone (MEK)	50	46.0	92	51.1	102	11	45-171/25
56-23-5	Carbon tetrachloride	50	46.1	92	51.5	103	11	54-151/25
108-90-7	Chlorobenzene	50	45.5	91	52.0	104	13	75-117/25
67-66-3	Chloroform	50	45.7	91	52.1	104	13	65-127/25
106-46-7	1,4-Dichlorobenzene	50	46.0	92	51.0	102	10	77-117/25
107-06-2	1,2-Dichloroethane	50	44.3	89	50.3	101	13	68-126/25
75-35-4	1,1-Dichloroethene	50	40.7	81	46.1	92	12	44-148/25
127-18-4	Tetrachloroethene	50	46.7	93	52.9	106	12	68-133/25
79-01-6	Trichloroethene	50	46.0	92	51.9	104	12	73-120/25
75-01-4	Vinyl chloride	50	43.5	87	44.3	89	2	49-154/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	101%	100%	76-129%
2037-26-5	Toluene-D8	101%	101%	83-114%
460-00-4	4-Bromofluorobenzene	99%	98%	75-124%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC48725-1MS	L101581.D	1	11/18/16	TB	n/a	n/a	MSL4385
MC48725-1MSD	L101582.D	1	11/18/16	TB	n/a	n/a	MSL4385
MC48725-1 ^a	L101571.D	1	11/18/16	TB	n/a	n/a	MSL4385

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-4

CAS No.	Compound	MC48725-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	3080	3100	101	3080	3660	119	17	10-200/30
71-43-2	Benzene	ND	3080	2990	97	3080	2950	96	1	38-135/30
75-27-4	Bromodichloromethane	ND	3080	3370	109	3080	2740	89	21	45-136/30
75-25-2	Bromoform	ND	3080	3450	112	3080	3060	99	12	42-150/30
74-83-9	Bromomethane	ND	3080	3690	120	3080	2750	89	29	20-159/30
78-93-3	2-Butanone (MEK)	ND	3080	3210	104	3080	3690	120	14	10-187/30
75-15-0	Carbon disulfide	ND	3080	2840	92	3080	2960	96	4	29-157/30
56-23-5	Carbon tetrachloride	ND	3080	3550	115	3080	2640	86	29	42-148/30
108-90-7	Chlorobenzene	ND	3080	2960	96	3080	3060	99	3	33-148/30
75-00-3	Chloroethane	ND	3080	3060	99	3080	3080	100	1	32-162/30
67-66-3	Chloroform	ND	3080	3130	102	3080	2780	90	12	46-136/30
74-87-3	Chloromethane	ND	3080	4470	145	3080	2360	77	62* ^b	33-152/30
124-48-1	Dibromochloromethane	ND	3080	3140	102	3080	2990	97	5	46-147/30
75-34-3	1,1-Dichloroethane	ND	3080	2910	94	3080	2810	91	3	49-134/30
107-06-2	1,2-Dichloroethane	ND	3080	3400	110	3080	2580	84	27	46-135/30
75-35-4	1,1-Dichloroethene	ND	3080	2870	93	3080	2930	95	2	46-148/30
156-59-2	cis-1,2-Dichloroethene	ND	3080	3110	101	3080	3270	106	5	46-144/30
156-60-5	trans-1,2-Dichloroethene	ND	3080	2670	87	3080	2800	91	5	44-145/30
78-87-5	1,2-Dichloropropane	ND	3080	3010	98	3080	2960	96	2	48-138/30
10061-01-5	cis-1,3-Dichloropropene	ND	3080	3270	106	3080	2920	95	11	34-149/30
10061-02-6	trans-1,3-Dichloropropene	ND	3080	3130	102	3080	2630	85	17	28-151/30
100-41-4	Ethylbenzene	ND	3080	3190	103	3080	3130	102	2	32-150/30
591-78-6	2-Hexanone	ND	3080	3510	114	3080	3960	128	12	10-184/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	3080	3550	115	3080	3160	102	12	35-164/30
75-09-2	Methylene chloride	ND	3080	2860	93	3080	3030	98	6	48-140/30
100-42-5	Styrene	ND	3080	3260	106	3080	3290	107	1	17-160/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	3080	2210	72	3080	3150	102	35* ^b	30-157/30
127-18-4	Tetrachloroethene	ND	3080	2950	96	3080	2940	95	0	40-146/30
108-88-3	Toluene	ND	3080	3080	100	3080	2900	94	6	33-145/30
71-55-6	1,1,1-Trichloroethane	ND	3080	3400	110	3080	2750	89	21	41-147/30
79-00-5	1,1,2-Trichloroethane	ND	3080	3050	99	3080	3020	98	1	40-148/30
79-01-6	Trichloroethene	ND	3080	3160	102	3080	2860	93	10	36-155/30
75-01-4	Vinyl chloride	ND	3080	3390	110	3080	2260	73	40* ^b	11-183/30
1330-20-7	Xylene (total)	ND	9250	10000	108	9250	10200	110	2	33-150/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC48725-1MS	L101581.D	1	11/18/16	TB	n/a	n/a	MSL4385
MC48725-1MSD	L101582.D	1	11/18/16	TB	n/a	n/a	MSL4385
MC48725-1 ^a	L101571.D	1	11/18/16	TB	n/a	n/a	MSL4385

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-4

CAS No.	Surrogate Recoveries	MS	MSD	MC48725-1	Limits
1868-53-7	Dibromofluoromethane	101%	97%	112%	65-141%
2037-26-5	Toluene-D8	102%	99%	101%	65-129%
460-00-4	4-Bromofluorobenzene	70%	100%	99%	63-137%

(a) Analytical results based on analysis of intact sample. Sample results may be biased low due to sample not being preserved according to 5035-L/5035A-L specifications.

(b) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC48777-1MS	M82046.D	1	11/21/16	KP	n/a	n/a	MSM2942
MC48777-1MSD	M82047.D	1	11/21/16	KP	n/a	n/a	MSM2942
MC48777-1	M82031.D	1	11/21/16	KP	n/a	n/a	MSM2942

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-1, MC48722-2

CAS No.	Compound	MC48777-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	51.6	38.6	75	49.5	41.3	83	7	10-200/30
71-43-2	Benzene	ND	51.6	50.2	97	49.5	48.1	97	4	38-135/30
75-27-4	Bromodichloromethane	ND	51.6	48.8	95	49.5	46.8	95	4	45-136/30
75-25-2	Bromoform	ND	51.6	43.9	85	49.5	41.7	84	5	42-150/30
74-83-9	Bromomethane	ND	51.6	39.6	77	49.5	39.2	79	1	20-159/30
78-93-3	2-Butanone (MEK)	ND	51.6	33.4	65	49.5	41.9	85	23	10-187/30
75-15-0	Carbon disulfide	ND	51.6	57.9	112	49.5	53.0	107	9	29-157/30
56-23-5	Carbon tetrachloride	ND	51.6	55.0	107	49.5	51.2	103	7	42-148/30
108-90-7	Chlorobenzene	ND	51.6	42.0	81	49.5	40.6	82	3	33-148/30
75-00-3	Chloroethane	ND	51.6	42.9	83	49.5	39.5	80	8	32-162/30
67-66-3	Chloroform	ND	51.6	52.0	101	49.5	48.6	98	7	46-136/30
74-87-3	Chloromethane	ND	51.6	54.8	106	49.5	50.2	101	9	33-152/30
124-48-1	Dibromochloromethane	ND	51.6	42.7	83	49.5	41.3	83	3	46-147/30
75-34-3	1,1-Dichloroethane	ND	51.6	51.1	99	49.5	48.1	97	6	49-134/30
107-06-2	1,2-Dichloroethane	ND	51.6	51.7	100	49.5	49.0	99	5	46-135/30
75-35-4	1,1-Dichloroethene	ND	51.6	52.0	101	49.5	49.2	99	6	46-148/30
156-59-2	cis-1,2-Dichloroethene	ND	51.6	51.9	101	49.5	49.0	99	6	46-144/30
156-60-5	trans-1,2-Dichloroethene	ND	51.6	46.9	91	49.5	44.3	89	6	44-145/30
78-87-5	1,2-Dichloropropane	ND	51.6	49.5	96	49.5	46.8	95	6	48-138/30
10061-01-5	cis-1,3-Dichloropropene	ND	51.6	44.6	86	49.5	43.6	88	2	34-149/30
10061-02-6	trans-1,3-Dichloropropene	ND	51.6	45.9	89	49.5	44.1	89	4	28-151/30
100-41-4	Ethylbenzene	ND	51.6	44.4	86	49.5	42.7	86	4	32-150/30
591-78-6	2-Hexanone	ND	51.6	36.0	70	49.5	36.5	74	1	10-184/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	51.6	45.9	89	49.5	44.0	89	4	35-164/30
75-09-2	Methylene chloride	ND	51.6	59.8	116	49.5	54.4	110	9	48-140/30
100-42-5	Styrene	ND	51.6	41.4	80	49.5	40.1	81	3	17-160/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	51.6	44.9	87	49.5	43.3	87	4	30-157/30
127-18-4	Tetrachloroethene	ND	51.6	42.4	82	49.5	41.0	83	3	40-146/30
108-88-3	Toluene	0.98	51.6	48.0	91	49.5	46.1	91	4	33-145/30
71-55-6	1,1,1-Trichloroethane	ND	51.6	54.7	106	49.5	51.2	103	7	41-147/30
79-00-5	1,1,2-Trichloroethane	ND	51.6	47.6	92	49.5	45.3	91	5	40-148/30
79-01-6	Trichloroethene	ND	51.6	47.0	91	49.5	45.4	92	3	36-155/30
75-01-4	Vinyl chloride	ND	51.6	43.9	85	49.5	41.4	84	6	11-183/30
1330-20-7	Xylene (total)	ND	155	125	81	149	121	81	3	33-150/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC48777-1MS	M82046.D	1	11/21/16	KP	n/a	n/a	MSM2942
MC48777-1MSD	M82047.D	1	11/21/16	KP	n/a	n/a	MSM2942
MC48777-1	M82031.D	1	11/21/16	KP	n/a	n/a	MSM2942

The QC reported here applies to the following samples: Method: SW846 8260C

MC48722-1, MC48722-2

CAS No.	Surrogate Recoveries	MS	MSD	MC48777-1	Limits
1868-53-7	Dibromofluoromethane	105%	102%	118%	65-141%
2037-26-5	Toluene-D8	105%	103%	105%	65-129%
460-00-4	4-Bromofluorobenzene	94%	97%	97%	63-137%

* = Outside of Control Limits.

Leachate Spike Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GP21107-LS1	N106538.D	1	11/23/16	AD	11/15/16	GP21107	MSN3919
MC48722-1A	N106527.D	100	11/23/16	AD	11/15/16	GP21107	MSN3919

The QC reported here applies to the following samples:

Method: SW846 8260C

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	MC48722-1ASpike		LS ug/l	LS %	Limits
		ug/l	Q ug/l			
71-43-2	Benzene	58.6	J 50	45.3	-27* a	63-125
78-93-3	2-Butanone (MEK)	ND	50	47.7	95	10-158
56-23-5	Carbon tetrachloride	ND	50	42.2	84	48-153
108-90-7	Chlorobenzene	ND	50	45.0	90	68-117
67-66-3	Chloroform	ND	50	47.2	94	57-137
106-46-7	1,4-Dichlorobenzene	ND	50	44.3	89	66-114
107-06-2	1,2-Dichloroethane	ND	50	46.8	94	48-146
75-35-4	1,1-Dichloroethene	ND	50	40.6	81	47-150
127-18-4	Tetrachloroethene	ND	50	42.2	84	71-117
79-01-6	Trichloroethene	ND	50	44.1	88	67-121
75-01-4	Vinyl chloride	ND	50	49.0	98	49-151

CAS No.	Surrogate Recoveries	LS MC48722-1ALimits		
1868-53-7	Dibromofluoromethane	102%	101%	74-135%
2037-26-5	Toluene-D8	101%	102%	83-116%
460-00-4	4-Bromofluorobenzene	100%	102%	76-124%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846 8260C	Matrix: LEACHATE
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC48722-3	N106529.D	100	100	102
MC48722-1A	N106527.D	101	102	102
MC48722-2A	N106528.D	101	101	101
GP21107-LB1	N106524.D	99	102	102
GP21107-LS1	N106538.D	102	101	100
MSN3919-BS	N106517.D	101	101	99
MSN3919-BSD	N106518.D	100	101	98
MSN3919-MB	N106520.D	101	100	101

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	74-135%
S2 = Toluene-D8	83-116%
S3 = 4-Bromofluorobenzene	76-124%

5.7.1
 5

Volatile Surrogate Recovery Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846 8260C	Matrix: SO
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC48722-1	M82033.D	118	103	95
MC48722-2	M82034.D	115	103	104
MC48722-4	L101580.D	107	100	98
MC48725-1MS	L101581.D	101	102	70
MC48725-1MSD	L101582.D	97	99	100
MC48777-1MS	M82046.D	105	105	94
MC48777-1MSD	M82047.D	102	103	97
MSL4385-BS	L101567.D	102	98	96
MSL4385-MB	L101570.D	108	98	104
MSM2942-BS	M82024.D	103	102	96
MSM2942-MB	M82027.D	114	104	97

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	65-141%
S2 = Toluene-D8	65-129%
S3 = 4-Bromofluorobenzene	63-137%

5.7.2
 5

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

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Job Number: MC48722**Account:** BBLNYS Arcadis**Project:** National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49144-MB	R50705.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889

The QC reported here applies to the following samples:**Method:** SW846 8270D

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	240	11	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	480	11	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	480	26	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	480	200	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	480	100	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	480	47	ug/kg	
95-48-7	2-Methylphenol	ND	480	51	ug/kg	
	3&4-Methylphenol	ND	480	42	ug/kg	
88-75-5	2-Nitrophenol	ND	480	37	ug/kg	
100-02-7	4-Nitrophenol	ND	480	55	ug/kg	
87-86-5	Pentachlorophenol	ND	480	54	ug/kg	
108-95-2	Phenol	ND	240	10	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	480	14	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	480	8.7	ug/kg	
83-32-9	Acenaphthene	ND	95	6.5	ug/kg	
208-96-8	Acenaphthylene	ND	95	7.5	ug/kg	
120-12-7	Anthracene	ND	95	7.7	ug/kg	
56-55-3	Benzo(a)anthracene	ND	95	9.4	ug/kg	
50-32-8	Benzo(a)pyrene	ND	240	8.1	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	95	11	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	95	9.2	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	95	13	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	240	9.9	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	240	12	ug/kg	
91-58-7	2-Chloronaphthalene	ND	240	9.5	ug/kg	
106-47-8	4-Chloroaniline	ND	480	11	ug/kg	
86-74-8	Carbazole	ND	95	8.2	ug/kg	
218-01-9	Chrysene	ND	95	7.4	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	240	9.3	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	240	8.6	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	240	12	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	240	11	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	240	8.1	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	240	7.1	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	240	9.6	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	480	12	ug/kg	

Method Blank Summary

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Job Number: MC48722**Account:** BBLNYS Arcadis**Project:** National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49144-MB	R50705.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889

The QC reported here applies to the following samples:**Method:** SW846 8270D

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Result	RL	MDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	480	11	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	480	31	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	95	7.8	ug/kg	
132-64-9	Dibenzofuran	ND	95	7.4	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	240	10	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	240	8.1	ug/kg	
84-66-2	Diethyl phthalate	ND	240	7.6	ug/kg	
131-11-3	Dimethyl phthalate	ND	240	7.5	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	240	9.5	ug/kg	
206-44-0	Fluoranthene	ND	95	8.7	ug/kg	
86-73-7	Fluorene	ND	95	11	ug/kg	
118-74-1	Hexachlorobenzene	ND	240	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	240	9.2	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	480	11	ug/kg	
67-72-1	Hexachloroethane	ND	240	23	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	240	26	ug/kg	
78-59-1	Isophorone	ND	240	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	95	11	ug/kg	
88-74-4	2-Nitroaniline	ND	480	11	ug/kg	
99-09-2	3-Nitroaniline	ND	480	11	ug/kg	
100-01-6	4-Nitroaniline	ND	480	11	ug/kg	
91-20-3	Naphthalene	ND	95	8.1	ug/kg	
98-95-3	Nitrobenzene	ND	240	26	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	240	13	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	240	32	ug/kg	
85-01-8	Phenanthrene	ND	95	7.1	ug/kg	
129-00-0	Pyrene	ND	95	9.2	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	240	12	ug/kg	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	30% 25-109%
4165-62-2	Phenol-d5	34% 29-113%
118-79-6	2,4,6-Tribromophenol	57% 20-141%
4165-60-0	Nitrobenzene-d5	29% 27-115%

Method Blank Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49144-MB	R50705.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889

The QC reported here applies to the following samples: Method: SW846 8270D
MC48722-1, MC48722-2, MC48722-4

CAS No.	Surrogate Recoveries	Limits
321-60-8	2-Fluorobiphenyl	43% 34-118%
1718-51-0	Terphenyl-d14	81% 42-139%

6.1.1
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Method Blank Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-MB1	R50878.D	1	11/26/16	DRY	11/16/16	OP49119	MSR1897

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	100	3.2	ug/l	
	3&4-Methylphenol	ND	100	5.4	ug/l	
87-86-5	Pentachlorophenol	ND	100	5.9	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	100	5.2	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	100	3.8	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	3.5	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	100	12	ug/l	
118-74-1	Hexachlorobenzene	ND	50	4.1	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	4.3	ug/l	
67-72-1	Hexachloroethane	ND	50	3.6	ug/l	
98-95-3	Nitrobenzene	ND	50	4.2	ug/l	
110-86-1	Pyridine	ND	100	13	ug/l	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	41% 10-73%
4165-62-2	Phenol-d5	25% 10-58%
118-79-6	2,4,6-Tribromophenol	76% 15-125%
4165-60-0	Nitrobenzene-d5	65% 23-120%
321-60-8	2-Fluorobiphenyl	69% 31-102%
1718-51-0	Terphenyl-d14	101% 42-124%

Method Blank Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-MB	W30954.D	1	11/11/16	MR	11/10/16	OP49119	MSW1256

The QC reported here applies to the following samples:

Method: SW846 8270D

OP49119-MS, OP49119-MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	100	3.2	ug/l	
	3&4-Methylphenol	ND	100	5.4	ug/l	
87-86-5	Pentachlorophenol	ND	100	5.9	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	100	5.2	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	100	3.8	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	3.5	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	100	12	ug/l	
118-74-1	Hexachlorobenzene	ND	50	4.1	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	4.3	ug/l	
67-72-1	Hexachloroethane	ND	50	3.6	ug/l	
98-95-3	Nitrobenzene	ND	50	4.2	ug/l	
110-86-1	Pyridine	ND	100	13	ug/l	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	38% 10-73%
4165-62-2	Phenol-d5	24% 10-58%
118-79-6	2,4,6-Tribromophenol	88% 15-125%
4165-60-0	Nitrobenzene-d5	62% 23-120%
321-60-8	2-Fluorobiphenyl	67% 31-102%
1718-51-0	Terphenyl-d14	85% 42-124%

Method Blank Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-MB2	R50865.D	1	11/23/16	MR	11/22/16	OP49119	MSR1896

The QC reported here applies to the following samples:

Method: SW846 8270D

OP49119-LS2, OP49119-LS3

CAS No.	Compound	Result	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	100	3.2	ug/l	
	3&4-Methylphenol	ND	100	5.4	ug/l	
87-86-5	Pentachlorophenol	ND	100	5.9	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	100	5.2	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	100	3.8	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	3.5	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	100	12	ug/l	
118-74-1	Hexachlorobenzene	ND	50	4.1	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	4.3	ug/l	
67-72-1	Hexachloroethane	ND	50	3.6	ug/l	
98-95-3	Nitrobenzene	ND	50	4.2	ug/l	
110-86-1	Pyridine	ND	100	13	ug/l	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	32% 10-73%
4165-62-2	Phenol-d5	22% 10-58%
118-79-6	2,4,6-Tribromophenol	70% 15-125%
4165-60-0	Nitrobenzene-d5	52% 23-120%
321-60-8	2-Fluorobiphenyl	57% 31-102%
1718-51-0	Terphenyl-d14	93% 42-124%

Leachate Blank Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-LB1	R50878A.D	1	11/26/16	DRY	11/16/16	OP49119	MSR1897

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	100	3.2	ug/l	
	3&4-Methylphenol	ND	100	5.4	ug/l	
87-86-5	Pentachlorophenol	ND	100	5.9	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	100	5.2	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	100	3.8	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	3.5	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	100	12	ug/l	
118-74-1	Hexachlorobenzene	ND	50	4.1	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	4.3	ug/l	
67-72-1	Hexachloroethane	ND	50	3.6	ug/l	
98-95-3	Nitrobenzene	ND	50	4.2	ug/l	
110-86-1	Pyridine	ND	100	13	ug/l	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	41% 10-73%
4165-62-2	Phenol-d5	25% 10-58%
118-79-6	2,4,6-Tribromophenol	76% 15-125%
4165-60-0	Nitrobenzene-d5	65% 23-120%
321-60-8	2-Fluorobiphenyl	69% 31-102%
1718-51-0	Terphenyl-d14	101% 42-124%

Leachate Blank Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-LB	W30954A.D	1	11/11/16	MR	11/10/16	OP49119	MSW1256

The QC reported here applies to the following samples:

Method: SW846 8270D

OP49119-MS, OP49119-MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	100	3.2	ug/l	
	3&4-Methylphenol	ND	100	5.4	ug/l	
87-86-5	Pentachlorophenol	ND	100	5.9	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	100	5.2	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	100	3.8	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	3.5	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	100	12	ug/l	
118-74-1	Hexachlorobenzene	ND	50	4.1	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	4.3	ug/l	
67-72-1	Hexachloroethane	ND	50	3.6	ug/l	
98-95-3	Nitrobenzene	ND	50	4.2	ug/l	
110-86-1	Pyridine	ND	100	13	ug/l	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	38% 10-73%
4165-62-2	Phenol-d5	24% 10-58%
118-79-6	2,4,6-Tribromophenol	88% 15-125%
4165-60-0	Nitrobenzene-d5	62% 23-120%
321-60-8	2-Fluorobiphenyl	67% 31-102%
1718-51-0	Terphenyl-d14	85% 42-124%

Leachate Blank Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-LB2	R50865A.D	1	11/23/16	MR	11/22/16	OP49119	MSR1896

The QC reported here applies to the following samples:

Method: SW846 8270D

OP49119-LS2, OP49119-LS3

CAS No.	Compound	Result	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	100	3.2	ug/l	
	3&4-Methylphenol	ND	100	5.4	ug/l	
87-86-5	Pentachlorophenol	ND	100	5.9	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	100	5.2	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	100	3.8	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	3.5	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	100	12	ug/l	
118-74-1	Hexachlorobenzene	ND	50	4.1	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	4.3	ug/l	
67-72-1	Hexachloroethane	ND	50	3.6	ug/l	
98-95-3	Nitrobenzene	ND	50	4.2	ug/l	
110-86-1	Pyridine	ND	100	13	ug/l	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	32% 10-73%
4165-62-2	Phenol-d5	22% 10-58%
118-79-6	2,4,6-Tribromophenol	70% 15-125%
4165-60-0	Nitrobenzene-d5	52% 23-120%
321-60-8	2-Fluorobiphenyl	57% 31-102%
1718-51-0	Terphenyl-d14	93% 42-124%

Blank Spike Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-BS1	R50879.D	1	11/26/16	DRY	11/16/16	OP49119	MSR1897

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-48-7	2-Methylphenol	500	365	73	20-112
	3&4-Methylphenol	1000	650	65	19-102
87-86-5	Pentachlorophenol	500	351	70	28-117
95-95-4	2,4,5-Trichlorophenol	500	532	106	56-112
88-06-2	2,4,6-Trichlorophenol	500	525	105	54-112
106-46-7	1,4-Dichlorobenzene	500	405	81	30-90
121-14-2	2,4-Dinitrotoluene	500	535	107	62-121
118-74-1	Hexachlorobenzene	500	522	104	49-128
87-68-3	Hexachlorobutadiene	500	406	81	22-96
67-72-1	Hexachloroethane	500	368	74	22-86
98-95-3	Nitrobenzene	500	425	85	50-117
110-86-1	Pyridine	500	178	36	10-86

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	50%	10-73%
4165-62-2	Phenol-d5	32%	10-58%
118-79-6	2,4,6-Tribromophenol	90%	15-125%
4165-60-0	Nitrobenzene-d5	78%	23-120%
321-60-8	2-Fluorobiphenyl	87%	31-102%
1718-51-0	Terphenyl-d14	94%	42-124%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49144-BS	R50706.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
OP49144-BSD	R50714.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	2400	1580	66	2200	89	33* a	39-104/30
59-50-7	4-Chloro-3-methyl phenol	2400	1640	68	2150	87	27	51-110/30
120-83-2	2,4-Dichlorophenol	2400	1660	69	2240	90	30	47-109/30
105-67-9	2,4-Dimethylphenol	2400	1630	68	2200	89	30	43-105/30
51-28-5	2,4-Dinitrophenol	2400	610	25	703	28	14	10-130/30
534-52-1	4,6-Dinitro-o-cresol	2400	1190	50	941	38	23	16-140/30
95-48-7	2-Methylphenol	2400	1590	66	2220	90	33* a	40-105/30
	3&4-Methylphenol	4800	3130	65	4300	87	31* a	39-113/30
88-75-5	2-Nitrophenol	2400	1520	63	2030	82	29	41-112/30
100-02-7	4-Nitrophenol	2400	1750	73	2450	99	33* a	28-134/30
87-86-5	Pentachlorophenol	2400	1410	59	1910	77	30	22-123/30
108-95-2	Phenol	2400	1550	65	2060	83	28	40-107/30
95-95-4	2,4,5-Trichlorophenol	2400	1930	80	2450	99	24	54-115/30
88-06-2	2,4,6-Trichlorophenol	2400	1890	79	2440	99	25	51-110/30
83-32-9	Acenaphthene	2400	1800	75	2300	93	24	49-108/30
208-96-8	Acenaphthylene	2400	1660	69	2150	87	26	37-102/30
120-12-7	Anthracene	2400	1690	70	2230	90	28	54-111/30
56-55-3	Benzo(a)anthracene	2400	1760	73	2380	96	30	56-117/30
50-32-8	Benzo(a)pyrene	2400	1730	72	2320	94	29	57-117/30
205-99-2	Benzo(b)fluoranthene	2400	1750	73	2280	92	26	55-122/30
191-24-2	Benzo(g,h,i)perylene	2400	1660	69	2210	89	28	52-123/30
207-08-9	Benzo(k)fluoranthene	2400	1760	73	2370	96	30	54-117/30
101-55-3	4-Bromophenyl phenyl ether	2400	2070	86	2670	108	25	54-118/30
85-68-7	Butyl benzyl phthalate	2400	1990	83	2800	113	34* a	54-121/30
91-58-7	2-Chloronaphthalene	2400	1840	77	2400	97	26	46-114/30
106-47-8	4-Chloroaniline	2400	1320	55	666	27	66* a	12-88/30
86-74-8	Carbazole	2400	1730	72	2300	93	28	56-116/30
218-01-9	Chrysene	2400	1720	72	2290	92	28	56-114/30
111-91-1	bis(2-Chloroethoxy)methane	2400	1540	64	2090	84	30	41-106/30
111-44-4	bis(2-Chloroethyl)ether	2400	1690	70	2310	93	31* a	28-113/30
108-60-1	bis(2-Chloroisopropyl)ether	2400	1790	75	2480	100	32* a	30-132/30
7005-72-3	4-Chlorophenyl phenyl ether	2400	2100	87	2730	110	26	54-114/30
95-50-1	1,2-Dichlorobenzene	2400	1750	73	2330	94	28	34-100/30
541-73-1	1,3-Dichlorobenzene	2400	1740	72	2360	95	30	35-99/30
106-46-7	1,4-Dichlorobenzene	2400	1690	70	2270	92	29	35-98/30
121-14-2	2,4-Dinitrotoluene	2400	1920	80	2480	100	25	50-121/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49144-BS	R50706.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
OP49144-BSD	R50714.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
606-20-2	2,6-Dinitrotoluene	2400	1830	76	2360	95	25	52-115/30
91-94-1	3,3'-Dichlorobenzidine	2400	1260	52	1420	57	12	17-120/30
53-70-3	Dibenzo(a,h)anthracene	2400	1650	69	2210	89	29	54-121/30
132-64-9	Dibenzofuran	2400	1830	76	2370	96	26	52-109/30
84-74-2	Di-n-butyl phthalate	2400	1940	81	2640	107	31* a	55-113/30
117-84-0	Di-n-octyl phthalate	2400	1850	77	2470	100	29	53-126/30
84-66-2	Diethyl phthalate	2400	2080	87	2730	110	27	54-111/30
131-11-3	Dimethyl phthalate	2400	2060	86	2690	109	27	53-111/30
117-81-7	bis(2-Ethylhexyl)phthalate	2400	1870	78	2590	105	32* a	55-125/30
206-44-0	Fluoranthene	2400	1790	75	2350	95	27	55-116/30
86-73-7	Fluorene	2400	1950	81	2520	102	26	52-111/30
118-74-1	Hexachlorobenzene	2400	1880	78	2440	99	26	52-117/30
87-68-3	Hexachlorobutadiene	2400	1700	71	2310	93	30	36-108/30
77-47-4	Hexachlorocyclopentadiene	2400	1240	52	1290	52	4	10-99/30
67-72-1	Hexachloroethane	2400	1580	66	2120	86	29	33-100/30
193-39-5	Indeno(1,2,3-cd)pyrene	2400	1630	68	2200	89	30	55-120/30
78-59-1	Isophorone	2400	1660	69	2200	89	28	37-101/30
91-57-6	2-Methylnaphthalene	2400	1640	68	2200	89	29	38-114/30
88-74-4	2-Nitroaniline	2400	1780	74	2330	94	27	55-120/30
99-09-2	3-Nitroaniline	2400	1600	67	1270	51	23	31-103/30
100-01-6	4-Nitroaniline	2400	1650	69	1900	77	14	50-112/30
91-20-3	Naphthalene	2400	2050	85	2960	120	36* a	27-128/30
98-95-3	Nitrobenzene	2400	1590	66	2150	87	30	33-108/30
621-64-7	N-Nitroso-di-n-propylamine	2400	1750	73	2400	97	31* a	37-112/30
86-30-6	N-Nitrosodiphenylamine	2400	1710	71	2300	93	29	47-114/30
85-01-8	Phenanthrene	2400	1780	74	2340	94	27	54-112/30
129-00-0	Pyrene	2400	1860	77	2540	103	31* a	54-118/30
120-82-1	1,2,4-Trichlorobenzene	2400	1780	74	2430	98	31* a	38-105/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	63%	81%	25-109%
4165-62-2	Phenol-d5	66%	82%	29-113%
118-79-6	2,4,6-Tribromophenol	74%	88%	20-141%
4165-60-0	Nitrobenzene-d5	63%	79%	27-115%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49144-BS	R50706.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
OP49144-BSD	R50714.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-1, MC48722-2, MC48722-4

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
321-60-8	2-Fluorobiphenyl	74%	88%	34-118%
1718-51-0	Terphenyl-d14	80%	96%	42-139%

(a) Outside control limits. Individual spike recoveries within acceptance limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-MS	W30956.D	1	11/11/16	MR	11/10/16	OP49119	MSW1256
OP49119-MSD	W30957.D	1	11/11/16	MR	11/10/16	OP49119	MSW1256
MC48658-1	W30958.D	1	11/11/16	MR	11/10/16	OP49119	MSW1256

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	MC48658-1 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-48-7	2-Methylphenol	ND	500	314	63	500	299	60	5	30-130/20
	3&4-Methylphenol	ND	1000	582	58	1000	552	55	5	30-130/20
87-86-5	Pentachlorophenol	ND	500	367	73	500	362	72	1	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND	500	469	94	500	454	91	3	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND	500	463	93	500	436	87	6	30-130/20
106-46-7	1,4-Dichlorobenzene	ND	500	315	63	500	266	53	17	40-140/20
121-14-2	2,4-Dinitrotoluene	ND	500	471	94	500	472	94	0	40-140/20
118-74-1	Hexachlorobenzene	ND	500	491	98	500	482	96	2	40-140/20
87-68-3	Hexachlorobutadiene	ND	500	318	64	500	264	53	19	40-140/20
67-72-1	Hexachloroethane	ND	500	281	56	500	243	49	15	40-140/20
98-95-3	Nitrobenzene	ND	500	373	75	500	336	67	10	40-140/20
110-86-1	Pyridine	ND	500	184	37	500	186	37	1	10-86/20

CAS No.	Surrogate Recoveries	MS	MSD	MC48658-1	Limits
367-12-4	2-Fluorophenol	43%	41%	41%	10-73%
4165-62-2	Phenol-d5	27%	26%	26%	10-58%
118-79-6	2,4,6-Tribromophenol	100%	99%	93%	15-125%
4165-60-0	Nitrobenzene-d5	72%	66%	67%	23-120%
321-60-8	2-Fluorobiphenyl	75%	67%	70%	31-102%
1718-51-0	Terphenyl-d14	88%	89%	85%	42-124%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49144-MS	R50710.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
OP49144-MSD	R50712.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
MC48723-45	R50713.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	MC48723-45 Spike ug/kg	Q	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	ND		3170	1870	59	3040	1510	50	27-112/30
59-50-7	4-Chloro-3-methyl phenol	ND		3170	2380	75	3040	2240	74	30-130/30
120-83-2	2,4-Dichlorophenol	ND		3170	2400	76	3040	2090	69	36-119/30
105-67-9	2,4-Dimethylphenol	ND		3170	2050	65	3040	1790	59	28-118/30
51-28-5	2,4-Dinitrophenol	ND		3170	550	17	3040	481	16	10-149/30
534-52-1	4,6-Dinitro-o-cresol	ND		3170	823	26	3040	489	16	51* a 10-150/30
95-48-7	2-Methylphenol	ND		3170	2040	64	3040	1710	56	18 23-119/30
	3&4-Methylphenol	ND		6330	4120	65	6070	3590	59	14 24-124/30
88-75-5	2-Nitrophenol	ND		3170	1950	62	3040	1470	48	28 23-126/30
100-02-7	4-Nitrophenol	ND		3170	2600	82	3040	2440	80	6 18-141/30
87-86-5	Pentachlorophenol	ND		3170	2010	63	3040	1870	62	7 10-145/30
108-95-2	Phenol	ND		3170	1900	60	3040	1600	53	17 25-119/30
95-95-4	2,4,5-Trichlorophenol	ND		3170	2820	89	3040	2610	86	8 34-128/30
88-06-2	2,4,6-Trichlorophenol	ND		3170	2750	87	3040	2500	82	10 32-124/30
83-32-9	Acenaphthene	ND		3170	2530	80	3040	2340	77	8 27-133/30
208-96-8	Acenaphthylene	ND		3170	2350	74	3040	2180	72	8 25-111/30
120-12-7	Anthracene	ND		3170	2520	80	3040	2430	80	4 25-138/30
56-55-3	Benzo(a)anthracene	ND		3170	2690	85	3040	2590	85	4 23-147/30
50-32-8	Benzo(a)pyrene	ND		3170	2640	83	3040	2540	84	4 24-144/30
205-99-2	Benzo(b)fluoranthene	ND		3170	2600	82	3040	2510	83	4 25-149/30
191-24-2	Benzo(g,h,i)perylene	ND		3170	2710	86	3040	2390	79	13 18-150/30
207-08-9	Benzo(k)fluoranthene	ND		3170	2640	83	3040	2560	84	3 18-143/30
101-55-3	4-Bromophenyl phenyl ether	ND		3170	3040	96	3040	2910	96	4 42-128/30
85-68-7	Butyl benzyl phthalate	ND		3170	3110	98	3040	2960	97	5 39-132/30
91-58-7	2-Chloronaphthalene	ND		3170	2530	80	3040	2300	76	10 39-121/30
106-47-8	4-Chloroaniline	ND		3170	1640	52	3040	1320	43	22 10-105/30
86-74-8	Carbazole	ND		3170	2580	81	3040	2480	82	4 32-134/30
218-01-9	Chrysene	ND		3170	2600	82	3040	2520	83	3 23-145/30
111-91-1	bis(2-Chloroethoxy)methane	ND		3170	2040	64	3040	1750	58	15 32-114/30
111-44-4	bis(2-Chloroethyl)ether	ND		3170	1680	53	3040	1410	46	17 25-111/30
108-60-1	bis(2-Chloroisopropyl)ether	ND		3170	1910	60	3040	1570	52	20 24-136/30
7005-72-3	4-Chlorophenyl phenyl ether	ND		3170	3070	97	3040	2930	96	5 42-123/30
95-50-1	1,2-Dichlorobenzene	ND		3170	1480	47	3040	1310	43	12 25-105/30
541-73-1	1,3-Dichlorobenzene	ND		3170	1390	44	3040	1280	42	8 26-103/30
106-46-7	1,4-Dichlorobenzene	ND		3170	1370	43	3040	1270	42	8 25-104/30
121-14-2	2,4-Dinitrotoluene	ND		3170	2850	90	3040	2600	86	9 34-129/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 2 of 3

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49144-MS	R50710.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
OP49144-MSD	R50712.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
MC48723-45	R50713.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	MC48723-45 Spike ug/kg	Q	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
606-20-2	2,6-Dinitrotoluene	ND		3170	2710	86	3040	2500	82	39-124/30
91-94-1	3,3'-Dichlorobenzidine	ND		3170	1380	44	3040	1320	43	10-139/30
53-70-3	Dibenzo(a,h)anthracene	ND		3170	2630	83	3040	2430	80	35-134/30
132-64-9	Dibenzofuran	ND		3170	2600	82	3040	2450	81	30-131/30
84-74-2	Di-n-butyl phthalate	ND		3170	2970	94	3040	2850	94	41-123/30
117-84-0	Di-n-octyl phthalate	ND		3170	2790	88	3040	2630	87	33-142/30
84-66-2	Diethyl phthalate	ND		3170	3100	98	3040	2960	97	42-119/30
131-11-3	Dimethyl phthalate	ND		3170	3020	95	3040	2910	96	38-122/30
117-81-7	bis(2-Ethylhexyl)phthalate	ND		3170	2890	91	3040	2780	92	35-141/30
206-44-0	Fluoranthene	ND		3170	2700	85	3040	2570	85	17-151/30
86-73-7	Fluorene	ND		3170	2790	88	3040	2640	87	34-128/30
118-74-1	Hexachlorobenzene	ND		3170	2810	89	3040	2650	87	40-125/30
87-68-3	Hexachlorobutadiene	ND		3170	1820	57	3040	1490	49	20 30-113/30
77-47-4	Hexachlorocyclopentadiene	ND		3170	1330	42	3040	798	26	50* a 10-103/30
67-72-1	Hexachloroethane	ND		3170	1320	42	3040	1110	37	17 10-125/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		3170	2600	82	3040	2390	79	8 22-147/30
78-59-1	Isophorone	ND		3170	2140	68	3040	1890	62	12 29-109/30
91-57-6	2-Methylnaphthalene	35.5	J	3170	2160	67	3040	1910	62	12 26-127/30
88-74-4	2-Nitroaniline	ND		3170	2610	82	3040	2470	81	6 40-128/30
99-09-2	3-Nitroaniline	ND		3170	2310	73	3040	2110	69	9 21-116/30
100-01-6	4-Nitroaniline	ND		3170	2350	74	3040	2280	75	3 21-125/30
91-20-3	Naphthalene	ND		3170	2570	81	3040	2290	75	12 18-135/30
98-95-3	Nitrobenzene	ND		3170	1820	57	3040	1560	51	15 29-110/30
621-64-7	N-Nitroso-di-n-propylamine	ND		3170	2150	68	3040	1800	59	18 22-128/30
86-30-6	N-Nitrosodiphenylamine	ND		3170	2520	80	3040	2470	81	2 22-142/30
85-01-8	Phenanthrene	22.3	J	3170	2660	83	3040	2560	84	4 21-141/30
129-00-0	Pyrene	ND		3170	2820	89	3040	2690	89	5 22-148/30
120-82-1	1,2,4-Trichlorobenzene	ND		3170	2010	63	3040	1690	56	17 30-113/30

CAS No.	Surrogate Recoveries	MS	MSD	MC48723-45 Limits
367-12-4	2-Fluorophenol	51%	43%	42% 25-109%
4165-62-2	Phenol-d5	62%	54%	54% 29-113%
118-79-6	2,4,6-Tribromophenol	83%	81%	71% 20-141%
4165-60-0	Nitrobenzene-d5	56%	48%	46% 27-115%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 3 of 3

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49144-MS	R50710.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
OP49144-MSD	R50712.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889
MC48723-45	R50713.D	1	11/16/16	MR	11/14/16	OP49144	MSR1889

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-1, MC48722-2, MC48722-4

CAS No.	Surrogate Recoveries	MS	MSD	MC48723-45 Limits	
321-60-8	2-Fluorobiphenyl	78%	73%	73%	34-118%
1718-51-0	Terphenyl-d14	92%	91%	95%	42-139%

(a) Outside control limits. Individual spike recoveries within acceptance limits.

* = Outside of Control Limits.

Leachate Spike Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-LS1	R50880.D	1	11/26/16	DRY	11/16/16	OP49119	MSR1897
MC48722-2A	R50882.D	1	11/26/16	DRY	11/16/16	OP49119	MSR1897

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	MC48722-2ASpike		LS	LS	Limits
		ug/l	Q ug/l	ug/l	%	
95-48-7	2-Methylphenol	ND	500	354	71	30-130
	3&4-Methylphenol	ND	1000	634	63	30-130
87-86-5	Pentachlorophenol	ND	500	338	68	30-130
95-95-4	2,4,5-Trichlorophenol	ND	500	525	105	30-130
88-06-2	2,4,6-Trichlorophenol	ND	500	509	102	30-130
106-46-7	1,4-Dichlorobenzene	ND	500	398	80	40-140
121-14-2	2,4-Dinitrotoluene	ND	500	523	105	40-140
118-74-1	Hexachlorobenzene	ND	500	517	103	40-140
87-68-3	Hexachlorobutadiene	ND	500	405	81	40-140
67-72-1	Hexachloroethane	ND	500	360	72	40-140
98-95-3	Nitrobenzene	ND	500	431	86	40-140
110-86-1	Pyridine	ND	500	226	45	10-86

CAS No.	Surrogate Recoveries	LS	MC48722-2ALimits	
367-12-4	2-Fluorophenol	52%	48%	10-73%
4165-62-2	Phenol-d5	34%	29%	10-58%
118-79-6	2,4,6-Tribromophenol	91%	79%	15-125%
4165-60-0	Nitrobenzene-d5	80%	74%	23-120%
321-60-8	2-Fluorobiphenyl	87%	80%	31-102%
1718-51-0	Terphenyl-d14	93%	94%	42-124%

* = Outside of Control Limits.

Leachate Spike Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-LS2	R50867.D	1	11/23/16	MR	11/22/16	OP49119	MSR1896
MC48791-2	R50869.D	1	11/23/16	MR	11/22/16	OP49119	MSR1896

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	MC48791-2 ug/l	Spike Q	LS ug/l	LS %	Limits
95-48-7	2-Methylphenol	ND	500	380	76	30-130
	3&4-Methylphenol	ND	1000	681	68	30-130
87-86-5	Pentachlorophenol	ND	500	420	84	30-130
95-95-4	2,4,5-Trichlorophenol	ND	500	507	101	30-130
88-06-2	2,4,6-Trichlorophenol	ND	500	488	98	30-130
106-46-7	1,4-Dichlorobenzene	ND	500	466	93	40-140
121-14-2	2,4-Dinitrotoluene	ND	500	504	101	40-140
118-74-1	Hexachlorobenzene	ND	500	496	99	40-140
87-68-3	Hexachlorobutadiene	ND	500	448	90	40-140
67-72-1	Hexachloroethane	ND	500	217	43	40-140
98-95-3	Nitrobenzene	ND	500	427	85	40-140
110-86-1	Pyridine	ND	500	206	41	10-86

CAS No.	Surrogate Recoveries	LS	MC48791-2	Limits
367-12-4	2-Fluorophenol	52%	41%	10-73%
4165-62-2	Phenol-d5	37%	26%	10-58%
118-79-6	2,4,6-Tribromophenol	90%	83%	15-125%
4165-60-0	Nitrobenzene-d5	77%	63%	23-120%
321-60-8	2-Fluorobiphenyl	83%	69%	31-102%
1718-51-0	Terphenyl-d14	92%	91%	42-124%

* = Outside of Control Limits.

Leachate Spike Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49119-LS3	R50897.D	1	11/28/16	MR	11/22/16	OP49119	MSR1898
MC48853-7	R50898.D	1	11/28/16	MR	11/22/16	OP49119	MSR1898

The QC reported here applies to the following samples:

Method: SW846 8270D

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	MC48853-7 ug/l	Spike Q	LS ug/l	LS %	Limits
95-48-7	2-Methylphenol	ND	500	388	78	30-130
	3&4-Methylphenol	ND	1000	692	69	30-130
87-86-5	Pentachlorophenol	ND	500	367	73	30-130
95-95-4	2,4,5-Trichlorophenol	ND	500	522	104	30-130
88-06-2	2,4,6-Trichlorophenol	ND	500	499	100	30-130
106-46-7	1,4-Dichlorobenzene	ND	500	341	68	40-140
121-14-2	2,4-Dinitrotoluene	ND	500	567	113	40-140
118-74-1	Hexachlorobenzene	ND	500	502	100	40-140
87-68-3	Hexachlorobutadiene	ND	500	340	68	40-140
67-72-1	Hexachloroethane	ND	500	308	62	40-140
98-95-3	Nitrobenzene	ND	500	431	86	40-140
110-86-1	Pyridine	ND	500	167	33	10-86

CAS No.	Surrogate Recoveries	LS	MC48853-7	Limits
367-12-4	2-Fluorophenol	47%	47%	10-73%
4165-62-2	Phenol-d5	33%	30%	10-58%
118-79-6	2,4,6-Tribromophenol	81%	76%	15-125%
4165-60-0	Nitrobenzene-d5	75%	71%	23-120%
321-60-8	2-Fluorobiphenyl	70%	71%	31-102%
1718-51-0	Terphenyl-d14	88%	81%	42-124%

* = Outside of Control Limits.

Semivolatile Surrogate Recovery Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846 8270D

Matrix: LEACHATE

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC48722-3	R50883.D	46	29	79	76	82	94
MC48722-1A	R50881.D	48	30	83	73	78	94
MC48722-2A	R50882.D	48	29	79	74	80	94
OP49119-BS1	R50879.D	50	32	90	78	87	94
OP49119-LB1	R50878A.D	41	25	76	65	69	101
OP49119-LS1	R50880.D	52	34	91	80	87	93
OP49119-LS2	R50867.D	52	37	90	77	83	92
OP49119-LS3	R50897.D	47	33	81	75	70	88
OP49119-MB1	R50878.D	41	25	76	65	69	101
OP49119-MS	W30956.D	43	27	100	72	75	88
OP49119-MSD	W30957.D	41	26	99	66	67	89
OP49119-LB	W30954A.D	38	24	88	62	67	85
OP49119-LB2	R50865A.D	32	22	70	52	57	93
OP49119-MB	W30954.D	38	24	88	62	67	85
OP49119-MB2	R50865.D	32	22	70	52	57	93

Surrogate Compounds

Recovery Limits

S1 = 2-Fluorophenol	10-73%
S2 = Phenol-d5	10-58%
S3 = 2,4,6-Tribromophenol	15-125%
S4 = Nitrobenzene-d5	23-120%
S5 = 2-Fluorobiphenyl	31-102%
S6 = Terphenyl-d14	42-124%

6.7.1

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Semivolatile Surrogate Recovery Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846 8270D	Matrix: SO
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC48722-1	R50715.D	36	50	81	42	70	88
MC48722-2	R50716.D	57	66	81	59	80	87
MC48722-4	R50717.D	60	68	82	66	82	89
OP49144-BS	R50706.D	63	66	74	63	74	80
OP49144-BSD	R50714.D	81	82	88	79	88	96
OP49144-MB	R50705.D	30	34	57	29	43	81
OP49144-MS	R50710.D	51	62	83	56	78	92
OP49144-MSD	R50712.D	43	54	81	48	73	91

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	25-109%
S2 = Phenol-d5	29-113%
S3 = 2,4,6-Tribromophenol	20-141%
S4 = Nitrobenzene-d5	27-115%
S5 = 2-Fluorobiphenyl	34-118%
S6 = Terphenyl-d14	42-139%

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GWX3867-MB	WX78122.D	1	11/17/16	AF	n/a	n/a	GWX3867

The QC reported here applies to the following samples: Method: SW846 8015

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	5.0	0.94	mg/kg	

CAS No.	Surrogate Recoveries	Limits
	2,3,4-Trifluorotoluene	106% 64-127%

7.1.1
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Blank Spike/Blank Spike Duplicate Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GWX3867-BSP	WX78123.D	1	11/17/16	AF	n/a	n/a	GWX3867
GWX3867-BSD	WX78124.D	1	11/17/16	AF	n/a	n/a	GWX3867

The QC reported here applies to the following samples: Method: SW846 8015

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (VOA)	50	55.1	110	53.4	107	3	80-120/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
	2,3,4-Trifluorotoluene	106%	106%	64-127%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC48722-1MS	WX78129.D	1	11/17/16	AF	n/a	n/a	GWX3867
MC48722-1MSD	WX78130.D	1	11/17/16	AF	n/a	n/a	GWX3867
MC48722-1	WX78128.D	1	11/17/16	AF	n/a	n/a	GWX3867

The QC reported here applies to the following samples: Method: SW846 8015

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	MC48722-1 mg/kg	Spike Q	mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (VOA)	4.46	J	118	130	107	118	132	109	2	54-130/20

CAS No.	Surrogate Recoveries	MS	MSD	MC48722-1	Limits
	2,3,4-Trifluorotoluene	105%	106%	102%	64-127%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846 8015	Matrix: SO
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a
MC48722-1	WX78128.D	102
MC48722-2	WX78127.D	102
MC48722-4	WX78125.D	107
GWX3867-BSD	WX78124.D	106
GWX3867-BSP	WX78123.D	106
GWX3867-MB	WX78122.D	106
MC48722-1MS	WX78129.D	105
MC48722-1MSD	WX78130.D	106

Surrogate Compounds	Recovery Limits
S1 = 2,3,4-Trifluorotoluene	64-127%

(a) Recovery from GC signal #1

GC Semi-volatiles

QC Data Summaries



Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49161-MB	YZ98708.D	1	11/28/16	TA	11/16/16	OP49161	GYZ8038

The QC reported here applies to the following samples: Method: SW846 8151

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	10	3.4	ug/l	
93-72-1	2,4,5-TP (Silvex)	ND	10	4.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
19719-28-9	2,4-DCAA	75% 30-150%
19719-28-9	2,4-DCAA	68% 30-150%

Method Blank Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49159-MB	BE53422.D	1	11/21/16	TA	11/16/16	OP49159	GBE2688

The QC reported here applies to the following samples:

Method: SW846 8081B

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	0.50	0.044	ug/l	
12789-03-6	Chlordane	ND	5.0	1.1	ug/l	
72-20-8	Endrin	ND	0.50	0.12	ug/l	
76-44-8	Heptachlor	ND	0.50	0.11	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.50	0.051	ug/l	
72-43-5	Methoxychlor	ND	0.50	0.21	ug/l	
8001-35-2	Toxaphene	ND	25	1.3	ug/l	

CAS No.	Surrogate Recoveries	Limits
877-09-8	Tetrachloro-m-xylene	62% 30-150%
877-09-8	Tetrachloro-m-xylene	73% 30-150%
2051-24-3	Decachlorobiphenyl	90% 30-150%
2051-24-3	Decachlorobiphenyl	80% 30-150%

8.1.2

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Method Blank Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49147-MB	BK63151.D	1	11/17/16	TA	11/15/16	OP49147	GBK1996

The QC reported here applies to the following samples: Method: SW846 8082A
MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	25	2.5	ug/kg	
11104-28-2	Aroclor 1221	ND	25	11	ug/kg	
11141-16-5	Aroclor 1232	ND	25	7.6	ug/kg	
53469-21-9	Aroclor 1242	ND	25	5.7	ug/kg	
12672-29-6	Aroclor 1248	ND	25	4.3	ug/kg	
11097-69-1	Aroclor 1254	ND	25	11	ug/kg	
11096-82-5	Aroclor 1260	ND	25	2.3	ug/kg	

CAS No.	Surrogate Recoveries	Limits
877-09-8	Tetrachloro-m-xylene	85% 25-145%
877-09-8	Tetrachloro-m-xylene	87% 25-145%
2051-24-3	Decachlorobiphenyl	86% 25-179%
2051-24-3	Decachlorobiphenyl	87% 25-179%

Method Blank Summary

Page 1 of 1

Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49160-MB	BK63180.D	1	11/18/16	TA	11/16/16	OP49160	GBK1997

The QC reported here applies to the following samples:

Method: SW846 8082A

MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	2.5	1.6	ug/l	
11104-28-2	Aroclor 1221	ND	2.5	1.6	ug/l	
11141-16-5	Aroclor 1232	ND	2.5	1.8	ug/l	
53469-21-9	Aroclor 1242	ND	2.5	1.9	ug/l	
12672-29-6	Aroclor 1248	ND	2.5	1.2	ug/l	
11097-69-1	Aroclor 1254	ND	2.5	1.6	ug/l	
11096-82-5	Aroclor 1260	ND	2.5	1.9	ug/l	

CAS No.	Surrogate Recoveries	Limits
877-09-8	Tetrachloro-m-xylene	86% 30-150%
877-09-8	Tetrachloro-m-xylene	89% 30-150%
2051-24-3	Decachlorobiphenyl	94% 30-150%
2051-24-3	Decachlorobiphenyl	97% 30-150%

8.1.4

8

Method Blank Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49158-MB	IR3252.D	1	11/18/16	MD	11/16/16	OP49158	GIR226

The QC reported here applies to the following samples: Method: SW846-8015

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (Semi-VOA)	ND	16	4.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	79% 17-130%

8.1.5
8

Leachate Blank Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49161-LB	YZ98708A.D	1	11/28/16	TA	11/16/16	OP49161	GYZ8038

The QC reported here applies to the following samples:

Method: SW846 8151

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	10	3.4	ug/l	
93-72-1	2,4,5-TP (Silvex)	ND	10	4.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
19719-28-9	2,4-DCAA	75% 30-150%
19719-28-9	2,4-DCAA	68% 30-150%

8.2.1

8

Leachate Blank Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49159-LB	BE53422A.D	1	11/21/16	TA	11/16/16	OP49159	GBE2688

The QC reported here applies to the following samples:

Method: SW846 8081B

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	0.50	0.044	ug/l	
12789-03-6	Chlordane	ND	5.0	1.1	ug/l	
72-20-8	Endrin	ND	0.50	0.12	ug/l	
76-44-8	Heptachlor	ND	0.50	0.11	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.50	0.051	ug/l	
72-43-5	Methoxychlor	ND	0.50	0.21	ug/l	
8001-35-2	Toxaphene	ND	25	1.3	ug/l	

CAS No.	Surrogate Recoveries	Limits
877-09-8	Tetrachloro-m-xylene	62% 30-150%
877-09-8	Tetrachloro-m-xylene	73% 30-150%
2051-24-3	Decachlorobiphenyl	90% 30-150%
2051-24-3	Decachlorobiphenyl	80% 30-150%

8.2.2

8

Leachate Blank Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49160-LB	BK63180A.D	1	11/18/16	TA	11/16/16	OP49160	GBK1997

The QC reported here applies to the following samples:

Method: SW846 8082A

MC48722-1A, MC48722-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	2.5	1.6	ug/l	
11104-28-2	Aroclor 1221	ND	2.5	1.6	ug/l	
11141-16-5	Aroclor 1232	ND	2.5	1.8	ug/l	
53469-21-9	Aroclor 1242	ND	2.5	1.9	ug/l	
12672-29-6	Aroclor 1248	ND	2.5	1.2	ug/l	
11097-69-1	Aroclor 1254	ND	2.5	1.6	ug/l	
11096-82-5	Aroclor 1260	ND	2.5	1.9	ug/l	

CAS No.	Surrogate Recoveries	Limits
877-09-8	Tetrachloro-m-xylene	86% 30-150%
877-09-8	Tetrachloro-m-xylene	89% 30-150%
2051-24-3	Decachlorobiphenyl	94% 30-150%
2051-24-3	Decachlorobiphenyl	97% 30-150%

8.2.3

8

Blank Spike Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49161-BS	YZ98709.D	1	11/28/16	TA	11/16/16	OP49161	GYZ8038

The QC reported here applies to the following samples: Method: SW846 8151

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
94-75-7	2,4-D	40	43.2	108	40-140
93-72-1	2,4,5-TP (Silvex)	40	40.9	102	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
19719-28-9	2,4-DCAA	101%	30-150%
19719-28-9	2,4-DCAA	96%	30-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49159-BS	BE53423.D	1	11/21/16	TA	11/16/16	OP49159	GBE2688

The QC reported here applies to the following samples: Method: SW846 8081B

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
58-89-9	gamma-BHC (Lindane)	5	4.4	88	40-140
72-20-8	Endrin	5	5.2	104	40-140
76-44-8	Heptachlor	5	4.5	90	40-140
1024-57-3	Heptachlor epoxide	5	4.6	92	40-140
72-43-5	Methoxychlor	5	5.5	110	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	75%	30-150%
877-09-8	Tetrachloro-m-xylene	69%	30-150%
2051-24-3	Decachlorobiphenyl	82%	30-150%
2051-24-3	Decachlorobiphenyl	70%	30-150%

* = Outside of Control Limits.

Blank Spike Summary

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Job Number: MC48722

Account: BBLNYS Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49160-BS	BK63181.D	1	11/18/16	TA	11/16/16	OP49160	GBK1997

The QC reported here applies to the following samples:

Method: SW846 8082A

MC48722-1A, MC48722-2A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	20	21.1	106	40-140
11104-28-2	Aroclor 1221		ND		40-140
11141-16-5	Aroclor 1232		ND		40-140
53469-21-9	Aroclor 1242		ND		40-140
12672-29-6	Aroclor 1248		ND		40-140
11097-69-1	Aroclor 1254		ND		40-140
11096-82-5	Aroclor 1260	20	22.5	113	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	86%	30-150%
877-09-8	Tetrachloro-m-xylene	86%	30-150%
2051-24-3	Decachlorobiphenyl	95%	30-150%
2051-24-3	Decachlorobiphenyl	99%	30-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49158-BS	IR3253.D	1	11/18/16	MD	11/16/16	OP49158	GIR226

The QC reported here applies to the following samples: Method: SW846-8015

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (Semi-VOA)	160	141	88	29-125

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	82%	17-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49147-BS	BK63152.D	1	11/17/16	TA	11/15/16	OP49147	GBK1996
OP49147-BSD	BK63164.D	1	11/17/16	TA	11/15/16	OP49147	GBK1996

The QC reported here applies to the following samples: Method: SW846 8082A

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	262	263	100	290	113	10	47-144/30
11104-28-2	Aroclor 1221		ND		ND		nc	40-140/30
11141-16-5	Aroclor 1232		ND		ND		nc	40-140/30
53469-21-9	Aroclor 1242		ND		ND		nc	40-140/30
12672-29-6	Aroclor 1248		ND		ND		nc	40-140/30
11097-69-1	Aroclor 1254		ND		ND		nc	40-140/30
11096-82-5	Aroclor 1260	262	262	100	269	105	3	45-156/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	94%	104%	25-145%
877-09-8	Tetrachloro-m-xylene	95%	113%	25-145%
2051-24-3	Decachlorobiphenyl	90%	92%	25-179%
2051-24-3	Decachlorobiphenyl	95%	100%	25-179%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49161-MS	YZ98710.D	1	11/28/16	TA	11/16/16	OP49161	GYZ8038
OP49161-MSD	YZ98713.D	1	11/28/16	TA	11/16/16	OP49161	GYZ8038
MC48722-2A	YZ98718.D	1	11/29/16	TA	11/16/16	OP49161	GYZ8038

The QC reported here applies to the following samples: Method: SW846 8151

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	MC48722-2ASpike ug/l	Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
94-75-7	2,4-D	ND	40	44.3	111	40	42.2	106	5	30-150/30
93-72-1	2,4,5-TP (Silvex)	ND	40	42.4	106	40	40.2	101	5	30-150/30

CAS No.	Surrogate Recoveries	MS	MSD	MC48722-2ALimits
19719-28-9	2,4-DCAA	101%	100%	60% 30-150%
19719-28-9	2,4-DCAA	96%	95%	47% 30-150%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49159-MS	BE53424.D	1	11/21/16	TA	11/16/16	OP49159	GBE2688
OP49159-MSD	BE53425.D	1	11/21/16	TA	11/16/16	OP49159	GBE2688
MC48722-2A	BE53427.D	1	11/21/16	TA	11/16/16	OP49159	GBE2688

The QC reported here applies to the following samples: Method: SW846 8081B

MC48722-3, MC48722-1A, MC48722-2A

CAS No.	Compound	MC48722-2ASpike ug/l	Q	ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
58-89-9	gamma-BHC (Lindane)	ND	5		4.7	94	5	3.8	76	21	30-150/30
72-20-8	Endrin	ND	5		5.6	112	5	4.8	96	15	30-150/30
76-44-8	Heptachlor	ND	5		4.9	98	5	4.1	82	18	30-150/30
1024-57-3	Heptachlor epoxide	ND	5		5.0	100	5	4.1	82	20	30-150/30
72-43-5	Methoxychlor	ND	5		6.0	120	5	5.3	106	12	30-150/30

CAS No.	Surrogate Recoveries	MS	MSD	MC48722-2ALimits
877-09-8	Tetrachloro-m-xylene	75%	57%	47% 30-150%
877-09-8	Tetrachloro-m-xylene	70%	56%	61% 30-150%
2051-24-3	Decachlorobiphenyl	85%	76%	32% 30-150%
2051-24-3	Decachlorobiphenyl	72%	67%	65% 30-150%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49147-MS	BK63153.D	1	11/17/16	TA	11/15/16	OP49147	GBK1996
OP49147-MSD	BK63154.D	1	11/17/16	TA	11/15/16	OP49147	GBK1996
MC48722-1	BK63163.D	1	11/17/16	TA	11/15/16	OP49147	GBK1996

The QC reported here applies to the following samples: Method: SW846 8082A

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	MC48722-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND	333	311	93	344	286	83	8	24-164/50
11104-28-2	Aroclor 1221	ND		ND			ND		nc	40-140/50
11141-16-5	Aroclor 1232	ND		ND			ND		nc	40-140/50
53469-21-9	Aroclor 1242	ND		ND			ND		nc	40-140/50
12672-29-6	Aroclor 1248	ND		ND			ND		nc	40-140/50
11097-69-1	Aroclor 1254	ND		ND			ND		nc	40-140/50
11096-82-5	Aroclor 1260	ND	333	329	99	344	295	86	11	19-177/50

CAS No.	Surrogate Recoveries	MS	MSD	MC48722-1	Limits
877-09-8	Tetrachloro-m-xylene	145%	84%	83%	25-145%
877-09-8	Tetrachloro-m-xylene	97%	73%	74%	25-145%
2051-24-3	Decachlorobiphenyl	83%	78%	76%	25-179%
2051-24-3	Decachlorobiphenyl	75%	80%	76%	25-179%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49160-MS	BK63182.D	1	11/18/16	TA	11/16/16	OP49160	GBK1997
OP49160-MSD	BK63183.D	1	11/18/16	TA	11/16/16	OP49160	GBK1997
MC48722-2A	BK63185.D	1	11/18/16	TA	11/16/16	OP49160	GBK1997

The QC reported here applies to the following samples: Method: SW846 8082A

MC48722-1A, MC48722-2A

CAS No.	Compound	MC48722-2ASpike ug/l	Q	ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND		20	20.5	103	20	21.4	107	4	40-140/50
11104-28-2	Aroclor 1221	ND			ND			ND		nc	40-140/50
11141-16-5	Aroclor 1232	ND			ND			ND		nc	40-140/50
53469-21-9	Aroclor 1242	ND			ND			ND		nc	40-140/50
12672-29-6	Aroclor 1248	ND			ND			ND		nc	40-140/50
11097-69-1	Aroclor 1254	ND			ND			ND		nc	40-140/50
11096-82-5	Aroclor 1260	ND		20	22.3	112	20	23.3	117	4	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	MC48722-2ALimits
877-09-8	Tetrachloro-m-xylene	83%	80%	68% 30-150%
877-09-8	Tetrachloro-m-xylene	84%	80%	70% 30-150%
2051-24-3	Decachlorobiphenyl	105%	102%	92% 30-150%
2051-24-3	Decachlorobiphenyl	110%	107%	96% 30-150%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49158-MS	IR3258.D	1	11/18/16	MD	11/16/16	OP49158	GIR226
OP49158-MSD	IR3261.D	1	11/18/16	MD	11/16/16	OP49158	GIR226
MC48722-4	IR3257.D	1	11/18/16	MD	11/16/16	OP49158	GIR226

The QC reported here applies to the following samples: Method: SW846-8015

MC48722-1, MC48722-2, MC48722-4

CAS No.	Compound	MC48722-4 mg/kg	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (Semi-VOA)	2200	195	4280	1069* a	203	2720	256* a	45	10-139/50

CAS No.	Surrogate Recoveries	MS	MSD	MC48722-4	Limits
84-15-1	o-Terphenyl	124%	131%* b	91%	17-130%

(a) Outside control limits due to high level in sample relative to spike amount.
(b) Outside control limits due to possible matrix interference.

* = Outside of Control Limits.

Semivolatile Surrogate Recovery Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846 8151	Matrix: LEACHATE
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b
MC48722-3	YZ98719.D	59	48
MC48722-1A	YZ98717.D	57	45
MC48722-2A	YZ98718.D	60	47
OP49161-BS	YZ98709.D	101	96
OP49161-LB	YZ98708A.D	75	68
OP49161-MB	YZ98708.D	75	68
OP49161-MS	YZ98710.D	101	96
OP49161-MSD	YZ98713.D	100	95

Surrogate Compounds	Recovery Limits
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S1 = 2,4-DCAA	30-150%
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(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

8.6.1
8

Semivolatile Surrogate Recovery Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846 8081B	Matrix: LEACHATE
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b	S2 ^a	S2 ^b
MC48722-3	BE53428.D	68	70	82	76
MC48722-1A	BE53426.D	50	53	82	75
MC48722-2A	BE53427.D	47	61	32	65
OP49159-BS	BE53423.D	75	69	82	70
OP49159-LB	BE53422A.D	62	73	90	80
OP49159-MB	BE53422.D	62	73	90	80
OP49159-MS	BE53424.D	75	70	85	72
OP49159-MSD	BE53425.D	57	56	76	67

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	30-150%
S2 = Decachlorobiphenyl	30-150%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

8.6.2
8

Semivolatile Surrogate Recovery Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846 8082A	Matrix: LEACHATE
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b	S2 ^a	S2 ^b
MC48722-1A	BK63184.D	85	72	109	112
MC48722-2A	BK63185.D	68	70	92	96
OP49160-BS	BK63181.D	86	86	95	99
OP49160-LB	BK63180A.D	86	89	94	97
OP49160-MB	BK63180.D	86	89	94	97
OP49160-MS	BK63182.D	83	84	105	110
OP49160-MSD	BK63183.D	80	80	102	107

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	30-150%
S2 = Decachlorobiphenyl	30-150%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

8.6.3
8

Semivolatile Surrogate Recovery Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846 8082A	Matrix: SO
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b	S2 ^a	S2 ^b
MC48722-1	BK63163.D	83	74	76	76
MC48722-2	BK63165.D	99	106	91	99
MC48722-4	BK63166.D	101	74	69	68
OP49147-BS	BK63152.D	94	95	90	95
OP49147-BSD	BK63164.D	104	113	92	100
OP49147-MB	BK63151.D	85	87	86	87
OP49147-MS	BK63153.D	145	97	83	75
OP49147-MSD	BK63154.D	84	73	78	80

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	25-145%
S2 = Decachlorobiphenyl	25-179%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

8.6.4
8

Semivolatile Surrogate Recovery Summary

Job Number: MC48722
Account: BBLNYS Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Method: SW846-8015	Matrix: SO
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a
MC48722-1	IR3264.D	91
MC48722-2	IR3263.D	70
MC48722-4	IR3257.D	91
OP49158-BS	IR3253.D	82
OP49158-MB	IR3252.D	79
OP49158-MS	IR3258.D	124
OP49158-MSD	IR3261.D	131* ^b

Surrogate Compounds	Recovery Limits
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S1 = o-Terphenyl 17-130%

(a) Recovery from GC signal #1
(b) Outside control limits due to possible matrix interference.

8.6.5
8

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27019
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 11/15/16

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.033	.0011	.0057	0.0070	<0.033

Associated samples MP27019: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27019
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 11/15/16

Metal	MC48716-3		Spike lot		QC
	Original	MS	HGRWS1	% Rec	Limits
Mercury	0.030	0.53	0.496	100.8	80-120

Associated samples MP27019: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27019
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 11/15/16

Metal	MC48716-3 Original MSD	SpikeLot HGRWS1	% Rec	MSD RPD	QC Limit
Mercury	0.030 0.53	0.489	102.3	0.0	20

Associated samples MP27019: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27019
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 11/15/16 11/15/16

Metal	BSP Result	Spike lot HGRWS1	% Rec	QC Limits	BSD Result	Spike lot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	0.50	0.5	100.0	80-120	0.48	0.5	96.0	4.1	20

Associated samples MP27019: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27019
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 11/15/16

Metal	LCS Result	Spike lot HGLCS86	% Rec	QC Limits
Mercury	19.6	20.2	97.0	71-129

Associated samples MP27019: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 11/15/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	20	1.1	1.2		
Antimony	1.0	.13	.17	0.12	<1.0
Arsenic	1.0	.15	.2	-0.070	<1.0
Barium	5.0	.019	.076	0.040	<5.0
Beryllium	0.40	.016	.015	0.0	<0.40
Bismuth	5.0	.095	.15		
Boron	10	.97	.13		
Cadmium	0.40	.019	.031	-0.010	<0.40
Calcium	500	.76	.86		
Chromium	1.0	.039	.047	0.080	<1.0
Cobalt	5.0	.021	.031		
Copper	2.5	.055	.1		
Gold	5.0	.091	.11		
Iron	10	.19	.44		
Lead	1.0	.11	.11	0.030	<1.0
Lithium	50	.13	.18		
Magnesium	500	2.5	4		
Manganese	1.5	.011	.047		
Molybdenum	10	.017	.51		
Nickel	4.0	.033	.057	-0.010	<4.0
Palladium	5.0	.19	.14		
Platinum	5.0	.31	.54		
Potassium	500	2.7	3.4		
Selenium	1.0	.18	.3	0.13	<1.0
Silicon	10	.63	.51		
Silver	0.50	.027	.061	-0.010	<0.50
Sodium	500	.51	1.2		
Sulfur	5.0	.22	.31		
Strontium	1.0	.0079	.022		
Thallium	1.0	.13	.11	-0.080	<1.0
Tin	10	.08	.078		
Titanium	5.0	.032	.054		
Tungsten	10	.33	.93		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 11/15/16

Metal	RL	IDL	MDL	MB raw	final
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Vanadium 1.0 .037 .04 -0.010 <1.0

Zinc 2.0 .12 .17 0.22 <2.0

Zirconium 5.0 .032 .17

Associated samples MP27020: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/15/16

Metal	MC48731-1 Original MS		SpikeLot MPICP7	% Rec	QC Limits
Aluminum					
Antimony	0.26	19.9	44.9	43.7 (a)	75-125
Arsenic	2.6	43.4	44.9	90.9	75-125
Barium	33.9	198	180	91.4	75-125
Beryllium	0.26	40.6	44.9	89.9	75-125
Bismuth					
Boron					
Cadmium	0.082	42.5	44.9	94.5	75-125
Calcium					
Chromium	12.5	52.2	44.9	88.4	75-125
Cobalt					
Copper					
Gold					
Iron					
Lead	19.4	107	89.8	97.6	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	7.6	49.7	44.9	93.8	75-125
Palladium					
Platinum					
Potassium					
Selenium	0.0	40.4	44.9	90.0	75-125
Silicon					
Silver	0.082	15.2	18	84.2	75-125
Sodium					
Sulfur					
Strontium					
Thallium	0.0	42.0	44.9	93.6	75-125
Tin					
Titanium					
Tungsten					

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/15/16

Metal	MC48731-1 Original MS		Spike lot MPICP7	% Rec	QC Limits
Vanadium	22.5	63.7	44.9	91.8	75-125
Zinc	28.2	79.0	44.9	113.2	75-125

Zirconium

Associated samples MP27020: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity. Post spike within acceptable range.

9.2.2

9

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/15/16

Metal	MC48731-1 Original	MSD	Spike/lot MPICP7	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.26	20.3	44.9	44.6 (a)	2.0	20
Arsenic	2.6	43.6	44.9	91.3	0.5	20
Barium	33.9	193	180	88.6	2.6	20
Beryllium	0.26	40.9	44.9	90.5	0.7	20
Bismuth						
Boron						
Cadmium	0.082	42.8	44.9	95.2	0.7	20
Calcium						
Chromium	12.5	50.8	44.9	85.3	2.7	20
Cobalt						
Copper						
Gold						
Iron						
Lead	19.4	105	89.8	95.3	1.9	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	7.6	49.4	44.9	93.1	0.6	20
Palladium						
Platinum						
Potassium						
Selenium	0.0	40.7	44.9	90.7	0.7	20
Silicon						
Silver	0.082	15.2	18	84.2	0.0	20
Sodium						
Sulfur						
Strontium						
Thallium	0.0	42.4	44.9	94.4	0.9	20
Tin						
Titanium						
Tungsten						

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/15/16

Metal	MC48731-1 Original MSD		Spike lot MPICP7	% Rec	MSD RPD	QC Limit
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Vanadium	22.5	62.0	44.9	88.0	2.7	20
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Zinc	28.2	68.3	44.9	89.3	14.5	20
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Zirconium

Associated samples MP27020: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike duplicate recovery indicates possible matrix interference and/or sample nonhomogeneity.

9.2.2

9

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/15/16 11/15/16

Metal	BSP Result	SpikeLot MPICP7	% Rec	QC Limits	BSD Result	SpikeLot MPICP7	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony	47.8	50	95.6	80-120	48.3	50	96.6	1.0	20
Arsenic	48.1	50	96.2	80-120	48.4	50	96.8	0.6	20
Barium	188	200	94.0	80-120	186	200	93.0	1.1	20
Beryllium	46.6	50	93.2	80-120	46.3	50	92.6	0.6	20
Bismuth									
Boron									
Cadmium	49.3	50	98.6	80-120	49.6	50	99.2	0.6	20
Calcium									
Chromium	46.0	50	92.0	80-120	45.9	50	91.8	0.2	20
Cobalt									
Copper									
Gold									
Iron									
Lead	95.5	100	95.5	80-120	96.3	100	96.3	0.8	20
Lithium									
Magnesium									
Manganese									
Molybdenum									
Nickel	47.3	50	94.6	80-120	47.5	50	95.0	0.4	20
Palladium									
Platinum									
Potassium									
Selenium	47.2	50	94.4	80-120	47.5	50	95.0	0.6	20
Silicon									
Silver	17.4	20	87.0	80-120	17.2	20	86.0	1.2	20
Sodium									
Sulfur									
Strontium									
Thallium	48.4	50	96.8	80-120	48.6	50	97.2	0.4	20
Tin									
Titanium									
Tungsten									

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/15/16 11/15/16

Metal	BSP Result	SpikeLot MPICP7	% Rec	QC Limits	BSD Result	SpikeLot MPICP7	% Rec	BSD RPD	QC Limit
Vanadium	47.0	50	94.0	80-120	46.3	50	92.6	1.5	20
Zinc	47.1	50	94.2	80-120	47.4	50	94.8	0.6	20

Zirconium

Associated samples MP27020: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

9.2.3

9

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC48722

Account: BBLNYS - Arcadis

Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020

Methods: SW846 6010C

Matrix Type: SOLID

Units: mg/kg

Prep Date: 11/15/16

Metal	LCS Result	Spike lot MPLCS86	% Rec	QC Limits
Aluminum				
Antimony	52.3	86.5	60.5	1-199
Arsenic	91.7	97.5	94.1	78-122
Barium	290	306	94.8	83-117
Beryllium	90.8	100	90.8	83-118
Bismuth				
Boron				
Cadmium	73.2	76.6	95.6	82-118
Calcium				
Chromium	93.0	103	90.3	80-121
Cobalt				
Copper				
Gold				
Iron				
Lead	89.9	96.7	93.0	82-118
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	141	153	92.2	82-118
Palladium				
Platinum				
Potassium				
Selenium	150	161	93.2	78-123
Silicon				
Silver	43.6	49.3	88.4	75-125
Sodium				
Sulfur				
Strontium				
Thallium	114	119	95.8	79-121
Tin				
Titanium				
Tungsten				

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/15/16

Metal	LCS Result	Spike lot MPLCS86	% Rec	QC Limits
Vanadium	95.2	102	93.3	78-123
Zinc	203	229	88.6	82-118

Zirconium

Associated samples MP27020: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

9.2.3

9

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date: 11/15/16

Metal	MC48731-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	2.90	0.00	100.0(a)	0-10
Arsenic	28.8	24.0	16.7 (a)	0-10
Barium	372	391	5.1	0-10
Beryllium	2.80	2.60	7.1	0-10
Bismuth				
Boron				
Cadmium	0.900	0.00	100.0(a)	0-10
Calcium				
Chromium	137	143	4.5	0-10
Cobalt				
Copper				
Gold				
Iron				
Lead	213	215	0.7	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	83.1	82.6	0.6	0-10
Palladium				
Platinum				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.900	0.00	100.0(a)	0-10
Sodium				
Sulfur				
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Tungsten				

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date: 11/15/16

Metal	MC48731-1		%DIF	QC Limits
	Original	SDL 1:5		

Vanadium 247 260 5.1 0-10

Zinc 310 333 7.6 0-10

Zirconium

Associated samples MP27020: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

9.2.4

9

POST DIGESTATE SPIKE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date:

11/15/16

Metal	Sample ml	Final ml	MC48731-1 Raw	PS ug/l	Corr.**	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	10	10.1	2.9	2.871287	21.8	.1	2	19.80198	95.6	80-120
Arsenic										
Barium										
Beryllium										
Bismuth										
Boron										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Gold										
Iron										
Lead										
Lithium										
Magnesium										
Manganese										
Molybdenum										
Nickel										
Palladium										
Platinum										
Potassium										
Selenium										
Silicon										
Silver										
Sodium										
Sulfur										
Strontium										
Thallium										
Tin										
Titanium										
Tungsten										

POST DIGESTATE SPIKE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27020
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date:

11/15/16

Metal	Sample ml	Final ml	MC48731-1 Raw	PS Corr.** ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
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Vanadium

Zinc

Zirconium

Associated samples MP27020: MC48722-1, MC48722-2, MC48722-4

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(**) Corr. sample result = Raw * (sample volume / final volume)

(anr) Analyte not requested

9.2.5

9

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 11/16/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	0.20	.011	.025		
Antimony	0.0060	.0013	.0012		
Arsenic	0.010	.0015	.002	-0.00020	<0.010
Barium	0.50	.00019	.00057	0.00010	<0.50
Beryllium	0.0040	.00016	.00034		
Bismuth	0.050	.00095	.0018		
Boron	0.10	.0097	.0023		
Cadmium	0.0040	.00019	.0003	0.0	<0.0040
Calcium	5.0	.0076	.018		
Chromium	0.010	.00039	.0011	0.00010	<0.010
Cobalt	0.050	.00021	.00041		
Copper	0.025	.00055	.0042		
Gold	0.050	.00091	.0013		
Iron	0.10	.0019	.016		
Lead	0.010	.0011	.0011	0.00010	<0.010
Lithium	0.50	.0013	.0018		
Magnesium	5.0	.025	.056		
Manganese	0.015	.00011	.00041		
Molybdenum	0.10	.00017	.016		
Nickel	0.040	.00033	.00035		
Palladium	0.050	.0019	.0014		
Platinum	0.050	.0031	.0047		
Potassium	5.0	.027	.078		
Selenium	0.025	.0018	.0034	0.00080	<0.025
Silicon	0.10	.0063	.03		
Silver	0.0050	.00027	.0014	0.00010	<0.0050
Sodium	5.0	.0051	.035		
Sulfur	0.050	.0022	.0033		
Strontium	0.010	.000079	.00017		
Thallium	0.0050	.0013	.0018		
Tin	0.10	.0008	.0022		
Titanium	0.050	.00032	.00099		
Tungsten	0.10	.0033	.023		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 11/16/16

Metal	RL	IDL	MDL	MB raw	final
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Vanadium 0.010 .00037 .0004

Zinc 0.10 .0012 .001

Zirconium 0.050 .00032 .0026

Associated samples MP27025: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 11/16/16

Metal	MC48722-1A Original MS		SpikeLot MPICP7	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	0.0044	0.54	0.50	107.1	75-125
Barium	0.65	2.6	2.0	97.5	75-125
Beryllium					
Bismuth					
Boron					
Cadmium	0.0012	0.54	0.50	107.8	75-125
Calcium					
Chromium	0.00060	0.47	0.50	93.9	75-125
Cobalt					
Copper					
Gold					
Iron					
Lead	0.0012	1.0	1.0	99.9	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Palladium					
Platinum					
Potassium					
Selenium	0.0	0.55	0.50	110.0	75-125
Silicon					
Silver	0.00090	0.21	0.20	104.6	75-125
Sodium					
Sulfur					
Strontium					
Thallium					
Tin					
Titanium					
Tungsten					

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 11/16/16

Metal	MC48722-1A Original MS	Spike lot MPICP7	% Rec	QC Limits
-------	---------------------------	---------------------	-------	--------------

Vanadium

Zinc

Zirconium

Associated samples MP27025: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

9.3.2

9

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 11/16/16

Metal	MC48722-1A Original MSD		Spike lot MPICP7	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	0.0044	0.55	0.50	109.1	1.8	20
Barium	0.65	2.6	2.0	97.5	0.0	20
Beryllium						
Bismuth						
Boron						
Cadmium	0.0012	0.55	0.50	109.8	1.8	20
Calcium						
Chromium	0.00060	0.47	0.50	93.9	0.0	20
Cobalt						
Copper						
Gold						
Iron						
Lead	0.0012	1.0	1.0	99.9	0.0	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Palladium						
Platinum						
Potassium						
Selenium	0.0	0.56	0.50	112.0	1.8	20
Silicon						
Silver	0.00090	0.21	0.20	104.6	0.0	20
Sodium						
Sulfur						
Strontium						
Thallium						
Tin						
Titanium						
Tungsten						

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 11/16/16

Metal	MC48722-1A Original MSD	Spike lot MPICP7	% Rec	MSD RPD	QC Limit
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Vanadium

Zinc

Zirconium

Associated samples MP27025: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

9.3.2

9

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 11/16/16 11/16/16

Metal	BSP Result	Spikelot MPICP7	% Rec	QC Limits	BSD Result	Spikelot MPICP7	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony									
Arsenic	0.53	0.50	106.0	80-120	0.52	0.50	104.0	1.9	20
Barium	1.9	2.0	95.0	80-120	1.9	2.0	95.0	0.0	20
Beryllium									
Bismuth									
Boron									
Cadmium	0.52	0.50	104.0	80-120	0.51	0.50	102.0	1.9	20
Calcium									
Chromium	0.48	0.50	96.0	80-120	0.48	0.50	96.0	0.0	20
Cobalt									
Copper									
Gold									
Iron									
Lead	1.0	1.0	100.0	80-120	0.99	1.0	99.0	1.0	20
Lithium									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Palladium									
Platinum									
Potassium									
Selenium	0.54	0.50	108.0	80-120	0.53	0.50	106.0	1.9	20
Silicon									
Silver	0.20	0.20	100.0	80-120	0.20	0.20	100.0	0.0	20
Sodium									
Sulfur									
Strontium									
Thallium									
Tin									
Titanium									
Tungsten									

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Methods: SW846 6010C
Units: mg/l

11/16/16

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: ug/l

Prep Date: 11/16/16

Metal	MC48722-1A Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	4.40	9.40	113.6(a)	0-10
Barium	649	663	2.1	0-10
Beryllium				
Bismuth				
Boron				
Cadmium	1.20	2.00	66.7 (a)	0-10
Calcium				
Chromium	0.600	0.00	100.0(a)	0-10
Cobalt				
Copper				
Gold				
Iron				
Lead	1.20	0.00	100.0(a)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Palladium				
Platinum				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.900	0.00	100.0(a)	0-10
Sodium				
Sulfur				
Strontium				
Thallium				
Tin				
Titanium				
Tungsten				

9.3.4
 9

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27025
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: ug/l

Prep Date: 11/16/16

Metal	MC48722-1A		QC Limits
	Original	SDL 1:5 %DIF	

Vanadium

Zinc

Zirconium

Associated samples MP27025: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

9.3.4

9

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27030
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date: 11/17/16

Metal	RL	IDL	MDL	MB raw	final
-------	----	-----	-----	-----------	-------

Mercury 0.00020 .0000068 .000034 -0.00010 <0.00020

Associated samples MP27030: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27030
 Matrix Type: LEACHATE

Methods: SW846 7470A
 Units: mg/l

Prep Date: 11/17/16

Metal	MC48751-1A Original MS	SpikeLot HGRWS1	% Rec	QC Limits
Mercury	0.0	0.0029	0.0030 96.7	75-125

Associated samples MP27030: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27030
 Matrix Type: LEACHATE

Methods: SW846 7470A
 Units: mg/l

Prep Date: 11/17/16

Metal	MC48751-1A Original MSD	SpikeLot HGRWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	0.0028	0.0030	93.3	3.5

Associated samples MP27030: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27030
 Matrix Type: LEACHATE

Methods: SW846 7470A
 Units: mg/l

Prep Date: 11/17/16

Metal	MC48722-1A		Spike lot		QC
	Original	LS	HGRWS1	% Rec	Limits
Mercury	0.0	0.0029	0.0030	96.7	75-125

Associated samples MP27030: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC48722
 Account: BBLNYS - Arcadis
 Project: National Grid, Washington Street, Rensselaer, NY

QC Batch ID: MP27030
 Matrix Type: LEACHATE

Methods: SW846 7470A
 Units: mg/l

Prep Date: 11/17/16 11/17/16

Metal	BSP Result	Spike lot HGRWS1	% Rec	QC Limits	BSD Result	Spike lot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	0.0029	0.0030	96.7	80-120	0.0029	0.0030	96.7	0.0	

Associated samples MP27030: MC48722-3, MC48722-1A, MC48722-2A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Cyanide	GP21141/GN55417	0.12	0.0	mg/kg	0.6	0.630	105.0	90-110%
Cyanide	GP21141/GN55417			mg/kg	4.8	4.78	99.6	90-110%

Associated Samples:

Batch GP21141: MC48722-1, MC48722-2, MC48722-4
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Cyanide	GP21141/GN55417	MC48722-1	mg/kg	2.6	2.4	8.0	0-20%
Solids, Percent	GN55333	MC48476-24	%	85.6	88	2.8	0-5%
Solids, Percent	GN55337	MC48745-7	%	90.2	92.2	2.2	0-5%

Associated Samples:

Batch GN55333: MC48722-1

Batch GN55337: MC48722-2, MC48722-4

Batch GP21141: MC48722-1, MC48722-2, MC48722-4

(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC48722
Account: BBLNYS - Arcadis
Project: National Grid, Washington Street, Rensselaer, NY

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Cyanide	GP21141/GN55417	MC48722-1	mg/kg	2.6	1.47	4.8	149.9(a)	75-125%

Associated Samples:

Batch GP21141: MC48722-1, MC48722-2, MC48722-4

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity. Refer to spike blank.

Misc. Forms

Custody Documents and Other Forms

(SGS Accutest New Jersey)

Includes the following where applicable:

- Chain of Custody

III.11.1

171 of 175
ACCUTEST
MC48722

SGS Accutest Sample Receipt Summary

Job Number: MC48722

Client: _____

Project: _____

Date / Time Received: 11/15/2016 9:45:00 AM

Delivery Method: _____

Airbill #s: _____

Cooler Temps (Raw Measured) °C: Cooler 1: (2.1);

Cooler Temps (Corrected) °C: Cooler 1: (3.5);

Cooler Security

Y or N

1. Custody Seals Present: ☒ ☐
2. Custody Seals Intact: ☒ ☐

Y or N

3. COC Present: ☒ ☐
4. Smp'l Dates/Time OK ☒ ☐

Cooler Temperature

Y or N

1. Temp criteria achieved: ☒ ☐
2. Cooler temp verification: IR Gun
3. Cooler media: Ice (Bag)
4. No. Coolers: 1

Quality Control Preservation

Y or N

N/A

1. Trip Blank present / cooler: ☐ ☒ ☐
2. Trip Blank listed on COC: ☐ ☒ ☐
3. Samples preserved properly: ☒ ☐ ☐
4. VOCs headspace free: ☐ ☐ ☒

Sample Integrity - Documentation

Y or N

1. Sample labels present on bottles: ☒ ☐
2. Container labeling complete: ☒ ☐
3. Sample container label / COC agree: ☒ ☐

Sample Integrity - Condition

Y or N

1. Sample recvd within HT: ☒ ☐
2. All containers accounted for: ☒ ☐
3. Condition of sample: Intact

Sample Integrity - Instructions

Y or N N/A

1. Analysis requested is clear: ☒ ☐
2. Bottles received for unspecified tests: ☐ ☒
3. Sufficient volume recvd for analysis: ☒ ☐
4. Compositing instructions clear: ☐ ☐ ☒
5. Filtering instructions clear: ☐ ☐ ☒

Comments

MC48722: Chain of Custody

Page 2 of 2

General Chemistry

QC Data Summaries

(SGS Accutest New Jersey)

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC48722
Account: ALNE - SGS Accutest New England
Project: BBLNYS: National Grid, Washington Street, Rensselaer, NY

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Percent Sulfur	GN55368	0.10	0.0	%	xxxxxxx	0.60	90.6	80-120%
Percent Sulfur	GP1330/GN54926	0.10	0.0	%	.667	0.73	109.0	80-120%

Associated Samples:
Batch GP1330: MC48722-1, MC48722-2, MC48722-4
Batch GN55368: MC48722-1, MC48722-4
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC48722
Account: ALNE - SGS Accutest New England
Project: BBLNYS: National Grid, Washington Street, Rensselaer, NY

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Heat Content, BTU	GP1329/GN54841	LA26575-1	BTU/lb	6360	6200	2.5	0-45%
Percent Sulfur	GP1330/GN54926	TC94111-1	%	8.6	8.5	1.2	0-41%

Associated Samples:

Batch GP1329: MC48722-1, MC48722-2, MC48722-4

Batch GP1330: MC48722-1, MC48722-2, MC48722-4

(*) Outside of QC limits

ATTACHMENT 9 - WASTE DISPOSAL DOCUMENTATION



SECRET

WORK ORDER NO

100

STRAIGHT BILL OF LADING

VEHICLE ID #

TRANS. 1 PHONE ~~770-442-5800~~

VEHICLE ID #

TRANS. 2 PHONE

SHIPPERS CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

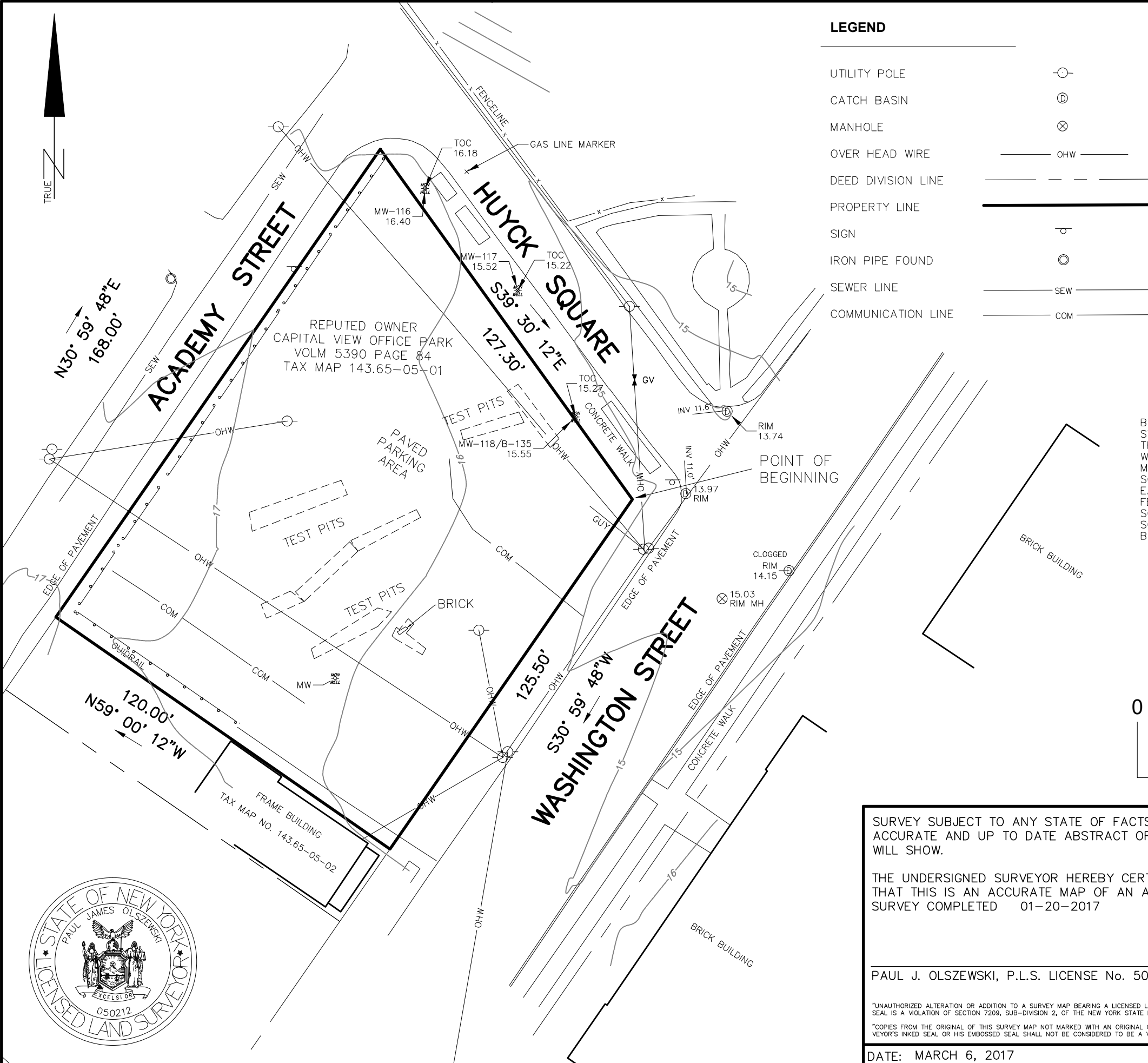
SHIPPER	PRINT <i>Shirley A. Smith</i>	SIGN <i>[Signature]</i>	DATE <i>11/11/77</i>
TRANSPORTER 1	PRINT <i>James Johnson</i>	SIGN <i>[Signature]</i>	DATE <i>11/11/77</i>
TRANSPORTER 2	PRINT	SIGN	DATE
RECEIVED BY	PRINT	SIGN	DATE

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number NYR000133371		2. Page 1 of 1		3. Emergency Response Phone 800-424-9300		4. Waste Tracking Number 07101789	
		5. Generator's Name and Mailing Address Niagara Mohawk Power Corp 300 Erie Blvd West Syracuse NY 13202		Att: Jim Morgan		Generator's Site Address (if different than mailing address) Niagara Mohawk Power Corp 89 Washington Street Rensselaer NY 12144			
Generator's Phone: 315 428-3101		6. Transporter 1 Company Name Sun Environmental Corp				U.S. EPA ID Number NYR000176958			
7. Transporter 2 Company Name						U.S. EPA ID Number			
8. Designated Facility Name and Site Address Industrial Oil Tank Services 120 Dry Road Oriskany NY 13424						U.S. EPA ID Number NYR000005298			
Facility's Phone: 315 736-6080									
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.				
		No.	Type						
1. Non RCRA, Non DOT Regulated Material (Non Hazardous Drill Cuttings)		8	DM	EST 4,000	P	L			
2. Non RCRA, Non DOT Regulated Material (Spent PPE/ Debris)		2	DM	EST 100	P	L			
3. Non RCRA, Non DOT Regulated Material (Decon Water)			DM		P	R MG			
4.									
13. Special Handling Instructions and Additional Information Approval :									
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.									
Generator's/Offoror's Printed/Typed Name Megan Guitford		Signature <i>Megan Guitford</i>		Month 07		Day 10		Year 17	
15. International Shipments ☐ Import to U.S. ☐ Export from U.S.		Port of entry/exit: Date leaving U.S.:							
Transporter Signature (for exports only):									
16. Transporter Acknowledgment of Receipt of Materials									
Transporter 1 Printed/Typed Name Tom Tennant		Signature <i>Tom Tennant</i>		Month 07		Day 10		Year 17	
Transporter 2 Printed/Typed Name		Signature		Month		Day		Year	
17. Discrepancy									
17a. Discrepancy Indication Space		☐ Quantity		☐ Type		☐ Residue		☐ Partial Rejection	
		☐ Full Rejection							
		Manifest Reference Number:							
17b. Alternate Facility (or Generator)		U.S. EPA ID Number							
Facility's Phone:									
17c. Signature of Alternate Facility (or Generator)				Month		Day		Year	
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a									
Printed/Typed Name		Signature		Month		Day		Year	

DESIGNATED FACILITY TO GENERATOR

ATTACHMENT 10 - SITE SURVEY





LEGEND

UTILITY POLE	
CATCH BASIN	
MANHOLE	
OVER HEAD WIRE	
DEED DIVISION LINE	
PROPERTY LINE	
SIGN	
IRON PIPE FOUND	
SEWER LINE	
COMMUNICATION LINE	

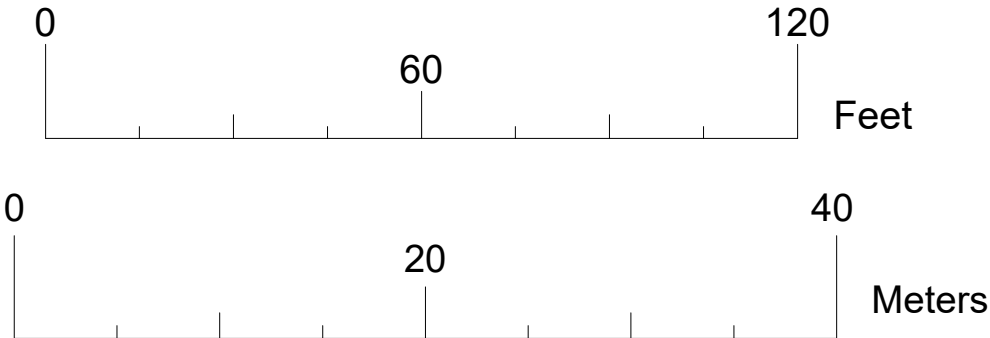
NOTES

- FEMA FLOOD ZONE A12
- DATUMS HORIZONTAL NAD83/CORS/96 EAST ZONE AND VERTICAL NAVD88
- UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE THERE LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS UNKNOWN.

THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL EASEMENT HELD BY THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION PURSUANT TO TITLE 36 OF ARTICLE 71 OF THE NEW YORK ENVIRONMENTAL CONSERVATION LAW. THE ENGINEERING AND INSTITUTIONAL CONTROLS FOR THIS EASEMENT ARE SET FORTH IN THE SITE MANAGEMENT PLAN (SMP). A COPY OF THE SMP MUST BE OBTAINED BY ANY PARTY WITH AN INTEREST IN THE PROPERTY. THE SMP CAN BE OBTAINED FROM NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF ENVIRONMENTAL REMEDIATION, SITE CONTROL SECTION, 625 BROADWAY, ALBANY, NY 12233 OR AT DERWEB@DEC.NY.GOV

SURVEYORS LEGAL DESCRIPTION
NEW YORK STATE ELECTRIC AND GAS
RENSSELAER SITE
TAX MAP NO. 143.65-05-01

BEGINNING AT A POINT LOCATED IN THE NORTHWESTERLY BOUNDARY OF WASHINGTON STREET AT ITS INTERSECTION WITH THE SOUTHWESTERLY BOUNDARY OF HUYCK SQUARE; THENCE SOUTH 30 DEG 59 MIN 48 SEC WEST ALONG SAID NORTHWESTERLY BOUNDARY OF WASHINGTON STREET, A DISTANCE OF 125.50 FEET TO A POINT; THENCE NORTH 59 DEG 00 MIN 12 SEC WEST A DISTANCE OF 120.00 FEET TO A POINT LOCATED IN THE SOUTHEASTERLY BOUNDARY OF ACADEMY STREET; THENCE NORTH 30 DEG 59 MIN 48 SEC EAST ALONG SAID SOUTHEASTERLY BOUNDARY OF ACADEMY STREET, A DISTANCE OF 168.00 FEET TO A POINT LOCATED IN THE ABOVE MENTIONED SOUTHWESTERLY BOUNDARY OF HUYCK SQUARE; THENCE SOUTH 39 DEG 30 MIN 12 SEC EAST ALONG THE LAST MENTIONED SOUTHWESTERLY BOUNDARY, A DISTANCE OF 127.30 FEET TO THE POINT OF BEGINNING, BEING 0.40 ACRE MORE OR LESS.



SURVEY SUBJECT TO ANY STATE OF FACTS AN ACCURATE AND UP TO DATE ABSTRACT OF TITLE WILL SHOW.

THE UNDERSIGNED SURVEYOR HEREBY CERTIFIES THAT THIS IS AN ACCURATE MAP OF AN ACTUAL SURVEY COMPLETED 01-20-2017

PAUL J. OLSZEWSKI, P.L.S. LICENSE No. 50212

"UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW."
"COPIES FROM THE ORIGINAL OF THIS SURVEY MAP NOT MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S INKED SEAL OR HIS EMBOSSED SEAL SHALL NOT BE CONSIDERED TO BE A VALID TRUE COPY."

DATE: MARCH 6, 2017

SCALE: 1" = 30 FEET

PROJECT No. RENN143.65-05-01

NATIONAL GRID - RENSSELAER MGP SITE
WASHINGTON STREET
SITE NUMBER 00488

CITY OF RENSSELAER

COUNTY OF RENSSELAER

STATE OF NEW YORK

PAUL JAMES OLSZEWSKI, P.L.S., PLLC
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315-488-5552

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