REMEDIAL INVESTIGATION REPORT ADDENDUM

South Island Apartments Northern Parcel

Center Island,

Town of Green Island, Albany County, New York

BCP Site # C401074

August 2018

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CERTIFICATION

I, Gianna M. Aiezza certify that I am currently a NYS registered professional engineer and that this Remedial Investigation Report Addendum was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.

Gianna M. Aiezza
Name

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NYS PE License Number

Signature

8/29/18
Date

1.0 INTRODUCTION

This Remedial Investigation Report Addendum (RI Report) has been prepared by Envirospec Engineering, PLLC (Envirospec) on behalf of South Island Apartments, LLC (SIA) for the South Island Apartments Northern Parcel (Site) located at Center Island in the Town of Green Island (and Village), Albany County, New York (see Figure 1).

SIA is submitting this RI Report in regards to their acceptance into the New York State Brownfield Cleanup Program (BCP) as a Volunteer. SIA intends to investigate and remediate the Site for a Restricted Residential end use. The Site will be redeveloped as a mixed housing and commercial use consisting of apartments, retail, and recreation areas.

1.1 General Site Description

The portion of the site included in this RI Report Addendum is the northern piece of the BCP Site # C401074 and is referred to as the Northern Parcel. It is located on the southern portion of Center Island in the Village of Green Island, NY just south of the Green Island Bridge. The Hudson River is located directly to the east of the Site (see Figure 1). The Site is identified on the Albany 2016 Final Tax Map as 33.09 Block 1 Lots 2.1, 2.2, and 3. The property comprises approximately 10.025 acres. This RI Work Plan Addendum focuses on Lots 2.1, and 2.2. According to aerial images, land uses in the surrounding area include various commercial and residential uses. The Site is a former petroleum bulk storage facility, which was redeveloped to include a car wash and an office building, which were demolished in Fall 2017. The site is part of the larger SIA site already investigated as part of an RI completed in July and August 2017. The northern parcel was added as an amendment to the Brownfield Cleanup Agreement (BCA).

2.0 SITE HISTORY AND BACKGROUND INFORMATION

The Northern Parcel is located on the southern portion of Center Island in the Village of Green Island, NY and is bordered by the Hudson River to the east. It is located just south of the Green Island Bridge. According to the Site Investigation Report prepared by The Tyree Organization, Ltd in November 2003, it was at one time a petroleum bulk storage facility operated by the King Fuels Corporation. The 2003 Site Investigation Report discusses remedial activities that were completed in 1997 by UST Solutions. Remedial activities included excavation of contaminated soil associated with a former UST. This was related to spill #95-04931, which was closed by NYSDEC in 1997.

Ownership of the site was transferred in 1999. Spill #99-03203 was reported and petroleum product piping was removed, along with soil contaminated with #6 fuel oil. This site activity exposed other buried piping and soil contamination, which led to the completion of site investigation activities in 2003. The parcel was subsequently redeveloped with a car wash and an office building, which were demolished in Fall 2017 as part of the redevelopment by SIA.

2.1 Site Topography and Drainage

The Site elevation ranges from approximately 5 (at the River) to approximately 30 feet above mean sea level (AMSL) according to the survey completed for the site. Mean high water is at 5.9 feet AMSL. The Site slopes to the east, south and west towards the Hudson River. The banks are steep in most areas. Presumably, site runoff drains to the east or west towards the Hudson River.

2.2 Site Geology and Hydrogeology

In the 2003 Site Investigation Report, site geology was described as mainly consisting of fill layers overlying finely laminated silt and sand and some gravel and clay layers. The fill consists of ash and cinder, brick, bottles, and concrete. This is generally consistent with observations during the November 2017 test pit sampling, outlined in Section 3.2 below, and extensive investigation completed during the 2017 RI on the original BCP site.

Based on the New York State Museum Geologic Map of New York, the Site is situated over the Canajoharie Shale Formation. Envirospec could not determine depth to bedrock at the Site from historical records. However, during the 2006 Site Assessment by Shifrin, soil borings were advanced to approximately 30 feet bgs. Furthermore, several groundwater monitoring wells installed prior to the 2006 Site Assessment were found to have depth to bottom of well measurements ranging from 32-38.5 feet bgs.

The Site is located in the Hudson River basin, south of where the Mohawk River and the Hudson River converge. Regional groundwater presumably flows toward the Hudson River. According to the 2017 RI Report, groundwater flow at the Site was determined to flow west toward the Hudson. However, groundwater is tidal and fluctuates with the Hudson River.

2.3 Existing Site Infrastructure

The car wash and office building were demolished in Fall 2017. Remaining on the site are the foundations, a transformer, and utility lines. Water and gas utility lines are no longer in service. Removal of the foundations is planned after completion of the RI.

2.4 Sensitive Receptors

Area land uses within one half mile of the Site include residential, commercial and industrial uses. Sensitive receptors are not identified on the Site, but are further discussed in the following sections.

2.4.1 Wetlands and Floodplains

According to the NYSDEC Environmental Resource Mapper (Figure 2) and the USFWS National Wetlands Inventory (Figure 3), there are no state or federal designated wetlands located within the Site boundaries. The Hudson River borders the site to the east. Refer to Section 2.4.2 for further discussion on the Hudson River.

Portions of the Site are located in the 100 year flood plain according to the Flood Insurance Rate Map, map number 36001C0202D, effective date 03/16/2015 (Figure 4). The 100 year flood elevation at the Site is approximately 26 ft AMSL.

2.4.2 Hudson River

As previously discussed, the Hudson River is located immediately adjacent to the Site and borders the Site to the east. According to the NYSDEC Environmental Resource Mapper, the Hudson River shorelines are known to contain rare plants, rare animals, and significant natural communities.

2.4.3 Residences, Schools, Parks and Water Supply Wells Locations

Residential units are located upgradient within one-tenth mile to the north of the Site on Starbuck Island. Residential units and park areas are noted at locations across the Hudson River to the

east, south and west of the Site. The closest residential units and park are within one-tenth mile to the east/southeast of the Site, across the Hudson River. The closest school is located outside a half mile radius of the Site.

The 2008 Phase I ESA conducted by Shifrin for the southern and western portions of the BCP site stated that the Site lies within the water service area of the Village of Green Island, with a supply well located on the northern end of Starbuck Island. However, as discussed in Section 2.3, the water lines are no longer in service.

3.0 PREVIOUS SITE ASSESSMENTS AND INVESTIGATIONS

Previous investigations of the Northern Parcel were performed and are briefly summarized below.

3.1 November 2003 Site Investigation Report

The scope of work for the 2003 site investigation included the following:

- Completion of 14 soil borings, with soil sampling from select borings for analysis for VOCs by EPA Method 8021 and SVOCs by EPA Method 8270
- Installation of two (2) 2" monitoring wells
- Groundwater sampling from existing and new monitoring wells for analysis for VOCs by EPA Method 8021 and SVOCs by EPA Method 8270

Soil results showed VOCs below NYSDEC cleanup standards, with elevated SVOCs in lower fill layers. Specific exceedances were noted in the report for benzo(a)anthracene, chrysene, benzo(a)pyrene, and dibenz(a,h)anthracene. However, when the results were compared to current Part 375 cleanup objectives, there was only one restricted residential exceedance for indeno(1,2,3-cd)pyrene at 0.503 ppm. The groundwater showed no exceedances of standards for VOCs or SVOCs.

3.2 November 2017 Preliminary Site Characterization Study

The scope of work for the November 2017 Preliminary Site Characterization Study included the following:

- Excavation of four (4) test pits across the site
- Collection of samples at depths ranging from 3 to 12 ft bgs, depending on the test pit location, with subsequent analysis for metals by EPA Method 6010, PCBs by EPA method 8082, SVOCs by EPA Method 8270, and VOCs by EPA Method 8260C
- Collection of three (3) shallow soil samples at depths of 3" to 6" bgs and analysis for metals by EPA Method 6010 and SVOCs by EPA Method 8270

One test pit sample (TP-03A) was also analyzed for TPH by EPA Method 8015B. The decision was made to add this analysis at this location due to odors observed during sample collection. The sample showed an elevated TPH result of 2206 mg/kg.

Due to access issues, the test pit samples were collected close to old foundations or utilities where soil cover (e.g. asphalt) had previously been disturbed. This increased the likelihood of sampling clean fill material. No exceedances above Restricted Residential Soil Cleanup Objectives (RRSCOs) were observed for these samples, though several exceedances of Unrestricted SCOs were observed.

Exceedances were observed above RRSCOs, Commercial Soil Cleanup Objectives (CSCOs), and Industrial Soil Cleanup Objectives (ISCOs) for the shallow soil samples for metals and benzo(b)fluoranthene. Test pit locations and results are shown on Drawing S-1.

4.0 RI SCOPE OF WORK

The RI was performed to further delineate the nature and extent of the contamination on-site on the Northern Parcel. The specific goals of the RI are outlined below:

- Advance a series of soil borings across the property for the purpose of developing a soil profile across the property;
- Collect and analyze representative surface and subsurface soil samples to supplement samples collected in previous investigations;
- Collect and analyze bank samples to investigate characterize the banks surrounding the Site;
- Collect and analyze soil vapor samples to evaluate whether actions are necessary to address exposures related to soil vapor intrusion;
- Install and sample groundwater wells to assess groundwater impacts from on-Site sources and to better understand Site hydrogeology;
- Collect soil and groundwater data to update the Qualitative Human Health Exposure Assessment in accordance with DER-10 Section 3.3(c) 4;
- Investigate the groundwater interface near SB-12 utilizing a Hydropunch sampler to determine if any LNAPL is present at the water table;
- Gather data necessary to update the FWIRA in accordance with DER-10 Section 3.10(c).

Soil borings, groundwater well installation and sampling, bank sampling, and soil vapor sampling were completed in June 2018. A NYSDEC representative was on site periodically during investigation activities to observe progress. The specific work completed during the RI included the following:

- Completion of soil borings at 10 locations across the site with the collection of 24 soil samples at varying depths;
- Collection of bank samples at one (1) location at two depths along the northeastern bank;
- Collection of two (2) soil vapor samples and one (1) ambient air sample;
- Groundwater sampling at three (3) newly installed monitoring wells;
- Investigation at the groundwater interface near SB-12 utilizing a Hydropunch sampler and collection of one (1) groundwater sample for visual observation.

The summary of samples collected during the RI is provided in Table 1 in Section 5.0. Sample locations are provided in Drawing S-2. Drawing S-3 shows the lots (2.1 and 2.2) that are the focus of the investigation in this RI addendum. Data collected during the RI was used to develop a Conceptual Site Model (CSM), provided in Appendix A to the November 2017 RI Report. There are no significant changes to the CSM based on the results of the 2018 RI.

5.0 SUMMARY OF RI ACTIVITIES

The RI consisted of sampling across the Site to further delineate the nature and extent of contamination and to identify potential source areas. The investigation was completed as outlined in the sections below. A summary of samples collected is provided in Table 1.

5.1 Soil Borings

A total of 10 soil borings were completed across the Site (not including offsets) on an approximate 100 foot grid. This sampling grid is consistent with the RI completed on the original BCP site. Three of the soil borings, SB-42, SB-43, and SB-46 were located outside the boundary of the BCP site. Borings were completed to groundwater, which ranged from 24 to 32 feet bgs. A large portion of the site is covered with asphalt and concrete. Within the asphalt areas and former building footprints, two samples were collected from each boring. One sample was collected from a depth of approximately 1 to 2 feet bgs. A second sample was collected from the interface with groundwater. Outside of these areas, three (3) samples were collected from each boring, with one sample collected from 0-2 inches, one sample collected from 2 inches – 2 feet, and one sample collected from the interface with groundwater.

Samples were analyzed as shown in Table 1. Soil boring sampling was conducted in accordance with Section 5.4. Soil boring locations are shown on Drawing S-2.

5.2 Bank Samples

Samples were collected from 0-6 inches bgs and 6 inches-2 feet bgs, as outlined in Table 1. Soil samples were collected from the eastern side of the Site along the bank of the River. Samples were collected at one (1) location on the eastern bank at two depths, for a total of two (2) samples. The sample location is shown on Drawing S-2.

5.3 Soil Vapor Sampling

Soil vapor samples were collected at the property, in accordance with the approved protocol included in the RI Addendum Work Plan. Soil vapor samples were collected from a total of two (2) locations, with one location in the center of each former building foundation. Sample locations are shown on Drawing S-2.

Table 1
Samples Collected during RI Addendum[a]

Medium Sampled	Number of Samples Collected	Analyzed
Surface Soils (0 to 2" bgs)	4	2 – SVOCs, PCBs, Metals 1 – SVOCs, PCBs, Metals, TPH, VOCs 1 – Full
Shallow Subsurface Soils (2" to 2' bgs)	10	5 – SVOCs, PCBs, Metals 2 – SVOCs, PCBs, Metals, TPH, VOCs 3 – Full
Groundwater Interface Soils (approx. 25 to 30' bgs)	10	5 – SVOCs, PCBs, Metals 2 – SVOCs, PCBs, Metals, TPH, VOCs 3 – Full
Shallow Bank Soils (0 to 6" bgs)	1	1 - Full
Subsurface Bank Soils (6" to 2' bgs)	1	1 - Full
Soil Vapor	2	TO-15 list
Ambient Air	1	TO-15 list
Groundwater	3	3 - Full

[a] = The table does not include duplicate samples. "Full" analyses for soil included metals, VOCs, SVOCs, PCBs, pesticides, and TPH. "Full" analyses for groundwater included the same list as for soil with the addition of PFAS.

5.4 Soil Sampling Procedures

Soil borings were completed with 5 foot macro core samplers via Geoprobe©. Each interval was characterized and screened for the presence of VOCs using a photoionization detector (PID). A grab sample was collected from each interval and placed in a ziplock bag for a headspace reading. Upon reaching the completion of each soil boring, field results including PID, visual, and olfactory results were reviewed. A grab sample was collected for VOCs and TPH from the interval with the highest reading on the PID or was visually contaminated. The remainder of that sampling interval was composited for SVOCs, metals, pesticides, and PCBs. If there was no visual contamination and no headspace reading, the originally planned interval was sampled for all parameters. If there was poor recovery, the boring was offset by

approximately one (1) foot to obtain the remainder of the samples from the same sampling interval(s).

Soil samples were collected using dedicated sampling tools as described in the Sampling and Analysis Plan / Quality Assurance Project Plan (SAP/QAPP). Representative soil samples were placed in laboratory provided sample bottles and transported under chain-of-custody command to a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory.

Envirospec collected samples in accordance with the protocols described in the SAP/QAPP. USEPA and NYSDEC approved sample collection and handling techniques were used during implementation of the investigation.

Samples for chemical analysis were analyzed in accordance with USEPA SW-846 methodology with an equivalent Category B deliverable package to meet the definitive-level data requirements and appropriate method detection limits for comparison to applicable cleanup objectives. Analytical results were evaluated by a third-party data validation expert in accordance with the SAP/QAPP.

Samples were analyzed for one or more of the following:

- VOCs via EPA Method 8260;
- TPH by Method 9071B
- SVOCs via EPA Method 8270;
- PCBs via EPA Method 8082;
- Pesticides by Method 8081
- Metals via EPA Method 6010 (mercury via EPA Method 7471);

Bank Samples were collected by hand with a shovel.

Quality Assurance/ Quality Control (QA/QC) Measures to be followed are discussed in the SAP/QAPP provided in the RI Work Plan. The specific contaminants of concern that investigation samples were analyzed for are shown in Table 1.

5.5 Groundwater Sampling

Three (3) groundwater monitoring wells were installed as part of the investigation activities. The wells were developed and sampled to evaluate current groundwater quality. The wells were

sampled in accordance with Table 2 below. See Drawing S-2 for the locations of the monitoring wells. MW-31 is located outside the boundary of the BCP site.

Monitoring wells MW-29 was installed to a depth of 35 ft bgs with a 10 ft screen. MW-30 was installed to a depth of 50 ft bgs with a 10 ft screen. MW-31 was installed to a depth of 41 ft bgs with a 10 ft screen.

The water table near SB-12 was also investigated for LNAPL using a Hydropunch sampler. Drawing S-2 shows the SB-12 location, which was part of the 2017 RI. The groundwater sample was collected at a depth of approximately 30 feet bgs using a peristaltic pump.

Table 2
Investigation Groundwater Sampling

Sample Location ID	Analyses Completed
MW-29, MW-30, MW-31	TCL VOCs by EPA Method 8260, TPH by Method 9071B TCL SVOCs by EPA Method 8270 PCBs by EPA method 8082 Pesticides by Method 8081 PFCs by Modified (Low Level) Method 537 TAL Metals by EPA Method 6010 (filtered and unfiltered) (mercury via EPA Method 7471)
SB-12	Visual Observation

5.5.1 Water Table Elevations

Static water levels were measured and recorded during the RI activities from Site groundwater monitoring wells, including remaining wells on the southern portion of the BCP Site that were included in the 2017 RI. Water table levels were collected and are provided in Table 3. An oil-water interface probe was used to measure static water levels. No product was measured in the newly installed monitoring wells or in the wells on the southern portion of the BCP Site during this sampling round.

Table 3
Water Table Elevations

Well ID	Depth to water (ft bgs)	Water Table Elevation (ft)
MW-2	26.9	1.44
MW-3	26.9	2.39
MW-6	25.4	2.18
MW-7	23.8	3.06
MW-14	22.7	1.93
MW-29	25.7	2.175
MW-30	25.3	2.1
MW-31	25.6	2.096

5.5.2 Well Development

Groundwater monitoring wells required development in accordance with NYSDEC protocols. Development of the newly installed monitoring wells was with low flow PFC-free bladder pumps or a submersible pump, depending on the location. Field parameters including pH, temperature, turbidity, dissolved oxygen (DO), oxidation-reduction potential (ORP) and specific conductance were measured and recorded periodically (i.e., every well volume or as necessary) during development for stabilization. Purging was considered complete when pH, specific conductivity, DO, ORP and temperature stabilize and when turbidity measurements fall below 50 Nephelometric Turbidity Units (NTU), or become stable above 50 NTU. Stability is defined as variation between field measurements of 10 percent or less and no overall upward or downward trend in the measurements. Upon stabilization of field parameters, groundwater samples were collected and analyzed as discussed below. Samples were collected for both filtered and unfiltered metals analysis. Development water from the monitoring wells was containerized for off-site disposal.

5.6 Groundwater Sample Collection

Following water level and free product thickness measurement, Envirospec personnel purged the monitoring wells using a PFC-free bladder pump with dedicated pump tubing or a submersible pump, depending on the sample location. Low-flow purge and sample collection procedures were followed. The wells were sampled using the pumps or a dedicated, disposable, PFC-free bailer. NYSDEC's "Collection of Groundwater Samples for Perfluorooctanoic Acid (PFOA) and Perfluorinated Compounds (PFCs) from Monitoring Wells Sample Protocol" (June 2016) and "Groundwater Sampling for Emerging Contaminants" (April 2018) were followed during sample collection and analysis. Sampling for PFAS was only completed through the use of the PFC-free

bladder pump.

Groundwater samples were placed in laboratory-provided sample bottles, cooled to 4ºC in the field, and transported under chain-of-custody command to a NYSDOH ELAP certified laboratory to be analyzed for the following:

- VOCs via EPA Method 8260;
- TPH by Method 9071B
- SVOCs via EPA Method 8270;
- PCBs via EPA Method 8082;
- Pesticides by Method 8081,
- Metals via EPA Method 6010 (mercury via EPA Method 7471)
- PFAS by Modified (Low Level) Method 537 and

5.7 Decontamination and Management of Investigation Derived Waste

The sampling methods and equipment selected for the soil sampling and groundwater sampling limit both the need for decontamination and the volume of waste material to be generated. Personal protective equipment (i.e. latex gloves) and disposable sampling equipment (i.e., polyethylene tubing) were placed in plastic garbage bags for disposal as a solid waste at the Site.

Drill cuttings that could not be placed back into the boring and other soil and/or water generated on-Site during the RI investigation were disposed of off-Site in conformance with solid and/or hazardous waste regulations. Envirospec collected samples for testing, as required by the off-Site disposal facility.

5.8 Survey

Following completion of a sampling location, it was staked and marked. Following completion of the field work, sampling locations were surveyed for development of a Site Plan showing the final sampling locations. Final locations are shown on Drawing S-2.

6.0 RESULTS OF INVESTIGATION

The results of the investigation are discussed in the following sections. Field Documentation of the RI including soil boring logs, groundwater sampling logs, soil vapor field sheets, and photo logs are included in Appendices A, B, C and D, respectively. Tables with full sampling results are included in Appendix E.

6.1 Soil Boring Samples

Full results from the soil borings completed across the site are provided in Table 10, attached in Appendix E. Surface and subsurface soil data are discussed separately in the following sections.

6.1.1 Surface Soils

Surface soil samples (0 to 2") were collected outside of asphalt, concrete, and gravel areas. Drawings R-1 and R-2 show exceedances of soil cleanup objectives for metals. Drawings R-5 and R-6 show exceedances of soil cleanup objectives for SVOCs. Drawings R-9 and R-10 show TPH results for surface soils.

Exceedances of RRSCOs for mercury were consistent with historic fill. No source areas of metals were identified in surface soils, and no other metals showed exceedances in surface soils. Table 4 summarizes the mercury exceedances. The results for all samples are provided in Table 10 included in Appendix E.

Exceedances of RRSCOs for SVOCs were observed for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene at SB-42A (see Table 5). Of the SVOCs analyzed, only benzo(a)pyrene exceeded the Industrial Soil Cleanup Objective (ISCO). Although the results exceed the cleanup standard of 1 ppm (residential, commercial and industrial), the results are consistent with fill material and there was no source area found.

There are no cleanup goals for TPH. TPH results in surface soils ranged from 318 to 389 mg/kg. No exceedances of RRSCOs were observed for pesticides, PCBs, or VOCs in surface soils.

Table 4.
Exceedances for metals in surface soils

Analyte (ppm)	UUSCO	RRSCO	CSCO	ISCO	SB-42A	SB-43A	SB-44AO	SB-46A
Chromium	1	110	140	800	20.5	23.9	15.7	16.6
Copper	50	270	270	10000	117	119	-	56.5
Lead	63	400	1000	3900	355	333	-	207
Mercury	0.18	0.81	2.8	5.7	1.7	1.5	-	0.84
Silver	2	180	1500	6800	-	2	-	2.3
Zinc	109	10000	10000	10000	289	305	-	190

Table 5.
Exceedances for SVOCs in surface soils

Analyte (ppm)	UUSCO	RRSCO	CSCO	ISCO	SB-42A
Benzo(a)anthracene	1	1	5.6	11	3.59
Benzo(a)pyrene	1	1	1	1.1	3.27
Benzo(b)fluoranthene	1	1	5.6	11	3.3
Benzo(k)fluoranthene	0.8	3.9	56	110	3.98
Chrysene	1	3.9	56	110	3.65
Dibenz(a,h)anthracene	0.33	0.33	0.56	1.1	0.429
Indeno(1,2,3-cd)pyrene	0.5	0.5	5.6	11	1.04

6.1.2 Subsurface Soil

Subsurface soil samples were collected in shallow soils (generally 2" to 2') and at the groundwater interface (approximately 25' to 30'). Drawings R-3 and R-4 show exceedances of soil cleanup objectives for metals. Drawings R-7 and R-8 show exceedances of soil cleanup objectives for SVOCs. Drawings R-9 and R-10 show TPH results for subsurface soils.

6.1.2.1 Shallow Subsurface Soil

Exceedances of RRSCOs were detected for metals in shallow (2" to 2') subsurface soils. The metals and levels detected were consistent with those expected in historic fill. Table 6 summarizes shallow subsurface soil results for lead, mercury, and copper. There was no evidence of a specific source area of metals in subsurface soils.

Exceedances of RRSCOs, CSCOs, and ISCOs for SVOCs were detected at one shallow subsurface soil boring, SB-37B. SVOC results are summarized in Table 6.

Although there are no cleanup standards available for TPH, elevated detections of 1790 mg/kg and 3640 mg/kg were observed at SB-37B and SB-45B. No exceedances of RRSCOs were observed for pesticides, PCBs, or VOCs in shallow subsurface soils.

Table 6.
Exceedances for metals in shallow subsurface soils

Analyte (ppm)	UUSCO	RRSCO	CSCO	ISCO	SB-37B	SB-38B	SB-39B	SB-40BO	SB-41B
Chromium	1	110	140	800	14.6	31.8	18.1	14.7	16.6
Copper	50	270	270	10000	76.5	158	-	70	-
Lead	63	400	1000	3900	452	344	87.7	261	134
Mercury	0.18	0.81	2.8	5.7	2	0.77	0.26	1.3	-
Nickel	30	310	310	10000	-	158	-	-	-
Silver	2	180	1500	6800	3.4	-	5.3	3.1	3.6
Zinc	109	10000	10000	10000	264	414	-	173	-

Analyte (ppm)	UUSCO	RRSCO	CSCO	ISCO	SB-42B	SB-43B	SB-44B	SB-45B	SB-46B
Arsenic	13	16	16	16	-	-	-	-	13
Barium	350	400	400	10000	-	-	-	-	357
Chromium	1	110	140	800	34.7	74.4	16.3	18.4	17.2
Copper	50	270	270	10000	1790	143	-	-	140
Lead	63	400	1000	3900	811	660	69.5	133	926
Mercury	0.18	0.81	2.8	5.7	3.6	0.58	-	0.46	1.8
Nickel	30	310	310	10000	43.7	32.6	-	-	-
Silver	2	180	1500	6800	2.3	2.4	3.5	3.6	2.6
Zinc	109	10000	10000	10000	497	496	-	116	434

Table 7. Exceedances for SVOCs in shallow subsurface soils

Analyte (ppm)	UUSCO	RRSCO	CSCO	ISCO	SB-37B
Benzo(a)anthracene	1	1	5.6	11	13.2
Benzo(a)pyrene	1	1	1	1.1	11.1
Benzo(b)fluoranthene	1	1	5.6	11	10.8
Benzo(k)fluoranthene	0.8	3.9	56	110	8.46
Chrysene	1	3.9	56	110	13.3
Dibenz(a,h)anthracene	0.33	0.33	0.56	1.1	1.73
Indeno(1,2,3-cd)pyrene	0.5	0.5	5.6	11	3.32

6.1.2.2 Groundwater Interface Subsurface Soils

Relatively few exceedances were observed in the soils at the groundwater interface, which was at a depth of approximately 25' to 30'. One location showed exceedances of the RRSCOs for chromium and mercury. One location showed exceedances of RRSCOs for benzo(a)anthracene, benzo(b)fluoranthene, and indeno(1,2,3-cd)pyrene and an exceedance of the ISCO for benzo(a)pyrene. Results are shown in Tables 8 and 9.

An elevated TPH detection of 6550 mg/kg was observed at SB-41C. No RRSCO exceedances for pesticides, PCBs, or VOCs were observed in the groundwater interface soil samples.

Table 8. Exceedances for metals in groundwater interface subsurface soils

Analyte (ppm)	UUSCO	RRSCO	CSCO	ISCO	SB-37C	SB-38C	SB-39C	SB-40C	SB-41C
Chromium	1	110	140	800	9.5	16.6	7.7	113	20.4
Copper	50	270	270	10000	-	-	-	177	-
Lead	63	400	1000	3900	-	-	-	349	93.8
Mercury	0.18	0.81	2.8	5.7	-	0.33	-	1.2	0.8
Nickel	30	310	310	10000	-	-	-	79.4	-
Silver	2	180	1500	6800	-	-	-	2.3	-
Zinc	109	10000	10000	10000	-	-	-	283	-

Analyte (ppm)	UUSCO	RRSCO	CSCO	ISCO	SB-42C	SB-43C	SB-44C	SB-45C	SB-46C
Chromium	1	110	140	800	14.7	9.2	6.4	24.3	27.9
Copper	50	270	270	10000	-	-	-	-	54
Lead	63	400	1000	3900	-	-	-	92.2	69.7
Mercury	0.18	0.81	2.8	5.7	-	-	-	0.61	0.64
Nickel	30	310	310	10000	-	-	-	-	-
Silver	2	180	1500	6800	-	-	-	-	-
Zinc	109	10000	10000	10000	-	-	-	229	117

Table 9. Exceedances for SVOCs in groundwater interface subsurface soils

Analyte (ppm)	UUSCO	RRSCO	CSCO	ISCO	SB-46C
Benzo(a)anthracene	1	1	5.6	11	3.53
Benzo(a)pyrene	1	1	1	1.1	2.77
Benzo(b)fluoranthene	1	1	5.6	11	2
Benzo(k)fluoranthene	0.8	3.9	56	110	2.47
Chrysene	1	3.9	56	110	3.14
Indeno(1,2,3-cd)pyrene	0.5	0.5	5.6	11	0.916

6.2 Bank Samples

Bank sample results are provided in Table 10, in Appendix E. No exceedances of RRSCOs were observed in the bank samples for any of the analytes. Drawings R-11 and R-12 show TPH results.

TPH results of 150 mg/kg and 445 mg/kg were observed at BS-10A and BS-10B, respectively.

6.3 Groundwater Samples

The results from the groundwater sampling are provided in Table 11, attached in Appendix E. The only exceedances of Part 703 groundwater standards observed during this sampling round were for iron, manganese, and sodium.

Per NYSDEC request, sampling was also completed for PFAS. Results for PFAS showed only very low level detections. The results ranged from ND to 19.9 ng/L, with most detections in the 2-5 ng/L range. Results are included in Table 11 in Appendix E.

6.4 SB-12 Investigation

A groundwater sample was collected from the area near SB-12 for visual observation to determine if LNAPL was present in this area of the Site. Photos of this groundwater sample are provided in Appendix F. No evidence of free product or a sheen was observed on the groundwater sample. No other analyses were completed for this sample.

6.5 Soil Vapor Samples

The full results from the two (2) soil vapor samples are provided in Table 12, included in Appendix E. One ambient air sample was also collected so the data could be compared to the subsurface vapor results. Soil vapor sample results were compared the air guideline values in the NYSDOH VI guidance, with no exceedances noted. Detections of BTEX were observed at several locations, which is consistent with the historical use of the site. No decision matrices are publicly available for BTEX. Soil vapor results are shown in Drawings R-13 and R-14. As discussed in the November 2017 RI Report, mitigation systems will be installed on onsite buildings as a proactive measure.

7.0 QUALITATIVE EXPOSURE ASSESSMENT

As required by the BCP, an on-Site and off-Site qualitative exposure assessment was completed in accordance with DER-10 section 3.3(c)4 for BCP Site #401074, which included both the Qualitative Human Health Exposure Assessment and the Fish and Wildlife Resource Impact Analysis (FWRIA). These were submitted to NYSDEC as part of the 2017 RI Report. Any necessary updates are discussed in the following sections.

7.1 Human Health Exposure Assessment (HHEA)

The qualitative HHEA evaluated the five (5) elements (DER-10 Appendix 3B) associated with exposure pathways, and described how each of these elements pertains to the Site. The elements addressed include:

- A description of the contaminant source(s) including the location of the contaminant release to the environment (any waste disposal area or point of discharge) or if the original source is unknown, the contaminated environmental medium (soil, indoor or outdoor air, biota, water) at the point of exposure;
- An explanation of the contaminant release and transport mechanisms to the exposed population;
- Identification of all potential exposure point(s) where actual or potential human contact with a contaminated medium may occur;
- Description(s) of the route(s) of exposure (i.e., ingestion, inhalation, dermal absorption); and
- A characterization of the receptor populations who may be exposed to contaminants at a point of exposure.

The full Qualitative Human Health Exposure Assessment is included as Appendix F to the November 2017 RI Report. Updates based on the 2018 RI would include one soil exceedance of the RRSCO for chromium and one soil boring that showed exceedances for SVOCs at the groundwater interface at SB-46C. These updates would not change the overall conclusions from the 2017 HHEA.

7.2 Fish and Wildlife Resource Impact Analysis (FWRIA)

Due to the surrounding Hudson River, a FWRIA was completed and submitted in the November 2017 RI Report. The FWRIA was completed in accordance with DER-10 Section 3.10(c) and

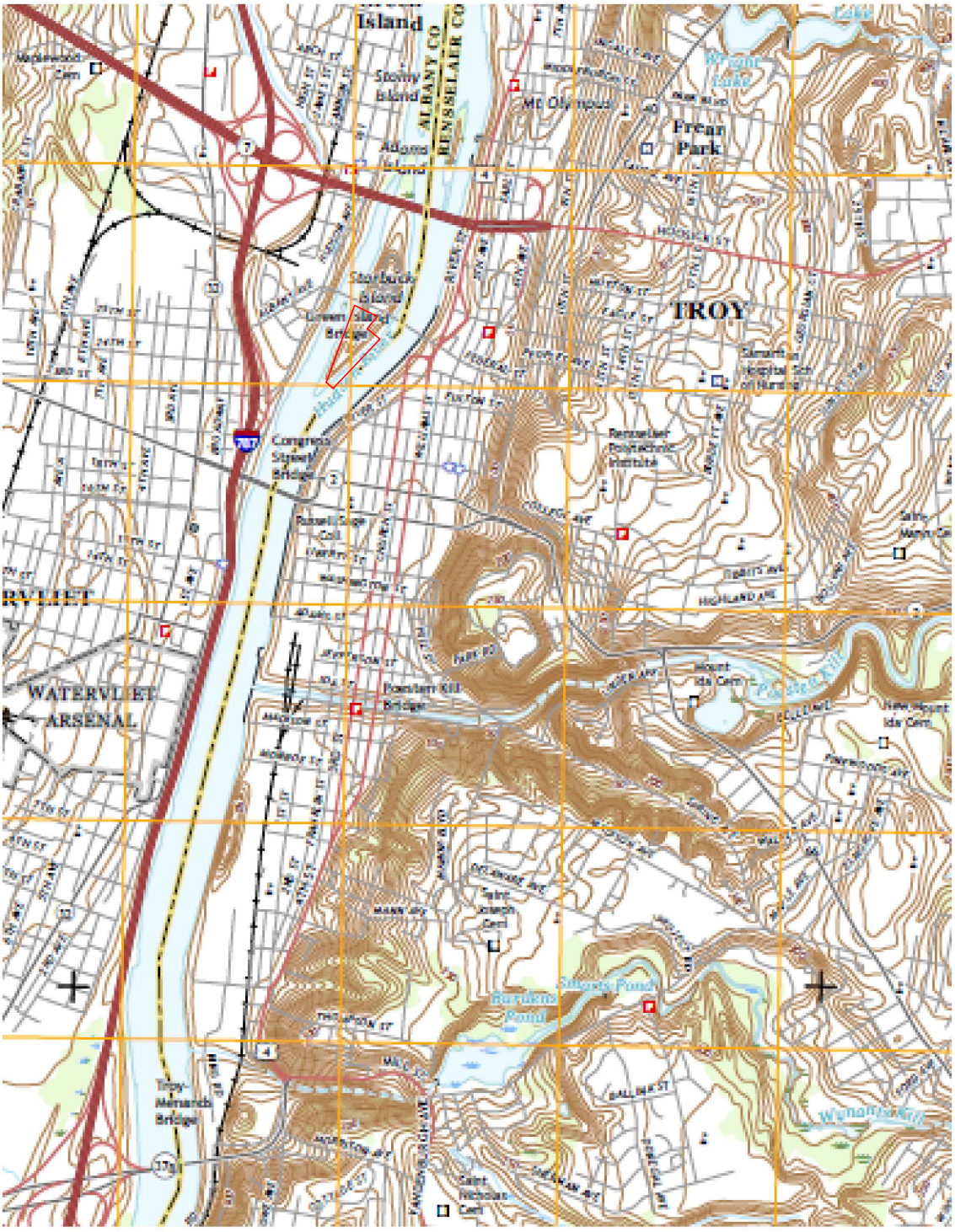
the DFW&MR Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites (1994) guidance document.

The updated FWRIA is provided in Appendix G. The results of the 2018 RI do not change the conclusions from the 2017 RI Report. Table 2 has been updated to reflect the number of exceedances of Ecological SCOs in each media.

8.0 DATA USABILITY SUMMARY REPORT (DUSR)

The data collected during the RI were reviewed by a third party data validation expert. The results of the DUSR are provided in Appendix H.

FIGURES



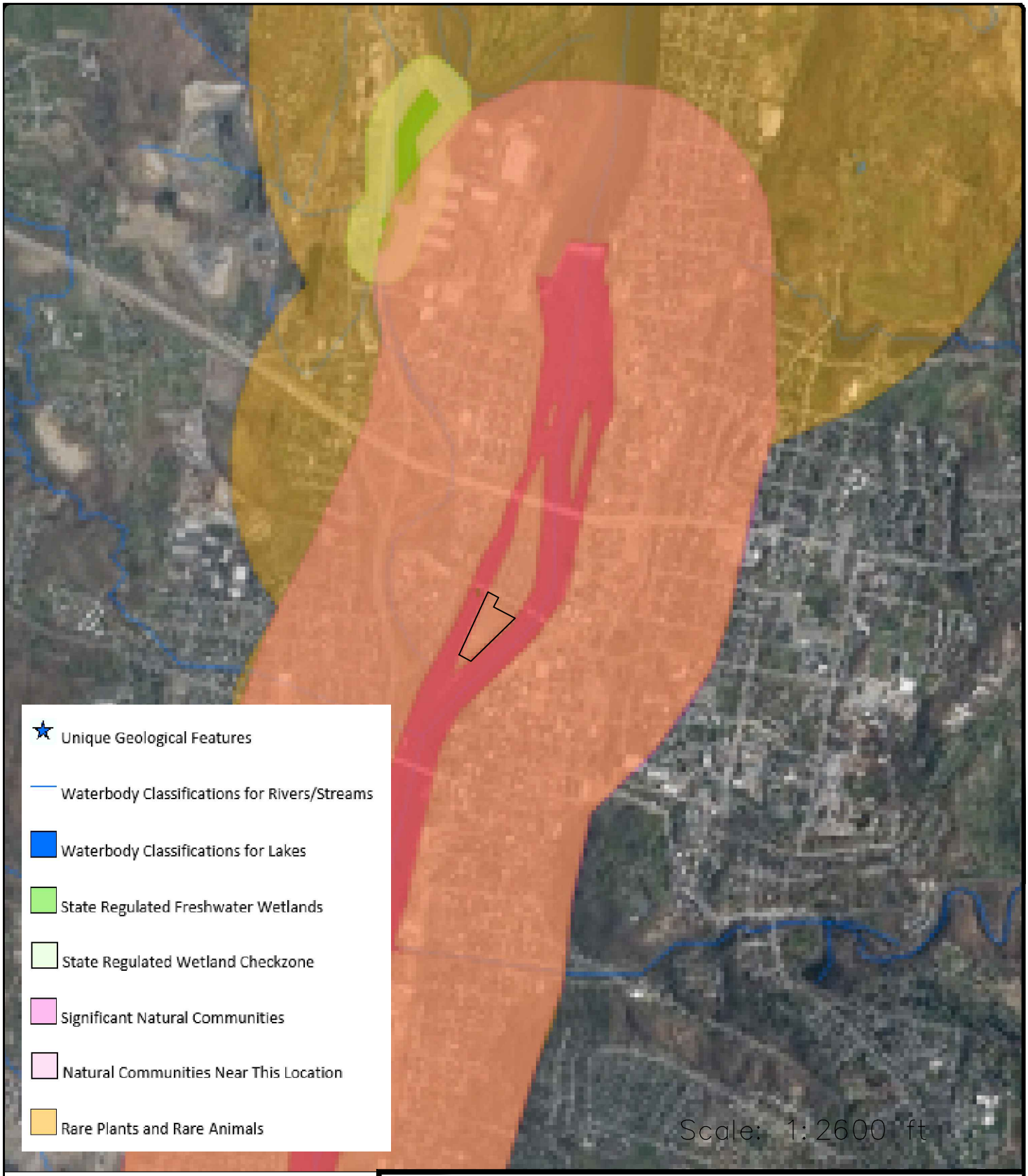
Scale: 1:3,000 ft

APPROXIMATE SITE BOUNDARY

TITLE: FIGURE 1 – SITE LOCATION MAP

LOCATION: 1 OSGOOD AVENUE/CENTER ISLAND
GREEN ISLAND, NEW YORK

envirospec ENGINEERING, PLLC
349 Northern Blvd., Suite 3
Albany, NY 12204
Phone: 518.453.2203
Fax: 518.453.2204
www.envirospeceng.com



——APPROXIMATE SITE BOUNDARY

TITLE:
FIGURE 2 – NYSDEC ENVIRONMENTAL RESOURCE MAPPER

LOCATION:
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Albany, NY 12204
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Fax: 518.453.2204
www.envirospeceng.com

APPROXIMATE SITE BOUNDARY

TITLE: FIGURE 3 – USFWS WETLANDS INVENTORY MAP

LOCATION: 1 OSGOOD AVENUE/CENTER ISLAND
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Albany, NY 12204
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Scale: 1:670 ft

APPROXIMATE SITE BOUNDARY

TITLE: FIGURE 4 – FEMA FLOOD INSURANCE RATE MAP
MAP NUMBER 36001C0202D; EFFECTIVE 3/16/15

LOCATION: 1 OSGOOD AVENUE/CENTER ISLAND
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DRAWINGS

NOTES:

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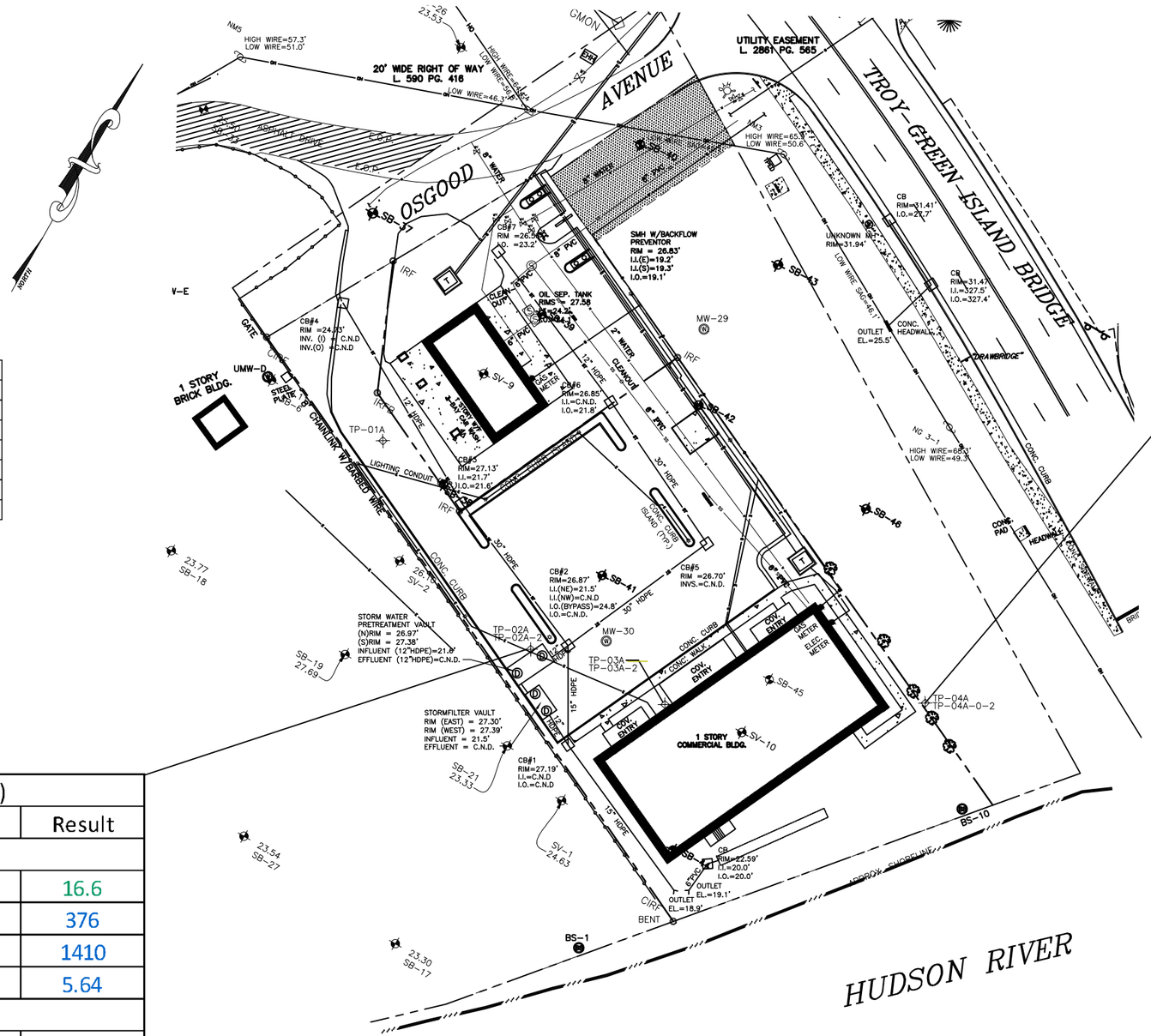
6. SAMPLE LOCATIONS WERE LOCATED ON AUGUST 14, 2017.

LEGEND:

- CAPPED IRON ROD FOUND
- IRON ROD FOUND
- GRANITE MONUMENT FOUND
- UTILITY POLE
- MONITORING WELL
- ACCESS EASEMENT
- UTILITY EASEMENT
- AREA SUBJECT TO THE INUNDATION OF THE 1% ANNUAL CHANCE FLOOD
- SB-## 100.00 SAMPLE LOCATION (SB OR SV) ELEVATION AT SURFACE
- 100.0 SURFACE ELEVATION
- BANK SAMPLE

Standards (ppm)	Restricted Residential	Commercial	Industrial
Metals			
Arsenic	16	16	16
Copper	270	270	10000
Lead	400	1000	3900
Mercury	0.81	2.8	5.7
SVOCs			
Benzo(b)fluoranthene	1	5.6	11



TP-02A-2 (0.3 to 0.5 ft)	
Parameter (ppm)	Result
Metals	
Arsenic	16.6
Copper	376
Lead	1410
Mercury	5.64
SVOCs	
Benzo(b)fluoranthene	1.1

TP-04A-O-2 (0.42 to 0.58 ft)	
Parameter (ppm)	Result
Metals	
Lead	726
Mercury	1.58
SVOCs	
Benzo(b)fluoranthene	1.2

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TOWN OF GREEN ISLAND, ALBANY COUNTY, NEW YORK

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DRAWING WORK -

SOUTH ISLAND APARTMENTS
NORTHERN PARCEL
TEST PIT EXCEEDANCES

SCALE: NTS | DRAWING No.: S-1 | SHEET | REV. No.

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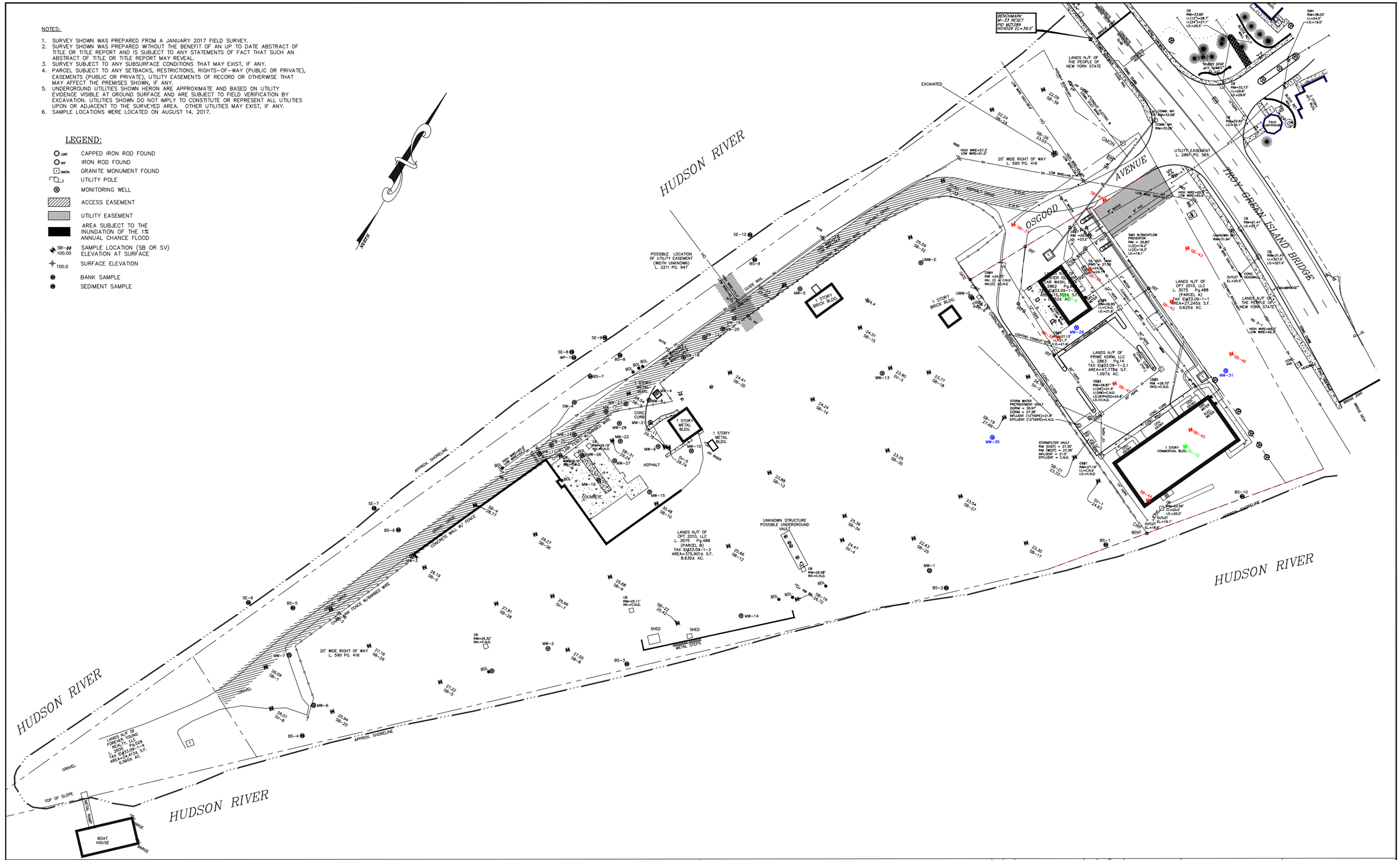
- SEDIMENT SAMPLE



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CHECKED: -
DRAWING: MSM

SOUTH ISLAND APARTMENTS SITE SURVEYED SAMPLE LOCATIONS

SCALE	DRAWING No.	SHEET	REV. No.
NTS	S-2		

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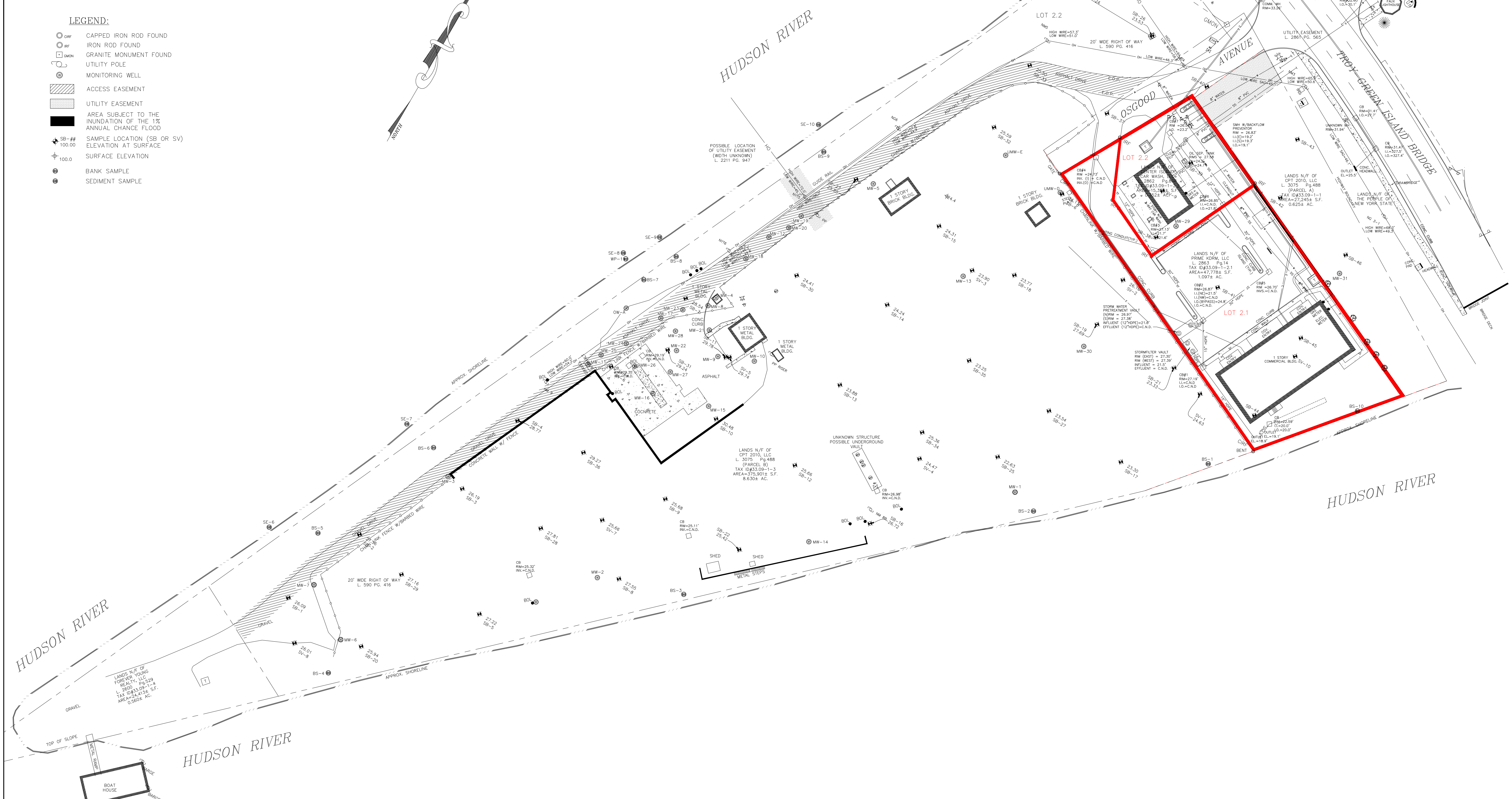

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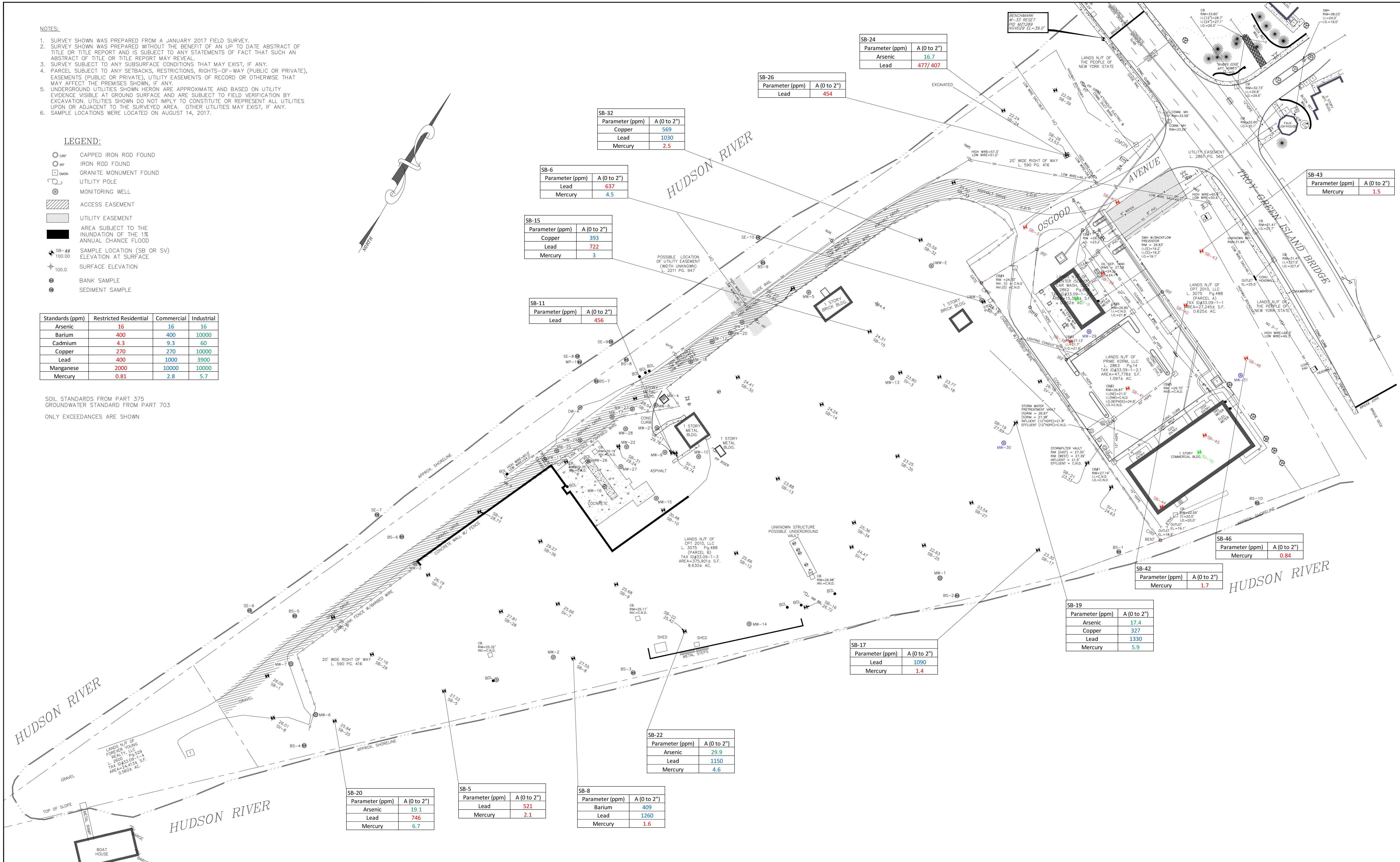
SOUTH ISLAND APARTMENTS SITE
NORTHERN PARCEL

SCALE	DRAWING No.	SHEET	REV. No.
NTS	S-3		



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- SB-## 100.00 — SAMPLE LOCATION (SB OR SV) ELEVATION AT SURFACE
- 100.0 — SURFACE ELEVATION
- BANK SAMPLE
- SEDIMENT SAMPLE

Standards (ppm)	Restricted Residential	Commercial	Industrial
Arsenic	16	16	16
Barium	400	400	10000
Cadmium	4.3	9.3	60
Copper	270	270	10000
Lead	400	1000	3900
Manganese	2000	10000	10000
Mercury	0.81	2.8	5.7

SOIL STANDARDS FROM PART 375
GROUNDWATER STANDARD FROM PART 703

ONLY EXCEEDANCES ARE SHOWN

SB-24

Parameter (ppm)	A (0 to 2")
Arsenic	16.7
Lead	477/ 407

SB-26

Parameter (ppm)	A (0 to 2")
Lead	454

SB-32

Parameter (ppm)	A (0 to 2")
Copper	569
Lead	1030
Mercury	2.5

SB-6

Parameter (ppm)	A (0 to 2")
Lead	637
Mercury	4.5

SB-15

Parameter (ppm)	A (0 to 2")
Copper	393
Lead	722
Mercury	3

SB-11

Parameter (ppm)	A (0 to 2")
Lead	456

SB-43

Parameter (ppm)	A (0 to 2")
Mercury	1.5

SB-46

Parameter (ppm)	A (0 to 2")
Mercury	0.84

SB-42

Parameter (ppm)	A (0 to 2")
Mercury	1.7

SB-19

Parameter (ppm)	A (0 to 2")
Arsenic	17.4
Copper	327
Lead	1330
Mercury	5.9

SB-17

Parameter (ppm)	A (0 to 2")
Lead	1090
Mercury	1.4

SB-22

Parameter (ppm)	A (0 to 2")
Arsenic	29.9
Lead	1150
Mercury	4.6

SB-20

Parameter (ppm)	A (0 to 2")
Arsenic	19.1
Lead	746
Mercury	6.7

SB-5

Parameter (ppm)	A (0 to 2")
Lead	521
Mercury	2.1

SB-8

Parameter (ppm)	A (0 to 2")
Barium	409
Lead	1260
Mercury	1.6

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DRAWN BY – DRAWING MGR

SOUTH ISLAND APARTMENTS SITE
SURFACE SOILS – METALS

SCALE: NTS | DRAWING No.: R–1 | SHEET | REV. No.

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- SEDIMENT SAMPLE

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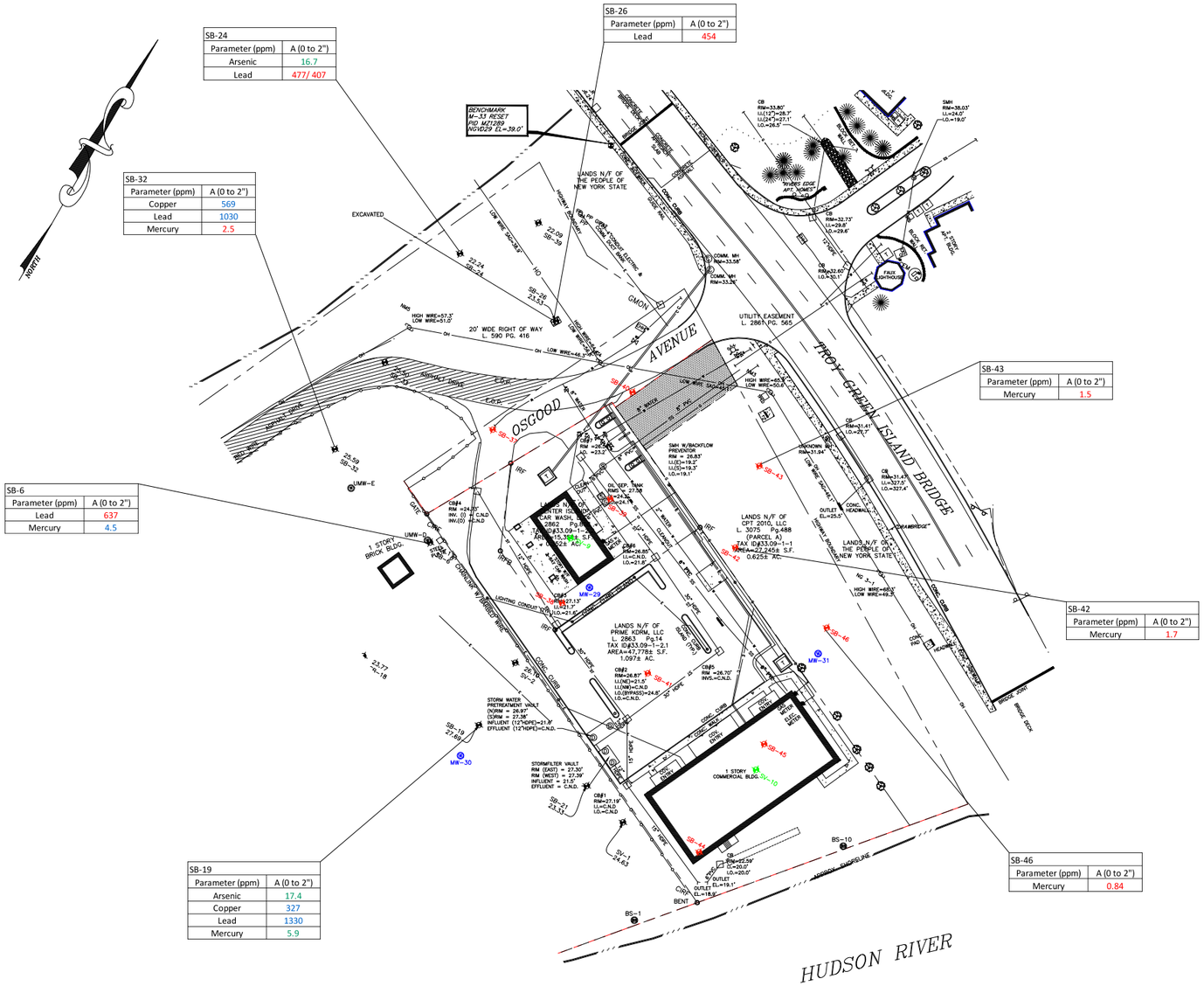
Barium	400	400	10000
Cadmium	4.3	9.3	60
Copper	270	270	10000
Lead	400	1000	3900
Manganese	2000	10000	10000
Mercury	0.81	2.8	5.7

SOIL STANDARDS FROM PART 375
GROUNDWATER STANDARD FROM PART 703

ONLY EXCEEDANCES ARE SHOWN



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SB-43	
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Mercury	1.5

SB-6	
Parameter (ppm)	A (0 to 2")
Lead	637
Mercury	4.5

SB-42	
Parameter (ppm)	A (0 to 2")
Mercury	1.7

SB-19	
Parameter (ppm)	A (0 to 2")
Arsenic	17.4
Copper	327
Lead	1330
Mercury	5.9

SB-46	
Parameter (ppm)	A (0 to 2")
Mercury	0.84

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DRAWING: MGR

SOUTH ISLAND APARTMENTS SITE SURFACE SOILS – METALS NORTHERN PARCEL

SCALE: NTS | DRAWING No.: R-2 | SHEET | REV. No.

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Cadmium	4.3	9.3	60
Chromium, hexavalent	110	400	800
Copper	270	270	10000
Lead	400	1000	3900
Manganese	2000	10000	10000
Mercury	0.81	2.8	5.7

SOIL STANDARDS FROM PART 375
GROUNDWATER STANDARD FROM PART 703

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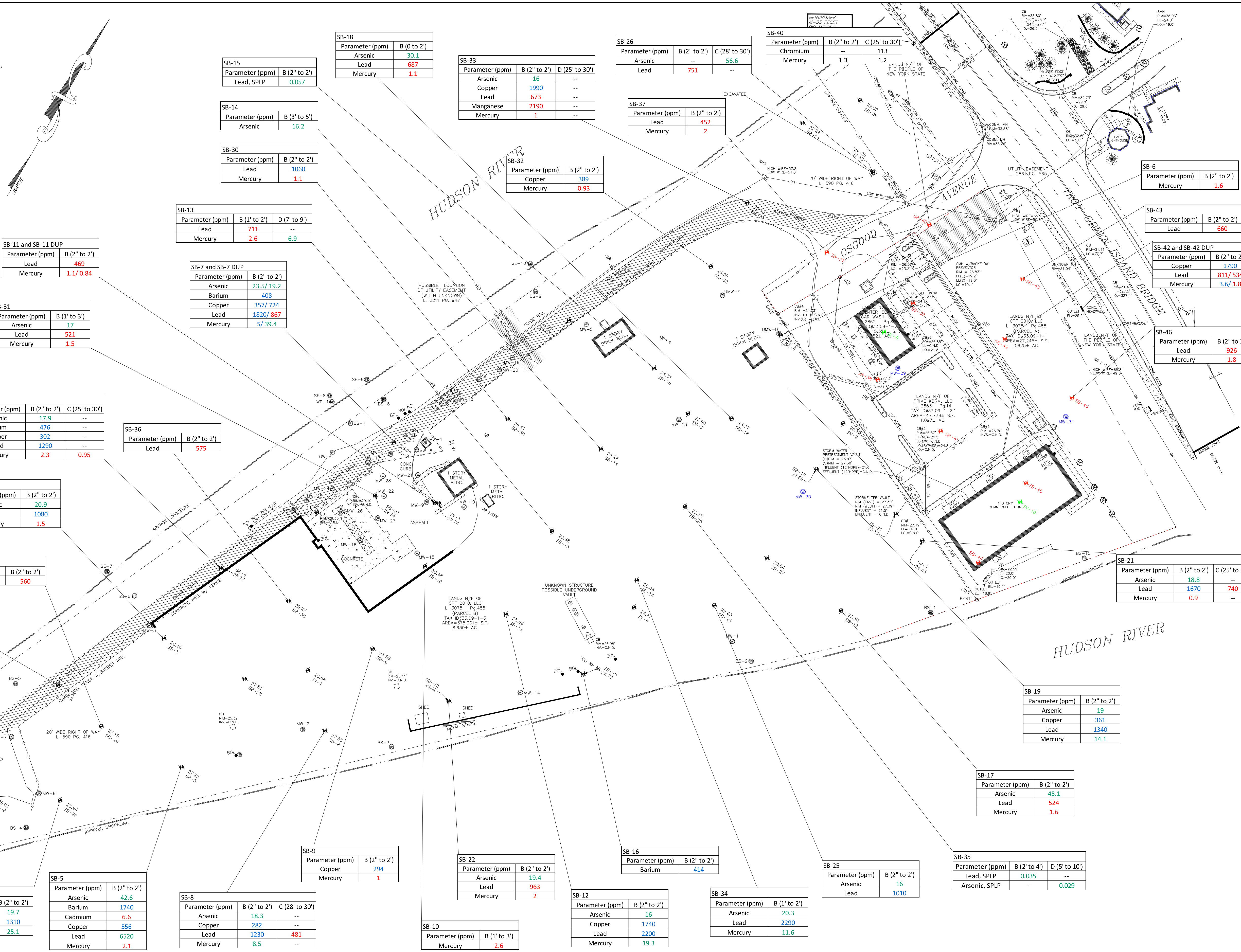

SB-15

Parameter (ppm)	B (2" to 2')
Lead, SPLP	0.057

SB-18

Parameter (ppm)	B (0 to 2')
Arsenic	30.1
Lead	687
Mercury	1.1

SB-33

Parameter (ppm)	B (2" to 2')	D (25' to 30')
Arsenic	16	--
Copper	1990	--
Lead	673	--
Manganese	2190	--
Mercury	1	--

SB-26

Parameter (ppm)	B (2" to 2')	C (28' to 30')
Arsenic	--	56.6
Lead	751	--

SB-40

Parameter (ppm)	B (2" to 2')	C (25' to 30')
Chromium	--	113
Mercury	1.3	1.2

SB-14

Parameter (ppm)	B (3' to 5')
Arsenic	16.2

SB-37

Parameter (ppm)	B (2" to 2')
Lead	452
Mercury	2

SB-30

Parameter (ppm)	B (2" to 2')
Lead	1060
Mercury	1.1

SB-32

Parameter (ppm)	B (2" to 2')
Copper	389
Mercury	0.93

SB-6

Parameter (ppm)	B (2" to 2')
Mercury	1.6

SB-13

Parameter (ppm)	B (1' to 2')	D (7' to 9')
Lead	711	--
Mercury	2.6	6.9

SB-43

Parameter (ppm)	B (2" to 2')
Lead	660

SB-11 and SB-11 DUP

Parameter (ppm)	B (2" to 2')
Lead	469
Mercury	1.1/ 0.84

SB-42 and SB-42 DUP

Parameter (ppm)	B (2" to 2')
Copper	1790
Lead	811/ 534
Mercury	3.6/ 1.8

SB-7 and SB-7 DUP

Parameter (ppm)	B (2" to 2')
Arsenic	23.5/ 19.2
Barium	408
Copper	357/ 724
Lead	1820/ 867
Mercury	5/ 39.4

SB-31

Parameter (ppm)	B (1' to 3')
Arsenic	17
Lead	521
Mercury	1.5

SB-46

Parameter (ppm)	B (2" to 2')
Lead	926
Mercury	1.8

SB-4

Parameter (ppm)	B (2" to 2')	C (25' to 30')
Arsenic	17.9	--
Barium	476	--
Copper	302	--
Lead	1290	--
Mercury	2.3	0.95

SB-36

Parameter (ppm)	B (2" to 2')
Lead	575

SB-3

Parameter (ppm)	B (2" to 2')
Arsenic	20.9
Lead	1080
Mercury	1.5

SB-2

Parameter (ppm)	B (2" to 2')
Barium	423
Lead	1370
Mercury	5.9

SB-29

Parameter (ppm)	B (2" to 2')
Lead	560

SB-21

Parameter (ppm)	B (2" to 2')	C (25' to 30')
Arsenic	18.8	--
Lead	1670	740
Mercury	0.9	--

SB-1

Parameter (ppm)	B (2" to 2')
Lead	476
Mercury	0.89

SB-19

Parameter (ppm)	B (2" to 2')
Arsenic	19
Copper	361
Lead	1340
Mercury	14.1

SB-17

Parameter (ppm)	B (2" to 2')
Arsenic	45.1
Lead	524
Mercury	1.6

SB-9

Parameter (ppm)	B (2" to 2')
Copper	294
Mercury	1

SB-22

Parameter (ppm)	B (2" to 2')
Arsenic	19.4
Lead	963
Mercury	2

SB-16

Parameter (ppm)	B (2" to 2')
Barium	414

SB-25

Parameter (ppm)	B (2" to 2')
Arsenic	16
Lead	1010

SB-35

Parameter (ppm)	B (2' to 4')	D (5' to 10')
Lead, SPLP	0.035	--
Arsenic, SPLP	--	0.029

SB-20

Parameter (ppm)	B (2" to 2')
Arsenic	19.7
Lead	1310
Mercury	25.1

SB-5

Parameter (ppm)	B (2" to 2')
Arsenic	42.6
Barium	1740
Cadmium	6.6
Copper	556
Lead	6520
Mercury	2.1

SB-8

Parameter (ppm)	B (2" to 2')	C (28' to 30')
Arsenic	18.3	--
Copper	282	--
Lead	1230	481
Mercury	8.5	--

SB-12

Parameter (ppm)	B (2" to 2')
Arsenic	16
Copper	1740
Lead	2200
Mercury	19.3

SB-34

Parameter (ppm)	B (1' to 2')
Arsenic	20.3
Lead	2290
Mercury	11.6

SB-10

Parameter (ppm)	B (1' to 3')
Mercury	2.6

ENVIROSPEC PROJECT #E17-1600

envirospec ENGINEERING, PLLC
349 NORTHERN BLVD. SUITE 3
ALBANY, NY 12204-1032
P:518.453.2203
F:518.453.2204

W.O.	No.	REVISION	DATE	DRN.	APR.

DRAWING STATUS: FOR REFERENCE ONLY

SOUTH ISLAND APARTMENTS SITE
1 OSGOOD AVENUE/CENTER ISLAND,
TOWN OF GREEN ISLAND, ALBANY COUNTY, NEW YORK

DRAWN BY: – DRAWING: MGR

SOUTH ISLAND APARTMENTS SITE
SUBSURFACE SOILS – METALS

SCALE	DRAWING No.	SHEET	REV. No.
NTS	R-3		

NOTES:

1. SURVEY SHOWN WAS PREPARED FROM A JANUARY 2017 FIELD SURVEY.
2. SURVEY SHOWN WAS PREPARED WITHOUT THE BENEFIT OF AN UP TO DATE ABSTRACT OF TITLE OR TITLE REPORT AND IS SUBJECT TO ANY STATEMENTS OF FACT THAT SUCH AN ABSTRACT OF TITLE OR TITLE REPORT MAY REVEAL.
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6. SAMPLE LOCATIONS WERE LOCATED ON AUGUST 14, 2017.

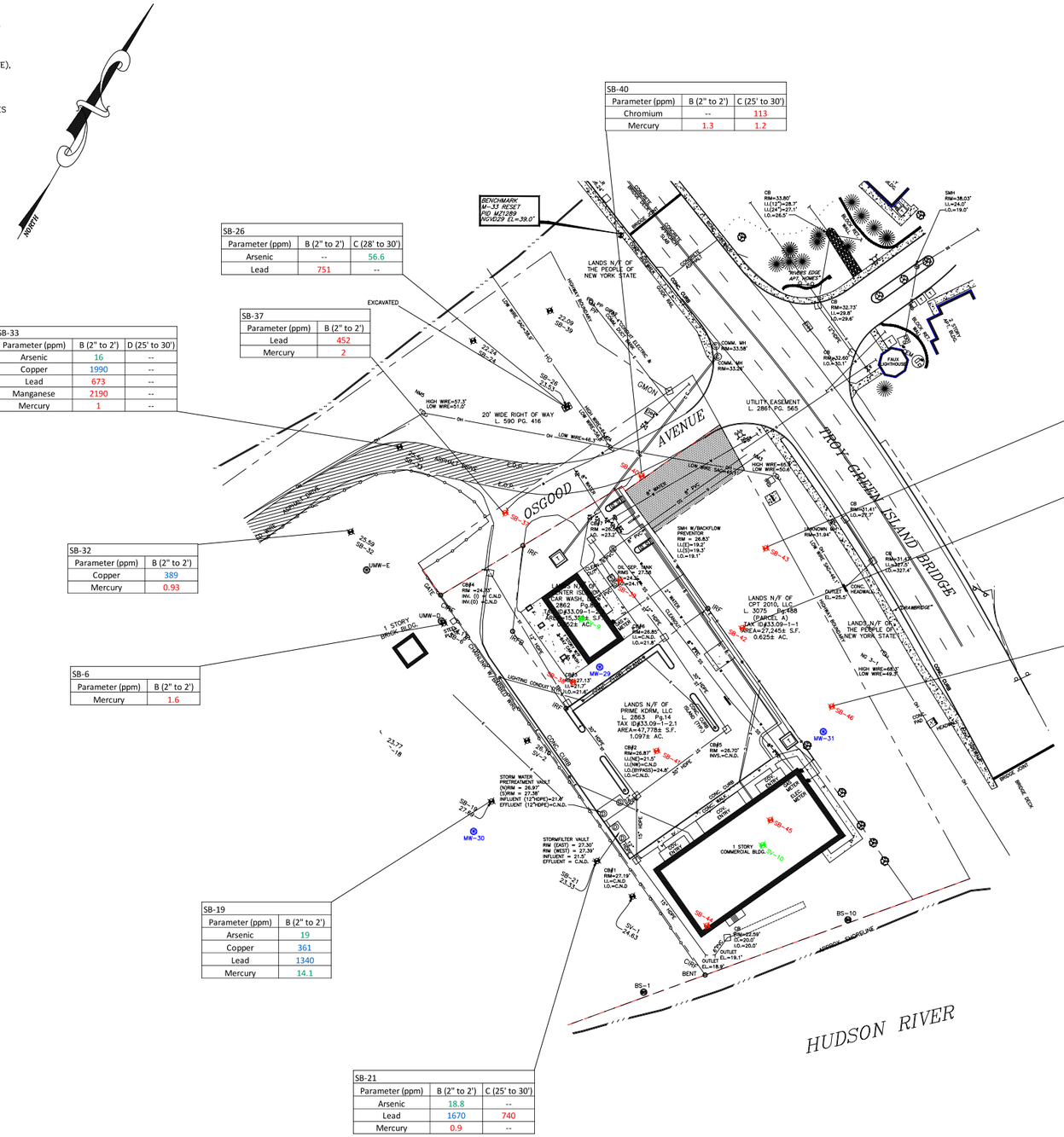
LEGEND:

- CRF — CAPPED IRON ROD FOUND
- IRF — IRON ROD FOUND
- GMON — GRANITE MONUMENT FOUND
- UTILITY POLE
- MW — MONITORING WELL
- ACCESS EASEMENT
- UTILITY EASEMENT
- AREA SUBJECT TO THE INUNDATION OF THE 1% ANNUAL CHANCE FLOOD
- SB-## 100.00 — SAMPLE LOCATION (SB OR SV) ELEVATION AT SURFACE
- 100.0 — SURFACE ELEVATION
- BANK SAMPLE
- SEDIMENT SAMPLE

Standards (ppm)	Restricted Residential	Commercial	Industrial
Arsenic	16	16	16
Barium	400	400	10000
Cadmium	4.3	9.3	60
Chromium, hexavalent	110	400	800
Copper	270	270	10000
Lead	400	1000	3900
Manganese	2000	10000	10000
Mercury	0.81	2.8	5.7

SOIL STANDARDS FROM PART 375
GROUNDWATER STANDARD FROM PART 703

ONLY EXCEEDANCES ARE SHOWN



SB-40		
Parameter (ppm)	B (2" to 2')	C (25' to 30')
Chromium	--	113
Mercury	1.3	1.2

SB-26		
Parameter (ppm)	B (2" to 2')	C (28' to 30')
Arsenic	--	56.6
Lead	751	--

SB-37	
Parameter (ppm)	B (2" to 2')
Lead	452
Mercury	2

SB-33		
Parameter (ppm)	B (2" to 2')	D (25' to 30')
Arsenic	16	--
Copper	1990	--
Lead	673	--
Manganese	2190	--
Mercury	1	--

SB-43	
Parameter (ppm)	B (2" to 2')
Lead	660

SB-42 and SB-42 DUP	
Parameter (ppm)	B (2" to 2')
Copper	1790
Lead	811/ 534
Mercury	3.6/ 1.8

SB-46	
Parameter (ppm)	B (2" to 2')
Lead	926
Mercury	1.8

SB-32	
Parameter (ppm)	B (2" to 2')
Copper	389
Mercury	0.93

SB-6	
Parameter (ppm)	B (2" to 2')
Mercury	1.6

SB-19	
Parameter (ppm)	B (2" to 2')
Arsenic	19
Copper	361
Lead	1340
Mercury	14.1

SB-21		
Parameter (ppm)	B (2" to 2')	C (25' to 30')
Arsenic	18.8	--
Lead	1670	740
Mercury	0.9	--

ENVIROSPEC PROJECT #E17-1600

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ALBANY, NY 12204-1032
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W.O.No. | REVISION | DATE | APR.

DRAWING STATUS: FOR REFERENCE ONLY

SOUTH ISLAND APARTMENTS SITE
1 OSGOOD AVENUE/CENTER ISLAND,
TOWN OF GREEN ISLAND, ALBANY COUNTY, NEW YORK

DRAWN: -
CHECKED:
DRAWING NO.:

SOUTH ISLAND APARTMENTS SITE SUBSURFACE SOILS – METALS NORTHERN PARCEL

SCALE: NTS | DRAWING No.: R-4 | SHEET | REV. No.

NOTES:

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LEGEND:

- CIRF — CAPPED IRON ROD FOUND
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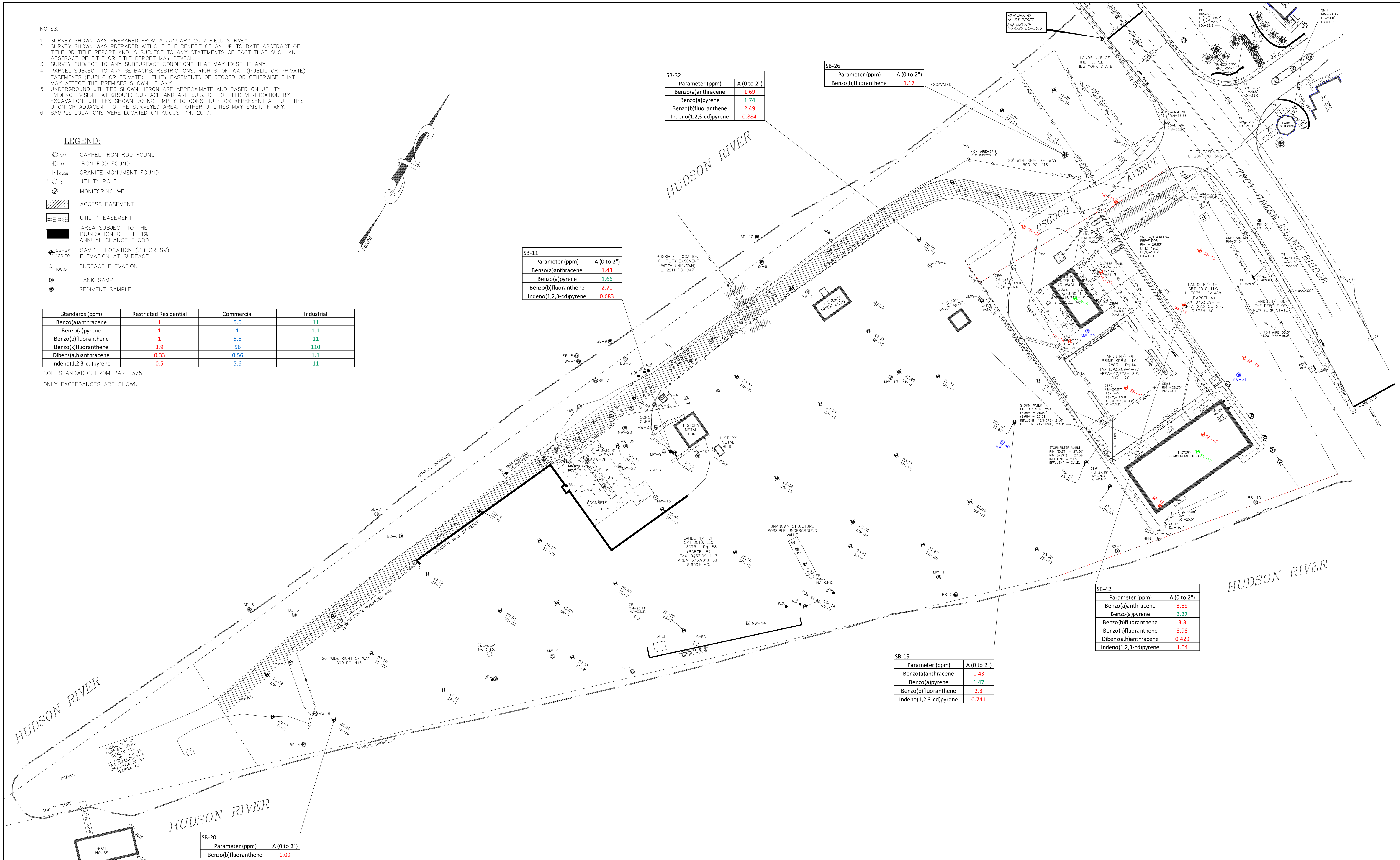
- GMON — GRANITE MONUMENT FOUND
- UTILITY POLE
- MONITORING WELL
- ACCESS EASEMENT
- UTILITY EASEMENT
- AREA SUBJECT TO THE INUNDATION OF THE 1% ANNUAL CHANCE FLOOD
- SB-## 100.00 — SAMPLE LOCATION (SB OR SV) ELEVATION AT SURFACE
- 100.0 — SURFACE ELEVATION
- BANK SAMPLE
- SEDIMENT SAMPLE

Standards (ppm)	Restricted Residential	Commercial	Industrial
Benzo(a)anthracene	1	5.6	11
Benzo(a)pyrene	1	1	1.1
Benzo(b)fluoranthene	1	5.6	11
Benzo(k)fluoranthene	3.9	56	110
Dibenz(a,h)anthracene	0.33	0.56	1.1
Indeno(1,2,3-cd)pyrene	0.5	5.6	11

SOIL STANDARDS FROM PART 375

ONLY EXCEEDANCES ARE SHOWN



SB-32 Parameter (ppm)	A (0 to 2")
Benzo(a)anthracene	1.69
Benzo(a)pyrene	1.74
Benzo(b)fluoranthene	2.49
Indeno(1,2,3-cd)pyrene	0.884

SB-26 Parameter (ppm)	A (0 to 2")
Benzo(b)fluoranthene	1.17

SB-11 Parameter (ppm)	A (0 to 2")
Benzo(a)anthracene	1.43
Benzo(a)pyrene	1.66
Benzo(b)fluoranthene	2.71
Indeno(1,2,3-cd)pyrene	0.683

SB-42 Parameter (ppm)	A (0 to 2")
Benzo(a)anthracene	3.59
Benzo(a)pyrene	3.27
Benzo(b)fluoranthene	3.3
Benzo(k)fluoranthene	3.98
Dibenz(a,h)anthracene	0.429
Indeno(1,2,3-cd)pyrene	1.04

SB-19 Parameter (ppm)	A (0 to 2")
Benzo(a)anthracene	1.43
Benzo(a)pyrene	1.47
Benzo(b)fluoranthene	2.3
Indeno(1,2,3-cd)pyrene	0.741

SB-20 Parameter (ppm)	A (0 to 2")
Benzo(b)fluoranthene	1.09

ENVIROSPEC PROJECT #E17-1600

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349 NORTHERN BLVD. SUITE 3
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W.O. | No. | REVISION | DATE | DRN. | APR.

DRAWING STATUS: FOR REFERENCE ONLY

SOUTH ISLAND APARTMENTS SITE
1 OSGOOD AVENUE/CENTER ISLAND,
TOWN OF GREEN ISLAND, ALBANY COUNTY, NEW YORK

DRAWN BY: –
DRAWING MGR

SOUTH ISLAND APARTMENTS SITE
SURFACE SOILS – SVOCS

SCALE: NTS | DRAWING No.: R-5 | SHEET | REV. No.

NOTES:

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- SB-## 100.00 — SAMPLE LOCATION (SB OR SV) ELEVATION AT SURFACE
- 100.0 — SURFACE ELEVATION
- BANK SAMPLE
- SEDIMENT SAMPLE

Standards (ppm)	Restricted Residential	Commercial	Industrial
Benzo(a)anthracene	1	5.6	11
Benzo(a)pyrene	1	1	1.1
Benzo(b)fluoranthene	1	5.6	11
Benzo(k)fluoranthene	3.9	56	110
Dibenz(a,h)anthracene	0.33	0.56	1.1
Indeno(1,2,3-cd)pyrene	0.5	5.6	11

SOIL STANDARDS FROM PART 375

ONLY EXCEEDANCES ARE SHOWN

ENVIROSPEC PROJECT #E17-1600

envirospec ENGINEERING, PLLC
349 NORTHERN BLVD. SUITE 3
ALBANY, NY 12204-1032
P:518.453.2203
F:518.453.2204

W.O.No.	REVISION	DATE	APR.

DRAWING STATUS: FOR REFERENCE ONLY

SOUTH ISLAND APARTMENTS SITE
1 OSGOOD AVENUE/CENTER ISLAND,
TOWN OF GREEN ISLAND, ALBANY COUNTY, NEW YORK

DESIGN BY | DRAWN BY | CHECKED BY

SOUTH ISLAND APARTMENTS SITE
SURFACE SOILS – SVOCS
NORTHERN PARCEL

SCALE: NTS | DRAWING No.: R-6 | SHEET | REV. No.

NOTES:

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- 100.0 — SURFACE ELEVATION
- BS — BANK SAMPLE
- SE — SEDIMENT SAMPLE

Standards (ppm)	Restricted Residential	Commercial	Industrial
Benzo(a)anthracene	1	5.6	11
Benzo(a)pyrene	1	1	1.1
Benzo(b)fluoranthene	1	5.6	11
Benzo(k)fluoranthene	3.9	56	110
Chrysene	3.9	56	110
Dibenz(a,h)anthracene	0.33	0.56	1.1
Indeno(1,2,3-cd)pyrene	0.5	5.6	11

SOIL STANDARDS FROM PART 375
ONLY EXCEEDANCES ARE SHOWN

SB-37	
Parameter (ppm)	B (2" to 2')
Benzo(a)anthracene	13.2
Benzo(a)pyrene	11.1
Benzo(b)fluoranthene	10.8
Benzo(k)fluoranthene	8.46
Chrysene	13.3
Dibenz(a,h)anthracene	1.73
Indeno(1,2,3-cd)pyrene	3.32

SB-26 - Location removed	
Parameter (ppm)	B (2" to 2')
Benzo(a)anthracene	5.84
Benzo(a)pyrene	6.09
Benzo(b)fluoranthene	9.21
Benzo(k)fluoranthene	6.31
Chrysene	7.21
Dibenz(a,h)anthracene	1.04
Indeno(1,2,3-cd)pyrene	3.84

SB-46 and SB-46 DUP	
Parameter (ppm)	C (25' to 30')
Benzo(a)anthracene	3.53/ 1.2
Benzo(a)pyrene	2.77/ 1.1
Benzo(b)fluoranthene	2
Indeno(1,2,3-cd)pyrene	0.916/ 0.591

SB-11	
Parameter (ppm)	B (2" to 2')
Benzo(a)pyrene	1.1
Benzo(b)fluoranthene	1.7

SB-4	
Parameter (ppm)	B (2" to 2')
Benzo(a)anthracene	1.83
Benzo(a)pyrene	1.9
Benzo(b)fluoranthene	2.77
Indeno(1,2,3-cd)pyrene	0.795

SB-3	
Parameter (ppm)	B (2" to 2')
Benzo(a)anthracene	1.04
Benzo(a)pyrene	1.37
Benzo(b)fluoranthene	1.59
Indeno(1,2,3-cd)pyrene	0.841

SB-19	
Parameter (ppm)	B (2" to 2')
Benzo(a)anthracene	2.21
Benzo(a)pyrene	2.09
Benzo(b)fluoranthene	3.22
Indeno(1,2,3-cd)pyrene	0.735

SB-35	
Parameter (ppm)	B (2' to 4')
Benzo(a)anthracene	2.37
Benzo(a)pyrene	2.04
Benzo(b)fluoranthene	3.21
Indeno(1,2,3-cd)pyrene	0.697

SB-8	
Parameter (ppm)	B (2" to 2')
Benzo(a)anthracene	1.48
Benzo(a)pyrene	1.33
Benzo(b)fluoranthene	1.81
Indeno(1,2,3-cd)pyrene	0.64

SB-20	
Parameter (ppm)	B (2" to 2')
Benzo(a)anthracene	1.76
Benzo(a)pyrene	1.71
Benzo(b)fluoranthene	2.65
Indeno(1,2,3-cd)pyrene	0.674

ENVIROSPEC PROJECT #E17-1600

envirospec ENGINEERING, PLLC
349 NORTHERN BLVD. SUITE 3
ALBANY, NY 12204-1032
P:518.453.2203
F:518.453.2204

W.O. No. | REVISION | DATE | APR.

DRAWING STATUS: FOR REFERENCE ONLY

SOUTH ISLAND APARTMENTS SITE
1 OSGOOD AVENUE/CENTER ISLAND,
TOWN OF GREEN ISLAND, ALBANY COUNTY, NEW YORK

DRAWN: -
CHECKED: -
DRAWING: MGP

SOUTH ISLAND APARTMENTS SITE SUBSURFACE SOILS – SVOCS

SCALE: NTS | DRAWING No.: R-7 | SHEET | REV. No.

NOTES:

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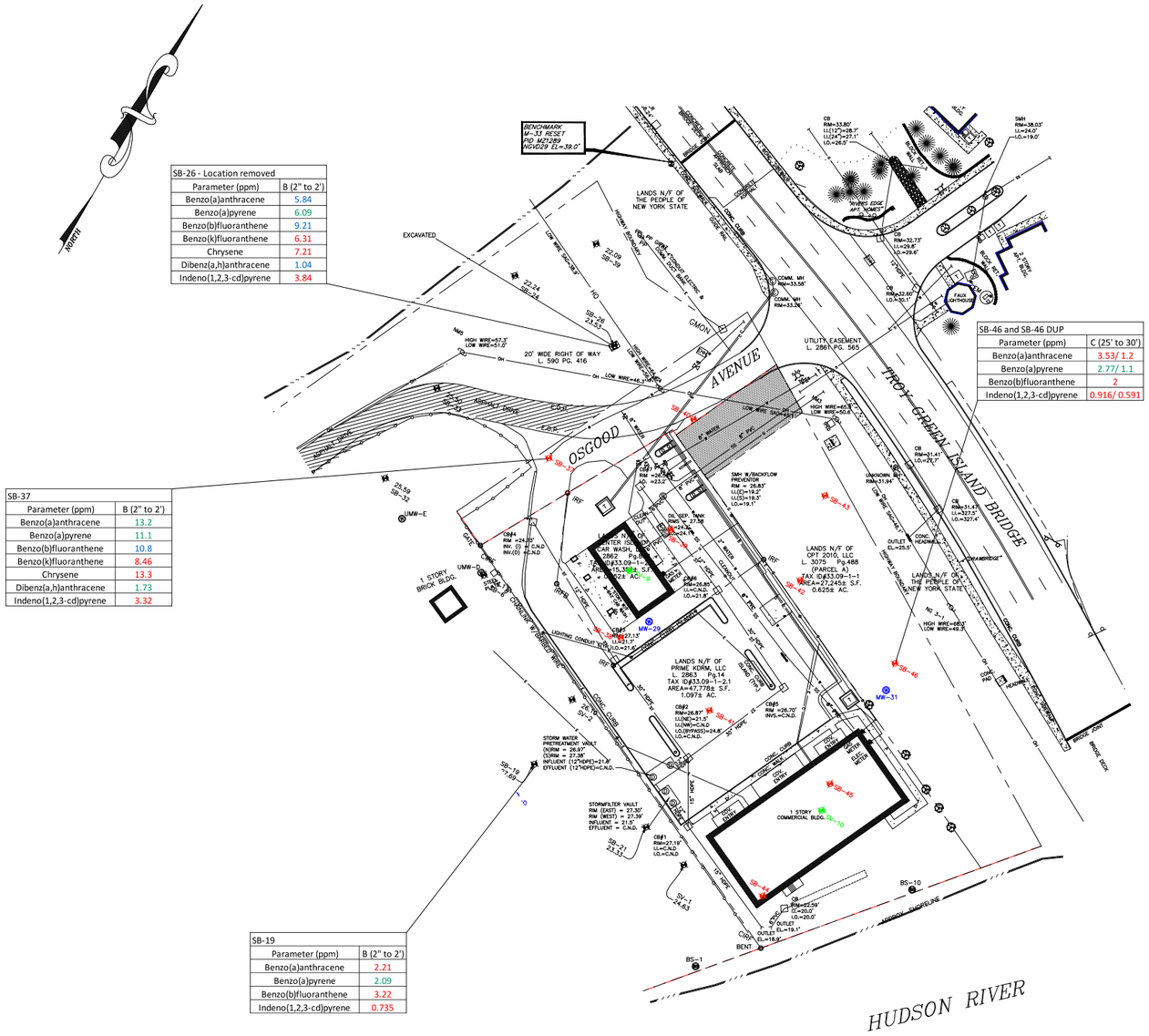
- AREA SUBJECT TO THE INUNDATION OF THE 1% ANNUAL CHANCE FLOOD
- SB-## 100.00 — SAMPLE LOCATION (SB OR SV) ELEVATION AT SURFACE
- 100.0 — SURFACE ELEVATION
- BANK SAMPLE
- SEDIMENT SAMPLE

Standards (ppm)	Restricted Residential	Commercial	Industrial
Benzo(a)anthracene	1	5.6	11
Benzo(a)pyrene	1	1	1.1
Benzo(b)fluoranthene	1	5.6	11
Benzo(k)fluoranthene	3.9	56	110
Chrysene	3.9	56	110
Dibenz(a,h)anthracene	0.33	0.56	1.1
Indeno(1,2,3-cd)pyrene	0.5	5.6	11

SOIL STANDARDS FROM PART 375

ONLY EXCEEDANCES ARE SHOWN



ENVIROSPEC PROJECT #E17-1600

envirospec ENGINEERING, PLLC
349 NORTHERN BLVD. SUITE 3
ALBANY, NY 12204-1032
P:518.453.2203
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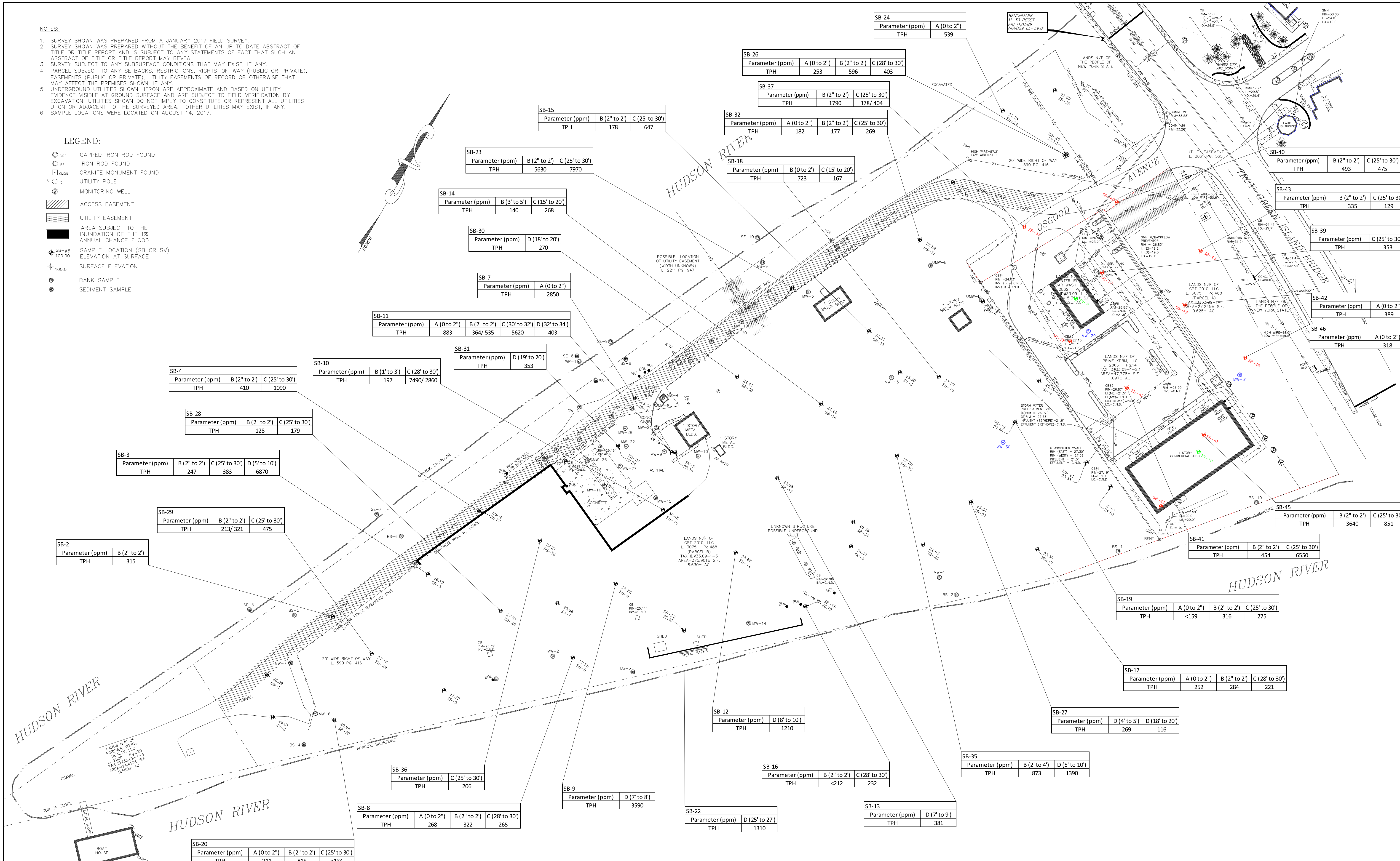
SOUTH ISLAND APARTMENTS SITE
1 OSGOOD AVENUE/CENTER ISLAND,
TOWN OF GREEN ISLAND, ALBANY COUNTY, NEW YORK

SOUTH ISLAND APARTMENTS SITE
SUBSURFACE SOILS - SVOCS
NORTHERN PARCEL

SCALE: NTS | DRAWING No.: R-8 | SHEET | REV. No.



NOTES:

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6. SAMPLE LOCATIONS WERE LOCATED ON AUGUST 14, 2017.

LEGEND:

- CIRF CAPPED IRON ROD FOUND
- IRF IRON ROD FOUND
- GMON GRANITE MONUMENT FOUND
- UTILITY POLE
- MONITORING WELL
- ACCESS EASEMENT
- UTILITY EASEMENT
- AREA SUBJECT TO THE INUNDATION OF THE 1% ANNUAL CHANCE FLOOD
- SB-## 100.00 SAMPLE LOCATION (SB OR SV) ELEVATION AT SURFACE
- 100.0 SURFACE ELEVATION
- BANK SAMPLE
- SEDIMENT SAMPLE

SB-24

Parameter (ppm)	A (0 to 2")
TPH	539

SB-26

Parameter (ppm)	A (0 to 2")	B (2" to 2')	C (28' to 30')
TPH	253	596	403

SB-37

Parameter (ppm)	B (2" to 2')	C (25' to 30')
TPH	1790	378/ 404

SB-15

Parameter (ppm)	B (2" to 2')	C (25' to 30')
TPH	178	647

SB-32

Parameter (ppm)	A (0 to 2")	B (2" to 2')	C (25' to 30')
TPH	182	177	269

SB-23

Parameter (ppm)	B (2" to 2')	C (25' to 30')
TPH	5630	7970

SB-18

Parameter (ppm)	B (0 to 2')	C (15' to 20')
TPH	723	167

SB-14

Parameter (ppm)	B (3' to 5')	C (15' to 20')
TPH	140	268

SB-30

Parameter (ppm)	D (18' to 20')
TPH	270

SB-7

Parameter (ppm)	A (0 to 2")
TPH	2850

SB-11

Parameter (ppm)	A (0 to 2")	B (2" to 2')	C (30' to 32')	D (32' to 34')
TPH	883	364/ 535	5620	403

SB-31

Parameter (ppm)	D (19' to 20')
TPH	353

SB-10

Parameter (ppm)	B (1' to 3')	C (28' to 30')
TPH	197	7490/ 2860

SB-4

Parameter (ppm)	B (2" to 2')	C (25' to 30')
TPH	410	1090

SB-28

Parameter (ppm)	B (2" to 2')	C (25' to 30')
TPH	128	179

SB-3

Parameter (ppm)	B (2" to 2')	C (25' to 30')	D (5' to 10')
TPH	247	383	6870

SB-29

Parameter (ppm)	B (2" to 2')	C (25' to 30')
TPH	213/ 321	475

SB-2

Parameter (ppm)	B (2" to 2')
TPH	315

SB-40

Parameter (ppm)	B (2" to 2')	C (25' to 30')
TPH	493	475

SB-43

Parameter (ppm)	B (2" to 2')	C (25' to 30')
TPH	335	129

SB-39

Parameter (ppm)	C (25' to 30')
TPH	353

SB-42

Parameter (ppm)	A (0 to 2")
TPH	389

SB-46

Parameter (ppm)	A (0 to 2")
TPH	318

SB-45

Parameter (ppm)	B (2" to 2')	C (25' to 30')
TPH	3640	851

SB-41

Parameter (ppm)	B (2" to 2')	C (25' to 30')
TPH	454	6550

SB-19

Parameter (ppm)	A (0 to 2")	B (2" to 2')	C (25' to 30')
TPH	<159	316	275

SB-17

Parameter (ppm)	A (0 to 2")	B (2" to 2')	C (28' to 30')
TPH	252	284	221

SB-27

Parameter (ppm)	D (4' to 5')	D (18' to 20')
TPH	269	116

SB-12

Parameter (ppm)	D (8' to 10')
TPH	1210

SB-35

Parameter (ppm)	B (2' to 4')	D (5' to 10')
TPH	873	1390

SB-16

Parameter (ppm)	B (2" to 2')	C (28' to 30')
TPH	<212	232

SB-36

Parameter (ppm)	C (25' to 30')
TPH	206

SB-9

Parameter (ppm)	D (7' to 8')
TPH	3590

SB-22

Parameter (ppm)	D (25' to 27')
TPH	1310

SB-13

Parameter (ppm)	D (7' to 9')
TPH	381

SB-8

Parameter (ppm)	A (0 to 2")	B (2" to 2')	C (28' to 30')
TPH	268	322	265

SB-20

Parameter (ppm)	A (0 to 2")	B (2" to 2')	C (25' to 30')
TPH	244	815	<134

ENVIROSPEC PROJECT #E17-1600

envirospec ENGINEERING, PLLC
349 NORTHERN BLVD. SUITE 3
ALBANY, NY 12204-1032
P:518.453.2203
F:518.453.2204

W.O. | No. | REVISION | DATE | DRN. | APR.

DRAWING STATUS: FOR REFERENCE ONLY

SOUTH ISLAND APARTMENTS SITE
1 OSGOOD AVENUE/CENTER ISLAND,
TOWN OF GREEN ISLAND, ALBANY COUNTY, NEW YORK

DRAWN BY –
DRAWING MGR

SOUTH ISLAND APARTMENTS SITE
SURFACE AND SUBSURFACE
SOILS – TPH

SCALE: NTS | DRAWING No.: R-9 | SHEET | REV. No.

NOTES:

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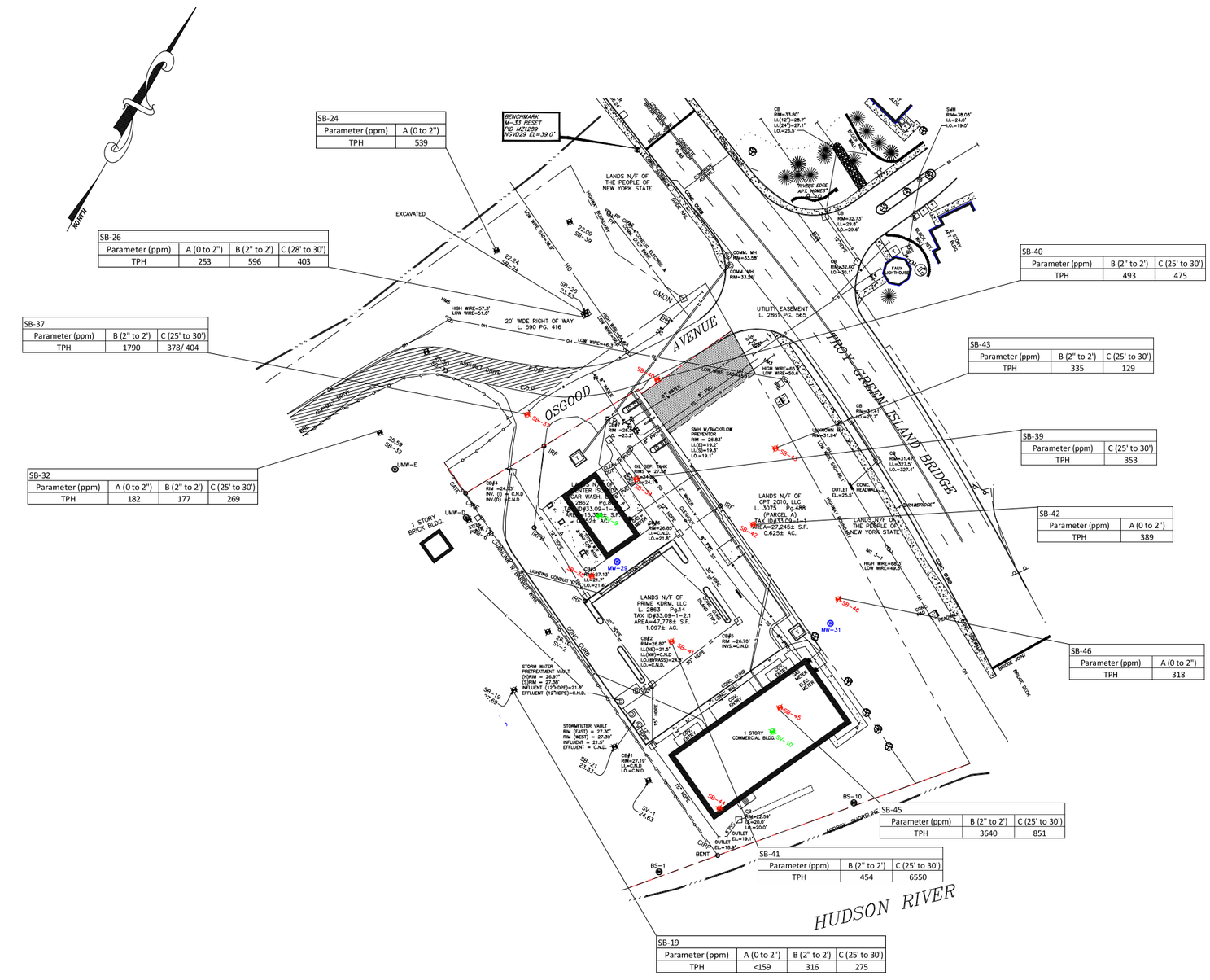
LEGEND:

◎ CIRF	CAPPED IRON ROD FOUND
◎ IRF	IRON ROD FOUND
⊡ GMON	GRANITE MONUMENT FOUND
	UTILITY POLE
◎	MONITORING WELL
▨	ACCESS EASEMENT
░	UTILITY EASEMENT
■	AREA SUBJECT TO THE INUNDATION OF THE 1% ANNUAL CHANCE FLOOD
SB-## 100.00	SAMPLE LOCATION (SB OR SV) ELEVATION AT SURFACE
✛ 100.0	SURFACE ELEVATION
●	BANK SAMPLE
●	SEDIMENT SAMPLE



SB-24

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TPH	539

SB-26

Parameter (ppm)	A (0 to 2")	B (2" to 2')	C (28' to 30')
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Parameter (ppm)	B (2" to 2')	C (25' to 30')
TPH	1790	378/ 404

SB-32

Parameter (ppm)	A (0 to 2")	B (2" to 2')	C (25' to 30')
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SB-40

Parameter (ppm)	B (2" to 2')	C (25' to 30')
TPH	493	475

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Parameter (ppm)	B (2" to 2')	C (25' to 30')
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SB-39

Parameter (ppm)	C (25' to 30')
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SB-42

Parameter (ppm)	A (0 to 2")
TPH	389

SB-46

Parameter (ppm)	A (0 to 2")
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SB-45

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Parameter (ppm)	A (0 to 2")	B (2" to 2')	C (25' to 30')
TPH	<159	316	275

ENVIROSPEC PROJECT #E17-1600

envirospec
ENGINEERING, PLLC

349 NORTHERN BLVD. SUITE 3
ALBANY, NY 12204-1032
P:518.453.2203
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W.O.	No.	REVISION	DATE	DRN.	APR.

DRAWING STATUS
FOR REFERENCE ONLY

SOUTH ISLAND APARTMENTS SITE
1 OSGOOD AVENUE/CENTER ISLAND,
TOWN OF GREEN ISLAND, ALBANY COUNTY, NEW YORK

DRAWN BY –
DRAWING MGR

SOUTH ISLAND APARTMENTS SITE
SURFACE AND SUBSURFACE
SOILS – TPH
NORTHERN PARCEL

SCALE	DRAWING No.	SHEET	REV. No.
NTS	R-10		

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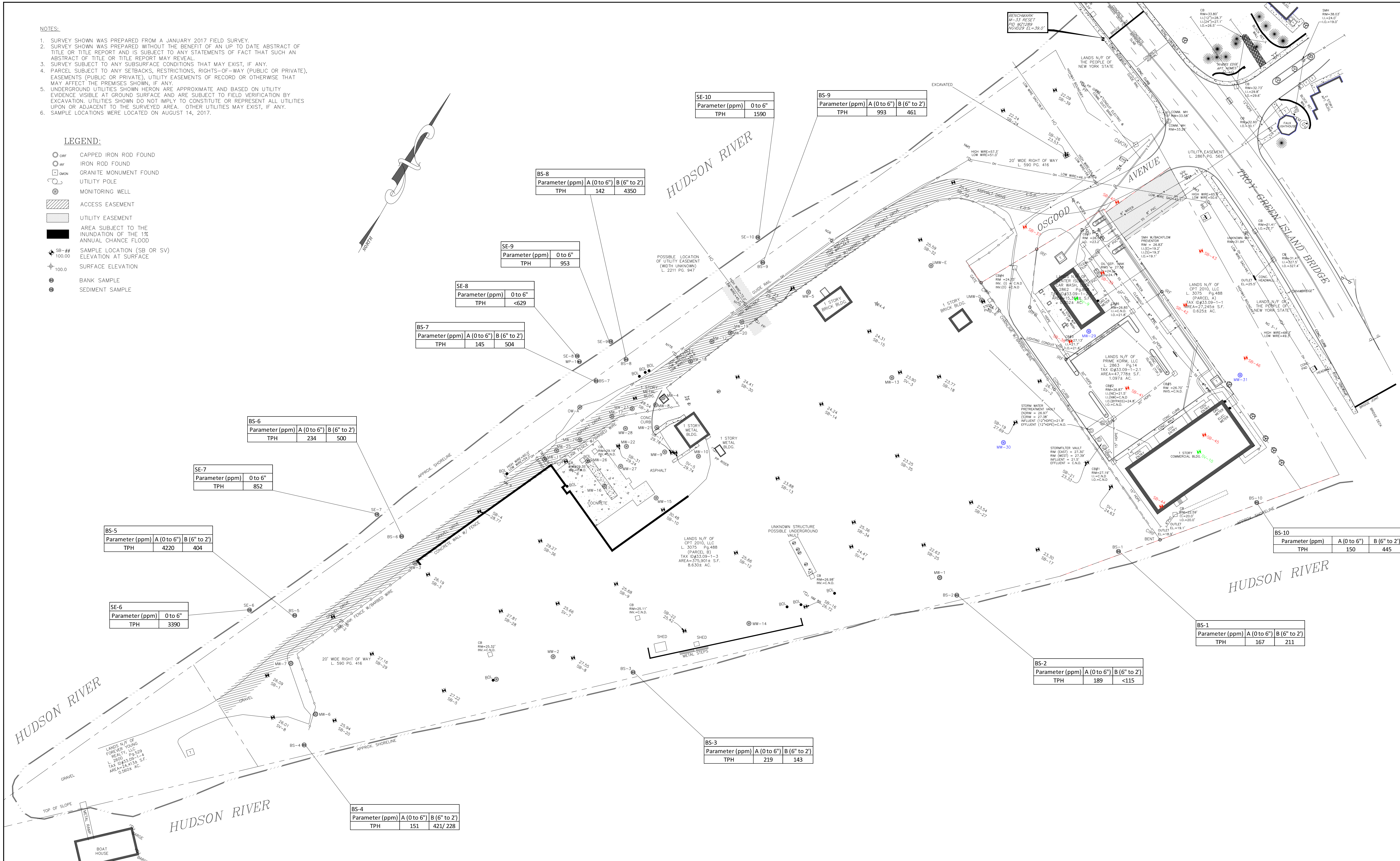
- SEDIMENT SAMPLE



SE-10

Parameter (ppm)	0 to 6"
TPH	1590

BS-9

Parameter (ppm)	A (0 to 6")	B (6" to 2')
TPH	993	461

BS-8

Parameter (ppm)	A (0 to 6")	B (6" to 2')
TPH	142	4350

SE-9

Parameter (ppm)	0 to 6"
TPH	953

SE-8

Parameter (ppm)	0 to 6"
TPH	<629

BS-7

Parameter (ppm)	A (0 to 6")	B (6" to 2')
TPH	145	504

BS-6

Parameter (ppm)	A (0 to 6")	B (6" to 2')
TPH	234	500

SE-7

Parameter (ppm)	0 to 6"
TPH	852

BS-5

Parameter (ppm)	A (0 to 6")	B (6" to 2')
TPH	4220	404

SE-6

Parameter (ppm)	0 to 6"
TPH	3390

BS-10

Parameter (ppm)	A (0 to 6")	B (6" to 2')
TPH	150	445

BS-1

Parameter (ppm)	A (0 to 6")	B (6" to 2')
TPH	167	211

BS-2

Parameter (ppm)	A (0 to 6")	B (6" to 2')
TPH	189	<115

BS-3

Parameter (ppm)	A (0 to 6")	B (6" to 2')
TPH	219	143

BS-4

Parameter (ppm)	A (0 to 6")	B (6" to 2')
TPH	151	421/ 228

ENVIROSPEC PROJECT #E17-1600

envirospec ENGINEERING, PLLC
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P:518.453.2203
F:518.453.2204

W.O.	No.	REVISION	DATE	DRN.	APR.

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1 OSGOOD AVENUE/CENTER ISLAND,
TOWN OF GREEN ISLAND, ALBANY COUNTY, NEW YORK

DRAWN BY: –
DRAWING: MGR

SOUTH ISLAND APARTMENTS SITE
BANK AND SEDIMENT – TPH RESULTS

SCALE	DRAWING No.	SHEET	REV. No.
NTS	R-11		

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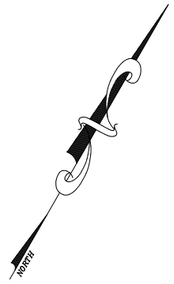

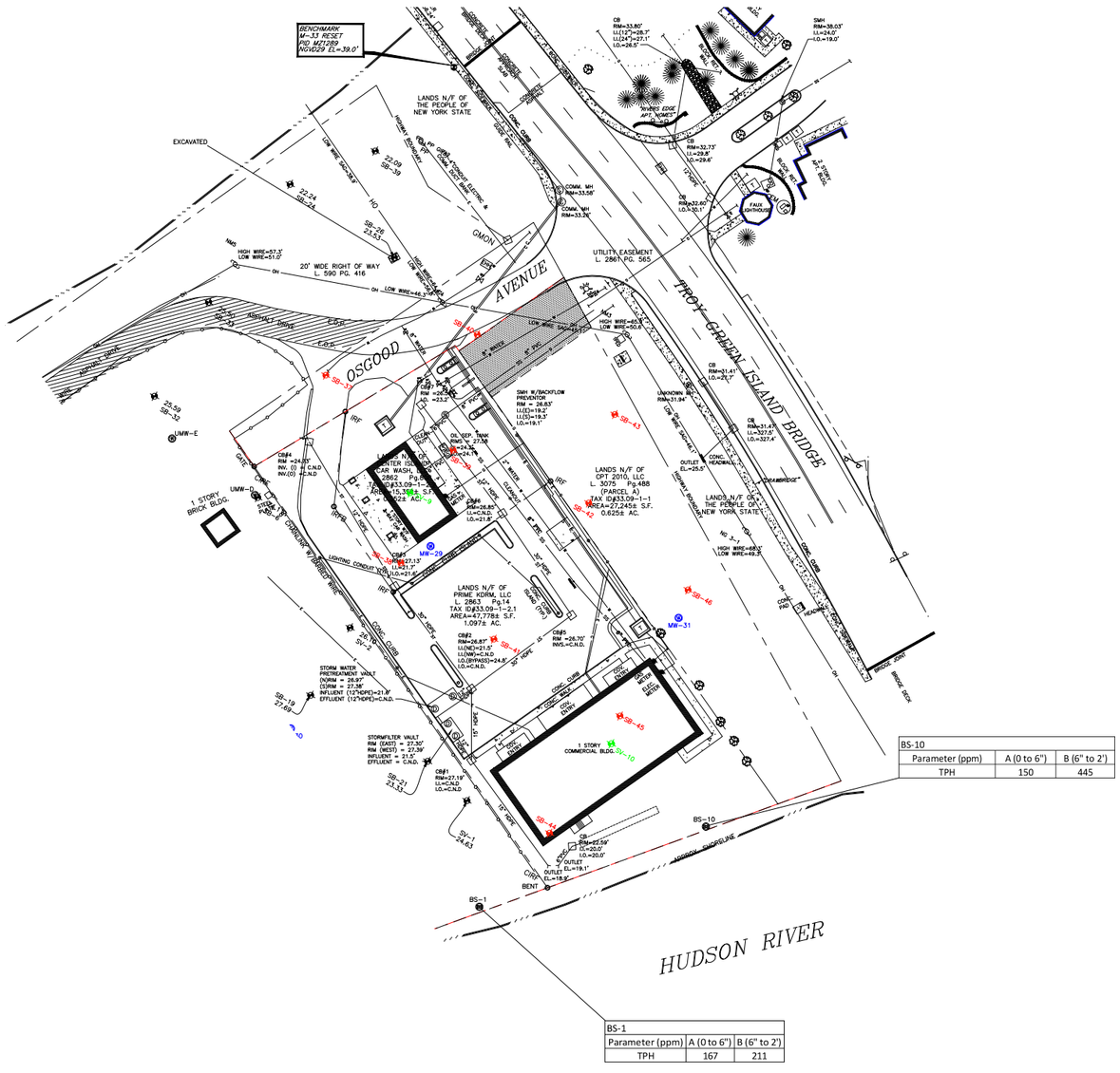

BS-10		
Parameter (ppm)	A (0 to 6")	B (6" to 2')
TPH	150	445

BS-1		
Parameter (ppm)	A (0 to 6")	B (6" to 2')
TPH	167	211

ENVIROSPEC PROJECT #E17-1600

envirospec ENGINEERING, PLLC
349 NORTHERN BLVD. SUITE 3
ALBANY, NY 12204-1032
P:518.453.2203
F:518.453.2204

W.O. No.	REVISION	DATE	APR.

DRAWING STATUS: FOR REFERENCE ONLY

SOUTH ISLAND APARTMENTS SITE
1 OSGOOD AVENUE/CENTER ISLAND,
TOWN OF GREEN ISLAND, ALBANY COUNTY, NEW YORK

DRAWN BY: -
CHECKED BY: MGR

SOUTH ISLAND APARTMENTS SITE
BANK AND SEDIMENT – TPH RESULTS
NORTHERN PARCEL

SCALE: NTS | DRAWING No.: R-12 | SHEET | REV. No.

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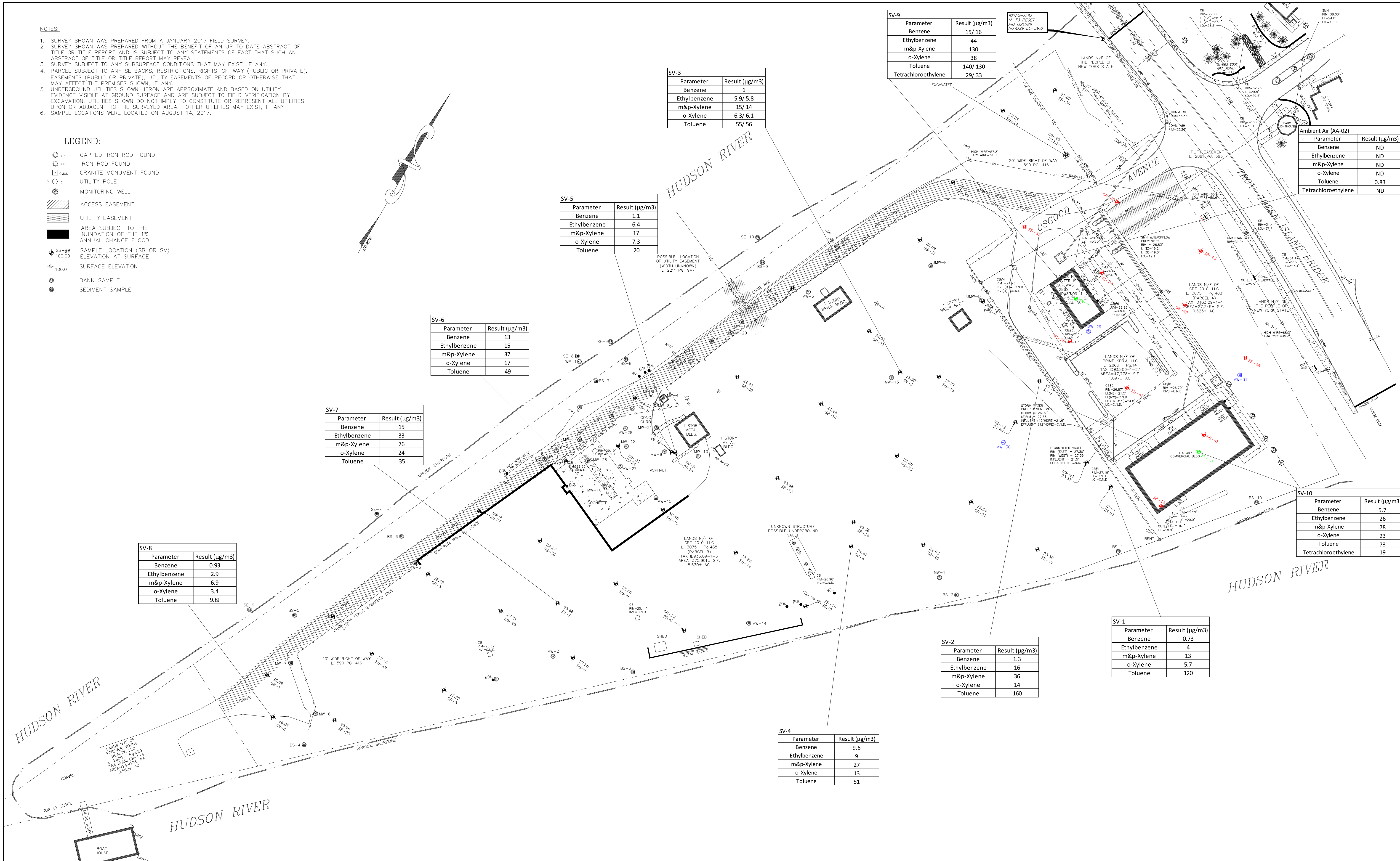

SV-9	
Parameter	Result (µg/m3)
Benzene	15/ 16
Ethylbenzene	44
m&p-Xylene	130
o-Xylene	38
Toluene	140/ 130
Tetrachloroethylene	29/ 33

SV-3	
Parameter	Result (µg/m3)
Benzene	1
Ethylbenzene	5.9/ 5.8
m&p-Xylene	15/ 14
o-Xylene	6.3/ 6.1
Toluene	55/ 56

Ambient Air (AA-02)	
Parameter	Result (µg/m3)
Benzene	ND
Ethylbenzene	ND
m&p-Xylene	ND
o-Xylene	ND
Toluene	0.83
Tetrachloroethylene	ND

SV-5	
Parameter	Result (µg/m3)
Benzene	1.1
Ethylbenzene	6.4
m&p-Xylene	17
o-Xylene	7.3
Toluene	20

SV-6	
Parameter	Result (µg/m3)
Benzene	13
Ethylbenzene	15
m&p-Xylene	37
o-Xylene	17
Toluene	49

SV-7	
Parameter	Result (µg/m3)
Benzene	15
Ethylbenzene	33
m&p-Xylene	76
o-Xylene	24
Toluene	35

SV-10	
Parameter	Result (µg/m3)
Benzene	5.7
Ethylbenzene	26
m&p-Xylene	78
o-Xylene	23
Toluene	73
Tetrachloroethylene	19

SV-8	
Parameter	Result (µg/m3)
Benzene	0.93
Ethylbenzene	2.9
m&p-Xylene	6.9
o-Xylene	3.4
Toluene	9.8J

SV-1	
Parameter	Result (µg/m3)
Benzene	0.73
Ethylbenzene	4
m&p-Xylene	13
o-Xylene	5.7
Toluene	120

SV-2	
Parameter	Result (µg/m3)
Benzene	1.3
Ethylbenzene	16
m&p-Xylene	36
o-Xylene	14
Toluene	160

SV-4	
Parameter	Result (µg/m3)
Benzene	9.6
Ethylbenzene	9
m&p-Xylene	27
o-Xylene	13
Toluene	51

ENVIROSPEC PROJECT #E17-1600

envirospec ENGINEERING, PLLC
349 NORTHERN BLVD. SUITE 3
ALBANY, NY 12204-1032
P:518.453.2203
F:518.453.2204

W.O.	No.	REVISION	DATE	DRN.	APR.

DRAWING STATUS: FOR REFERENCE ONLY

SOUTH ISLAND APARTMENTS SITE
1 OSGOOD AVENUE/CENTER ISLAND,
TOWN OF GREEN ISLAND, ALBANY COUNTY, NEW YORK

DRAWN BY: –
DRAWING MGR:

SOUTH ISLAND APARTMENTS SITE SOIL VAPOR – BTEX AND PCE RESULTS

SCALE: NTS | DRAWING No.: R-13 | SHEET: | REV. No.:

NOTES:

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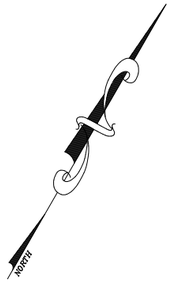

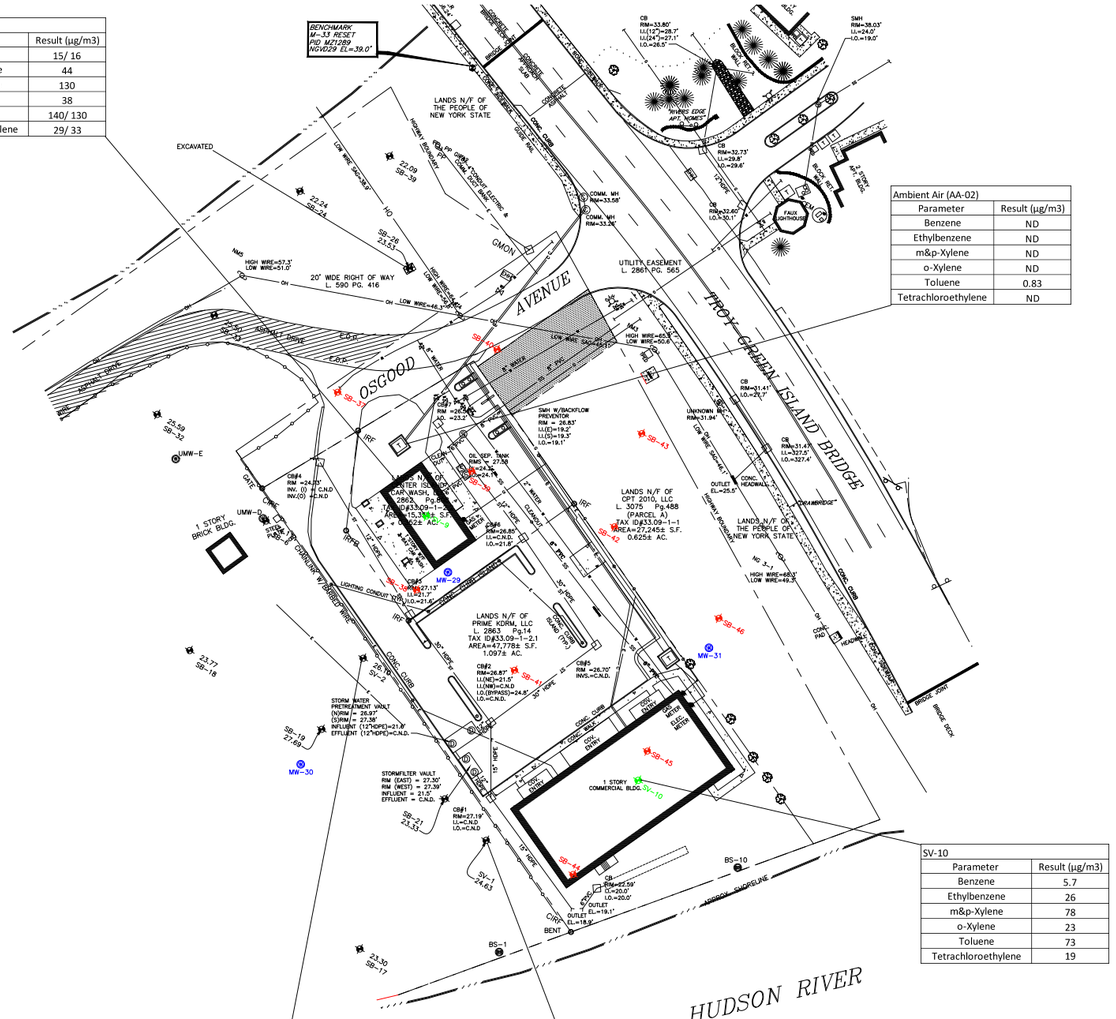

SV-9	
Parameter	Result (µg/m3)
Benzene	15/ 16
Ethylbenzene	44
m&p-Xylene	130
o-Xylene	38
Toluene	140/ 130
Tetrachloroethylene	29/ 33

Ambient Air (AA-02)	
Parameter	Result (µg/m3)
Benzene	ND
Ethylbenzene	ND
m&p-Xylene	ND
o-Xylene	ND
Toluene	0.83
Tetrachloroethylene	ND

SV-10	
Parameter	Result (µg/m3)
Benzene	5.7
Ethylbenzene	26
m&p-Xylene	78
o-Xylene	23
Toluene	73
Tetrachloroethylene	19

SV-1	
Parameter	Result (µg/m3)
Benzene	0.73
Ethylbenzene	4
m&p-Xylene	13
o-Xylene	5.7
Toluene	120

SV-2	
Parameter	Result (µg/m3)
Benzene	1.3
Ethylbenzene	16
m&p-Xylene	36
o-Xylene	14
Toluene	160

ENVIROSPEC PROJECT #E17-1600

envirospec ENGINEERING, PLLC
349 NORTHERN BLVD. SUITE 3
ALBANY, NY 12204-1032
P:518.453.2203
F:518.453.2204

W.O.No.	REVISION	DATE	APR.

DRAWING STATUS: FOR REFERENCE ONLY

SOUTH ISLAND APARTMENTS SITE
1 OSGOOD AVENUE/CENTER ISLAND,
TOWN OF GREEN ISLAND, ALBANY COUNTY, NEW YORK

DRAWN BY — CHECKED — DRAWING MGR

SOUTH ISLAND APARTMENTS SITE SOIL VAPOR – BTEX AND PCE RESULTS NORTHERN PARCEL

SCALE: NTS | DRAWING No.: R-14 | SHEET | REV. No.

APPENDIX A
SOIL BORING LOGS

349 Northern Boulevard Suite 3▪ Albany, NY 12204 ▪ Phone: 518.453.2203 ▪ Fax: 518.453.2204
A Woman Owned Business Enterprise (WBE)

Soil Boring: SB-43

Depth (ft)	Sample Interval (ft)	PID Screen (ppm)	Description Include color, texture, structure, odor, etc.; Trace 0-10%, Little 10-20%, Some 20-35%, And 35-50%; D = dry, S = saturated, M = moist	Recovery (in)
1	0 – 2”	0	Brown fill with a little clay	40”
2	2” – 2			
3	2 – 4		Brick	
4			Brown clay	
5	4 - 6			
6			Fill, ash	26"
7	6 – 8		Brick	
8				
9	8 – 10		Black, fill	
10				
11	10 – 12		Fill Brick	25”
12				
13	12 – 14		Clay Gravel	
14				
15	14 – 16			
16			Fill and brick upper 6”	39”
17	16 – 18		Rest is brown clay and sand mixture	
18				
19	18 – 20			
20				
21	20 – 22		Upper 30” is brown clay and sand	42”
22				
23	22 – 24		Bottom is dark grey sand	
24				
25	24 – 26			
26				30”
27	26 – 28		Clay	
28				
29	28 – 30		Wet gravel and a little clay	
30				

Notes:

Performed By: Aztech Start Time:8:10 AM

Groundwater Interface (▼): Refusal:

28’

Composite Sample Notes:

PID Headspace (H/S) Readings

Interval	PID H/S
0-2”	1.0
2”-2	1.0
2-4	1.0
4-6	1.3
6-8	1.3
8-10	1.3
10-12	0.5
12-14	0.5
14-16	0.5
16-18	0.8
18-20	0.8
20-22	0.2
22-24	0.2
24-26	0.2
26-28	0.6
28-30	0.6

Grab/Composite Samples

Interval:	
Sample Time:	
Sample ID:	

Interval:	2” – 2’ **Full**
Sample Time:	8:30 AM
Sample ID:	SB-43B

Interval:	28’ – 30’ **Full**
Sample Time:	8:57 AM
Sample ID:	SB-43C

DATE: 6/6/18

LOCATION: 1 Osgood Avenue, Town of Green Island, NY

LOGGED BY: RF

Soil Boring Log

BORING LOCATION: SB-43

enviroSPEC ENGINEERING, PLLC

Envirospec Engineering, PLLC
349 Northern Blvd., Suite 3
Albany, NY 12204

CLIENT: South Island Apartments, LLC

PROJECT #:E17-1600

PROJECT MANAGER: Gianna Aiezza

Soil Boring: SB-42

Depth (ft)	Sample Interval (ft)	PID Screen (ppm)	Description Include color, texture, structure, odor, etc.; Trace 0-10%, Little 10-20%, Some 20-35%, And 35-50%; D = dry, S = saturated, M = moist	Recovery (in)
1	0 – 2”	0	Clay	39”
2	2” – 2		Brick	
3	2 – 4		Fill &	
4			Gravel	
5	4 - 6		Concrete	
6			Ash & sand	34”
7	6 – 8		6” black fill	
8			6” black clay	
9	8 – 10		Rest clay & gravel	
10				
11	10 – 12	0.5	Sand & fill upper 2’	30”
12				
13	12 – 14		Rest clay	
14				
15	14 – 16	13.0		
16			Fill upper 4”	30”
17	16 – 18	0.1	Rest clay	
18				
19	18 – 20			
20				
21	20 – 22		Upper 6” fill and gravel	33”
22			Middle section clay and sand mix	
23	22 – 24			
24			Bottom 8” gravel and brick	
25	24 – 26			
26			Clay 19”	35”
27	26 – 28	4.8	Rest fill and gravel	
28				
29	28 – 30	25.7		
30				

Notes:

Performed By: Aztech Start Time: 9:20 AM

Groundwater Interface (▼): 29’ Refusal:

Composite Sample Notes:

9:37 AM – DUP for SVOCs, metals, and PCBs for SB-42B sample.

10:00 AM – MS/MSD for SVOCs, metals, and PCBs for SB-42C sample.

PID Headspace (H/S) Readings

Interval	PID H/S
0-2”	0.8
2”-2	0.8
2-4	0.8
4-6	0.8
6-8	0.9
8-10	0.9
10-12	0.3
12-14	0.3
14-16	0.3
16-18	3.2
18-20	3.2
20-22	0.4
22-24	0.4
24-26	0.4
26-28	0.4
28-30	0.4

Grab/Composite Samples

Interval:	
Sample Time:	
Sample ID:	

Interval:	2” – 2’	**SVOCs**
Sample Time:	9:36AM	**Metals**
Sample ID:	SB-42B	**PCBs**

Interval:	25’ – 30’	**SVOCs**
Sample Time:	10:00 AM	**Metals**
Sample ID:	SB-42C	**PCBs**

DATE: 6/6/18

LOCATION: 1 Osgood Avenue, Town of Green Island, NY

LOGGED BY: RF

Soil Boring Log

BORING LOCATION: SB-42

enviroSPEC ENGINEERING, PLLC
Envirospec Engineering, PLLC
349 Northern Blvd., Suite 3
Albany, NY 12204

CLIENT: South Island Apartments, LLC

PROJECT #:E17-1600

PROJECT MANAGER: Gianna Aiezza

Soil Boring: SB-46

Depth (ft)	Sample Interval (ft)	PID Screen (ppm)	Description Include color, texture, structure, odor, etc.; Trace 0-10%, Little 10-20%, Some 20-35%, And 35-50%; D = dry, S = saturated, M = moist	Recovery (in)
1	0 – 2”	0	Fill and brick upper 2’	36”
2	2” – 2			
3	2 – 4		Then mix of clay and fill	
4				
5	4 - 6		Bottom → fill and ash bottom 4”	
6		0	Black fill upper 1’	26”
7	6 – 8		Rest brown sand	
8				
9	8 – 10			
10				
11	10 – 12	0	Gravel and clay upper 18”	33”
12				
13	12 – 14		Rest is brick and fill	
14				
15	14 – 16			
16		0		33”
17	16 – 18		Sand upper 6” Brick and clay	
18				
19	18 – 20		Fill and brick bottom 8”	
20				
21	20 – 22	0	Upper 5” clay and brick	35”
22				
23	22 – 24		Rest black clay and sand mix	
24				
25	24 – 26			
26		-		
27	26 – 28	-	No recovery, all water	
28				
29	28 – 30	-		
30				

Notes:

Performed By: Aztech Start Time:10:10 AM

Groundwater Interface (▼): Refusal:

24’

Sample from bottom of 20-25’ interval

Composite Sample Notes:

DUP for SB-46C for SVOCs, metals, PCBs, and pesticides at 10:50 AM.

PID Headspace (H/S) Readings

Interval	PID H/S
0-2”	0.7
2”-2	0.7
2-4	0.7
4-6	0.7
6-8	0.5
8-10	0.5
10-12	1.0
12-14	1.0
14-16	1.0
16-18	0.5
18-20	0.5
20-22	1.0
22-24	1.0
24-26	
26-28	
28-30	

Grab/Composite Samples

Interval:	
Sample Time:	
Sample ID:	

Interval:	2” – 2’	**SVOCs**
Sample Time:	10:33AM	**Metals**
Sample ID:	SB-46B	**PCBs**

Interval:	20 – 25’	**SVOCs**
Sample Time:	10:44AM	**Metals**
Sample ID:	SB-46C	**PCBs**
		Pesticides

DATE: 6/6/18

LOCATION: 1 Osgood Avenue, Town of Green Island, NY

LOGGED BY: RF

Soil Boring Log

BORING LOCATION: SB-46

enviroSPEC ENGINEERING, PLLC

Envirospec Engineering, PLLC
349 Northern Blvd., Suite 3
Albany, NY 12204

CLIENT: South Island Apartments, LLC

PROJECT #:E17-1600

PROJECT MANAGER: Gianna Aiezza

Soil Boring: SB-45

Depth (ft)	Sample Interval (ft)	PID Screen (ppm)	Description Include color, texture, structure, odor, etc.; Trace 0-10%, Little 10-20%, Some 20-35%, And 35-50%; D = dry, S = saturated, M = moist	Recovery (in)
1	0 – 2”	0	Brown sand upper 1’	25”
2	2” – 2			
3	2 – 4		Clay	
4				
5	4 - 6		Fill at bottom 4”	
6		0		28”
7	6 – 8		Black fill and ash	
8				
9	8 – 10			
10				
11	10 – 12	0	White ash and grey and black fill layers	26”
12				
13	12 – 14			
14				
15	14 – 16			
16		0		25”
17	16 – 18		White ash and grey and black fill layers	
18				
19	18 – 20			
20				
21	20 – 22	0	Brown fill and gravel 4”	17”
22				
23	22 – 24		Black fill 4” Rest clay	
24				
25	24 – 26			
26		0	Clay upper 26”	42”
27	26 – 28		Rest is clay and sand	
28				
29	28 – 30			
30				

Notes:

Performed By: Aztech Start Time: 11:05 AM

Groundwater Interface (▼): 28’ Refusal:

Composite Sample Notes:

PID Headspace (H/S) Readings

Interval	PID H/S
0-2”	0.2
2”-2	0.2
2-4	0.2
4-6	0.7
6-8	0.7
8-10	0.7
10-12	0.1
12-14	0.1
14-16	0.1
16-18	1.1
18-20	1.1
20-22	1.3
22-24	1.3
24-26	1.3
26-28	0.8
28-30	0.8

Grab/Composite Samples

Interval:	
Sample Time:	
Sample ID:	

Interval:	2” – 2’	**SVOCs**
Sample Time:	11:10AM	**Metals**
Sample ID:	SB-45B	**PCBs**
		VOCs & TPH

Interval:	25 – 30’
Sample Time:	11:28AM
Sample ID:	SB-45C

SVOCs, Metals, PCBs, VOCs & TPH

DATE: 6/6/18

LOCATION: 1 Osgood Avenue, Town of Green Island, NY

LOGGED BY: RF

Soil Boring Log

BORING LOCATION: SB-45

enviroSPEC ENGINEERING, PLLC

Envirospec Engineering, PLLC
349 Northern Blvd., Suite 3
Albany, NY 12204

CLIENT: South Island Apartments, LLC

PROJECT #:E17-1600

PROJECT MANAGER: Gianna Aiezza

Soil Boring: SB-44

Depth (ft)	Sample Interval (ft)	PID Screen (ppm)	Description Include color, texture, structure, odor, etc.; Trace 0-10%, Little 10-20%, Some 20-35%, And 35-50%; D = dry, S = saturated, M = moist	Recovery (in)
1	0 – 2”	0	Upper 2’ brown sand and some brick	33”
2	2” – 2			
3	2 – 4		Rest fill and gravel	
4				
5	4 - 6			
6		0	Brown sand	29”
7	6 – 8		Brick and gravel	
8				
9	8 – 10			
10				
11	10 – 12	0	White and black ash layers with some brick	25”
12				
13	12 – 14			
14				
15	14 – 16			
16		0		25”
17	16 – 18		Black, white ash layers and some brick	
18				
19	18 – 20		Brown sand bottom 8”	
20				
21	20 – 22	-	No recovery, hit boulder	0
22				
23	22 – 24	-		
24				
25	24 – 26	-		
26		-		33”
27	26 – 28	-	Brown sand	
28				
29	28 – 30	-		
30				

Notes:

Performed By: Aztech Start Time: 12:55 PM

Groundwater Interface (▼): 28’ Refusal:

Composite Sample Notes:

1:07 MS/MSD Pesticides SB-44B sample

PID Headspace (H/S) Readings

Interval	PID H/S
0-2”	1.1
2”-2	1.1
2-4	1.1
4-6	1.0
6-8	1.0
8-10	1.0
10-12	1.3
12-14	1.3
14-16	1.3
16-18	1.6
18-20	-
20-22	-
22-24	-
24-26	1.8
26-28	1.8
28-30	1.8

Grab/Composite Samples

Interval:	
Sample Time:	
Sample ID:	

Interval:	2” – 2’	**SVOCs**
Sample Time:	1:05PM	**Metals**
Sample ID:	SB-44B	**PCBs**
		Pesticides

Interval:	25 – 30’	**SVOCs**
Sample Time:	1:30PM	**Metals**
Sample ID:	SB-44C	**PCBs**
		Pesticides

DATE: 6/6/18

LOCATION: 1 Osgood Avenue, Town of Green Island, NY

LOGGED BY: RF

Soil Boring Log

BORING LOCATION: SB-44

enviroSPEC ENGINEERING, PLLC
Envirospec Engineering, PLLC
349 Northern Blvd., Suite 3
Albany, NY 12204

CLIENT: South Island Apartments, LLC

PROJECT #:E17-1600

PROJECT MANAGER: Gianna Aiezza

Soil Boring: SB-41

Depth (ft)	Sample Interval (ft)	PID Screen (ppm)	Description Include color, texture, structure, odor, etc.; Trace 0-10%, Little 10-20%, Some 20-35%, And 35-50%; D = dry, S = saturated, M = moist	Recovery (in)
1	0 – 2”	0	Grey ash/fill upper 6”	34”
2	2” – 2			
3	2 – 4		Rest is brown fill and gravel	
4				
5	4 - 6			
6		0	Fill	42”
7	6 – 8			
8				
9	8 – 10		Bottom is mix of wet clay and black fill, some ash	
10				
11	10 – 12	0	Mix of clay, fill and gravel with some brick	26”
12				
13	12 – 14			
14				
15	14 – 16			
16		0		26”
17	16 – 18		Black fill and gravel	
18				
19	18 – 20			
20				
21	20 – 22	0	Sand and fill	27”
22				
23	22 – 24		Wet starting at ~22’, strong petroleum odor	
24				
25	24 – 26	1		
26				43”
27	26 – 28	5.5	Mix of clay and gravel	
28				
29	28 – 30	17		
30				

Notes:

Performed By: Aztech Start Time: 1:42 PM

Groundwater Interface (▼): 26’ Refusal:

Composite Sample Notes:

PID Headspace (H/S) Readings

Interval	PID H/S
0-2”	1.3
2”-2	1.3
2-4	1.3
4-6	1.3
6-8	1.3
8-10	1.3
10-12	1.6
12-14	1.6
14-16	1.6
16-18	1.0
18-20	1.0
20-22	67
22-24	67
24-26	67
26-28	96.2
28-30	96.2

Grab/Composite Samples

Interval:	
Sample Time:	
Sample ID:	

Interval:	2” – 2’ **Full**
Sample Time:	1:45 PM
Sample ID:	SB-41B

Interval:	25 – 30’ **SVOCs**
Sample Time:	2:05 PM **Metals**
Sample ID:	SB-41C **PCBs**

VOCs & TPH

DATE: 6/6/18

LOCATION: 1 Osgood Avenue, Town of Green Island, NY

LOGGED BY: RF

Soil Boring Log

BORING LOCATION: SB-41

enviroSPEC ENGINEERING, PLLC
Envirospec Engineering, PLLC
349 Northern Blvd., Suite 3
Albany, NY 12204

CLIENT: South Island Apartments, LLC

PROJECT #:E17-1600

PROJECT MANAGER: Gianna Aiezza

Soil Boring: SB-37

Depth (ft)	Sample Interval (ft)	PID Screen (ppm)	Description Include color, texture, structure, odor, etc.; Trace 0-10%, Little 10-20%, Some 20-35%, And 35-50%; D = dry, S = saturated, M = moist	Recovery (in)
1	0 – 2”	0	Brown fill and some clay	35”
2	2” – 2			
3	2 – 4			
4				
5	4 - 6			
6		0		29”
7	6 – 8		Clay and sand, some ash	
8				
9	8 – 10			
10				
11	10 – 12	0	Clay	29”
12				
13	12 – 14			
14				
15	14 – 16		Brick in bottom 4”	
16		0		28”
17	16 – 18		Brown sand	
18				
19	18 – 20		Gravel	
20				
21	20 – 22	0	Brown sand	42”
22				
23	22 – 24			
24				
25	24 – 26			
26		0		54”
27	26 – 28		Brown clay and some sand	
28				
29	28 – 30			
30				

Notes:

Performed By: Aztech Start Time: 2:20 PM

Groundwater Interface (▼): 28’ Refusal:

Composite Sample Notes:

2:51 PM DUP SB-37C VOCs, TPH.

2:55 PM MS/MSD SB-37C SVOCs, metals, PCBs.

PID Headspace (H/S) Readings

Interval	PID H/S
0-2”	4
2”-2	4
2-4	4
4-6	4
6-8	2.4
8-10	2.4
10-12	3.4
12-14	3.4
14-16	2.1
16-18	2.1
18-20	2.1
20-22	1
22-24	1
24-26	1
26-28	1.3
28-30	1.3

Grab/Composite Samples

Interval:	
Sample Time:	
Sample ID:	

Interval:	2” – 2’	**SVOCs**
Sample Time:	2:30PM	**Metals**
Sample ID:	SB-37B	**PCBs**
		VOCs & TPH

Interval:	25 – 30’	**SVOCs**
Sample Time:	2:50PM	**Metals**
Sample ID:	SB-37C	**PCBs**
		VOCs & TPH

DATE: 6/6/18

LOCATION: 1 Osgood Avenue, Town of Green Island, NY

LOGGED BY: RF

Soil Boring Log

BORING LOCATION: SB-37

enviroSPEC ENGINEERING, PLLC
Envirospec Engineering, PLLC
349 Northern Blvd., Suite 3
Albany, NY 12204

CLIENT: South Island Apartments, LLC

PROJECT #:E17-1600

PROJECT MANAGER: Gianna Aiezza

Soil Boring: SB-40

Depth (ft)	Sample Interval (ft)	PID Screen (ppm)	Description Include color, texture, structure, odor, etc.; Trace 0-10%, Little 10-20%, Some 20-35%, And 35-50%; D = dry, S = saturated, M = moist	Recovery (in)
1	0 – 2”	0	Brown fill, very poor recovery	7”
2	2” – 2			
3	2 – 4			
4				
5	4 - 6			
6		0	Top 3” black fill	21”
7	6 – 8		White ash layer 4”	
8				
9	8 – 10		Rest brown and grey fill	
10				
11	10 – 12	0	Upper 5” brown fill	28”
12				
13	12 – 14		Rest is mix of grey clay, brick and fill	
14				
15	14 – 16			
16		0		
17	16 – 18		Upper 2’ brown clay Rest is mix of grey clay and fill	37”
18				
19	18 – 20		Wet starting at ~16’, slight petroleum odor	
20				
21	20 – 22	0	Mix of black clay and fill	21”
22				
23	22 – 24			
24				
25	24 – 26			
26		0		5”
27	26 – 28		Clay, very poor recovery, not wet	
28				
29	28 – 30			
30				
31	30-35	0	Grey clay upper 1.5’ Rest brown clay (water at ~32’)	33”
32				
33				
34				
35				

Notes:

Performed By: Aztech — Start Time: 7:15

Groundwater Interface (▼): 32’ — Refusal:

Composite Sample Notes:

DATE: 6/7/18

LOGGED BY: RF

BORING LOCATION: SB-40

LOCATION: 1 Osgood Avenue, Town of Green Island, NY

CLIENT: South Island Apartments, LLC

PID Headspace (H/S) Readings

Interval	PID H/S
0-2”	11.1
2”-2	11.1
2-4	11.1
4-6	1.6
6-8	1.6
8-10	1.6
10-12	1.1
12-14	1.1
14-16	1.1
16-18	1.1
18-20	1.1
20-22	1.1
22-24	1.1
24-26	0.5
26-28	0.5
28-30	0.5

Grab/Composite Samples

Interval:		
Sample		
Sample		

Interval:	2” – 2’	**SVOCs**
Sample	8:08AM	**PCBs**
Sample	SB-40BO	**Metals**
		TPH

Interval:	30 – 35’	**SVOCs**
Sample	8:00AM	**PCBs**
Sample	SB-40C	**Metals**
		TPH

Soil Boring Log

30-35	1.5

enviroSPEC ENGINEERING, PLLC
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349 Northern Blvd., Suite 3
Albany, NY 12204

PROJECT#: E17-1600

PROJECT MANAGER: Gianna Aiezza

Soil Boring: SB-40 2nd

Depth (ft)	Sample Interval (ft)	PID Screen (ppm)	Description Include color, texture, structure, odor, etc.; Trace 0-10%, Little 10-20%, Some 20-35%, And 35-50%; D = dry, S = saturated, M = moist	Recovery (in)
1 2 3 4 5	0-5' offset	-	Grey fill and some clay	33"

Notes:

Performed By: Aztech Start Time: 7:15

Groundwater Interface (▼): Refusal:

32'

Composite Sample Notes:

DATE: 6/7/18

LOGGED BY: RF

BORING LOCATION: SB-40

LOCATION: 1 Osgood Avenue, Town of Green Island, NY

CLIENT: South Island Apartments, LLC

PID Headspace (H/S) Readings

Interval	PID H/S
0-2"	11.1
2"-2	11.1
2-4	11.1
4-6	1.6
6-8	1.6
8-10	1.6
10-12	1.1
12-14	1.1
14-16	1.1
16-18	1.1
18-20	1.1
20-22	1.1
22-24	1.1
24-26	0.5
26-28	0.5
28-30	0.5

Grab/Composite Samples

Interval:		
Sample		
Sample		

Interval:	2" – 2'	**SVOCs**
Sample	8:08AM	**PCBs**
Sample	SB-40BO	**Metals**
		TPH

Interval:	30 – 35'	**SVOCs**
Sample	8:00AM	**PCBs**
Sample	SB-40C	**Metals**
		TPH

Soil Boring Log

30-35	1.5

enviroSPEC ENGINEERING, PLLC

Envirospec Engineering, PLLC
349 Northern Blvd., Suite 3
Albany, NY 12204

PROJECT#: E17-1600

PROJECT MANAGER: Gianna Aiezza

Soil Boring: SB-38

Depth (ft)	Sample Interval (ft)			Recovery (in)
1	0 – 2”	-	Grey fill upper 6”	48”
2	2” – 2			
3	2 – 4	-	Clay & fill	
4				
5	4 - 6	-		
6		-		30”
7	6 – 8	-	Fill, sand, white gravel and some wood chips	
8				
9	8 – 10	-		
10				
11	10 – 12	-	Brown fill and gravel and clay upper 15’	33”
12				
13	12 – 14	-	Rest brown clay and sand	
14				
15	14 – 16	-		
16		-		43”
17	16 – 18	-	Brown clay and sand Some gravel in upper 6”	
18				
19	18 – 20	-		
20				
21	20 – 22	-	Top 6” clay and brown sand	48”
22				
23	22 – 24	-	Rest grey clay and sand	
24				
25	24 – 26	-		
26		-		32”
27	26 – 28	-		
28				
29	28 – 30	-		
30				

Notes:

Performed By: Aztech Start Time: 8:25 AM

Groundwater Interface (▼): 29’ Refusal:

Composite Sample Notes:

SB-38B MS VOCs and 8:35 AM.

SB-38B MSD VOCs at 8:36 AM.

PID Headspace (H/S) Readings

Interval	PID H/S
0-2”	0.2
2”-2	0.2
2-4	0.2
4-6	0.5
6-8	0.5
8-10	0.5
10-12	0.1
12-14	0.1
14-16	0.1
16-18	0.7
18-20	0.7
20-22	0.5
22-24	0.5
24-26	0.5
26-28	0.5
28-30	0.5

Grab/Composite Samples

Interval:	
Sample Time:	
Sample ID:	

Interval:	2” – 2’	**SVOCs**
Sample Time:	8:33AM	**VOCs**
Sample ID:	SB-38B	**Metals**
		PCBs

Interval:	25 – 30’	**SVOCs**
Sample Time:	8:55AM	**VOCs**
Sample ID:	SB-38C	**Metals**
		PCBs

DATE: 6/7/18

LOCATION: 1 Osgood Avenue, Town of Green Island, NY

LOGGED BY: RF

Soil Boring Log

BORING LOCATION: SB-38

enviroSPEC ENGINEERING, PLLC
Envirospec Engineering, PLLC
349 Northern Blvd., Suite 3
Albany, NY 12204

CLIENT: South Island Apartments, LLC

PROJECT #:E17-1600

PROJECT MANAGER: Gianna Aiezza

Soil Boring: SB-39

Depth (ft)	Sample Interval (ft)	PID Screen (ppm)	Description Include color, texture, structure, odor, etc.; Trace 0-10%, Little 10-20%, Some 20-35%, And 35-50%; D = dry, S = saturated, M = moist	Recovery (in)
1	0 – 2”	0	Grey fill and gravel with some brick	25”
2	2” – 2			
3	2 – 4			
4				
5	4 - 6			
6		0	Gravel and brick upper 1’	27”
7	6 – 8		Black fill (some wet) ~8”	
8				
9	8 – 10		Brown clay bottom 6”	
10				
11	10 – 12	0	Upper 6” grey fill and gravel	37”
12				
13	12 – 14		Rest is moist brown clay	
14				
15	14 – 16			
16		0	Black fill upper 3”	35”
17	16 – 18		Rest mix of brown sand and clay	
18				
19	18 – 20			
20				
21	20 – 22	0	Black fill upper 6”	53”
22				
23	22 – 24		Brown clay and sand rest of boring	
24				
25	24 – 26		Bottom 6” gravel	
26		0		53”
27	26 – 28		Clay and sand upper 25’ Rest sand and gravel	
28				
29	28 – 30			
30				

Notes:

Performed By: Aztech Start Time: 9:20 AM

Groundwater Interface (▼): 28’ Refusal:

Composite Sample Notes:

MS/MSD for TPH on SB-39C at 9:50 AM.

PID Headspace (H/S) Readings

Interval	PID H/S
0-2”	0.5
2”-2	0.5
2-4	0.5
4-6	0.6
6-8	0.6
8-10	0.6
10-12	1.0
12-14	1.0
14-16	1.0
16-18	1.5
18-20	1.5
20-22	1.2
22-24	1.2
24-26	1.2
26-28	0.4
28-30	0.4

Grab/Composite Samples

Interval:	
Sample Time:	
Sample ID:	

Interval:	2” – 2’	**SVOCs**
Sample Time:	9:30AM	**PCBs**
Sample ID:	SB-39B	**Metals**

Interval:	25 – 30’	**SVOCs**
Sample Time:	9:49AM	**PCBs**
Sample ID:	SB-39C	**Metals**
		TPH

DATE: 6/7/18

LOCATION: 1 Osgood Avenue, Town of Green Island, NY

LOGGED BY: RF

Soil Boring Log

BORING LOCATION: SB-39

enviroSPEC ENGINEERING, PLLC
Envirospec Engineering, PLLC
349 Northern Blvd., Suite 3
Albany, NY 12204

CLIENT: South Island Apartments, LLC

PROJECT #:E17-1600

PROJECT MANAGER: Gianna Aiezza

APPENDIX B
GROUNDWATER SAMPLING LOGS

envirospec ENGINEERING, PLLC

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A Woman Owned Business Enterprise (WBE)

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Albany, NY 12204
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Well Sampling Field Record

WELL NO	MW-29
Date(s)	6/18/18

Weather	Temperature
Sunny	High 97 Low 71

Project	Green Island RI	Project No.	E17-1600
Location			

Well Info

Well #:	MW-29	Well Location:	
Well Diameter (in):	2"	Well Condition:	New, installed last week.
A. Total Well Depth (ft bgs):	35.3'	Depth to Bedrock (ft):	
B. TOC to Grade (ft):	0.5'	TOC Elevation (ft):	
C. Depth to Water TOC (ft):	26'	G. Volume Factors:	2-inch well = 0.163 gal/ft
D. Water Column Height (ft):	8.8'	*= (A + B) - C*	4-inch well = 0.653 gal/ft
E. Total Well Volume (gal):	1.43 gal	*=D*G*	6-inch well = 1.468 gal/ft
F. Purge (3 volumes) (gal):	4.3 gal	*=E*3*	8-inch well = 2.609 gal/ft

Purge

Purge Date:	6/18/18	Pump/Method:	Bladder pump
Purge Start Time:	8:03 AM	Approx Flow Rate:	300 mL/min
Purge Stop Time:	9:50 AM	Approx Volume Removed:	6 gal
Did well dry out?	No		

Sampling

Date:	6/18/18	pH			
Time:	10:00 AM	Temp (ºC)			
Sample ID:	MW-29	Conductivity (mS/cm)			
Sample Method:	Bladder pump	TDS (ppm)			
		ORP (mV)			
		Turbidity (NTU)			
		DO (mg/L)			

Appearance

Brown at first, but cleared up.

Comments

DUP sampled at 10:40 AM
MS sampled at 11:30 AM
MSD sampled at 12:15 PM

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Well Sampling Field Record

WELL NO	MW-31		
Date(s)	6/18/18		
Weather		Temperature	
Sunny		High	97
		Low	71

Project	Green Island RI	Project No.	E17-1600
Location			

Well Info

Well #:	MW-31	Well Location:	
Well Diameter (in):	2”	Well Condition:	New, installed last week.
A. Total Well Depth (ft bgs):	40’	Depth to Bedrock (ft):	
B. TOC to Grade (ft):	0	TOC Elevation (ft):	
C. Depth to Water TGS (ft):	25’	G. Volume Factors:	2-inch well = 0.163 gal/ft
D. Water Column Height (ft):	15’	*= (A + B) - C*	4-inch well = 0.653 gal/ft
E. Total Well Volume (gal):	2.445 gal	*=D*G*	6-inch well = 1.468 gal/ft
F. Purge (3 volumes) (gal):	7.34 gal	*=E*3*	8-inch well = 2.609 gal/ft

Purge

Purge Date:	6/18/18	Pump/Method:	Bladder pump
Purge Start Time:	2:00 PM	Approx Flow Rate:	300 mL/min
Purge Stop Time:	3:45 PM	Approx Volume Removed:	~ 7 gal
Did well dry out?	No		

Sampling

Date:		pH			
Time:		Temp (ºC)			
Sample ID:		Conductivity (mS/cm)			
Sample Method:		TDS (ppm)			
		ORP (mV)			
		Turbidity (NTU)			
		DO (mg/L)			

Appearance

Dark brown

Comments

1st purging attempt. Turbidity too high to sample.

TGS = to ground surface

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Well Sampling Field Record

WELL NO	MW-30		
Date(s)	6/19/18		
Weather		Temperature	
Partly cloudy		High	83
		Low	64

Project		Project No.	
Location			

Well Info

Well #:	MW-30	Well Location:	
Well Diameter (in):	2”	Well Condition:	New, installed last week.
A. Total Well Depth (ft bgs):	47’	Depth to Bedrock (ft):	
B. TOC to Grade (ft):	0	TOC Elevation (ft):	
C. Depth to Water TOC (ft):	25.8’	G. Volume Factors:	2-inch well = 0.163 gal/ft
D. Water Column Height (ft):	21.2’	*= (A + B) - C*	4-inch well = 0.653 gal/ft
E. Total Well Volume (gal):	3.5 gal	*=D*G*	6-inch well = 1.468 gal/ft
F. Purge (3 volumes) (gal):	10.49 gal	*=E*3*	8-inch well = 2.609 gal/ft

Purge

Purge Date:	6/19/18	Pump/Method:	Bladder pump
Purge Start Time:	7:45 AM	Approx Flow Rate:	300 mL/min
Purge Stop Time:	10:30 AM	Approx Volume Removed:	12.8 gal
Did well dry out?	No		

Sampling

Date:		pH			
Time:		Temp (ºC)			
Sample ID:		Conductivity (mS/cm)			
Sample Method:		TDS (ppm)			
		ORP (mV)			
		Turbidity (NTU)			
		DO (mg/L)			

Appearance

Dark brown

Comments

1st purging attempt. Turbidity too high to sample.

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Well Sampling Field Record

WELL NO	MW-31		
Date(s)	6/20/18		
Weather		Temperature	
Sunny		High	76
		Low	56

Project		Project No.	
Location			

Well Info

Well #:	MW-31	Well Location:	
Well Diameter (in):	2”	Well Condition:	New, installed last week.
A. Total Well Depth (ft bgs):	40’	Depth to Bedrock (ft):	
B. TOC to Grade (ft):	0	TOC Elevation (ft):	
C. Depth to Water TOC (ft):	25.6’	G. Volume Factors:	2-inch well = 0.163 gal/ft
D. Water Column Height (ft):	14.4’	*= (A + B) - C*	4-inch well = 0.653 gal/ft
E. Total Well Volume (gal):	2.35 gal	*=D*G*	6-inch well = 1.468 gal/ft
F. Purge (3 volumes) (gal):	7.05 gal	*=E*3*	8-inch well = 2.609 gal/ft

Purge

Purge Date:	6/20/18	Pump/Method:	Monsoon Pro Pump
Purge Start Time:	8:40 AM	Approx Flow Rate:	2 gal/min
Purge Stop Time:	9:40 AM	Approx Volume Removed:	26 gal
Did well dry out?	No		

Sampling

Date:	6/20/18	pH			
Time:	9:50 AM	Temp (ºC)			
Sample ID:	MW-31	Conductivity (mS/cm)			
Sample Method:	Monsoon Pro Pump	TDS (ppm)			
		ORP (mV)			
		Turbidity (NTU)			
		DO (mg/L)			

Appearance

Dark brown at first, but cleared up after 11 gallons.

Comments

2nd purging. Sampled at 300mL/min.

PACE sample: 9:50 AM
PFA sample: 12:02 PM

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Well Sampling Field Record

WELL NO	MW-30		
Date(s)	6/20/18		
Weather		Temperature	
Sunny		High	76
		Low	56

Project		Project No.	
Location			

Well Info

Well #:	MW-30	Well Location:	
Well Diameter (in):	2"	Well Condition:	New, installed last week.
A. Total Well Depth (ft bgs):	47'	Depth to Bedrock (ft):	
B. TOC to Grade (ft):	0	TOC Elevation (ft):	
C. Depth to Water TOC (ft):	26.6'	G. Volume Factors:	2-inch well = 0.163 gal/ft
D. Water Column Height (ft):	20.4'	*= (A + B) - C*	4-inch well = 0.653 gal/ft
E. Total Well Volume (gal):	3.33 gal	*=D*G*	6-inch well = 1.468 gal/ft
F. Purge (3 volumes) (gal):	9.99 gal	*=E*3*	8-inch well = 2.609 gal/ft

Purge

Purge Date:	6/20/18	Pump/Method:	Bladder pump
Purge Start Time:	8:00 AM	Approx Flow Rate:	300 mL/min
Purge Stop Time:	10:45 AM	Approx Volume Removed:	4 gal
Did well dry out?	No		

Sampling

Date:		pH			
Time:		Temp (ºC)			
Sample ID:		Conductivity (mS/cm)			
Sample Method:		TDS (ppm)			
		ORP (mV)			
		Turbidity (NTU)			
		DO (mg/L)			

Appearance

Dark brown at first but cleared up.

Comments

2nd purging.
Well obstruction does not allow for submersible pump to get further than ~15' bgs.

Sampled all analytes at 10:45 AM.

Well location	MW-29
Date	6/18/2018

Time (min)	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	ORP	Depth to Water (ft)
8:23	6.93	0.91	23.9	708	4.35	-12.5	
8:30	7.37	0.87	22.5	283	5.73	-57	
8:36	7.3	0.88	19.2	59.7	7.06	-52.1	
8:43	7.24	0.89	18.2	32.5	7.54	-39	
8:51	8.4	0.90	17.6	8.77	7.89	-32.9	
8:56	8.62	0.89	18.1	13	8.13	-34.7	
9:07	7.12	0.90	16.7	76.9	6.35	-49.6	
9:16	6.98	0.91	16.5	43.1	7.07	-48.6	
9:21	7.00	0.90	16.4	25	6.81	-54	
9:26	6.96	0.91	16.4	24.7	6.41	-24.6	
9:32	6.98	0.91	16.6	35.1	6.41	-24.2	
9:37	7.00	0.91	16.6	13.7	7.61	-29.3	
9:42	6.99	0.91	16.2	9.91	6.55	-28.5	
9:46	7.04	0.90	17.6	11.4	6.45	-37.4	

Well location	MW-31
Date	6/18/2018

Time	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	ORP	Depth to Water (ft)
14:05	7.71	0.64	22.2	519	9.25	-24.2	
14:10	7.48	0.61	20.5	758	8.03	-9.0	
14:15	7.39	0.61	20.4	588	8.41	-14.9	
14:20	7.17	0.61	17.6	679	8.19	-43.9	
14:25	7.15	0.60	17.6	662	8.00	-68.0	
14:31	7.10	0.60	18.4	674	7.77	-69.2	
14:40	7.28	0.60	18.1	552	9.00	-71.0	
14:47	7.16	0.59	17.8	619	7.42	-71.7	
14:53	7.25	0.58	17.8	509	8.41	-68.7	
15:00	7.27	0.58	17.4	565	9.40	-69.2	
15:08	7.47	0.59	21.3	250	7.71	-63.7	
15:14	7.41	0.34	19.9	493	8.10	-66.7	
15:19	7.39	0.298	20.6	575	7.90	-58.7	
15:27	7.33	0.58	17.9	458	7.17	-63.9	
15:35	7.40	0.56	17.1	704	9.74	-61.5	

Well location	MW-30
Date	6/19/2018

Time	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	ORP	Depth to Water (ft)
8:04				755			
8:12				728			
8:26				572			
8:43				769			
9:00				772			
9:23				403			
9:47				680			
10:07	7.71	0.361	15.6	841	10.16	-81.7	
10:30	7.81	0.36	15.3	848	10.30	-97.1	

Well location	MW-31
Date	6/20/2018

Time	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	ORP	Depth to Water (ft)
9:13	6.88	0.541	15.6	18.5	1.22	-74.7	
9:25	7.13	0.547	16.1	42.2	0.73	-111.9	
9:28	7.14	0.551	15.3	55	1.18	-113.1	
9:31	6.94	0.545	15.2	38.7	0.71	-115.0	
9:34	7.01	0.547	14.9	24.4	1.02	-113.6	

Well location	MW-30
Date	6/20/2018

Time	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	ORP	Depth to Water (ft)
9:47	7.59	0.366	16.4	98.2	8.83	-98.5	
9:53	7.80	0.357	16.3	83.9	7.79	-107.6	
9:59	7.87	0.356	16.0	76.4	8.54	-118.7	
10:04	7.87	0.353	16.5	56.1	7.55	-130.3	
10:11	8.01	0.355	16.1	59.0	7.99	-134.8	
10:22	7.91	0.349	17.7	43.3	8.09	-85.4	
10:28	7.93	0.350	17.2	41.2	9.12	-113.0	
10:35	7.98	0.350	17.1	40.0	8.58	-111.0	

APPENDIX C
SOIL VAPOR FIELD SHEETS

envirospec ENGINEERING, PLLC

349 Northern Boulevard Suite 3▪ Albany, NY 12204 ▪ Phone: 518.453.2203 ▪ Fax: 518.453.2204

A Woman Owned Business Enterprise (WBE)

Soil Gas Sampling Field Data Sheet

Project Name	Green Island Northern Property
Date	6/7/18
Sampler Name	R. Farnum
Start Time	11:42 AM
End Time	12:39 PM
Sample ID	SV-10
Probe Depth	10' bgs
Probe Tubing Type	Teflon
	canister 189, regulator 172

Weather Conditions

Temperature 70 °F

Barometric Pressure _____ in Hg

Wind Speed and Direction _____

Significant precipitation event 24-48 hrs prior to sampling Y ☐ N ☒

If yes to significant precipitation event,

Date _____ Amount of Precipitation _____Inches

Soil Conditions

Apparent Moisture Content Dry ☒ Moist ☐ Saturated ☐

What is soil type encountered at sample location? Fill

Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☒

Describe the surface cover, if any _____

Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any _____

Sampling Train

Sample container: Canister: 1.0 L ☒ 6.0 L ☐

Other: _____

Tedlar bag: Y ☐ N ☐ Gas-tight syringe: Y ☐ N ☐

If canister:

Vacuum reading before sampling: -29 in Hg

Vacuum reading after sampling: -6 in Hg

Flow restrictor setting: _____ mL/min 1 hr setting

Tubing type (e.g. Teflon, stainless steel): Teflon

Tubing used from probe top to canister: Length: 120 inch ID: 0.25 inch

Tubing Volume: 0.003 ft^3

Leak Testing and Probe Purging before sampling

Total Volume of Probe + Tubing: 0.004 ft^3

Purge volumes removed: 3

Purging pump type: used helium detector

Purging pump flowrate: 50 cc/min

Tracer compound for leak testing: helium

For Helium leak testing:

Concentration of Helium in shroud: > 3 %

Container used to collect tracer gas sample: in tubing

Concentration of Helium in tracer gas sample (if greater than 10%, improve seal): < 3 %

Results of repeat testing, if needed, and comments on any necessary seal improvements in field:

Field Duplicate

Y ☐ N ☒

Used the Duplicate Splitter?

Other Comments

Soil Gas Sampling Field Data Sheet

Project Name	Green Island Northern Property
Date	6/7/18
Sampler Name	R. Farnum
Start Time	12:12 PM
End Time	1:11 PM
Sample ID	SV-9
Probe Depth	10' bgs
Probe Tubing Type	Teflon

SV-9 : canister 325

Weather Conditions SV-9 DUP : canister 365

Temperature 70 °F Regulator 67

Barometric Pressure _____ in Hg

Wind Speed and Direction _____

Significant precipitation event 24-48 hrs prior to sampling Y ☐ N ☒

If yes to significant precipitation event,

Date _____ Amount of Precipitation _____Inches

Soil Conditions

Apparent Moisture Content Dry ☒ Moist ☐ Saturated ☐

What is soil type encountered at sample location? Fill

Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☒ N ☐

Describe the surface cover, if any Parking lot

Was the sample collected near a subsurface conduit? Y ☐ N ☒

Describe subsurface conduit, if any _____

Sampling Train

Sample container: Canister: 1.0 L ☒ 6.0 L ☐

Other: _____

Tedlar bag: Y ☐ N ☐ Gas-tight syringe: Y ☐ N ☐

If canister:

Vacuum reading before sampling: -29.5 in Hg

Vacuum reading after sampling: -6 in Hg

Flow restrictor setting: _____ mL/min 1 hr setting

Tubing type (e.g. Teflon, stainless steel): Teflon

Tubing used from probe top to canister: Length: 120 inch ID: 0.25 inch

Tubing Volume: 0.003 ft^3

Leak Testing and Probe Purging before sampling

Total Volume of Probe + Tubing: 0.004 ft^3

Purge volumes removed: 3

Purging pump type: used helium detector

Purging pump flowrate: 50 cc/min

Tracer compound for leak testing: helium

For Helium leak testing:

Concentration of Helium in shroud: > 3 %

Container used to collect tracer gas sample: in tubing

Concentration of Helium in tracer gas sample (if greater than 10%, improve seal): < 3 %

Results of repeat testing, if needed, and comments on any necessary seal improvements in field:

Field Duplicate

Y ☒ N ☐

Used the Duplicate Splitter?

Yes

Other Comments

Soil Gas Sampling Field Data Sheet

Project Name	Green Island Northern Property
Date	6/7/18
Sampler Name	R. Farnum
Start Time	11:35 AM
End Time	2:42 PM
Sample ID	AA-02
Probe Depth	
Probe Tubing Type	

canister 131, regulator 262

Weather Conditions

Temperature 70 °F

Barometric Pressure _____ in Hg

Wind Speed and Direction _____

Significant precipitation event 24-48 hrs prior to sampling Y ☐ N ☒

If yes to significant precipitation event,

Date _____ Amount of Precipitation _____Inches

Soil Conditions Not applicable – ambient air

Apparent Moisture Content Dry ☒ Moist ☐ Saturated ☐

What is soil type encountered at sample location?

Was sample collected beneath a surface cover (e.g. parking lot, sidewalk, road, building, other)? Y ☐ N ☐

Describe the surface cover, if any _____

Was the sample collected near a subsurface conduit? Y ☐ N ☐

Describe subsurface conduit, if any _____

Sampling Train Not applicable – ambient air

Sample container: Canister: 1.0 L ☐ 6.0 L ☐

Other: _____

Tedlar bag: Y ☐ N ☐ Gas-tight syringe: Y ☐ N ☐

If canister:

Vacuum reading before sampling: -30 in Hg

Vacuum reading after sampling: -6 in Hg

Flow restrictor setting: _____ mL/min 4 hr setting

Tubing type (e.g. Teflon, stainless steel): _____

Tubing used from probe top to canister: Length:_____ inch ID: _____ inch

Tubing Volume: _____ ft^3

Leak Testing and Probe Purging before sampling Not applicable – ambient air

Total Volume of Probe + Tubing: _____ ft^3

Purge volumes removed: _____

Purging pump type: _____

Purging pump flowrate: _____

Tracer compound for leak testing: _____

For Helium leak testing:

Concentration of Helium in shroud: _____ %

Container used to collect tracer gas sample: _____

Concentration of Helium in tracer gas sample (if greater than 10%, improve seal): _____ %

Results of repeat testing, if needed, and comments on any necessary seal improvements in field:

Field Duplicate

Y ☐ N ☐

Used the Duplicate Splitter?

Other Comments

_____

_____

_____

_____

APPENDIX D
SOIL BORING PHOTO LOG

349 Northern Boulevard Suite 3▪ Albany, NY 12204 ▪ Phone: 518.453.2203 ▪ Fax: 518.453.2204
A Woman Owned Business Enterprise (WBE)

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/06/2018

Pic. #:

Comments:

SB-37 0'-5'
SB-37 5'-10'

Date:
06/06/2018

Pic. #:

Comments:

SB-37 10'-15'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/06/2018

Pic. #:

Comments:

SB-37 15'-20'

Date:
06/06/2018

Pic. #:

Comments:

SB-37 20'-25'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/06/2018

Pic. #:

Comments:

SB-37 25'-30'

Date:
06/07/2018

Pic. #:

Comments:

SB-38 0'-5'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/07/2018

Pic. #:

Comments:

SB-38 5'-10'
SB-38 10'-15'

Date:
06/07/2018

Pic. #:

Comments:

SB-38 15'-20'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/07/2018

Pic. #:

Comments:

SB-38 20'-25'

Date:
06/07/2018

Pic. #:

Comments:

SB-38 25'-30'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/07/2018

Pic. #:

Comments:

SB-39 0'-5'

Date:
06/07/2018

Pic. #:

Comments:

SB-39 5'-10'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/07/2018

Pic. #:

Comments:

SB-39 10'-15'

Date:
06/07/2018

Pic. #:

Comments:

SB-39 20'-25'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/07/2018

Pic. #:

Comments:

SB-39 25'-30'

Date:
06/07/2018

Pic. #:

Comments:

SB-40-0 0'-5'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/07/2018

Pic. #:

Comments:

SB-40 0'-5'

Date:
06/07/2018

Pic. #:

Comments:

SB-40 5'-10'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**
Date: **06/07/2018**	
Pic. #:	
Comments: **SB-40 10'-15'**	
Date: 06/07/2018	
Pic. #:	
Comments: **SB-40 15'-20'**	

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date: **06/07/2018**

Pic. #:

Comments:

SB-40 20'-25'

Date: 06/07/2018

Pic. #:

Comments:

SB-40 25'-30'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/07/2018

Pic. #:

Comments:

SB-40 30'-35'

Date:
06/06/2018

Pic. #:

Comments:

SB-41 5'-10'
SB-41 10'-15'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/06/2018

Pic. #:

Comments:

SB-41 15’-20’

Date:
06/06/2018

Pic. #:

Comments:

SB-41 20’-25’

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/06/2018

Pic. #:

Comments:

SB-41 25'-30'

Date:
06/06/2018

Pic. #:

Comments:

SB-42 0'-5'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/06/2018

Pic. #:

Comments:

SB-42 5'-10'
SB-42 10'-15'

Date:
06/06/2018

Pic. #:

Comments:

SB-42 15'-20'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date: **06/06/2018**

Pic. #:

Comments:

SB-42 20'-25'

Date: 06/06/2018

Pic. #:

Comments:

SB-42 25'-30'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/06/2018

Pic. #:

Comments:

SB-43 0'-5'
SB-43 5'-10'

Date:
06/06/2018

Pic. #:

Comments:

SB-43 10'-15'
SB-43 15'-20'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/06/2018

Pic. #:

Comments:

SB-43 20'-25'

Date:
06/06/2018

Pic. #:

Comments:

SB-43 25'-30'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/06/2018

Pic. #:

Comments:

SB-44 0'-5'

Date:
06/06/2018

Pic. #:

Comments:

SB-44 5'-10'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/06/2018

Pic. #:

Comments:

SB-44 10'-15'

Date:
06/06/2018

Pic. #:

Comments:

SB-44 15'-20'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/06/2018

Pic. #:

Comments:

SB-44 25'-30'

Date:
06/06/2018

Pic. #:

Comments:

SB-45 0'-5'
SB-45 5'-10'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/06/2018

Pic. #:

Comments:

SB-45 10'-15'
SB-45 15'-20'

Date:
06/06/2018

Pic. #:

Comments:

SB-45 20'-25'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:	Project Number: E17-1600
Site Name: **South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/06/2018

Pic. #:

Comments:

SB-45 25'-30'

Date:
06/06/2018

Pic. #:

Comments:

SB-46 0'-5'
SB-46 5'-10'

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME South Island Apartments JOB #____E17-1600_____ DATE___July 2018_____

Customer:		Project Number: E17-1600
Site Name:	**South Island RI Addendum**	Site Location: **Green Island, NY**

Date:
06/06/2018

Pic. #:

Comments:

SB-46 10'-15'

Date:
06/06/2018

Pic. #:

Comments:

SB-46 15'-20'
SB-46 20'-25'

APPENDIX E
TABLES OF SAMPLE RESULTS

envirospec ENGINEERING, PLLC

349 Northern Boulevard Suite 3▪ Albany, NY 12204 ▪ Phone: 518.453.2203 ▪ Fax: 518.453.2204

A Woman Owned Business Enterprise (WBE)

TABLE 10. Soil Analytical Results

				Sample ID	BS-10A	BS-10B	SB-37B	SB-37C DUP	SB-37C	SB-38B	SB-38C	SB-39B	SB-39C	SB-40BO	SB-40C	SB-41B	SB-41C
				Depth	0'-0.5'	0.5'-2'	2"-2'	25'-30'	25'-30'	2"-2'	25'-30'	2"-2'	25'-30'	2"-2'	30'-35'	2"-2'	25'-30'
				Sample Date	6/26/2018	6/26/2018	6/6/2018	6/6/2018	6/6/2018	6/7/2018	6/7/2018	6/7/2018	6/7/2018	6/7/2018	6/7/2018	6/6/2018	6/6/2018
Contaminants	6 NYCRR-375.6.8(b) Unrestricted Use	6 NYCRR-375.6.8(b) Residential	6 NYCRR-375.6.8(b) Commercial	6 NYCRR-375.6.8(b) Industrial													
Metals																	
Aluminum					9270	11000	8040	NA*	6860	10900	7960	9380	5960	10000	9310	11100	8390
Antimony					ND	ND	1.5	NA*	ND	0.98	ND	ND	ND	ND	1.9	ND	ND
Arsenic	13	16	16	16	14.0	7.9	8.7	NA*	2.1	10.5	2.3	4.6	3.5	7.4	9.8	6.8	5.1
Barium	350	400	400	10000	139	88.2	217	NA*	35.8	150	49.7	75.5	25.3	114	137	101	64.5
Beryllium	7.2	72	590	2700	0.65	0.53	0.52	NA*	0.38	0.95	0.41	0.48	0.32	0.56	1.1	0.50	0.45
Boron					ND	ND	7.6	NA*	ND	7.0	ND	ND	ND	ND	7.7	ND	ND
Cadmium	2.5	4.3	9.3	60	0.67	0.38	0.44	NA*	ND	0.66	ND	ND	ND	0.41	0.31	0.38	0.41
Calcium					8010	18400	8890	NA*	2490	18700	4640	32900	1210	19500	10700	13100	6260
Chromium **(1)**	1	110	140	800	16.6	14.7	14.6	NA*	9.5	31.8	16.6	18.1	7.7	14.7	113	16.6	20.4
Cobalt					10.1	12.1	7.0	NA*	5.8	13.5	7.8	7.5	5.1	8.1	10.6	9.7	8.6
Copper	50	270	270	10000	69.4	37.4	76.5	NA*	10.1	158	14.8	27.0	6.7	70.0	177	30.6	31.0
Iron					17300	20500	19500	NA*	14000	37400	14800	15600	12300	18300	39500	20500	15200
Lead	63	400	1000	3900	315	114	452	NA*	5.2	344	8.3	87.7	3.9	261	349	134	93.8
Magnesium					2870	7550	1690	NA*	2770	4880	4140	10400	2590	6330	3180	5170	4010
Manganese	1600	2000	10000	10000	485	442	357	NA*	174	566	147	413	142	391	514	511	223
Molybdenum					ND	ND	ND	NA*	ND	3.4	2.3	ND	ND	ND	37.4	ND	3.2
Nickel	30	310	310	10000	22.1	23.7	14.5	NA*	12.6	158	16.1	15.5	9.6	15.9	79.4	18.0	17.7
Potassium					1370	1310	1020	NA*	966	1570	1040	1440	820	1560	1500	1340	1210
Selenium	3.9	180	1500	6800	1.7	1.5	2.3	NA*	ND	2.0	1.6	ND	ND	1.6	1.0	ND	1.9
Silver	2	180	1500	6800	1.8	0.75	3.4	NA*	1.8	1.4	1.6	5.3	1.2	3.1	2.3	3.6	1.4
Sodium					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium					26.7	19.6	20.6	NA*	13.4	928	16.9	33.2	10.7	22.4	20.8	21.5	17.3
Zinc	109	10000	10000	10000	221	125	264	NA*	41.7	414	47.1	78.4	32.4	173	283	107	84.2
Mercury	0.18	0.81	2.8	5.7	0.38	0.36	2.0	NA*	ND	0.77	0.33	0.26	ND	1.3	1.2	0.16	0.80
Pesticides																	
4,4'-DDD	0.0033	13	92	180	ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
4,4'-DDE	0.0033	8.9	62	120	ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
4,4'-DDT	0.0033	7.9	47	94	ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
Aldrin	0.005	0.097	0.68	1.4	ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
Dieldrin	0.005	0.2	1.4	2.8	ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
Endosulfan I	2.4	24	200	920	ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
Endosulfan II	2.4	24	200	920	ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
Endosulfan sulfate	2.4	24	200	920	ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
Endrin	0.014	11	89	410	ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
Endrin aldehyde					ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
Endrin ketone					ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
Heptachlor	0.042	2.1	15	29	ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
Heptachlor epoxide					ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
Methoxychlor					ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
Toxaphene					ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
alpha-BHC	0.02	0.48	3.4	6.8	ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
alpha-Chlordane	0.094	4.2	24	47	ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
beta-BHC	0.036	0.42	3	14	ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
delta-BHC	0.04	100	500	1000	ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
gamma-BHC (Lindane)	0.1	1.3	9.2	23	ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
gamma-Chlordane					ND	ND	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*	ND	NA*
PCBs																	
PCB, Total					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1016 (Aroclor 1016)	0.1	1	1	25	ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1221 (Aroclor 1221)	0.1	1	1	25	ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1232 (Aroclor 1232)	0.1	1	1	25	ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1242 (Aroclor 1242)	0.1	1	1	25	ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1248 (Aroclor 1248)	0.1	1	1	25	ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1254 (Aroclor 1254)	0.1	1	1	25	ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1260 (Aroclor 1260)	0.1	1	1	25	ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOCs																	
1,1,1-Trichloroethane	0.68	100	500	1000	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
1,1,2,2-Tetrachloroethane					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
1,1,2-Trichloroethane					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
1,1-Dichloroethane	0.27	26	240	480	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
1,1-Dichloroethene	0.33	100	500	1000	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
1,2,4-Trichlorobenzene					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
1,2,4-Trimethylbenzene					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND

TABLE 10. Soil Analytical Results

				Sample ID	BS-10A	BS-10B	SB-37B	SB-37C DUP	SB-37C	SB-38B	SB-38C	SB-39B	SB-39C	SB-40BO	SB-40C	SB-41B	SB-41C
				Depth	0'-0.5'	0.5'-2'	2"-2'	25'-30'	25'-30'	2"-2'	25'-30'	2"-2'	25'-30'	2"-2'	30'-35'	2"-2'	25'-30'
				Sample Date	6/26/2018	6/26/2018	6/6/2018	6/6/2018	6/6/2018	6/7/2018	6/7/2018	6/7/2018	6/7/2018	6/7/2018	6/7/2018	6/6/2018	6/6/2018
Contaminants	6 NYCRR-375.6.8(b) Unrestricted Use	6 NYCRR-375.6.8(b) Residential	6 NYCRR-375.6.8(b) Commercial	6 NYCRR-375.6.8(b) Industrial													
1,2-Dichlorobenzene	1.1	100	500	1000	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
1,2-Dichloroethane	0.02	3.1	30	60	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
1,2-Dichloroethene (Total)					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
1,2-Dichloropropane					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
1,3,5-Trimethylbenzene					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
1,3-Dichlorobenzene	2.4	49	280	560	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
1,4-Dichlorobenzene	1.8	13	130	250	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
2-Butanone (MEK)	0.12	100	500	1000	ND	ND	ND	ND	ND	0.0114	ND	NA*	NA*	NA*	NA*	ND	ND
2-Hexanone					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
4-Methyl-2-pentanone (MIBK)					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Acetone	0.05	100	500	1000	0.213	0.213	0.0274	0.0680	0.0575	0.0606	0.0282	NA*	NA*	NA*	NA*	0.0528	0.0387
Benzene	0.06	4.8	44	89	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Bromochloromethane					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Bromodichloromethane					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Bromoform					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Bromomethane					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Carbon disulfide					ND	ND	ND	ND	ND	ND	0.0063	NA*	NA*	NA*	NA*	ND	ND
Carbon tetrachloride	0.76	2.4	22	44	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Chlorobenzene	1.1	100	500	1000	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Chloroethane					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Chloroform	0.37	49	350	700	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Chloromethane					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Dibromochloromethane					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Ethylbenzene	1	41	390	780	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Isopropylbenzene (Cumene)					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	0.0074
Methyl-tert-butyl ether	0.93	100	500	1000	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Methylene Chloride	0.05	100	500	1000	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Naphthalene					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Styrene					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Tetrachloroethene	1.3	19	150	300	0.0433	0.0143	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Toluene	0.7	100	500	1000	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Trichloroethene	0.47	21	200	400	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Vinyl chloride	0.02	0.9	13	27	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
Xylene (Total) **(2)**	0.26	100	500	1000	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
cis-1,2-Dichloroethene	0.25	100	500	1000	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
cis-1,3-Dichloropropene					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
m&p-Xylene					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
o-Xylene					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
trans-1,2-Dichloroethene	0.19	100	500	1000	ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
trans-1,3-Dichloropropene					ND	ND	ND	ND	ND	ND	ND	NA*	NA*	NA*	NA*	ND	ND
SVOCs																	
1,2,4-Trichlorobenzene					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1.1	100	500	1000	ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	2.4	49	280	560	ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1.8	13	130	250	ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene					ND	ND	1.59	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene					ND	ND	1.87	NA*	ND	ND	ND	ND	ND	ND	ND	ND	0.618
2-Methylphenol(o-Cresol)	0.33	100	500	1000	ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
3&4-Methylphenol(m&p Cresol)	0.33	100	500	1000	ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenylphenyl ether					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 10. Soil Analytical Results

				Sample ID	BS-10A	BS-10B	SB-37B	SB-37C DUP	SB-37C	SB-38B	SB-38C	SB-39B	SB-39C	SB-40BO	SB-40C	SB-41B	SB-41C
				Depth	0'-0.5'	0.5'-2'	2"-2'	25'-30'	25'-30'	2"-2'	25'-30'	2"-2'	25'-30'	2"-2'	30'-35'	2"-2'	25'-30'
				Sample Date	6/26/2018	6/26/2018	6/6/2018	6/6/2018	6/6/2018	6/7/2018	6/7/2018	6/7/2018	6/7/2018	6/7/2018	6/7/2018	6/6/2018	6/6/2018
Contaminants	6 NYCRR-375.6.8(b) Unrestricted Use	6 NYCRR-375.6.8(b) Residential	6 NYCRR-375.6.8(b) Commercial	6 NYCRR-375.6.8(b) Industrial													
4-Chloroaniline					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenylphenyl ether					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	100	500	1000	ND	ND	3.34	NA*	ND	ND	ND	ND	ND	ND	ND	ND	1.42
Acenaphthylene	100	100	500	1000	ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	100	100	500	1000	ND	ND	6.45	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	1	1	5.6	11	ND	ND	13.2	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	1	1	1	1.1	ND	ND	11.1	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	1	1	5.6	11	ND	ND	10.8	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	100	100	500	1000	ND	ND	3.05	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.8	3.9	56	110	ND	ND	8.46	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic acid					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole					ND	ND	2.60	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	1	3.9	56	110	ND	ND	13.3	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octylphthalate					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	0.33	0.33	0.56	1.1	ND	ND	1.73	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	7	59	350	1000	ND	ND	2.25	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	100	100	500	1000	ND	ND	32.7	NA*	ND	ND	0.446	ND	ND	ND	ND	ND	ND
Fluorene	30	100	500	1000	ND	ND	4.19	NA*	ND	ND	ND	ND	ND	ND	ND	ND	1.52
Hexachloro-1,3-butadiene					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.33	1.2	6	12	ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.5	0.5	5.6	11	ND	ND	3.32	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-n-propylamine					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodimethylamine					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	1.04
Naphthalene	12	100	500	1000	ND	ND	2.25	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	0.8	6.7	6.7	55	ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	100	100	500	1000	ND	ND	35.2	NA*	ND	ND	0.407	ND	ND	ND	ND	ND	2.81
Phenol	0.33	100	500	1000	ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	100	100	500	1000	ND	ND	30.3	NA*	ND	ND	0.421	ND	ND	ND	ND	ND	ND
bis(2-Chloroethoxy)methane					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl) ether					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroisopropyl) ether					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate					ND	ND	ND	NA*	ND	ND	ND	ND	ND	ND	ND	ND	ND
TPH																	
Total Petroleum Hydrocarbons					150	445	1790	404	378	NA*	NA*	NA*	353	493	475	454	6550

(1) Standards based on Chromium, hexavalent.
(2) Standards based on Xylene (mixed).
(3) All units in ppm
(4) 'ND' = Not Detected
(5) 'NA*' = Not Analyzed

(6) Results exceeding unrestricted SCOs are in ORANGE
(7) Results exceeding residential SCOs are RED
(8) Results exceeding commercial SCOs are BLUE
(9) Results exceeeding industrial SCOs are GREEN

TABLE 10. Soil Analytical Results

					Sample ID	SB-42A	SB-42B DUP	SB-42B	SB-42C	SB-43A	SB-43B	SB-43C	SB-44A-O	SB-44B	SB-44C	SB-45B	SB-45C	SB-46A	SB-46B	SB-46C DUP	SB-46C
					Depth	0-2"	2"-2'	2"-2'	25'-30'	0-2"	2"-2'	28'-30'	0-2"	2"-2'	25'-30'	2"-2'	25'-30'	0-2"	2"-2'	20'-25'	20'-25'
					Sample Date	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/62018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018
Contaminants	6 NYCRR-375.6.8(b) Unrestricted Use	6 NYCRR-375.6.8(b) Residential	6 NYCRR-375.6.8(b) Commercial	6 NYCRR-375.6.8(b) Industrial																	
Metals																					
Aluminum					10200	7590	8230	9390	11000	9560	5990	12200	7250	4310	8430	8400	8730	8340	8940	12100
Antimony					1.1	0.98	1.4	ND	1.8	3.4	ND	ND	ND	ND	ND	ND	0.70	2.6	ND	ND
Arsenic	13	16	16	16	8.6	7.4	7.3	5.1	6.8	9.1	2.2	6.2	3.8	2.0	5.2	5.9	6.1	13.0	7.2	7.8
Barium	350	400	400	10000	135	171	200	61.1	136	241	31.9	57.7	73.7	18.5	97.3	91.6	97.2	357	69.1	91.4
Beryllium	7.2	72	590	2700	0.57	1.1	1.2	0.48	0.65	0.82	0.29	0.60	0.34	0.26	0.39	0.46	0.48	0.57	0.49	0.64
Boron					ND	9.5	11.0	ND	9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.8
Cadmium	2.5	4.3	9.3	60	0.76	0.83	0.85	ND	0.72	0.82	ND	ND	0.30	ND	0.40	1.4	0.42	0.83	0.42	0.58
Calcium					11300	14800	21500	5260	11100	15800	3450	17100	27500	1350	20900	14500	8440	8720	9000	9670
Chromium **(1)**	1	110	140	800	20.5	34.7	25.5	14.7	23.9	74.4	9.2	15.7	16.3	6.4	18.4	24.3	16.6	17.2	19.2	27.9
Cobalt					7.7	8.9	8.3	7.3	9.5	10.4	5.5	11.5	5.9	4.2	6.7	8.4	7.1	9.2	9.6	11.2
Copper	50	270	270	10000	117	158	1790	19.9	119	143	10.4	29.8	21.3	7.0	41.8	41.6	56.5	140	29.1	54.0
Iron					21800	20800	18500	18300	22700	54400	12400	23700	11900	9540	16000	18900	17000	29900	18600	21800
Lead	63	400	1000	3900	355	534	811	16.7	333	660	18.6	13.2	69.5	11.2	133	92.2	207	926	42.0	69.7
Magnesium					4210	3250	4930	5240	5660	5740	3310	7880	5480	1800	4890	5250	4060	4420	5430	5770
Manganese	1600	2000	10000	10000	426	305	341	757	546	562	195	652	245	146	277	366	441	694	250	352
Molybdenum					ND	4.7	2.2	ND	ND	5.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	30	310	310	10000	19.6	43.7	28.4	17.2	22.4	32.6	11.4	22.1	15.0	8.8	16.2	16.8	16.0	18.7	18.4	22.2
Potassium					1760	1250	1430	1180	1410	1470	923	1460	1180	726	1080	1250	1550	1250	1290	1760
Selenium	3.9	180	1500	6800	1.3	1.1	0.96	ND	1.7	1.2	ND	ND	ND	ND	ND	ND	0.93	1.5	ND	ND
Silver	2	180	1500	6800	1.7	2.3	3.2	1.2	2.0	2.4	1.1	0.73	3.5	0.84	3.6	1.7	2.3	2.6	1.7	2.1
Sodium					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium					20.8	21.0	22.9	16.0	21.0	27.0	11.2	18.2	20.3	8.3	26.8	18.4	19.3	22.9	19.5	23.7
Zinc	109	10000	10000	10000	289	497	442	51.3	305	496	35.8	66.2	76.7	35.2	119	229	190	434	80.9	117
Mercury	0.18	0.81	2.8	5.7	1.7	1.8	3.6	0.15	1.5	0.58	ND	ND	ND	ND	0.46	0.61	0.84	1.8	0.24	0.64
Pesticides																				
4,4'-DDD	0.0033	13	92	180	NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	ND
4,4'-DDE	0.0033	8.9	62	120	NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	ND
4,4'-DDT	0.0033	7.9	47	94	NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	ND
Aldrin	0.005	0.097	0.68	1.4	NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	ND
Dieldrin	0.005	0.2	1.4	2.8	NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	ND
Endosulfan I	2.4	24	200	920	NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	ND
Endosulfan II	2.4	24	200	920	NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	ND
Endosulfan sulfate	2.4	24	200	920	NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	ND
Endrin	0.014	11	89	410	NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	ND
Endrin aldehyde					NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	ND
Endrin ketone					NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	0.0150
Heptachlor	0.042	2.1	15	29	NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	ND
Heptachlor epoxide					NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	ND
Methoxychlor					NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	ND
Toxaphene					NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	ND
alpha-BHC	0.02	0.48	3.4	6.8	NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	ND
alpha-Chlordane	0.094	4.2	24	47	NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	0.0202	ND	NA*	NA*	ND	NA*	ND	ND
beta-BHC	0.036	0.42	3	14	NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	ND
delta-BHC	0.04	100	500	1000	NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	ND
gamma-BHC (Lindane)	0.1	1.3	9.2	23	NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	ND	ND	NA*	NA*	ND	NA*	ND	0.0142
gamma-Chlordane					NA*	NA*	NA*	NA*	NA*	ND	ND	NA*	0.0233	ND	NA*	NA*	ND	NA*	ND	ND
PCBs																				
PCB, Total					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1016 (Aroclor 1016)	0.1	1	1	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1221 (Aroclor 1221)	0.1	1	1	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1232 (Aroclor 1232)	0.1	1	1	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1242 (Aroclor 1242)	0.1	1	1	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1248 (Aroclor 1248)	0.1	1	1	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1254 (Aroclor 1254)	0.1	1	1	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1260 (Aroclor 1260)	0.1	1	1	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOCs																				
1,1,1-Trichloroethane	0.68	100	500	1000	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
1,1,2,2-Tetrachloroethane					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
1,1,2-Trichloroethane					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
1,1-Dichloroethane	0.27	26	240	480	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
1,1-Dichloroethene	0.33	100	500	1000	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
1,2,4-Trichlorobenzene					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
1,2,4-Trimethylbenzene					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
1,2-Dichlorobenzene	1.1	100	500	1000	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
1,2-Dichloroethane	0.02	3.1	30	60	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
1,2-Dichloroethene (Total)					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
1,2-Dichloropropane					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
1,3,5-Trimethylbenzene					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
1,3-Dichlorobenzene	2.4	49	280	560	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
1,4-Dichlorobenzene	1.8	13	130	250	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
2-Butanone (MEK)	0.12	100	500	1000	ND	NA*	NA*	NA*	NA*	0.0381	ND	NA*	NA*	NA*	ND	ND	0.0214	NA*	NA*	NA*
2-Hexanone					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
4-Methyl-2-pentanone (MIBK)					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Acetone	0.05	100	500	1000	0.130	NA*	NA*	NA*	NA*	0.270	0.0219	NA*	NA*	NA*	0.0642	0.0509	0.285	NA*	NA*	NA*
Benzene	0.06	4.8	44	89	0.0069	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*

TABLE 10. Soil Analytical Results

				Sample ID	SB-42A	SB-42B DUP	SB-42B	SB-42C	SB-43A	SB-43B	SB-43C	SB-44A-O	SB-44B	SB-44C	SB-45B	SB-45C	SB-46A	SB-46B	SB-46C DUP	SB-46C
				Depth	0-2"	2"-2'	2"-2'	25'-30'	0-2"	2"-2'	28'-30'	0-2"	2"-2'	25'-30'	2"-2'	25'-30'	0-2"	2"-2'	20'-25'	20'-25'
				Sample Date	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/62018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018
Contaminants	6 NYCRR-375.6.8(b) Unrestricted Use	6 NYCRR-375.6.8(b) Residential	6 NYCRR-375.6.8(b) Commercial	6 NYCRR-375.6.8(b) Industrial																
Bromochloromethane					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Bromodichloromethane					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Bromoform					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Bromomethane					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Carbon disulfide					ND	NA*	NA*	NA*	NA*	0.0092	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Carbon tetrachloride	0.76	2.4	22	44	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Chlorobenzene	1.1	100	500	1000	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Chloroethane					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Chloroform	0.37	49	350	700	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Chloromethane					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Dibromochloromethane					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Ethylbenzene	1	41	390	780	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Isopropylbenzene (Cumene)					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Methyl-tert-butyl ether	0.93	100	500	1000	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Methylene Chloride	0.05	100	500	1000	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Naphthalene					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Styrene					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Tetrachloroethene	1.3	19	150	300	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Toluene	0.7	100	500	1000	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Trichloroethene	0.47	21	200	400	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Vinyl chloride	0.02	0.9	13	27	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
Xylene (Total) **(2)**	0.26	100	500	1000	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
cis-1,2-Dichloroethene	0.25	100	500	1000	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
cis-1,3-Dichloropropene					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
m&p-Xylene					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
o-Xylene					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
trans-1,2-Dichloroethene	0.19	100	500	1000	ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
trans-1,3-Dichloropropene					ND	NA*	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	ND	ND	NA*	NA*	NA*
SVOCs																				
1,2,4-Trichlorobenzene					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1.1	100	500	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	2.4	49	280	560	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1.8	13	130	250	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol(o-Cresol)	0.33	100	500	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3&4-Methylphenol(m&p Cresol)	0.33	100	500	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenylphenyl ether					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenylphenyl ether					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	100	500	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	100	100	500	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	100	100	500	1000	1.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.42
Azobenzene					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	1	1	5.6	11	3.59	ND	ND	ND	ND	ND	ND	ND	ND	0.506	ND	ND	0.570	0.436	1.20	3.53
Benzo(a)pyrene	1	1	1	1.1	3.27	ND	ND	ND	ND	ND	ND	ND	ND	0.455	ND	ND	0.612	ND	1.11	2.77
Benzo(b)fluoranthene	1	1	5.6	11	3.30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.582	ND	0.831	2.00
Benzo(g,h,i)perylene	100	100	500	1000	0.883	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.567	0.722
Benzo(k)fluoranthene	0.8	3.9	56	110	3.98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.631	ND	0.849	2.47
Benzoic acid					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole					0.817	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	1	3.9	56	110	3.65	ND	ND	ND	ND	ND	ND	ND	ND	0.467	ND	ND	0.626	0.486	1.19	3.14
Di-n-butylphthalate					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octylphthalate					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	0.33	0.33	0.56	1.1	0.429	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	7	59	350	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 10. Soil Analytical Results

				Sample ID	SB-42A	SB-42B DUP	SB-42B	SB-42C	SB-43A	SB-43B	SB-43C	SB-44A-O	SB-44B	SB-44C	SB-45B	SB-45C	SB-46A	SB-46B	SB-46C DUP	SB-46C
				Depth	0-2"	2"-2'	2"-2'	25'-30'	0-2"	2"-2'	28'-30'	0-2"	2"-2'	25'-30'	2"-2'	25'-30'	0-2"	2"-2'	20'-25'	20'-25'
				Sample Date	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/62018	6/6/2018	6/6/2018	6/6/2018	6/6/2018	6/6/2018
Contaminants	6 NYCRR-375.6.8(b) Unrestricted Use	6 NYCRR-375.6.8(b) Residential	6 NYCRR-375.6.8(b) Commercial	6 NYCRR-375.6.8(b) Industrial																
Fluoranthene	100	100	500	1000	9.38	5.64	4.27	ND	ND	0.632	ND	ND	ND	1.09	ND	0.585	1.14	0.856	2.37	7.26
Fluorene	30	100	500	1000	0.580	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloro-1,3-butadiene					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.33	1.2	6	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.5	0.5	5.6	11	1.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.591	0.916
Isophorone					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-n-propylamine					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodimethylamine					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	12	100	500	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	0.8	6.7	6.7	55	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	100	100	500	1000	6.57	ND	ND	ND	ND	ND	ND	ND	ND	0.833	ND	ND	0.557	0.718	2.09	6.18
Phenol	0.33	100	500	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	100	100	500	1000	7.17	5.12	ND	ND	ND	0.531	ND	ND	ND	0.915	ND	0.554	1.15	0.803	2.64	7.02
bis(2-Chloroethoxy)methane					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl) ether					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroisopropyl) ether					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TPH																				
Total Petroleum Hydrocarbons					389	NA*	NA*	NA*	NA*	335	129	NA*	NA*	NA*	3640	851	318	NA*	NA*	NA*

(1) Standards based on Chromium, hexavalent.
(2) Standards based on Xylene (mixed).
(3) All units in ppm
(4) 'ND' = Not Detected
(5) 'NA*' = Not Analyzed

(6) Results exceeding unrestricted SCOs are in ORANGE
(7) Results exceeding residential SCOs are RED
(8) Results exceeding commercial SCOs are BLUE
(9) Results exceeeding industrial SCOs are GREEN

TABLE 11. Groundwater Analytical Results

Analyte	Part 703 Groundwater A Standard	MW-29 6/18/18	MW-29 DUP 6/18/18	MW-30 6/20/18	MW-31 6/20/18
Total Metals					
Aluminum		ND	16600	902	174
Antimony	3	ND	ND	ND	ND
Arsenic	25	6.1	18.6	ND	6
Barium	1000	355	498	344	131
Beryllium		ND	ND	ND	ND
Cadmium	5	ND	ND	ND	ND
Calcium		105000	110000	41400	70400
Chromium	50	ND	22.7	ND	ND
Cobalt		ND	13.8	ND	ND
Copper	200	ND	32.6	ND	ND
Iron	300	14400	55100	1350	6160
Lead	25	ND	13.7	ND	ND
Magnesium		13000	19400	6500	9400
Manganese	300	3040	3700	469	880
Mercury	0.7	ND	ND	ND	ND
Nickel	100	ND	29.2	ND	ND
Potassium		7700	9310	6680	7960
Selenium	10	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND
Sodium	20000	55100	55100	17600	28300
Thallium		ND	ND	ND	ND
Vanadium		ND	26.6	ND	ND
Zinc		97.1	ND	ND	ND
Dissolved Metals					
Aluminum, Dissolved		ND	ND	ND	ND
Antimony, Dissolved	3	ND	ND	ND	ND
Arsenic, Dissolved	25	ND	ND	ND	ND
Barium, Dissolved	1000	286	284	335	119
Beryllium, Dissolved		ND	ND	ND	ND
Cadmium, Dissolved	5	ND	ND	ND	ND
Calcium, Dissolved		104000	105000	42200	68400
Chromium, Dissolved	50	ND	ND	ND	ND
Cobalt, Dissolved		ND	ND	ND	ND
Copper, Dissolved	200	ND	ND	ND	ND
Iron, Dissolved	300	122	ND	ND	2740
Lead, Dissolved	25	ND	ND	ND	ND
Magnesium, Dissolved		12800	12900	6410	9100
Manganese, Dissolved	300	2900	2930	463	848
Mercury, Dissolved	0.7	ND	ND	ND	ND
Nickel, Dissolved	100	ND	ND	ND	ND
Potassium, Dissolved		7600	7630	6640	7680
Selenium, Dissolved	10	ND	ND	ND	ND
Silver, Dissolved	50	ND	ND	ND	ND
Sodium, Dissolved	20000	54600	55400	18100	27300
Thallium, Dissolved		ND	ND	ND	ND
Vanadium, Dissolved		ND	ND	ND	ND
Zinc, Dissolved		ND	ND	ND	ND
Pesticides					
4,4'-DDD	0.3	ND	ND	ND	ND
4,4'-DDE	0.2	ND	ND	ND	ND

TABLE 11. Groundwater Analytical Results

Analyte	Part 703 Groundwater A Standard	MW-29 6/18/18	MW-29 DUP 6/18/18	MW-30 6/20/18	MW-31 6/20/18
4,4'-DDT	0.2	ND	ND	ND	ND
Aldrin	ND	ND	ND	ND	ND
alpha-BHC	0.01	ND	ND	ND	ND
alpha-Chlordane		ND	ND	ND	ND
beta-BHC	0.04	ND	ND	ND	ND
delta-BHC	0.04	ND	ND	ND	ND
Dieldrin	0.004	ND	ND	ND	ND
Endosulfan I		ND	ND	ND	ND
Endosulfan II		ND	ND	ND	ND
Endosulfan sulfate		ND	ND	ND	ND
Endrin	ND	ND	ND	ND	ND
Endrin aldehyde	5	ND	ND	ND	ND
Endrin ketone	5	ND	ND	ND	ND
gamma-BHC (Lindane)	0.05	ND	ND	ND	ND
gamma-Chlordane	0.05	ND	ND	ND	ND
Heptachlor	0.04	ND	ND	ND	ND
Heptachlor epoxide	0.03	ND	ND	ND	ND
Methoxychlor	35	ND	ND	ND	ND
Toxaphene	0.06	ND	ND	ND	ND
PCBs					
PCB-1016 **(2)**		ND	ND	ND	ND
PCB-1221 **(2)**		ND	ND	ND	ND
PCB-1232 **(2)**		ND	ND	ND	ND
PCB-1242 **(2)**		ND	ND	ND	ND
PCB-1248 **(2)**		ND	ND	ND	ND
PCB-1254 **(2)**		ND	ND	ND	ND
PCB-1260 **(2)**		ND	ND	ND	ND
PCB-1262 **(2)**		ND	ND	ND	ND
PCB-1268 **(2)**		ND	ND	ND	ND
Polychlorinated biphenyls, Total	0.09				
VOCs					
1,1,1-Trichloroethane	5	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	5	ND	ND	ND	ND
1,1,2-Trichloroethane	1	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	0.04	ND	ND	ND	ND
1,2-Dibromoethane	0.0006	ND	ND	ND	ND
1,2-Dichlorobenzene	3	ND	ND	ND	ND
1,2-Dichloroethane	0.6	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND
1,3-Dichlorobenzene	3	ND	ND	ND	ND
1,4-Dichlorobenzene	3	ND	ND	ND	ND
2-Butanone (MEK)		ND	ND	ND	ND
2-Hexanone		ND	ND	ND	ND
4-Methyl-2-pentanone (MIBK)		ND	ND	ND	ND
Acetone		ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND
Bromodichloromethane		ND	ND	ND	ND

TABLE 11. Groundwater Analytical Results

Analyte	Part 703 Groundwater A Standard	MW-29 6/18/18	MW-29 DUP 6/18/18	MW-30 6/20/18	MW-31 6/20/18
Bromoform		ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND
Carbon disulfide	60	ND	ND	ND	ND
Carbon tetrachloride	5	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND
Chloroform	7	ND	ND	ND	ND
Chloromethane	5	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	2.3
cis-1,3-Dichloropropene **(3)**	0.4	ND	ND	ND	ND
Cyclohexane		ND	ND	ND	ND
Dibromochloromethane		ND	ND	ND	ND
Dichlorodifluoromethane	5	ND	ND	ND	ND
Ethylbenzene	5	ND	ND	ND	ND
Isopropylbenzene	5	ND	ND	ND	ND
Methyl acetate		ND	ND	ND	ND
Methyl tert-butyl ether		ND	ND	ND	ND
Methylcyclohexane		ND	ND	ND	ND
Methylene Chloride	5	ND	ND	ND	ND
Styrene	5	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND
trans-1,3-Dichloropropene **(3)**	0.4	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND
Trichlorofluoromethane	5	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND
Xylenes, Total	5	ND	ND	ND	ND
SVOCs					
2,4,5-Trichlorophenol		ND	ND	ND	ND
2,4,6-Trichlorophenol		ND	ND	ND	ND
2,4-Dichlorophenol **(1)**	1	ND	ND	ND	ND
2,4-Dimethylphenol **(1)**	1	ND	ND	ND	ND
2,4-Dinitrophenol **(1)**	1	ND	ND	ND	ND
2,4-Dinitrotoluene	5	ND	ND	ND	ND
2,6-Dinitrotoluene	5	ND	ND	ND	ND
2-Chloronaphthalene		ND	ND	ND	ND
2-Chlorophenol		ND	ND	ND	ND
2-Methylnaphthalene		ND	ND	ND	ND
2-Methylphenol		ND	ND	ND	ND
2-Nitroaniline	5	ND	ND	ND	ND
2-Nitrophenol		ND	ND	ND	ND
3,3'-Dichlorobenzidine	5	ND	ND	ND	ND
3-Nitroaniline	5	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol		ND	ND	ND	ND
4-Bromophenyl phenyl ether		ND	ND	ND	ND
4-Chloro-3-methylphenol		ND	ND	ND	ND
4-Chloroaniline	5	ND	ND	ND	ND
4-Chlorophenyl phenyl ether		ND	ND	ND	ND
4-Methylphenol		ND	ND	ND	ND
4-Nitroaniline	5	ND	ND	ND	ND

TABLE 11. Groundwater Analytical Results

Analyte	Part 703 Groundwater A Standard	MW-29 6/18/18	MW-29 DUP 6/18/18	MW-30 6/20/18	MW-31 6/20/18
4-Nitrophenol		ND	ND	ND	ND
Acenaphthene		ND	ND	ND	ND
Acenaphthylene		ND	ND	ND	ND
Acetophenone		ND	ND	ND	ND
Anthracene		ND	ND	ND	ND
Atrazine	7.5	ND	ND	ND	ND
Benzaldehyde		ND	ND	ND	ND
Benzo(a)anthracene		ND	ND	ND	ND
Benzo(a)pyrene	ND	ND	ND	ND	ND
Benzo(b)fluoranthene		ND	ND	ND	ND
Benzo(g,h,i)perylene		ND	ND	ND	ND
Benzo(k)fluoranthene		ND	ND	ND	ND
Biphenyl	5	ND	ND	ND	ND
bis (2-chloroisopropyl) ether	5	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	5	ND	ND	ND	ND
Bis(2-chloroethyl)ether	1	ND	ND	ND	ND
Bis(2-ethylhexyl) phthalate	5	ND	ND	ND	ND
Butyl benzyl phthalate		ND	ND	ND	ND
Caprolactam		ND	ND	ND	ND
Carbazole		ND	ND	ND	ND
Chrysene		ND	ND	ND	ND
Dibenz(a,h)anthracene	50	ND	ND	ND	ND
Dibenzofuran		ND	ND	ND	ND
Diethyl phthalate		ND	ND	ND	ND
Dimethyl phthalate		ND	ND	ND	ND
Di-n-butyl phthalate	50	ND	ND	ND	ND
Di-n-octyl phthalate		ND	ND	ND	ND
Fluoranthene		ND	ND	ND	ND
Fluorene		ND	ND	ND	ND
Hexachlorobenzene	0.04	ND	ND	ND	ND
Hexachlorobutadiene	0.5	ND	ND	ND	ND
Hexachlorocyclopentadiene	5	ND	ND	ND	ND
Hexachloroethane	5	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene		ND	ND	ND	ND
Isophorone		ND	ND	ND	ND
Naphthalene		ND	ND	ND	ND
Nitrobenzene	0.4	ND	ND	ND	ND
N-Nitrosodi-n-propylamine		ND	ND	ND	ND
N-Nitrosodiphenylamine		ND	ND	ND	ND
Pentachlorophenol **(1)**	1	ND	ND	ND	ND
Phenanthrene		ND	ND	ND	ND
Phenol **(1)**	1	ND	ND	ND	ND
Pyrene		ND	ND	ND	ND
TPH					
GRO (C6-C10)		ND	ND	ND	ND
DRO (C10-C28)		180	260	ND	ND
PFAS					
Perfluorobutanoic Acid (PFBA)		0.00394	0.00385	0.00146	0.00516
Perfluoropentanoic Acid (PFPeA)		0.00551	0.00653	0.00131	0.00472
Perfluorobutanesulfonic Acid (PFBS)		0.00286	0.00259	0.000515	0.00222
Perfluorohexanoic Acid (PFHxA)		0.00418	0.00414	0.00105	0.00502

TABLE 11. Groundwater Analytical Results

Analyte	Part 703 Groundwater A Standard	MW-29 6/18/18	MW-29 DUP 6/18/18	MW-30 6/20/18	MW-31 6/20/18
Perfluoroheptanoic Acid (PFHpA)		0.00167	0.00174	ND	0.00196
Perfluorohexanesulfonic Acid (PFHxS)		0.0029	0.00328	0.000385	0.00162
Perfluorooctanoic Acid (PFOA)		0.00329	0.00394	0.000300	0.0035
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)		ND	0.000841	ND	0.0199
Perfluoroheptanesulfonic Acid (PFHpS)		ND	ND	ND	ND
Perfluorononanoic Acid (PFNA)		0.00227	0.00225	0.000165	0.00114
Perfluorooctanesulfonic Acid (PFOS)		0.00236	0.00203	0.000258	0.0033
Perfluorodecanoic Acid (PFDA)		ND	ND	ND	0.000236
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)		ND	ND	ND	ND
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)		ND	ND	ND	ND
Perfluoroundecanoic Acid (PFUnA)		ND	ND	ND	0.000556
Perfluorodecanesulfonic Acid (PFDS)		ND	ND	ND	ND
Perfluorooctanesulfonamide (FOSA)		ND	ND	ND	ND
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)		0.000411	ND	ND	ND
Perfluorododecanoic Acid (PFDoA)		ND	ND	ND	ND
Perfluorotridecanoic Acid (PFTrDA)		ND	ND	ND	ND
Perfluorotetradecanoic Acid (PFTA)		ND	0.000404	ND	ND

(1) Based on total phenols standard
(2) See total standard
(3) cis and trans-1,3-dichloropropene standard is total
(4) All results in ppb.

Table 12. Soil Vapor Analytical Results

Analyses	Detection Limit	NYSDOH Air Guideline Values ($\mu g/m^3$)[a]	SV9	SV9 DUP	SV10	AA-02
1,1,1-Trichloroethane	0.82		ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	1		ND	ND	ND	ND
1,1,2-Trichloroethane	0.82		ND	ND	ND	ND
1,1-Dichloroethane	0.61		ND	ND	ND	ND
1,1-Dichloroethene	0.59		ND	ND	ND	ND
1,2,4-Trichlorobenzene	1.1		ND	ND	ND	ND
1,2,4-Trimethylbenzene	0.74		20	21	14	ND
1,2-Dibromoethane	1.2		ND	ND	ND	ND
1,2-Dichlorobenzene	0.9		ND	ND	ND	ND
1,2-Dichloroethane	0.61		ND	ND	ND	ND
1,2-Dichloropropane	0.69		ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.74		8.2	8.2	5.2	ND
1,3-butadiene	0.33		ND	ND	ND	ND
1,3-Dichlorobenzene	0.9		ND	ND	ND	ND
1,4-Dichlorobenzene	0.9		ND	ND	ND	ND
1,4-Dioxane	1.1		ND	ND	ND	ND
2,2,4-trimethylpentane	0.7		5.2	4.8	6	ND
4-ethyltoluene	0.74		9.9	10	6.8	ND
Acetone	1200		5300	4200	11000	130
Allyl chloride	0.47		ND	ND	ND	ND
Benzene	4.8		15	16	5.7	ND
Benzyl chloride	0.86		ND	ND	ND	ND
Bromodichloromethane	1		ND	ND	ND	ND
Bromoform	1.6		ND	ND	ND	ND
Bromomethane	0.58		ND	ND	ND	ND
Carbon disulfide	0.47		3.6	3.6	12	ND
Carbon tetrachloride	0.94		ND	ND	ND	ND
Chlorobenzene	0.69		ND	ND	ND	ND
Chloroethane	0.4		ND	ND	ND	ND
Chloroform	0.73		ND	ND	ND	ND
Chloromethane	0.31		1.3	ND	ND	0.64
cis-1,2-Dichloroethene	0.59		ND	ND	ND	ND
cis-1,3-Dichloropropene	0.68		ND	ND	ND	ND
Cyclohexane	0.52		5.6	5	5.3	ND
Dibromochloromethane	1.3		ND	ND	ND	ND
Ethyl acetate	0.54		2.4	ND	2.1	0.4
Ethylbenzene	6.5		44	44	26	ND
Freon 11	0.84		1.2	1.1	ND	0.84
Freon 113	1.1		ND	ND	ND	ND
Freon 114	1		ND	ND	ND	ND
Freon 12	0.74		1.7	1.9	0.94	1.8
Heptane	25		130	130	210	ND
Hexachloro-1,3-butadiene	1.6		ND	ND	ND	ND
Hexane	5.3		60	60	20	0.39
Isopropyl alcohol	0.37		ND	ND	ND	4.8
m&p-Xylene	13		130	130	78	ND
Methyl Butyl Ketone	1.2		ND	ND	ND	8
Methyl Ethyl Ketone	35		100	120	640	4.1
Methyl Isobutyl Ketone	1.2		ND	ND	8.3	0.53
Methyl tert-butyl ether	0.54		ND	ND	0.5	ND
Methylene chloride	0.52	60	ND	ND	ND	0.45
o-Xylene	6.5		38	38	23	ND
Propylene	0.26		ND	ND	ND	ND
Styrene	0.64		ND	ND	ND	ND
Tetrachloroethylene	10	100	29	33	19	ND
Tetrahydrofuran	0.44		ND	ND	ND	ND
Toluene	0.57		140	130	73	0.83
trans-1,2-Dichloroethene	0.59		1.5	ND	ND	ND
trans-1,3-Dichloropropene	0.68		ND	ND	ND	ND
Trichloroethene	0.81	5	ND	ND	ND	ND
Vinyl acetate	0.53		ND	ND	ND	ND
Vinyl Bromide	0.66		ND	ND	ND	ND
Vinyl chloride	0.38		ND	ND	ND	ND

[a] = From Table 3.1 in NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in the State of New York", October 2006.

APPENDIX F
SB-12 PHOTO LOG

349 Northern Boulevard Suite 3▪ Albany, NY 12204 ▪ Phone: 518.453.2203 ▪ Fax: 518.453.2204
A Woman Owned Business Enterprise (WBE)

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME__South Island Apartments__ JOB #___E17-1600_____ DATE_____July 2018_____

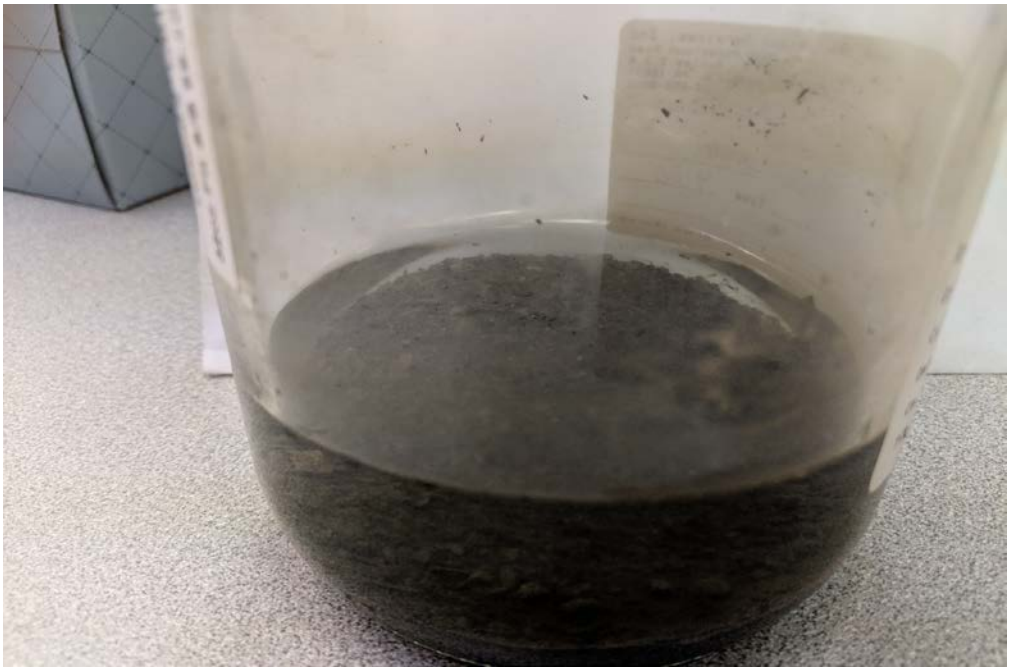
Customer:	Project Number: E17-1600
Site Name: South Island Apartments	Site Location: Green Island, NY

Date: 6/22/2018

Pic. #: 1

Comments:

Water sample from SB-12



Date: 6/22/2018

Pic. #: 2

Comments:

Water sample from SB-12

envirospec ENGINEERING, PLLC	**Photo Log**	JOB NAME__South Island Apartments__ JOB #___E17-1600_____ DATE_____July 2018_____

Customer:	Project Number: E17-1600
Site Name: South Island Apartments	Site Location: Green Island, NY

Date: 6/22/2018

Pic. #: 3

Comments:

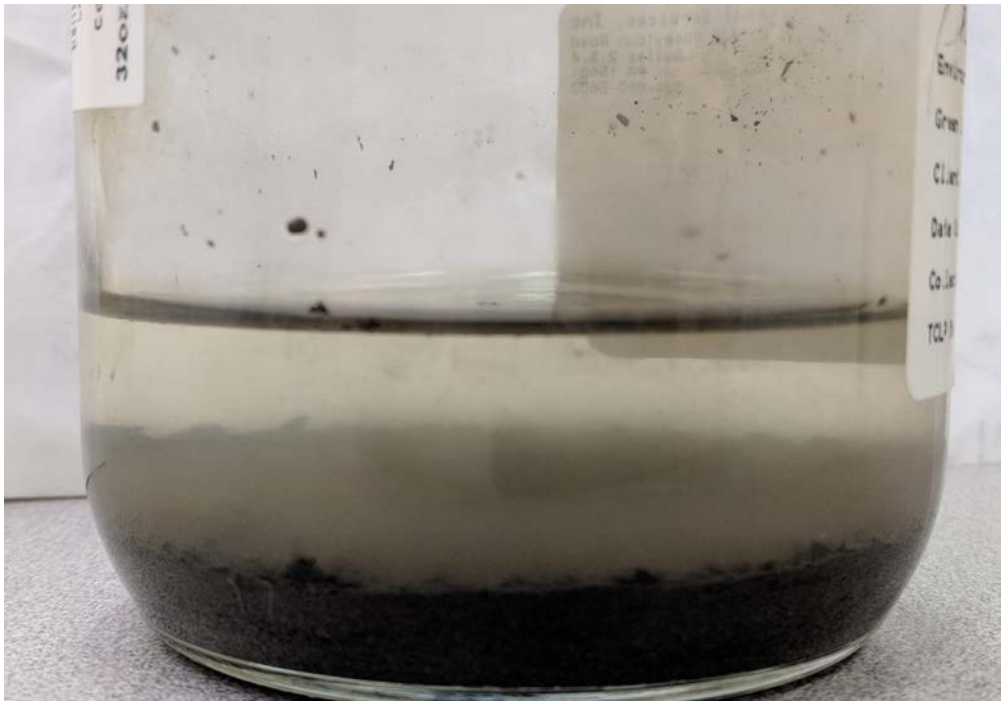
Water sample from SB-12

Date: 6/22/2018

Pic. #: 4

Comments:

Water sample from SB-12



APPENDIX G
UPDATED FISH AND WILDLIFE RESOURCE IMPACT ANALYSIS (FWRIA)

envirospec ENGINEERING, PLLC

349 Northern Boulevard Suite 3▪ Albany, NY 12204 ▪ Phone: 518.453.2203 ▪ Fax: 518.453.2204

A Woman Owned Business Enterprise (WBE)

FISH AND WILDLIFE RESOURCE IMPACT ANALYSIS (FWRIA)

South Island Apartments Site

1 Osgood Avenue/Center Island,

Town of Green Island, Albany County, New York

BCP Site # C401074

August 2018

Prepared for:

South Island Apartments, LLC
c/o Couch White, LLP
540 Broadway, 7th Floor
Albany, New York 12201-2222

Prepared by:

349 Northern Blvd. STE 3
Albany, NY 12205

Envirospec Engineering Project E17-1600

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1.0 INTRODUCTION

A Fish and Wildlife Resources Impact Analysis (FWRIA) was completed for the site. Potential exposure pathways and potential impact on nearby resources was evaluated. The supporting information used to complete the analysis and form the conclusions regarding the potential for impacts are addressed in the following sections.

2.0 SITE MAPS

2.1 Topographic Map

The topographic maps of the site are provided in Figures 1 and 2. The maps illustrate areas on the National Wetlands Inventory and other significant habitats and waterways within one-half (1/2) mile of the site.

2.1.1 Habitats supporting rare, threatened or endangered species

According to Environmental Resource Mapper, habitats in the area include riverine, freshwater forested, and shrub wetland areas.

2.1.2 NYS-regulated wetlands

There are no NYS-regulated wetlands. However, there are two areas and a perimeter of a third freshwater forested/ shrub wetlands on the national inventory of wetlands.

2.1.3 Waterways

The primary waterway within one-half mile of the site is the Hudson River, which is Classification C. According to the Environmental Resource Mapper, there is also a Classification D stream and a Classification C stream within the one-half mile distance. The Hudson River is also a significant coastal fish and wildlife habitat area.

2.1.4 State Forests and Nature Preserves

There are no state forests or nature preserves located within one-half mile of the site.

2.2 Covertype Maps

The covertype maps are provided in Figure 1, 2, and 3 and focus on habitat areas within one-half mile of the site.

2.2.1 Terrestrial Habitats

The site is located in an urban environment. There are trees and shrubs in the area but mostly for privacy/scenery.

2.2.2 Freshwater Habitats

Freshwater habitats within one-half mile of the site include freshwater tidal swamps and wetlands on the national inventory that are not state-regulated.

2.2.3 Rare NYS Ecological Communities

Environmental Resource Mapper indicates that the entire area around the site contains rare ecological communities. Specific plant and animal species expected in this area are discussed in Section 3.0.

3.0 FISH AND WILDLIFE RESOURCES

3.1 Cover Types and Vegetative Species

The soil on the site is essentially bare, with the exception of the bank areas that have trees and understory plants. The soil on site consists mainly of a historic fill material with rocks, broken glass, bricks, debris and gravel. The surrounding area of the site is primarily an urban environment. However, the plant species that could be expected within one-quarter mile of the site, given the proximity to the Hudson River, are summarized below (USFWS 1997):

- Endangered:: Hudson River water nymph, American waterwort, blunt-lobe grape fern
- Threatened: Estuary beggar-ticks, golden seal, and heartleaf plantain
- Rare: Bickell's Sedge, Davis Sedge, Glaucous Sedge, Mock-pennyroyal, Schweinitz's flatsedge, and Weak Stellate Sedge
- Other vegetative species: water milfoil, water celery, water chestnut, common reed, narrow-leaved cattail, pondweeds, bur-reed, red maple, black ash, slippery elm, alders, arrowwood, poison ivy, ferns, knotweeds, and spotted jewelweed

3.2 Fish and Wildlife Species

The types of fish and wildlife species expected within one-quarter mile of the site include the following (USFWS 1997):

- Endangered: Peregrine falcons, shortnosed sturgeon, atlantic sturgeon, Indiana Bat, Karner blue butterfly, and short-eared owl
- Threatened: American bald eagle, Northern Harrier, and Upland sandpiper
- Species of special concern: Spotted turtle, wood turtle, Cooper's hawk, common nighthawk, vesper sparrow
- Other fish and wildlife species: American shad, American eel, beetles, black bass, black crappie, black ducks, blue herring, brown billhead, caddisfly, Canadian geese, Carolina locusts, clams, common carp, coyote, crayfish, gnats, goldfish, herons, mallards, mayflies, midges, mosquitoes, mussels, northern pike, passerine birds, pumpkinseed, raptors, rodents, shore birds, smallmouth bass, snails, spiders, squirrels, striped bass, stoneflies, sunfish, true flies, waterfowl, white catfish, white sucker, yellow perch.

3.3 Observations of Stress

There are potential observations of stress based on limited plant growth and the condition of trees previously present on the banks of the site. This is likely due to the general condition of the fill material, which includes a significant amount of gravel and brick. This material is not conducive to healthy plant growth.

3.4 Fish or Wildlife Consumption Advisories

The Hudson River in the area of the site has a fish consumption advisory related to PCBs. The details of this advisory are as follows (NYSDOH 2017):

- Women under 50 and children under 15 should not eat any fish from the Hudson River.
- Men over 15 and Women over 50 – one meal per month of one of the following species: alewife, blue herring, rock bass, or yellow perch. They should not consume any other species of fish from this section of the Hudson River.

3.5 Ability to Support Fish and Wildlife

The area is known to be able to support fish and wildlife based on field observations of American bald eagles, coyotes, rabbits, raccoons and squirrels in the area. The Hudson River is a known habitat area for aquatic species.

3.6 Use of Resources by Humans

The site area will be developed for mixed commercial and residential use, and hunting will not be occurring on the property. The Hudson River is used for recreational activities and fishing, though there are limitations on fish consumption in this area, as discussed in Section 3.4.

4.0 PATHWAY ANALYSIS

Potential ecological exposure pathways are summarized in Table 1. The table summarizes whether a pathway could be complete at this site. No conclusions are provided in this table regarding the potential for adverse impacts or the significance of potential exposure.

Table 1. Review of Potential Exposure Pathways.

Medium	Exposure	Route of Exposure	Pathway	Pathway Potentially Complete
Surface Soil	Direct Contact	Ingestion	Ingestion of soils containing contaminants by wildlife and soil organisms	No. The site will have an engineered cover system. Surface soils post development will not be contaminated.
Surface Soil	Direct Contact	Dermal	Dermal contact with soil containing contaminants by wildlife and soil organisms.	No. The site will have an engineered cover system. Surface soils post development will not be contaminated.
Subsurface Soil	Direct Contact	Ingestion	Ingestion of soils containing contaminants by wildlife and soil organisms	Yes. Ingestion is possible by soil macro-organisms and micro-organisms.
Subsurface Soil	Direct Contact	Dermal	Dermal contact with soil containing contaminants by wildlife and soil organisms.	Yes. Dermal contact with contaminated soil is possible by soil macro-organisms and micro-organisms.
Bank Surface Soils	Direct Contact	Ingestion	Ingestion of soils containing contaminants by wildlife and soil organisms	No. The site will have an engineered cover system. Surface soils post development will not be contaminated.
Bank Surface Soils	Direct Contact	Dermal	Dermal contact with soil containing contaminants by wildlife and soil organisms.	No. The site will have an engineered cover system. Surface soils post development will not be contaminated.
Bank Subsurface Soils	Direct Contact	Ingestion	Ingestion of soils containing contaminants by wildlife and soil organisms.	Yes. Ingestion is possible by soil macro-organisms and micro-organisms.
Bank Subsurface Soils	Direct Contact	Dermal	Dermal contact with soil containing contaminants by wildlife and soil organisms.	Yes. Dermal contact with contaminated soil is possible by soil macro-organisms and micro-organisms.
Sediments	Direct Contact	Ingestion	Ingestion of sediments containing contaminants by wildlife and fish.	Yes. Ingestion of contaminants in sediment by wildlife and fish is possible

Medium	Exposure	Route of Exposure	Pathway	Pathway Potentially Complete
Sediments	Direct Contact	Dermal	Dermal contact with sediments containing contaminants by wildlife and fish.	Yea. Dermal contact with sediments containing contaminants by wildlife and fish.
Plants	Soil to Plants that grow below cover (Bio-concentration)	Ingestion	Plants incorporating contaminants from soil are ingested by wildlife and soil organisms.	Yes. Wildlife and soil organisms may ingest contaminated plant biomass.
Soil Fauna	Soil to Soil Fauna (Bio-concentration)	Ingestion	Soil fauna (e.g. insects, worms, etc.) which have incorporated contaminants from soil are consumed by wildlife.	Yes. Soil fauna having incorporated contaminants from contaminated soil may be ingested by wildlife.
Sediment Fauna	Sediment to Sediment Fauna (Bio-concentration)	Ingestion	Sediment fauna which have incorporated contaminants from the sediment are consumed by wildlife.	Yes. Sediment fauna which have incorporated the contaminants from the sediment may be consumed by terrestrial and aquatic wildlife.
Prey Animals	Plants to Prey Animals (Bio-Magnification) Mercury	Ingestion	Prey animals which have ingested contaminants from land and aquatic plants are consumed by predators.	Yes. Prey animals which have ingested the contaminants from the land and aquatic plants may be consumed by predators.
Prey Animals	Soil Fauna to Prey Animals (Bio-concentration)	Ingestion	Prey animals which have ingested soil fauna containing the contaminants may be consumed by predators.	Yes. Prey animals which have ingested soil fauna containing the contaminants may be consumed by predators.
Prey Animals	Sediment Fauna to Prey Animals (Bio-magnification) Mercury	Ingestion	Prey animals which have ingested sediment fauna containing contaminants are consumed by predators.	Yes. Prey animals which have ingested sediment fauna containing contaminants may be consumed by predators.

Surface soils, both on the main part of the site and the bank, will be covered with at least two (2) feet of clean fill, a retaining wall, building foundations or an asphalt cover. Therefore, direct contact with soils will not be a concern post development.

The potentially complete pathways that could lead to bioaccumulation of contaminants through the terrestrial food chain include the following:

- Ingestion of soil organisms that have consumed contaminants

- Ingestion of plants that have accumulated contaminants through root systems that extend below the two feet of clean fill material.
- Direct ingestion of contaminated sediment.
- Ingestion of sediment fauna that have consumed contaminated sediment
- Predators consuming prey that has ingested contaminants through ingestion of soil organisms, sediment, sediment fauna, and/or plants

The potential for exposure related to these pathways, with the exception of contaminated sediments, would be minimized or eliminated by the installation of the engineered cover across the site. However, soil organisms and some plant root systems can be exposed to soils below two feet into the subsurface, so these pathways cannot be completely eliminated

The potentially complete pathways that could lead to bioaccumulation of contaminants through the aquatic food chain include the following:

- Direct ingestion of contaminated sediments
- Ingestion of sediment fauna that have ingested contaminated sediments
- Predators consuming prey that has ingested contamination through ingestion of sediment and/or sediment fauna

To determine the significance of these pathways, the specific contaminants, their environmental fate, and toxicity need to be considered. These considerations are discussed further in Section 5.0.

5.0 CONTAMINANTS OF ECOLOGICAL CONCERN

To determine the potential contaminants of ecological concern and the likelihood of a potential adverse impact, site data were first compared to relevant standards. The exceedances were then evaluated in the context of the exposure pathways of concern at the site, which were discussed in Section 4, and the toxicity of the contaminants to determine the potential for adverse impacts to fish and wildlife. The results of this evaluation are discussed in the following sections.

5.1 Comparison to Relevant Standards

The data for surface soil, subsurface soil, bank, and sediment samples were compared to the relevant ecological standards. Soil and bank samples were compared to the NYCRR Part 375 SCOs for Protection of Ecological Resources and CP-51 Supplemental SCOs for Protection of Ecological Resources. The results of this comparison are provided in Table 2.

The contaminants at the site are consistent with those found in historical fill. There were no

source areas of metals or SVOC contamination identified. LNAPL was identified in the former loading rack and MW-5 areas of the site, which was addressed through the DEC-approved IRM.

Sediment sample results were compared to the SGVs from the NYSDEC *Screening and Assessment of Contaminated Sediment* (NYSDEC 2014) document. Sediment samples only showed exceedances of SGVs for metals, which are summarized in Table 3. Lead exceeded the Class C SGV (130 mg/kg) at SE-7, where it was detected at 142 mg/kg. The toxic effects of PAHs are expected to be additive, and the sum of the concentrations of PAHs needs to be compared to the SGV of 4 mg/kg. None of the sampling locations exceeded this total value for PAHs.

Table 2. Comparison of soil data to Ecological Soil Cleanup Objectives.

Analyte	Exceeds Ecological SCO in 0 to 6" bank sample(s)?	Exceeds Ecological SCO in 6" to 2' bank sample(s)?	Exceeds Ecological SCO in surface soils sample(s)?	Exceeds Ecological SCO in subsurface soils sample(s)?
Metals				
Aluminum	**Yes (2)**	**Yes (4)**	**Yes (16)**	**Yes (21)**
Antimony	No	No	No	**Yes (2)**
Arsenic	**Yes (2)**	**Yes (4)**	**Yes (8)**	**Yes (21)**
Barium	No	**Yes (1)**	No	**Yes (2)**
Cadmium	No	No	No	**Yes (1)**
Calcium	**Yes (7)**	**Yes (8)**	**Yes (10)**	**Yes (26)**
Chromium	**Yes (10)**	**Yes (10)**	**Yes (21)**	**Yes (46)**
Cobalt	**Yes (1)**	**Yes (1)**	**Yes (2)**	No
Copper	**Yes (7)**	**Yes (4)**	**Yes (14)**	**Yes (37)**
Lead	**Yes (9)**	**Yes (10)**	**Yes (18)**	**Yes (43)**
Manganese	No	No	**Yes (1)**	**Yes (2)**
Mercury	**Yes (8)**	**Yes (9)**	**Yes (16)**	**Yes (35)**
Nickel	**Yes (3)**	**Yes (3)**	**Yes (9)**	**Yes (15)**
Selenium	No	No	No	**Yes (2)**
Silver	**Yes (7)**	**Yes (6)**	**Yes (13)**	**Yes (33)**
Thallium	No	No	No	**Yes (1)**
Vanadium	No	No	**Yes (3)**	**Yes (4)**
Zinc	**Yes (10)**	**Yes (10)**	**Yes (19)**	**Yes (36)**
SVOCs				

Analyte	Exceeds Ecological SCO in 0 to 6" bank sample(s)?	Exceeds Ecological SCO in 6" to 2' bank sample(s)?	Exceeds Ecological SCO in surface soils sample(s)?	Exceeds Ecological SCO in subsurface soils sample(s)?
Benzo(a)pyrene	**Yes (1)**	**Yes (1)**	No	**Yes (2)**
Di-n-butylphthalate	**Yes (2)**	No	No	No
Pesticides				
4,4'-DDD	**Yes (3)**	**Yes (6)**	**Yes (3)**	**Yes (3)**
4,4'-DDE	No	No	**Yes (2)**	**Yes (1)**
4,4'-DDT	**Yes (4)**	**Yes (7)**	**Yes (5)**	**Yes (4)**
Dieldrin	No	No	**Yes (1)**	**Yes (1)**

Table 3. Comparison to Sediment Guidance Values

Analyte	Within Class B SGV Range?	Class C Exceedances
Copper	**Yes, 2 locations**	No
Lead	**Yes, 1 location**	**Yes, 1 location**
Mercury	**Yes, 1 location**	No
Silver	**Yes, 5 locations**	No
Zinc	**Yes, 1 location**	No

5.2 Contaminants Relevant to Exposure Pathways

The contaminants relevant to the potential exposure pathways in each media are discussed in the following sections for soils, bank samples, and sediments.

Table 4. Contaminants Exceeding Standards or Guidance Values

Exposure Medium	Potentially relevant pathways	Contaminants Exceeding Relevant Standards or Guidance Values
Subsurface Soils	- Direct ingestion of contaminants by soil organisms - Dermal contact with contaminants by soil organisms - Accumulation in plants with roots extending below the two (2) foot layer of clean fill - Ingestion of soil organisms by wildlife - Ingestion of plants with roots extending below the two (2) foot layer of clean fill by wildlife	- Metals: aluminum, antimony, arsenic, barium, cadmium, calcium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, silver, thallium, vanadium, and zinc - SVOCs: Benzo(a)pyrene - Pesticides: 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, and dieldrin

Exposure Medium	Potentially relevant pathways	Contaminants Exceeding Relevant Standards or Guidance Values
	- Predators consuming prey that has ingested soil organisms and/or plants	
Bank Subsurface Soils	- Direct ingestion of contaminants by soil organisms - Dermal contact with contaminants by soil organisms - Accumulation in plants with roots extending below the two (2) foot layer of clean fill - Ingestion of soil organisms by wildlife - Ingestion of plants with roots extending below the two (2) foot layer of clean fill by wildlife - Predators consuming prey that has ingested soil organisms and/or plants	- Metals: aluminum, arsenic, barium, calcium, chromium, cobalt, copper, lead, mercury, nickel, silver, and zinc - SVOCs: Benzo(a)pyrene and di-n-butylphthalate - Pesticides: 4,4'-DDD and 4,4'-DDT
Sediment	- Ingestion of sediments containing contaminants by wildlife and fish. - Dermal contact with sediments containing contaminants by wildlife and fish. - Sediment fauna which have incorporated contaminants from the sediment are consumed by wildlife.	- Metals: Lead

5.2.1 Subsurface Soils

Soils currently at the surface of the site would be covered by at least two (2) feet of clean fill after development or an alternate engineered cover. Therefore, the surface soils after installation of the engineered cover would be clean, and the exceedances observed for surface soils data collected during the RI should only be considered relevant to the subsurface soil exposure pathways, which are summarized in Table 4. The potential contaminants that could be relevant to these pathways are also included in the table. The list of contaminants is based on the exceedances summarized in Table 2 for surface and subsurface sampling data from the RI.

5.2.2 Bank Samples

Soils currently at the surface of the bank would also be covered with at least two (2) feet of clean fill or an alternate engineered cover after development. Therefore, as for the soils across the rest of the site, only the subsurface soil exposure pathways are potentially complete at this site, which are also provided in Table 4. The list of contaminants is based on the exceedances summarized in Table 2 for surface and subsurface bank sampling data from the RI.

5.2.3 Sediment Samples

As discussed in Section 5.1, the Class C SGV for lead was exceeded at one location, and some locations showed metals concentrations within the Class B SGV ranges. Potentially relevant pathways for the sediment at this site are summarized in Table 4.

Direct comparison of sediment concentrations to SGV values has limitations, as discussed in the SGV guidance, and should not be used as the only indicator of the potential for adverse effects. The bioavailability of metals is correlated more to the concentrations in interstitial pore water (NYSDEC 2014).

One pore water sample was collected at this site, and no exceedances of the Class C aquatic chronic NYCRR 703.5 surface water standards were observed.

5.3 Potential Effects on Fish and Wildlife

5.3.1 Metals

An overview of the potential effects of the metals listed in Table 4 on fish and wildlife species is provided in Table 5. Effects in the aquatic food chain are only included for lead because no other metals exceeded the Class C SGV.

As discussed in Section 5.2.3, the potential for adverse effects of metals is dependent on the bioavailability of a given metal. The availability of a given metal in the environment is dependent on many factors, such as speciation, the ability of the metal to form complexes or to sorb strongly to subsurface soils or sediments, pH, and redox conditions. Therefore, the potential for toxic effects to fish and wildlife cannot be solely based on comparison to SCOs. The lead levels at the site are consistent with lead levels found in historic fill. No source area of lead was identified. With the engineered cover, the risk to fish and wildlife will be minimized.

5.3.2 SVOCs

An overview of the potential effects of benzo(a)pyrene and di-n-butylphthalate on fish and wildlife species is provided in Table 5. Though some bioaccumulation in some aquatic species have been observed for both of these compounds, biomagnification in terrestrial food chains is not expected. Bioaccumulation through aquatic food chains is not relevant to these compounds at this site given the lack of exceedances of SGVs. A limited source area of SVOCS was identified at the site. However, the area was small and levels were not signficaintly elevated. Based on the low levels and limited area identified, SOVCs are not a significant risk to fish and wildlife.

5.3.3 Pesticides

An overview of potential effects of 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, and dieldrin on fish and wildlife species is provided in Table 5. Though DDD, DDE, DDT, and dieldrin are known to bioaccumulate and biomagnify through aquatic food chains, this pathway is not relevant at this site given that exceedances were only observed in soils. There are some indications of bioavailability of DDD, DDE, and DDT to some plants. Dieldrin is known to biomagnify through terrestrial food chains. No source area of pesticides was identified at the site. The levels found were low and pesticides were not identified as a contaminant of concern for this site. Therefore, the risk to fish and wildlife is minimal.

Table 5. Summary of Potential Effects of Contaminants on fish and wildlife.

Analyte	Potential Effects of Contaminant on Fish and Wildlife	References
Aluminum	Does not bioaccumulate to a significant extent.	ATSDR 2008
Antimony	Can accumulate through plant root systems.	ATSDR 2017
Arsenic	Plants can accumulate, but generally at low levels	ATSDR 2007
Barium	Very little accumulation observed in terrestrial plant species.	ATSDR 2007a
Cadmium	Bioaccumulates terrestrial species and plants. Evidence for biomagnification is inconclusive.	ATSDR 2012
Chromium	Not expected to bioaccumulate or biomagnify significantly through terrestrial food chain.	ATSDR 2012a
Cobalt	Can accumulate in roots of plants, but not likely to translocate from root to the above ground plant to significant extent.	ATSDR 2004
Copper	Little evidence of bioaccumulation in low levels of the terrestrial food chain. Biomagnification in the food chain is not expected.	ATSDR 2004a
Lead	Bioconcentration may occur in aquatic species and terrestrial plants and animals, but biomagnification is not expected.	ATSDR 2007b
Mercury	Can accumulate in plants but the availability of mercury to organisms through terrestrial exposure is inconclusive. Can accumulate in earthworms.	WHO 1989
Nickel	Some accumulation in plants has been observed but biomagnification terrestrial food chains not expected.	ATSDR 2005
Selenium	Uptake by plants may be observed.	ATSDR 2003

Analyte	Potential Effects of Contaminant on Fish and Wildlife	References
Silver	Uptake by plants is low. Biomagnification is not expected.	WHO 2002
Thallium	Some accumulation in plants may be observed.	ATSDR 1992
Vanadium	Some accumulation in terrestrial plant roots, with relatively little in aboveground parts of plants. Human studies suggest that biomagnification is unlikely.	ATSDR 2012b
Zinc	Essential nutrient that occurs in tissues of organisms. Biomagnification is not expected.	ATSDR 2005a
Benzo(a)pyrene	Uptake to plants and subsequent biomagnification is low. May be some accumulation through ingestion of soil or soil organisms in terrestrial food chain.	ATSDR 1995
Di-n-butylphthalate	Biomagnification in terrestrial animals is unlikely given ability to metabolize it.	WHO 1997
4,4'-DDD	Bioavailable to plants.	ATSDR 2002a
4,4'-DDE	Bioavailable to plants.	ATSDR 2002a
4,4'-DDT	Bioavailable to plants. Soil bound DDT is bioavailable to earthworms.	ATSDR 2002a
Dieldrin	Bioconcentrates and biomagnifies in terrestrial food chains.	ATSDR 2002

6.0 SUMMARY AND CONCLUSIONS

Though potentially complete pathways were identified in the FWRIA, there were no source areas of contamination identified at the site during the RI. Levels of metals identified were expected, as the site consists primarily of historical fill material. The final remedy for the site will be an engineered cover system which will eliminate the most probable route of exposure for fish and wildlife. Impacts from source contamination to the Hudson River from the site were not identified, as there were no source areas found. The impacts to the Hudson River are those associated with the historical fill and do not require mitigation. Based on these findings, no additional ecological assessment is needed.

7.0 REFERENCES

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APPENDIX H
DATA USABILITY SUMMARY REPORT (DUSR)
(SEPARATE ELECTRONIC FILE)

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