

Appendix G Public Ballfield Surface Soil Summary

March 3, 2022

Ms. Greta White P.G.
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-7014

**Public Ballfield Surface Soil Sampling Summary Report
Greenpoint Energy Center Former Manufactured Gas Plant
287 Maspeth Avenue, Brooklyn, New York
Site No. 224052**

Dear Ms. White:

National Grid is submitting this summary report for additional surface soil sampling conducted in the public ballfield area located on the Greenpoint Former Manufactured Gas Plant (MGP) site (the Site) near the corner of Vandervoort Avenue and Division Place (Figure 1). The sampling was conducted in response to the New York State Department of Environmental Conservation (NYSDEC) comments received on November 24, 2020, on the Draft Remedial Investigation Report (RIR) for the Site. The sampling was performed following the conclusion of the baseball season on November 4, 2021, and was in accordance with the approved work plan dated May 20, 2021. Following the sample collection and the receipt of the results, a conference call between representatives of National Grid and their consultant (GEI Consultants, Inc., P.C.), NYSDER and the New York State Department of Health (NYSDOH) was held on December 2, 2021, to discuss the results and any additional actions. Based on exceedances of the NYSDER Part 375-6.8b Restricted Residential Use Soil Cleanup Objectives (RRUSCOs) in the November 2021 samples, which are applicable for the use of the area, additional sample locations were proposed and subsequently approved. The second supplemental sampling event was conducted on December 16 and 17, 2021.

Sample Locations

As part of the initial supplemental sampling program conducted in November 2021, two locations were sampled from each of the three infield areas for a total of six locations (GPEC-SS334 through GPEC-SS339). The additional surface soil samples were collected from the vicinity of the bases, which are most likely to be disturbed and be a source of potential exposure to the users. One additional sample was collected from the center of the ballfield area (GPEC-SS340). A total of three other locations (GPEC-SS341 through GPEC-SS343) were sampled to delineate exceedances of the RRUSCOs identified at locations GPEC-SS329 and GPEC-SS331 during the remedial investigation (RI).

A total of 16 additional locations (GPEC-SS344 through GPEC-SS359) were selected for the second round of sampling in December 2021. The sample locations were chosen to provide a more complete characterization of the ballfield area given the exceedances noted in previous sampling events.

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The sample locations from each of the two supplemental sampling events along with the locations from the RI are shown in Figure 1. The figure shows the location of samples exceeding the RRUSCOs along with the depth interval with the exceedance.

Sample Procedures and Analysis

The sampling was conducted to a depth of two feet with samples collected from three intervals including 0 to 2 inches, 0 to 6 inches [volatile organic compounds (VOCs) analysis only] and 2 to 24 inches at each location, excluding those discussed below. The samples were collected for the following analysis:

- VOCs by United States Environmental Protection Agency (USEPA) Method 8260D (excluding the zero to two-inch interval)
- Semi-volatile organic compounds (SVOCs) by USEPA Method 8270C
- Target Analyte List (TAL) metals by USEPA Method 6000/ 7000 series
- Polychlorinated biphenyls (PCBs) by USEPA Method 8082
- Free cyanide by USEPA Method 9016
- Hexavalent chromium by USEPA Method 3060A/7196
- Herbicides by USEPA Method 8151A
- Pesticides by USEPA Method 8081A

Only the shallow intervals (0 to 2 inches and 0 to 6 inches) were collected at GPEC-SS358, and no samples were collected from GPEC-SS359 due to the lack of soil in the area. The area consisted primarily of gravel, recycled concrete aggregate or asphalt which prevented the advancement of the manual sampling equipment.

The samples were collected using a stainless-steel spoon for the shallow intervals and a hand auger for the deeper interval. An approximate area of one square foot was sampled at each location. The surface soil was screened for VOCs using a photoionization detector (PID). Excluding the samples collected for VOCs, the soil was homogenized in a stainless-steel bowl prior to being placed in laboratory-provided sample containers. The sampling spoon, hand auger and bowl were decontaminated between samples.

Quality assurance/quality control (QA/QC) samples included a blind duplicate soil sample, a matrix spike/matrix spike duplicate (MS/MSD) sample, and an equipment rinsate blank sample. A NYSDOH Environmental Laboratory Approval Program (ELAP) certified laboratory performed the analyses under chain of custody (COC) procedures. A New York State Category B data deliverable was provided by the laboratory.

Results

The sample results are provided in Table 1 and were compared to the RRUSCOs as well as the NYSDEC Part 375-6.8b Industrial Use Soil Cleanup objectives (IUSCOs), which are applicable to the use of the former MGP Site.

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Exceedances of the RRUSCOs were noted in 8 of the 10 locations sampled during the November 2021 sampling event and included select polycyclic aromatic hydrocarbons (PAHs) and metals. The PAHs and metals exceeding the RRUSCOs included benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, dibenz(a,h)anthracene, indeno[1,2,3-cd]pyrene, as well as arsenic, copper, lead and mercury. The exceedances were identified in the deeper interval (2 to 24-inches) in four of the eight locations (GPEC-SS334, GPEC-SS3335, GPEC-SS337 and GPEC-SS339) and in both the shallow and deep intervals in another three locations (GPEC-SS340, GPEC-SS342 and GPEC-SS343). Exceedances of the RRUSCOs were only identified in the shallow interval at one additional location (GPEC-SS341). Exceedances of the IUSCOs were identified in seven locations but were limited to benzo(a)pyrene which was found in the deeper interval in six of the seven locations.

Exceedances of the RRUSCOs were noted in 12 of the 15 locations sampled during the December 2021 sampling event and included the same PAHs as the November event with the addition of benzo(k)fluoranthene in one sample. The metals exceedances were also similar to the November event but included barium instead of copper. As shown in Figure 2, the exceedances were identified in the deeper interval (2 to 24 inches) in 7 of the 12 locations and were in both the shallow and deep intervals in four other locations. As stated above, only the shallow interval was sampled in GPEC-SS358, in which exceedances were also identified. Exceedances of the IUSCOs were identified in seven locations but were limited to benzo(a)pyrene (seven locations), dibenz(a,h)anthracene (one location) and arsenic (six locations) which were primarily found in the deeper interval.

In general, the exceedances of the RRUSCOs and IUSCOs were relatively low in magnitude with the exceedances of the IUSCOs limited to compounds benzo(a)pyrene, dibenz(a,h)anthracene and arsenic that have similar values for both the RRUSCOS and the IUSCOs. No visual or olfactory impacts were noted during the sampling (e.g., staining, odors or PID readings above background). The identified contaminants are unlikely to be the result of operations on the former MGP Site, since there were no operational facilities present on this portion of the property. The impacts are consistent with those of typical urban fill throughout the metropolitan area. It is likely that the urban fill was placed in the area prior to, or as part of the construction of the ballfields circa 1950s.

If you have any questions, feel free to contact me at (718) 963-5607 or by email at reeti.doshi@nationalgrid.com.

Sincerely,



Christopher Morris, P.G.
On behalf of
William Ryan
Program Manager

Attachment
cc: D. Terry (GEI)

FIGURE

TABLE

Table 1. Surface Soil Sampling Results
Public Ballfield Surface Soil Investigation
Greenpoint Energy Center Site
Greenpoint, NY

Sample ID	NYDEC 375-6	NYDEC 375-6	GPEC-SS334 (0-6)		GPEC-SS335 (0-6)		GPEC-SS336 (0-6)		GPEC-SS337 (0-6)		GPEC-SS338 (0-6)		GPEC-SS339 (0-6)		GPEC-SS340 (0-6)		GPEC-SS341 (0-6)	
Sampling Date	Restricted Use	Restricted Use	1/04/2021 13:00:00		1/04/2021 13:20:00		1/04/2021 11:05:00		1/04/2021 10:25:00		1/04/2021 11:40:00		1/04/2021 12:05:00		1/04/2021 14:10:00		1/04/2021 14:25:00	
Matrix	Restricted Resid	Industrial	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
			Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
SOIL BY 8260D																		
1,1,1-Trichloroethane	100	1000	0.0013	U	0.0011	U	0.0012	U	0.0011	U	0.0013	U	0.					

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Sample ID	NYDEC 375-6	NYDEC 375-6	GPEC-SS334 (0-6)		GPEC-SS335 (0-6)		GPEC-SS336 (0-6)		GPEC-SS337 (0-6)		GPEC-SS338 (0-6)		GPEC-SS339 (0-6)		GPEC-SS340 (0-6)		GPEC-SS341 (0-6)	
Sampling Date	Restricted Use	Restricted Use	1/04/2021 13:00:00		1/04/2021 13:20:00		1/04/2021 11:05:00		1/04/2021 10:25:00		1/04/2021 11:40:00		1/04/2021 12:05:00		1/04/2021 14:10:00		1/04/2021 14:25:00	
Matrix	Restricted Resid	Industrial	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
			Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
SOIL BY 8260D																		
1,1,1-Trichloroethane	100	1000	0.0013	U	0.0011	U	0.0012	U	0.0011	U	0.0013	U	0.00096	U	0.0014	U	0.0012	U
1,1,2,2-Tetrachloroethane</																		

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Sample ID	NYDEC 375-6	NYDEC 375-6	GPEC-SS334 (0-6)		GPEC-SS335 (0-6)		GPEC-SS336 (0-6)		GPEC-SS337 (0-6)		GPEC-SS338 (0-6)		GPEC-SS339 (0-6)		GPEC-SS340 (0-6)		GPEC-SS341 (0-6)	
Sampling Date	Restricted Use	Restricted Use	1/04/2021 13:00:00		1/04/2021 13:20:00		1/04/2021 11:05:00		1/04/2021 10:25:00		1/04/2021 11:40:00		1/04/2021 12:05:00		1/04/2021 14:10:00		1/04/2021 14:25:00	
Matrix	Restricted Resid	Industrial	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
			Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
SOIL BY 8260D																		
1,1,1-Trichloroethane	100	1000	0.0															

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Sample ID	NYDEC 375-6	NYDEC 375-6	GPEC-SS334 (0-6)		GPEC-SS335 (0-6)		GPEC-SS336 (0-6)		GPEC-SS337 (0-6)		GPEC-SS338 (0-6)		GPEC-SS339 (0-6)		GPEC-SS340 (0-6)		GPEC-SS341 (0-6)	
Sampling Date	Restricted Use	Restricted Use	1/04/2021 13:00:00		1/04/2021 13:20:00		1/04/2021 11:05:00		1/04/2021 10:25:00		1/04/2021 11:40:00		1/04/2021 12:05:00		1/04/2021 14:10:00		1/04/2021 14:25:00	
Matrix	Restricted Resid	Industrial	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
			Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
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