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**Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.**  
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**To:** Marlen Salazar and Jane O'Connell, PG of the NYSDEC

**From:** Michael Burke, PG, CHMM and Brian Gochenaur, QEP of Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.

**Date:** January 12, 2024

**Re:** Supplemental Subsurface Investigation  
2560-2580 Boston Road  
Bronx, New York  
Langan Project No.: 170684201

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Dear Ms. Salazar:

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology D.P.C. (Langan) completed a supplemental subsurface investigation on behalf of SPG 2560 Boston Road LLC (the Applicant) to confirm that petroleum-related impacts observed in groundwater and soil vapor during the initial Limited Subsurface Investigation (LSI) are 1) originating from the site, 2) present in soil, and 3) not solely originating from an off-site source.

On January 9 and 10, 2024 Langan advanced eleven soil borings in the southern and central parts of the site. The purpose of this supplemental subsurface investigation was to confirm the suspected presence of a source area within the southern part of the site unrelated to residual petroleum contamination that may be migrating on-site from an upgradient off-site source. Borings were installed both to identify the presence of on-site source material as well as to demonstrate the absence of petroleum impacts migrating on-site from potential upgradient off-site sources as well as around the site perimeter. Figure 1 shows the location of all soil borings and our associated field observations. Some borings depicted on Figure 1 were installed during the previous LSI and illustrate the absence of impacts in the upgradient direction from the identified on-site source material.

Free-phase product, petroleum-like odors, and a maximum PID reading of 1,478 ppm were observed in soil boring SI-SB03, which was advanced in the general vicinity of LSI soil boring SB03. The most significant petroleum impacts were observed immediately above the groundwater interface in SI-SB03, with lesser impacts observed in the deeper 16.5-17 feet below ground surface (ft bgs) interval of SI-SB03 and in other borings surrounding this location.

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**Image 1** – View of petroleum product from SI-SB03 in a bucket    **Image 2** – View of PID reading taken at SI-SB03

PID readings above 10 ppm, and petroleum-like staining and odors were observed as follows:

Soil Boring	Depth Interval of Impacts (feet bgs)	Maximum PID Reading (ppm)	Maximum PID Reading Depth (feet bgs)	Observations
SI-SB01	11.5-20	833.3	16.5	Petroleum-like odors
SI-SB02	13.5-20	995.2	17.5	Petroleum-like odors
SI-SB03	10-20	1,478	12.5	Petroleum-like staining and odors, free product observed
SI-SB04	15-20	900.3	16.5	Petroleum-like staining and odors

Soil samples were collected and analyzed for VOCs where petroleum impacts were observed. VOC samples were also collected at the groundwater interface in some borings to confirm the absence of impacts and to rule out the origination from an off-site source. The analytical results for soil samples collected and analyzed for VOCs from SI-SB01 through SI-SB06, and SI-SB10 are presented in Table 1. The petroleum-related compounds ethylbenzene, total xylenes, n-

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butylbenzene, naphthalene, n-propylbenzene, 1,3,5-trimethylbenzene, and 1,2,4-trimethylbenzene were detected above the PGW and/or RURR SCOs in soil samples collected from SI-SB01, SI-SB03, and SI-SB04.

In contrast, no petroleum impacts or petroleum-related VOC exceedances of the PGW and/or RR SCOs were observed in the supplemental soil borings SI-SB05, SI-SB06, SI-SB07, and SI-SB08 or in the LSI soil borings SB05 or SB06. These borings are located within the central part of the site (see Figure 1) and provide evidence that any potential petroleum impacts migrating on-site from an upgradient off-site source do not continuously extend through the southern part of the site, as no impacts were observed in these intervening locations. Accordingly, the lack of petroleum impacts near the central part of the site indicates that the on-site source identified within the southern part of the site is distinct and wholly unrelated to any potential impacts from an upgradient off-site source.

In summary, free product along with soil exhibiting petroleum impacts and/or petroleum-related VOC concentrations exceeding the applicable soil cleanup objectives was identified in borings SI-SB01 through SI-SB04 advanced in the vicinity of LSI soil borings SB03 and SB07, where petroleum-related impacts were previously observed in soil, groundwater, and soil vapor. Petroleum-like staining, odors, and PID readings above 10 ppm were not observed in borings around the eastern, southern, or western perimeter of the site or in borings to the north of this area where residual impacts from an upgradient off-site source would be expected if these impacts were solely emanating from an upgradient off-site source. Although the scope of this supplemental investigation was limited, we feel it establishes that contamination is not solely emanating from an off-site source and that the site is eligible for tangible property credits. Further delineation of these impacts as well as other impacts across the site will be further assessed during the Remedial Investigation.

cc: L. Esmail, PE – Langan

## Enclosures:

Figure 1 – Soil Boring Map

Table 1 – Soil Sample Analytical Results



**Table 1**  
**Supplemental NYSDEC BCP Eligibility Investigation**  
**Soil Sample Analytical Results**

**2560-2580 Boston Road**  
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LOCATION					SI_SB01 13-13.5		SI_SB01 13-13.5		SI_SB01 16.5-17		SI_SB02 13-13.5		SI_SB02 17-17.5	
SAMPLING DATE					1/9/2024		1/9/2024		1/9/2024		1/9/2024		1/9/2024	
SAMPLE TYPE					SOIL		SOIL		SOIL		SOIL		SOIL	
	CasNum	NYSDEC Part 375 Protection of Groundwater SCOs	NYSDEC Part 375 Restricted Use Restricted-Residential SCOs	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
<b>Volatile Organics by EPA 5035</b>														
Ethylbenzene	100-41-4	1	41	mg/kg	0.91		-	-	0.51		0.053	U	0.079	
Xylenes, Total	1330-20-7	1.6	100	mg/kg	0.066	J	-	-	0.048	U	0.053	U	0.0019	
Acetone	67-64-1	0.05	100	mg/kg	0.55	U	-	-	0.48	U	0.53	U	0.0085	U
n-Butylbenzene	104-61-8	12	100	mg/kg	3.2		-	-	0.87		0.053	U	0.046	
Naphthalene	91-20-3	12	100	mg/kg	4.1		-	-	0.29		0.26		0.016	
n-Propylbenzene	103-65-1	3.9	100	mg/kg	2.2		-	-	4		0.053	U	0.77	
1,3,5-Trimethylbenzene	108-67-8	8.4	52	mg/kg	0.041	J	-	-	0.44		0.11	U	0.97	
1,2,4-Trimethylbenzene	95-63-6	3.6	52	mg/kg	0.061	J	-	-	0.095	U	0.11	U	0.7	E

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LOCATION					SI_SB03 12-12.5		SI_SB03 12-12.5		SI_SB03 16.5-17		SI_SB03 16.5-17		SI_SB03 1-2		SI_SB04 16.5-17	
SAMPLING DATE					1/9/2024		1/9/2024		1/9/2024		1/9/2024		1/9/2024		1/9/2024	
SAMPLE TYPE					SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	CasNum	NYSDEC Part 375 Protection of Groundwater SCOs	NYSDEC Part 375 Restricted Use Restricted-Residential SCOs	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
<b>Volatile Organics by EPA 5035</b>																
Ethylbenzene	100-41-4	1	41	mg/kg	96		-	-	42		-	-	0.002	U	2.7	
Xylenes, Total	1330-20-7	1.6	100	mg/kg	180		-	-	62		-	-	0.002	U	0.26	J
Acetone	67-64-1	0.05	100	mg/kg	6	U	-	-	2.5	U	-	-	0.02	U	0.6	U
n-Butylbenzene	104-51-8	12	100	mg/kg	15		-	-	6.6		-	-	0.002	U	2.8	
Naphthalene	91-20-3	12	100	mg/kg	23		-	-	10		-	-	0.008	U	1.2	
n-Propylbenzene	103-65-1	3.9	100	mg/kg	59		-	-	25		-	-	0.002	U	5.8	
1,3,5-Trimethylbenzene	108-67-8	8.4	52	mg/kg	120		-	-	46		-	-	0.004	U	1.5	
1,2,4-Trimethylbenzene	95-63-6	3.6	52	mg/kg	320	E	380		130		120	E	0.004	U	0.52	

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LOCATION					SI_SB05 1-2		SI_SB05 15-16		SI_SB06 1-2		SI_SB06 15-16		SI-SB10 17-18	
SAMPLING DATE					1/9/2024		1/9/2024		1/9/2024		1/9/2024		1/10/2024	
SAMPLE TYPE					SOIL		SOIL		SOIL		SOIL		SOIL	
	CasNum	NYSDEC Part 375 Protection of Groundwater SCOs	NYSDEC Part 375 Restricted Use Restricted-Residential SCOs	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
<b>Volatile Organics by EPA 5035</b>														
Ethylbenzene	100-41-4	1	41	mg/kg	0.0013	U	0.00037	J	0.00088	U	0.00035	J	0.0011	U
Xylenes, Total	1330-20-7	1.6	100	mg/kg	0.0013	U	0.00078	J	0.00088	U	0.0025	J	0.0011	U
Acetone	67-64-1	0.05	100	mg/kg	0.1		0.0095	U	0.018		0.021		0.011	U
n-Butylbenzene	104-51-8	12	100	mg/kg	0.0013	U	0.00045	J	0.00088	U	0.00038	J	0.0011	U
Naphthalene	91-20-3	12	100	mg/kg	0.0052	U	0.0035	U	0.0035	U	0.0034	U	0.0043	U
n-Propylbenzene	103-65-1	3.9	100	mg/kg	0.0013	U	0.00041	J	0.00088	U	0.00017	J	0.0011	U
1,3,5-Trimethylbenzene	108-67-8	8.4	52	mg/kg	0.0026	U	0.00055	J	0.0018	U	0.00024	J	0.0022	U
1,2,4-Trimethylbenzene	95-63-6	3.6	52	mg/kg	0.0026	U	0.0014	J	0.0018	U	0.0005	J	0.0022	U

**Table 1**  
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**Notes:**

1. CAS - Chemical Abstract Service
2. mg/kg - milligram per kilogram
3. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Protection of Groundwater (PGW) and Restricted Use Restricted-Residential (RURR) Soil Cleanup Objectives (SCO).
4. Highlighted concentrations indicate an exceedance of the PGW and/or the RURR SCOs.
5. Only analytes that exceeded either the PGW and/or RURR SCOs are shown.
6. J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
7. U - The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
8. E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
9. **This data was provided directly from Alpha Analytical Laboratories. This data has not been validated.**