

## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127		<b>CLIENT:</b> 250 Seaport District, LLC	<b>DATE:</b> Monday, July 27, 2020  <b>WEATHER:</b> Sunny, 80-97 °F Wind: SE @ 0.9 mph (10:29am) to S @ 6.4 mph (12:05pm)  <b>TIME:</b> 6:00 am – 5:00 pm
<b>CONTRACTOR:</b> AARCO Environmental Services Corp.		<b>LANGAN REP. :</b> Ashley Stappenbeck Adrian Heath	
<b>EQUIPMENT:</b> Geoprobe 7720 DT Niton XL3t XRF Jerome J505 and J405 MiniRAE 3000 Dusttrak DRX		<b>PRESENT AT SITE:</b> Ashley Stappenbeck, Adrian Heath, Giuliana Frizzi, Mimi Raygorodetsky – Langan Brian Ehalt – EXCEL Environmental Resources Nick Turro, Jose Romoro – AARCO Environmental Services Corp.	
<b>RI Day 5</b>			
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  Langan initiated Phase 3 of the May 13, 2020 Remedial Investigation Work Plan (RIWP) for New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) Site No. C231127 located at 250 Water Street (Block 98, Lot 1).			
<b>Site Activities</b> <ul style="list-style-type: none"> <li>• AARCO used a Geoprobe 7720 DT drill rig with 4-foot-long Macro-Core® samplers to advance three soil borings to about 30 feet below grade surface (bgs). Langan documented the work, screened the soil samples for environmental impacts, and collected soil samples.           <ul style="list-style-type: none"> <li>○ Boring SB4R: No petroleum-like odors, staining, or elevated photoionization detector (PID) readings were observed. Visual evidence of elemental mercury was not identified. Mercury vapor concentrations above background were identified with a Jerome J405 or J505 unit at a maximum concentration of 6.63 micrograms per cubic meter (<math>\mu\text{g}/\text{m}^3</math>) from 10 to 12 feet bgs. Total mercury concentrations detected with the Niton XL3t XRF (XRF) were identified at a maximum concentrations of 42 parts per million (ppm) from 2 to 4 feet bgs.</li> <li>○ Boring SB4E1: No petroleum-like odors, staining, or elevated PID readings were observed. Visual evidence of elemental mercury was not identified. A maximum mercury vapor concentration above background of 2.48 <math>\mu\text{g}/\text{m}^3</math> was identified with a Jerome J405 or J505 unit from 2 to 4 feet bgs. Total mercury concentrations detected with the XRF were less than the limit of detection (LOD).</li> <li>○ Boring SB4W1: No petroleum-like odors, staining, or elevated PID readings were observed. Visual evidence of elemental mercury was not identified. A maximum mercury vapor concentration above background of 0.15 <math>\mu\text{g}/\text{m}^3</math> was identified with a Jerome J405 or J505 unit from 0 to 2 feet bgs. Total mercury concentrations detected with the XRF were less than the LOD.</li> </ul> </li> <li>• All soil borings were backfilled with drill cuttings from the borehole and then patched with cold patch asphalt after sampling was completed.</li> </ul>			
<b>Material Tracking</b> <ul style="list-style-type: none"> <li>• No material was imported to the site.</li> <li>• No material was exported from the site.</li> </ul>			
<b>Cc:</b> J. Yanowitz, P. McMahon, M. Raygorodetsky	<b>By:</b> Adrian Heath		<b>LANGAN</b>

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- No investigation derived waste (i.e. soil cutting or groundwater) was generated during site activities.

### **Sampling**

- The following samples were collected and relinquished to Eurofins Lancaster Laboratories Environmental, Inc. a New York State Department of Environmental Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory in Lancaster, Pennsylvania (ELAP No. 10670) for analyses proposed in the RIWP. The following sample depths were submitted for analysis of total mercury:
  - SB4R: 0-2, 2-4, 4-6, 6-8, 10-12, 14-16, and 18-20 feet bgs
  - SB4E1: 0-2, 2-4, 6-8, 10-12, 14-16, 16-18, and 18-20 feet bgs.
  - SB4W1: 0-2, 2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, and 18-20 feet bgs
- Two quality assurance/quality control soil sample (duplicate and matrix spike/matrix spike duplicate [MS/MSD]) were collected and submitted for analysis.
- Due to low soil recovery samples could not be collected in soil boring SB4R from 8 to 10, 12 to 14, and 16-18 feet bgs and in soil boring SB4E1 from 4 to 6, 8 to 10, and 12 to 14 feet bgs.
- The following samples were collected and relinquished to Eurofins, and were placed on hold pending total mercury results from 0 to 20 feet bgs:
  - SB4R: 20-22, 22-24, 24-26, 26-28, and 28-30 feet bgs
  - SB4E1: 20-22, 22-24, 24-26, 26-28, and 28-30 feet bgs
  - SB4W1: 20-22, 22-24, 24-26, 26-28, and 28-30 feet bgs
- Select samples will be additionally analyzed for mercury selective sequential extraction, pending total mercury results.

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### CAMP Activities

Langan performed air monitoring during ground-intrusive activities. Fifteen-minute average concentrations of particulate matter smaller than 10 microns in diameter (PM10) and volatile organic compounds (VOCs) did not exceed action levels for the duration of work activities. Daily background concentrations for PM10, VOCs, and mercury vapor based on the June 16, 2020 baseline air monitoring event were 0.025 milligrams per cubic meter (mg/m<sup>3</sup>) for PM10, 0.5 ppm for VOCs, and 0.0 µg/m<sup>3</sup> for mercury vapor.

- An instantaneous mercury vapor reading of 20.6 µg/m<sup>3</sup> occurred at the CAMP station PM1 at 13:40. The instantaneous reading caused the fifteen-minute average concentration to exceed the action level (readings are collected every minute). Work was stopped and the dedicated CAMP personnel used a handheld Jerome J505 to collect readings next to the PM1 station. The Jerome J505 air samples were non-detect. Instantaneous mercury vapor readings at the PM1 CAMP station from before and after the instantaneous spike were all below the detection limit. Mercury vapor was not observed in soil borings at concentrations approaching the elevated instantaneous mercury vapor concentration. The elevated reading may have resulted from interference or a power surge from the CAMP station battery.

Daily Average Concentrations			
Station ID	Particulate (mg/m <sup>3</sup> )	Organic Vapor (ppm)	Mercury Vapor (µg/m <sup>3</sup> )
PM-1	0.025	0.0	0.0
PM-2	0.036	0.0	0.0
PM-3	0.025	0.4	0.0
PM-4	0.019	0.3	0.0
PM-5	0.017	0.4	0.0
PM-6	0.021	0.0	0.0
WZ-1	0.011	0.0	0.1

mg/m<sup>3</sup> = milligrams per cubic meter  
 ppm = parts per million  
 µg/m<sup>3</sup> = micrograms per cubic meter

Max 15 Minute Average Concentration			
Station ID	Particulate (mg/m <sup>3</sup> )	Organic Vapor (ppm)	Mercury Vapor (µg/m <sup>3</sup> )
PM-1	0.034	0.0	1.4
PM-2	0.041	0.2	0.1
PM-3	0.045	0.7	0.1
PM-4	0.036	0.4	0.0
PM-5	0.035	2.1	0.2
PM-6	0.037	0.3	0.1
WZ-1	0.031	0.7	0.4

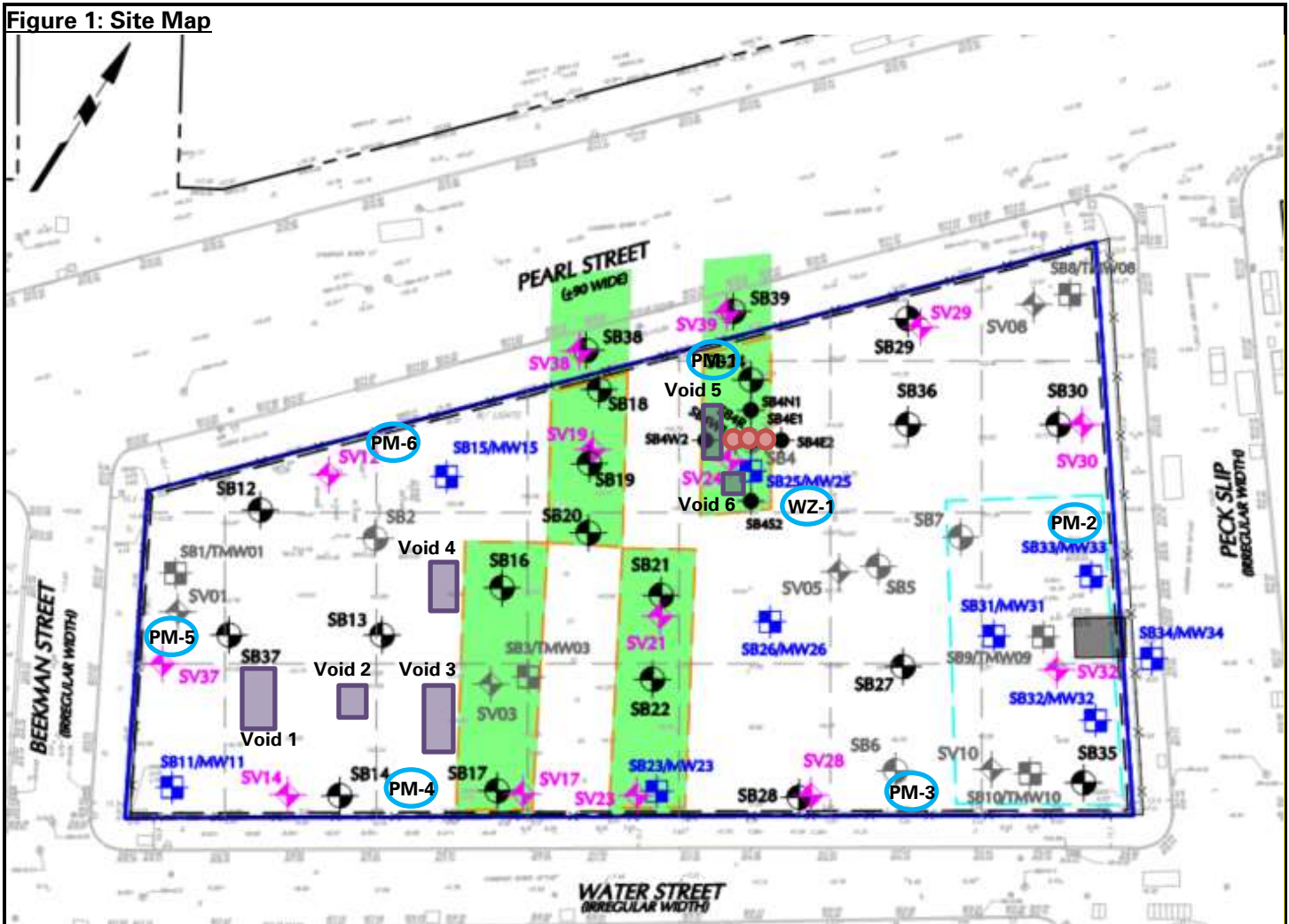
### Anticipated Activities

- AARCO and Langan will continue to advance and sample delineation and site-wide soil borings, and install monitoring wells within the Phase 3 work area.

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Figure 1: Site Map



### Legend:

- Site Boundary
- Approximate area of suspected void space
- Approximate location of soil borings sampled
- PM-1 Approximate location of air monitoring station (on-site)
- PM-1 Approximate location of air monitoring station (off-site)
- WZ-1 Approximate locations of work zone air monitoring station

### Notes:

1) Air monitoring station were relocated based on work area and wind direction. Locations shown above identify the predominant area of the air monitoring station.

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### Select Site Photographs:



Photo 1: AARCO advancing soil boring SB4W1 (facing southwest)



Photo 2: Langan collecting VOC readings from a soil boring (facing northeast)

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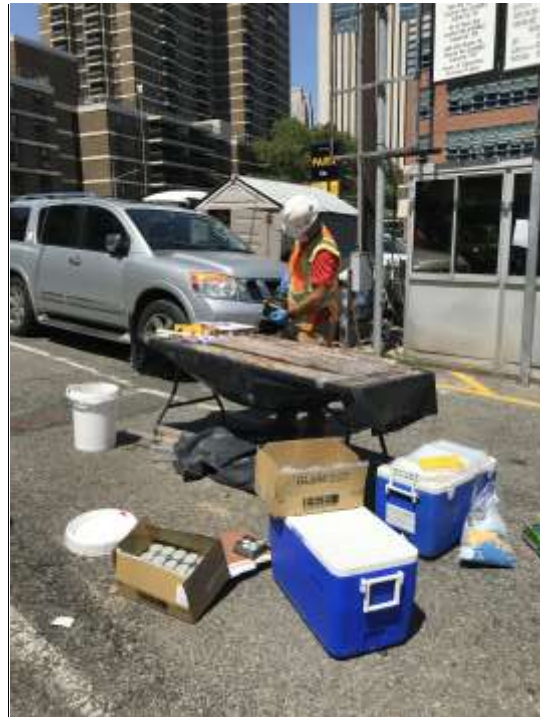


Photo 3: Langan collecting mercury vapor readings from a soil boring (facing northeast)



Photo 4: Perimeter CAMP station PM-4 in the southern part of the site (facing south)

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