SITE OBSERVATION REPORT

PROJECT No.: 170381202		**DATE:**	Wednesday, July 29, 2020
PROJECT: 250 Water Street	**CLIENT:** 250 Seaport District, LLC	**WEATHER:**	Sunny, 80-90 ^{0}F Wind: SE @ 0.6 mph (6:56 am) to S @ 6.6 mph (2:52 pm)
LOCATION: New York, NY		**TIME:**	5:45 am – 5:45 pm
BCP SITE ID: C231127			
CONTRACTOR: AARCO Environmental Services Corp.		**LANGAN REP. :**	Ashley Stappenbeck Adrian Heath

EQUIPMENT:	**PRESENT AT SITE:** **RI Day 7**
Geoprobe 7822 DT Niton XL3t XRF Jerome J505 and J405 MiniRAE 3000 Dusttrak DRX	Ashley Stappenbeck, Adrian Heath, Paul McMahon – Langan Nick Turro, Sergio Magana – AARCO Environmental Services Corp.

OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:

Langan continued implementing 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 (Manhattan Block 98, Lot 1).

Site Activities

- AARCO used a Geoprobe 7822 DT drill rig with 4-foot-long Macro-Core® samplers to advance four soil borings. Langan documented the work, screened the soil samples for environmental impacts, and collected soil samples.
    - Boring SB4S2: Boring was advanced to 30 feet below grade surface (bgs). Petroleum-like odors, staining, and photoionization detector (PID) readings up to 42 parts per million (ppm) were observed at 17 to 21 feet bgs. Visual evidence of elemental mercury was not identified. A maximum mercury vapor concentration above background of 0.88 micrograms per cubic meter (µg/m^3) was identified with a Jerome J505 unit from 4 to 6 feet bgs. Total mercury concentrations evaluated with the Niton XL3t XRF (XRF) were identified at a maximum concentration of 23 ppm from 4 to 6 feet bgs.
    - Boring SB4W2: Boring was advanced to 30 feet bgs. No petroleum-like odors, staining, or PID readings above background were observed. Visual evidence of elemental mercury was not identified. A maximum mercury vapor concentration above background of 1.72 µg/m^3 was identified with a Jerome J505 unit from 14 to 16 feet bgs. Total mercury concentrations evaluated with the XRF were identified at a maximum concentration of 179 ppm from 2 to 4 feet bgs.
    - Boring SB24: Boring was advanced to 30 feet bgs. No petroleum-like odors, staining, or PID readings above background were observed. Visual evidence of elemental mercury was not identified. A maximum mercury vapor concentration above background of 0.75 µg/m^3 was identified with a Jerome J505 unit from 6 to 8 feet bgs. Total mercury concentrations evaluated with the XRF were identified at a maximum concentration of 257 ppm from 2 to 4 feet bgs.
    - Boring SB19: Boring was advanced to 20 feet bgs. No petroleum-like odors, staining, or PID readings above background were observed. Visual evidence of elemental mercury was not identified. A maximum mercury vapor concentration above background of 0.10 µg/m^3 was identified with a Jerome J505 unit from 14 to 16 feet bgs. Total mercury concentrations evaluated with the XRF were less than limit of detection (LOD).

Cc:	J. Yanowitz, P. McMahon, M. Raygorodetsky	By:	Adrian Heath **LANGAN**

SITE OBSERVATION REPORT

- All soil borings were backfilled with drill cuttings from the borehole, clean sand, and/or bentonite and then patched with cold patch asphalt after sampling was completed.

Material Tracking

- No material was imported to the site.
- No material was exported from the site.
- 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. (Eurofins) 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:
  - SB4S2: 0-2, 2-4, 4-6, 6-8, 8-10,10-12, 12-14, 14-16, 16-18, and 18-20 feet bgs
  - SB4W2: 0-2, 2-4, 4-6, 6-8, 8-10,10-12, 12-14, 14-16, 16-18, and 18-20 feet bgs
  - SB24: 0-2, 2-4, 4-6, 6-8, 8-10,10-12, 12-14, 14-16, 16-18, and 18-20 feet bgs
- Select samples will be additionally analyzed for mercury selective sequential extraction, pending total mercury results.
- Twelve quality assurance/quality control soil samples (five mercury field blanks, four mercury duplicates, four matrix spike/matrix spike duplicate, one trip blank, and one equipment blank) were collected and submitted for analysis.
- The following samples were placed on hold pending total mercury results from 0 to 20 feet bgs:
  - SB4S2: 20-22, 22-24, 24-26, 26-28, and 28-30 feet bgs
  - SB4W2: 20-22, 22-24, 24-26, 26-28, and 28-30 feet bgs
  - SB24: 20-22, 22-24, 24-26, 26-28, and 28-30 feet bgs
- The following sample depths were submitted for analysis of volatile organic compounds (VOC), semivolatile organic compounds (SVOC), polychlorinated biphenyls (PCB), pesticides, herbicides, metals including hexavalent and trivalent chromium, total cyanide, 1,4-dioxane, and per- and polyfluoroalkyl substances (PFAS):
  - SB19: 0-2, 6-8, and 18-20 feet bgs
  - SB24: 0-2, 6-8, and 10-12 feet bgs
- The following sample depths were submitted for analysis of VOCs, SVOCs, and metals including hexavalent and trivalent chromium:
  - SB4S2: 18-19 and 22-23 feet bgs

Cc:	J. Yanowitz, P. McMahon, M. Raygorodetsky	By:	Adrian Heath
			LANGAN

SITE OBSERVATION REPORT

CAMP Activities

Langan performed air monitoring during ground-intrusive activities. Fifteen-minute average concentrations of mercury vapor, particulate matter smaller than 10 microns in diameter (PM10), and 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^3) for PM10, 0.5 ppm for VOCs, and 0.0 $\mu g/m^3$ for mercury vapor.

Daily Average Concentrations			
Station ID	Particulate (mg/m^3)	Organic Vapor (ppm)	Mercury Vapor ($\mu g/m^3$)
PM-1	0.022	0.2	0.1
PM-2	0.032	0.0	0.0
PM-3	0.022	0.0	0.0
PM-4	0.019	0.0	0.0
PM-5	0.015	0.5	0.0
PM-6	0.017	0.0	0.0
WZ-1	0.011	0.0	0.1

mg/m^3 = milligrams per cubic meter
ppm = parts per million
$\mu g/m^3$ = micrograms per cubic meter

Maximum 15-Minute-Average Concentration			
Station ID	Particulate (mg/m^3)	Organic Vapor (ppm)	Mercury Vapor ($\mu g/m^3$)
PM-1	0.028	1.9	0.8
PM-2	0.039	0.0	0.2
PM-3	0.038	0.1	0.1
PM-4	0.027	0.0	0.0
PM-5	0.023	2.4	0.0
PM-6	0.031	1.5	0.0
WZ-1	0.038	0.0	0.4

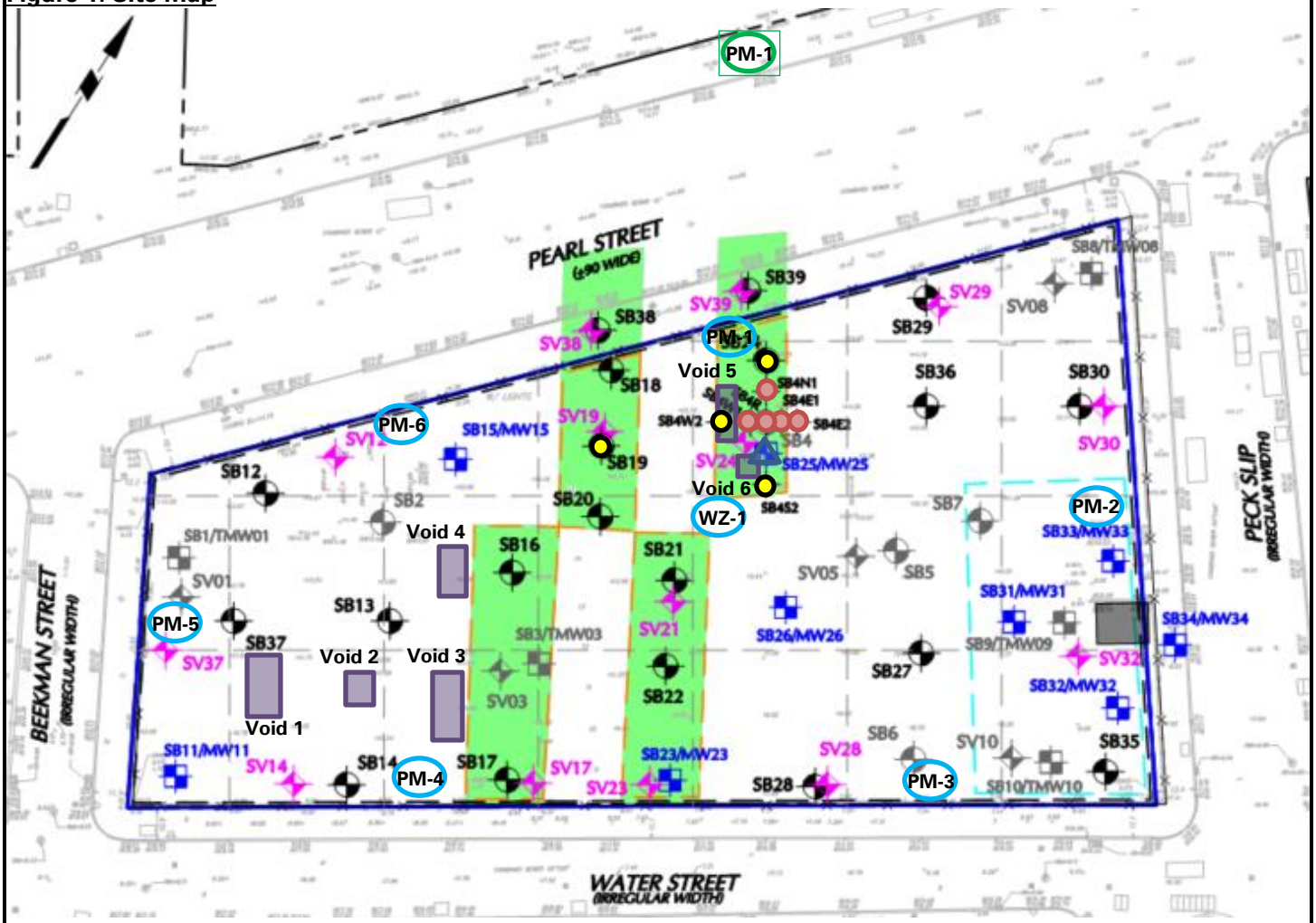
Anticipated Activities

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

Cc:	J. Yanowitz, P. McMahon, M. Raygorodetsky	By:	Adrian Heath
			LANGAN

SITE OBSERVATION REPORT

Figure 1: Site Map



Legend:

- Site Boundary
- Approximate area of suspected void space
- Approximate location of soil borings sampled
- Approximate location of previously sampled soil borings
- Approximate location of previously completed soil borings and monitoring well
- 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.

Cc:	J. Yanowitz, P. McMahon, M. Raygorodetsky	By:	Adrian Heath
			LANGAN

SITE OBSERVATION REPORT

Select Site Photographs:

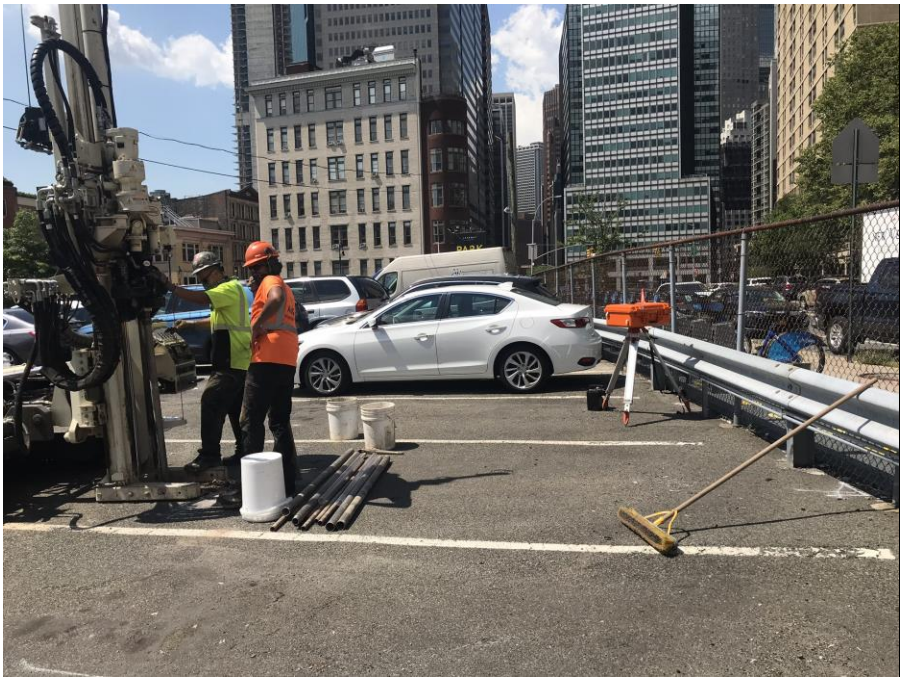


Photo 1: AARCO advancing soil boring SB24 in the northern part of the site (facing southwest)

Photo 2: View of soil from boring SB4S2

Cc:	J. Yanowitz, P. McMahon, M. Raygorodetsky	By:	Adrian Heath
			LANGAN

SITE OBSERVATION REPORT

Photo 3: View of air monitoring station PM-1 while AARCO advances soil boring SB-24 (facing north)

Photo 4: Langan preparing to screen soil for VOCs (facing northwest)

Cc:	J. Yanowitz, P. McMahon, M. Raygorodetsky	By:	Adrian Heath
			LANGAN