SITE OBSERVATION REPORT

PROJECT No.: 170381202		**DATE:**	Monday, August 3, 2020
PROJECT: 250 Water Street	**CLIENT:** 250 Seaport District, LLC	**WEATHER:**	Sunny, 80-92 ^{0}F Wind: E @ 0.6 mph (8:50am) to E @ 7.6 mph (2:11pm)
LOCATION: New York, NY		**TIME:**	6:00 am – 5:30 pm
BCP SITE ID: C231127			
CONTRACTOR: AARCO Environmental Services Corp. (AARCO)		**LANGAN REP. :**	Ashley Stappenbeck Adrian Heath

EQUIPMENT:	**PRESENT AT SITE:** **RI Day 10**
Geoprobe 7822 DT Niton XL3t XRF Jerome J505 and J405 MiniRAE 3000 Dusttrak DRX Post Hole Digger	Ashley Stappenbeck, Adrian Heath, Michael Aldoroty – Langan Sergio Magana, William Edom – AARCO Environmental Services Corp. Brian Ehalt – EXCEL Environmental Resources

OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:

Langan completed 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 core drill and post hole digger to drill through the Pearl Street sidewalk and hand clear two borings to 5 feet below grade surface (bgs). AARCO then used a Geoprobe 7822 DT drill rig with 4-foot-long Macro-Core® samplers to advance two soil borings. Langan documented the work, screened the soil samples for environmental impacts, and collected soil samples.
    - Boring SB38: Boring was advanced to 24 feet bgs. No petroleum-like odors, staining, or photoionization detector (PID) readings above background were observed in soil. Visual evidence of elemental mercury was not identified. A maximum mercury vapor concentration above background of 0.51 micrograms per cubic meter (µg/m^3) was identified with a Jerome J505 unit from 2 to 4 feet bgs. Total mercury concentrations evaluated with the Niton XL3t XRF (XRF) were less than the limit of detection (LOD).
    - Boring SB39: Boring was advanced to 28 feet bgs. No petroleum-like odors, staining, or PID readings above background were observed in soil. Visual evidence of elemental mercury was not identified. A maximum mercury vapor concentration above background of 0.57 µg/m^3 was identified with a Jerome J505 unit from 6 to 8 feet bgs. Total mercury concentrations were detected with the XRF at concentrations of 22 parts per million (ppm) from 6 to 8 feet bgs and 24 ppm from 8 to 10 feet bgs.
- AARCO installed soil vapor probes in predrilled soil borings. After installation and prior to sampling, the sample tubing was purged with a MultiRAE and a mercury vapor reading was taken with a Jerome J505:
    - Soil vapor probe SV38 was installed to about 15 feet bgs. A maximum PID reading of 0.9 ppm and a maximum mercury vapor concentration of 0.09 µg/m^3 were observed.
    - Soil vapor probe SV39 was installed to about 15 feet bgs. A maximum PID reading of 2.5 ppm and a maximum mercury vapor concentration of 0.07 µg/m^3 were observed.

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- 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.
- AARCO developed previously installed monitoring wells MW17 and MW25.

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

Soil 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 volatile organic compounds (VOC), semivolatile organic compounds (SVOC), polychlorinated biphenyls (PCB), pesticides, herbicides, metals including mercury and hexavalent and trivalent chromium, total cyanide, 1,4-dioxane, and per- and polyfluoroalkyl substances (PFAS):
  - SB38: 0-2, 6-8, and 22-24 feet bgs
  - SB39: 0-2, 8-10, and 18-20 feet bgs
- Four quality assurance/quality control soil samples (one PFAS equipment blank, one trip blank, one matrix spike/matrix spike duplicate [MS/MSD], and soil duplicate) were collected and submitted for analysis.

Soil vapor samples were collected and relinquished to Alpha Analytical, Inc, a NYSDOH ELAP-certified laboratory in Westborough, Massachusetts (ELAP No. 11148) for analyses proposed in the RIWP.

- SV38 and SV39: Two, two-hour soil vapor samples were collected in 6-liter summa canisters and in sorbent tubes for analyses by Alpha Analytical, Inc. for VOCs by USEPA Method TO-15 and for mercury vapor by NIOSH Method 6009.

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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	0.012	0.3	0.1
PM-2	0.024	0.0	0.0
PM-3	0.010	0.1	0.0
PM-4	0.009	0.0	0.0
PM-5	0.008	0.8	0.0
PM-6	0.008	0.0	0.0
WZ-1	0.001	0.4	0.0

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	0.016	0.7	0.3
PM-2	0.034	0.0	0.0
PM-3	0.018	0.2	0.1
PM-4	0.042	0.0	0.0
PM-5	0.019	1.4	0.1
PM-6	0.013	0.0	0.0
WZ-1	0.009	0.7	0.1

Anticipated Activities

- Tomorrow, AARCO will cement patch soil vapor points SV38 and SV39.
- Phase 4 of the RIWP (soil sampling) is anticipated to be scheduled and initiated after the Phase 3 results are evaluated.

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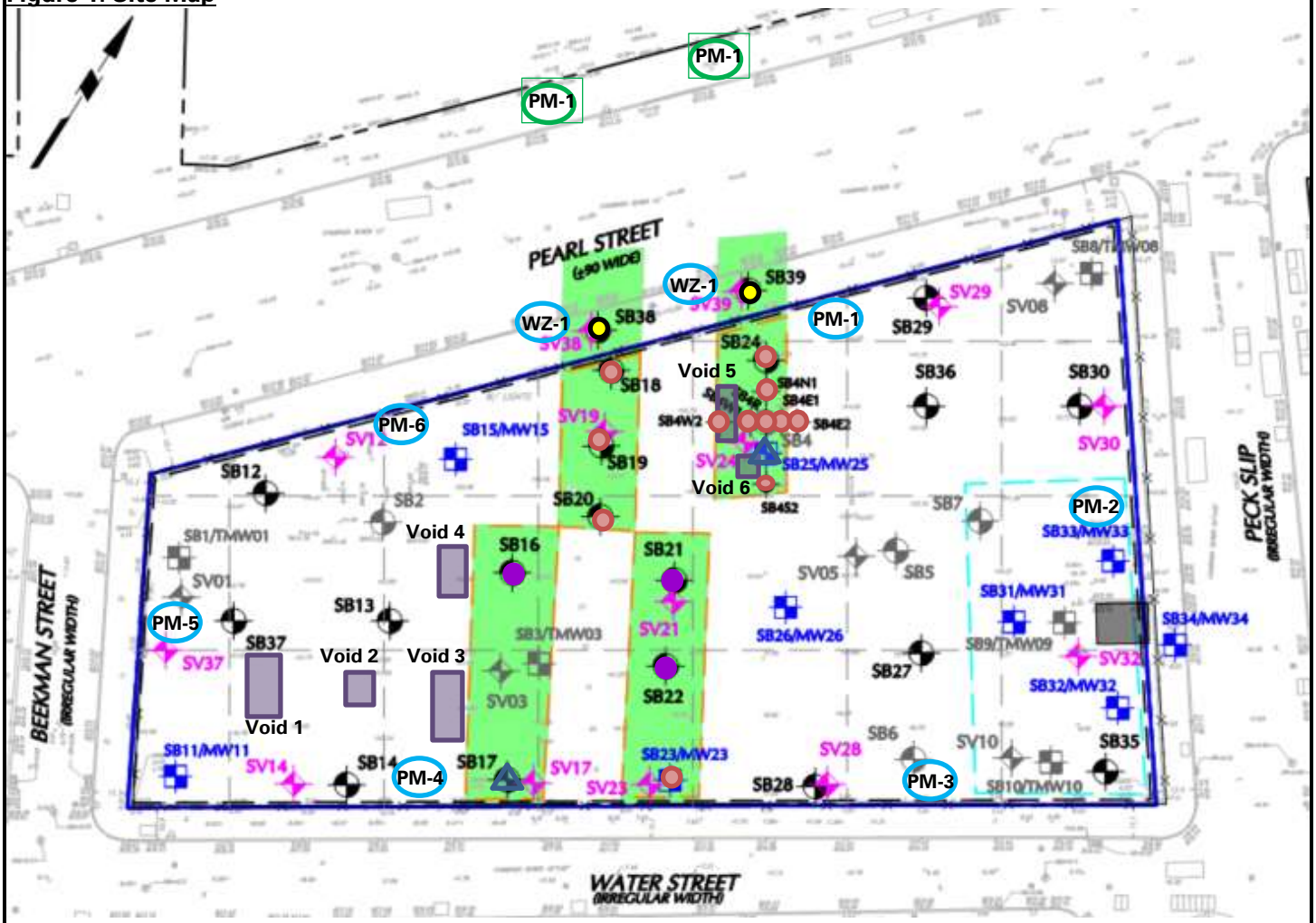
Figure 1: Site Map



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 soil borings advanced to refusal
- Approximate location of 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.

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Select Site Photographs:

Photo 1: AARCO developing monitoring well MW17 in the southern part of the site (facing south)

Photo 2: AARCO hand clearing soil boring SB38 (facing northwest)

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Photo 3: View of Langan collecting a mercury vapor sample at SV39 (facing south)

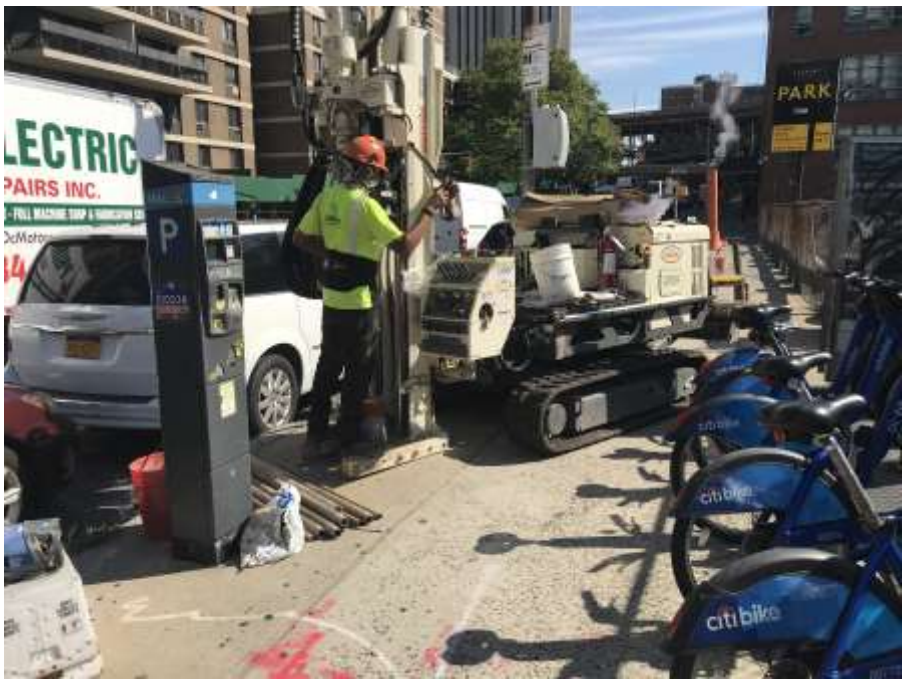

Photo 4: AARCO advancing boring SB39 (facing east)

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