LANGAN

SITE OBSERVATION REPORT

PROJECT No.: 170381202		**DATE:**	Wednesday, July 8, 2020
PROJECT: 250 Water Street	**CLIENT:** 250 Seaport District, LLC	**WEATHER:**	Cloudy, 79-87 ^{0}F Wind: SSE @ 1.1 mph (10:33 am) to E @ 6.2 mph (12:28 pm)
LOCATION: New York, NY		**TIME:**	6:45 am – 3:45 pm
BCP SITE ID: C231127			
CONTRACTOR: AARCO Environmental Services Corp.		**LANGAN REP. :**	Thomas Schiefer Adrian Heath Mimi Raygorodetsky

EQUIPMENT:
Geoprobe 7720 DT
Bosch RH540M Hammer Drill
Jerome J505 and J405
MultiRAE
MiniRAE 3000
Dusttrak DRX

PRESENT AT SITE: **RI Day 3**
Thomas Schiefer, Adrian Heath, Mimi Raygorodetsky – Langan
Nick Turro, Jose Romoro – AARCO Environmental Services Corp.
Rick Lin – NYSDEC
Brian Ehalt – EXCEL Environmental Resources
Carey Wu – Emilcott Environmental

OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:

Langan continued implementing 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).

Site Activities

- AARCO used a Bosch RH540M Hammer Drill to probe six suspected void spaces that were identified by the geophysical survey.
  - The top of the void spaces were encountered between 1 and 1.5 feet below grade surface (bgs).
  - Langan used a Jerome J505 and MultiRae unit to measure mercury vapor and total volatile organic compound (VOC) concentrations, respectively, within the void spaces. No VOC readings above background were identified in the void spaces. Mercury vapor concentrations are summarized below.
    - Void 1: 0.08 to 0.23 micrograms per cubic meter (µg/m^3)
    - Void 2: 0.00 µg/m^3
    - Void 3: 0.00 to 0.07 µg/m^3
    - Void 4: 0.02 to 0.05 µg/m^3
    - Void 5: 1.87 to 2.32 µg/m^3
    - Void 6: 0.03 to 0.09 µg/m^3

    Based on these data, additional soil vapor probes will be installed in Voids 1, 3, and 5. See site map for void locations.
  - Initial mercury vapor readings in Void 1 ranged from 0.5 to 0.7 ug/m^3, but after evaluation with a separate J405 unit from the community monitor, and ambient monitoring with the J505, it became clear that the J505 required recalibration/flushing. The Void Space 1 readings above reflect readings after recalibration.
- AARCO used a Geoprobe 7720 DT drill rig with a closed point sampler to install the following soil vapor probes:
  - Sub-slab soil vapor probe V8 was installed to about 1.5 feet bgs in Void 5. No petroleum-like odors or elevated photoionization detector (PID) readings above background were observed. A maximum mercury vapor concentration of to 2.32 µg/m^3 was observed.

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  - Soil vapor probe SV19 was installed to about 7 feet bgs. No PID readings or mercury vapor concentrations above background were observed.
  - Soil vapor probe SV21 was advanced to about 7 feet bgs. No PID readings or mercury vapor concentrations above background were observed.
  - Soil vapor probe SV24 was advanced to about 7 feet bgs. No PID readings or mercury vapor concentrations above background were observed.
- AARCO installed all soil vapor probes by backfilling with one foot of No.2 sand, followed by backfilling to grade with bentonite, before finishing the boring with a bentonite seal.

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

- No samples were collected.

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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 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^3) for PM10, 0.5 parts per million (ppm) for VOCs, and 0.0 micrograms per cubic meter ($\mu g/m^3$) for mercury vapor.

- Intrusive work was performed between about 10AM and 3PM. Due to a connection issue at perimeter station PM6, air monitoring data was not recorded from PM6 during investigation of Voids 1, 2, 3, and 4. The work zone was monitored by the work zone air monitoring station, and the dedicated CAMP personnel during intrusive work, and no exceedances of action levels were observed. An elevated instantaneous mercury vapor reading of 5.05 $\mu g/m^3$ occurred at a PM6 at 11:08 AM. No intrusive work was occurring at this time and the issue was investigated by the dedicated CAMP personnel. The dedicated CAMP personnel used a handheld Jerome J505 to collect mercury readings next to the PM6 station, and re-ran an air sample of the Jerome J405 that produced the elevated reading. Both air samples were non-detect. Langan determined the cause of the elevated reading to be a power surge from the unit or the telemetry system turning off and on. Due to a faulty battery connection, the Jerome J405 unit lost power and turned back on, causing initial elevated readings to be recorded when the unit turned back on. A representative from the equipment rental company was on site at 11:35, and repaired the connection. Intrusive work was not performed until the connection was repaired.

Daily Average Concentrations			
Station ID	Particulate (mg/m^3)	Organic Vapor (ppm)	Mercury Vapor ($\mu g/m^3$)
PM-1	0.023	0.0	0.0
PM-2	0.038	0.0	0.0
PM-3	0.031	0.2	0.1
PM-4	0.022	0.0	0.0
PM-5	0.016	0.0	0.0
PM-6	0.020	0.0	0.1
WZ-1	0.009	0.0	0.1

Max 15 Minute Average Concentration			
Station ID	Particulate (mg/m^3)	Organic Vapor (ppm)	Mercury Vapor ($\mu g/m^3$)
PM-1	0.035	0.0	0.1
PM-2	0.043	0.0	0.0
PM-3	0.052	0.5	0.2
PM-4	0.040	0.0	0.1
PM-5	0.024	0.0	0.0
PM-6	0.025	0.0	0.0
WZ-1	0.022	0.0	0.3

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Anticipated Activities

- AARCO will install the remaining on-site soil vapor probes.
- Langan will collect soil vapor samples from soil vapor probes installed for mercury vapor and VOCs.

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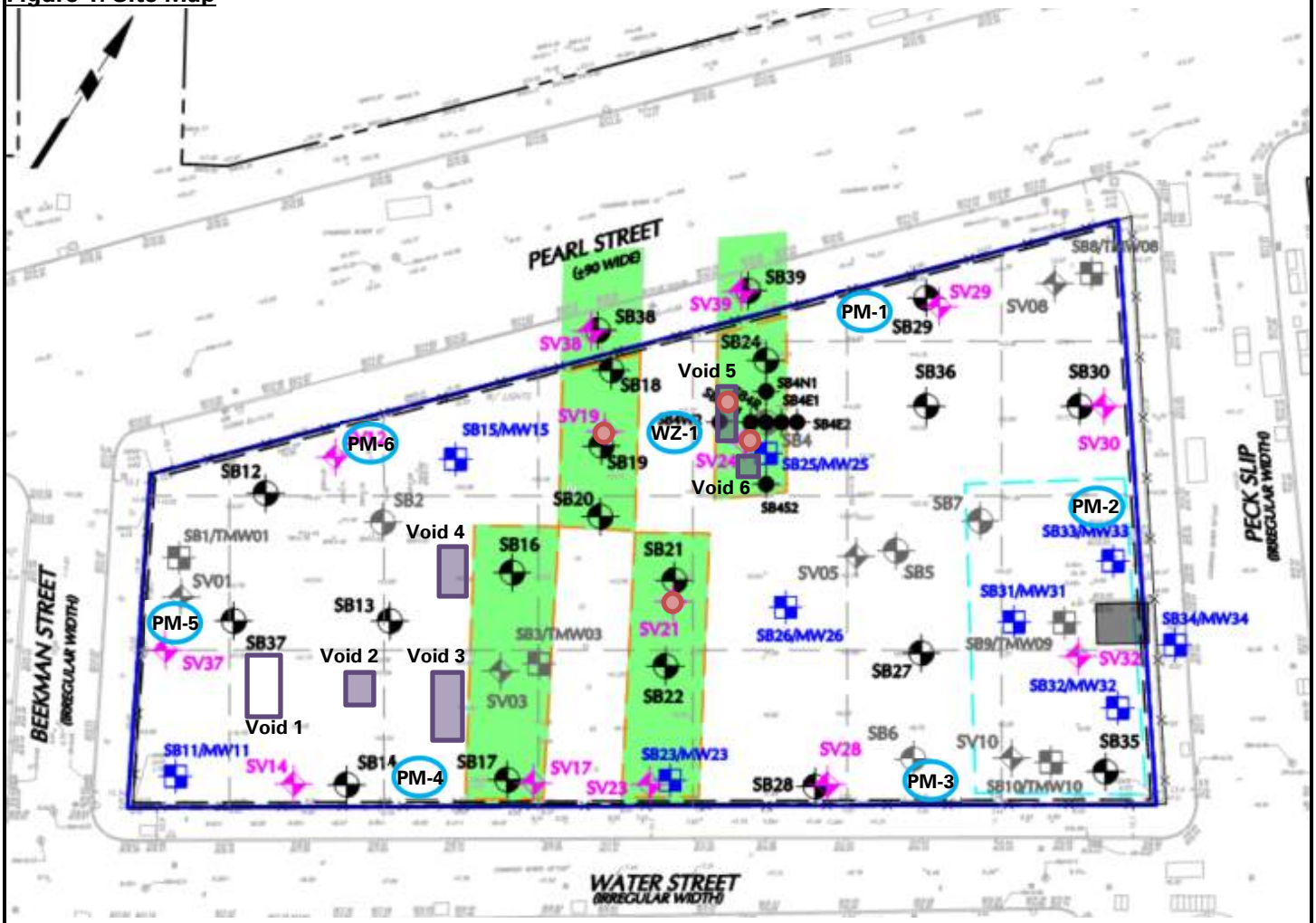
Figure 1: Site Map



Legend:

- Site Boundary
- Approximate area of suspected void space
- Approximate location of soil vapor probes installed today
- PM-1 — Approximate location of air monitoring station
- WZ-1 — Approximate location of wok zone air monitoring station

Notes:

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

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Select Site Photographs:

Photo 1: AARCO advancing a handheld hammer drill into a suspected void space (facing west)

Photo 2: AARCO installing sub-slab vapor probe at Void 5 (facing north)

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