SITE OBSERVATION REPORT

PROJECT No.: 170381202	**CLIENT:** 250 Seaport District, LLC c/o The Howard Hughes Corporation	**DATE:**	Wednesday, July 20, 2022
PROJECT: 250 Water Street		**WEATHER:**	Clear, 79.1 – 95.3 ˚F Wind: N @ 0.9 – 6.2 mph
LOCATION: New York, NY		**TIME:**	6:00 AM – 5:45 PM
BCP SITE ID: C231127		**MONITOR:**	Maitland Robinson, Brian Kenneally, Lauren Roper

EQUIPMENT:
MiniRAE 3000 PID
DustTrak II
Jerome J405®
Jerome J505®
Hand tools
CAT 374F
Komatsu 969
Komatsu 228
Takeuchi TB290

PRESENT AT SITE: **Day 43**
Langan (Environmental/Geotechnical) – Maitland Robinson, Brian Kenneally, Lauren Roper, Kevin Leong
LendLease (Construction Manager) – Marty Cohen
Civetta Cousins JV, LLC (CCJV) (Foundation Contractor) – Jack Dettra, George Washburn
Eastern Environmental Solutions, Inc. (Eastern Environmental) (Drilling Contractor) – Ernesto Santiago
New York State Department of Environmental Conservation (NYSDEC) – Rafi Alam

OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:

Langan was present to document remediation activities in accordance with the NYSDEC-approved November 2021 Remedial Action Work Plan (RAWP) at the 250 Water Street site (NYSDEC Brownfield Cleanup Program [BCP] Site No. C231127).

Site Activities

- CCJV temporarily backfilled test pits from soldier piles SP14 through SP19 using previously excavated soil/fill originating from each respective test pit.
- CCJV excavated an about 15-foot-long by 2-foot-wide area to a maximum depth of about 10 feet below grade surface (bgs) in the northeastern part of the site to locate potential subsurface utilities and/or obstructions prior to installation of support-of-excavation (SOE) soldier piles **SP20, SP21, SP22, SP23,** and **SP24**.
    - Construction & demolition (C&D) debris, consisting of demolished concrete, was removed from the excavation area and stockpiled in the northeastern part of the site in preparation for off-site disposal.
    - Excavated soil/fill was temporarily stockpiled adjacent to the work area on polyethylene sheeting and was screened for odors, staining, organic vapors, and mercury vapor using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer, respectively. No odors, staining, or instrumental evidence (PID or Jerome® J505) of contamination was recorded.
    - Following removal of concrete obstructions and installation of SOE soldier piles SP20 and SP21, excavated soil/fill was temporarily backfilled into the area surrounding each respective soldier pile. Excavated soil/fill from SOE soldier piles SP22 through SP24 was sprayed with Mercon-X® prior to being covered with polyethylene sheeting at the end of the work day. The stockpiled soil/fill will be temporarily backfilled into the location of origin at a later date.
- CCJV excavated five test pits along the eastern boundary of the site for future installation of SOE soldier piles **SP25, SP26, SP27, SP28,** and **SP29.** Each test pit consisted of an about 3-foot-long by 2-foot-wide area and was excavated to a maximum depth of about 4 feet bgs.

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  - Excavated soil/fill was temporarily stockpiled adjacent to each respective work area on polyethylene sheeting and was screened for odors, staining, organic vapors, and mercury vapor using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. No odors, staining, or instrumental evidence (PID and Jerome® J505) of contamination was recorded.
  - Subsurface utilities or obstructions were not identified. Excavated soil/fill from SOE soldier piles SP25 through SP29 was sprayed with Mercon-X® prior to being covered with polyethylene sheeting at the end of the work day. The stockpiled soil/fill will be temporarily backfilled into each respective test pit at a later date.

- CCJV installed five SOE soldier piles (SP17 through SP21) to a depth of about 36 feet bgs along the northern boundary of the site. No spoils were generated during installation of the solider piles.
- CCJV demolished concrete surrounding the four previously identified underground storage tanks (USTs) using an excavator with a jackhammer attachment. Demolished concrete was stockpiled on and covered with polyethylene sheeting in the southeastern part of the site in preparation for off-site disposal.
- CCJV continued installation of perimeter construction fencing, consisting of concrete jersey barriers and plywood panels, along the western sidewalk of Peck Slip. The existing plywood construction fencing remained in place along the eastern boundary of the site during this work.
- Eastern Environmental used a Geoprobe® 7322DT direct-push drill rig with 4-foot-long Marco-Core® samplers to advance 13 soil borings to determine the extents of previously identified hazardous lead in the south-central part of the site. Langan observed and documented the work, screened the soil samples for environmental impacts, and collected soil samples:
  - Soil borings **SB28_N1, SB28_NE1, SB28_NE1a, SB28_NW1, SB28_NW1a, SB28_N3, SB28_NE3, SB28_E3a, SB28_NW3, SB28_NW3a, SB28_N4, SB28_N5** and **SB28_N6** were advanced to a depth of about 12 feet bgs. Material was screened for odors, staining and organic vapors using a PID. A maximum PID reading of 32.7 parts per million (ppm) was observed in soil boring SB28_NW3a at a depth of about 10 feet bgs.
  - Soil borings were backfilled with clean drill cuttings and/or clean sand and patched with cold patch asphalt after sampling was completed.
- Eastern Environmental decommissioned remedial investigation (RI) monitoring wells MW25 and MW30 by placing hydrated bentonite chips within the bottom 10 feet of each well (ie. the screened interval).
- Following application of Mercon-X®, CCJV covered all exposed soil/fill and C&D debris with polyethylene sheeting and/or Atmos® AC-645 dust/vapor suppressing foam to create a temporary overnight cover at the end of the work day.

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Material Tracking

- No material was imported to the site.
- No material was exported from the site.

Material Import Summary						
Facility Name Location Type of Material	**Stone Industries, Inc. Haledon, NJ 1.5/2.5-inch Virgin Stone**		**Stone Industries, Inc. Haledon, NJ 0.75-inch Virgin Stone**		**Impact Reuse & Recovery or Impact Materials Jersey City, Lyndhurst/Jersey City, NJ 1.5 inch Clean Bluestone**	
Quantities	No. of Loads	Approx. Volume (Tons)	No. of Loads	Approx. Volume (Tons)	No. of Loads	Approx. Volume (Tons)
Today	0	0	0	0	0	0
Total	7	161.51	0	0	2	41.23
NYSDEC Approved:	1,000 CY				400 CY	

Material Export Summary						
Facility Name Location Type of Material	**Allocco Recycling Brooklyn, NY Construction & Demolition (C&D) Debris**		**IRRC Lyndhurst, NJ Construction & Demolition (C&D) Debris**		**Clean Earth of North Jersey Kearny, NJ Hazardous Lead-Impacted Soil/Fill**	
Quantities	No. of Loads	Approx. Volume (CY)	No. of Loads	Approx. Volume (CY)	No. of Loads	Approx. Volume (CY)
Today	0	0	0	0	0	0
Total	1	25	3	60	14	280

Sampling Activities

- Langan collected four composite and/or grab soil samples for laboratory analysis of total and toxicity characteristic leaching procedure (TCLP) lead.
    - An additional 49 soil samples were collected and placed on hold with the laboratory for potential analysis of total and TCLP lead pending receipt of the initial laboratory report.
- Samples were relinquished to Alpha Analytical, Inc., an Environmental Laboratory Accredited Program (ELAP)-certified laboratory under standard chain-of-custody protocols.

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CAMP Activities

Langan performed air monitoring at the perimeter of the site and at the work zone at nine total locations for mercury vapor, volatile organic compounds (VOCs), and particulate matter less than 10 microns in diameter (PM10), during ground-intrusive activities. There were no fifteen-minute average concentrations for mercury vapor, VOCs, or PM10 that approached or exceeded the action level established by the community air monitoring plan (CAMP) (1.0 µg/m^3, 5.0 ppm, and 0.1 mg/m^3, respectively).

Background Concentrations

Prior to implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome® J505 mercury vapor analyzer and a handheld PID, respectively.

- Background concentrations of mercury vapor at each CAMP station ranged from 0.00 to 0.03 µg/m^3.
- Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.

Perimeter and Work Zone Concentrations

Daily Average Concentrations

Station ID	Particulate (mg/m^3)	Organic Vapor (ppm)	Mercury Vapor (µg/m^3)
PM-1	0.044	0.0	0.0
PM-2	0.059	0.0	0.0
PM-3	0.036	0.1	0.0
PM-4	0.048	0.5	0.0
PM-5	0.049	0.1	0.0
PM-6	0.050	0.1	0.0
WZ-1	0.061	0.0	0.0
WZ-2	0.052	0.0	0.0
WZ-3	0.009	0.2	0.0

Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m^3)	Organic Vapor (ppm)	Mercury Vapor (µg/m^3)
Action Level	**0.100 mg/m^3**	**5.0 ppm**	**1.0 µg/m^3**
PM-1	0.063	0.0	0.0
PM-2	0.089	0.3	0.0
PM-3	0.062	0.3	0.0
PM-4	0.069	2.4	0.1
PM-5	0.059	0.3	0.1
PM-6	0.081	0.7	0.3
WZ-1	0.083	0.0	0.1
WZ-2	0.066	0.0	0.2
WZ-3	0.040	1.2	0.0

●mg/m^3 = milligrams per cubic meter ●ppm = parts per million ●µg/m^3 = micrograms per cubic meter

- Two instantaneous mercury vapor readings above background concentrations were recorded at off-site CAMP station WZ-2 (2.5 µg/m^3 at 8:15am) and perimeter CAMP station PM-6 (4.4 µg/m^3 at 2:17pm), respectively. There were no 15-minute average exceedances of the action level established

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in the CAMP, however, out of an abundance of caution, work was temporarily halted and Mercon-X® was applied to all stockpiles and exposed soil/fill throughout the site. In each instance, mercury vapor concentrations returned background conditions immediately following the instantaneous reading and work resumed following application of Mercon-X®.

Ambient Air (Handheld Jerome® J505 and Handheld PID)

- The dedicated mobile monitor (Langan) used a handheld Jerome® J505 mercury vapor analyzer to monitor ambient air conditions at various heights throughout the site. Instantaneous mercury vapor concentrations throughout the site ranged from 0.00 µg/m^3 to 0.16 µg/m^3.
- The dedicated mobile monitor (Langan) used a handheld PID to monitor VOC concentrations throughout the site. Instantaneous VOC concentrations were at or below background concentrations throughout the work day.

Equipment Troubleshooting

- The PID at off-site CAMP station WZ-1 was recalibrated at 8:58am due to persistent readings of 1.2 ppm, which was inconsistent with readings on the handheld unit (0.0 ppm). Data logging resumed at 9:00am and VOC concentrations returned to background conditions following equipment recalibration. Odors were not observed migrating from the site during this time.
- The PID at perimeter CAMP station PM-4 was recalibrated at 11:39am and 12:33pm due to persistent readings ranging from 2.1 ppm to 2.7ppm, which was inconsistent with readings on the handheld unit (0.0 ppm). Data logging resumed at 11:42am and 12:35pm, respectively, and VOC concentrations returned to background conditions in each instance. Odors were not observed migrating from the site during this time.

Off-Site CAMP Station Relocation

- CAMP station WZ-1 was relocated to the northern sidewalk of Pearl Street from 7:12am to 5:01pm during excavation/backfill of test pits and installation of SOE soldier piles along the northern boundary of the site.
- CAMP station WZ-2 was relocated to the southern sidewalk of Water Street from 7:04am to 12:50pm during advancement of soil borings in the south-central part of the site.
- CAMP station WZ-3 was relocated to the eastern sidewalk of Peck Slip from 8:09am to 5:01pm during excavation/backfill of test pits along the eastern boundary of the site.

Prior to CAMP Shutdown

Prior to discontinuing CAMP, air quality at each CAMP station was verified using the handheld PID and handheld Jerome® J505 mercury vapor analyzer and no readings above background concentrations were recorded. Additionally, areas of exposed soil/fill were covered with polyethylene sheeting and/or Atmos® AC-645 dust/vapor suppressing foam. CAMP stations were discontinued at 5:01pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.00 to 0.02 µg/m^3.
- VOC concentrations at each CAMP station were recorded at 0.0 ppm.

Anticipated Activities

- CCJV will export previously stockpiled C&D debris to the Impact Reuse & Recovery Center (IRRC) facility, located in Lyndhurst, NJ.
- UBS will begin relocation of the perimeter construction fence along the northern sidewalk of Water Street.
- CCJV will continue excavating test pits to identify potential subsurface utilities and/or obstructions prior to SOE soldier pile installation along the eastern boundary of the site.
- CCJV will continue installation of SOE soldier piles along the eastern boundary of the site.
- CCJV will remove the four 550-gallon USTs in the eastern part of the site.

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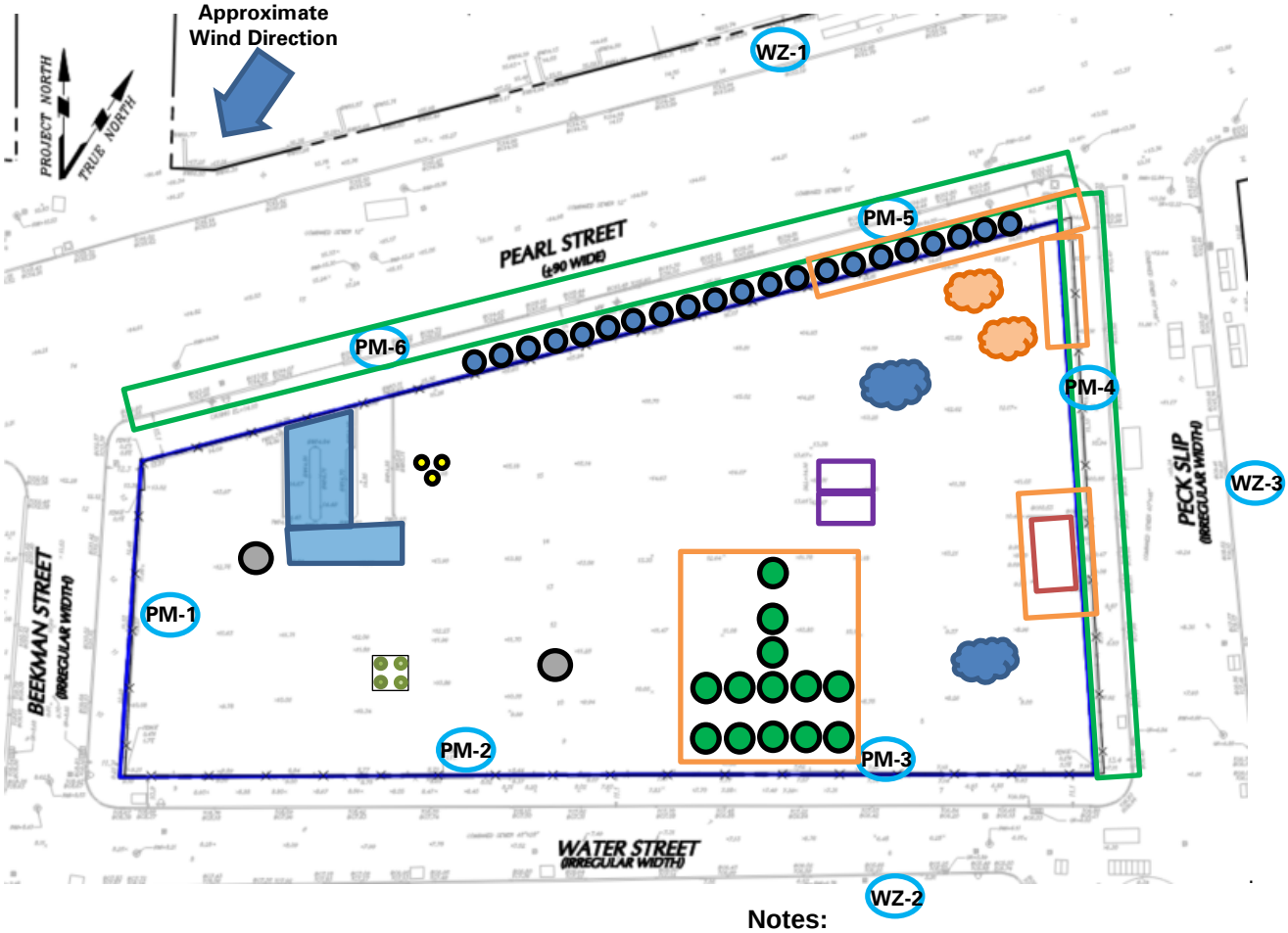
Site Map



Notes:
1) Locations of air monitoring stations are approximate.

Legend:

- PM-1 — Approximate Location of Air Monitoring Station
- Approximate Work Area
- Approximate Location of Installed Pile Cap
- Approximate Location of Foundation Piles Completed
- Approximate Location of Truck Tracking Pad
- Approximate Location of C&D Stockpile
- Approximate Location of Soil/Fill Container
- Approximate Location of Soil/Fill Stockpile
- Approximate location of USTs
- Approximate Location of Stockpiled Virgin Stone
- Approximate Location of 55-gallon drum
- Approximate Location of Test Pile
- Approximate Location of Soldier Pile
- Approximate Fence Relocation Area
- Approximate Location of Soil Boring Completed Today

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Select Site Photographs:

Photo 1: Atmos® AC-645 dust/vapor suppressing foam applied to areas of exposed soil/fill in the northern part of the site (facing northeast)

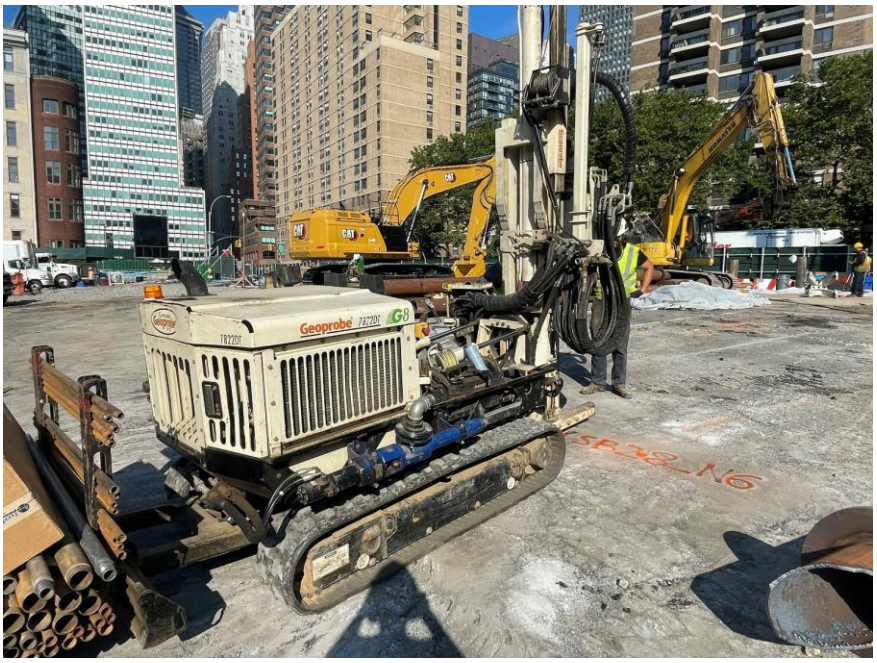

Photo 2: Eastern Environmental advancing soil boring SB28_N6 in the central part of the site (facing northwest)

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