

SITE OBSERVATION REPORT

PROJECT No.: 170381202	CLIENT: 250 Seaport District, LLC c/o The Howard Hughes Corporation	DATE: Wednesday, September 6, 2023
PROJECT: 250 Water Street		WEATHER: Partly Sunny, 80 – 92° F Wind: SE @ 0.1 – 1.4 mph
LOCATION: New York, NY		TIME: 5:45am – 5:45pm
BCP SITE ID: C231127		MONITOR Jack Millman

EQUIPMENT: CAT 335 Excavator CAT 328 Excavator Komatsu PC138 Excavator Delmag Drill Rig Bauer RTG RG 27S Bauer BG45 Drill Rig Jerome J505 Mercury Vapor Analyzer RKI GX-6000 Photoionization Detector (PID) Aeroqual ASQ1 Air Monitoring Station	PRESENT AT SITE: Day 197 Langan (Environmental/Geotechnical) Jack Millman, Michael Cole, Pradeep Pandey Suffolk Construction (Suffolk) (General Contractor) Anthony Galu, Wyatt Favia East Coast Drilling, Inc. (ECD) (Foundation Contractor) Danny Rodgers New York State Department of Environmental Conservation (NYSDEC) Mike Sollecito
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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

- ECD used a Bauer RTG RG 27S drill rig to pre-drill two boreholes in the eastern part of the site to loosen the underlying soil in preparation for soil mix column installation.
- ECD used a Bauer BG45 drill rig to install two deep soil mix columns for support-of-excavation (SOE) installation in the eastern part of the site (along Peck Slip Street). ECD’s drill rig advanced a steel rod with two cutter blades at the bottom of the rod, while concurrently injecting grout through the cutting head and spinning and advancing the blades downward to depths of about 77 and 90 feet below grade surface (bgs), respectively.
 - No drilling spoils were generated during installation of the soil mix column; however, a faint petroleum-like odor was observed adjacent to the drilling locations. Handheld photoionization detector (PID) readings in the work zone were recorded below 1.0 parts per million (ppm), and Atmos® AC-645 odor/vapor suppressing foam was applied to the exposed soil/fill following detection of the odors.
 - Excess grout was contained within a temporary containment area in the eastern part of the site and will be managed as construction and demolition (C&D) debris at a later date.
- ECD excavated previously imported fill to a maximum depth of about 3 feet bgs in the northeastern part of the site to facilitate installation of soil mix columns for the SOE system.
- ECD continued installation of the concrete guide wall in the northern and eastern parts of the site (along Pearl Street and Peck Slip, respectively). The concrete guide wall will be used to facilitate installation of SOE along the perimeter of the site.

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Material Tracking

- ECD exported two truckloads (about 40 cubic yards [CY]) of construction and demolition (C&D) debris for off-site disposal at the Earth Efficient MSM facility, located in East Stroudsburg, PA.
- No material was imported to 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 Center or Impact Materials Jersey City, Lyndhurst/Jersey City, NJ 1.5-inch Clean Bluestone		Impact Reuse & Recovery Center, Lyndhurst, NJ General Fill	
Quantities	No. of Loads	Approx. Volume (Tons)	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	0	0
Project Total	12	283.91	0	0	15	339.65	374	9,157.85
NYSDEC Approved:	1,800 tons*			720 tons*		19,500 tons*		

*0.75-inch, 1.5-inch, and 2.5-inch virgin stone from the Stone Industries, Inc. facility and 1.5-inch clean bluestone from the Impact Reuse & Recovery Center (IRRC) facility were approved for import of 1,000 cubic yards (CY) and 400 CY, respectively. Assuming a conversion factor of 1.8, each quantity was converted to tons in order to accurately compare with import weight tickets. General fill from the IRRC facility was approved for import of 13,000 CY and a conversion factor of 1.5 is applied.

Material Export Summary (1 of 3)

Facility Name Location Type of Material	Allocco Recycling Brooklyn, NY Construction & Demolition (C&D) Debris		IRRC Lyndhurst, NJ C&D Debris		Earth Efficient MSM East Stroudsburg, PA 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)	No. of Loads	Approx. Volume (CY)
Today	0	0	0	0	2	40	0	0
Project Total	5	85	42	840	30	600	95	1,900

Material Export Summary (2 of 3)

Facility Name Location Type of Material	Middlesex County Landfill East Brunswick, NJ Non-hazardous Soil/Fill		Bayshore Soil Management Keasbey, NJ Petroleum-Impacted Soil/Fill		Clean Earth of Carteret, NJ Carteret, NJ Non-hazardous 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
Project Total	273	5,460	267	5,340	66	1,320

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Material Export Summary (3 of 3)		
Facility Name Location Type of Material	Clean Earth of North Jersey Kearny, NJ Non-hazardous Soil/Fill	
Quantities	No. of Loads	Approx. Volume (CY)
Today	0	0
Project Total	201	4,020

Sampling

- No samples were collected.

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CAMP Activities

Langan performed air monitoring at the perimeter of the site, at the northern sidewalk of Pearl Street, at the western sidewalk of Beekman Street, at the eastern sidewalk of Peck Slip, and at the southern sidewalk of Water Street at eight total locations for mercury vapor, volatile organic compounds (VOCs), and particulate matter less than 10 microns in diameter (PM10) from about 7:00am to 4:48pm. There were no fifteen-minute average concentrations for mercury vapor, VOCs or PM10 that approached or exceeded the action levels established by the CAMP (1.00 $\mu\text{g}/\text{m}^3$, 5.0 ppm, or 0.100 mg/m^3 , respectively).

Background Concentrations

Prior to implementation of CAMP, 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 were recorded at 0.00 $\mu\text{g}/\text{m}^3$.
- 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 ($\mu\text{g}/\text{m}^3$)
PM-1	0.011	0.00	0.01
PM-2	0.012	0.00	0.01
PM-3	0.012	0.02	0.01
PM-4	0.012	0.01	0.02
WZ-1	0.012	0.00	0.00
WZ-2	0.011	0.00	0.00
WZ-3	0.011	0.00	0.01
WZ-4	0.011	0.00	0.03

Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m^3)	Organic Vapor (ppm)	Mercury Vapor ($\mu\text{g}/\text{m}^3$)
PM-1	0.018	0.00	0.04
PM-2	0.018	0.00	0.02
PM-3	0.026	0.16	0.03
PM-4	0.019	0.13	0.05
WZ-1	0.015	0.00	0.01
WZ-2	0.015	0.00	0.01
WZ-3	0.014	0.04	0.02
WZ-4	0.018	0.07	* 0.57

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

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Equipment Troubleshooting

* Two consecutive mercury vapor readings were detected at 4.88 $\mu\text{g}/\text{m}^3$ and 3.51 $\mu\text{g}/\text{m}^3$ at off-site CAMP station WZ-4 at 4:46pm and 4:47pm, respectively. No work was ongoing during this time and Langan was in the process of discontinuing CAMP for the day. Mercury vapor readings at perimeter CAMP station PM-4 were recorded at 0.0 $\mu\text{g}/\text{m}^3$ during this time. As a precautionary measure, off-site CAMP station WZ-4 was run for an additional 70 minutes to confirm readings returned to background levels. Mercury vapor readings remained at background concentrations from about 4:48pm to 6:00pm. The filter within the Jerome® J505 will be replaced tomorrow.

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 $\mu\text{g}/\text{m}^3$ to 0.17 $\mu\text{g}/\text{m}^3$.
- The dedicated mobile monitor (Langan) used a handheld PID to monitor VOC concentrations throughout the site. Instantaneous VOC concentrations were not detected above background concentrations throughout the workday.

Off-site CAMP Stations

- CAMP station WZ-1 was placed on the western sidewalk of Beekman Street from about 6:45am to 5:37pm.
- CAMP station WZ-2 was placed on the southern sidewalk of Water Street from about 6:48am to 5:42pm.
- CAMP station WZ-3 was placed on the eastern sidewalk of Peck Slip from about 6:50am to 5:49pm.
- CAMP station WZ-4 was placed on the northern sidewalk of Pearl Street from about 6:53am to 5:59pm.

Prior to CAMP Shutdown

Prior to discontinuing CAMP, mercury vapor and VOC concentrations were confirmed to return to background conditions at each perimeter station using the handheld Jerome® J505 mercury vapor analyzer and handheld PID, respectively. Perimeter CAMP stations were discontinued sequentially between 4:48pm and 4:58pm.

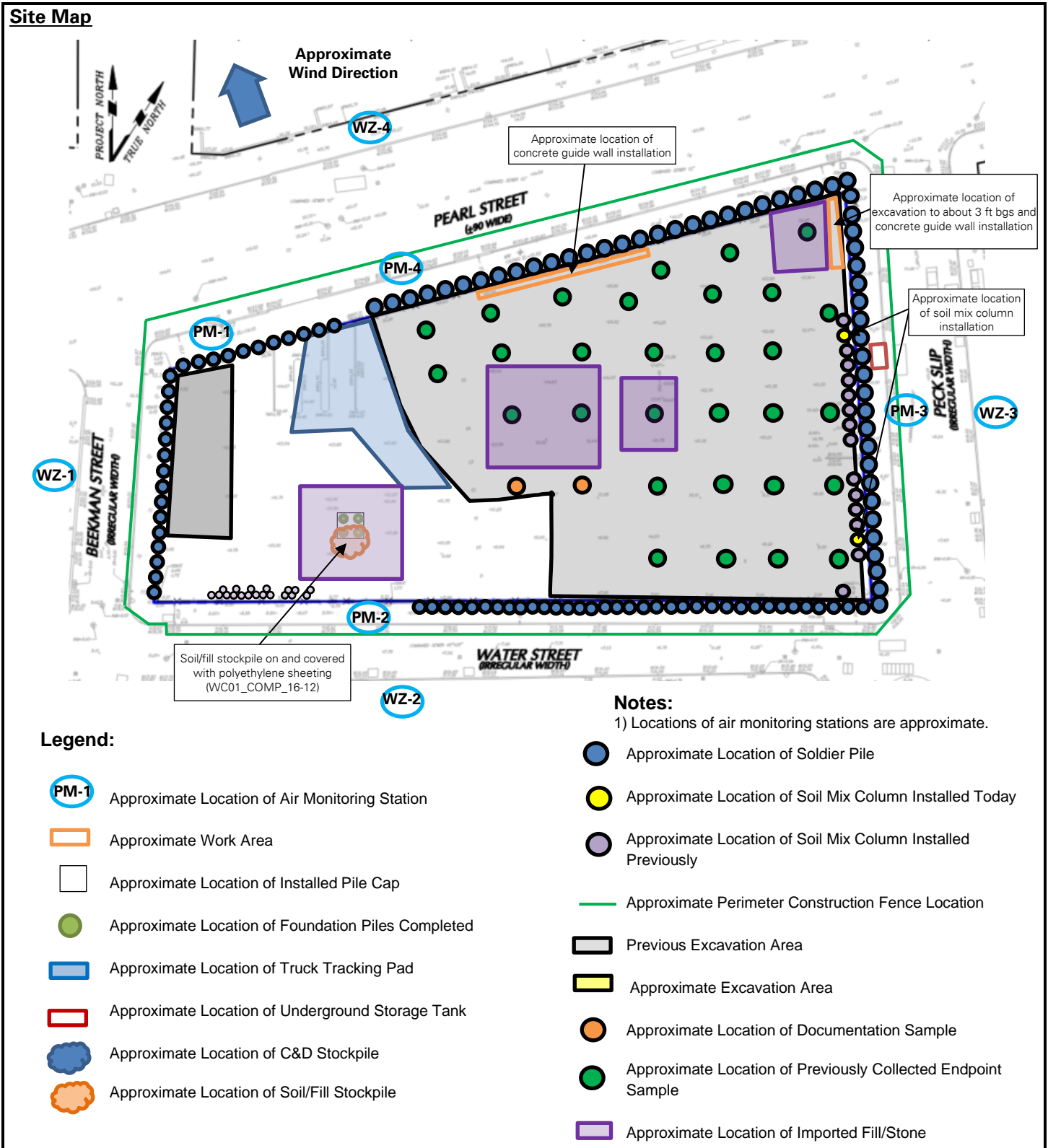
- Background concentrations of mercury vapor at each CAMP station were recorded at 0.00 $\mu\text{g}/\text{m}^3$.
- Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.

Anticipated Activities

- ECD will continue exporting C&D and soil/fill from the western part of the site for off-site disposal.
- ECD will continue installing soil mix columns and/or soldier piles for SOE installation along Pearl Street and Peck Slip.
- ECD will continue installation of timber lagging for the SOE system in the western part of the site.

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Select Site Photographs:



Photo 1: Atmos® AC-645 odor/vapor suppressing foam applied to soil/fill during soil mix column installation in the eastern part of the site (facing south)

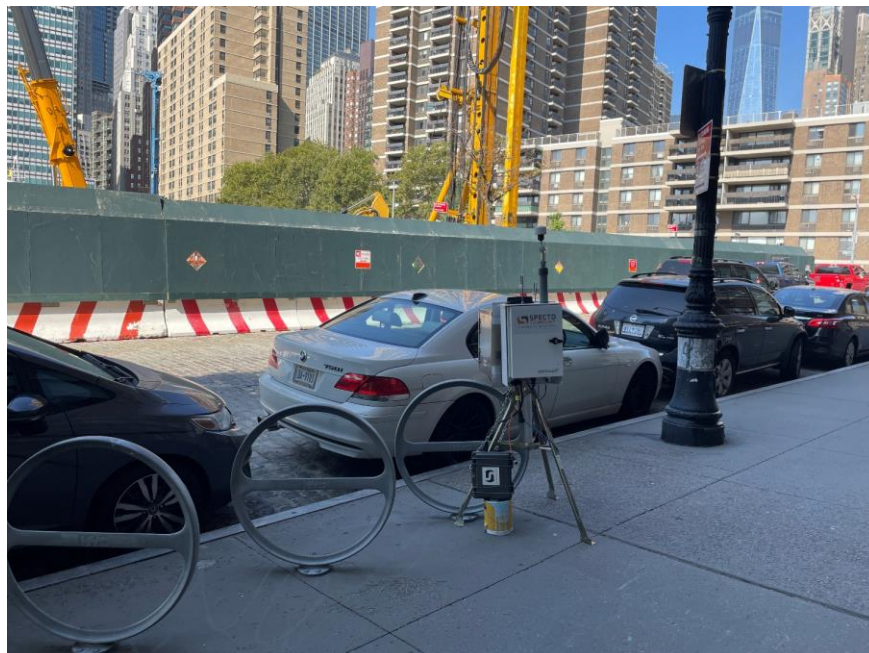


Photo 2: CAMP station WZ-3 on the eastern sidewalk of Peck Slip (facing northwest)

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