

SITE OBSERVATION REPORT

PROJECT No.: 170381202 PROJECT: 250 Water Street LOCATION: New York, NY BCP SITE ID: C231127	CLIENT: 250 Seaport District, LLC c/o The Howard Hughes Corporation	DATE: Wednesday, September 27, 2023 WEATHER: Partly Sunny, 50 – 64° F Wind: NW @ 0.3 – 2.7 mph TIME: 5:45am – 6:30pm MONITOR Jack Millman
EQUIPMENT: CAT 335 Excavator CAT 328 Excavator Komatsu PC138 Excavator Delmag Drill Rig Bauer RTG RG 27S Bauer BG45 Drill Rig Casagrande M6A-1 Tieback Drill Rig Jerome J505 Mercury Vapor Analyzer RKI GX-6000 Photoionization Detector (PID) Aeroqual ASQ1 Air Monitoring Station	PRESENT AT SITE: Day 212 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) Rafi Alam Earth Efficient (Soil Broker) Yinette Batista	
OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:		
<p>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).</p>		
Site Activities		
<ul style="list-style-type: none"> • ECD used a Bauer BG45 drill rig to install three deep soil mix columns for support-of-excavation (SOE) system installation in the northeast part of the site (along Pearl 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 between about 82 and 100 feet below grade surface (bgs). <ul style="list-style-type: none"> ○ No drilling spoils were generated during installation of the soil mix columns. ○ 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 an about 25-foot-long by 25-foot-wide area to a maximum depth of about 2 feet below the existing grade (about 9 feet below sidewalk grade [bsg]) in the western part of the site (waste characterization cell WC03) to facilitate installation of tiebacks as part of the SOE system. <ul style="list-style-type: none"> ○ Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapor using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer, respectively. Evidence of impacts was not observed and the excavated soil/fill was live-loaded into securely covered tri-axle dump trucks for off-site disposal. • ECD excavated an about 20-foot-long by 35-foot-wide area to a maximum depth of about 2 feet below the existing grade (about 8 feet bsg) in the northwest part of the site (waste characterization cell WC01) to facilitate installation of tiebacks as part of the SOE system. <ul style="list-style-type: none"> ○ Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapor using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. Evidence of impacts 		
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was not observed and the excavated soil/fill was graded into the adjacent area for future off-site disposal.

- ECD excavated an about 10-foot-long by 30-foot-wide area to a maximum depth of about 2 feet below the existing grade (about 10 feet bsg) in the southwest part of the site (waste characterization cell WC03) to facilitate installation of tiebacks as part of the SOE system.
 - Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapor using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. Evidence of impacts was not observed and the excavated soil/fill was graded into the adjacent area for future off-site disposal.
- ECD graded an about 40-foot-long by 60-foot-wide and an about 40-foot-wide by 85-foot-wide area to stabilize the grade surface for SOE installation in the northeast part of the site (along Pearl Street and Peck Slip).
 - Graded soil/fill was screened for odors, staining, organic vapors, and mercury vapor using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. Evidence of impacts was not observed and excess soil/fill generated from grading was stockpiled in the central part of the site for future off-site disposal.

Material Tracking

- ECD exported six truckloads (approximately 120 cubic yards [CY]) of hazardous lead-impacted soil/fill for off-site disposal at the Clean Earth of North Jersey (CENJ) facility, located in Kearney, NJ.
- ECD exported seven truckloads (approximately 140 CY) of non-hazardous soil/fill for off-site disposal at the Harmony Foul Rift facility, located in Belvidere, NJ.
- 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.

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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	0	0	6	120
Project Total	5	85	42	840	68	1,360	101	2,020

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	287	5,740	267	5,340	66	1,320

Material Export Summary (3 of 3)						
Facility Name Location Type of Material	Clean Earth of North Jersey Kearny, NJ Non-hazardous Soil/Fill		Cycle Chem, Inc. Elizabeth, NJ Hazardous Lead - Impacted Soil/Fill		Harmony Foul Rift (HFR) Belvidere, 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	7	140
Project Total	201	4,020	10	200	7	140

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 7:02am to 4:25pm. 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	0.010	0.01	0.02
PM-2	0.007	0.00	0.01
PM-3	0.010	0.01	0.00
PM-4	0.008	0.00	0.01
WZ-1	0.007	0.00	0.00
WZ-2	0.007	0.00	0.00
WZ-3	0.008	0.00	0.00
WZ-4	0.008	0.00	0.01

Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m^3)	Organic Vapor (ppm)	Mercury Vapor ($\mu\text{g}/\text{m}^3$)
PM-1	0.031	0.08	0.06
PM-2	0.009	0.08	0.02
PM-3	0.022	0.15	0.01
PM-4	0.009	0.03	0.03
WZ-1	0.008	0.01	0.00
WZ-2	0.010	0.00	0.01
WZ-3	0.012	0.01	0.02
WZ-4	0.015	0.07	0.02

• 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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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/m³ to 0.13 µg/m³.
- 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 6:51am to 5:44pm.
- CAMP station WZ-2 was placed on the southern sidewalk of Water Street from about 6:51am to 5:46pm.
- CAMP station WZ-3 was placed on the eastern sidewalk of Peck Slip from about 6:53am to 5:54pm.
- CAMP station WZ-4 was placed on the northern sidewalk of Pearl Street from about 6:58am to 6:11 pm.

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 4:25pm and 4:31pm.

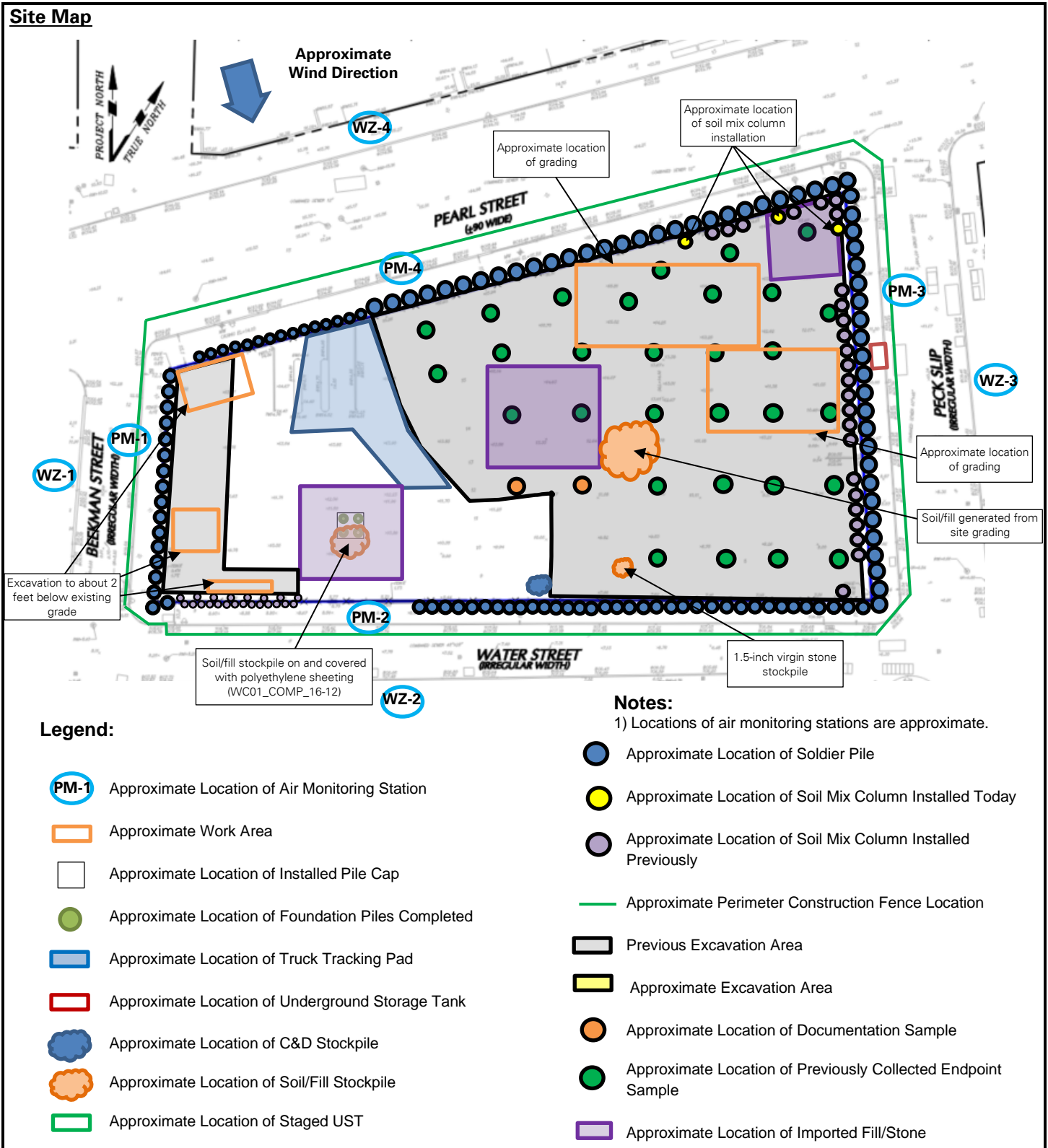
- Background concentrations of mercury vapor at each CAMP station were recorded at 0.00 µg/m³.
- Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.

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, Water Street, and Peck Slip.
- ECD will continue installing lagging for the SOE system along Pearl Street.
- ECD will continue installing walers for the SOE system along Beekman Street.

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Select Site Photographs:



Photo 1: ECD installing a soil mix column in the northeast part of the site (facing west)

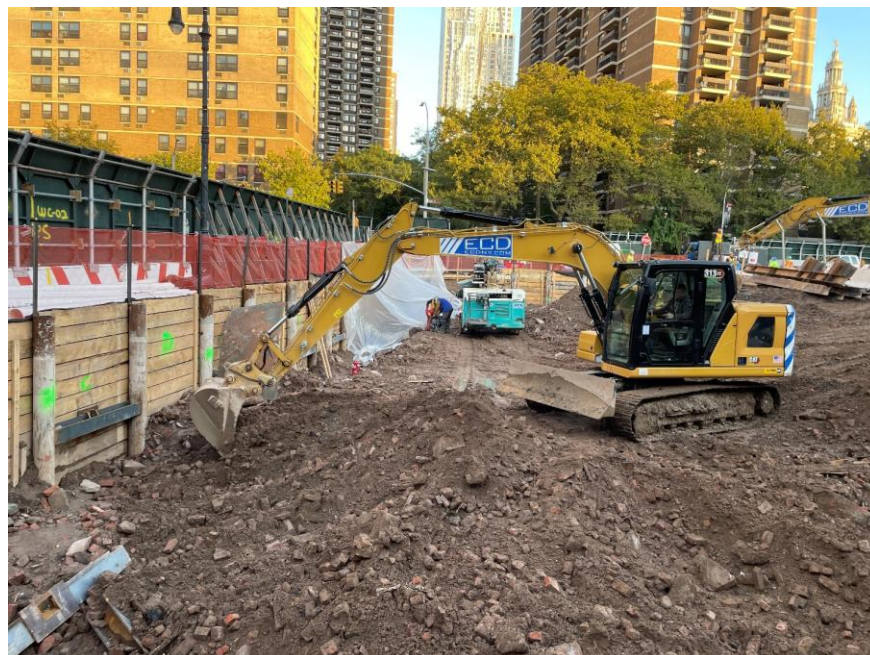


Photo 2: ECD excavating soil/fill in the western part of the site (facing north)

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