

SITE OBSERVATION REPORT

PROJECT No.: 170381202	CLIENT: 250 Seaport District, LLC c/o The Howard Hughes Corporation	DATE: Thursday October 5, 2023
PROJECT: 250 Water Street		WEATHER: Sunny, 64 – 76° F Wind: NE @ 0.1 – 1.8 mph
LOCATION: New York, NY		TIME: 5:45am – 7:00pm
BCP SITE ID: C231127		MONITOR Jack Millman

EQUIPMENT: CAT 335 Excavator CAT 328 Excavator Komatsu PC210 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 218 Langan (Environmental/Geotechnical) Jack Millman, Michael Cole, Paul McMahon, 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) Henry Batista
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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 northern 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) system installation in the northern 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 of about 105 and 110 feet below grade surface (bgs), respectively.
 - 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 70-foot-long by 15-foot-wide area to a maximum depth of about 14 feet bgs in the central part of the site (waste characterization cells WC01, WC02, WC04, WC0405, and WC06) for removal and off-site disposal of soil/fill.
 - 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 separated from C&D debris using a sifting bucket. The soil/fill and C&D debris were separately loaded into securely covered tri-axle dump trucks for off-site disposal.

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- Mercon-X® mercury vapor suppressant was actively applied to the soil/fill during excavation as a precautionary measure.
- ECD graded soil/fill in an about 75-foot-long by 100-foot-wide area in the central part of the site to stabilize the surface for SOE installation.
 - 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 the soil/fill generated from grading activities was added to the soil stockpile in the central part of the site for future off-site disposal.

Material Tracking

- ECD exported five truckloads (about 100 cubic yards [CY]) of C&D debris for off-site disposal at the Earth Efficient MSM facility located in East Stroudsburg, PA.
- ECD exported nine truckload (about 180 CY) of non-hazardous soil/fill for off-site disposal at the Middlesex County Landfill, located in East Brunswick, 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.

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	5	100	0	0
Project Total	5	85	42	840	124	2,480	101	2,020

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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	9	180	0	0	0	0
Project Total	301	6,020	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	0	0
Project Total	201	4,020	10	200	13	260

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 5:57pm. 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	0.008	0.00	0.02
PM-2	0.008	0.00	0.01
PM-3	0.007	0.00	0.00
PM-4	0.009	0.00	0.01
WZ-1	0.007	0.00	0.00
WZ-2	0.007	0.00	0.00
WZ-3	0.007	0.00	0.00
WZ-4	0.007	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	0.026	0.12	0.06
PM-2	0.016	0.00	0.06
PM-3	0.017	0.01	0.01
PM-4	0.051	0.02	0.05
WZ-1	0.014	0.02	0.01
WZ-2	0.013	0.03	0.01
WZ-3	0.013	0.02	0.02
WZ-4	0.015	0.04	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 $\mu\text{g}/\text{m}^3$ 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 6:49am to 6:09pm.
- CAMP station WZ-2 was placed on the southern sidewalk of Water Street from about 6:50am to 6:13pm.
- CAMP station WZ-3 was placed on the eastern sidewalk of Peck Slip from about 6:53am to 4:54pm.
 - Ground-intrusive activities were not conducted within 20 feet of Peck Slip after 4:54pm
- CAMP station WZ-4 was placed on the northern sidewalk of Pearl Street from about 6:55am to 6:32pm.

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 5:57pm and 6:02pm.

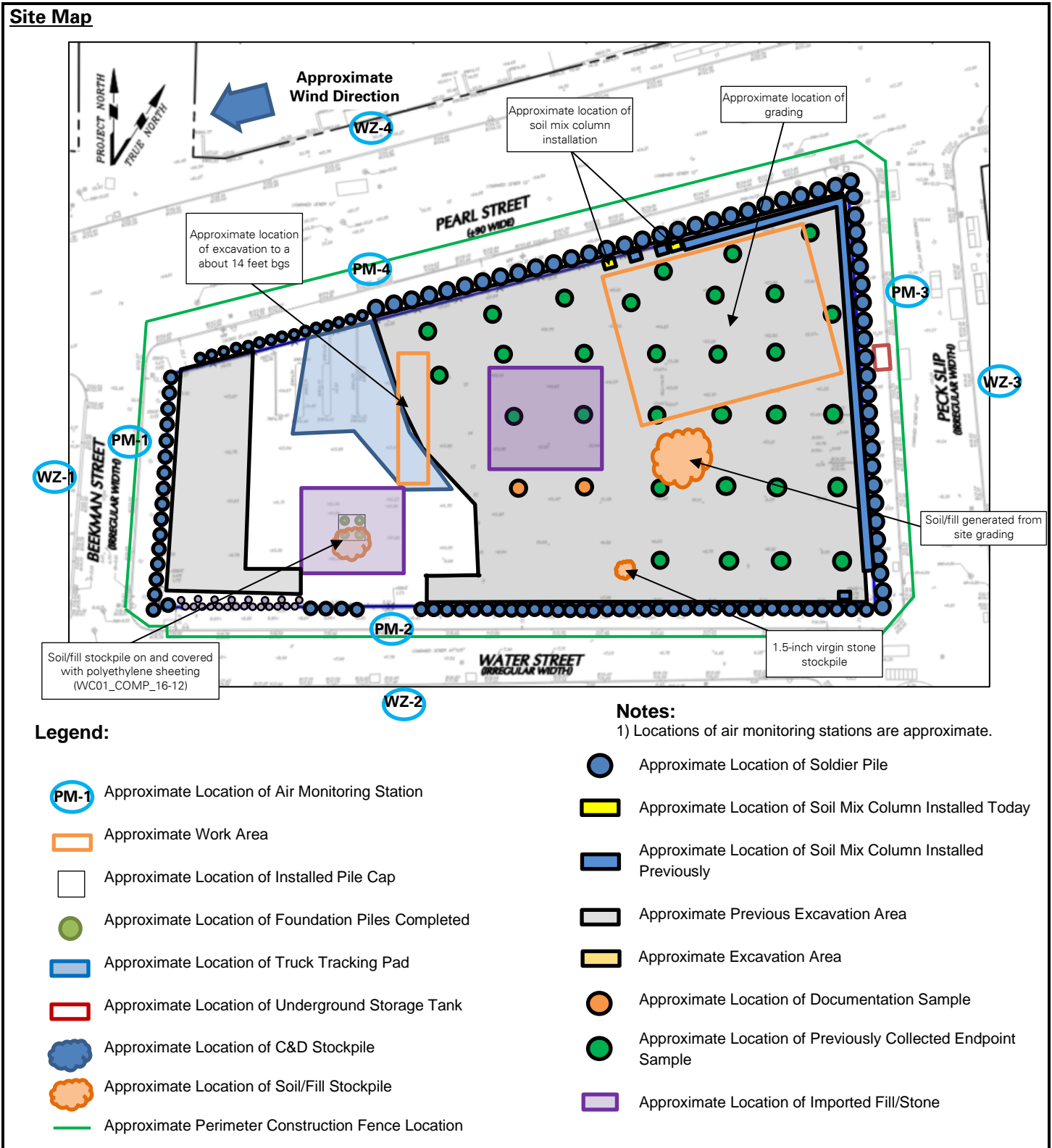
- Background concentrations of mercury vapor at each CAMP station were recorded at 0.00 $\mu\text{g}/\text{m}^3$.
- Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.

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

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Select Site Photographs:



Photo 1: Mercon-X[®] mercury vapor suppressant proactively applied to soil/fill during excavation (facing south)



Photo 2: ECD installing a soil mix column in the northern part of the site (facing west)

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