SITE OBSERVATION REPORT

PROJECT No.: 170381202	**CLIENT:** 250 Seaport District, LLC c/o The Howard Hughes Corporation	**DATE:**	Tuesday, September 20, 2022
PROJECT: 250 Water Street		**WEATHER:**	Clear, 69.4 – 82.4 ˚F Wind: NW @ 0.4 – 6.0 mph
LOCATION: New York, NY		**TIME:**	6:00 AM – 4:00 PM
BCP SITE ID: C231127		**MONITOR:**	Brian Kenneally, Eddie Cai

EQUIPMENT:
MiniRAE 3000 PID
DustTrak II
Jerome J405®
Jerome J505®
Hand tools
CAT 374F
Komatsu 969
Komatsu 228
Takeuchi TB290
JCB 110W Hydradig

PRESENT AT SITE: **Day 105**
Langan (Environmental/Geotechnical) – Brian Kenneally, Eddie Cai
Civetta Cousins JV, LLC (CCJV) (Foundation Contractor) – Jack Dettra
Lendlease (General Contractor) – Marty Cohen
New York State Department of Environmental Conservation (NYSDEC) – Aaron Fischer
AKRF Inc. (AKRF) (Archaeologist) – Elizabeth Meade

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 excavated an about 40-foot-long by 40-foot-wide area to a maximum depth of about 12 feet below grade surface (bgs) for removal and off-site disposal of petroleum-impacted soil/fill in the southeastern part of site (waste characterization cell WC10). Excavated soil/fill was live-loaded into tri-axle dump trucks for off-site disposal at the Bayshore Soil Management facility, located in Keasbey, NJ. Trucks were covered with tight-fitting covers and were inspected and washed before leaving the site.
    - 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. Petroleum-like odor and a maximum instantaneous PID reading of 7.8 parts per million (ppm) was recorded. Excavated soil/fill was actively sprayed with Atmos® AC-645 dust/vapor suppressing foam during excavation and loading for off-site disposal.
- CCJV installed odor neutralizing sleeves on the interior of the perimeter construction fencing along the eastern and southern boundaries of the site (Peck Slip and Water Street, respectively).
- CCJV pumped groundwater from the previously installed dewatering wells to facilitate excavation in the southeastern part of the site. Groundwater was pumped directly into the dewatering system, consisting of a settling tank, oil-water separator, and filtration system, before being discharged to the New York City Department of Environmental Protection (NYCDEP) combined sewer beneath Peck Slip in accordance with a NYCDEP temporary discharge permit (Permit No. C001712214).
- CCJV continued welding for installation of additional bracing required for the support-of-excavation (SOE) system in the southeast corner of the site (Peck Slip and Water Street).

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- CCJV used imported 1.5-inch clean bluestone to backfill and grade the northwestern part of the site for extension of the tracking pad.
- CCJV continued testing tie-backs along the southern boundary of the site (Water Street) for SOE system installation.
- CCJV covered exposed soil/fill that has not been confirmed to meet Track 2 remediation criteria and construction and demolition (C&D) debris with Atmos® AC-645 dust/vapor suppressing foam to create a temporary overnight cover.

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Material Tracking

- CCJV exported 13 truckloads (about 260 cubic yards [CY]) of petroleum-impacted soil/fill from waste characterization cell WC10 for off-site disposal at the Bayshore Soil Management facility, located in Keasbey, NJ
- CCJV imported one truckload (20.57 tons) of 1.5-inch clean bluestone from the Impact Reuse & Recovery Center (IRRC) facility, located in Lyndhurst NJ.

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	1	20.57
Project Total	8	184.42	0	0	7	149.95	20	476.26
NYSDEC Approved:	1,800 tons*				720 tons*		7,500 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 5,000 CY and a conversion factor of 1.5 is applied.

Material Export Summary (1 of 2)

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**		**Clean Earth of North Jersey Kearny, NJ Non-hazardous 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	0	0
Project Total	5	85	35	700	77	1,540	216	4,320

Material Export Summary (2 of 2)

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	13	260	0	0
Project Total	261	5,220	158	3,160	42	840

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Sampling Activities

- No samples were collected.

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CAMP Activities

Langan performed air monitoring at the perimeter of the site and at work zones 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 levels established by the CAMP (1.00 µg/m^3, 5.0 ppm, and 0.100 mg/m^3, respectively).

Background Concentrations

Prior to implementation of ground-intrusive work each day, 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 were recorded at 0.00 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	0.026	0.0	0.01
PM-2	0.032	0.0	0.01
PM-3	0.020	0.0	0.00
PM-4	0.000	0.1	0.00
PM-5	0.019	0.0	0.02
PM-6	0.018	0.1	0.02
WZ-1	0.025	0.0	0.02
WZ-2	0.013	0.0	0.01
WZ-3	0.018	0.0	0.01

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**	**1.00 µg/m^3**
PM-1	0.040	0.2	0.04
PM-2	0.045	0.0	0.02
PM-3	0.040	0.1	0.01
PM-4	0.001	0.3	0.02
PM-5	0.030	0.1	0.05
PM-6	0.039	0.9	0.05
WZ-1	0.039	0.0	0.04
WZ-2	0.020	0.1	0.02
WZ-3	0.031	0.0	0.02

●mg/m^3 = milligrams per cubic meter ●ppm = parts per million ●µg/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/m^3 to 0.15 µg/m^3.
- The dedicated mobile monitor (Langan) used a handheld PID to monitor VOC concentrations throughout the site. Instantaneous VOC concentrations of ambient air around the excavation area in the southeastern part of the site ranged from 0.0 ppm to 7.8 ppm. Exposed soil/fill was actively sprayed with Atmos® AC-645 dust/vapor suppressing foam during excavation and loading of trucks, and during periods of inactivity. VOC concentrations at perimeter and off-site CAMP stations did not exceed the action level established in the CAMP (5.0 ppm) throughout the work day.

CAMP Station Relocation

- CAMP station WZ-1 was relocated to the northern sidewalk of Pearl Street from 7:01am to 3:18pm due to exposed soil/fill within 20 feet of the northern site boundary.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 7:01am to 3:13pm during excavation activities in the southeastern part of the site.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 7:01am to 3:09pm during excavation activities in the southeastern part 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 sequentially from 3:06pm to 3:36pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.00 µg/m^3 to 0.09 µg/m^3.
- VOC concentrations at each CAMP station were recorded at 0.0 ppm.

Anticipated Activities

- CCJV will continue excavation and off-site disposal of soil/fill in the central and southern parts of the site.
- CCJV will continue welding brackets and bracing for SOE system installation in the southeastern part of the site.
- Langan will continue collection of confirmation endpoint soil samples across the site.

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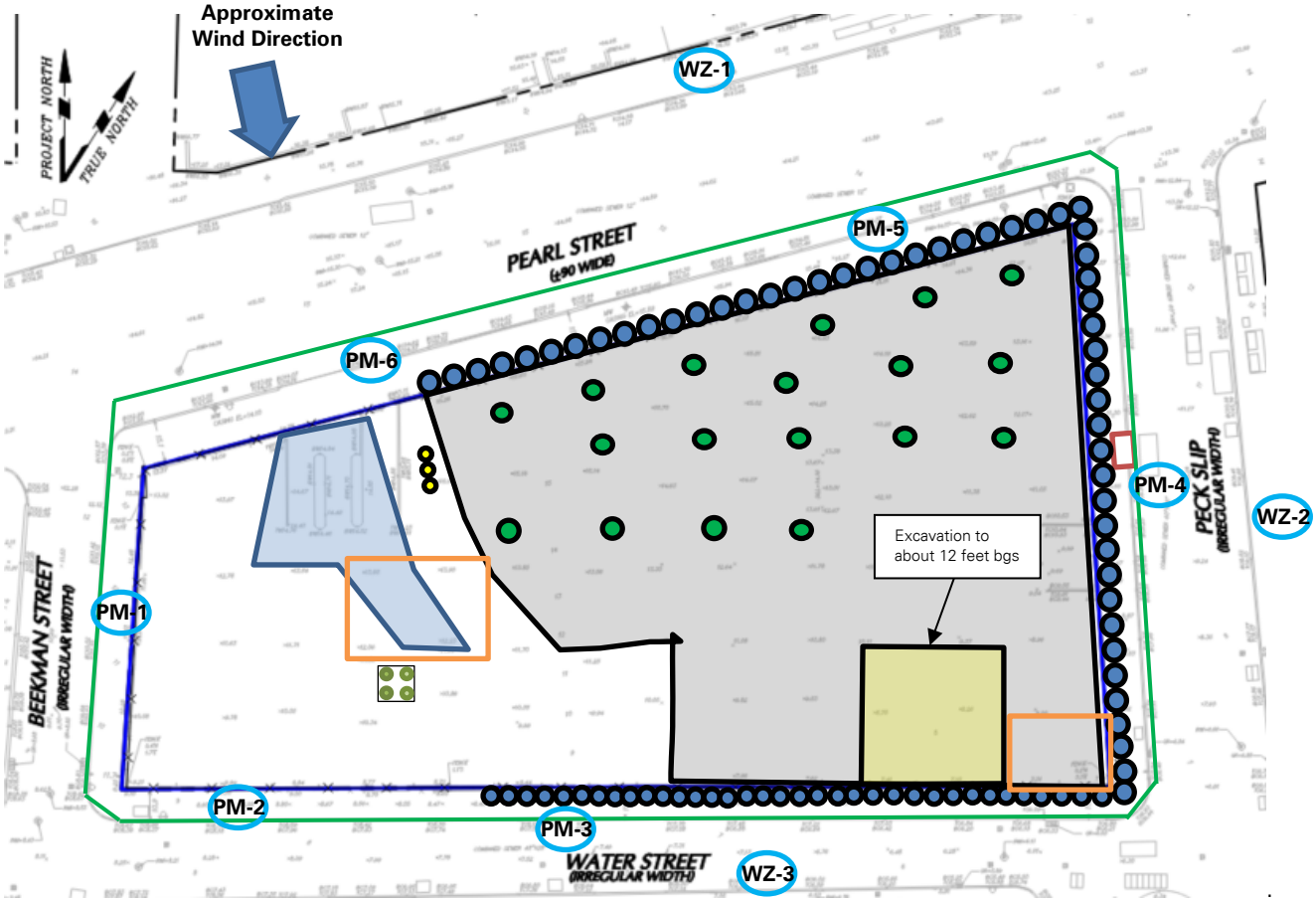
Site Map



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 General Fill Stockpile
- Approximate Location of Stockpiled Virgin Stone
- Approximate Excavated Soil/Fill Stockpile
- Approximate Location of 55-gallon drum
- Approximate Location of Soldier Pile
- Approximate Perimeter Construction Fence Location
- Previous Excavation Area
- Approximate Excavation Area
- Approximate Backfill Area
- Approximate Endpoint Sample Location
- Approximate Location of Previously Collected Endpoint Sample

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Select Site Photographs:

Photo 1: CCJV actively applying Atmos® AC-645 dust/vapor suppressing foam during excavation/loading in the southeastern part of the site (facing west)

Photo 2: Atmos® AC-645 dust/vapor suppressing foam applied to exposed soil/fill for the temporary overnight cover (facing southwest)

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