SITE OBSERVATION REPORT

PROJECT No.:	170381202	**CLIENT:** 250 Seaport District, LLC c/o The Howard Hughes Corporation	**DATE:**	Monday, August 14, 2023
PROJECT:	250 Water Street		**WEATHER:**	Partly Sunny, 75 – 85˚F Wind: WNW @ 0.2 – 1.3 mph
LOCATION:	New York, NY		**TIME:**	5:45am – 4:30pm
BCP SITE ID:	C231127		**MONITOR**	Jack Millman

EQUIPMENT:
CAT 335 Excavator
CAT 328 Excavator
Komatsu PC138 Excavator
ABI Mobilram Drill Rig
Bauer BG45 Drill Rig
Jerome J505 Mercury Vapor Analyzer
RKI GX-6000 Photoionization Detector (PID)
Aeroqual ASQ1 Air Monitoring Station

PRESENT AT SITE: **Day 181**
Langan (Environmental/Geotechnical) Jack Millman, Aron Farber, Anastassios Balaouras
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) Marnie Chancey

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 continued assembly of the Bauer BG45 drill rig in preparation for deep soil mix column installation along the perimeter of the site.
- ECD used an ABI Mobilram drill rig to install six soldier piles to depths between about 34 and 35 feet below grade surface (bgs) for support-of-excavation (SOE) installation in the western part of the site (Beekman Street). ECD's drill rig advanced a steel rod with a soil mixing paddle at the bottom of the rod, while concurrently injecting grout through the top of the paddle and spinning and advancing the paddle downward.
    - No drilling spoils were generated during installation of the soldier piles.
    - Excess grout was contained within a temporary trench adjacent to the drilling area and will be managed as construction and demolition (C&D) debris at a later date.

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

Material Tracking

- No material was exported from the site.
- 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	10	234.83	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	0	0	0	0
Project Total	5	85	42	840	14	280	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	263	5,260	267	5,340	66	1,320

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

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	216	4,320

Sampling

- No samples were collected.

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

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 6:35am to 3:49pm. 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, 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 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	0.008	0.01	0.01
PM-2	0.006	0.01	0.01
PM-3	0.005	0.01	0.00
PM-4	0.006	0.01	0.01
WZ-1	0.006	0.00	0.00
WZ-2	0.006	0.00	0.00
WZ-3	0.005	0.01	0.01
WZ-4	0.007	0.01	0.01

Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m^3)	Organic Vapor (ppm)	Mercury Vapor (µg/m^3)
PM-1	0.030	0.06	0.02
PM-2	0.009	0.08	0.02
PM-3	0.008	0.08	0.01
PM-4	0.010	0.10	0.03
WZ-1	0.010	0.05	0.01
WZ-2	0.010	0.07	0.01
WZ-3	0.008	0.10	0.02
WZ-4	0.016	0.11	0.05

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

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

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 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 6:19am to 3:58pm.
- CAMP station WZ-2 was placed on the southern sidewalk of Water Street from 6:21am to 4:01pm.
- CAMP station WZ-3 was placed on the eastern sidewalk of Peck Slip from 6:24am to 4:04pm
- CAMP station WZ-4 was placed on the northern sidewalk of Pearl Street from 6:26am to 4:05pm.

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 3:49pm and 3:55pm.

- Background concentrations of mercury vapor at each CAMP station ranged from 0.00 and 0.01 µg/m^3.
- Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.

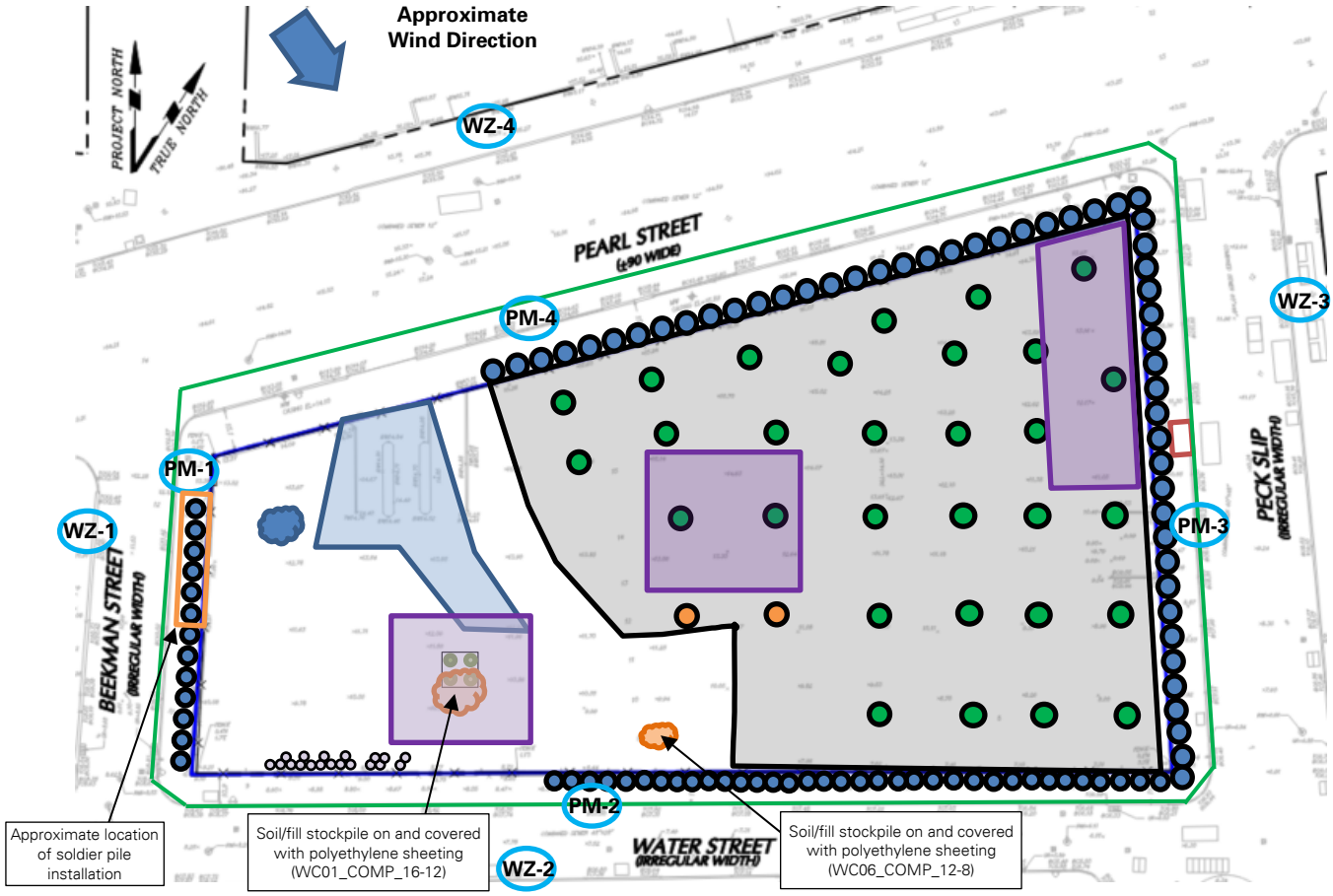
Anticipated Activities

- 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 soldier piles for SOE installation along Beekman Street.

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

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 Underground Storage Tank
- Approximate Location of C&D Stockpile
- Approximate Location of Soil/Fill Stockpile
- Approximate Location of Soldier Pile
- Approximate Location of Soil Mix Column Installed Today
- Approximate Location of Soil Mix Column Installed Previously
- Approximate Perimeter Construction Fence Location
- Previous Excavation Area
- Approximate Location of Documentation Sample
- Approximate Location of Previously Collected Endpoint Sample
- Approximate Location of Imported Fill

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

Select Site Photographs:

Photo 1: ECD installing a soldier pile in the western part of the site (facing southwest)

Photo 2: ECD assembling the Bauer BG45 drill rig in the eastern part of the site (facing southeast)

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

LANGAN

SITE OBSERVATION REPORT

PROJECT No.:	170381202	**CLIENT:** 250 Seaport District, LLC c/o The Howard Hughes Corporation	**DATE:**	Tuesday, August 15, 2023
PROJECT:	250 Water Street		**WEATHER:**	Partly Sunny, 70 – 80˚F Wind: SW @ 0.1 – 1.7 mph
LOCATION:	New York, NY		**TIME:**	5:45am – 4:45pm
BCP SITE ID:	C231127		**MONITOR**	Jack Millman

EQUIPMENT:
CAT 335 Excavator
CAT 328 Excavator
Komatsu PC138 Excavator
ABI Mobilram Drill Rig
Delmag Drill Rig
Bauer BG45 Drill Rig
Jerome J505 Mercury Vapor Analyzer
RKI GX-6000 Photoionization Detector (PID)
Aeroqual ASQ1 Air Monitoring Station

PRESENT AT SITE: **Day 182**
Langan (Environmental/Geotechnical) Jack Millman, Aron Farber, Anastassios Balaouras
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) Marnie Chancey

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 continued assembly of the Bauer BG45 drill rig in preparation for deep soil mix column installation along the perimeter of the site.
- ECD relocated a section of the perimeter construction fencing along Peck Slip for future equipment staging in the eastern part of the site.
- ECD used an ABI Mobilram drill rig to install two soldier piles to depths between about 34 and 35 feet below grade surface (bgs) for support-of-excavation (SOE) installation in the western part of the site (Beekman Street). ECD's drill rig advanced a steel rod with a soil mixing paddle at the bottom of the rod, while concurrently injecting grout through the top of the paddle and spinning and advancing the paddle downward.
    - No drilling spoils were generated during installation of the soldier piles.
    - Excess grout was contained within a temporary trench adjacent to the drilling area and will be managed as construction and demolition (C&D) debris at a later date.
- ECD excavated an about 20-foot-long by 2-foot-wide area to a maximum depth of about 1 foot bgs for temporary installation of a hose beneath the stabilized construction entrance in the northern part of the site (Pearl Street).
    - Excavated soil/fill was temporarily stockpiled adjacent to the work area 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 evidence of impacts was observed. The excavated soil/fill was temporarily backfilled into the original location following installation of the hose.

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

Material Tracking

- No material was exported from the site.
- 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	10	234.83	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	0	0	0	0
Project Total	5	85	42	840	14	280	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	263	5,260	267	5,340	66	1,320

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

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	216	4,320

Sampling

- No samples were collected.

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

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 7:05am to 3:58pm. 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, 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 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	0.007	0.00	0.01
PM-2	0.006	0.00	0.01
PM-3	0.006	0.00	0.01
PM-4	0.006	0.03	0.02
WZ-1	0.007	0.00	0.00
WZ-2	0.006	0.00	0.00
WZ-3	0.006	0.00	0.01
WZ-4	0.006	0.00	0.01

Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m^3)	Organic Vapor (ppm)	Mercury Vapor (µg/m^3)
PM-1	0.015	0.03	0.12
PM-2	0.011	0.03	0.02
PM-3	0.010	0.04	0.09
PM-4	0.010	0.81	0.11
WZ-1	0.012	0.00	0.01
WZ-2	0.018	0.01	0.01
WZ-3	0.010	0.00	0.02
WZ-4	0.010	0.01	0.02

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

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

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 0.20 µg/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 6:21am to 4:06pm.
- CAMP station WZ-2 was placed on the southern sidewalk of Water Street from about 6:23am to 4:10pm.
- CAMP station WZ-3 was placed on the eastern sidewalk of Peck Slip from about 6:26am to 4:16pm
- CAMP station WZ-4 was placed on the northern sidewalk of Pearl Street from about 6:28am to 4:21pm.

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 3:58pm and 4:06pm.

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

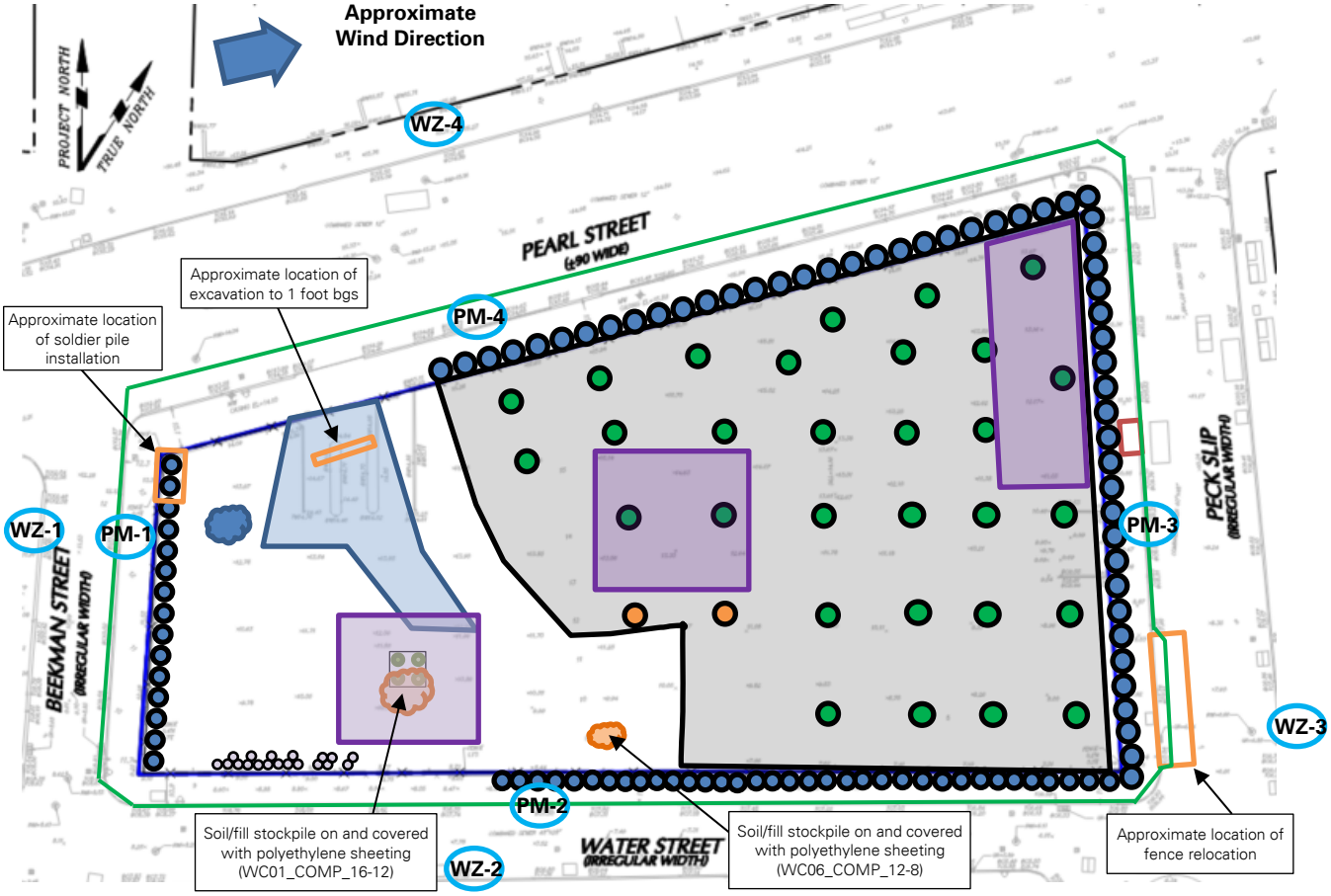
Anticipated Activities

- ECD will continue exporting C&D and soil/fill from the western part of the site for off-site disposal.
- ECD will continue installing soldier piles for SOE installation along Pearl Street.
- ECD will continue assembly of the Bauer BG45 drill rig in preparation for deep soil mix column installation along the perimeter of the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

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 Underground Storage Tank
- Approximate Location of C&D Stockpile
- Approximate Location of Soil/Fill Stockpile
- Approximate Location of Soldier Pile
- Approximate Location of Soil Mix Column Installed Today
- Approximate Location of Soil Mix Column Installed Previously
- Approximate Perimeter Construction Fence Location
- Previous Excavation Area
- Approximate Location of Documentation Sample
- Approximate Location of Previously Collected Endpoint Sample
- Approximate Location of Imported Fill

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

Select Site Photographs:

Photo 1: ECD installing a soldier pile in the western part of the site (facing southwest)

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

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

LANGAN

SITE OBSERVATION REPORT

PROJECT No.:	170381202	**CLIENT:** 250 Seaport District, LLC c/o The Howard Hughes Corporation		**DATE:**	Wednesday, August 16, 2023
PROJECT:	250 Water Street			**WEATHER:**	Partly Cloudy, 70 – 80˚F Wind: SW @ 0.1 – 1.6 mph
LOCATION:	New York, NY			**TIME:**	5:45am – 5:00pm
BCP SITE ID:	C231127			**MONITOR**	Jack Millman

EQUIPMENT:
CAT 335 Excavator
CAT 328 Excavator
Komatsu PC138 Excavator
ABI Mobilram Drill Rig
Delmag Drill Rig
Bauer BG45 Drill Rig
Jerome J505 Mercury Vapor Analyzer
RKI GX-6000 Photoionization Detector (PID)
Aeroqual ASQ1 Air Monitoring Station

PRESENT AT SITE: **Day 183**
Langan (Environmental/Geotechnical) Jack Millman, Aron Farber, Anastassios Balaouras
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) Marnie Chancey
Earth Efficient Yinette Batista

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 continued assembly of the Bauer BG45 drill rig in preparation for deep soil mix column installation along the perimeter of the site.
- ECD relocated a section of the perimeter construction fencing along Peck Slip for future equipment staging in the eastern part of the site.
- ECD used an ABI Mobilram drill rig to install one soldier pile to about 35 feet below grade surface (bgs) for support-of-excavation (SOE) installation in the northwest part of the site (Pearl Street). ECD's drill rig advanced a steel rod with a soil mixing paddle at the bottom of the rod, while concurrently injecting grout through the top of the paddle and spinning and advancing the paddle downward.
    - No drilling spoils were generated during installation of the soldier piles.
    - Excess grout was contained within a temporary trench adjacent to the drilling area and will be managed as construction and demolition (C&D) debris at a later date.
- ECD graded an about 15-foot-long by 30-foot-wide area and placed imported 1.5-inch virgin stone across the area to create a level surface for equipment staging in the southern part of the site.
    - Graded 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. No evidence of impacts was observed.

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

Material Tracking

- ECD exported one truckload (about 20 cubic yards [CY]) of C&D debris (previously demolished concrete and asphalt) for off-site disposal at the Earth Efficient MSM facility located in East Stroudsburg, PA.
- ECD imported two truckloads (49.08 tons) of 1.5-inch virgin stone from the Stone Industries Inc. facility, located in Haledon, 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	2	49.08	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	1	20	0	0
Project Total	5	85	42	840	15	300	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	263	5,260	267	5,340	66	1,320

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

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	216	4,320

Sampling

- No samples were collected.

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

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 6:59am to 4:05pm. 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, 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 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	0.006	0.00	0.01
PM-2	0.006	0.00	0.01
PM-3	0.005	0.00	0.01
PM-4	0.006	0.00	0.02
WZ-1	0.005	0.00	0.00
WZ-2	0.005	0.00	0.00
WZ-3	0.005	0.00	0.01
WZ-4	0.006	0.00	0.01

Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m^3)	Organic Vapor (ppm)	Mercury Vapor (µg/m^3)
PM-1	0.008	0.01	0.14
PM-2	0.013	0.06	0.02
PM-3	0.009	0.01	0.16
PM-4	0.010	0.04	0.13
WZ-1	0.009	0.00	0.01
WZ-2	0.008	0.05	0.00
WZ-3	0.007	0.01	0.01
WZ-4	0.009	0.02	0.02

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

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

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 0.17 µg/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 6:30am to 4:17pm.
- CAMP station WZ-2 was placed on the southern sidewalk of Water Street from about 6:31am to 4:25pm.
- CAMP station WZ-3 was placed on the eastern sidewalk of Peck Slip from about 6:34am to 4:31pm
- CAMP station WZ-4 was placed on the northern sidewalk of Pearl Street from about 6:37am to 4:20pm.

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 4:05pm and 4:15pm.

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

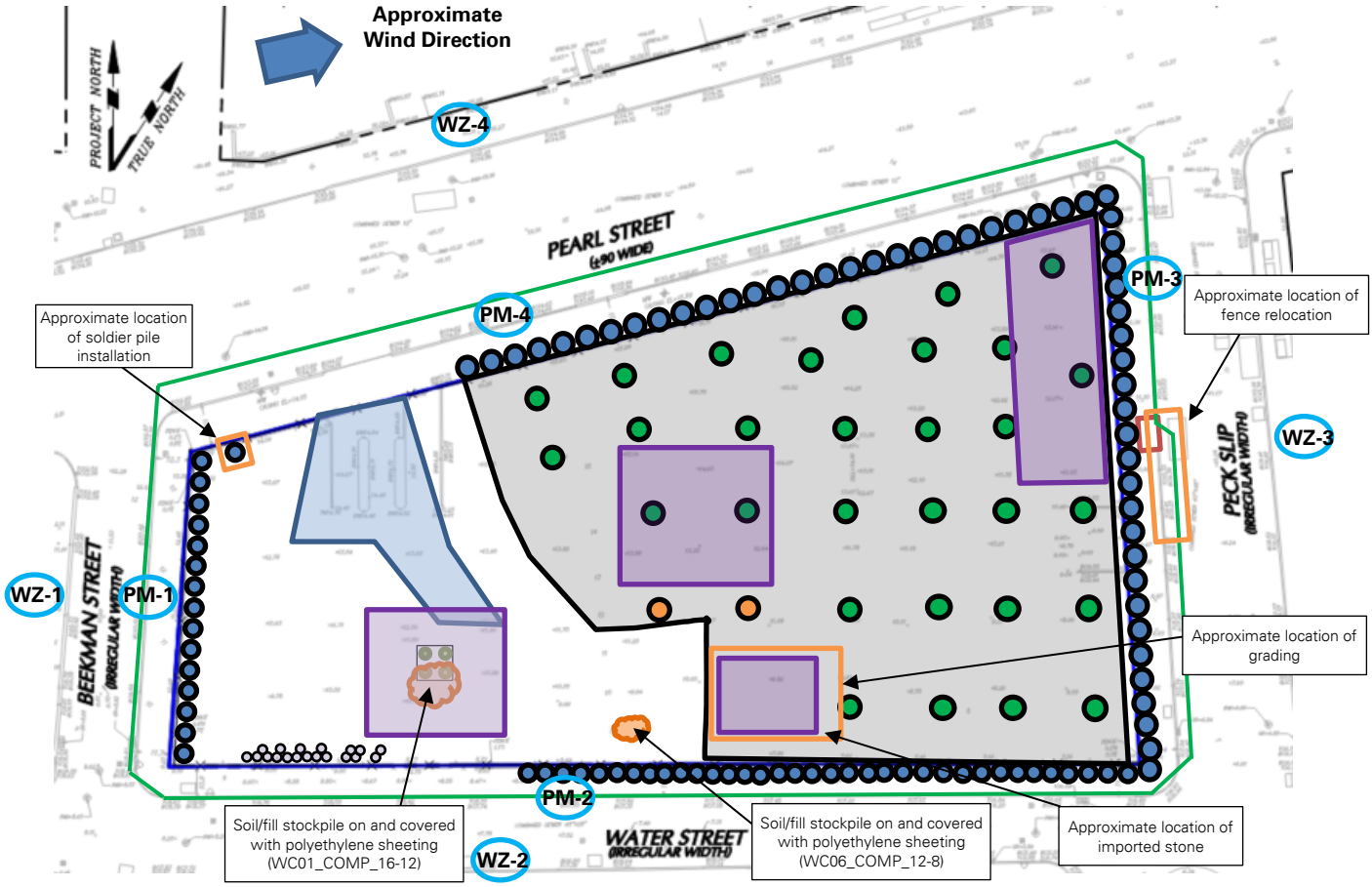
Anticipated Activities

- ECD will continue exporting C&D and soil/fill from the western part of the site for off-site disposal.
- ECD will continue installing soldier piles for SOE installation along Pearl Street.
- ECD will continue assembly of the Bauer BG45 drill rig in preparation for deep soil mix column installation along the perimeter of the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

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 Underground Storage Tank
- Approximate Location of C&D Stockpile
- Approximate Location of Soil/Fill Stockpile
- Approximate Location of Soldier Pile
- Approximate Location of Soil Mix Column Installed Today
- Approximate Location of Soil Mix Column Installed Previously
- Approximate Perimeter Construction Fence Location
- Previous Excavation Area
- Approximate Location of Documentation Sample
- Approximate Location of Previously Collected Endpoint Sample
- Approximate Location of Imported Fill

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

Select Site Photographs:

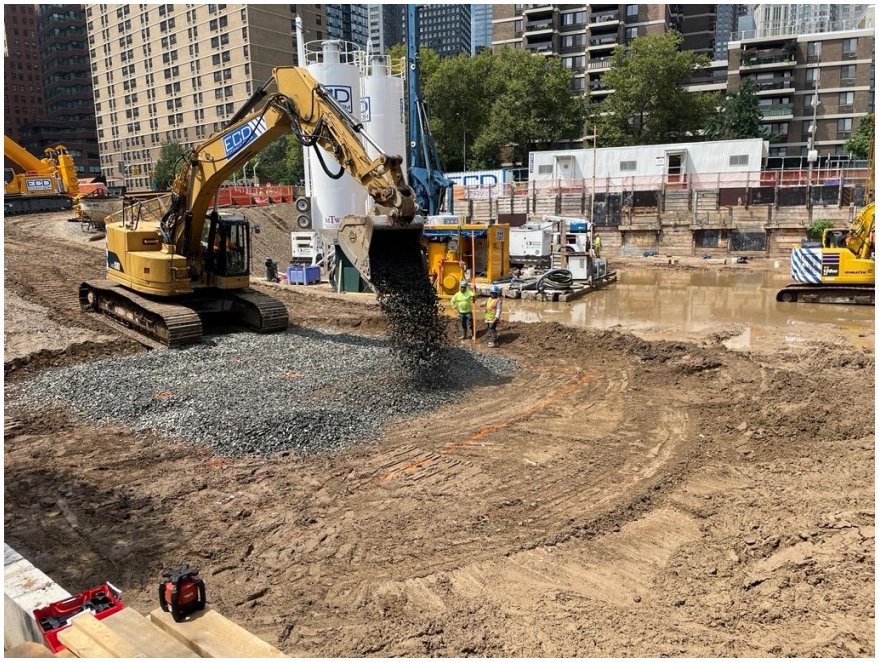


Photo 1: ECD placing imported virgin stone in the southern part of the site (facing northwest)

Photo 2: Relocated perimeter construction fencing along Peck Slip (facing northeast)

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

PROJECT No.:	170381202	**CLIENT:** 250 Seaport District, LLC c/o The Howard Hughes Corporation	**DATE:**	Thursday, August 17, 2023
PROJECT:	250 Water Street		**WEATHER:**	Partly Sunny, 72 – 78˚F Wind: SW @ 0.2 – 2.2 mph
LOCATION:	New York, NY		**TIME:**	5:45am – 5:00pm
BCP SITE ID:	C231127		**MONITOR**	Jack Millman

EQUIPMENT:
CAT 335 Excavator
CAT 328 Excavator
Komatsu PC138 Excavator
ABI Mobilram Drill Rig
Delmag Drill Rig
Bauer BG45 Drill Rig
Jerome J505 Mercury Vapor Analyzer
RKI GX-6000 Photoionization Detector (PID)
Aeroqual ASQ1 Air Monitoring Station

PRESENT AT SITE: **Day 184**
Langan (Environmental/Geotechnical) Jack Millman, Aron Farber, Michael Cole, Anastassios Balaouras
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) Marnie Chancey

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 continued assembly of the Bauer BG45 drill rig in preparation for deep soil mix column installation along the perimeter of the site.
- ECD relocated a section of the perimeter construction fencing along Peck Slip for future equipment staging in the eastern part of the site.
- ECD used an ABI Mobilram drill rig to install four soldier piles to a depth of about 35 feet below grade surface (bgs) for support-of-excavation (SOE) installation in the northwest part of the site (Pearl Street). ECD's drill rig advanced a steel rod with a soil mixing paddle at the bottom of the rod, while concurrently injecting grout through the top of the paddle and spinning and advancing the paddle downward.
    - No drilling spoils were generated during installation of the soldier piles.
    - Excess grout was contained within a temporary trench adjacent to the drilling area and will be managed as construction and demolition (C&D) debris at a later date.

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

Material Tracking

- No material was exported from the site.
- 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	0	0	0	0
Project Total	5	85	42	840	15	300	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	263	5,260	267	5,340	66	1,320

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

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	216	4,320

Sampling

- No samples were collected.

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

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 6:42am to 4:23pm. 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, 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 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	0.006	0.00	0.01
PM-2	0.007	0.01	0.01
PM-3	0.006	0.00	0.01
PM-4	0.007	0.00	0.02
WZ-1	0.005	0.00	0.00
WZ-2	0.006	0.00	0.00
WZ-3	0.006	0.00	0.01
WZ-4	0.006	0.00	0.01

Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m^3)	Organic Vapor (ppm)	Mercury Vapor (µg/m^3)
PM-1	0.009	0.00	0.11
PM-2	0.013	0.11	0.02
PM-3	0.010	0.01	0.05
PM-4	0.010	0.00	0.12
WZ-1	0.006	0.00	0.01
WZ-2	0.008	0.00	0.01
WZ-3	0.007	0.01	0.01
WZ-4	0.008	0.01	0.02

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

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

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 0.14 µg/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 6:32am to 4:01pm.
- CAMP station WZ-2 was placed on the southern sidewalk of Water Street from about 6:30am to 4:05pm.
- CAMP station WZ-3 was placed on the eastern sidewalk of Peck Slip from about 6:27am to 4:16pm
- CAMP station WZ-4 was placed on the northern sidewalk of Pearl Street from about 6:24am to 4:11pm.

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 4:23pm and 4:34pm.

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

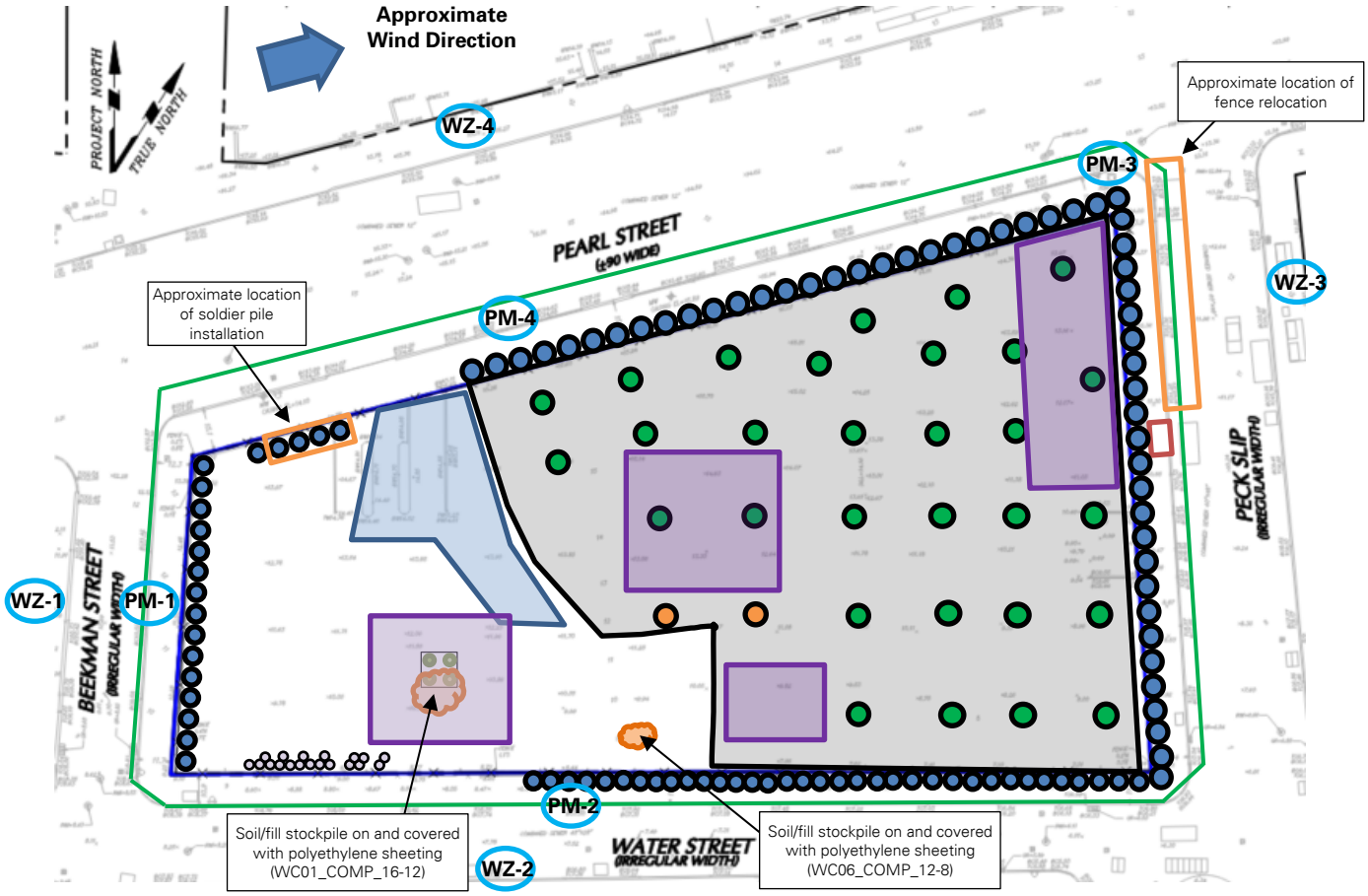
Anticipated Activities

- ECD will continue exporting C&D and soil/fill from the western part of the site for off-site disposal.
- ECD will continue installing soldier piles for SOE installation along Pearl Street.
- ECD will continue assembly of the Bauer BG45 drill rig in preparation for deep soil mix column installation along the perimeter of the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

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 Underground Storage Tank
- Approximate Location of C&D Stockpile
- Approximate Location of Soil/Fill Stockpile
- Approximate Location of Soldier Pile
- Approximate Location of Soil Mix Column Installed Today
- Approximate Location of Soil Mix Column Installed Previously
- Approximate Perimeter Construction Fence Location
- Previous Excavation Area
- Approximate Location of Documentation Sample
- Approximate Location of Previously Collected Endpoint Sample
- Approximate Location of Imported Fill

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

Select Site Photographs:

Photo 1: ECD installing a soldier pile in the northwest part of the site (facing west)

Photo 2: Relocated perimeter construction fencing along Peck Slip (facing southeast)

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

PROJECT No.:	170381202	**CLIENT:** 250 Seaport District, LLC c/o The Howard Hughes Corporation	**DATE:**	Friday, August 18, 2023
PROJECT:	250 Water Street		**WEATHER:**	Partly Cloudy/Rain, 70 – 80˚F Wind: NNW @ 0.1 – 1.6 mph
LOCATION:	New York, NY		**TIME:**	5:45am – 4:45pm
BCP SITE ID:	C231127		**MONITOR**	Jack Millman

EQUIPMENT:
CAT 335 Excavator
CAT 328 Excavator
Komatsu PC138 Excavator
ABI Mobilram Drill Rig
Delmag Drill Rig
Bauer BG45 Drill Rig
Jerome J505 Mercury Vapor Analyzer
RKI GX-6000 Photoionization Detector (PID)
Aeroqual ASQ1 Air Monitoring Station

PRESENT AT SITE: **Day 185**
Langan (Environmental/Geotechnical) Jack Millman, Michael Cole, Anastassios Balaouras
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) Marnie Chancey

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 continued assembly of the Bauer BG45 drill rig in preparation for deep soil mix column installation along the perimeter of the site.
- ECD relocated a section of the perimeter construction fencing along Water Street for future equipment staging in the southern part of the site.
- ECD used an ABI Mobilram drill rig to install two soldier piles to a depth of about 35 feet below grade surface (bgs) for support-of-excavation (SOE) installation in the northwest part of the site (Pearl Street). ECD's drill rig advanced a steel rod with a soil mixing paddle at the bottom of the rod, while concurrently injecting grout through the top of the paddle and spinning and advancing the paddle downward.
    - No drilling spoils were generated during installation of the soldier piles.
    - Excess grout was contained within a temporary trench adjacent to the drilling area and will be managed as construction and demolition (C&D) debris at a later date.
- ECD excavated an about 10-foot-long by 5-foot-wide area to a maximum depth of about 8 feet bgs to identify potential subsurface utilities and/or obstructions prior to SOE installation in the northwest part of the site (along Beekman Street).
    - Excavated soil/fill was temporarily stockpiled adjacent to the work area 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 evidence of impacts was observed. The excavated soil/fill was temporarily backfilled into the original location following removal of concrete obstructions.

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

- ECD began mobilizing and staging equipment for the site dewatering system in the southeast part of the site (along Water Street).

Material Tracking

- No material was exported from the site.
- 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	0	0	0	0
Project Total	5	85	42	840	15	300	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	263	5,260	267	5,340	66	1,320

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

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	216	4,320

Sampling

- No samples were collected.

Cc:	M. Raygorodetsky, P. McMahon, M. Au, J. Frey, S. Simpson	By:	Jack Millman **LANGAN**

SITE OBSERVATION REPORT

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 3:44pm. 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, 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 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	0.006	0.00	0.01
PM-2	0.004	0.00	0.01
PM-3	0.004	0.00	0.01
PM-4	0.004	0.00	0.01
WZ-1	0.005	0.00	0.00
WZ-2	0.003	0.00	0.00
WZ-3	0.004	0.00	0.01
WZ-4	0.004	0.00	0.02

Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m^3)	Organic Vapor (ppm)	Mercury Vapor (µg/m^3)
PM-1	0.023	0.01	0.06
PM-2	0.007	0.02	0.02
PM-3	0.006	0.03	0.04
PM-4	0.006	0.05	0.05
WZ-1	0.009	0.00	0.01
WZ-2	0.007	0.04	0.00
WZ-3	0.006	0.01	0.01
WZ-4	0.006	0.00	* 0.52

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

* Two consecutive mercury vapor readings were recorded at 3.88 µg/m^3 at off-site CAMP station WZ-4 (located at an upgradient wind direction from the site) between 10:33am and 10:34am. The detections occurred during a

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scheduled work break by ECD; no ground-intrusive activities were ongoing, and no on-site source was detected at the on-site CAMP stations. The 15-minute time-weighted-average (TWA) action level of 1.00µg/m^3 was not exceeded as a result of the mercury vapor detections.

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 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 6:41am to 3:59pm.
- CAMP station WZ-2 was placed on the southern sidewalk of Water Street from about 6:43am to 4:04pm.
- CAMP station WZ-3 was placed on the eastern sidewalk of Peck Slip from about 6:45am to 4:21pm
- CAMP station WZ-4 was placed on the northern sidewalk of Pearl Street from about 6:47am to 4:12pm.

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 3:44pm and 3:53pm.

- Background concentrations of mercury vapor at each CAMP station were recorded at 0.00 µg/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 soldier piles for SOE installation along Pearl Street.
- ECD will continue assembly of the Bauer BG45 drill rig in preparation for deep soil mix column installation along the perimeter of the site.

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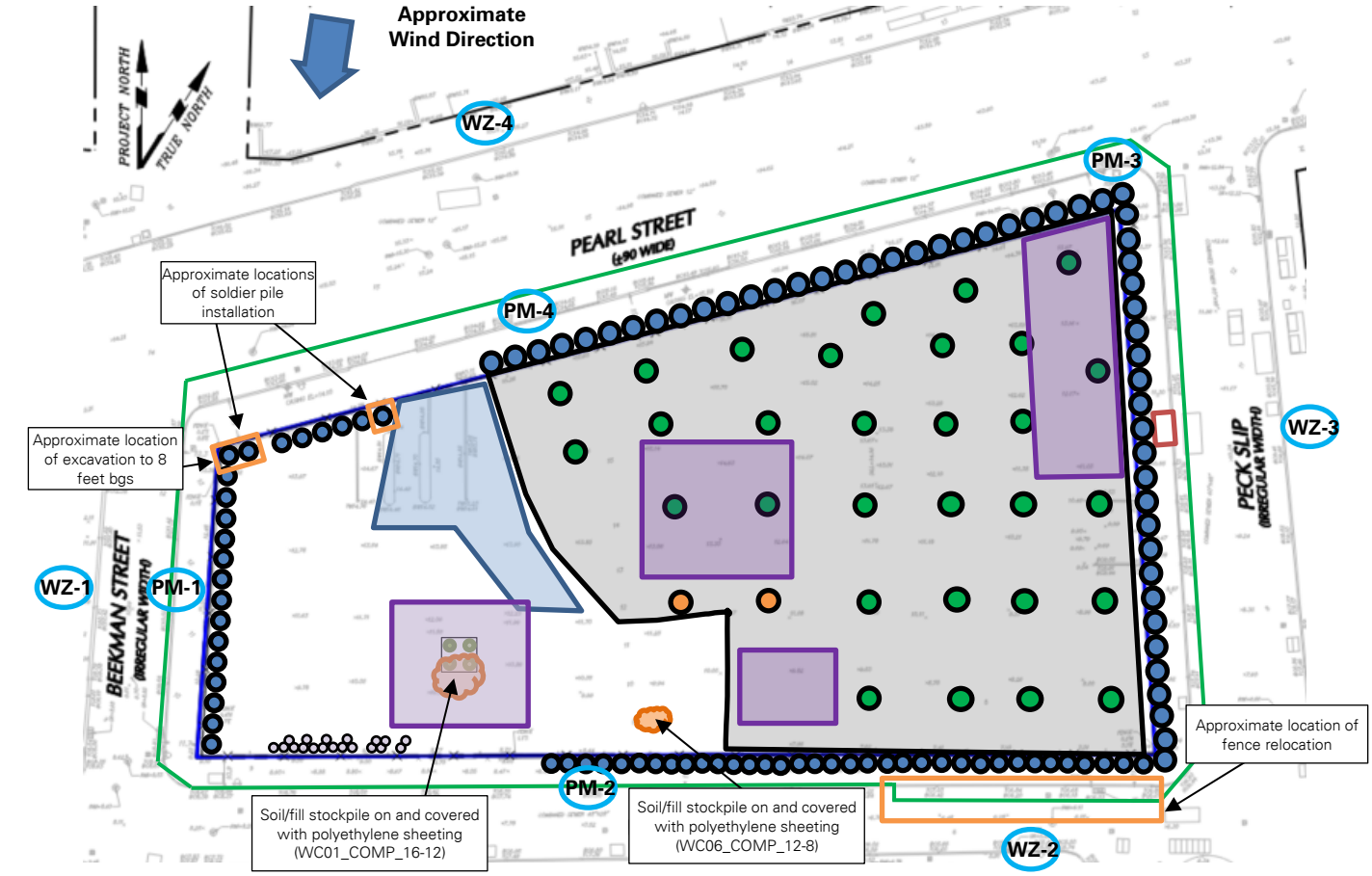
Site Map



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 Underground Storage Tank
- Approximate Location of C&D Stockpile
- Approximate Location of Soil/Fill Stockpile
- Approximate Location of Soldier Pile
- Approximate Location of Soil Mix Column Installed Today
- Approximate Location of Soil Mix Column Installed Previously
- Approximate Perimeter Construction Fence Location
- Previous Excavation Area
- Approximate Location of Documentation Sample
- Approximate Location of Previously Collected Endpoint Sample
- Approximate Location of Imported Fill

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Select Site Photographs:

Photo 1: ECD installing a soldier pile for SOE installation in the northwest part of the site (facing southwest)

Photo 2: CAMP station WZ-2 on the southern sidewalk of Water Street (facing northeast)

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