LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

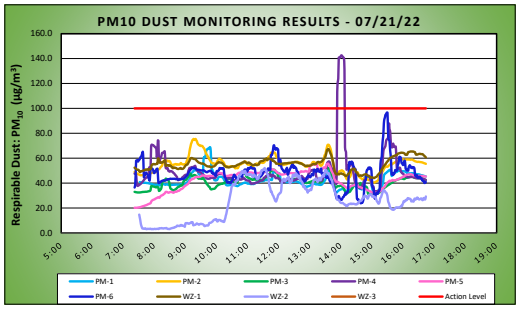
DAILY AIR MONITORING REPORT
250 Water Street Remediation Site
Manhattan, New York

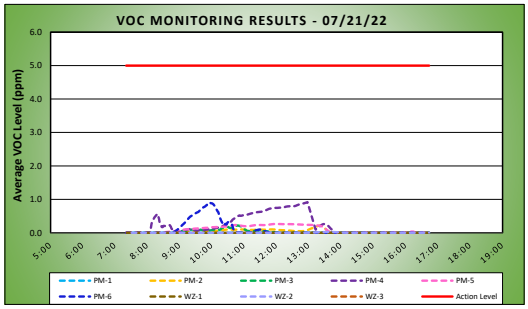
07/21/22	
Project number: 170381202	
Page 1 of 2	Rev. No. 0
Submitted By:	
Dust Action Level (µg/m³)	100
VOC Action Level (ppm)	5
Hg Action Level (µg/m³)	1.0

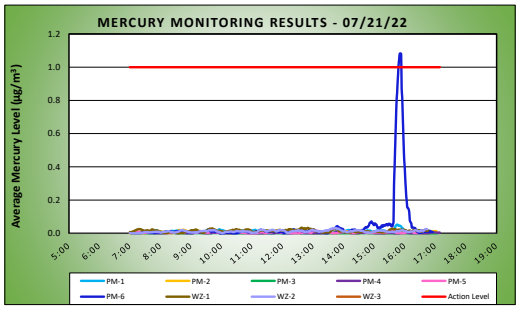
Weather Data Range for Work Day		Wind Direction	WSW	Relative Humidity (%)	55.7 - 69.9	Daily Rain (in)	0.00	Readings in the summary table and graphs below are the reported downwind concentrations.
Temp (°F)	81.1 - 89.0	Wind Speed (MPH)	0.8 - 4.9	Barometer (inHg)	29.74 - 29.75			

Station Location Work Area	Daily Avg. Dust Concentration (µg/m³)	Max 15 Minute Dust Concentration (µg/m³)	Time of Maximum 15 Minute Avg Dust Reading	Daily Avg. VOC Concentration (ppm)	Max 15 Minute VOC Concentration (ppm)	Time of Max 15 Minute Avg VOC Reading
PM-1	42.2	68.8	9:48	0.0	0.0	7:32
PM-2	54.9	75.5	9:16	0.0	0.2	13:21
PM-3	40.4	52.4	13:34	0.0	0.2	10:47
PM-4	49.7	**142.6	14:01	0.2	0.9	12:58
PM-5	41.8	55.7	13:35	0.1	0.3	12:00
PM-6	47.6	96.7	15:29	0.1	0.9	9:55
WZ-1	55.1	67.4	13:36	0.0	0.0	7:22
WZ-2	25.8	52.1	11:33	0.0	0.0	13:38
WZ-3	N/A	N/A	N/A	N/A	N/A	N/A

Station Location Work Area	Daily Avg. Mercury Concentration (µg/m³)	Max 15 Minute Mercury Concentration (µg/m³)	Time of Max 15 Minute Avg Mercury Reading
PM-1	0.01	0.05	15:45
PM-2	0.01	0.02	8:44
PM-3	0.00	0.00	16:21
PM-4	0.00	0.01	13:59
PM-5	0.01	0.02	16:37
PM-6	0.05	*1.08	15:51
WZ-1	0.01	0.03	12:38
WZ-2	0.01	0.03	13:44
WZ-3	N/A	N/A	N/A







Air Monitoring Notes:

Langan performed air monitoring at the perimeter of the site and at the work zone at eight 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 VOCs that approached or exceeded the action level established by the CAMP (5.0 ppm).

Background Concentrations

Prior to implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorde d using a handheld Jerome® J505 mercury vapor analyzer and a handheld PID, respectively.

- Background concentrations of mercury vapor at each CAMP station ranged from 0.00 to 0.07 µg/m³.
- Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.

Perimeter and Work Zone Concentrations

* During application of Mercon-X® across the excavation area in the north-central part of the site, the 15-minute TWA action level for mercury vapor (1.00 µg/m³) was exceeded at perimeter CAMP station PM-6, which was located about 30 feet from the work area, for a duration of about 6 minutes (from 3:48pm to 3:53pm). Work was previously halted across the site at 3:36pm due to an instantaneous mercury vapor reading of 63.1 µg/m³, which was recorded during screening of excavated soil/fill using the handheld Jerome® J505 unit. The maximum 15-minute TWA concentration of mercury vapor was recorded at 1.08 µg/m³ and was caused by instantaneous mercury vapor concentrations ranging from 1.0 µg/m³ to 3.4 µg/m³. During this time, off-site CAMP station WZ-1 was located on the northern sidewalk of Pearl Street and no instantaneous mercury vapor concentrations ab ove background conditions were recorded.
  - Following application of Mercon-X®, exposed soil/fill and stockpiles were covered with polyethylene sheeting. As an additional measure, Atmos ® AC-645 odor/vapor suppressing foam was sprayed atop the polyethylene sheeting and mercury vapor concentrations returned to background conditions at approximately 4:00pm.
  - Construction activities ceased for the remainder of the work day, however, CAMP was implemented until at least 4:30pm before implementing shutdown protocols (ie. collecting background readings at each CAMP station).

** PM10 concentrations at perimeter CAMP station PM-4 exceeded the action level established in the CAMP (0.100 mg/m³) for a duration of about 15 minutes (1:53pm to 2:07pm). The maximum 15-minute TWA concentration of PM10 was recorded at 142.6 mg/m³ and was caused by instantaneous PM10 concentrations ranging from 0.153 mg/m3 to 1.022 mg/m3. Prior to the exceedance, CCJV was in the process of removing the asphalt cover along the eastern boundary of the site to facilitate excavation of a test pit for SOE soldier pile installation. Heavy rain was ongoing and fugitive dust was not observed migrating off-site during this time. PM10 concentrations returned to background conditions at 2:08pm.

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. With the exception of the 15-minute TWA mercury vapor exceedance previously described, instantaneous mercury vapor concentrations throughout the site ranged from 0.00 µg/m³ to 0.40 µg/m³.
- The dedicated mobile monitor (Langan) used a handheld PID to monitor VOC concentrations throughout the site. With the exception of ambient air screening during removal of the USTs, instantaneous VOC concentrations were at or below background concentrations throughout the work day. A maximum instantaneousVOC concentration of 8.1 ppm was observed at 9:26am during removal of the USTs in the eastern part of the site, however, VOC concentrations at the nearest perimeter CAMP station(PM-4) were not recorded above background conditions.

Off-Site CAMP Station Relocation

- CAMP station WZ-1 was relocated to the northern sidewalk of Pearl Street from 7:07am to 4:44pm during excavation of test p its and installation of SOE soldier piles along the northern boundary of the site.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 7:16am to 4:44pm during excavation of test pits and demolition of concrete along the eastern boundary of the site.

Prior to CAMP Shutdown

Prior to discontinuing CAMP and approximately 30 minutes after mercury vapor readings returned to background concentrations at perimeter CAMP station PM-6, 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 at 4:44pm at the conclusion of ground - intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.00 to 0.08 µg/m³.
- VOC concentrations at each CAMP station ranged from 0.0 ppm to 0.1 ppm.

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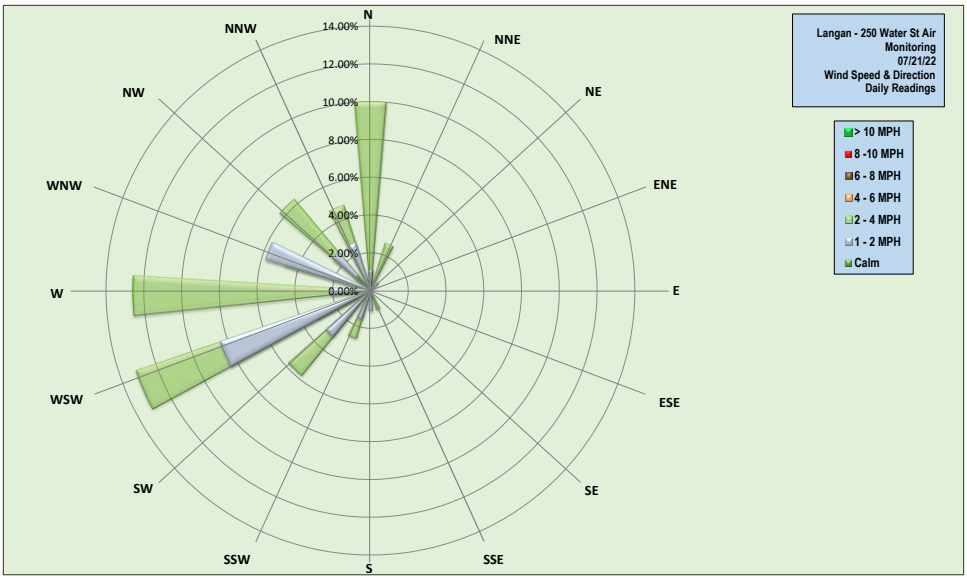
Langan - 250 Water St Air Monitoring
07/21/22
Wind Speed & Direction
Daily Readings
> 10 MPH
8 -10 MPH
6 - 8 MPH
4 - 6 MPH
2 - 4 MPH
1 - 2 MPH
Calm
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
14.00%
12.00%
10.00%
8.00%
6.00%
4.00%
2.00%
0.00%