

**WEEKLY PROGRESS REPORT – TRC SOLUTIONS**

**Gowanus Canal Turning Basin 4 Dredging and Capping Pilot Study  
Brooklyn, New York**

**Project number: 283126**

**Period: May 14 to 18, 2018**

**Date of Report: May 23, 2018**

**Rev: 0**

**Prepared For: Gowanus Environmental Remediation Trust**



**On-Site Activities Conducted During Week:**

*Sevenson Environmental Services (SES)*

Phase I Dredging:

- Approximately 2,817 cubic yards of sediment dredged (volume provided by Sevenson and accepted as draft by Geosyntec)
- Decanted dredged sediment consolidated into approximate 750 cubic yard scows and transferred to Clean Earth Claremont

Water Treatment and Monitoring

- Discharged 12,157 and 31,020 gallons of treated decant water on 05/17 and 05/18/18, respectively.
- No exceedances of continuous monitoring.
- Dredged sediment decanted prior to consolidation for off-site shipment.

Turbidity Monitoring

- Turbid water not observed migrating from the 4<sup>th</sup> Street Turning Basin.

Debris Screening Activities

- Large debris (i.e., debris greater than 5 feet in any direction) segregated and placed on the asphalt pad at Citizens Site. Photographs of debris provided for AHRS consultation.
- Screening and segregating of dredged sediment following removal of non-large debris performed at Clean Earth Claremont for inspection by AHRS.

Sediment Stabilization Activities

- Clean Earth Claremont stabilized 3,791 tons of dredged sediment by adding 8% Portland cement by weight.
- Stabilized material is segregated on-site pending waste characterization sampling results receipt and disposal facility acceptance.
- Two (2) shipments of stabilized material were disposed off-site as daily cover, consisting of approximately 1420 tons. An approximate total of 1950 tons of Phase I stabilized material has been shipped to Waste Management Fairless Hills.

*Quality Assurance and Control – Geosyntec*

- Water treatment system sampling performed on 05/17/18. Laboratory turnaround time is 10 business days.
- No exceedance of the turbidity trigger or action criteria during Phase I dredging.
- Measurements for 5/14/18:
  - Daily average for ambient buoy – 11.7 NTU
  - Daily average for sentinel buoy – 18.0 NTU
  - Greatest difference between ambient and sentinel buoy during 15-minute interval with sentinel buoy exceeding ambient buoy – 24.9 NTU at 1200.
- Measurements for 5/15/18:
  - Daily average for ambient buoy – 11.4 NTU
  - Daily average for sentinel buoy – 14.3 NTU
  - Greatest difference between ambient and sentinel buoy during 15-minute interval with sentinel buoy exceeding ambient buoy – 16.9 NTU at 1300.
- Measurements for 5/16/18:
  - Daily average for ambient buoy – 13.2 NTU
  - Daily average for sentinel buoy – 17.1 NTU
  - Greatest difference between ambient and sentinel buoy during 15-minute interval with sentinel buoy exceeding ambient buoy – 16.7 NTU at 1600.



- Measurements for 5/17/18:
  - Daily average for ambient buoy – 15.2 NTU
  - Daily average for sentinel buoy – 16.3 NTU
  - Greatest difference between ambient and sentinel buoy during 15-minute interval with sentinel buoy exceeding ambient buoy – 12.5 NTU at 1700.
- Measurements for 5/18/18:
  - Daily average for ambient buoy – 17.9 NTU
  - Daily average for sentinel buoy – 16.0 NTU
  - Greatest difference between ambient and sentinel buoy during 15-minute interval with sentinel buoy exceeding ambient buoy – 8.3 NTU at 1500.

*Community Air Monitoring Program – TRC CAMP*

- Operated and maintained two (2) air monitoring stations at the upland staging area and five (5) monitoring station at the 4<sup>th</sup> Street Turning Basin Area.
- No exceedances of particulate matter of 10 microns in diameter or smaller (PM<sub>10</sub>) or total volatile organic compounds (TVOC) of the action level of 150 micrograms per cubic meter or 1,000 parts per billion, respectively.
- Maximum weekly measurements of PM<sub>10</sub> in µg/m<sup>3</sup>
  - Station 1 – 59 µg/m<sup>3</sup> recorded on 05/15/18
  - Station 2 – 59 µg/m<sup>3</sup> recorded on 05/15/18
  - Station 3 – 60 µg/m<sup>3</sup> recorded on 05/15/18
  - Station 4 – 53 µg/m<sup>3</sup> recorded on 05/15/18
  - Station 5 – 52 µg/m<sup>3</sup> recorded on 05/15/18
  - Station 6 – 31 µg/m<sup>3</sup> recorded on 05/17/18
  - Station 7 – <1 µg/m<sup>3</sup> recorded throughout the week
- Maximum weekly measurements of TVOC in ppb
  - Station 1 – 66 ppb recorded on 05/15/18
  - Station 2 – 113 ppb recorded on 05/17/18
  - Station 3 – 76 ppb recorded on 05/14/18
  - Station 4 – 15 ppb recorded on 05/16/18
  - Station 5 – 33 ppb recorded on 05/14/18
  - Station 6 – 47 ppb recorded on 05/14/18
  - Station 7 – 149 ppb recorded on 05/16/18
- All real-time readings of formaldehyde, hydrogen sulfide, or ammonia less than instrument reporting limit except for the following readings.
  - *Formaldehyde:*
    - Station 1 at 0800 on 05/14/18 – 3.18 ppb                      Station 4 at 0835 on 05/14/18 – 11.07 ppb
    - Station 2 at 1510 on 05/14/18 – 14.15 ppb
  - *Hydrogen Sulfide:*
    - Station 1 at 0800 on 05/14/18 – 0.04 ppb                      Station 4 at 0835 on 05/14/18 – 0.13 ppb
    - Station 2 at 1510 on 05/14/18 – 0.08 ppb                      Station 7 at 0910 on 05/14/18 – 0.01 ppb
    -
  - *Ammonia:*
    - Station 1 at 0800 on 05/14/18 – 0.17 ppm                      Station 4 at 0835 on 05/14/18 – 0.03 ppm
    - Station 2 at 1510 on 05/14/18 – 0.01 ppm                      Station 7 at 0910 on 05/14/18 – 0.07 ppm



- 23-hour sample collected at ST-5 on 05/15 through 05/16 and ST-6 on 05/17 through 05/18. Laboratory turnaround time is 10 business days.

*Noise and Vibration Monitoring – Wilson Ihrig*

- Operated and maintained two (2) noise monitors: NM-1 (north side of canal on Whole Foods promenade) and NM-2 (south side of canal on southeast corner of 386 3rd Avenue).
- No exceedances of the hourly Leq noise limit of 80 dBA.
- Greatest hourly Leq noise measurements
  - Northern monitor (NM-1) – 73.1 dBA during 0900-1000 on 05/18/18
  - Southern monitor (NM-2) – 72.6 dBA during 1500-1600 on 05/17/18

*Cultural Natural Resource Monitoring – Archeology and Historic Resource Services (AHRS)*

- Draft and finalize memoranda to facilitate the disposal of non-archaeologically sensitive debris staged at Clean Earth.
- Reviewed photographs of screened debris from Phase I dredging at Clean Earth Claremont and Citizens Site. Conduct site inspection of segregated materials at Clean Earth Claremont. Wood debris, iron industrial debris, and red brick with maker's stamp identified as requiring additional cleaning, recording, and measuring, along with possible coordination with SHPO and EPA.

**Two-Week Look Ahead:**

Sevenson:

- Continue and complete Phase I dredging.
- Shipment of dredged sediment to Clean Earth Claremont for screening and stabilization prior to shipment to Waste Management Fairless Hills for beneficial reuse.
- Treatment and discharge of water decanted from dredged sediment.
- Perform optical monitoring of bulkheads and surrounding structures with autonomous total survey stations. Along with weekly optical surveys conducted by subcontractor.

Geosyntec – Perform construction quality assurance responsibilities, including collection of water samples from dredge water system.

TRC CAMP Monitoring – Perform community air monitoring.

Wilson Ihrig – Perform noise monitoring,

AHRS:

- Finalize report of inspection of screened debris from Access Dredging in preparation for off-site disposal.
- Review photographs and perform inspection of screened debris from Phase I dredging at Clean Earth Claremont and Citizens Site.

**Key Milestones**

- No milestones during period.

Attachments:

1. Geosyntec In-Canal Water Quality Monitoring Weekly Data Summary
2. TRC Weekly CAMP Report
3. Wilson Ihrig Weekly Noise and Vibration Monitoring Report
4. AHRS Weekly Report
5. Water Treatment System Monitoring Analytical Laboratory Data (no activities during current week)
6. Cumulative Dredged Material Chart



<b>Client Name:</b> Gowanus ERT	<b>Site Location:</b> TB-4 Pilot Study	<b>Project No.:</b> 283126.0000.0001
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<b>Photo No.</b> 001	<b>Date</b> 05-14-2018
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**Description**  
Excavating material from Turning Basin 4.



<b>Photo No.</b> 002	<b>Date</b> 05-14-2018
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**Description**  
Loading empty scow with excavated material.



<b>Client Name:</b> Gowanus ERT	<b>Site Location:</b> TB-4 Pilot Study	<b>Project No.:</b> 283126.0000.0001
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<b>Photo No.</b> 003	<b>Date</b> 05-15-2018
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**Description**  
Transferring dredged material from the scow to the DOS scow.



<b>Photo No.</b> 004	<b>Date</b> 05-15-2018
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**Description**  
Moving material within the DOS scow from one end to the other, levelling the load for transportation to Clean Earth.



<b>Client Name:</b> Gowanus ERT	<b>Site Location:</b> TB-4 Pilot Study	<b>Project No.:</b> 283126.0000.0001
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<b>Photo No.</b> 005	<b>Date</b> 05-16-2018
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**Description**  
Transferring material from the small scow to the larger DOS scow.



<b>Photo No.</b> 006	<b>Date</b> 05-16-2018
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**Description**  
Removing bucket with material from TB-4.



<b>Client Name:</b> Gowanus ERT	<b>Site Location:</b> TB-4 Pilot Study	<b>Project No.:</b> 283126.0000.0001
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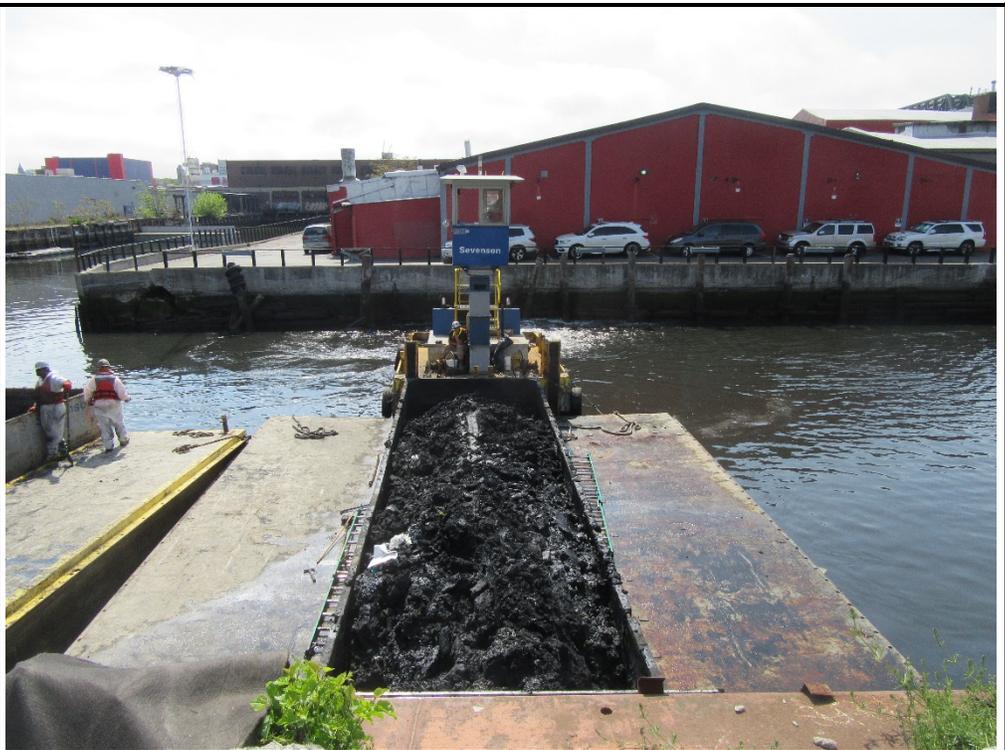
<b>Photo No.</b> 007	<b>Date</b> 05-17-2018
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**Description**  
Loaded scow turning in TB-4 preparing for the trip to Citizens site.



<b>Photo No.</b> 008	<b>Date</b> 05-10-2018
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**Description**  
Full scow delivery to Citizens Site for transfer to larger scow. Note lack of water to be decanted.



<b>Client Name:</b> Gowanus ERT	<b>Site Location:</b> TB-4 Pilot Study	<b>Project No.:</b> 283126.0000.0001
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<b>Photo No.</b> 009	<b>Date</b> 05-18-2018
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**Description**  
Loading scow with sediments from Turning Basin 4.



<b>Photo No.</b> 010	<b>Date</b> 05-18-2018
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**Description**  
Spud being lifted to allow for barge movement.



**GEOSYNTEC IN-CANAL WATER QUALITY MONITORING WEEKLY DATA SUMMARY**



# **GOWANUS CANAL SUPERFUND SITE DREDGING AND CAPPING PILOT STUDY Water Quality Monitoring Weekly Data Summary**

Week of May 14<sup>th</sup>, 2018

## **Report Contents**

- Scope of Monitoring
- Turbidity Buoy Data
- Handheld Measurements
- Summary of Visual Observations
  - Report of Exceedances

*Prepared by*

**Geosyntec**  **Beech and Bonaparte**   
consultants engineering p.c.

engineers | scientists | innovators

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Project Number HPH106A (52)

## 1. SCOPE OF MONITORING

The following report summarizes water quality monitoring data collected during the week of May 14<sup>th</sup>, 2018. Two turbidity buoys were deployed to monitor turbidity during the pilot study. One turbidity buoy was deployed just outside of the 4<sup>th</sup> Street Turning Basin and is referred to as the sentinel buoy. A second turbidity buoy was deployed further upstream in RTA1 in order to monitor background turbidity unaffected by on-water construction activities. This turbidity buoy is referred to as the ambient buoy. A map indicating the approximate locations of the turbidity buoys is provided in Figure 1. Each turbidity buoy was equipped with a YSI 600 OMS water quality meter with optical turbidity sensor. The buoys were programmed such that readings were collected every 15 minutes. After each measurement, the turbidity data were transmitted to a FTP site via telemetry. This report provides the turbidity data collected every 15 minutes from both the ambient and sentinel buoys during each day between 7 AM and 5 PM during the week of May 14<sup>th</sup>. Average and maximum turbidity are also presented. No handheld measurements were collected during this reporting period. Visual observations of turbidity and sheen are summarized in Section 4. The data provided in this summary report have not yet been validated and should be considered preliminary.













### 3. HANDHELD MEASUREMENTS

No handheld measurements were collected for this reporting period.

### 4. SUMMARY OF VISUAL OBSERVATIONS

Sheen was frequently observed outside of the turning basin beyond the air curtain in the main channel of the canal. This sheen was observed each day prior to the start of dredging and so in-waterway construction activities were determined to not be the source of the sheen. This sheen was consistent with background conditions of the main channel of the canal.

### 5. REPORT OF EXCEEDANCES

Refer to the Water Quality Monitoring Plan for In-waterway Construction Activities (Geosyntec 2017) for further information regarding the Trigger and Action Criteria. Threshold criteria are summarized as follows:

- **Trigger criterion** – Any of the following:
  - The rolling average of the sentinel buoy turbidity measurements over a one-hour period exceeds the rolling average of the ambient buoy turbidity measurements by 20 NTU excluding any eliminated outlier measurements; or
  - Either an oil sheen or a turbidity plume is visually observed outside of engineering controls and in-waterway construction activities cannot be immediately excluded as the source.
- **Action criterion** – Any of the following:
  - The rolling average of the sentinel buoy turbidity measurements over a one-hour period exceeds the rolling average of the ambient buoy turbidity measurements by 40 NTU excluding any eliminated outlier measurements; or
  - Either an oil sheen or a turbidity plume is visually observed outside of engineering controls and in-waterway construction activities are readily identified as the source.

# **FIGURES**

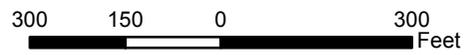


X:\03\_GIS\mxd\Canal\_Wide\_Turbidity\_Buoy\_Locations.mxd; acarnes; 10/19/2017



**Legend**

-  Ambient Buoy
-  Sentinel Buoy
-  RTA Boundary



**Turbidity Buoy Locations**

Gowanus Canal, Brooklyn, NY

**Gowanus Canal Remedial Design Group** **Geosyntec** consultants **Beech and Bonaparte** engineering p.c. an affiliate of Geosyntec Consultants

**Figure**

**1**

Ewing, NJ

October 2017

**APPENDIX A**  
**PRE-DREDGE TURBIDITY BUOY DATA**

Time (Local)	Ambient Turbidity (NTU)	Sentinel Turbidity (NTU)	Sentinel> Ambient (Y/N)	Time (Local)	Ambient Turbidity (NTU)	Sentinel Turbidity (NTU)	Sentinel> Ambient (Y/N)	Time (Local)	Ambient Turbidity (NTU)	Sentinel Turbidity (NTU)	Sentinel> Ambient (Y/N)
10/3/2017 15:00	7.4	2.7	N	10/4/2017 4:30	4.8	7.1	Y	10/4/2017 18:00	6.9	2.7	N
10/3/2017 15:15	6.6	2.4	N	10/4/2017 4:45	5	6.3	Y	10/4/2017 18:15	7.2	2.7	N
10/3/2017 15:30	6.4	2.7	N	10/4/2017 5:00	4.7	6	Y	10/4/2017 18:30	7.8	3.4	N
10/3/2017 15:45	6.9	2	N	10/4/2017 5:15	5.1	6.4	Y	10/4/2017 18:45	8.2	4.4	N
10/3/2017 16:00	6.3	2.1	N	10/4/2017 5:30	5	7.3	Y	10/4/2017 19:00	7.5	3.1	N
10/3/2017 16:15	6.5	2.4	N	10/4/2017 5:45	5.4	7.8	Y	10/4/2017 19:15	8.7	3.6	N
10/3/2017 16:30	7.1	2.9	N	10/4/2017 6:00	5.5	8.3	Y	10/4/2017 19:30	8.7	4.5	N
10/3/2017 16:45	6.1	2.8	N	10/4/2017 6:15	5.2	9	Y	10/4/2017 19:45	9.4	4.1	N
10/3/2017 17:00	7	2.8	N	10/4/2017 6:30	5.8	7.2	Y	10/4/2017 20:00	8.4	4	N
10/3/2017 17:15	7	4.4	N	10/4/2017 6:45	5.4	8.8	Y	10/4/2017 20:15	8.2	4	N
10/3/2017 17:30	7	4.7	N	10/4/2017 7:00	5.5	8	Y	10/4/2017 20:30	9	3.6	N
10/3/2017 17:45	6.3	4	N	10/4/2017 7:15	5.6	7.5	Y	10/4/2017 20:45	8.4	3.5	N
10/3/2017 18:00	6.5	6.9	Y	10/4/2017 7:30	6.9	7.2	Y	10/4/2017 21:00	9.5	4.7	N
10/3/2017 18:15	7.8	6.7	Y	10/4/2017 7:45	6.8	6.1	N	10/4/2017 21:15	10.2	3.9	N
10/3/2017 18:30	7.9	6.5	N	10/4/2017 8:00	6.7	7.4	Y	10/4/2017 21:30	9.5	3.5	N
10/3/2017 18:45	8.5	5.9	N	10/4/2017 8:15	7.3	6.1	N	10/4/2017 21:45	8.9	3.6	N
10/3/2017 19:00	7.9	6	N	10/4/2017 8:30	7.2	4.6	N	10/4/2017 22:00	8.6	2.9	N
10/3/2017 19:15	7.4	6.3	N	10/4/2017 8:45	6.6	9	Y	10/4/2017 22:15	8.7	3.6	N
10/3/2017 19:30	7.4	4.3	N	10/4/2017 9:00	9.2	14.1	Y	10/4/2017 22:30	8.4	6.3	N
10/3/2017 19:45	8.3	4.6	N	10/4/2017 9:15	7.9	4.8	N	10/4/2017 22:45	7.3	3.3	N
10/3/2017 20:00	8.9	5.2	N	10/4/2017 9:30	9.3	4.6	N	10/4/2017 23:00	7.4	3.8	N
10/3/2017 20:15	8.6	4.5	N	10/4/2017 9:45	7.6	5.1	N	10/4/2017 23:15	7.1	4.5	N
10/3/2017 20:30	8	4.9	N	10/4/2017 10:00	8.1	3.9	N	10/4/2017 23:30	7	3.8	N
10/3/2017 20:45	10.6	4.3	N	10/4/2017 10:15	7.8	3.1	N	10/4/2017 23:45	8.3	5.3	N
10/3/2017 21:00	11.1	4.6	N	10/4/2017 10:30	7.3	4.5	N	10/5/2017 0:00	7.7	6.2	N
10/3/2017 21:15	9.8	4.7	N	10/4/2017 10:45	7.5	3.9	N	10/5/2017 0:15	7.8	5.1	N
10/3/2017 21:30	8.8	4.6	N	10/4/2017 11:00	7.6	9	Y	10/5/2017 0:30	7.2	5.7	N
10/3/2017 21:45	9	4.7	N	10/4/2017 11:15	6.5	16.7	Y	10/5/2017 0:45	7	5.4	N
10/3/2017 22:00	8.3	4.8	N	10/4/2017 11:30	7.4	6	N	10/5/2017 1:00	7.5	4.9	N
10/3/2017 22:15	7.3	6.1	N	10/4/2017 11:45	6.8	5.3	N	10/5/2017 1:15	7	8.2	Y
10/3/2017 22:30	7	4.7	N	10/4/2017 12:00	7.7	5.1	N	10/5/2017 1:30	8.1	4.9	N
10/3/2017 22:45	6.6	5.3	N	10/4/2017 12:15	6.6	6.1	N	10/5/2017 1:45	9.1	6.5	N
10/3/2017 23:00	7.1	6.1	N	10/4/2017 12:30	7.6	4	N	10/5/2017 2:00	9.2	5.2	N
10/3/2017 23:15	6.5	6	N	10/4/2017 12:45	7.7	3.9	N	10/5/2017 2:15	8.5	3.7	N
10/3/2017 23:30	6.6	6.9	Y	10/4/2017 13:00	8.3	4.8	N	10/5/2017 2:30	10.2	5.2	N
10/3/2017 23:45	7.2	5.2	N	10/4/2017 13:15	8.5	3.9	N	10/5/2017 2:45	10.1	4.2	N
10/4/2017 0:00	6.8	6.3	N	10/4/2017 13:30	9.2	5.5	N	10/5/2017 3:00	10.3	4.9	N
10/4/2017 0:15	7.2	5.6	N	10/4/2017 13:45	9.4	4.5	N	10/5/2017 3:15	9	6.3	N
10/4/2017 0:30	7.4	6.4	N	10/4/2017 14:00	11.1	3.1	N	10/5/2017 3:30	9.2	4.5	N
10/4/2017 0:45	7.1	5	N	10/4/2017 14:15	10	2.5	N	10/5/2017 3:45	8.4	4.1	N
10/4/2017 1:00	7.1	4.3	N	10/4/2017 14:30	9.8	2	N	10/5/2017 4:00	7.4	4.4	N
10/4/2017 1:15	8.3	4.6	N	10/4/2017 14:45	9.7	2.1	N	10/5/2017 4:15	7.3	4.4	N
10/4/2017 1:30	9	5.1	N	10/4/2017 15:00	9.3	2.4	N	10/5/2017 4:30	6.4	4.6	N
10/4/2017 1:45	7.9	4.5	N	10/4/2017 15:15	8.5	2.1	N	10/5/2017 4:45	6.2	5.1	N
10/4/2017 2:00	9.1	4	N	10/4/2017 15:30	8.5	1.8	N	10/5/2017 5:00	5.3	5.2	N
10/4/2017 2:15	7	5.3	N	10/4/2017 15:45	7.2	1.8	N	10/5/2017 5:15	5.3	5.3	N
10/4/2017 2:30	7.2	5.5	N	10/4/2017 16:00	7.3	1.6	N	10/5/2017 5:30	4.8	5	Y
10/4/2017 2:45	6.6	4.8	N	10/4/2017 16:15	6.4	1.8	N	10/5/2017 5:45	5.7	5	N
10/4/2017 3:00	6.6	5.7	N	10/4/2017 16:30	7	1.6	N	10/5/2017 6:00	5.6	4.8	N
10/4/2017 3:15	6.2	5.1	N	10/4/2017 16:45	7.5	2.6	N	10/5/2017 6:15	5.4	4.9	N
10/4/2017 3:30	5.9	4.7	N	10/4/2017 17:00	6.4	2.7	N	10/5/2017 6:30	6.1	5.7	N
10/4/2017 3:45	5.5	5.9	N	10/4/2017 17:15	6.5	2	N	10/5/2017 6:45	5.9	6.4	Y
10/4/2017 4:00	4.9	6.4	Y	10/4/2017 17:30	6.7	2.3	N	10/5/2017 7:00	6.1	7.8	Y
10/4/2017 4:15	5.1	7	Y	10/4/2017 17:45	6.6	2.1	N				
Average	7.5	6.0	N								
Maximum	11.1	16.7	Y								

**TRC WEEKLY COMMUNITY AIR MONITORING PROJECT REPORT**





**Gowanus Canal Superfund Site  
TB-4 Dredging and Capping Pilot Study  
Brooklyn, New York  
Weekly Report  
(TRC Project No.274286-0000-00000)**

**Community Air Monitoring Project  
32<sup>nd</sup> Weekly Monitoring Period  
Summary Report:**

May 14<sup>th</sup>, through May 18<sup>th</sup>, 2018

**Report Contents**

- Executive Summary
- Daily Data Summary Report – PM<sub>10</sub>/TVOC
  - Daily Meteorological Summary Report
    - Periodic Monitoring Results

# **Gowanus Canal Superfund Site TB-4 Dredging and Capping Pilot Study Brooklyn, New York**

## **Executive Summary – Week 32 Monitoring Period May 14<sup>th</sup> through May 18<sup>th</sup>, 2018**

The following report summarizes site air monitoring activities for the Week 32 monitoring period from May 14<sup>th</sup> through May 18<sup>th</sup>, 2018. The start and stop times associated with each daily monitoring period are listed on the respective daily reports.

TRC continued to operate two (2) air monitoring stations on the Citizen Property or Staging Area, and five (5) air monitoring stations in the 4<sup>th</sup> St Turning Basin Area using the equipment specified previously in the *Gowanus Canal TB-4 Dredging and Pilot Study Executive Summary – Background Monitoring Period Report*. During the Week 32 monitoring period there were no PM<sub>10</sub> or TVOC exceedances of the action level of 150 ug/m<sup>3</sup> or 1,000 ppb respectively as defined in the *Community Air Monitoring Plan for the Gowanus Canal TB-4 Dredging and Pilot Study Project Brooklyn, NY, August 2017*.

Figure 1 depicts Total Volatile Organics (TVOC) daily averages and maximums. Figure 2 depicts particulate monitoring (PM<sub>10</sub>) daily averages and maximums. Figure 3 depicts the station locations along the Gowanus Canal.

Additional monitoring for hydrogen sulfide, ammonia, and formaldehyde took place at all stations throughout the Week 32 monitoring period twice daily during work week actives. The results of these measurements are shown in Table 1.

During the Week 32 monitoring period of May 14<sup>th</sup> through May 18<sup>th</sup>, 2018 TRC conducted Volatile Organic Compounds (USEPA Method TO-15) sampling at Stations 5 and 6. The ST-5 sample was collected on May 15<sup>th</sup>, through May 16<sup>th</sup>, 2018. The ST-6 sample was collected on May 17<sup>th</sup>, through May 18<sup>th</sup>, 2018. Both samples were collected over a 23-hour period and shipped to Con-Test Analytical Laboratory for analyses. The results of the summa canister sampling are pending lab analyses.

Site activities which were conducted at the Citizen Property on May 14<sup>th</sup> through May 18<sup>th</sup>, 2018 included the following:

- Material and equipment deliveries on Citizen Property
- General vehicular traffic site-wide throughout the monitoring period
- Maintenance of the barges and equipment
- De-watering of dredging sediment
- Transfer dredged material to larger scow for shipment to Clean Earth Claremont

Site activities which were conducted at the 4<sup>th</sup> St Turning Basin Area of the Canal on May 14<sup>th</sup> through May 18<sup>th</sup>, 2018 included the following:

- Dredging of approximately 2,817 cubic yards of soft sediments

**Gowanus Canal Superfund Site**  
**TB-4 Dredging and Capping Pilot Study**  
**Brooklyn, New York**  
Daily Station Report – TVOC/PM<sub>10</sub>  
(TRC Project No.274286-0000-00000)  
05/14/2018 06:30 AM - 05/14/2018 23:45 PM

**Station 1 (Citizen Property near Construction Trailers)**

TVOC			PM <sub>10</sub>		
Max.	33	ppb	Max.	18	ug/m <sup>3</sup>
Avg.	17	ppb	Avg.	11	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 2 (Citizen Property near Pad Area)**

TVOC			PM <sub>10</sub>		
Max.	30	ppb	Max.	25	ug/m <sup>3</sup>
Avg.	6	ppb	Avg.	13	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 3 (Whole Foods Property NW Riverwalk Location)**

TVOC			PM <sub>10</sub>		
Max.	76	ppb	Max.	30	ug/m <sup>3</sup>
Avg.	12	ppb	Avg.	17	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 4 (Whole Foods Property Central Riverwalk Location)**

TVOC			PM <sub>10</sub>		
Max.	<1	ppb	Max.	22	ug/m <sup>3</sup>
Avg.	<1	ppb	Avg.	15	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 5 (Whole Foods Property near 3rd Avenue Bridge)**

TVOC			PM <sub>10</sub>		
Max.	33	ppb	Max.	23	ug/m <sup>3</sup>
Avg.	9	ppb	Avg.	12	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 6 (Maritime Estates Property along Canal Fencing)**

TVOC			PM <sub>10</sub>		
Max.	47	ppb	Max.	<1	ug/m <sup>3</sup>
Avg.	27	ppb	Avg.	<1	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 7 (386 3rd Avenue along Canal Fencing)**

TVOC			PM <sub>10</sub>		
Max.	<1	ppb	Max.	<1	ug/m <sup>3</sup>
Avg.	<1	ppb	Avg.	<1	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

TVOC – Total Volatile Organic Compounds

PM<sub>10</sub> – Particulates as PM<sub>10</sub>

Max. – Maximum daily average (15 min. avg. – TVOC / 15 min. avg. – PM<sub>10</sub>)

Avg. – Daily average (15 min. avg. – TVOC / 15 min. avg. – PM<sub>10</sub>)

Exc. – Total # of averages which exceed the action level (≥1 ppm - TVOC / ≥150 ug/m<sup>3</sup> - PM<sub>10</sub>)

**Gowanus Canal Superfund Site**  
**TB-4 Dredging and Capping Pilot Study**  
**Brooklyn, New York**  
Daily Station Report – TVOC/PM<sub>10</sub>  
(TRC Project No.274286-0000-00000)  
05/15/2018 00:00 AM - 05/15/2018 23:45 PM

**Station 1 (Citizen Property near Construction Trailers)**

TVOC			PM <sub>10</sub>		
Max.	66	ppb	Max.	59	ug/m <sup>3</sup>
Avg.	38	ppb	Avg.	21	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 2 (Citizen Property near Pad Area)**

TVOC			PM <sub>10</sub>		
Max.	51	ppb	Max.	59	ug/m <sup>3</sup>
Avg.	19	ppb	Avg.	17	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 3 (Whole Foods Property NW Riverwalk Location)**

TVOC			PM <sub>10</sub>		
Max.	<1	ppb	Max.	60	ug/m <sup>3</sup>
Avg.	<1	ppb	Avg.	19	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 4 (Whole Foods Property Central Riverwalk Location)**

TVOC			PM <sub>10</sub>		
Max.	<1	ppb	Max.	53	ug/m <sup>3</sup>
Avg.	<1	ppb	Avg.	20	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 5 (Whole Foods Property near 3rd Avenue Bridge)**

TVOC			PM <sub>10</sub>		
Max.	<1	ppb	Max.	52	ug/m <sup>3</sup>
Avg.	<1	ppb	Avg.	20	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 6 (Maritime Estates Property along Canal Fencing)**

TVOC			PM <sub>10</sub>		
Max.	<1	ppb	Max.	<1	ug/m <sup>3</sup>
Avg.	<1	ppb	Avg.	<1	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 7 (386 3rd Avenue along Canal Fencing)**

TVOC			PM <sub>10</sub>		
Max.	<1	ppb	Max.	<1	ug/m <sup>3</sup>
Avg.	<1	ppb	Avg.	<1	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

TVOC – Total Volatile Organic Compounds

PM<sub>10</sub> – Particulates as PM<sub>10</sub>

Max. – Maximum daily average (15 min. avg. – TVOC / 15 min. avg. – PM<sub>10</sub>)

Avg. – Daily average (15 min. avg. – TVOC / 15 min. avg. – PM<sub>10</sub>)

Exc. – Total # of averages which exceed the action level (≥1 ppm - TVOC / ≥150 ug/m<sup>3</sup> - PM<sub>10</sub>)

**Gowanus Canal Superfund Site**  
**TB-4 Dredging and Capping Pilot Study**  
**Brooklyn, New York**  
Daily Station Report – TVOC/PM<sub>10</sub>  
(TRC Project No.274286-0000-00000)  
05/16/2018 00:00 AM - 05/16/2018 23:45 PM

**Station 1 (Citizen Property near Construction Trailers)**

TVOC			PM <sub>10</sub>		
Max.	33	ppb	Max.	23	ug/m <sup>3</sup>
Avg.	13	ppb	Avg.	8	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 2 (Citizen Property near Pad Area)**

TVOC			PM <sub>10</sub>		
Max.	46	ppb	Max.	26	ug/m <sup>3</sup>
Avg.	2	ppb	Avg.	8	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 3 (Whole Foods Property NW Riverwalk Location)**

TVOC			PM <sub>10</sub>		
Max.	54	ppb	Max.	1	ug/m <sup>3</sup>
Avg.	36	ppb	Avg.	<1	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 4 (Whole Foods Property Central Riverwalk Location)**

TVOC			PM <sub>10</sub>		
Max.	15	ppb	Max.	14	ug/m <sup>3</sup>
Avg.	4	ppb	Avg.	10	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 5 (Whole Foods Property near 3rd Avenue Bridge)**

TVOC			PM <sub>10</sub>		
Max.	<1	ppb	Max.	7	ug/m <sup>3</sup>
Avg.	<1	ppb	Avg.	<1	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 6 (Maritime Estates Property along Canal Fencing)**

TVOC			PM <sub>10</sub>		
Max.	23	ppb	Max.	26	ug/m <sup>3</sup>
Avg.	21	ppb	Avg.	12	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 7 (386 3rd Avenue along Canal Fencing)**

TVOC			PM <sub>10</sub>		
Max.	149	ppb	Max.	<1	ug/m <sup>3</sup>
Avg.	51	ppb	Avg.	<1	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

TVOC – Total Volatile Organic Compounds

PM<sub>10</sub> – Particulates as PM<sub>10</sub>

Max. – Maximum daily average (15 min. avg. – TVOC / 15 min. avg. – PM<sub>10</sub>)

Avg. – Daily average (15 min. avg. – TVOC / 15 min. avg. – PM<sub>10</sub>)

Exc. – Total # of averages which exceed the action level (≥1 ppm - TVOC / ≥150 ug/m<sup>3</sup> - PM<sub>10</sub>)

**Gowanus Canal Superfund Site**  
**TB-4 Dredging and Capping Pilot Study**  
**Brooklyn, New York**  
Daily Station Report – TVOC/PM<sub>10</sub>  
(TRC Project No.274286-0000-00000)  
05/17/2018 00:00 AM - 05/17/2018 23:45 PM

**Station 1 (Citizen Property near Construction Trailers)**

TVOC			PM <sub>10</sub>		
Max.	33	ppb	Max.	36	ug/m <sup>3</sup>
Avg.	24	ppb	Avg.	19	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 2 (Citizen Property near Pad Area)**

TVOC			PM <sub>10</sub>		
Max.	113	ppb	Max.	49	ug/m <sup>3</sup>
Avg.	14	ppb	Avg.	22	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 3 (Whole Foods Property NW Riverwalk Location)**

TVOC			PM <sub>10</sub>		
Max.	<1	ppb	Max.	<1	ug/m <sup>3</sup>
Avg.	<1	ppb	Avg.	<1	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 4 (Whole Foods Property Central Riverwalk Location)**

TVOC			PM <sub>10</sub>		
Max.	<1	ppb	Max.	<1	ug/m <sup>3</sup>
Avg.	<1	ppb	Avg.	<1	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 5 (Whole Foods Property near 3rd Avenue Bridge)**

TVOC			PM <sub>10</sub>		
Max.	<1	ppb	Max.	<1	ug/m <sup>3</sup>
Avg.	<1	ppb	Avg.	<1	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 6 (Maritime Estates Property along Canal Fencing)**

TVOC			PM <sub>10</sub>		
Max.	<1	ppb	Max.	31	ug/m <sup>3</sup>
Avg.	<1	ppb	Avg.	4	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 7 (386 3rd Avenue along Canal Fencing)**

TVOC			PM <sub>10</sub>		
Max.	<1	ppb	Max.	<1	ug/m <sup>3</sup>
Avg.	<1	ppb	Avg.	<1	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

TVOC – Total Volatile Organic Compounds

PM<sub>10</sub> – Particulates as PM<sub>10</sub>

Max. – Maximum daily average (15 min. avg. – TVOC / 15 min. avg. – PM<sub>10</sub>)

Avg. – Daily average (15 min. avg. – TVOC / 15 min. avg. – PM<sub>10</sub>)

Exc. – Total # of averages which exceed the action level (≥1 ppm - TVOC / ≥150 ug/m<sup>3</sup> - PM<sub>10</sub>)

**Gowanus Canal Superfund Site  
TB-4 Dredging and Capping Pilot Study  
Brooklyn, New York  
Daily Station Report – TVOC/PM<sub>10</sub>  
(TRC Project No.274286-0000-00000)  
05/18/2018 00:00 AM - 05/18/2018 16:00 PM**

**Station 1 (Citizen Property near Construction Trailers)**

TVOC			PM <sub>10</sub>		
Max.	33	ppb	Max.	22	ug/m <sup>3</sup>
Avg.	15	ppb	Avg.	10	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 2 (Citizen Property near Pad Area)**

TVOC			PM <sub>10</sub>		
Max.	27	ppb	Max.	26	ug/m <sup>3</sup>
Avg.	9	ppb	Avg.	13	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 3 (Whole Foods Property NW Riverwalk Location)**

TVOC			PM <sub>10</sub>		
Max.	<1	ppb	Max.	39	ug/m <sup>3</sup>
Avg.	<1	ppb	Avg.	15	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 4 (Whole Foods Property Central Riverwalk Location)**

TVOC			PM <sub>10</sub>		
Max.	<1	ppb	Max.	29	ug/m <sup>3</sup>
Avg.	<1	ppb	Avg.	11	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 5 (Whole Foods Property near 3rd Avenue Bridge)**

TVOC			PM <sub>10</sub>		
Max.	<1	ppb	Max.	26	ug/m <sup>3</sup>
Avg.	<1	ppb	Avg.	7	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 6 (Maritime Estates Property along Canal Fencing)**

TVOC			PM <sub>10</sub>		
Max.	<1	ppb	Max.	<1	ug/m <sup>3</sup>
Avg.	<1	ppb	Avg.	<1	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

**Station 7 (386 3rd Avenue along Canal Fencing)**

TVOC			PM <sub>10</sub>		
Max.	<1	ppb	Max.	<1	ug/m <sup>3</sup>
Avg.	<1	ppb	Avg.	<1	ug/m <sup>3</sup>
Exc.	0	total	Exc.	0	Total

TVOC – Total Volatile Organic Compounds

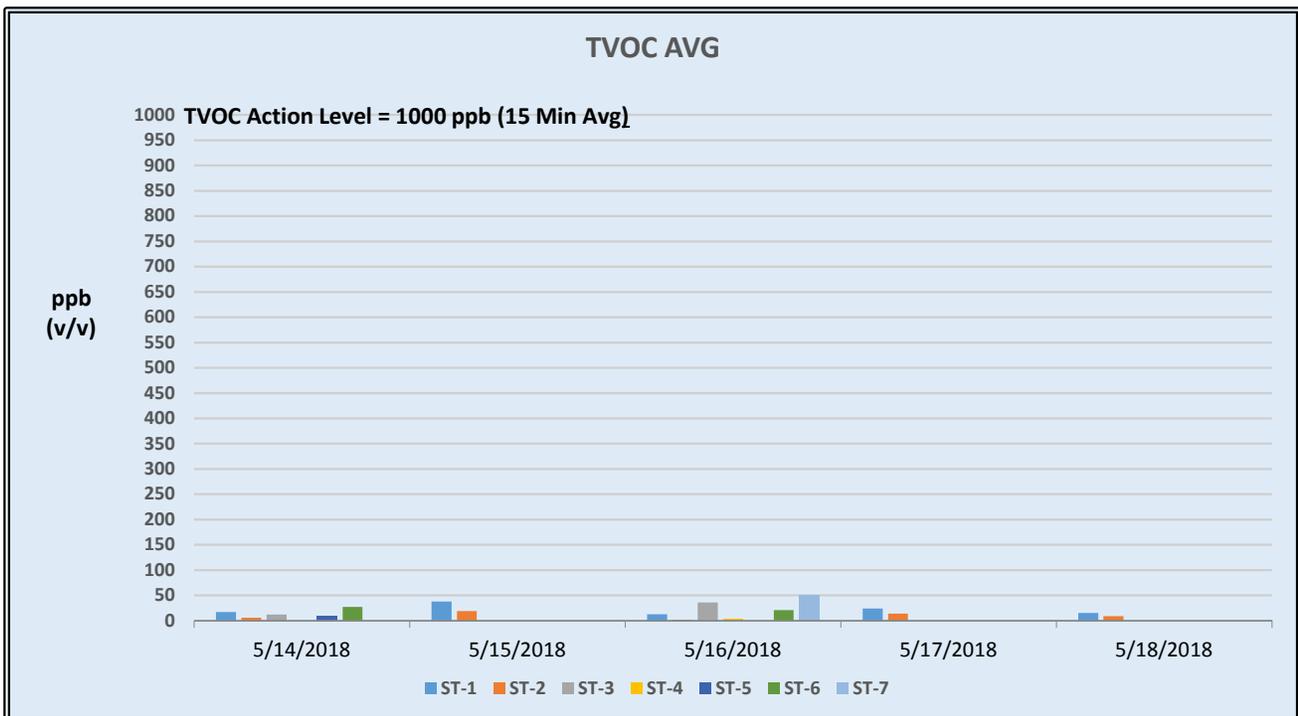
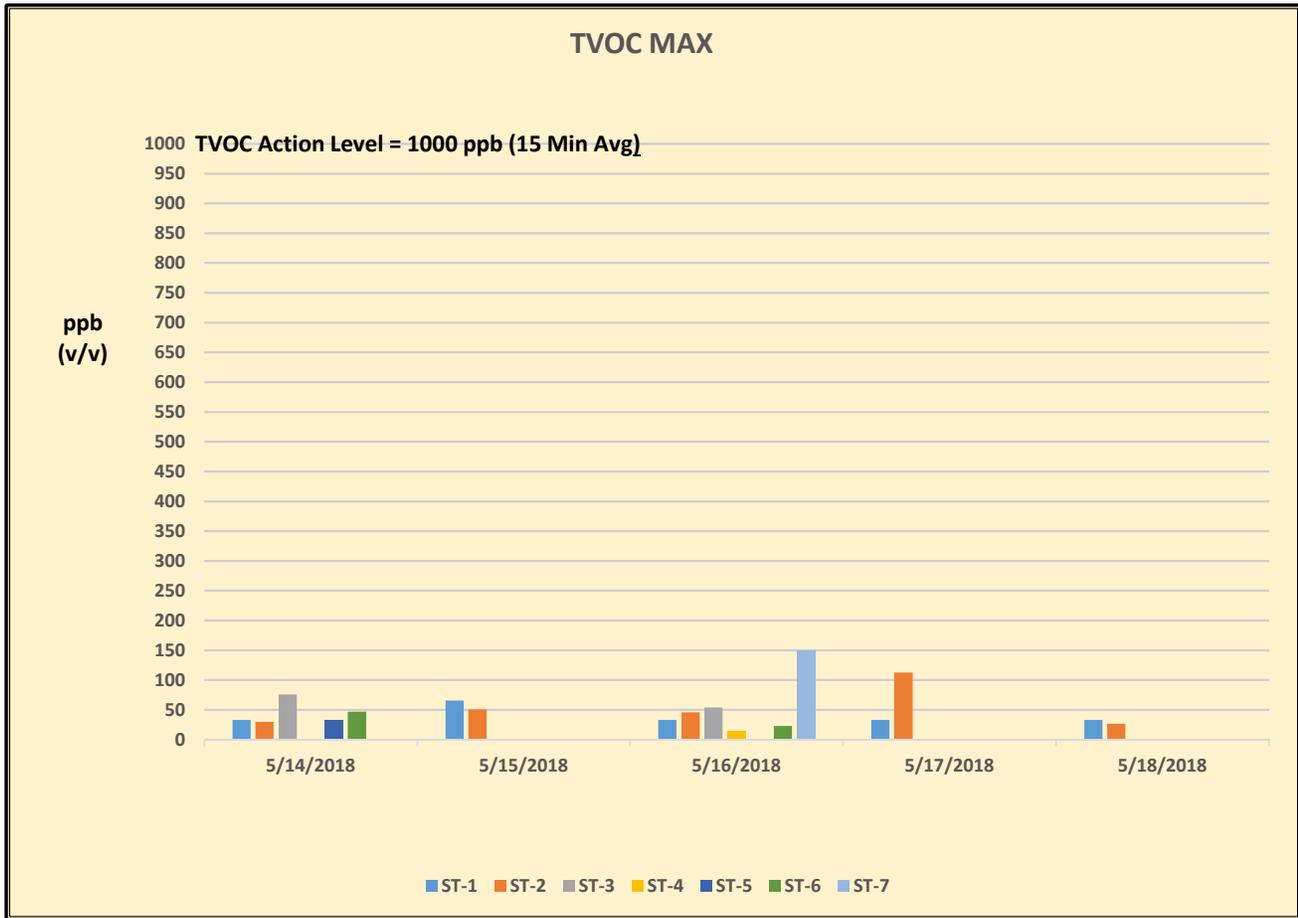
PM<sub>10</sub> – Particulates as PM<sub>10</sub>

Max. – Maximum daily average (15 min. avg. – TVOC / 15 min. avg. – PM<sub>10</sub>)

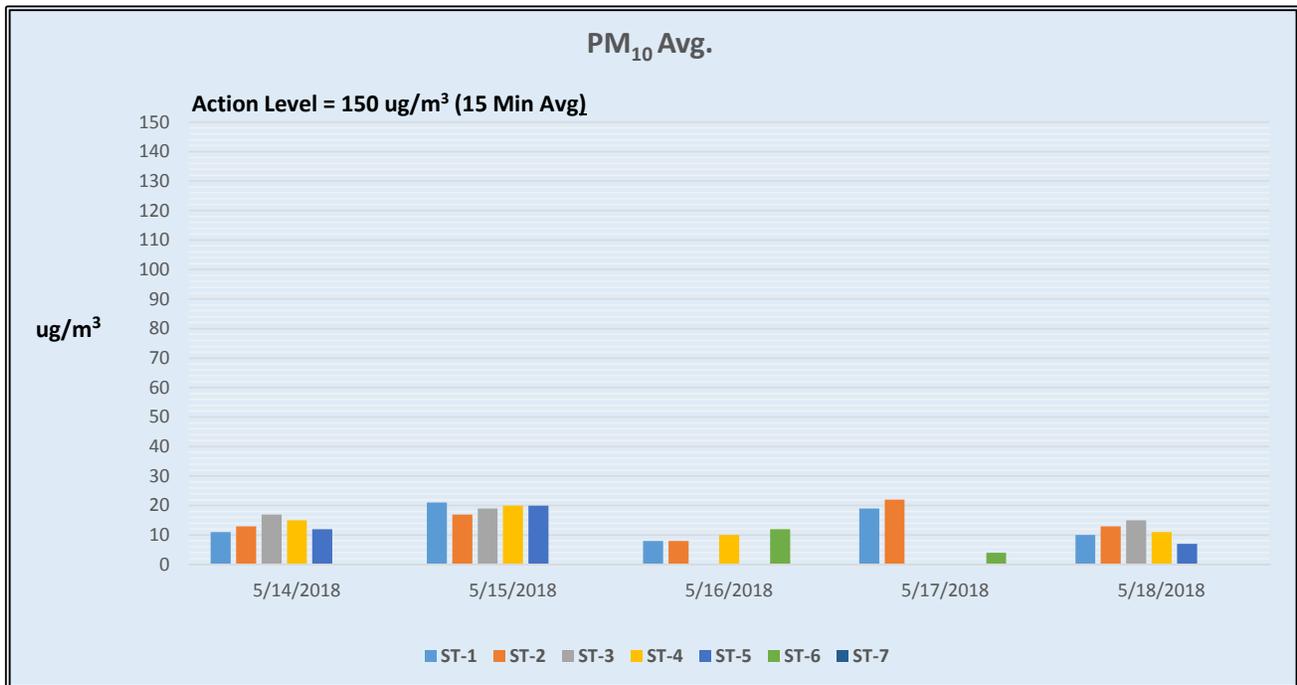
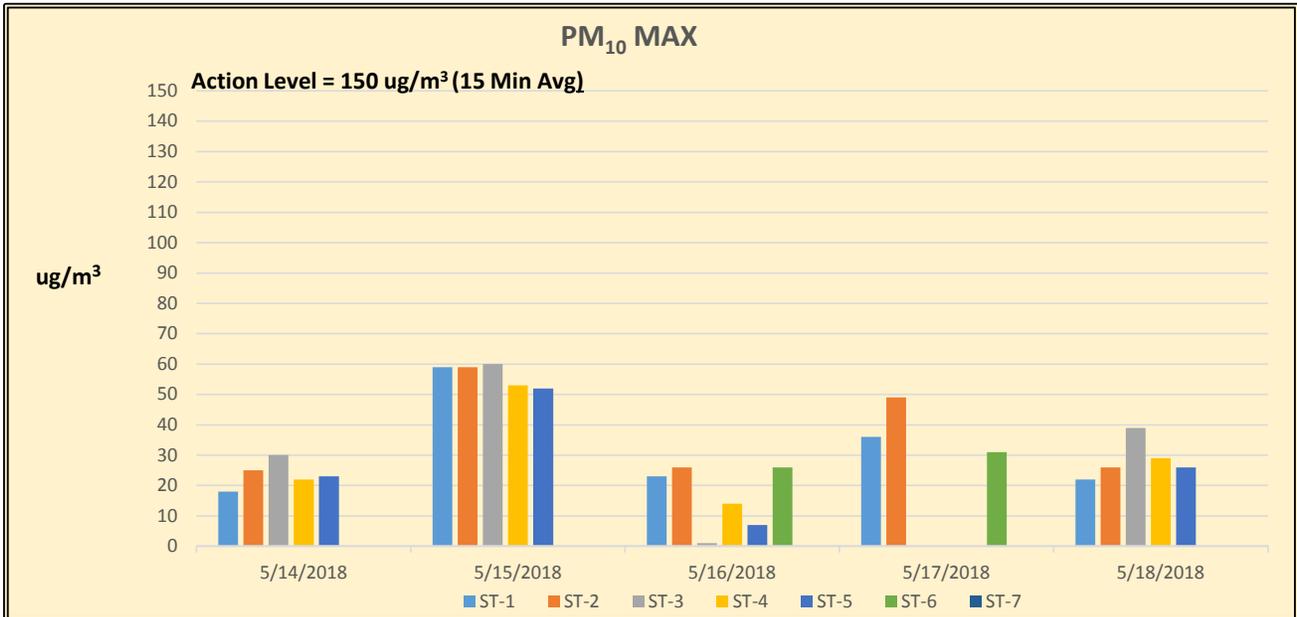
Avg. – Daily average (15 min. avg. – TVOC / 15 min. avg. – PM<sub>10</sub>)

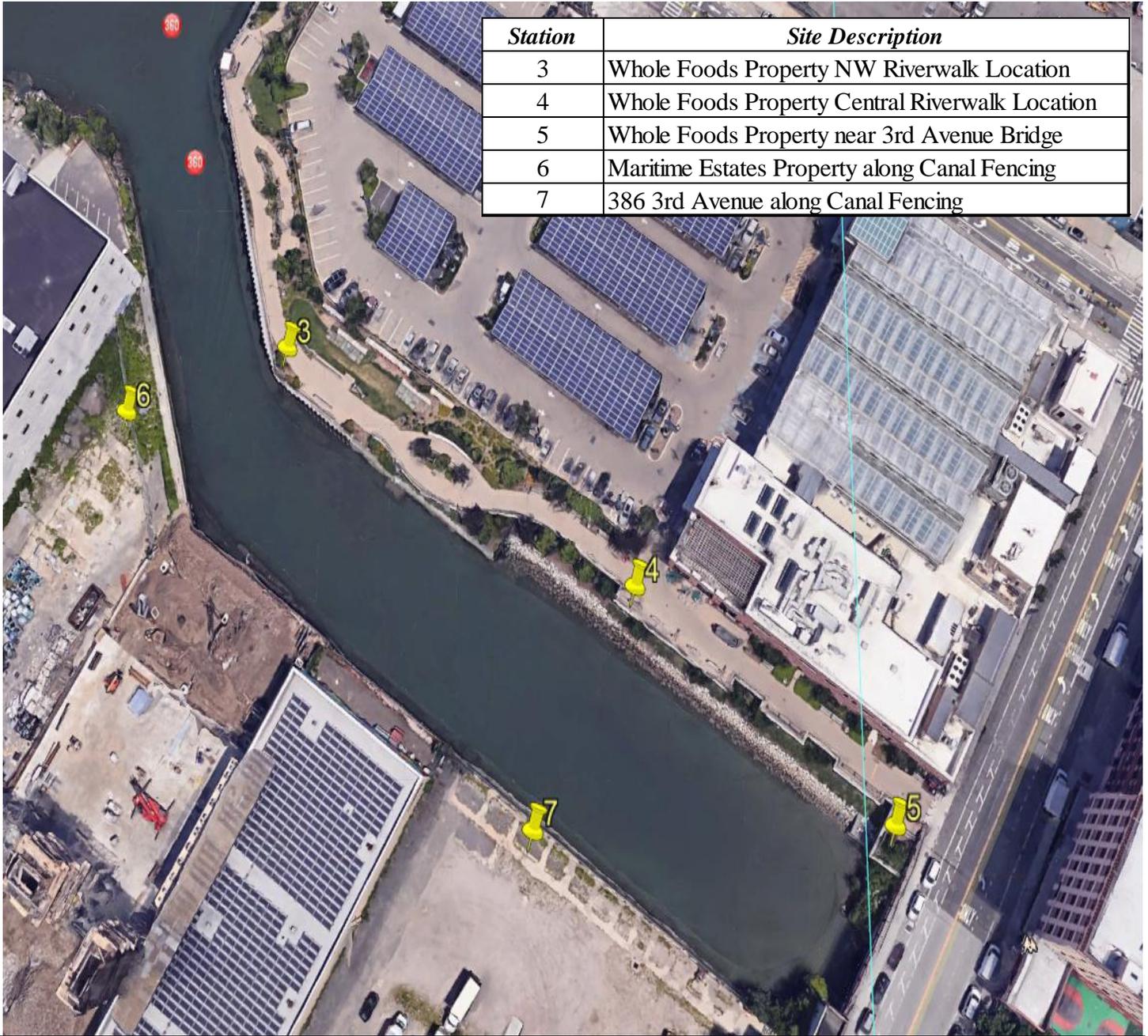
Exc. – Total # of averages which exceed the action level (≥1 ppm - TVOC / ≥150 ug/m<sup>3</sup> - PM<sub>10</sub>)

**Figure 1**  
**Gowanus Canal Superfund Site -TB4 Dredging and Capping Pilot Program**  
**TVOC Monitoring Data - Week 32**



**Figure 2**  
**Gowanus Canal Superfund Site - TB4 Dredging and Capping Pilot Program**  
**TRC CAMP PM<sub>10</sub> Monitoring Data - Week 32**





**FIGURE 3**  
**Gowanus Canal Superfund Site-TB4**  
**Dredging and Capping Pilot Program**

**Table 1**

**Week 32**

**Summary of Additional Periodic (Daily) Monitoring Data**

May 14 <sup>th</sup> , 2018				
Station Id	Time	Formaldehyde (CHO) (ppb)*	Hydrogen Sulfide (H <sub>2</sub> S) (ppb)*	Ammonia (NH <sub>3</sub> ) (ppm)**
ST-1	8:00	3.18	0.04	0.17
	15:05	<50	<3	<1.0
ST-2	8:05	2.07	0.01	<1.0
	15:10	14.15	0.08	0.01
ST-3	8:30	<50	<3	<1.0
	15:30	<50	<3	<1.0
ST-4	8:35	11.07	0.13	0.03
	15:35	<50	<3	<1.0
ST-5	8:40	<50	<3	<1.0
	15:40	<50	<3	<1.0
ST-6	8:55	<50	<3	<1.0
	15:30	<50	<3	<1.0
ST-7	9:10	<50	0.01	0.07
	16:10	<50	<3	<1.0

May 15 <sup>th</sup> , 2018				
Station Id	Time	Formaldehyde (CHO) (ppb)*	Hydrogen Sulfide (H <sub>2</sub> S) (ppb)*	Ammonia (NH <sub>3</sub> ) (ppm)**
ST-1	10:00	<50	<3	<1.0
	15:05	<50	<3	<1.0
ST-2	10:05	<50	<3	<1.0
	15:10	<50	<3	<1.0
ST-3	10:15	<50	<3	<1.0
	15:25	<50	<3	<1.0
ST-4	10:20	<50	<3	<1.0
	15:30	<50	<3	<1.0
ST-5	10:40	<50	<3	<1.0
	15:50	<50	<3	<1.0
ST-6	10:40	<50	<3	<1.0
	16:20	<50	<3	<1.0
ST-7	10:50	<50	<3	<1.0
	16:30	<50	<3	<1.0

**Table 1**

**Week 32**

**Summary of Additional Periodic (Daily) Monitoring Data**

May 16 <sup>th</sup> , 2018				
Station Id	Time	Formaldehyde (CHO) (ppb)*	Hydrogen Sulfide (H <sub>2</sub> S) (ppb)*	Ammonia (NH <sub>3</sub> ) (ppm)**
ST-1	7:30	<50	<3	<1.0
	14:00	<50	<3	<1.0
ST-2	7:35	<50	<3	<1.0
	14:05	<50	<3	<1.0
ST-3	7:50	<50	<3	<1.0
	14:15	<50	<3	<1.0
ST-4	7:55	<50	<3	<1.0
	14:20	<50	<3	<1.0
ST-5	8:05	<50	<3	<1.0
	14:25	<50	<3	<1.0
ST-6	8:15	<50	<3	<1.0
	14:35	<50	<3	<1.0
ST-7	8:25	<50	<3	<1.0
	14:50	<50	<3	<1.0
May 17 <sup>th</sup> , 2018				
Station Id	Time	Formaldehyde (CHO) (ppb)*	Hydrogen Sulfide (H <sub>2</sub> S) (ppb)*	Ammonia (NH <sub>3</sub> ) (ppm)**
ST-1	9:00	<50	<3	<1.0
	14:30	<50	<3	<1.0
ST-2	9:05	<50	<3	<1.0
	14:40	<50	<3	<1.0
ST-3	9:15	<50	<3	<1.0
	14:55	<50	<3	<1.0
ST-4	9:20	<50	<3	<1.0
	15:00	<50	<3	<1.0
ST-5	9:25	<50	<3	<1.0
	15:05	<50	<3	<1.0
ST-6	9:35	<50	<3	<1.0
	15:20	<50	<3	<1.0
ST-7	9:45	<50	<3	<1.0
	15:40	<50	<3	<1.0

Table 1

Week 32

Summary of Additional Periodic (Daily) Monitoring Data

May 18 <sup>th</sup> , 2018				
Station Id	Time	Formaldehyde (CHO) (ppb)*	Hydrogen Sulfide (H <sub>2</sub> S) (ppb)*	Ammonia (NH <sub>3</sub> ) (ppm)**
ST-1	9:00	<50	<3	<1.0
	14:30	<50	<3	<1.0
ST-2	9:05	<50	<3	<1.0
	14:35	<50	<3	<1.0
ST-3	9:20	<50	<3	<1.0
	14:45	<50	<3	<1.0
ST-4	9:25	<50	<3	<1.0
	15:00	<50	<3	<1.0
ST-5	9:30	<50	<3	<1.0
	15:10	<50	<3	<1.0
ST-6	9:50	<50	<3	<1.0
	15:20	<50	<3	<1.0
ST-7	10:10	<50	<3	<1.0
	15:30	<50	<3	<1.0

\*(ppb) Indicates results reported in parts per billion

\*\* (ppm) Indicates results reported in parts per million



**Gowanus Canal Superfund Site  
TB-4 Dredging and Capping Pilot Study  
Brooklyn, New York  
Meteorological Summary  
May 14<sup>th</sup> through May 18<sup>th</sup>, 2018**

May 14 <sup>th</sup> , 2018 *		
Wind Direction (°)	Wind Speed (mph)	Temperature (°F)
ESE	3.00	62.2

May 15 <sup>th</sup> , 2018 **		
Wind Direction (°)	Wind Speed (mph)	Temperature (°F)
SSE	1.98	70.5

May 16 <sup>th</sup> , 2018 **		
Wind Direction (°)	Wind Speed (mph)	Temperature (°F)
NE	6.03	62.4

May 17 <sup>th</sup> , 2018 **		
Wind Direction (°)	Wind Speed (mph)	Temperature (°F)
NE	2.40	77.8

May 18 <sup>th</sup> , 2018 **		
Wind Direction (°)	Wind Speed (mph)	Temperature (°F)
NE	6.36	65.5

\* Monday's meteorological data represents an average for the time period of 06:30 to 23:45.

\*\* Tuesday's Wednesday and Thursday's meteorological data represents averages for the time period of 00:00 to 23:45.

\*\*\* Friday's meteorological data represents an average for the time period of 00:00 to 17:00.

**WILSON IHRIG WEEKLY NOISE AND VIBRATION MONITORING REPORT**





WI #15-081

**MEMORANDUM**

May 21, 2018

To: William Lee/ de maximis, inc.  
Kirsten Meyers / TRC

From: Silas Bensing, Ani Toncheva / Wilson Ihrig

Subject: Gowanus Canal 4th Street Turning Basin Dredging and Capping Pilot Study, Weekly Noise and Vibration Monitoring Report, 14 May – 18 May, 2018

**Noise Monitoring Locations**

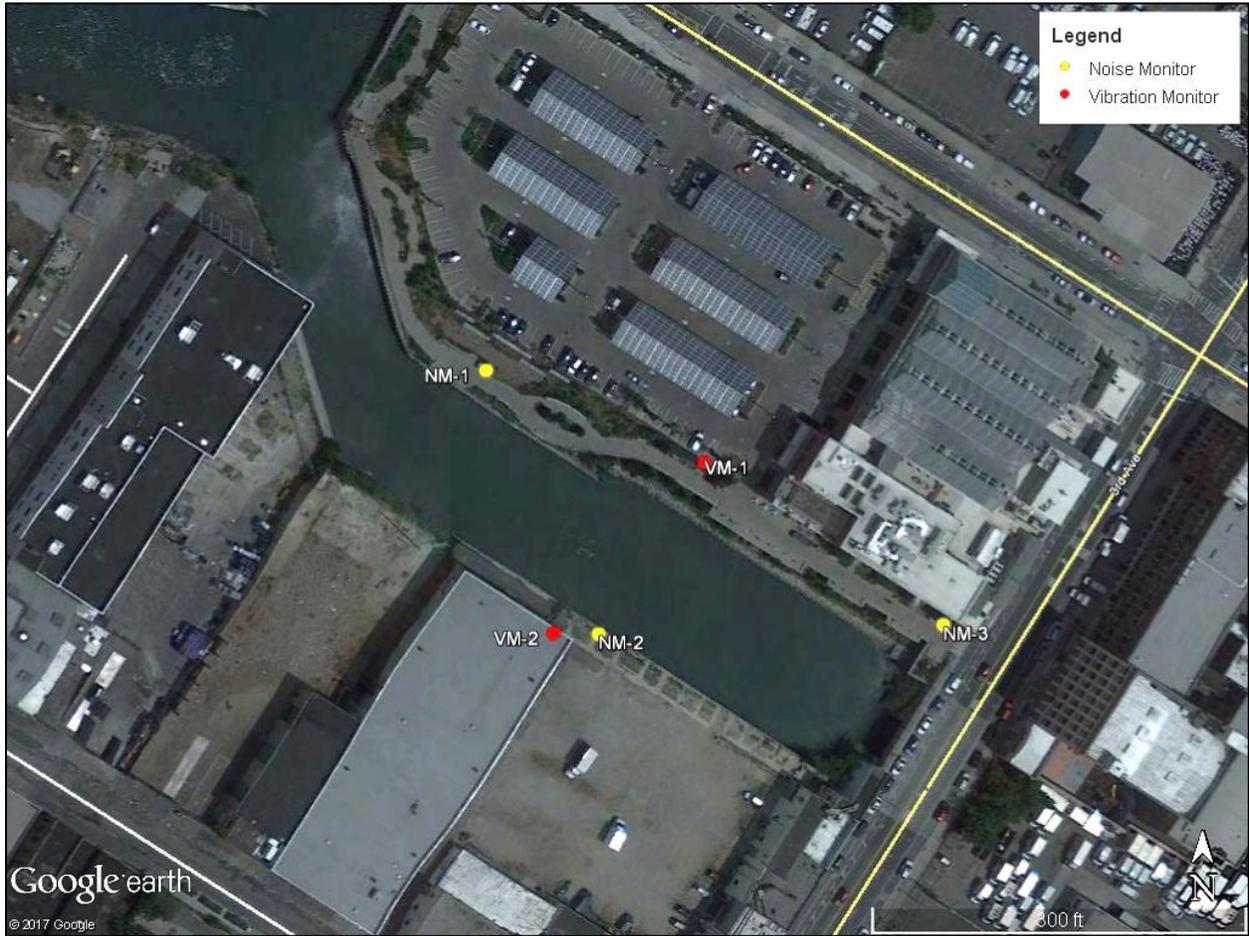
Figure 1 shows the noise monitoring locations. NM-1 is installed at a light pole on the north side of TB4 and is approximately 25 feet from the north edge of the canal. NM-2 is installed at the existing guard rail on the south side of TB4, approximately 4 feet from the south edge of the canal. Photos 1 & 2 show the recent field conditions at the monitors.

**Noise Monitoring Results**

Figures 2 through 11 present the hourly Leq noise levels compared with the noise thresholds discussed in the noise monitoring plan<sup>1</sup>. Commercial and Industrial land uses are assigned an hourly Leq noise limit of 80 dBA for Daytime and Evening time periods. The average baseline noise measured in the project area in 2015 are also shown for reference<sup>2</sup>. Noise monitor NM-2 was damaged at 9:05PM on Monday, May 14 at 9:05PM, and returned to normal operation at 3:00PM on Thursday, May 17 at 3:00PM.

<sup>1</sup> Wilson Ihrig. *Gowanus Canal 4<sup>th</sup> Street Turning Basin Dredging and Capping Pilot Study Noise and Vibration Monitoring Plan*. California: prepared for Gowanus Canal Remedial Design Group, DRAFT May 2017

<sup>2</sup> Wilson Ihrig. *Gowanus Canal Remedial Design Project RTA-1 Noise and Vibration Baseline Report*. California: prepared for Geosyntec Consultants Inc., October 2015.



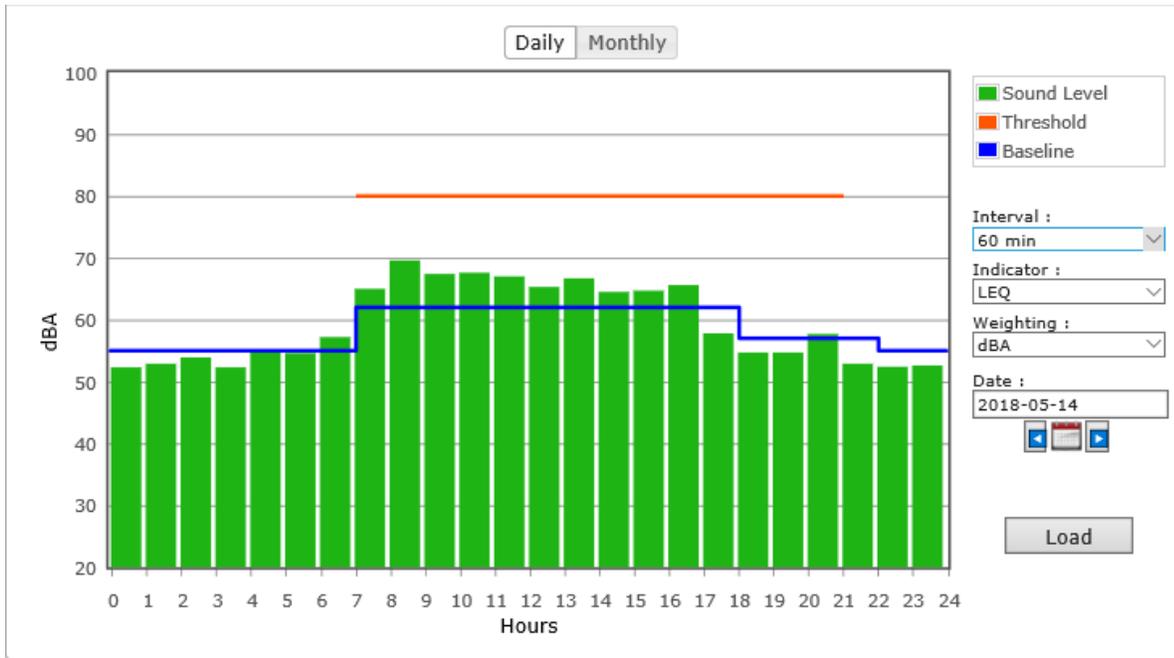
**Figure 1: Long-term Noise and Vibration Monitoring Locations for Gowanus TB4 Dredging and Capping Pilot Study**



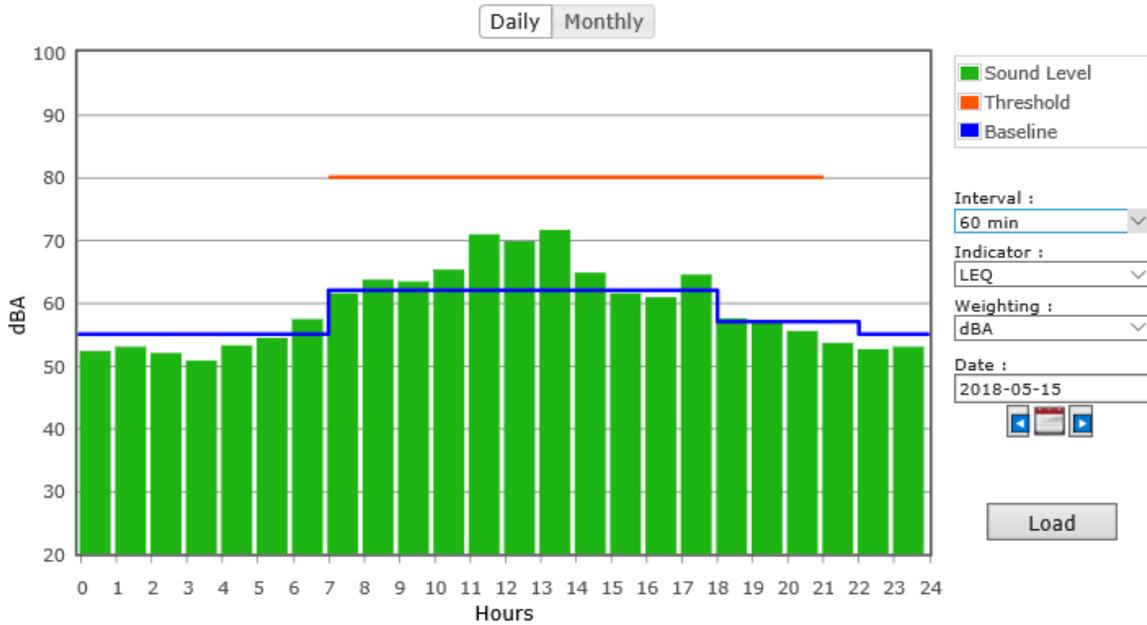
**Photo 1: Noise Monitoring Location NM-1  
(26 September 2017)**



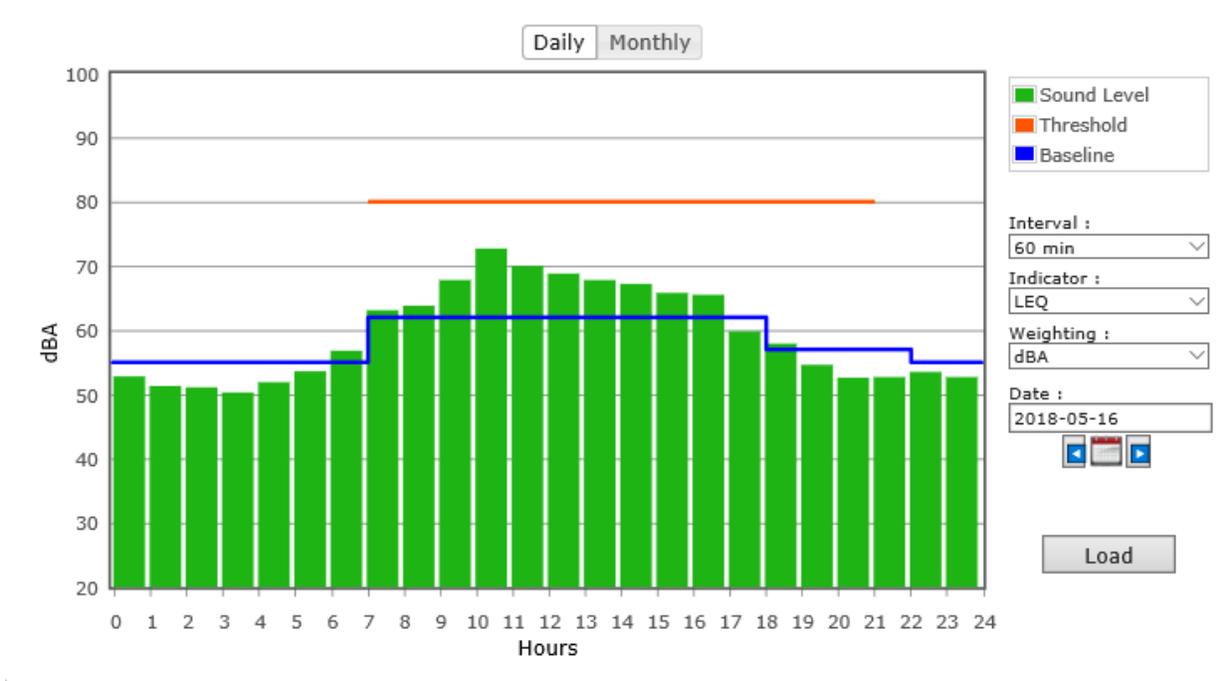
**Photo 2: Noise Monitoring Location NM-2  
(25 September 2017)**



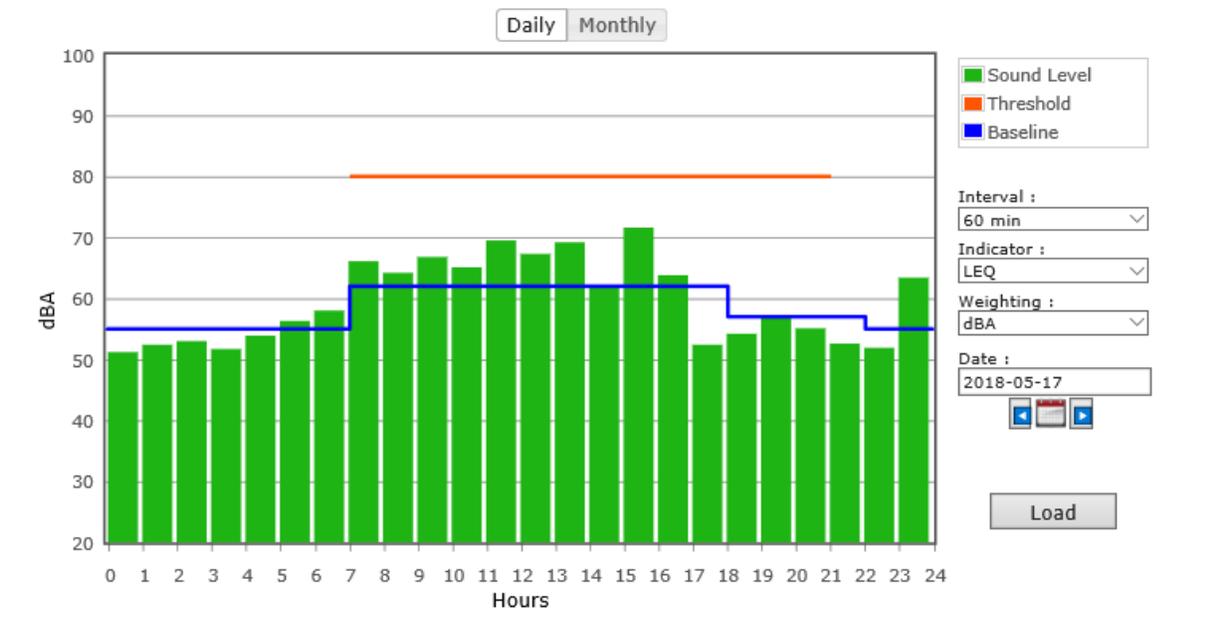
**Figure 2: North Monitor NM-1 on Monday**



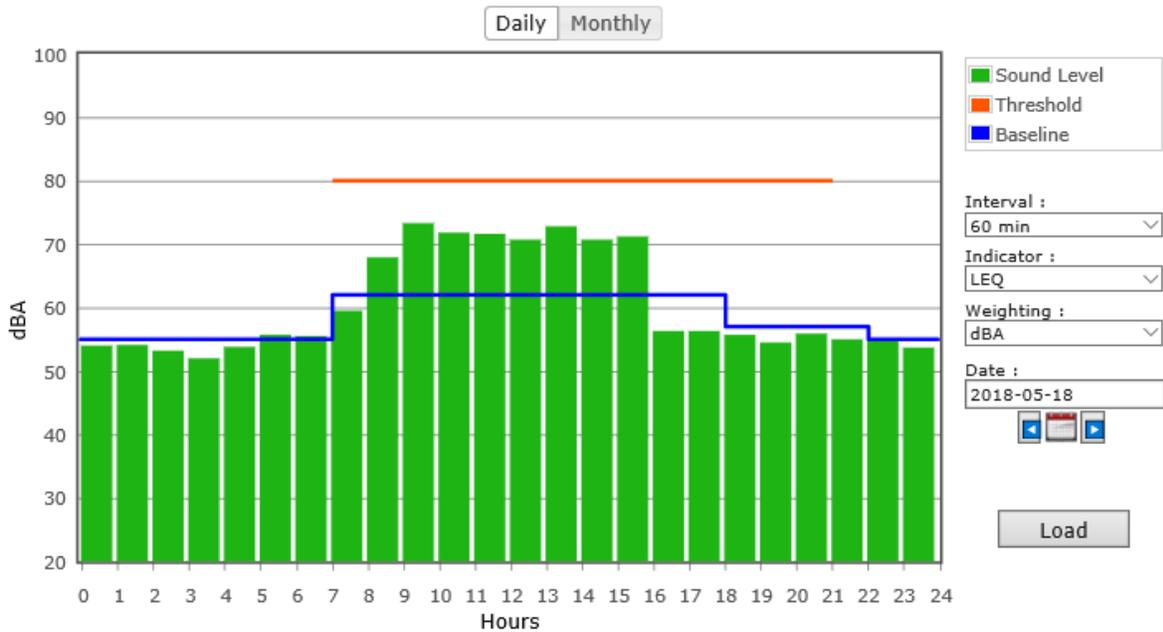
**Figure 3: North Monitor NM-1 on Tuesday**



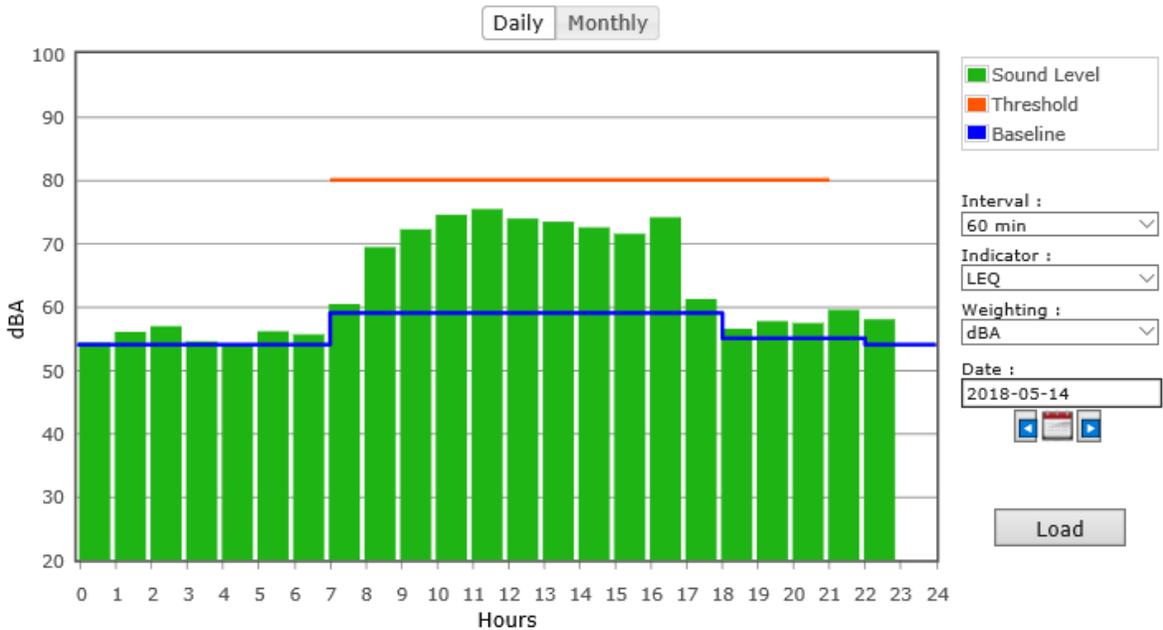
**Figure 4: North Monitor NM-1 on Wednesday**



**Figure 5: North Monitor NM-1 on Thursday**



**Figure 6: North Monitor NM-1 on Friday**



**Figure 7: South Monitor NM-2 on Monday\***

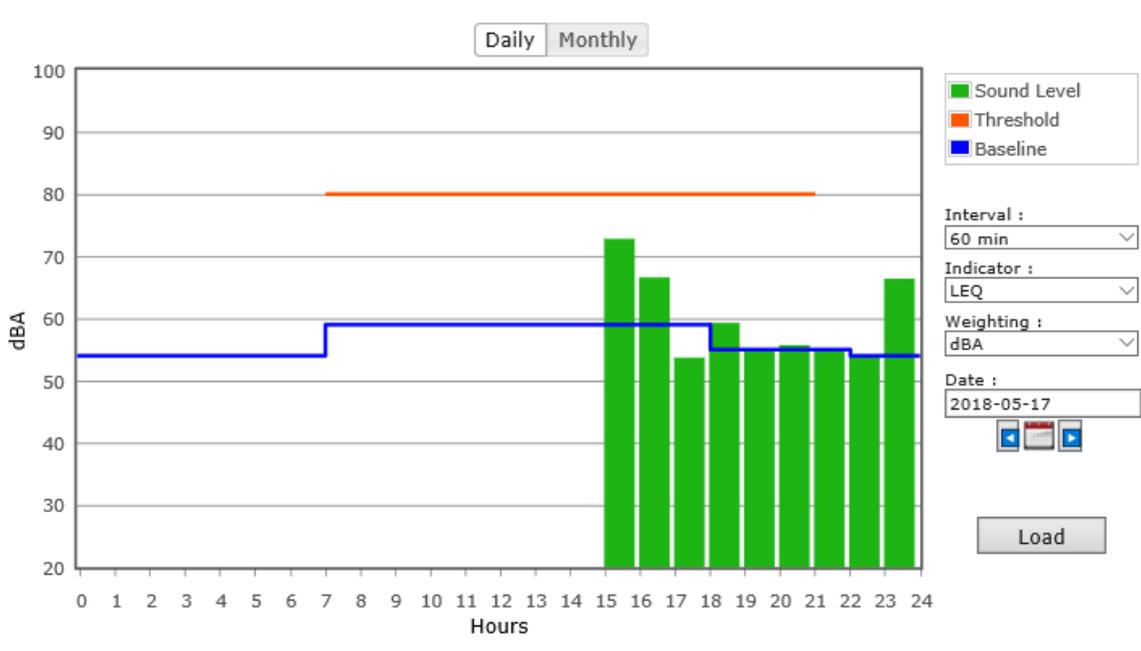
\*NM-2 was damaged at 9:05PM on Monday, May 14 at 9:05PM, and returned to normal operation at 3:00PM on Thursday, May 17 at 3:00PM.

**Figure 8: South Monitor NM-2 on Tuesday\***

\*NM-2 was damaged at 9:05PM on Monday, May 14 at 9:05PM, and returned to normal operation at 3:00PM on Thursday, May 17 at 3:00PM.

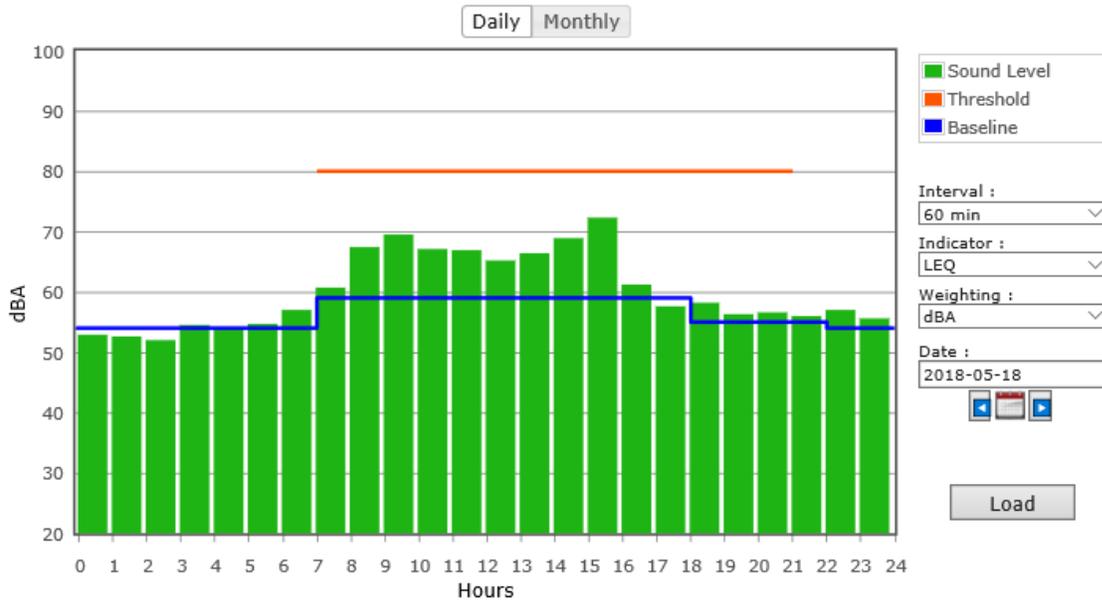
**Figure 9: South Monitor NM-2 on Wednesday\***

\*NM-2 was damaged at 9:05PM on Monday, May 14 at 9:05PM, and returned to normal operation at 3:00PM on Thursday, May 17 at 3:00PM.



**Figure 10: South Monitor NM-2 on Thursday\***

\*NM-2 was damaged at 9:05PM on Monday, May 14 at 9:05PM, and returned to normal operation at 3:00PM on Thursday, May 17 at 3:00PM.



**Figure 11: South Monitor NM-2 on Friday**

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**AHRS WEEKLY REPORT**





ARCHAEOLOGY & HISTORIC RESOURCE SERVICES

## Cultural Resource Consultants

### ARCHAEOLOGY MONITORING REPORT

PROJECT	DATES	PROJECT LOCATION	AHRS PERSONNEL IN FIELD
Turning Basin 4 Pilot Capping and Dredging	5/14 to 5/18/18	TB4/Citizens Site & Clean Earth - Claremont	Jonathan Bream

#### Week Overview

AHRS is conducting Level 1 archaeological monitoring in coordination with soft sediment dredging in TB4. AHRS archaeologist K. French reviewed photographs of artifacts of large debris staged at Citizens Site and photographs of screened debris from Clean Earth. Project archaeologist J. Bream also conducted a site visit to Clean Earth's Claremont facility 5/15/2018 to review accumulated debris. Red brick with maker's stamp, iron industrial debris, and wood debris are being retained at Clean Earth for recording after additional washing. All other debris reviewed was cleared by AHRS for disposal.

#### Monday, May 14

Reviewed Clean Earth photos of debris screened 5/11 and 5/14. Reviewed Citizens Site photo of debris recovered 5/11.

#### Tuesday, May 15

No photos posted from Citizens Site or Clean Earth. AHRS conducted site visit to Clean Earth – Claremont in the morning. With the assistance of a machine and operator, sorted through debris piles screened and processed since last site visit on 5/10. Segregated debris for additional investigation, including iron industrial debris and stamped brick.

#### Wednesday, May 16

AHRS prepared and submitted to Bill Lee (de maximis) a memo for EPA in order to clear non-archaeologically sensitive debris for immediate disposal. No new photos were uploaded from Clean Earth or Citizens Site.

#### Thursday, May 17

Reviewed photos from Citizens Site of debris recovered 5/16 and 5/17. Includes wood debris that will require additional investigation during archaeologist's site visit and a safe door that requires closer inspection. No photographs posted from Clean Earth.

#### Friday, May 18

Jonathan Bream conducted a site visit to Clean Earth in the morning. Additional Clean Earth visit planned for Monday before Citizens Site visit. Reviewed photos from Clean Earth for debris screened 5/15 to 5/18. No photos posted from Citizens Site.

#### NEXT WEEK

Continue to review daily pictures from Citizens Site and Clean Earth. Archaeologist site visit tentatively scheduled for both Clean Earth and Citizens Site on 5/21/18.

**WATER TREATMENT SYSTEM MONITORING LABORATORY ANALYTICAL DATA  
(NO ACTIVITIES DURING CURENT WEEK)**



**CUMULATIVE DREDGED MATERIAL CHART**



Gowanus Canal TB4 Pilot Study  
Cumulative Material Dredged  
Weekly Report Update

