

WEEKLY PROGRESS REPORT – TRC SOLUTIONS

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

Project number: 283126

Period: August 6 to 10, 2018

Date of Report: August 17, 2018

Rev: 0

Prepared For: Gowanus Environmental Remediation Trust



On-Site Activities Conducted During Week:

Sevenson Environmental Services (SES)

Water Treatment and Monitoring

- Discharged 39,159 and 36,485 gallons of treated decant water on 08/09 and 08/10/18, respectively.
- No exceedances of continuous monitoring.

Turbidity Monitoring

- Turbid water not observed migrating from the 4th Street Turning Basin.

Sediment Stabilization Activities

- Stabilized material shipped off-site and disposed as daily cover. Quantities to be included in next weekly report.

Capping Activities

- Continue constructing hydraulic capping make-up water feed system.
- Commence installing hydraulic capping systems piping from Citizens Site to the 4th Street Turning Basin.
- Continue decontaminating and demobilizing equipment.

Quality Assurance and Control – Geosyntec

- DWTS discharge sampling conducted on 8/9/18.
- No exceedance of the turbidity trigger or action criteria.
- Measurements for 8/6/18:
 - Daily average for ambient buoy – 4.4 NTU
 - Daily average for sentinel buoy – 0.0 NTU
 - Greatest difference between ambient and sentinel buoy during 15-minute interval with sentinel buoy exceeding ambient buoy – no instances when turbidity measurement at the sentinel buoy exceeded the ambient buoy.
- Measurements for 8/7/18:
 - Daily average for ambient buoy – 5.9 NTU
 - Daily average for sentinel buoy – 1.0 NTU
 - Greatest difference between ambient and sentinel buoy during 15-minute interval with sentinel buoy exceeding ambient buoy – 19.4 NTU at 0945.
- Measurements for 8/8/18:
 - Daily average for ambient buoy – 4.2 NTU
 - Daily average for sentinel buoy – 0.8 NTU
 - Greatest difference between ambient and sentinel buoy during 15-minute interval with sentinel buoy exceeding ambient buoy – 5.5 NTU at 1630.
- Measurements for 8/9/18:
 - Daily average for ambient buoy – 4.7 NTU
 - Daily average for sentinel buoy – 0.5 NTU
 - Greatest difference between ambient and sentinel buoy during 15-minute interval with sentinel buoy exceeding ambient buoy – no instances when turbidity measurement at the sentinel buoy exceeded the ambient buoy.



- Measurements for 8/10/18:
 - Daily average for ambient buoy – 6.3 NTU
 - Daily average for sentinel buoy – 12.6 NTU
 - Greatest difference between ambient and sentinel buoy during 15-minute interval with sentinel buoy exceeding ambient buoy – 18.4 NTU at 1600.

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 4th Street Turning Basin Area.
- No exceedances of particulate matter of 10 microns in diameter or smaller (PM₁₀) 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 PM₁₀ in µg/m³
 - Station 1 – 50 µg/m³ recorded on 08/10/18
 - Station 2 – 38 µg/m³ recorded on 08/06/18
 - Station 3 – <1 µg/m³ recorded throughout the week
 - Station 4 – 23 µg/m³ recorded on 08/06 and 08/08/18
 - Station 5 – 31 µg/m³ recorded on 08/07/18
 - Station 6 – 27 µg/m³ recorded on 08/08/18
 - Station 7 – <1 µg/m³ recorded throughout the week
- Maximum weekly measurements of TVOC in ppb
 - Station 1 – 33 ppb recorded on 08/08, 08/09, and 08/10/18
 - Station 2 – 60 ppb recorded on 08/10/18
 - Station 3 – <1 ppb recorded throughout the week
 - Station 4 – <1 ppb recorded throughout the week
 - Station 5 – 95 ppb recorded on 08/06/18
 - Station 6 – 123 ppb recorded on 08/06/18
 - Station 7 – 77 ppb recorded 08/09/18
- All real-time readings of formaldehyde, hydrogen sulfide, or ammonia less than instrument reporting limit.
- 23-hour samples collected at ST-2 collected on 08/06 through 08/07 and ST-3 collected on 08/08 through 08/09. Laboratory turnaround time is 10 business days.
- Tabulated laboratory analytical results for 23-hour sample collected at ST-1 on 07/10 through 07/11 and ST-2 on 07/12 through 07/13 presented in weekly CAMP report.

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 exceedance of the hourly Leq noise limit of 80 dBA.
- Greatest hourly Leq noise measurements
 - Northern monitor (NM-1) – 72.9 dBA during 0800-0900 on 08/08/18
 - Southern monitor (NM-2) – 65.1 dBA during 1100-1200 on 08/10/18

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

- No activities conducted during week.



Two-Week Look Ahead:

Sevenson:

- Treatment and discharge of water decanted accumulated during decontamination operations.
- Produce treatment layers with mixing plant.
- Perform optical monitoring of bulkheads and surrounding structures with autonomous total survey stations. Along with weekly optical surveys conducted by subcontractor.
- Continue and complete placement of leveling layer, if required.
- Complete assembly of hydraulic capping system.
- Initiate and complete installation of hydraulic capping demonstration area.
- Initiate installation of sand buttress to provide additional support for sheet piling at the Whole Foods property.

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

TRC CAMP Monitoring – Perform community air monitoring.

Wilson Ihrig – Perform noise monitoring,

AHRS – Perform final inspection of screened debris at Clean Earth Claremont and Citizens Site to prepare final report and inventory.

Key Milestones

- No milestones during current 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 (no activities during week)
5. Water Treatment System Monitoring Analytical Laboratory Data (no activities during week)
6. Cumulative Dredged Material Chart (no activities during week)



Client Name: Gowanus ERT	Site Location: TB-4 Pilot Study	Project No.: 283126.0000.0001
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Photo No. 001	Date 8-6-2018
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Description
Hydraulic capping mixing tank and feed conveyor.



Photo No. 002	Date 8-6-2018
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Description
Material removed during the barge decontamination. Placed on the asphalt pad for dewatering.



Client Name: Gowanus ERT	Site Location: TB-4 Pilot Study	Project No.: 283126.0000.0001
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Photo No. 003	Date 8-7-2018
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Description
14" centrifugal booster pump in place at Citizens Site.



Photo No. 004	Date 8-7-2018
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Description
Placing water supply pipe in the canal, using sheet pile pair to keep pipe on the bottom of the canal away of boat traffic.



Client Name: Gowanus ERT	Site Location: TB-4 Pilot Study	Project No.: 283126.0000.0001
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Photo No. 005	Date 8-8-2018
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Description
Hooking up discharge piping from the 14" centrifugal pump to the discharge piping to the hydraulic capping spreader barge.



Photo No. 006	Date 8-8-2018
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Description
Removing solids at bottom of scow as part of decontamination prior to demobilization.



Client Name: Gowanus ERT	Site Location: TB-4 Pilot Study	Project No.: 283126.0000.0001
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Photo No. 007	Date 8-9-2018
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Description
Warning buoy where hydraulic capping discharge pipe enters the water from Citizens property.



Photo No. 008	Date 8-9-2018
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Description
Rigging pipe section from the assembly area at Citizens property for installation toward TB4.



Client Name: Gowanus ERT	Site Location: TB-4 Pilot Study	Project No.: 283126.0000.0001
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Photo No. 009	Date 8-10-2018
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Description
Adding floats to the flexible hose on the hydraulic capping spreader barge.

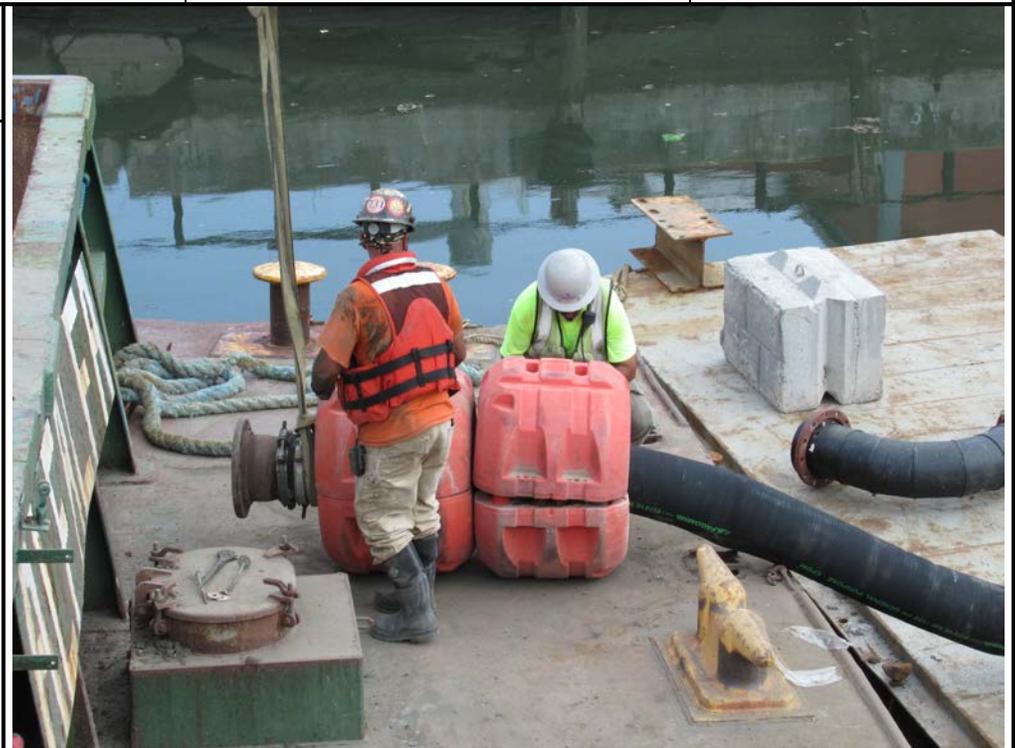
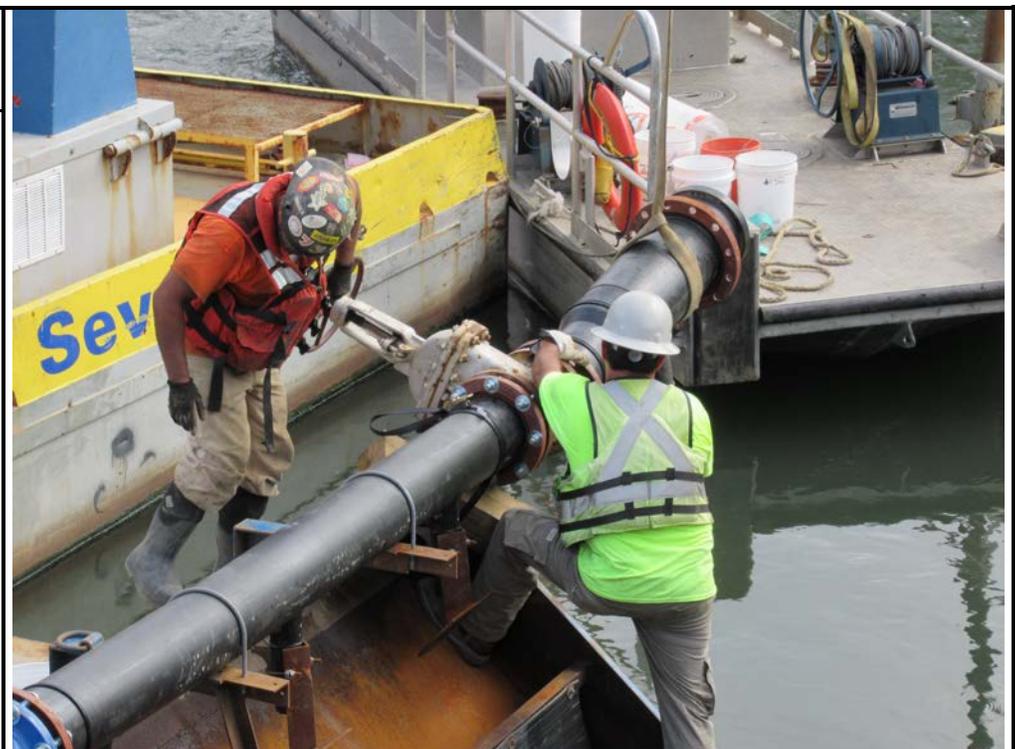


Photo No. 010	Date 8-10-2018
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Description
Adding end valve and HDPE fitting to the hydraulic capping spreader barge.



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 August 6th, 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.

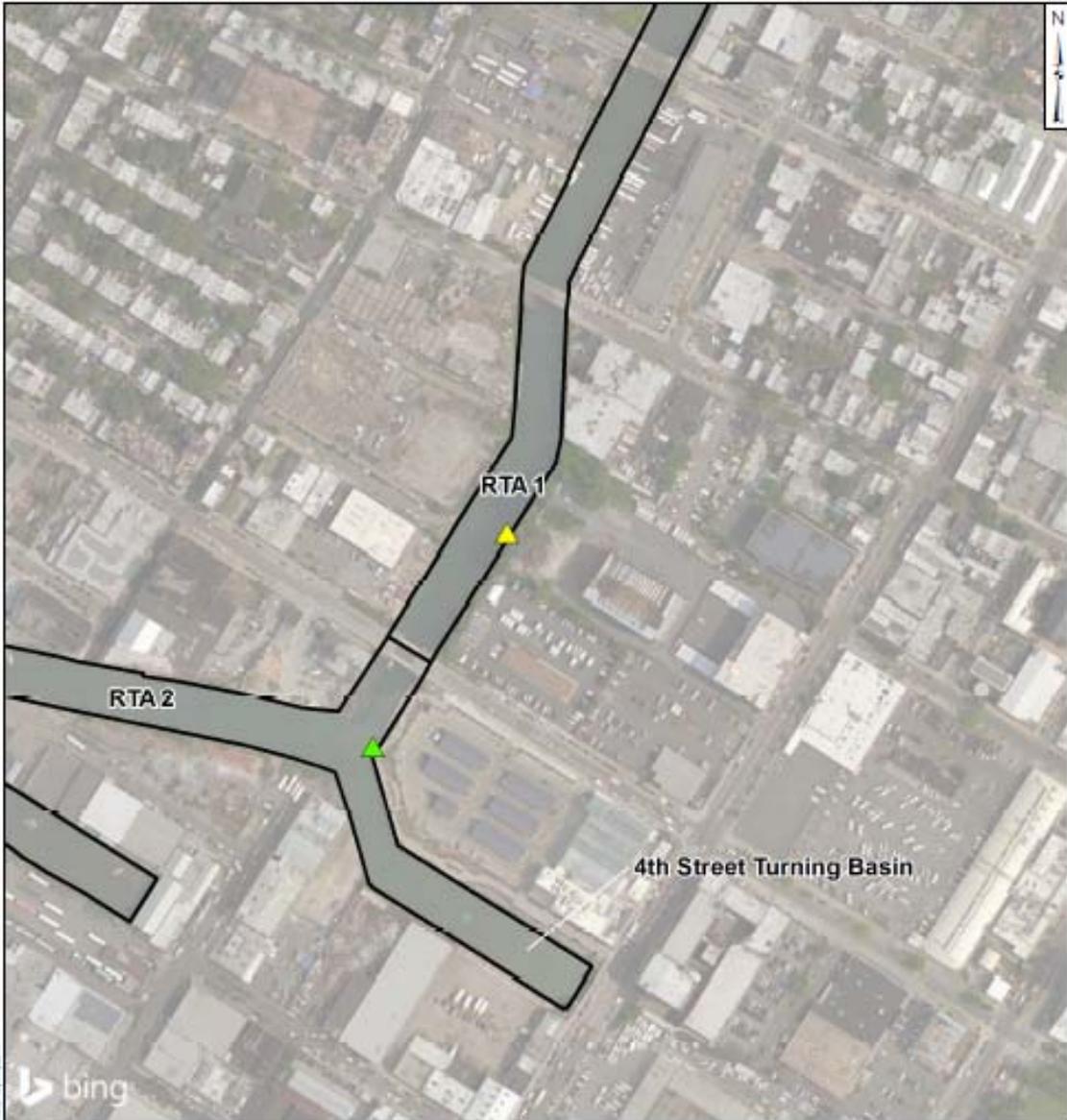
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Project Number HPH106A (52)

1. SCOPE OF MONITORING

The following report summarizes water quality monitoring data collected during the week of August 6th, 2018. Two turbidity buoys were deployed to monitor turbidity during the pilot study. One turbidity buoy was deployed just outside of the 4th 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 August 6th. 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.



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.
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Figure

1

Ewing, NJ

October 2017

2. TURBIDITY BUOY DATA

The following section provides turbidity data for the sentinel and ambient turbidity buoys from 7 AM to 5 PM from August 6th to August 10th, 2018. Background data prior to the start of dredging is provided in Appendix A. No exceedances to the numerical rolling average threshold criteria were observed during the reporting period. Buoys were serviced previously to address to the negative values the buoys recorded, but there continue to be negative values. Since the numerical criteria is based on the difference between the ambient and sentinel turbidity buoy measurements, these negative values do not impact monitoring.

2.1 Monday, August 6th, 2018

Time (Local)	Ambient Turbidity (NTU)	Sentinel Turbidity (NTU)	Sentinel >Ambient (Y/N)	Time (Local)	Ambient Turbidity (NTU)	Sentinel Turbidity (NTU)	Sentinel >Ambient (Y/N)
8/6/2018 7:00	2.4	-1.9	N	8/6/2018 12:15	4.3	0.8	N
8/6/2018 7:15	2.4	-0.6	N	8/6/2018 12:30	4.1	-0.4	N
8/6/2018 7:30	1.9	-1.3	N	8/6/2018 12:45	4.1	-1.1	N
8/6/2018 7:45	2.7	-0.3	N	8/6/2018 13:00	3.8	0.2	N
8/6/2018 8:00	3.0	-0.6	N	8/6/2018 13:15	2.4	-0.8	N
8/6/2018 8:15	3.1	-0.5	N	8/6/2018 13:30	3.5	-2.1	N
8/6/2018 8:30	3.4	0.1	N	8/6/2018 13:45	2.2	-1.9	N
8/6/2018 8:45	4.8	-0.6	N	8/6/2018 14:00	3.1	-0.5	N
8/6/2018 9:00	6.0	0.1	N	8/6/2018 14:15	2.3	0.1	N
8/6/2018 9:15	6.7	0.3	N	8/6/2018 14:30	2.9	0.0	N
8/6/2018 9:30	8.1	0.8	N	8/6/2018 14:45	3.0	0.5	N
8/6/2018 9:45	7.9	2.1	N	8/6/2018 15:00	3.0	-1.2	N
8/6/2018 10:00	8.0	2.0	N	8/6/2018 15:15	3.1	-0.5	N
8/6/2018 10:15	7.6	2.7	N	8/6/2018 15:30	2.5	0.7	N
8/6/2018 10:30	8.6	0.6	N	8/6/2018 15:45	2.9	1.3	N
8/6/2018 10:45	9.4	0.9	N	8/6/2018 16:00	2.5	1.5	N
8/6/2018 11:00	8.4	-0.5	N	8/6/2018 16:15	4.0	1.0	N
8/6/2018 11:15	7.4	1.1	N	8/6/2018 16:30	3.4	1.4	N
8/6/2018 11:30	6.7	0.9	N	8/6/2018 16:45	2.8	-0.1	N
8/6/2018 11:45	4.9	-1.5	N	8/6/2018 17:00	3.5	-0.8	N
8/6/2018 12:00	4.1	-1.0	N				

Average	4.4	0.0	N
Maximum	9.4	2.7	N

Notes:

No exceedances to rolling average threshold criteria during reporting period

Values highlighted in green are greater than 20 NTU above the ambient buoy reading

Values highlighted in blue are greater than 40 NTU above the ambient buoy reading

2.2 Tuesday, August 7th, 2018

Time (Local)	Ambient Turbidity (NTU)	Sentinel Turbidity (NTU)	Sentinel >Ambient (Y/N)	Time (Local)	Ambient Turbidity (NTU)	Sentinel Turbidity (NTU)	Sentinel >Ambient (Y/N)
8/7/2018 7:00	3.3	-1.3	N	8/7/2018 12:15	6.5	0.6	N
8/7/2018 7:15	7.4	-1.0	N	8/7/2018 12:30	5.8	2.3	N
8/7/2018 7:30	9.0	-1.3	N	8/7/2018 12:45	25.9	0.0	N
8/7/2018 7:45	3.8	0.5	N	8/7/2018 13:00	7.6	1.0	N
8/7/2018 8:00	3.0	-0.1	N	8/7/2018 13:15	12.8	2.5	N
8/7/2018 8:15	2.8	-0.6	N	8/7/2018 13:30	5.2	0.9	N
8/7/2018 8:30	2.6	-1.0	N	8/7/2018 13:45	4.9	-0.5	N
8/7/2018 8:45	4.0	-0.4	N	8/7/2018 14:00	4.1	0.2	N
8/7/2018 9:00	3.6	0.6	N	8/7/2018 14:15	4.2	-1.2	N
8/7/2018 9:15	5.6	0.2	N	8/7/2018 14:30	3.1	1.0	N
8/7/2018 9:30	3.4	2.4	N	8/7/2018 14:45	2.8	0.1	N
8/7/2018 9:45	3.3	22.7	Y	8/7/2018 15:00	2.6	-0.9	N
8/7/2018 10:00	4.3	1.8	N	8/7/2018 15:15	3.4	-0.5	N
8/7/2018 10:15	4.6	0.8	N	8/7/2018 15:30	2.7	-0.7	N
8/7/2018 10:30	7.9	-1.5	N	8/7/2018 15:45	3.2	0.4	N
8/7/2018 10:45	9.8	0.5	N	8/7/2018 16:00	2.8	0.2	N
8/7/2018 11:00	8.2	1.3	N	8/7/2018 16:15	3.7	0.7	N
8/7/2018 11:15	7.6	0.3	N	8/7/2018 16:30	4.6	7.0	Y
8/7/2018 11:30	8.0	3.4	N	8/7/2018 16:45	5.3	1.5	N
8/7/2018 11:45	11.9	-0.7	N	8/7/2018 17:00	3.2	1.9	N
8/7/2018 12:00	14.4	-0.4	N				

Average	5.9	1.0	N
Maximum	25.9	22.7	N

Notes:

No exceedances to rolling average threshold criteria during reporting period

Values highlighted in green are greater than 20 NTU above the ambient buoy reading

Values highlighted in blue are greater than 40 NTU above the ambient buoy reading

3. HANDHELD MEASUREMENTS

No handheld measurements were collected for this reporting period.

4. SUMMARY OF VISUAL OBSERVATIONS

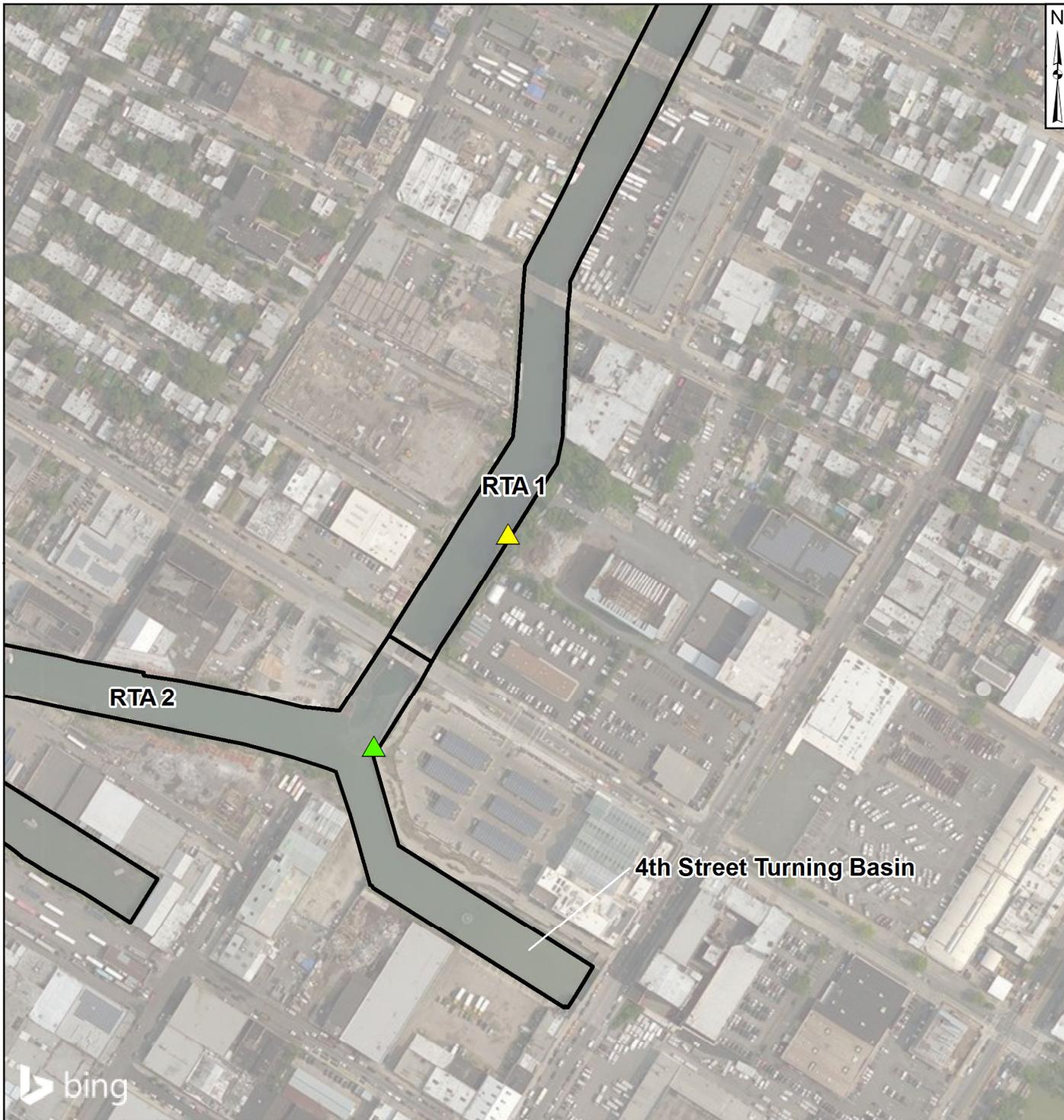
Visual observations were consistent with background conditions.

5. REPORT OF EXCEEDANCES

No exceedances of the water quality monitoring threshold criteria were met during the reporting period. 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

Ewing, NJ

October 2017

Figure

1

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
44th Weekly Monitoring Period
Summary Report:**

August 6th, through August 10th, 2018

Report Contents

- Executive Summary
- Daily Data Summary Report – PM₁₀/TVOC
 - Daily Meteorological Summary Report
 - Periodic Monitoring Results
- Volatile Organic Compounds (USEPA Method TO-15)

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

Executive Summary – Week 44 Monitoring Period August 6th through August 10th, 2018

The following report summarizes site air monitoring activities for the Week 44 monitoring period from August 6th through August 10th, 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 4th 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 44 monitoring period there were no PM₁₀ or TVOC exceedances of the action level of 150 ug/m³ 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 (PM₁₀) daily averages and maximums. Figure 3 depicts the station locations along the Gowanus Canal.

Additional monitoring for hydrogen sulfide, ammonia, and formaldehyde took place twice daily at Stations 1 and 2 only as no intrusive work was performed in the Gowanus Canal during the Week 44 monitoring period. The results of these measurements are shown in Table 1.

During the Week 44 monitoring period of August 6th through August 10th, 2018 TRC conducted Volatile Organic Compounds (USEPA Method TO-15) sampling at Stations 2 and 3. The ST-2 sample was collected on August 6th, through August 7th 2018 and the ST-3 sample was collected on August 8th, through August 9th. 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.

Table 2 presents the analytical results for 23-hour samples collected at Stations 1 and 2 during Week 40. The ST-1 sample was collected on July 10th through 11th, 2018. Sampling results were either not detected above the laboratory detection limit or consistent with concentrations detected during background monitoring conducted between August 28th and 31st, 2017. ST-2 was collected on July 12th through 13th, 2018. Results included concentrations for a number of aromatic hydrocarbons that were slightly elevated above background levels. These included a number of compounds commonly associated with Manufactured Gas Plant (MGP) residuals (naphthalene, toluene, trimethyl benzenes, ethylbenzene, ethyl toluene and xylene isomers (o.m.p.)).

Site activities which were conducted at the Citizen Property during August 6th through August 10th, 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
- Welding of HDPE pipe and fittings
- Assembly of Oil Water separator and pumps for Hydraulic capping
- Transfer dredged material to larger scow for shipment to Clean Earth Claremont

Site activities which were conducted at the 4th St Turning Basin Area of the Canal during August 6th through August 10th, 2018 include the following:

- Placed approximately 2,200 linear feet of welded HDPE sections of pipe for Hydraulic Capping

Gowanus Canal Superfund Site
TB-4 Dredging and Capping Pilot Study
Brooklyn, New York
Daily Station Report – TVOC/PM₁₀
(TRC Project No.274286-0000-00000)
08/06/2018 06:30 AM - 08/06/2018 23:45 PM

Station 1 (Citizen Property near Construction Trailers)

TVOC			PM ₁₀		
Max.	32	ppb	Max.	32	ug/m ³
Avg.	16	ppb	Avg.	19	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 2 (Citizen Property near Pad Area)

TVOC			PM ₁₀		
Max.	2	ppb	Max.	38	ug/m ³
Avg.	<1	ppb	Avg.	20	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 3 (Whole Foods Property NW Riverwalk Location)

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

Station 4 (Whole Foods Property Central Riverwalk Location)

TVOC			PM ₁₀		
Max.	<1	ppb	Max.	23	ug/m ³
Avg.	<1	ppb	Avg.	5	ug/m ³
Exc.	0	total	Exc.	0	Total

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

TVOC			PM ₁₀		
Max.	95	ppb	Max.	28	ug/m ³
Avg.	40	ppb	Avg.	14	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 6 (Maritime Estates Property along Canal Fencing)

TVOC			PM ₁₀		
Max.	123	ppb	Max.	21	ug/m ³
Avg.	38	ppb	Avg.	9	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 7 (386 3rd Avenue along Canal Fencing)

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

TVOC – Total Volatile Organic Compounds

PM₁₀ – Particulates as PM₁₀

Max. – Maximum daily average (15 min. avg. – TVOC / 15 min. avg. – PM₁₀)

Avg. – Daily average (15 min. avg. – TVOC / 15 min. avg. – PM₁₀)

Exc. – Total # of averages which exceed the action level (≥1 ppm - TVOC / ≥150 ug/m³ - PM₁₀)

**Gowanus Canal Superfund Site
TB-4 Dredging and Capping Pilot Study
Brooklyn, New York
Daily Station Report – TVOC/PM₁₀
(TRC Project No.274286-0000-00000)
08/07/2018 00:00 AM - 08/07/2018 23:45 PM**

Station 1 (Citizen Property near Construction Trailers)

TVOC			PM ₁₀		
Max.	31	ppb	Max.	27	ug/m ³
Avg.	13	ppb	Avg.	15	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 2 (Citizen Property near Pad Area)

TVOC			PM ₁₀		
Max.	<1	ppb	Max.	29	ug/m ³
Avg.	<1	ppb	Avg.	18	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 3 (Whole Foods Property NW Riverwalk Location)

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

Station 4 (Whole Foods Property Central Riverwalk Location)

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

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

TVOC			PM ₁₀		
Max.	73	ppb	Max.	31	ug/m ³
Avg.	33	ppb	Avg.	17	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 6 (Maritime Estates Property along Canal Fencing)

TVOC			PM ₁₀		
Max.	74	ppb	Max.	21	ug/m ³
Avg.	21	ppb	Avg.	2	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 7 (386 3rd Avenue along Canal Fencing)

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

TVOC – Total Volatile Organic Compounds

PM₁₀ – Particulates as PM₁₀

Max. – Maximum daily average (15 min. avg. – TVOC / 15 min. avg. – PM₁₀)

Avg. – Daily average (15 min. avg. – TVOC / 15 min. avg. – PM₁₀)

Exc. – Total # of averages which exceed the action level (≥1 ppm - TVOC / ≥150 ug/m³ - PM₁₀)

Gowanus Canal Superfund Site
TB-4 Dredging and Capping Pilot Study
Brooklyn, New York
Daily Station Report – TVOC/PM₁₀
(TRC Project No.274286-0000-00000)
08/08/2018 00:00 AM - 08/08/2018 23:45 PM

Station 1 (Citizen Property near Construction Trailers)

TVOC			PM ₁₀		
Max.	33	ppb	Max.	18	ug/m ³
Avg.	14	ppb	Avg.	10	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 2 (Citizen Property near Pad Area)

TVOC			PM ₁₀		
Max.	<1	ppb	Max.	24	ug/m ³
Avg.	<1	ppb	Avg.	12	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 3 (Whole Foods Property NW Riverwalk Location)

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

Station 4 (Whole Foods Property Central Riverwalk Location)

TVOC			PM ₁₀		
Max.	<1	ppb	Max.	23	ug/m ³
Avg.	<1	ppb	Avg.	1	ug/m ³
Exc.	0	total	Exc.	0	Total

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

TVOC			PM ₁₀		
Max.	57	ppb	Max.	20	ug/m ³
Avg.	35	ppb	Avg.	3	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 6 (Maritime Estates Property along Canal Fencing)

TVOC			PM ₁₀		
Max.	88	ppb	Max.	27	ug/m ³
Avg.	21	ppb	Avg.	3	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 7 (386 3rd Avenue along Canal Fencing)

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

TVOC – Total Volatile Organic Compounds

PM₁₀ – Particulates as PM₁₀

Max. – Maximum daily average (15 min. avg. – TVOC / 15 min. avg. – PM₁₀)

Avg. – Daily average (15 min. avg. – TVOC / 15 min. avg. – PM₁₀)

Exc. – Total # of averages which exceed the action level (≥1 ppm - TVOC / ≥150 ug/m³ - PM₁₀)

Gowanus Canal Superfund Site
TB-4 Dredging and Capping Pilot Study
Brooklyn, New York
Daily Station Report – TVOC/PM₁₀
(TRC Project No.274286-0000-00000)
08/09/2018 00:00 AM - 08/09/2018 23:45 PM

Station 1 (Citizen Property near Construction Trailers)

TVOC			PM ₁₀		
Max.	33	ppb	Max.	24	ug/m ³
Avg.	9	ppb	Avg.	10	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 2 (Citizen Property near Pad Area)

TVOC			PM ₁₀		
Max.	60	ppb	Max.	24	ug/m ³
Avg.	1	ppb	Avg.	7	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 3 (Whole Foods Property NW Riverwalk Location)

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

Station 4 (Whole Foods Property Central Riverwalk Location)

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

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

TVOC			PM ₁₀		
Max.	56	ppb	Max.	23	ug/m ³
Avg.	18	ppb	Avg.	5	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 6 (Maritime Estates Property along Canal Fencing)

TVOC			PM ₁₀		
Max.	36	ppb	Max.	<1	ug/m ³
Avg.	2	ppb	Avg.	<1	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 7 (386 3rd Avenue along Canal Fencing)

TVOC			PM ₁₀		
Max.	77	ppb	Max.	<1	ug/m ³
Avg.	4	ppb	Avg.	<1	ug/m ³
Exc.	0	total	Exc.	0	Total

TVOC – Total Volatile Organic Compounds

PM₁₀ – Particulates as PM₁₀

Max. – Maximum daily average (15 min. avg. – TVOC / 15 min. avg. – PM₁₀)

Avg. – Daily average (15 min. avg. – TVOC / 15 min. avg. – PM₁₀)

Exc. – Total # of averages which exceed the action level (≥1 ppm - TVOC / ≥150 ug/m³ - PM₁₀)

Gowanus Canal Superfund Site
TB-4 Dredging and Capping Pilot Study
Brooklyn, New York
Daily Station Report – TVOC/PM₁₀
(TRC Project No.274286-0000-00000)
08/10/2018 00:00 AM - 08/10/2018 17:00 PM

Station 1 (Citizen Property near Construction Trailers)

TVOC			PM ₁₀		
Max.	33	ppb	Max.	50	ug/m ³
Avg.	6	ppb	Avg.	19	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 2 (Citizen Property near Pad Area)

TVOC			PM ₁₀		
Max.	<1	ppb	Max.	36	ug/m ³
Avg.	<1	ppb	Avg.	20	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 3 (Whole Foods Property NW Riverwalk Location)

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

Station 4 (Whole Foods Property Central Riverwalk Location)

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

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

TVOC			PM ₁₀		
Max.	37	ppb	Max.	27	ug/m ³
Avg.	28	ppb	Avg.	19	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 6 (Maritime Estates Property along Canal Fencing)

TVOC			PM ₁₀		
Max.	25	ppb	Max.	26	ug/m ³
Avg.	12	ppb	Avg.	3	ug/m ³
Exc.	0	total	Exc.	0	Total

Station 7 (386 3rd Avenue along Canal Fencing)

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

TVOC – Total Volatile Organic Compounds

PM₁₀ – Particulates as PM₁₀

Max. – Maximum daily average (15 min. avg. – TVOC / 15 min. avg. – PM₁₀)

Avg. – Daily average (15 min. avg. – TVOC / 15 min. avg. – PM₁₀)

Exc. – Total # of averages which exceed the action level (≥1 ppm - TVOC / ≥150 ug/m³ - PM₁₀)

Figure 1
Gowanus Canal Superfund Site -TB4 Dredging and Capping Pilot Program
TVOC Monitoring Data - Week 44

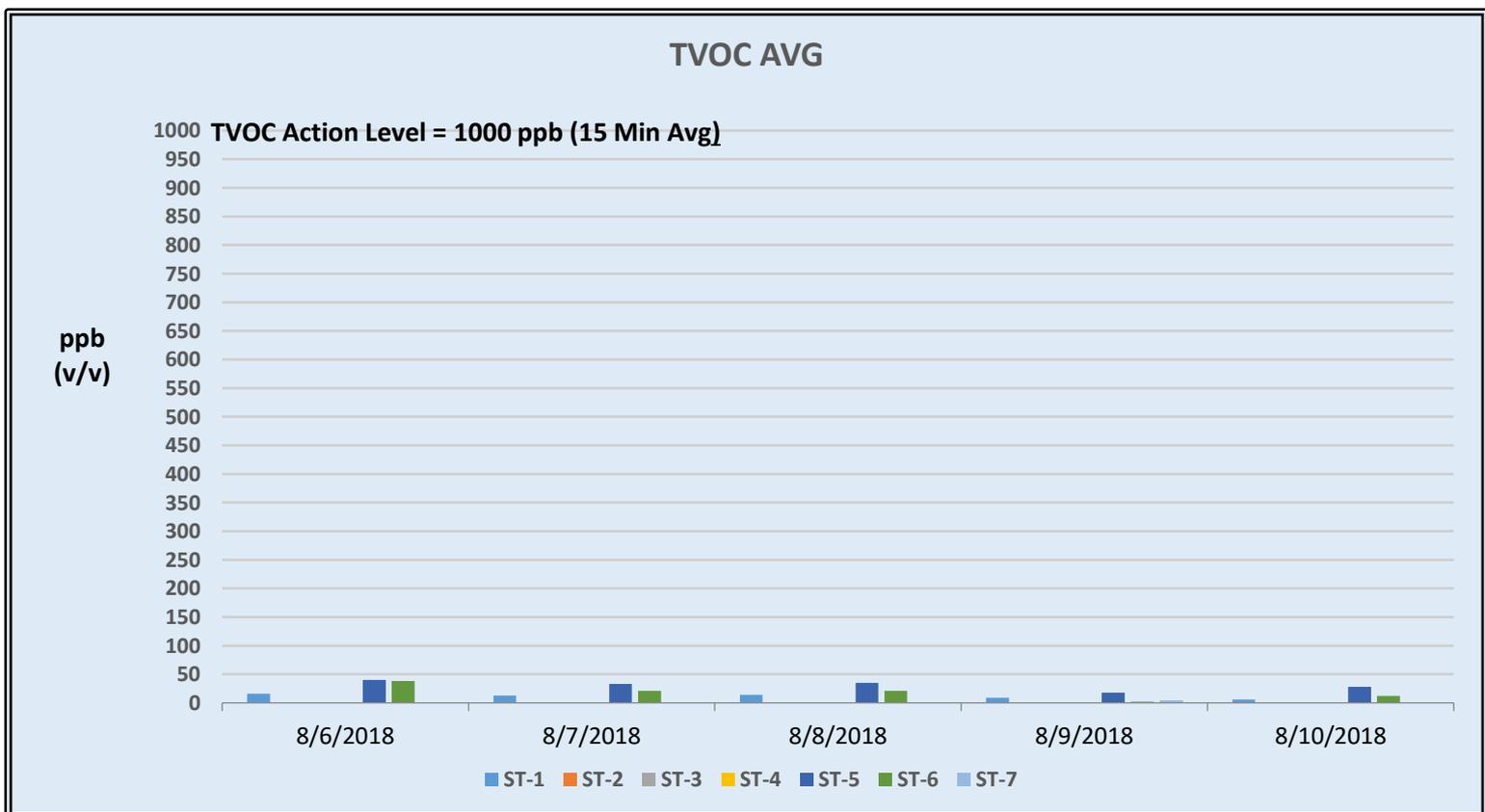
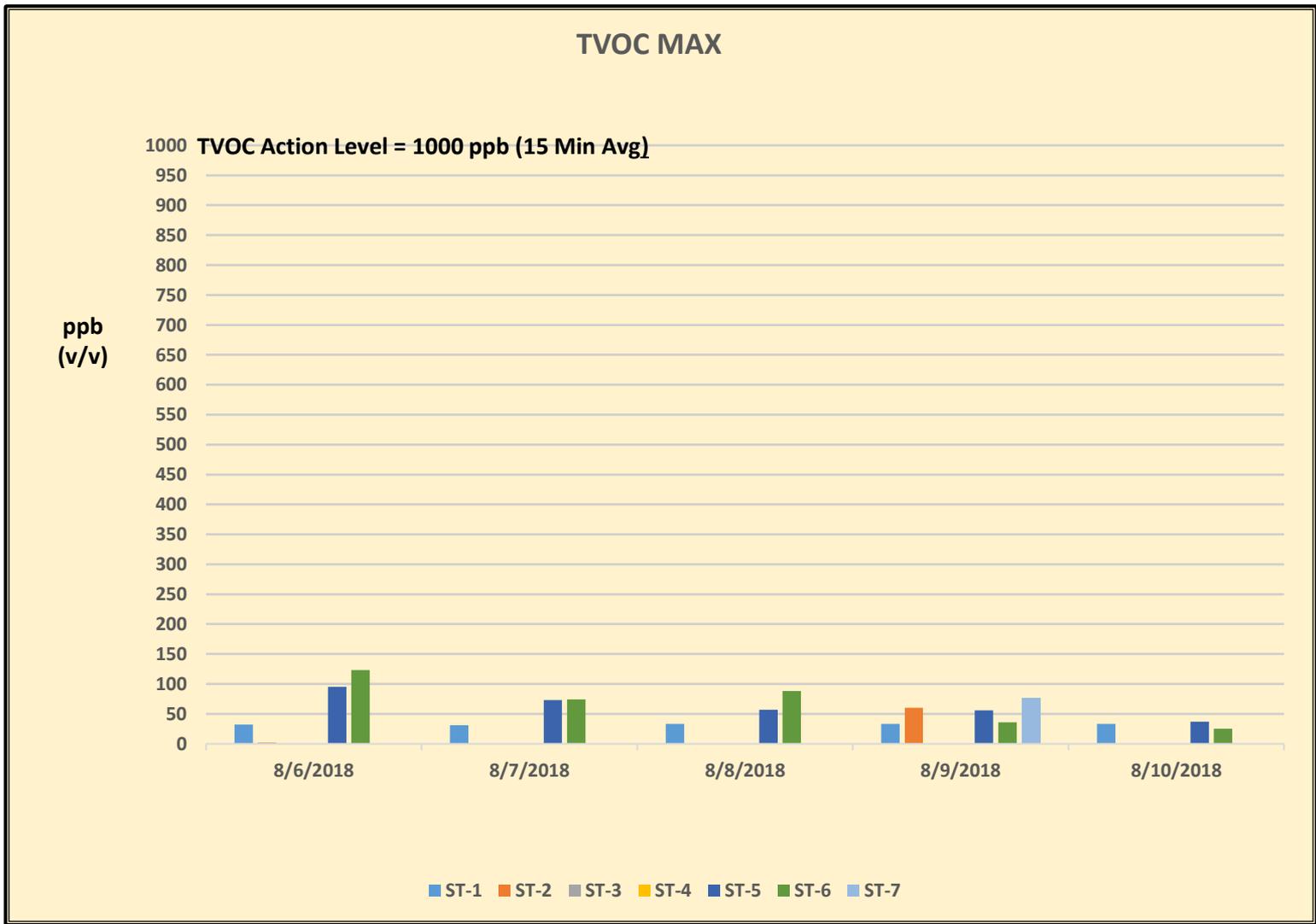
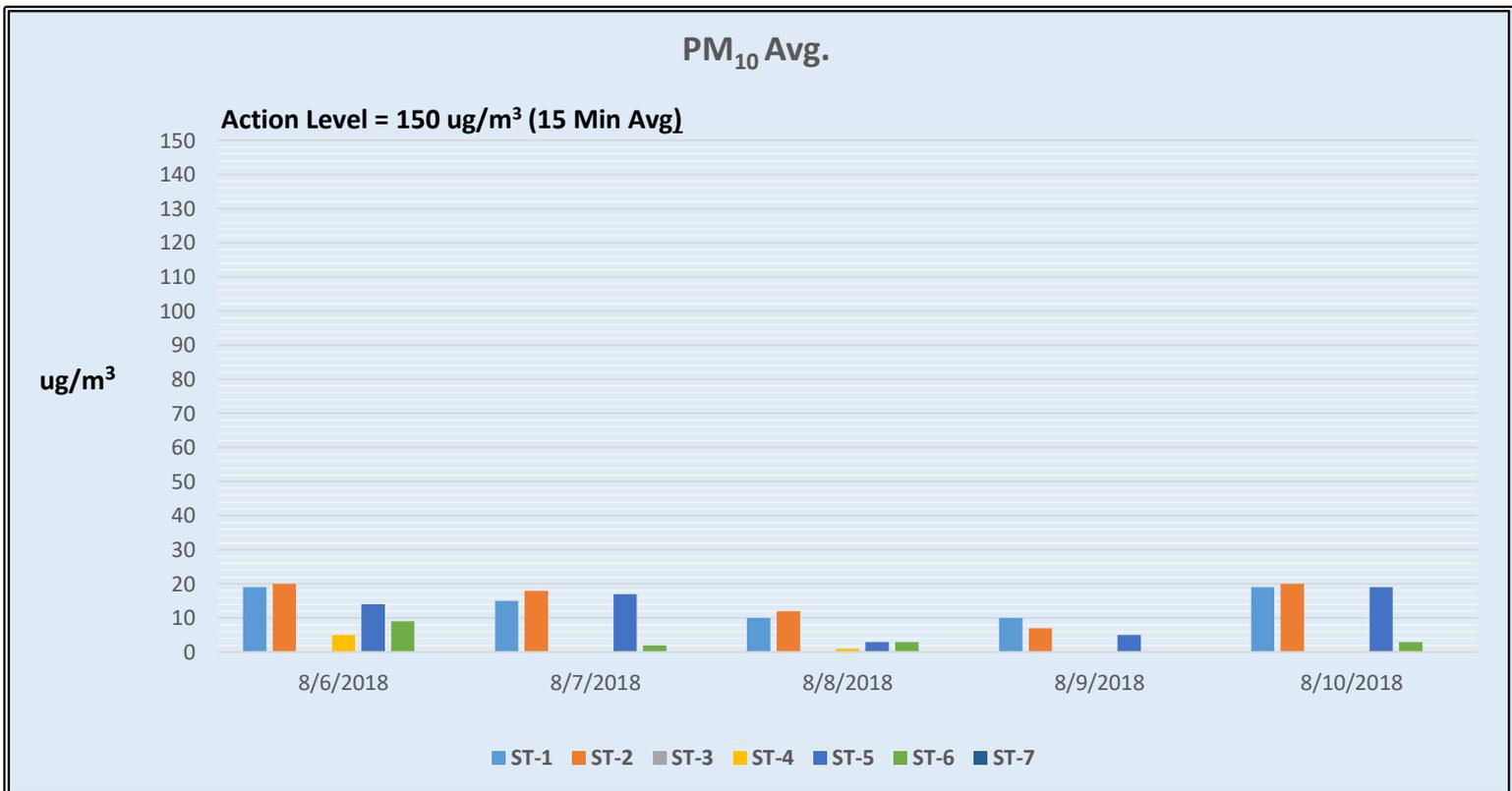
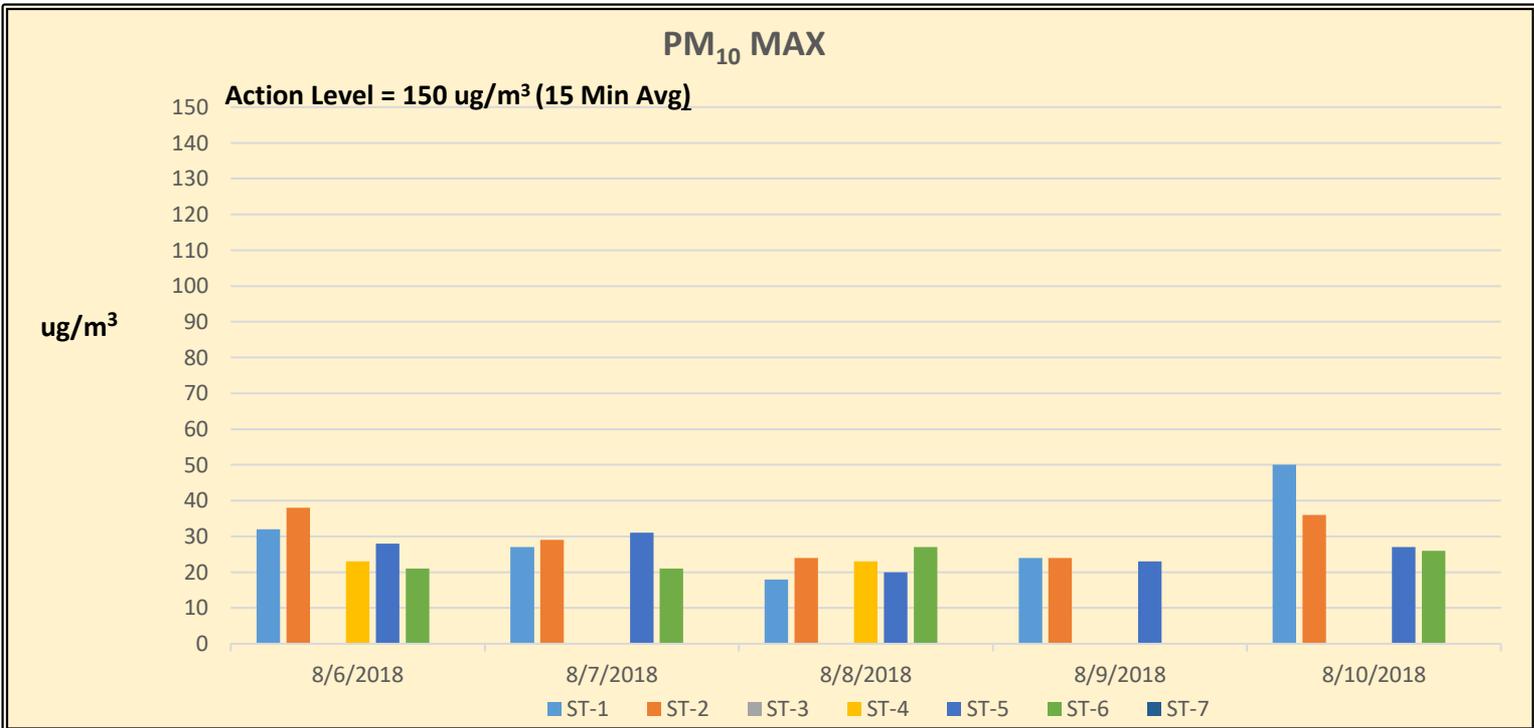


Figure 2
Gowanus Canal Superfund Site - TB4 Dredging and Capping Pilot Program
TRC CAMP PM₁₀ Monitoring Data - Week 44



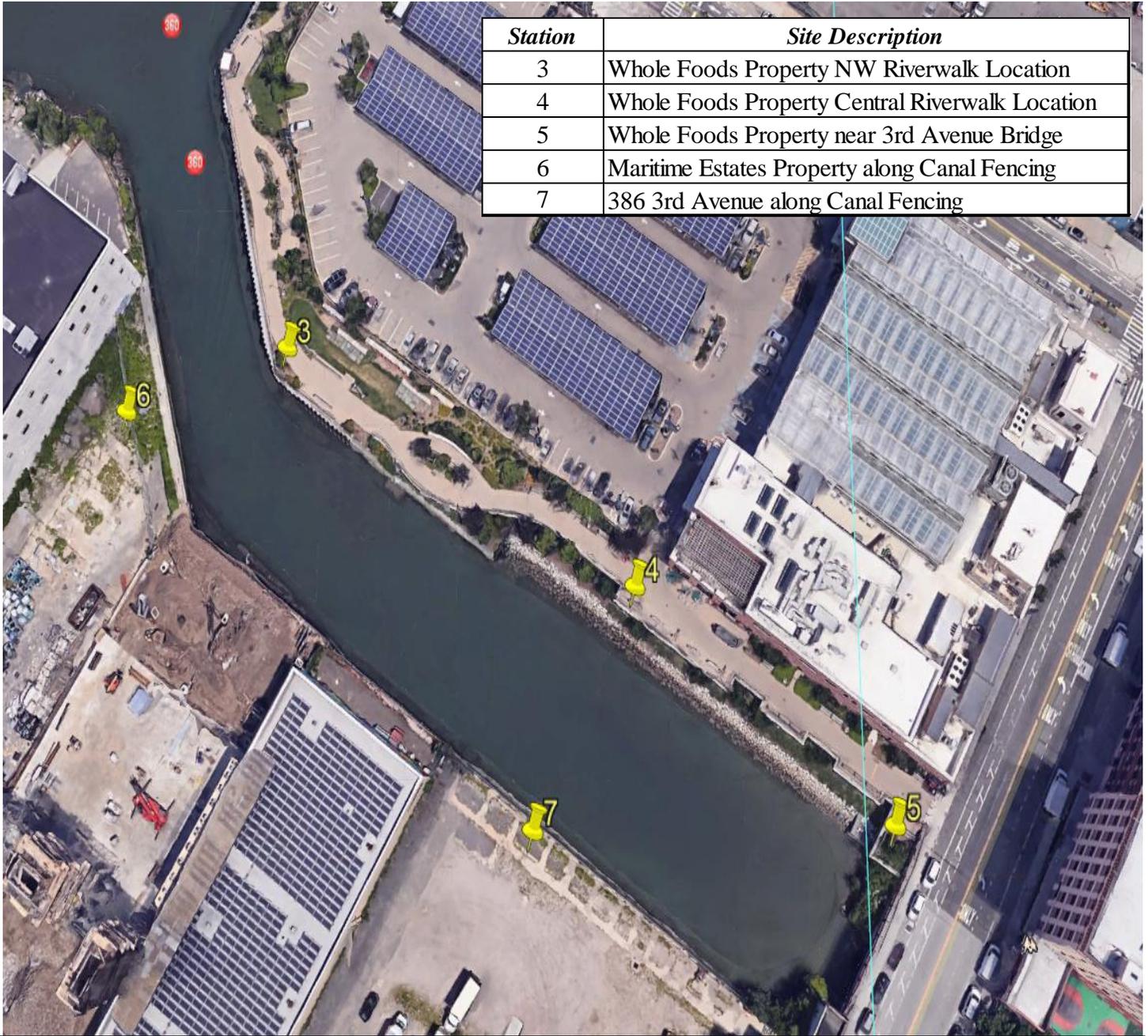


FIGURE 3
Gowanus Canal Superfund Site-TB4
Dredging and Capping Pilot Program

Table 2:
Gowanus Canal Superfund Site - TB4 Dredging and Capping Pilot Program
Week 40 VOCs Results: July 10th through 11th and July 12th through 13th

Sample ID	ST-1-VOC-071018		ST-2-VOC-071218	
Laboratory ID	18G0852-01		18G0852-02	
Date Sampled	7/10/18 09:00 - 7/11/18 08:00		7/12/18 14:00 - 7/13/18 13:00	
Location	Station 1		Station 2	
VOCs - TO-15	ppbV	ug/m3	ppbV	ug/m3
Acetone	8.3	20	8.4	20
Benzene	0.17	0.54	0.22	0.69
Benzyl chloride	<0.035	<0.18	<0.035	<0.18
Bromodichloromethane	<0.035	<0.24	<0.035	<0.24
Bromoform	<0.035	<0.36	<0.035	<0.36
Bromomethane	<0.035	<0.14	<0.035	<0.14
1,3-Butadiene	<0.035	<0.078	<0.035	<0.078
2-Butanone (MEK)	<1.4	<4.1	<1.4	<4.1
Carbon Disulfide	<0.35	<1.1	<0.35	<1.1
Carbon Tetrachloride	0.076	0.48	0.078	0.49
Chlorobenzene	<0.035	<0.16	<0.035	<0.16
Chloroethane	<0.035	<0.093	<0.035	<0.19
Chloroform	0.072	0.35	<0.035	<0.17
Chloromethane	0.57	1.2	0.55	1.1
Cyclohexane	<0.035	<0.12	<0.035	<0.12
Dibromochloromethane	<0.035	<0.30	<0.035	<0.30
1,2-Dibromoethane (EDB)	<0.035	<0.27	<0.035	<0.27
1,2-Dichlorobenzene	<0.035	<0.21	<0.035	<0.21
1,3-Dichlorobenzene	<0.035	<0.21	<0.035	<0.21
1,4-Dichlorobenzene	<0.035	<0.21	<0.035	<0.21
Dichlorodifluoromethane (Freon 12)	0.5	2.5	0.53	2.6
1,1-Dichloroethane	<0.035	<0.14	<0.035	<0.14
1,2-Dichloroethane	<0.035	<0.14	<0.035	<0.14
1,1-Dichloroethylene	<0.035	<0.14	<0.035	<0.14
cis-1,2-Dichloroethylene	<0.035	<0.14	<0.035	<0.14
trans-1,2-Dichloroethylene	<0.035	<0.14	<0.035	<0.14
1,2-Dichloropropane	<0.035	<0.16	<0.035	<0.16
cis-1,3-Dichloropropene	<0.035	<0.16	<0.035	<0.16
trans-1,3-Dichloropropene	<0.035	<0.16	<0.035	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	<0.035	<0.25	<0.035	<0.25
1,4-Dioxane	<0.35	<1.3	<0.35	<1.3
Ethanol	3.3	6.1	8.9	17
Ethyl Acetate	1.3	4.7	0.8	2.9
Ethylbenzene	0.076	0.33	0.21	0.91
4-Ethyltoluene	<0.035	<0.17	0.099	0.49
Heptane	0.084	0.35	0.17	0.7
Hexachlorobutadiene	<0.035	<0.37	<0.035	<0.37
Hexane	<1.4	<4.9	<1.4	<4.9
2-Hexanone (MBK)	<0.035	<0.14	<0.035	<0.14
Isopropanol	<1.4	<3.4	<1.4	<3.4
Methyl tert-Butyl Ether (MTBE)	<0.035	<0.13	<0.035	<0.13
Methylene Chloride	<0.35	<1.2	0.35	1.2
4-Methyl-2-pentanone (MIBK)	<0.035	<0.14	0.076	0.31
Naphthalene	0.06	0.32	1.3	6.7
Propene	<1.4	<2.4	<1.4	<2.4
Styrene	<0.035	<0.15	0.1	0.45
1,1,2,2-Tetrachloroethane	<0.035	<0.24	<0.035	<0.24
Tetrachloroethylene	0.057	0.39	0.47	3.2
Tetrahydrofuran	<0.035	<0.10	<0.035	<0.10
Toluene	0.45	1.7	0.92	3.5
1,2,4-Trichlorobenzene	<0.035	<0.26	<0.035	<0.26
1,1,1-Trichloroethane	<0.035	<0.19	<0.035	<0.19
1,1,2-Trichloroethane	<0.035	<0.19	<0.035	<0.19
Trichloroethylene	<0.035	<0.19	<0.035	<0.19
Trichlorofluoromethane (Freon 11)	0.24	1.4	0.31	1.8
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<0.14	<1.1	<0.14	<1.1
1,2,4-Trimethylbenzene	0.098	0.48	0.25	1.3
1,3,5-Trimethylbenzene	<0.035	<0.17	0.078	0.38
Vinyl Acetate	<0.70	<2.5	<0.70	<2.5
Vinyl Chloride	<0.035	<0.090	<0.035	<0.090
m&p-Xylene	0.23	1	0.5	2.2
o-Xylene	0.088	0.38	0.19	0.84

Notes:

Values in **bold** indicate detected concentrations

Results for the following compounds may be influenced by laboratory derived contamination:

acetone, ethanol, methylene chloride and isopropanol

Table 1

Week 44

Summary of Additional Periodic (Daily) Monitoring Data

August 6 th , 2018				
Station Id	Time	Formaldehyde (CHO) (ppb)*	Hydrogen Sulfide (H ₂ S) (ppb)*	Ammonia (NH ₃) (ppm)**
ST-1	7:30	<50	<3	<1.0
	13:30	<50	<3	<1.0
ST-2	8:35	<50	<3	<1.0
	13:40	<50	<3	<1.0

August 7 th , 2018				
Station Id	Time	Formaldehyde (CHO) (ppb)*	Hydrogen Sulfide (H ₂ S) (ppb)*	Ammonia (NH ₃) (ppm)**
ST-1	9:00	<50	<3	<1.0
	14:30	<50	<3	<1.0
ST-2	9:15	<50	<3	<1.0
	14:45	<50	<3	<1.0

August 8 th , 2018				
Station Id	Time	Formaldehyde (CHO) (ppb)*	Hydrogen Sulfide (H ₂ S) (ppb)*	Ammonia (NH ₃) (ppm)**
ST-1	9:00	<50	<3	<1.0
	12:30	<50	<3	<1.0
ST-2	9:30	<50	<3	<1.0
	13:00	<50	<3	<1.0

August 9 th , 2018				
Station Id	Time	Formaldehyde (CHO) (ppb)*	Hydrogen Sulfide (H ₂ S) (ppb)*	Ammonia (NH ₃) (ppm)**
ST-1	10:00	<50	<3	<1.0
	15:00	<50	<3	<1.0
ST-2	10:15	<50	<3	<1.0
	15:15	<50	<3	<1.0

Table 1

Week 44

Summary of Additional Periodic (Daily) Monitoring Data

August 10 th , 2018				
Station Id	Time	Formaldehyde (CHO) (ppb)*	Hydrogen Sulfide (H ₂ S) (ppb)*	Ammonia (NH ₃) (ppm)**
ST-1	10:00	<50	<3	<1.0
	13:30	<50	<3	<1.0
ST-2	10:30	<50	<3	<1.0
	13:40	<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
August 6th through August 10th, 2018**

August 6 th , 2018 *		
Wind Direction (°)	Wind Speed (mph)	Temperature (°F)
S	1.90	89.5

August 7 th , 2018 **		
Wind Direction (°)	Wind Speed (mph)	Temperature (°F)
SE	2.57	83.3

August 8 th , 2018 **		
Wind Direction (°)	Wind Speed (mph)	Temperature (°F)
SSE	2.03	83.3

August 9 th , 2018 **		
Wind Direction (°)	Wind Speed (mph)	Temperature (°F)
W	1.94	83.5

August 10 th , 2018 ***		
Wind Direction (°)	Wind Speed (mph)	Temperature (°F)
SSW	1.63	82.6

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

** Tuesday's, Wednesday's, 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

August 6, 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 Monitoring Report, 30 July – 3 August, 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 and 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 plan¹. 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 reference².

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

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

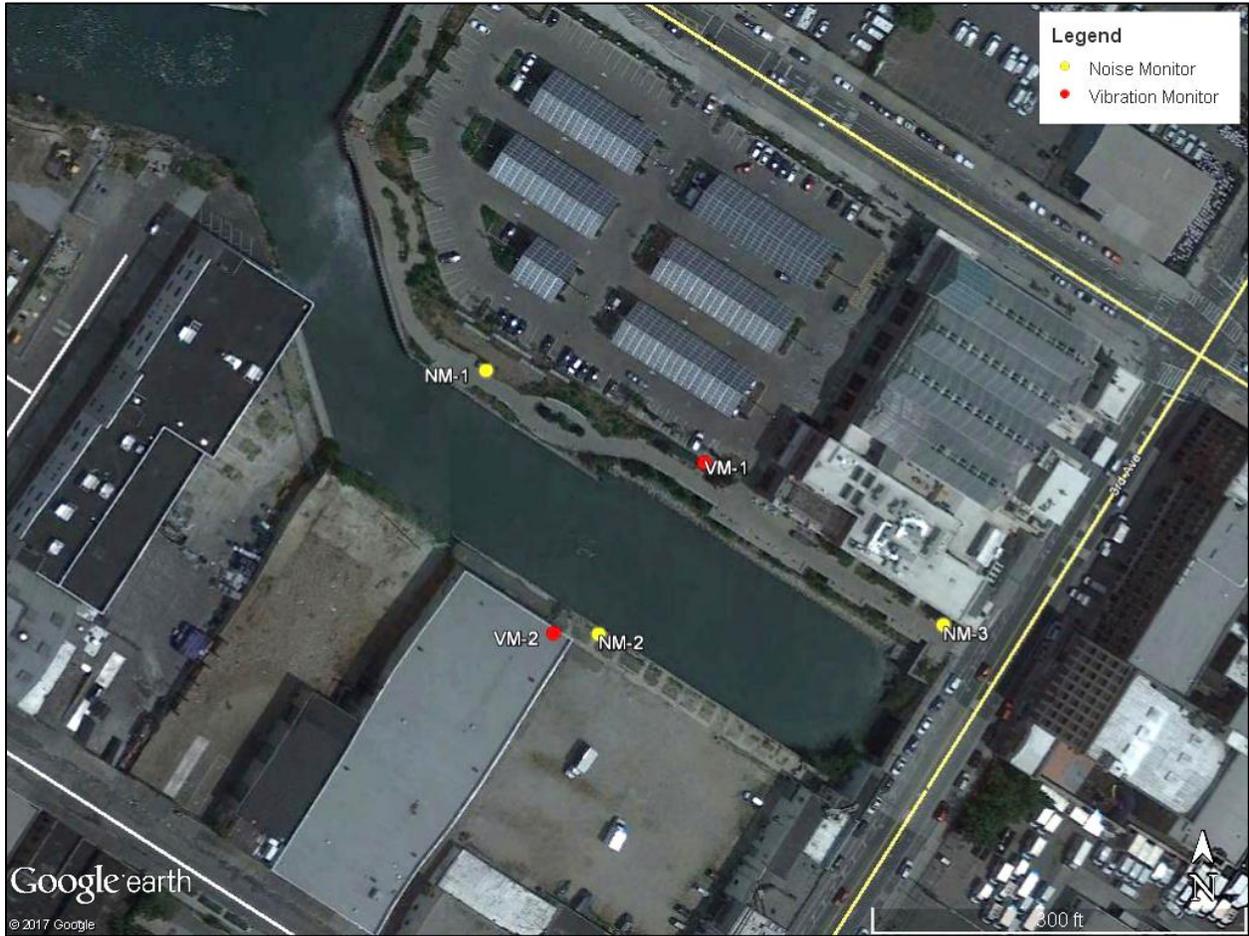


Figure 1: Long-term Noise and Vibration Monitoring Locations for Gowanus TB4 Dredging and Capping Pilot Study



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



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

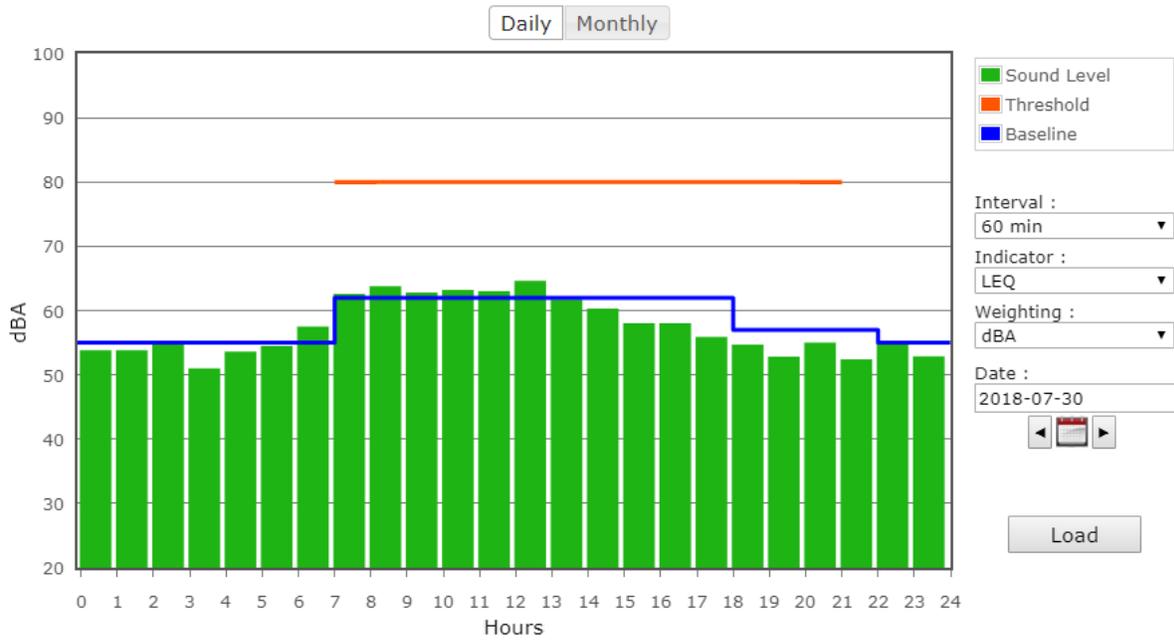


Figure 2: North Monitor NM-1 on Monday

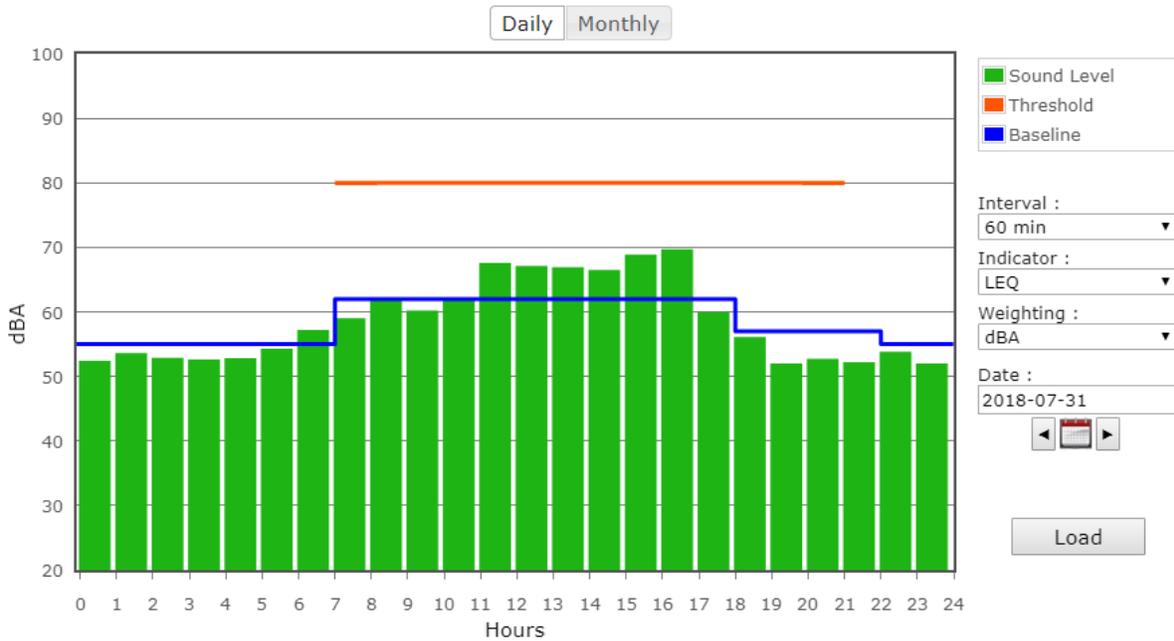


Figure 3: North Monitor NM-1 on Tuesday

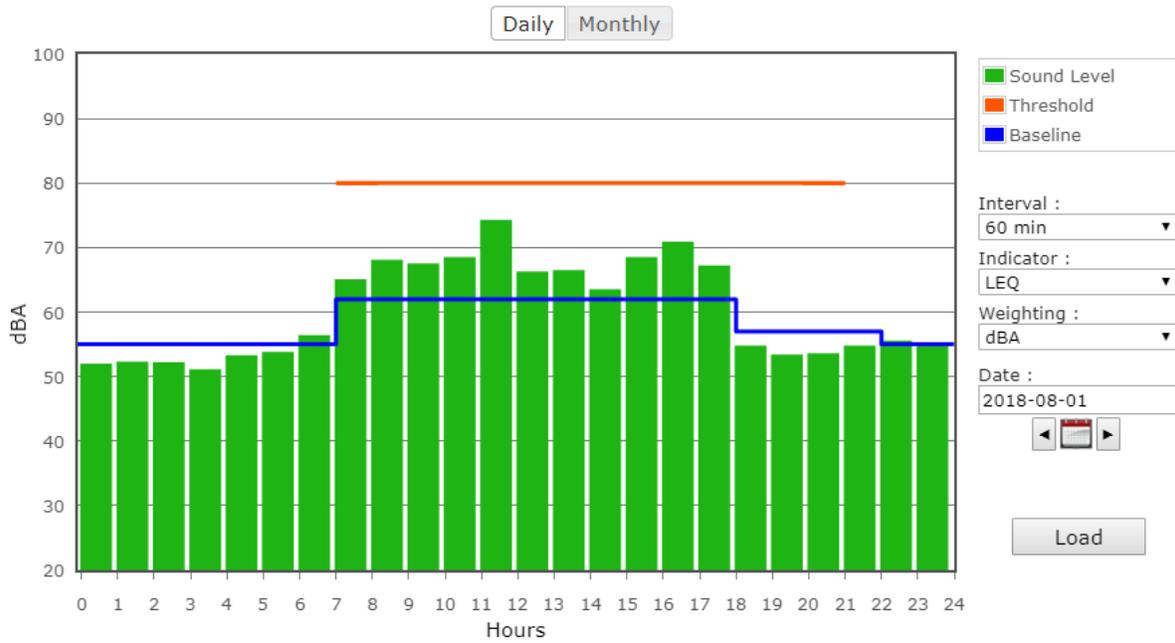


Figure 4: North Monitor NM-1 on Wednesday

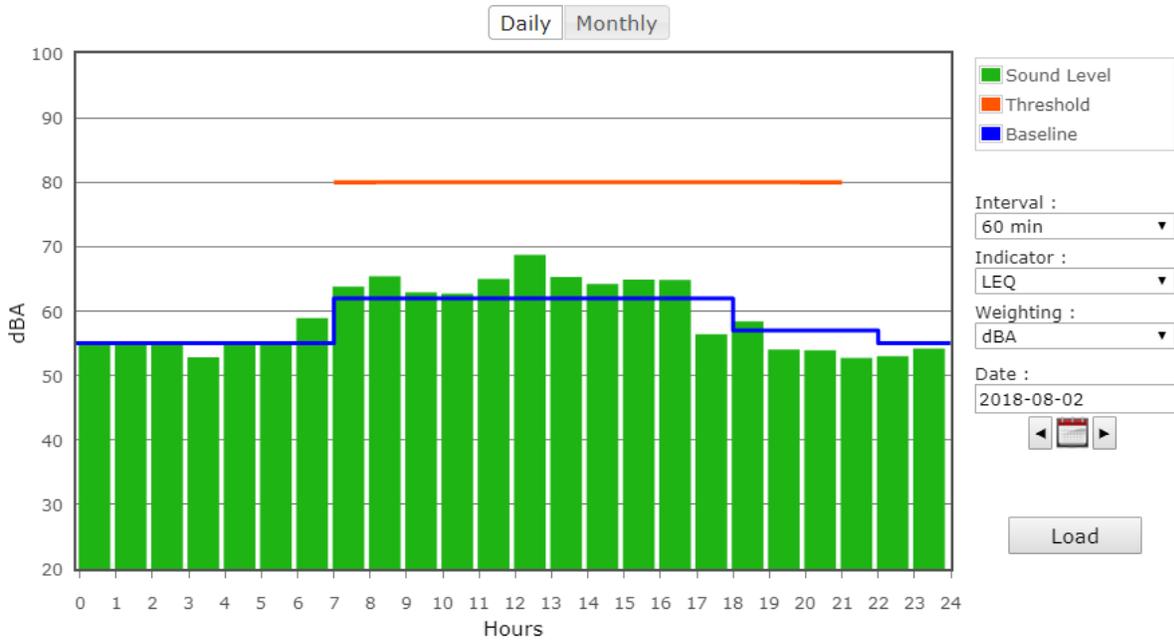


Figure 5: North Monitor NM-1 on Thursday

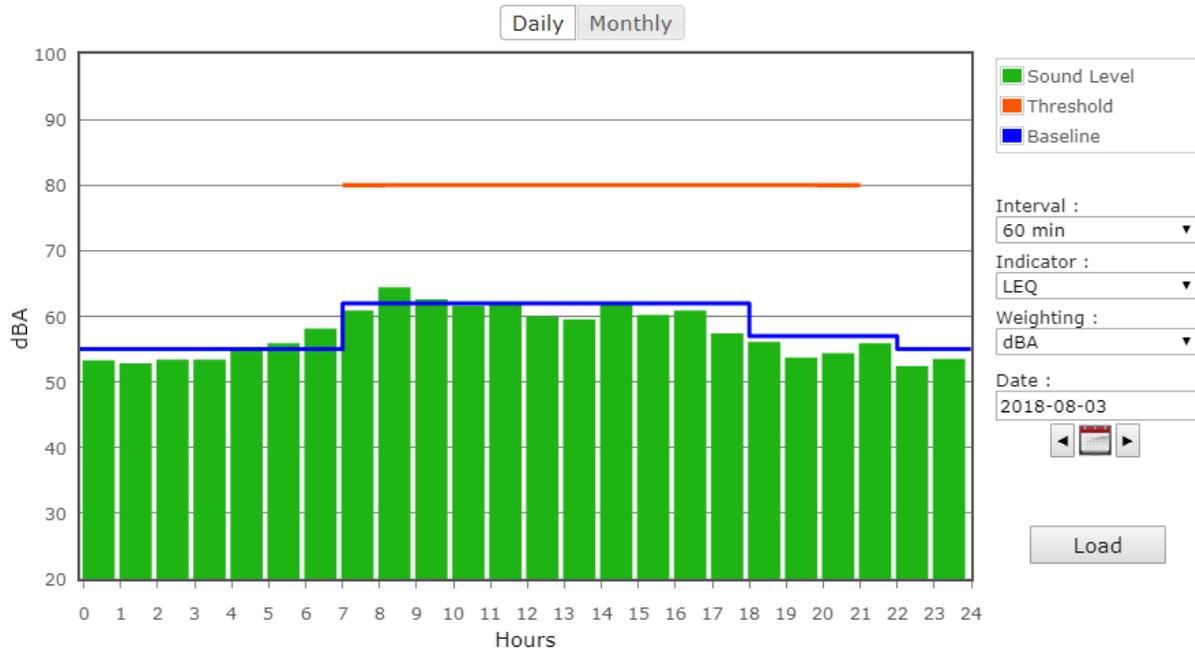


Figure 6: North Monitor NM-1 on Friday

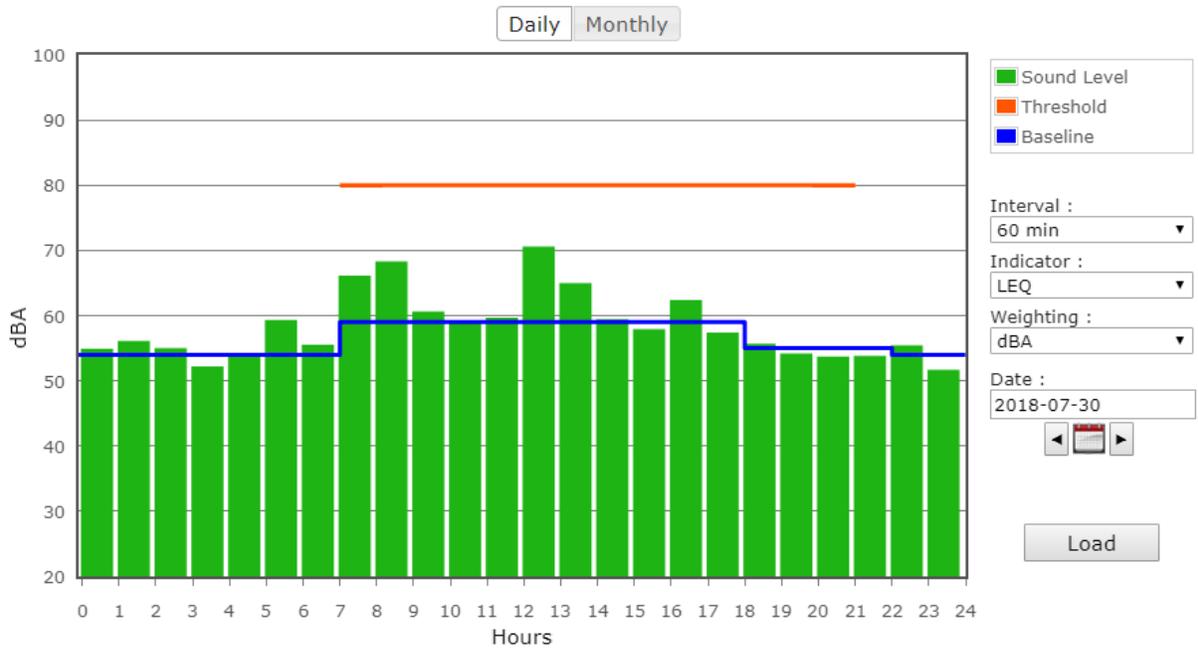


Figure 7: South Monitor NM-2 on Monday

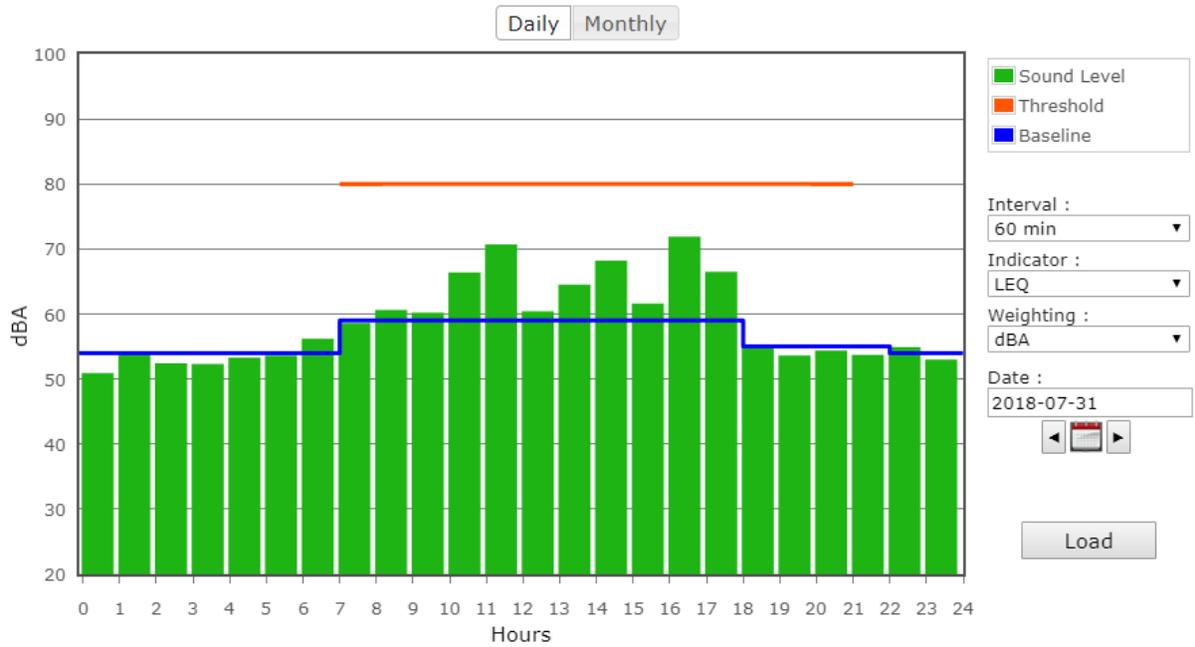


Figure 8: South Monitor NM-2 on Tuesday

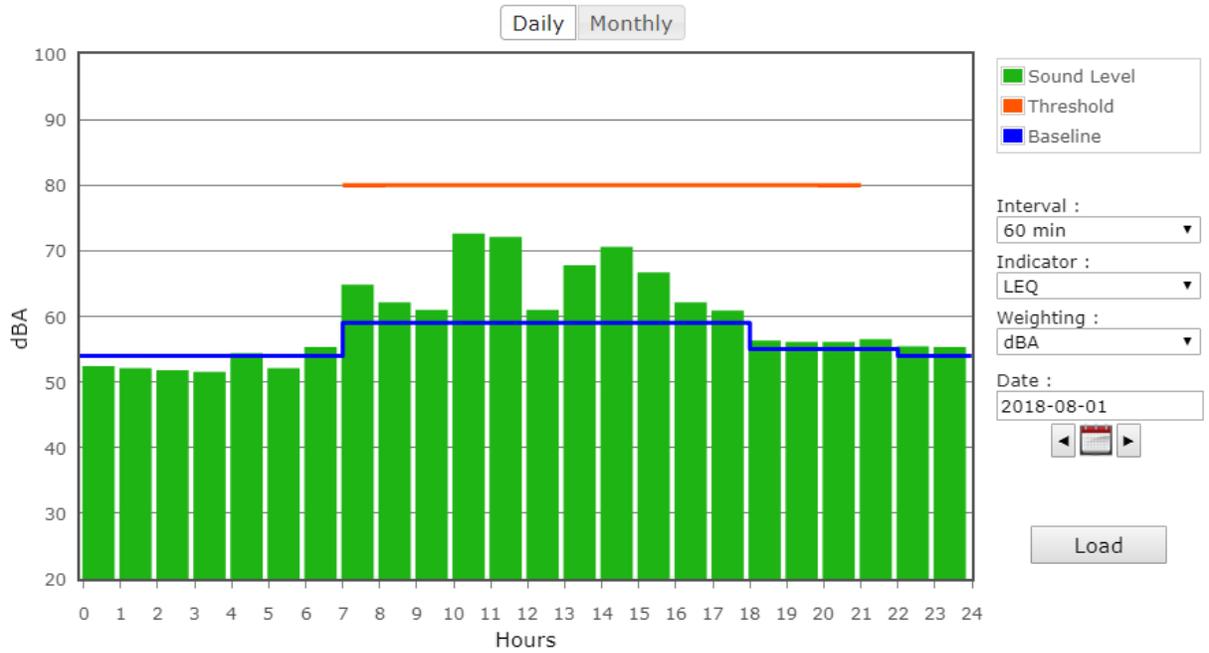


Figure 9: South Monitor NM-2 on Wednesday

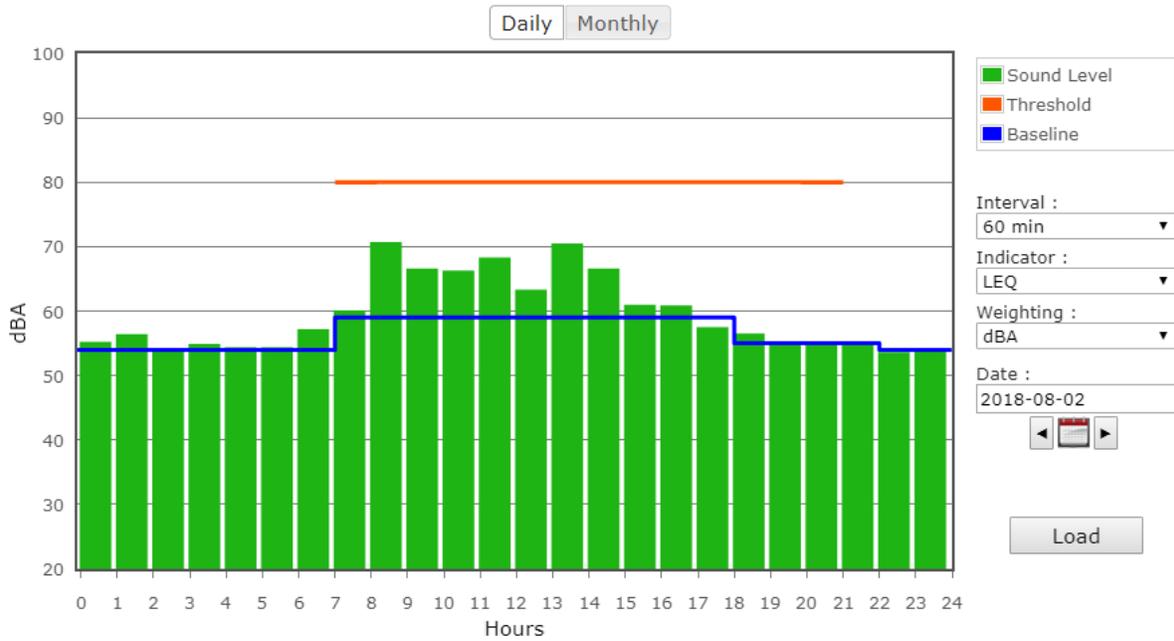


Figure 10: South Monitor NM-2 on Thursday

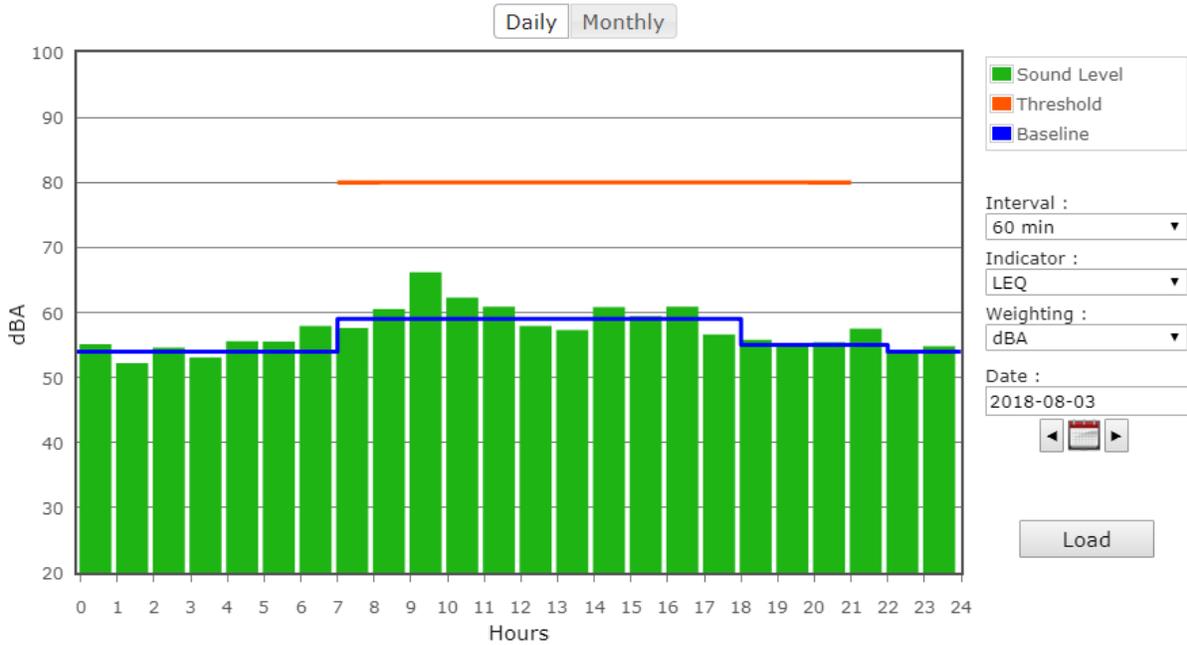


Figure 11: South Monitor NM-2 on Friday

AHRS WEEKLY REPORT
(NO ACTIVITIES DURING WEEK)



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



**CUMULATIVE DREDGED MATERIAL CHART
(NO ACTIVITIES DURING WEEK)**

