

**AIR, NOISE AND VIBRATION
MONTHLY MONITORING REPORT
Number 014 – September 2023**

Prepared By:
Gramercy
Group Inc.

DDC. Project ID:	BBJ M DSS	Period Start: 9/01/23 End 9/30/23
Project Name:	NYC Borough Based Jails System – Manhattan Dismantle and Swing Space	
DDC Pin No.:	8502021CR0004P-06P	

1) Community Air Monitoring Monthly Status Summary

TWA – Time Weighted Average
ug/m³- micrograms per cubic meter

Number of Workdays in a Month	Number of Air Monitoring Days in a Month	Number of Days with Dust Concentrations above Action Concentrations by Month (100 ug/m ³ 15 minute TWA)	Comments
21	30	0	There were zero days with dust concentration above action concentrations for the month of September. Air monitoring was continued throughout every day of the month even on weekends when no work was being performed. No construction-related exceedances were noted.

Community Air Monitoring Excursions and Corrective Actions

Action Concentration = 100 ug/m³ 15 minute TWA above background concentration
Stop Work Concentration = 150 ug/m³ 15 minute TWA above background concentration

Date: Time	Maximum Dust Reading Before Corrective Action 15 Minute TWA (ug/m ³)	Maximum Dust Reading After Corrective Action 15 Minute TWA (ug/m ³)	Corrective Action
N/A	N/A	N/A	N/A

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Narrative Summary of Air Monitoring, Excursions and Corrective Actions:

In September 2023, construction-related levels of Particulate Matter (PM) PM10 did not surpass Daily Permissible Exposure Limits (PEL) as set by federal standards for the 24-hour Time Weighted Average (TWA), or daily value, and did not cause air quality concerns to the public or on-site workers. In the graphs below, you will see some gaps in the data at different instances for each of the monitors. This is because the batteries for the AQS monitors run on sunlight. We had a ton of rain during the month of September. Not only does this affect the ability for the batteries to stay powered by the sun, but it does also not enable us to be able to swap batteries out and work with electricity when it is a heavy downpour. The batteries also may die over the weekend when there is no sunlight or anyone on site to change them. With that being said, we swap out the batteries as fast as possible to ensure proper monitoring coverage of the community around the job site. Also please note that when a monitor is down, the adjacent monitors are placed in locations that their coverage will cover the area of the monitor that is not recording for that time.

The contractor, Gramercy Group Inc, in conjunction with the contractor's environmental specialist, has successfully implemented mitigation techniques at Action Level as well as Permissible Exposure Limits (15-Minute TWA) to suppress construction activity effects on air quality throughout the project work-zone.

2) Community Noise Monitoring Monthly Summary

Weighted decibels (dBA) level

Number of Workdays in a Month	Number of Noise Monitoring Days in a Month	Number of Days with Noise Levels above Action Levels by Month (dBA)	Comments
21	30	4	Noise monitoring for the month of September had 4 instances where we had readings greater than the threshold. Below you will see explanations for all of the alerts. Monitoring was continued everyday throughout the week, and even on weekends.

Community Noise Monitoring Excursions and Corrective Actions

Action Level = 80 dBA

Stop Work Level = 90 dBA

Date: Time	Maximum Noise Reading before Corrective Action (dBA)	Maximum Noise Reading after Corrective Action (dBA)	Corrective Action
AQS #998: 9/18/23 – 9/21/23 @ all hours	Average of 104.55 dBA	81.6 dBA	From the 18 th to the 21 st of September, the noise monitor microphone was broken. Vibranalysis came to site to perform maintenance and replace the part to fix this issue to show accurate noise levels for this area.
AQS #998: 9/27/23 @ 10:00 AM	102.4 dBA	71.1 dBA	No corrective action was feasible as we went to investigate, and this was caused by a car horn on Baxter Street.
AQS #997: 9/18/23 @ 11:30 AM	103.218 dBA	72.206 dBA	No corrective action was feasible as we went to investigate, and this was caused by a car horn on Baxter Street.

AQS #997: 9/28/23 @ 1:30 PM	92.9 dBA	71.3 dBA	No corrective action was feasible at this time as this monitor is not near where we are performing work. This can be double checked by the data from AQS #998 on 9/28/23 as it is directly next to where we are working, and it does not show an exceedance.

Narrative Summary of Noise Monitoring, Excursions and Corrective Actions:

During the month of September, we experienced noise levels greater than the alert threshold AQS monitor #998. After investigation of the cause of these spikes in noise, we were able to determine that the level the monitor was showing was not accurate. We went out by this monitor and stood there with a handheld decibel meter and the noise in this area was below threshold. We notified Vibranalysis of this issue and they had to come to the site to replace the microphone. After the monitor was serviced and back up and running showing accurate noise levels, the noise was below threshold in this area. The other two exceedances stated above were both caused by car horns on Baxter Street. Not only did we visibly witness the cars setting them off while we got the notification, but as you can see above the data is very similar for both these exceedances. As stated above, the exceedance on 9/28/23 from AQS monitor #997 was not caused by construction activity as we are not actively working in this area, and we can double check that by looking at the data from AQS #998 which is located directly across the street from where we are working. You will also notice in the graphs below for AQS #975, that the unit was down on the 28th and for the remainder of the month. This was due to the battery dying on a Thursday and then Friday being a washed-out rain day where we were unable to service the monitor. The batteries were replaced, and the monitor was back up and running on Monday.

3) Community Vibration Monitoring Monthly Summary

Inches per second (in/sec)

Number of Workdays in a Month	Number of Vibration Monitoring Days in a Month	Number of Days with Vibration Levels above Action Levels by Month (in/sec)	Comments
21	30	2	All Vibration alerts were from R14 located in Criminal Justice Agency (CJA) intake area. This is the monitor that gets knocked / bumped into by either officer or inmates during their processing procedures. We took every alert seriously and made sure it was not caused by our operations. We are looking into finding a new place to mount this monitor to avoid having this issue of false readings.

Community Vibration Monitoring Excursions and Corrective Actions

Action Level = 0.5 in/sec

Stop Work Level = 1.0 in/sec

Date: Time	Maximum Vibration Level before Corrective Action (in/sec)	Maximum Vibration Level after Corrective Action (in/sec)	Corrective Action

R14: 9/15/23 @ 1:39 PM	1.423 (in/sec)	0.005 (in/sec)	Unrelated to construction activities. No corrective action at this time.
R14: 9/25/23 @ 7:04 AM	1.633 (in/sec)	0.018 (in/sec)	Unrelated to construction activities. No corrective action at this time.

Narrative Summary of Vibration Monitoring, Excursions and Corrective Actions:

During the Month of September 2023, there were 2 vibration monitor exceedances. When we got these alerts, they were investigated immediately. As stated in previous reports, Vibration Monitor R14 located in the CJA Intake area that goes off multiple times every month due to all the foot traffic in this space and people physically hitting into the monitor. We still investigate this every time it happens, and we continue to remind the personnel in this area to be mindful of the monitor. None of the exceedances from R14 are related to construction activity. Below you will see a few days with gaps in the data for vibration monitors R01, R02, R03, R05, & R07. This happens when batteries die, or the unit loses connection. When this happens, we have Vibranalysis act as quickly as possible to get these back up and running. Even though there is missing data for those couple of days, the monitors are places in areas that even when they are down, the adjacent monitor covers that area as a back up to ensure we are within our limits.

ATTACHMENTS:

- 1 – Include one map of monitoring station/locations
- 2 – Include Data Plots
- 3 – Include Baseline Reference
- 4 – Glossary of Terms

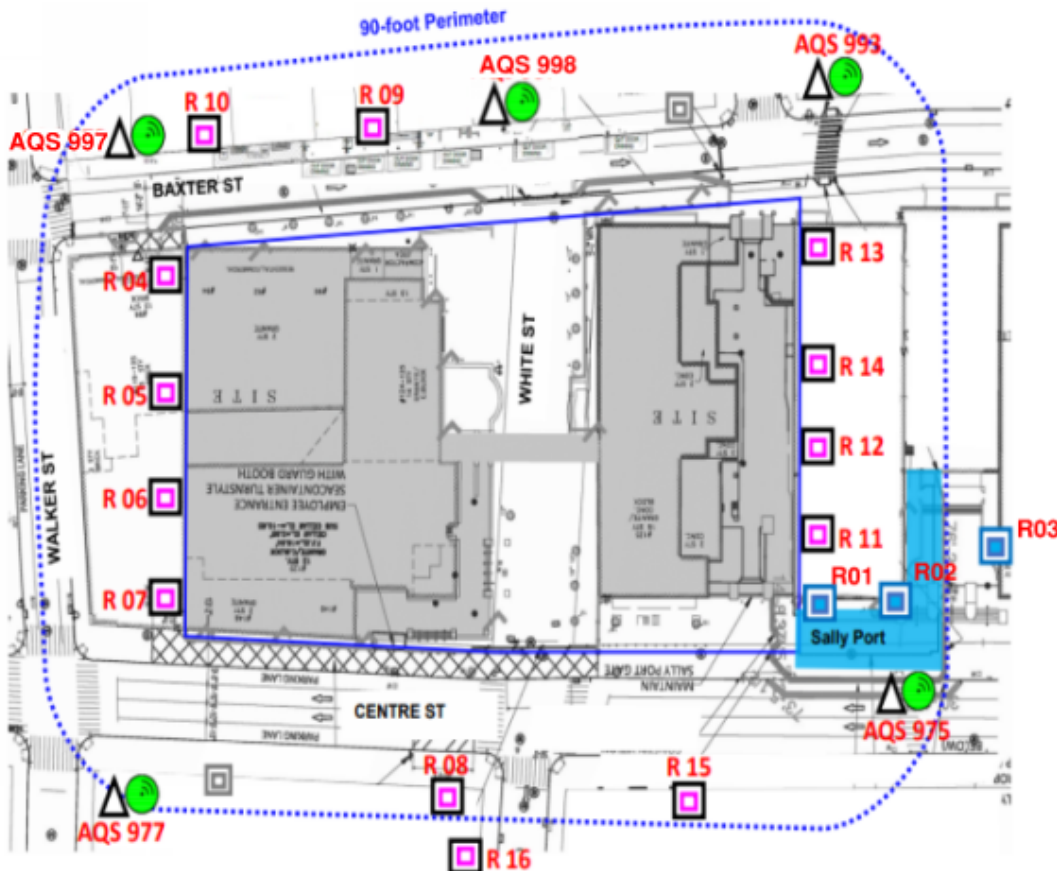
Glossary of Terms	
Terms	Descriptions
<i>Warning Alerts</i>	Warning limit line for vibration monitors is not an indication to stop work. This is to notify DB team to assess the operation and know that we are causing vibration, but not anything exceeding limits and to monitor this area more closely.
<i>After Hours Alert</i>	When a noise exceeding happens on the weekends or after working hours we have no way to correct or speak on what the cause was. Generally these are caused by trucks/car horns, emergency vehicle sirens, and sometimes even pedestrian
<i>Units of Measures</i>	For AQS monitors on the noise chart you will see two different units of measurement. The Lmax1min (blue line) shows the maximum noise level for a one minute reading. The Leq 20min (black line) shows the maximum noise level for a 20 minute average reading. this is the unit of measure we will use going forward. Exceeding the limit for Lmax1min is not something that is not allowable. OSHA standard allows for the noise output from a construction site to the public to be a weighted average
<i>Action Level</i>	employer must undertake certain duties of care for exposed workers. Typical values are 80 and 85 dB measured for a whole working day with 'A' frequency weighting.
<i>Ambient Sound</i>	The total amount of all noise present at a particular place and time in the environment at the point of
<i>Leq</i>	Equivalent continuous sound pressure level. A measure of the average sound pressure level during a period of time,
<i>Fine Particles (PM 2.5)</i>	Particles that are generally 2.5 µm in diameter or smaller. This group of particles also encompasses ultrafine particles and nanoparticles which are generally classified as having diameters less than 0.1 µm.

Map of Monitoring Locations:

Vibration Monitors R01 – R16

Air Quality System (AQS) # 933, 997, 975, 977, & 998.

Environmental Monitoring Manhattan

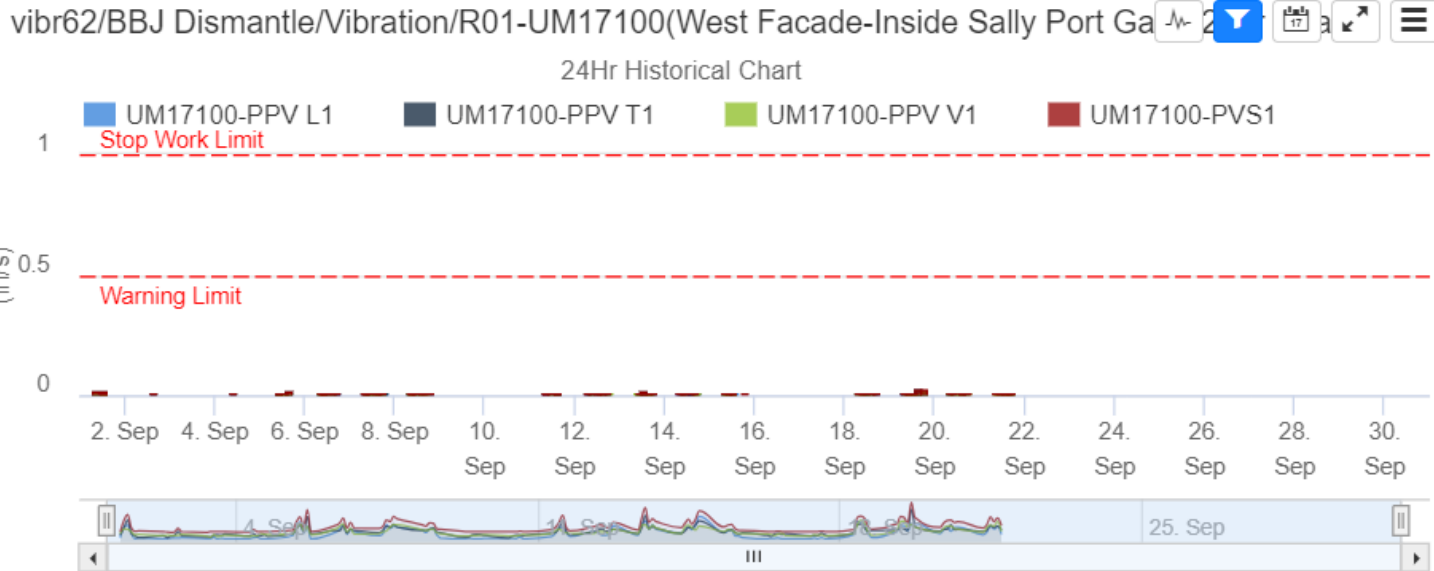


* Dismantle project vibration, air and noise monitoring devices are installed by Design-Build team in Phase 2, after sally port construction. A vibration monitoring station was installed in the DCTV Fire house at 87 Lafayette St.

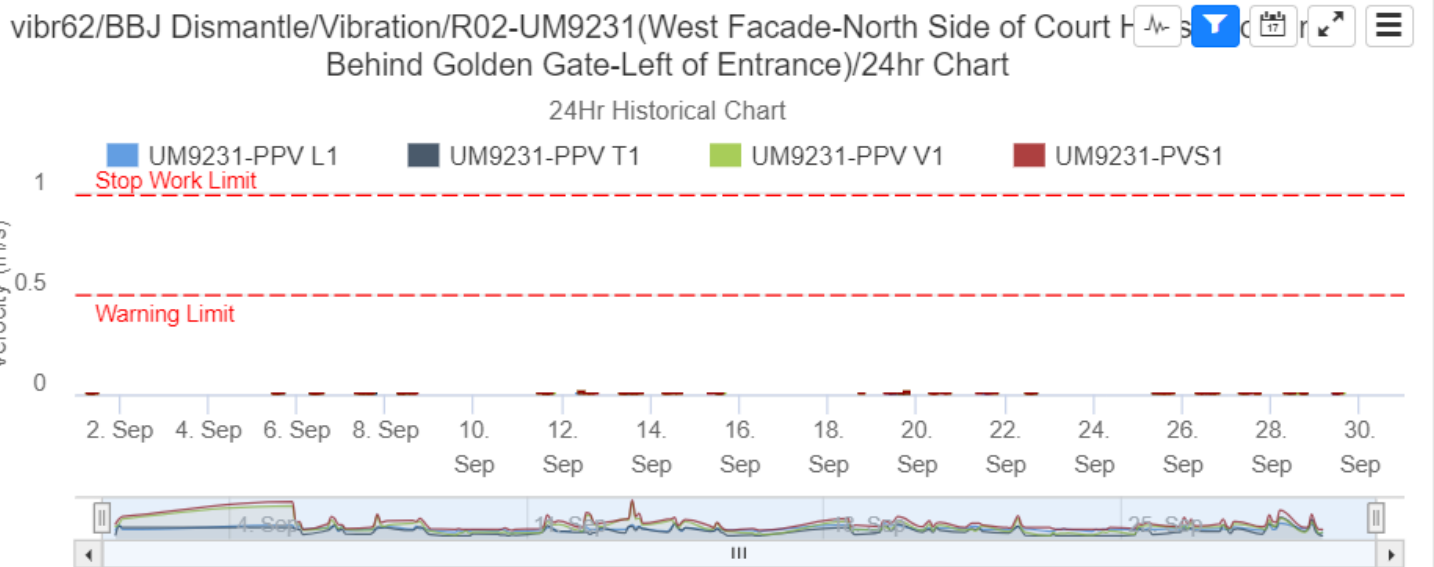
* The location of monitoring stations presented is referential. Air/Noise Monitoring station located in Sally Port area will be relocated in Phase 2.

	Vibration Monitoring Dismantle
	Air Monitoring Station Dismantle
	Noise Monitoring Station Dismantle
	Vibration Monitoring Sallyport construction (Installed)
	Vibration Monitoring Not installed

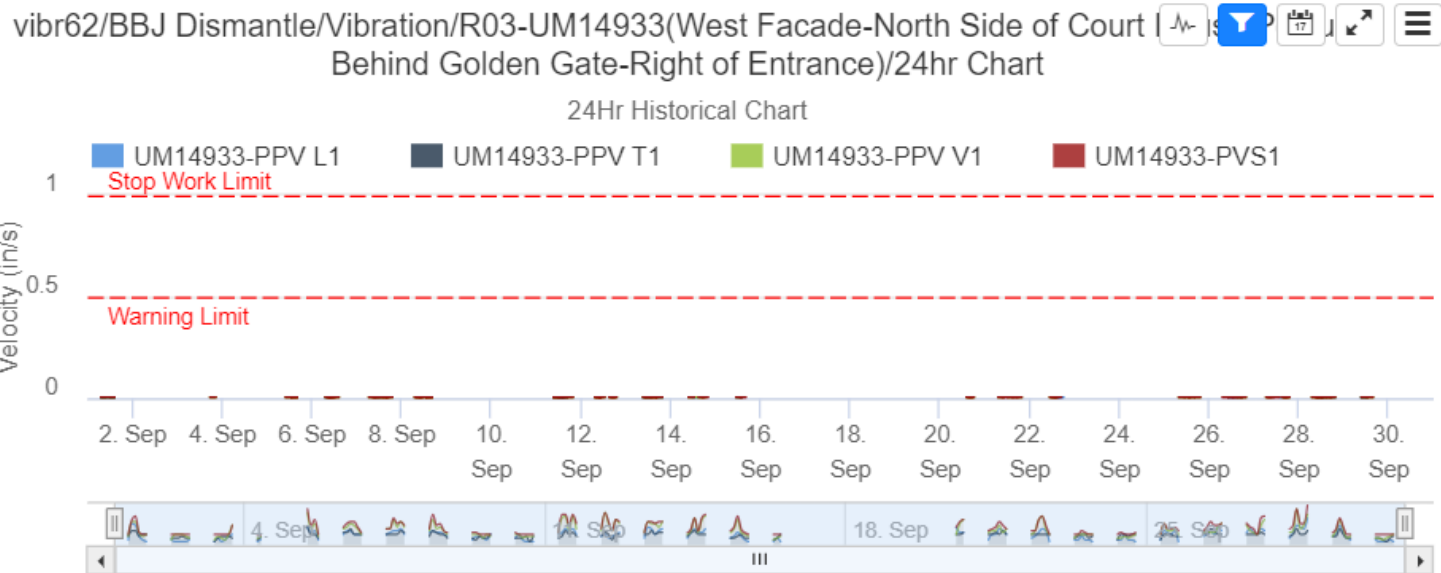
Vibration Monitor – (R01) September 23:



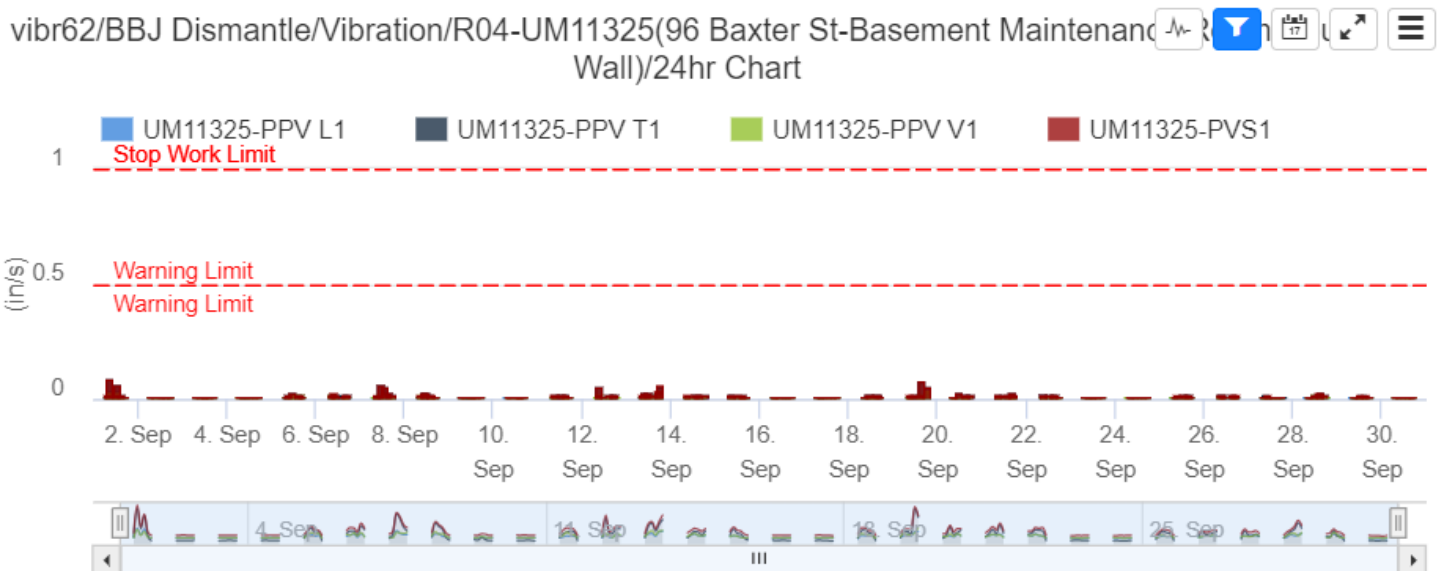
Vibration Monitor – (R02) September 23:



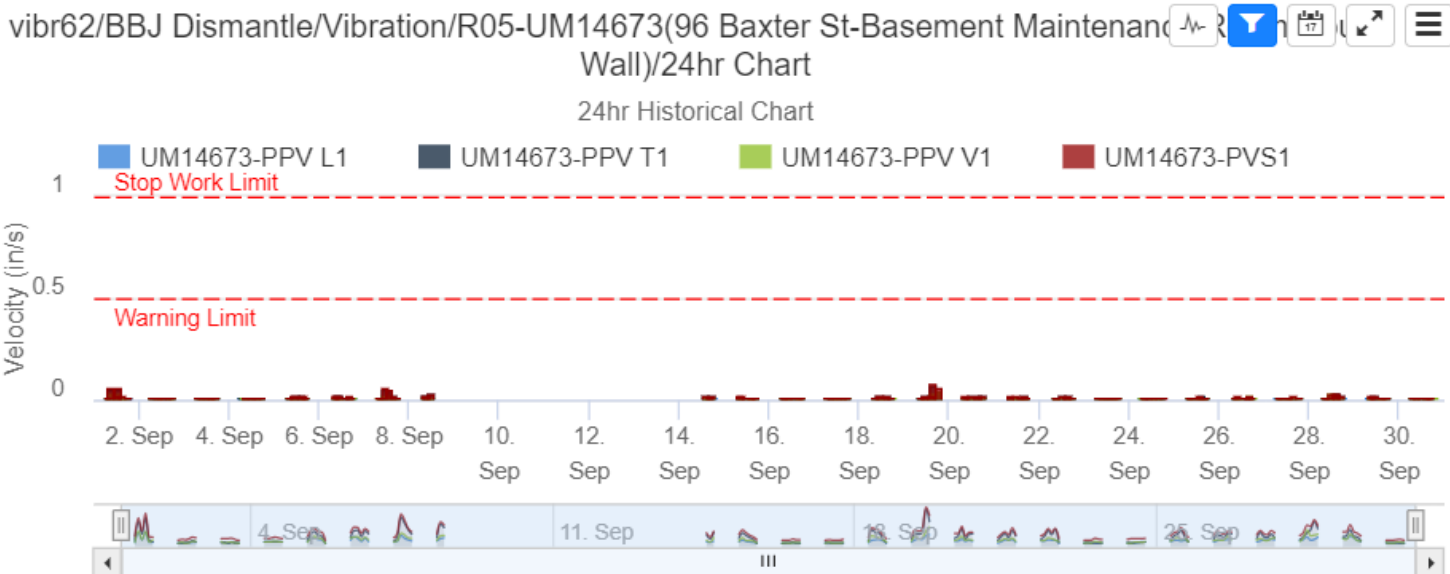
Vibration Monitor – (R03) September 23:



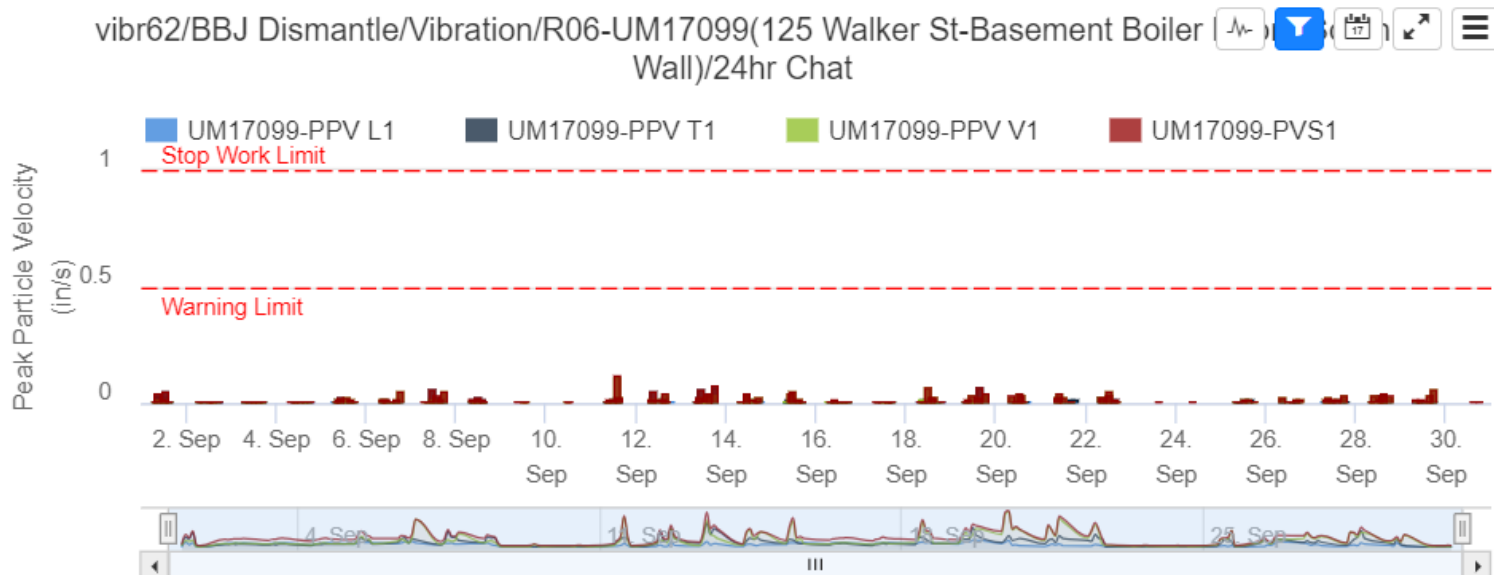
Vibration Monitor – (R04) September 23:



Vibration Monitor – (R05) September 23:

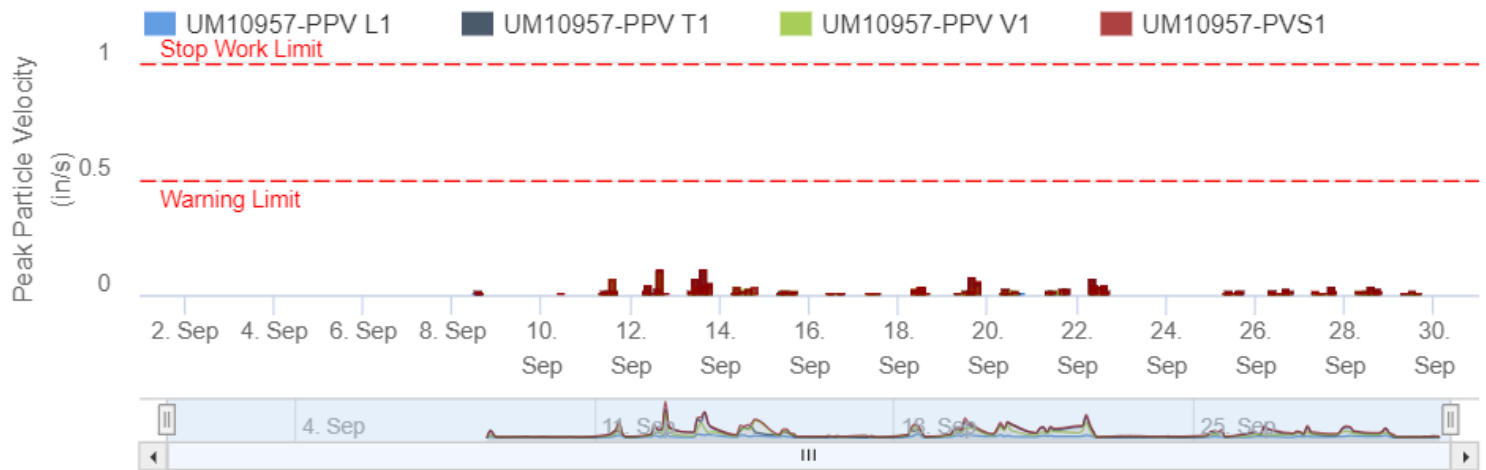


Vibration Monitor – (R06) September 23:



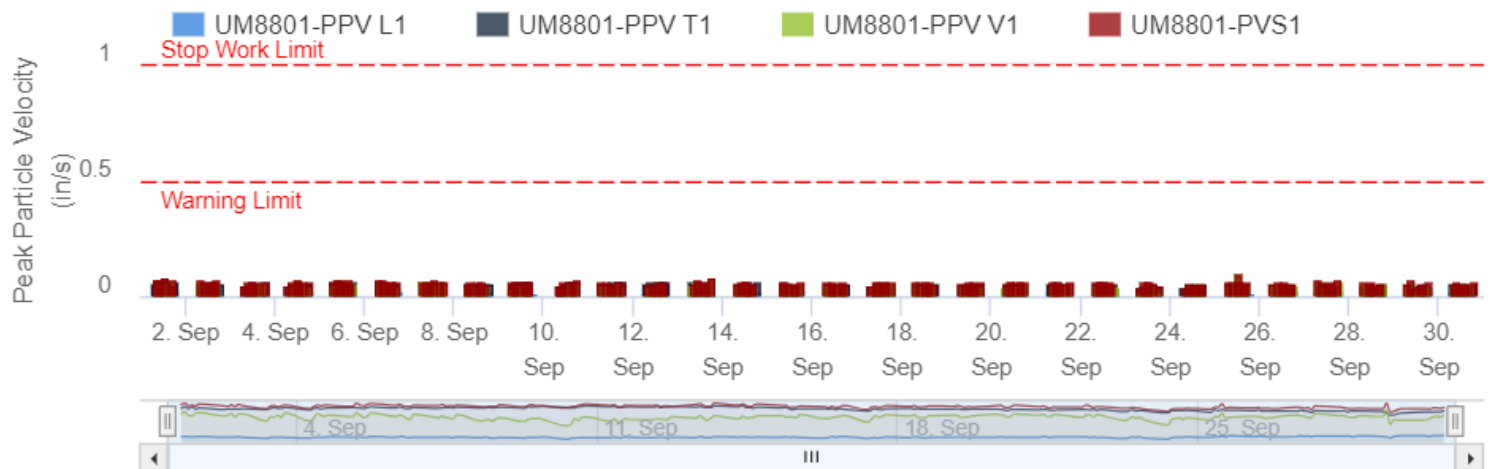
Vibration Monitor – (R07) September 23:

vibr62/BBJ Dismantle/Vibration/R07-UM10957(119 Walker St-1st Floor Emergency
South Wall)/24hr Chat

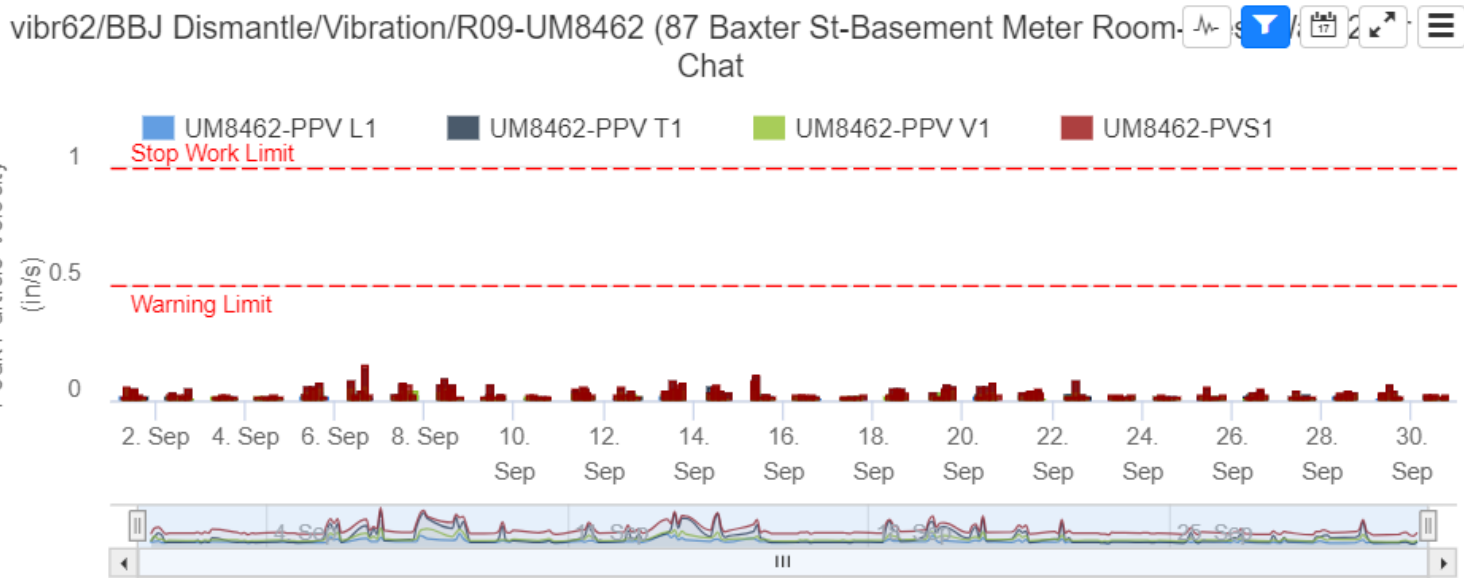


Vibration Monitor – (R08) September 23:

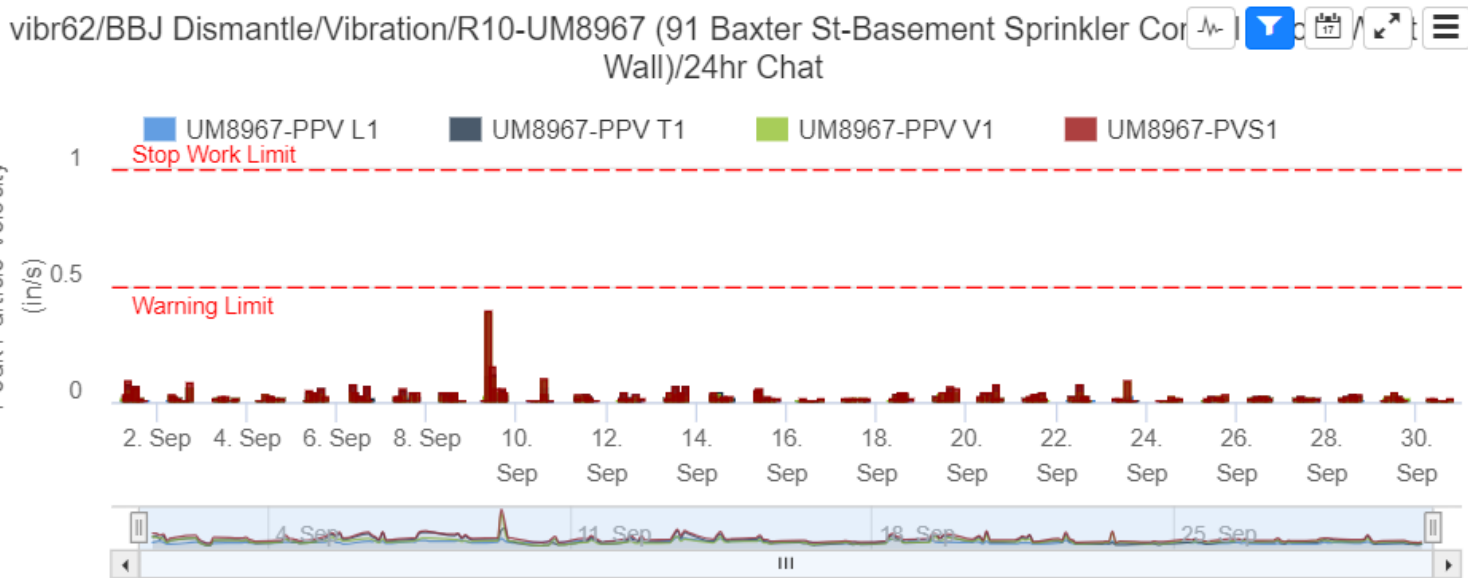
vibr62/BBJ Dismantle/Vibration/R08-UM8801 (137 Centre St-Basement Boiler
Wall)/24hr Chat



Vibration Monitor – (R09) September 23:

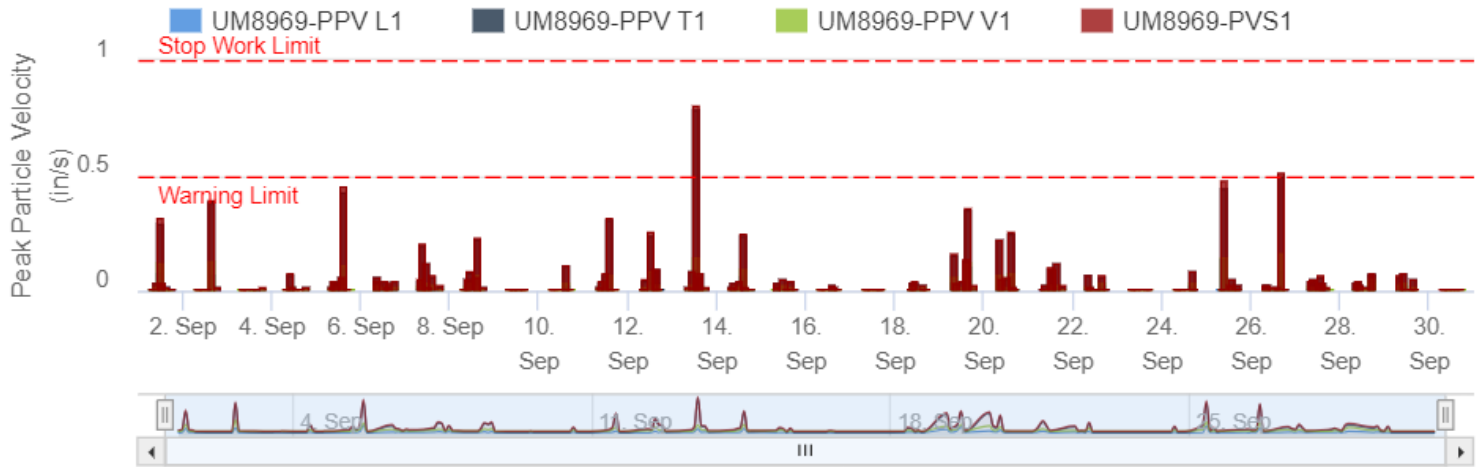


Vibration Monitor – (R10) September 23:



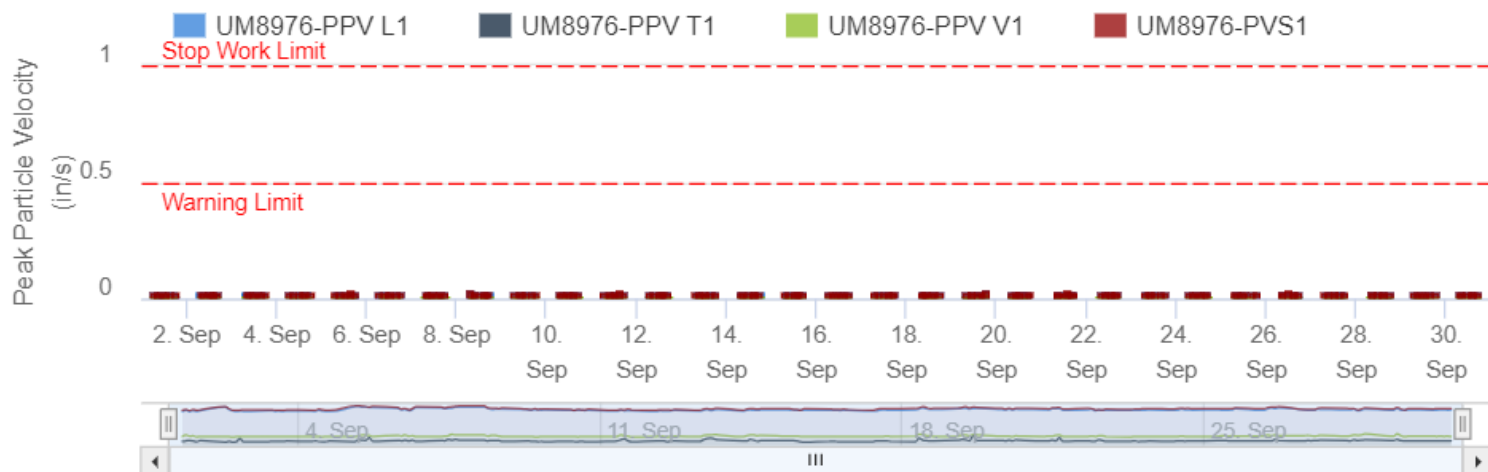
Vibration Monitor – (R11) September 23:

vibr62/BBJ Dismantle/Vibration/R11-UM8969 (125 White St- NYC Family Court- N West-Gym Area)/24hr Chat

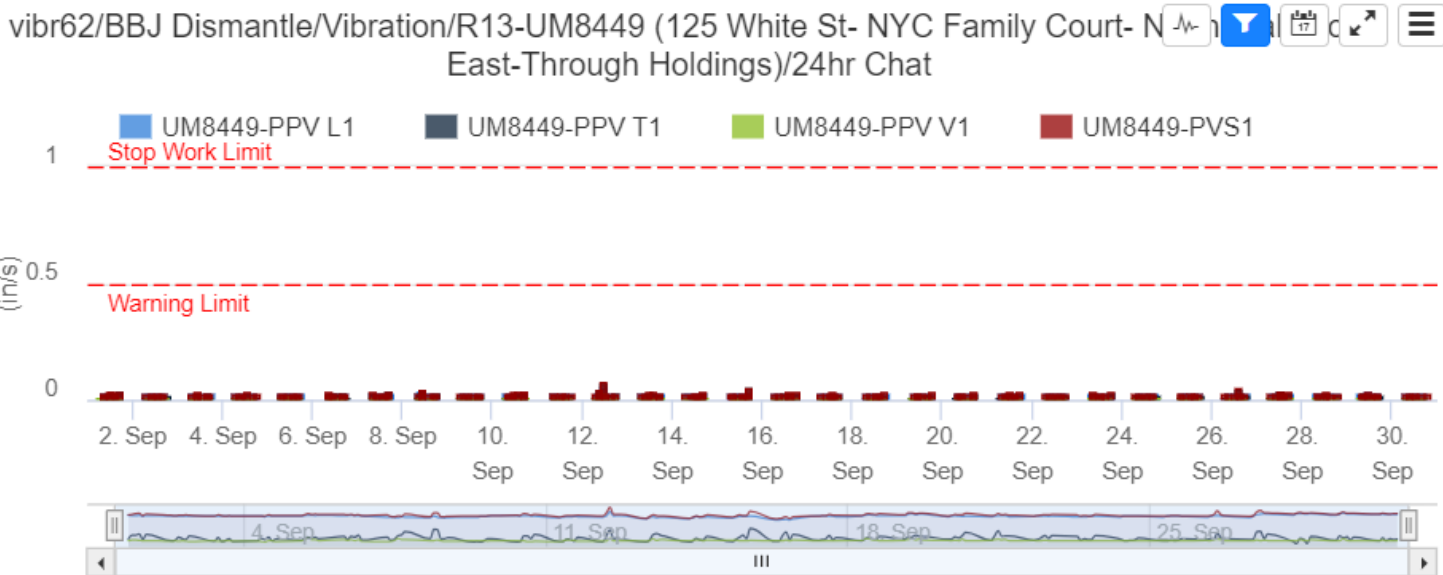


Vibration Monitor – (R12) September 23:

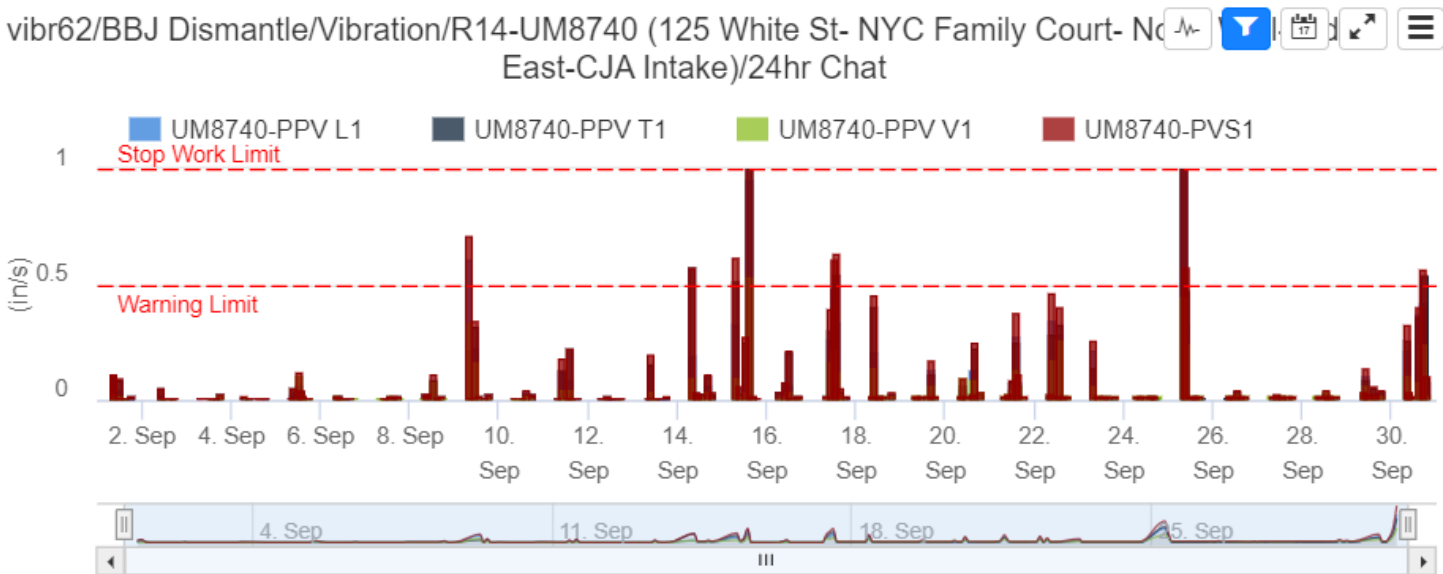
vibr62/BBJ Dismantle/Vibration/R12-UM8976 (125 White St- NYC Family Court- N West-Mechanical Room)/24hr Chat



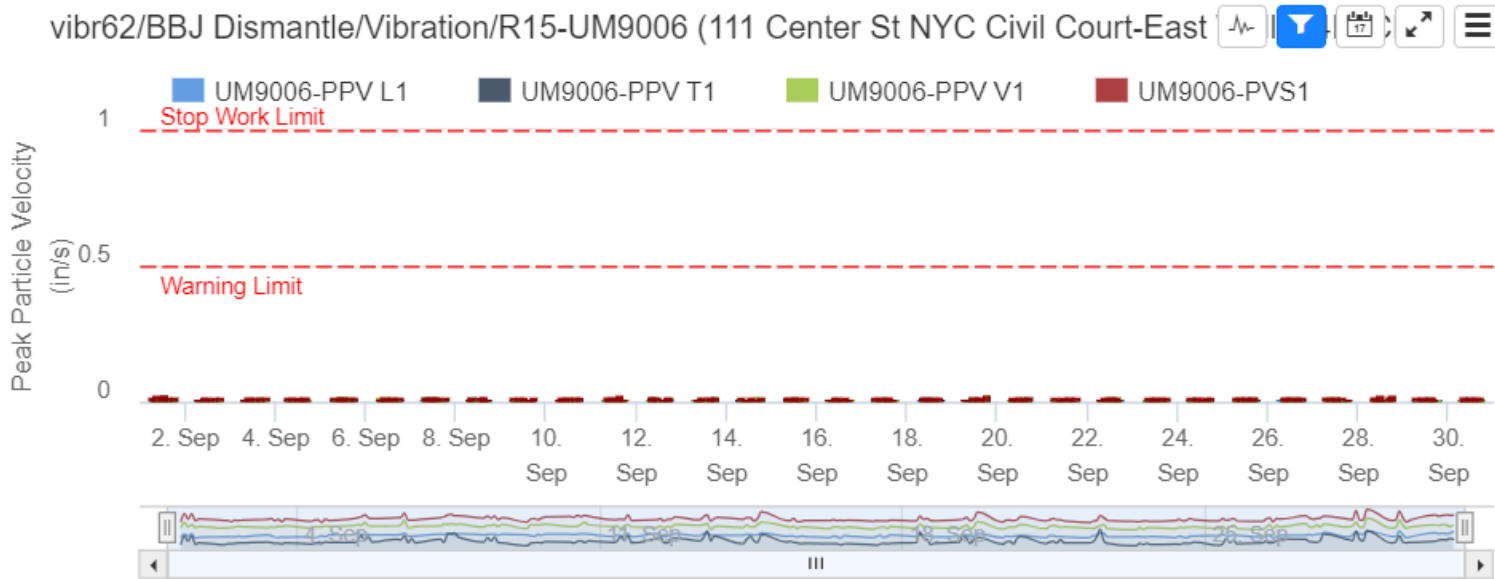
Vibration Monitor – (R13) September 23:



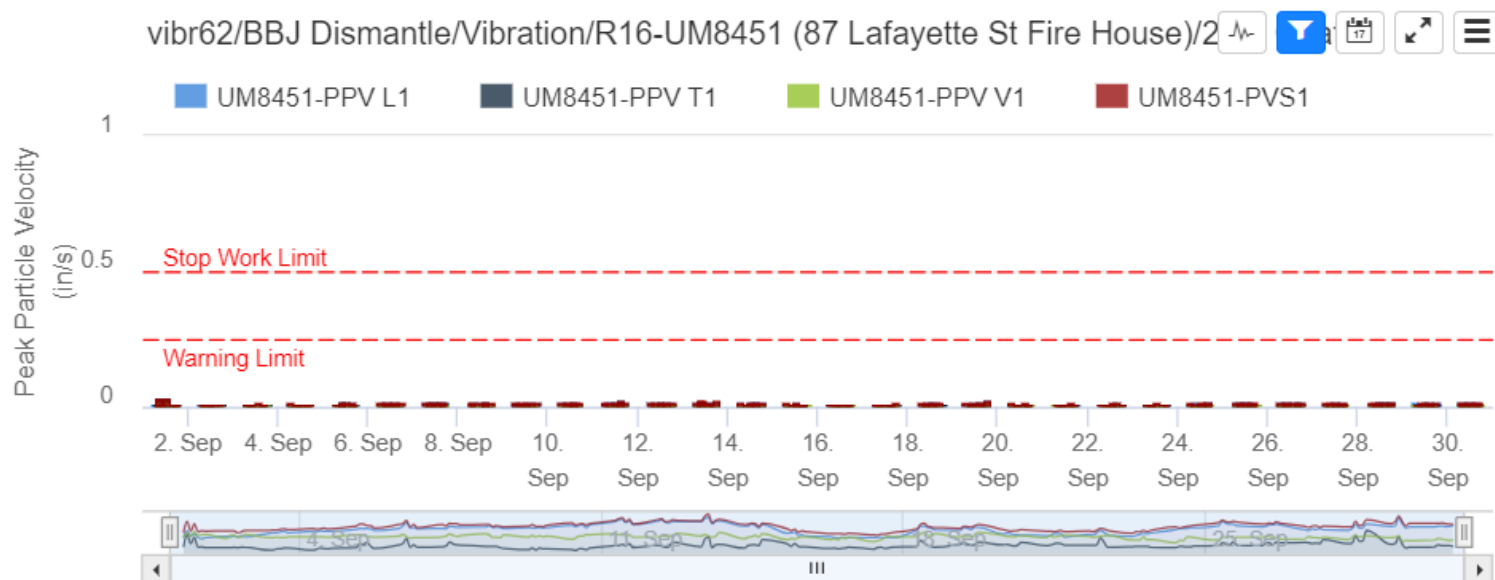
Vibration Monitor – (R14) September 23:



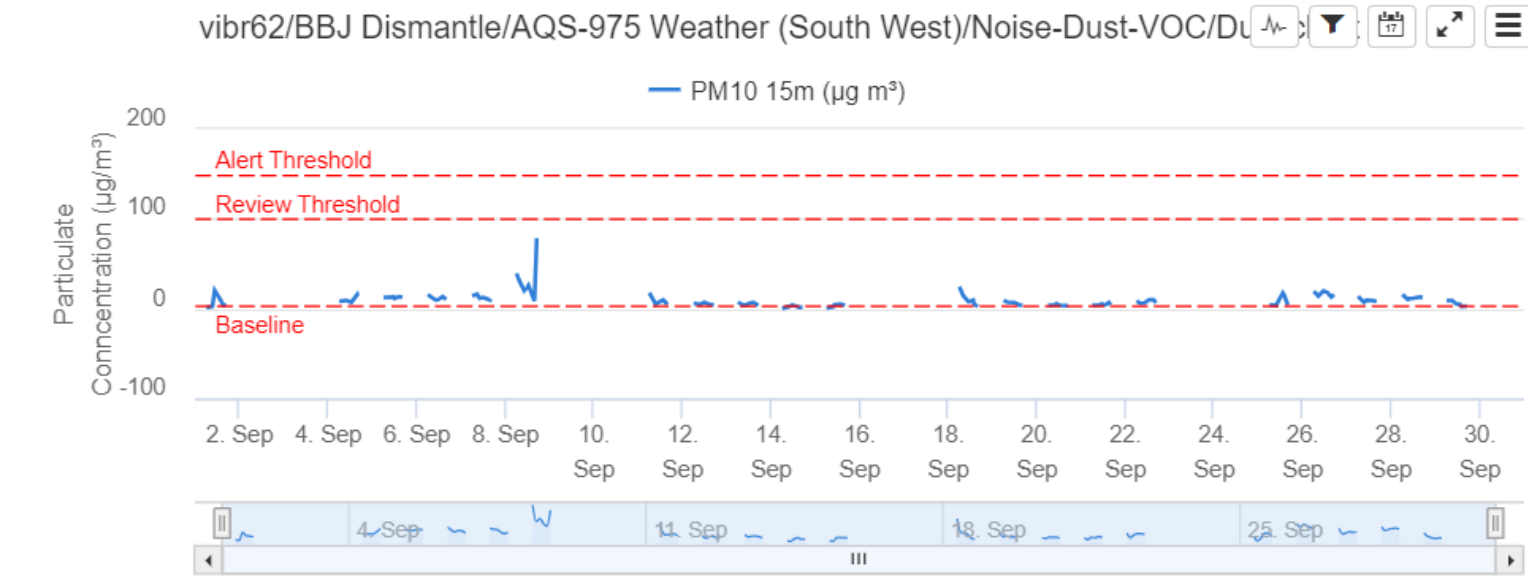
Vibration Monitor – (R15) September 23:



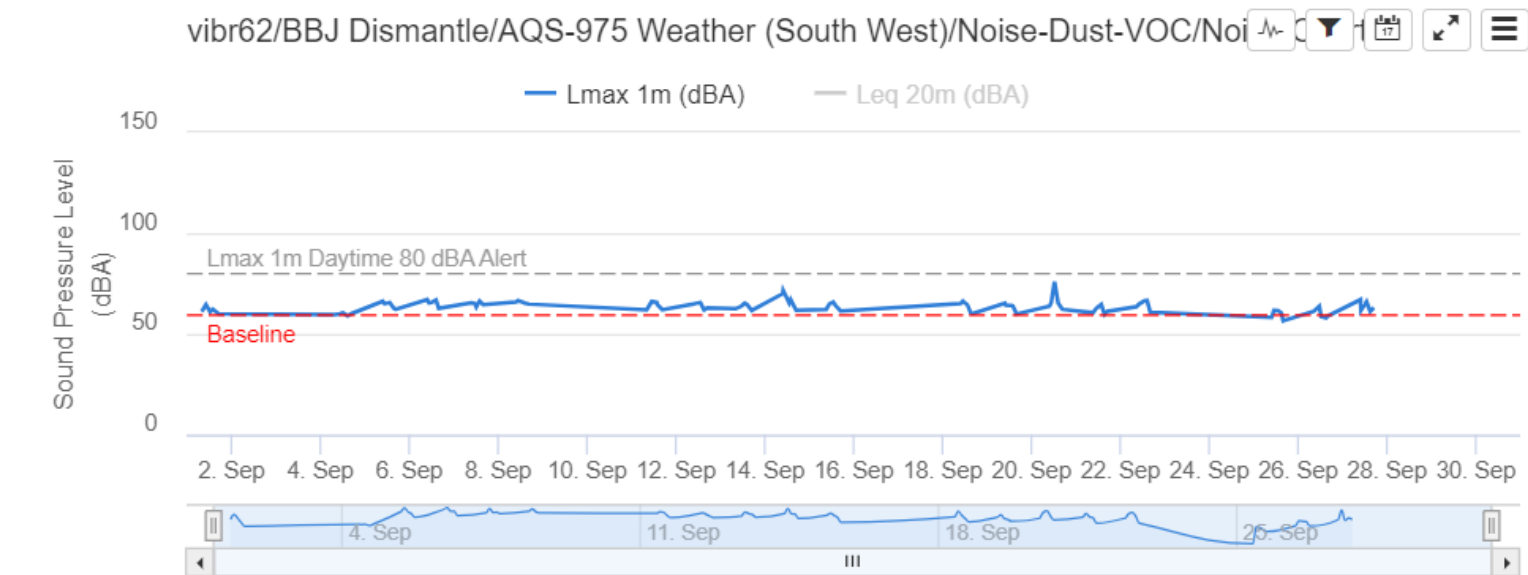
Vibration Monitor – (R16) September 23:



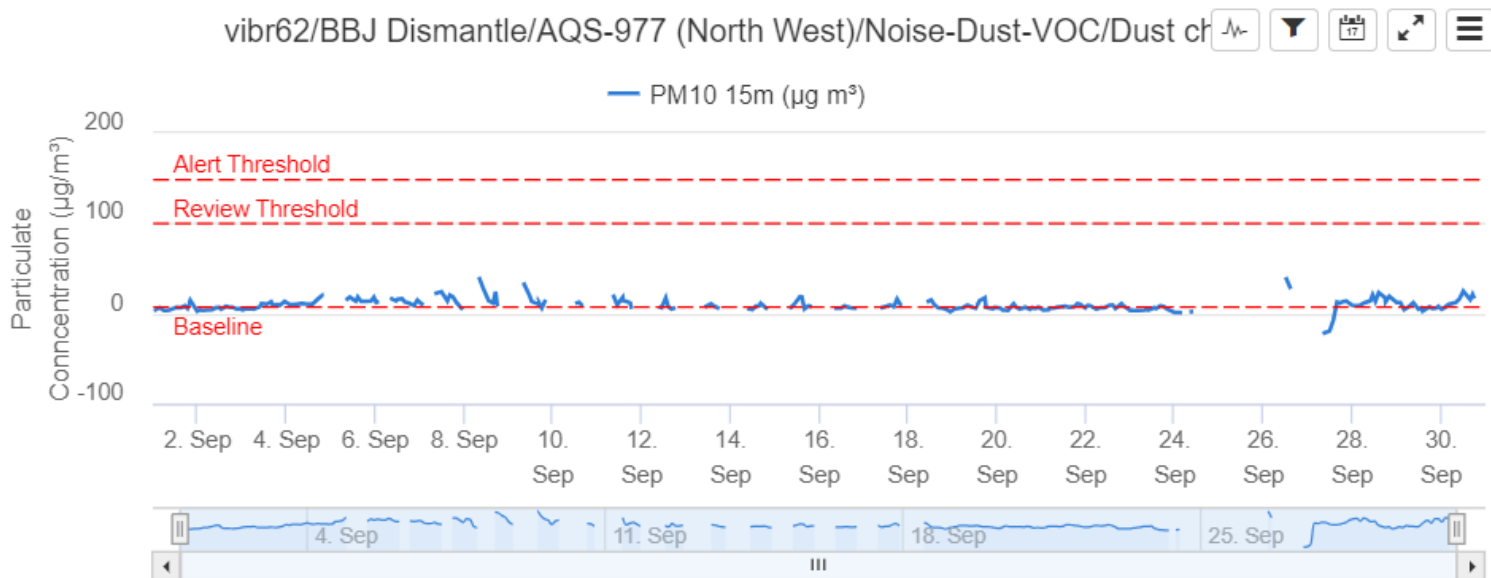
Air Quality Systems #975 – Dust Monitoring Station – September 23:



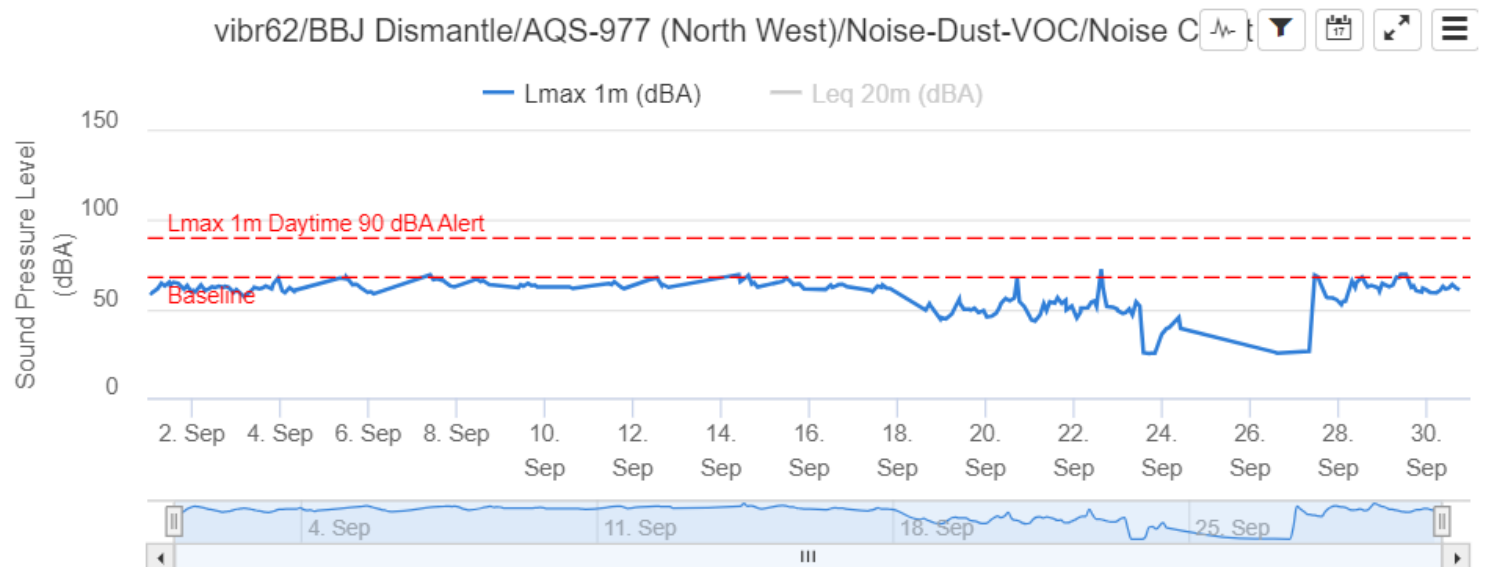
Air Quality Systems #975 – Noise Monitoring Station – September 23:



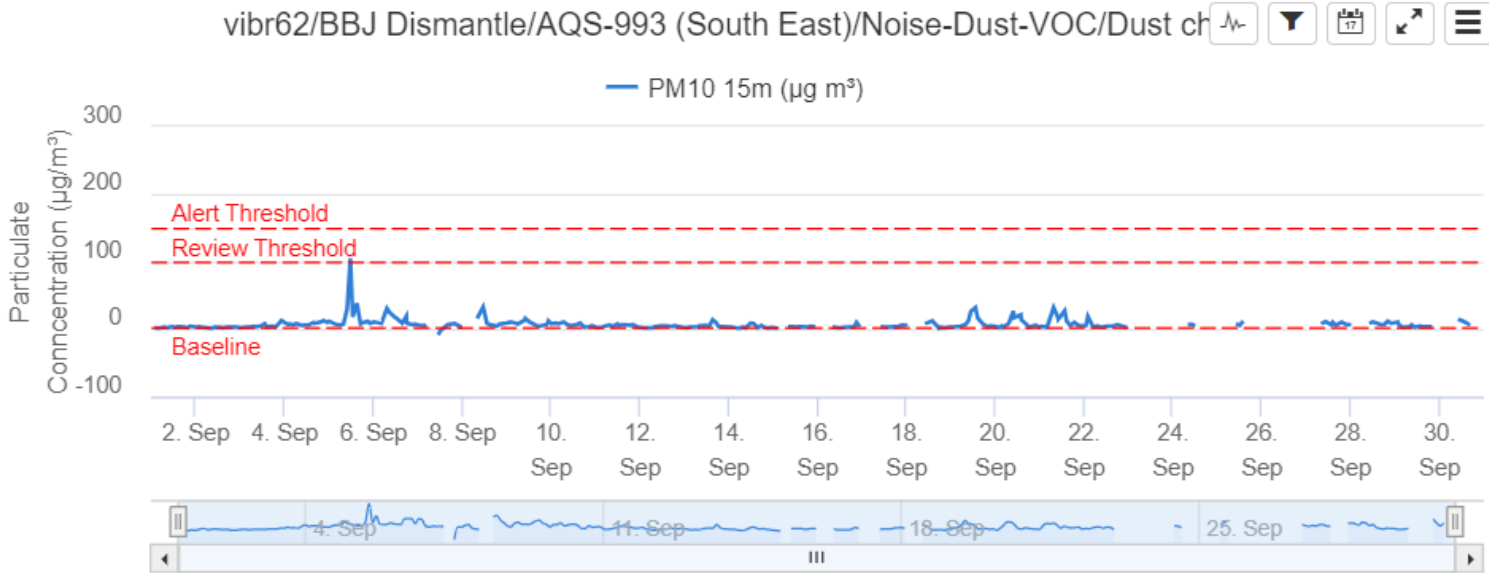
Air Quality Systems #977 – Dust Monitoring Station – September 23:



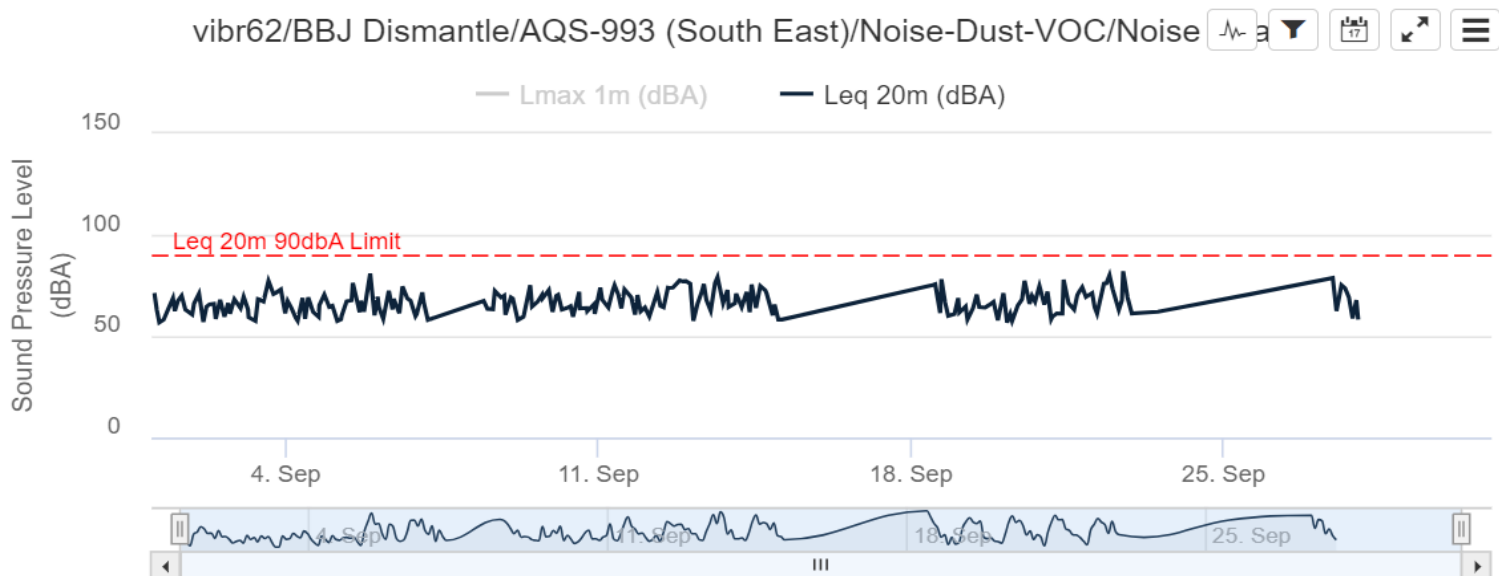
Air Quality Systems #977 – Noise Monitoring Station – September 23:



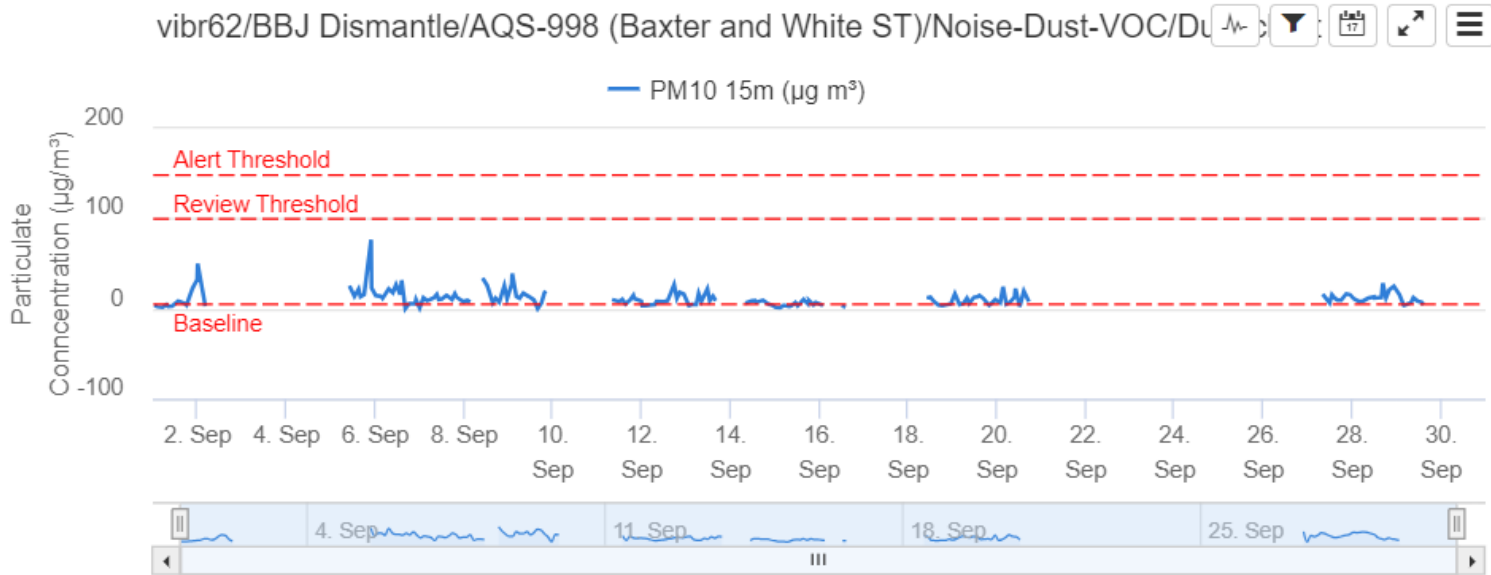
Air Quality Systems #993 – Dust Monitoring Station – September 23:



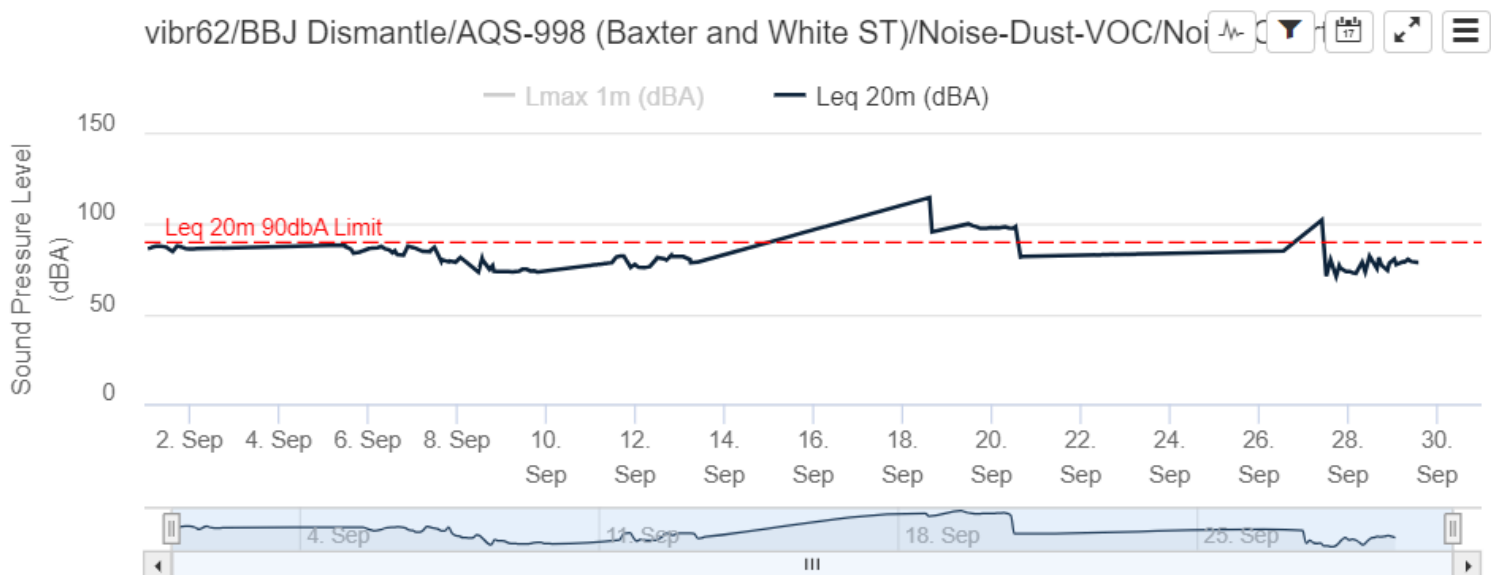
Air Quality Systems #993 – Noise Monitoring Station – September 23:



Air Quality Systems #998 – Dust Monitoring Station – September 23:

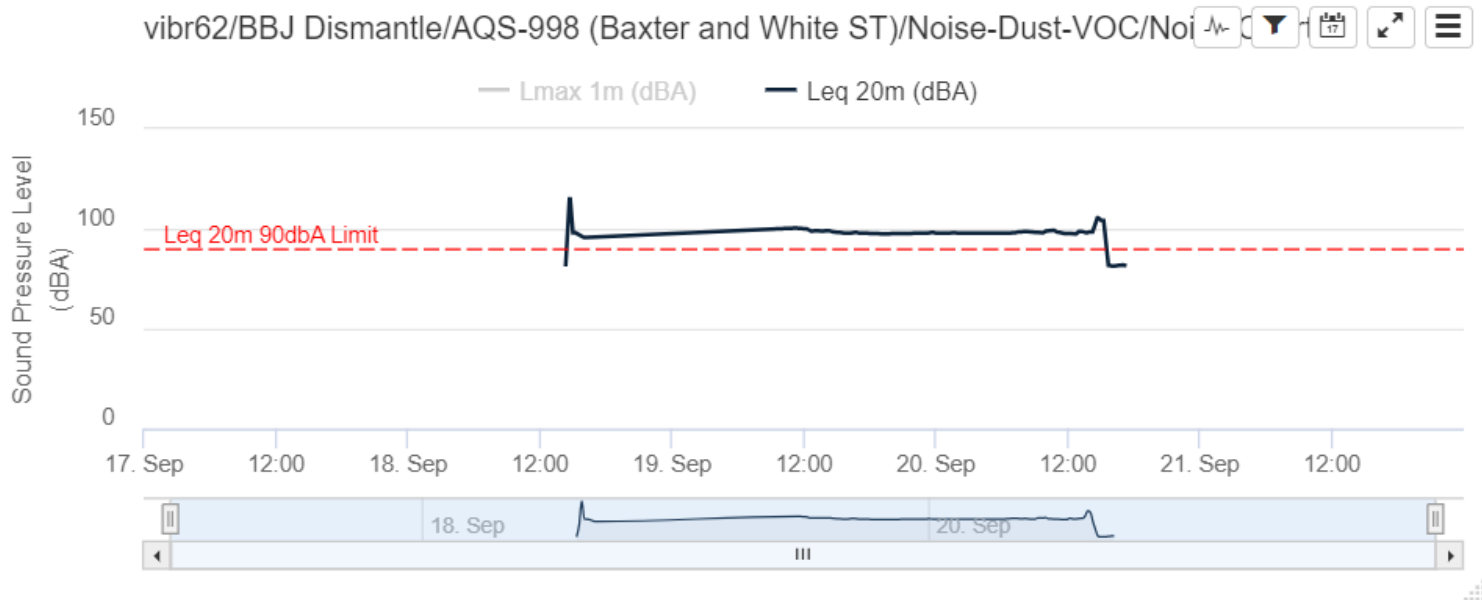


Air Quality Systems #998 – Noise Monitoring Station – September 23:

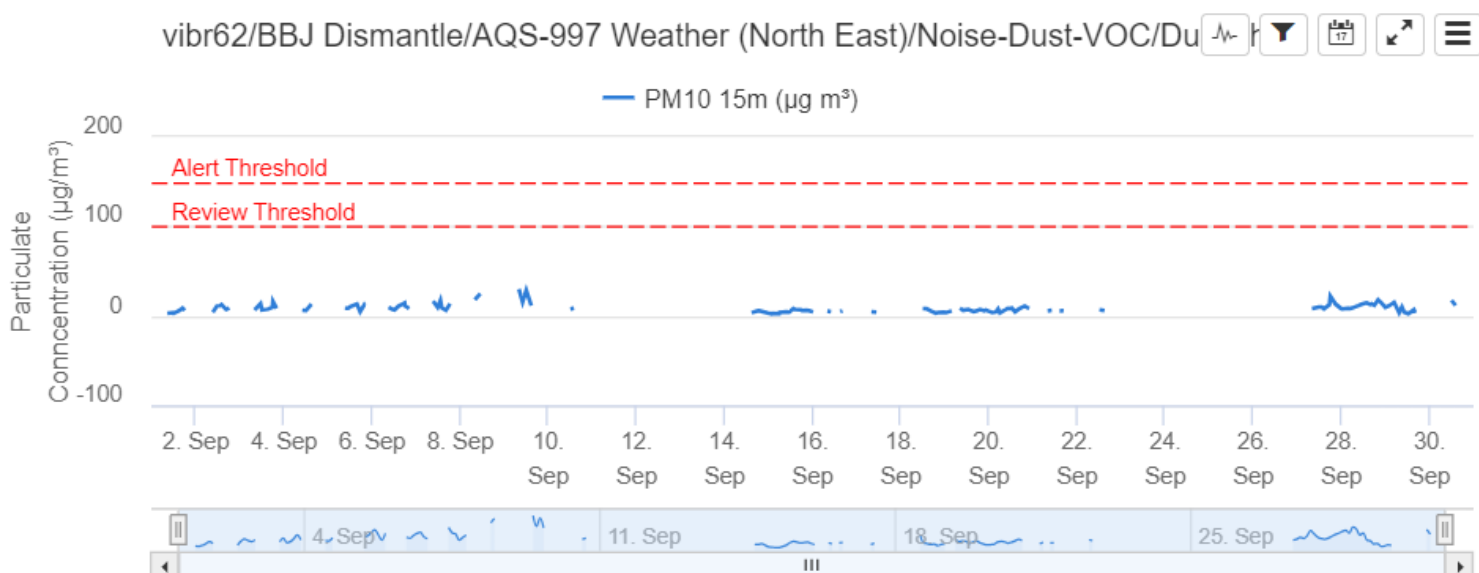


Air Quality Systems #998 – Noise Monitoring Station – September 23:

- Below is the graph displaying the flat line reading for AQS #998 when the microphone broke. As you can see from this graph it is not natural for four consecutive days to have the same noise level. As stated, Vibranalysis came to the site and remediated this issue by replacing the microphone. Data shown on graph above.



Air Quality Systems #997 – Dust Monitoring Station – September 23:



Air Quality Systems #997 – Noise Monitoring Station – September 23:

