

## AIR, NOISE AND VIBRATION MONTHLY MONITORING REPORT Number 017 – December 2023

Prepared By: Gramercy Group Inc.

DDC. Project ID	):	BBJ M DSS		Period Start: 12/01/23 End 12/31/23	
Project Name: N		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/m <sup>3</sup> - micrograms per cubic meter					
Number of Workdays ina Month	N	umber of Air Monitoring Days in a Month	Number of Days v Concentrations Action Concentra Month (100 ug/m <sup>3</sup> 15 minu	with Dust above ations by ute TWA)	Comments
21	31		0		There were zero days with dust concentration above action concentrations for the month of December. 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.
<b>Community Air</b> Action Concentration Stop Work Concentr concentration	<b>Mo</b> n =10 ration	nitoring Excursions and 00 ug/m³ 15 minute TWA above 1 = 150 ug/m³ 15 minute TWA a	d Corrective Actior e background concentra above background	<b>IS</b> Ition	
Date: Time	N B	laximum Dust Reading efore Corrective Action 15 Minute TWA (ug/m <sup>3</sup> )	Maximum Dust F After Corrective 15 Minute T (ug/m³)	Reading Action WA	Corrective Action
N/A	N/A		N/A		N/A



Narrative Summary of Air Monitoring, Excursions and Corrective Actions:

During the month of December 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. The batteries 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	31		14		Noise monitoring for the month of December 2023 had 27 instances where we had readings greater than the threshold. Although we had recorded 27 exceedances, it was found after investigations that only 4 alerts were caused by construction activity. Below you will see explanations for all 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: Tim	ie	Maximum Noise before Corrective (dBA)	Reading e Action	Maximum Noise Reading after Corrective Action (dBA)	Corrective Action
AQS #975 – 12/15/23 @ 5:30 AM		92.9 dBA		63.6 dBA	No corrective action at this time. This is before working hours. We were also not performing work in this area.
AQS #975 – 12/15/23 @ 9:00 AM		101.2 dBA		64.4 dBA	No corrective action at this time. We were not performing any work in this area. DOC buses siren / gate siren triggered the alert.
AQS #975 – 12/19/23 @ 3:00 AM		94.5 dBA		59.1 dBA	No corrective action at this time. This was before working hours. We are also not performing work in this area.
AQS #975 – 12/19/23 @ 7:00 AM		111.0 dBA		79.4 dBA	No corrective action at this time. We were not performing work in this area. DOC buses siren / gate siren triggered the alert.



AQS #975 – 12/19/23 @ 3:00 PM	107.9 dBA	82.9 dBA	No corrective action at this time. We were not performing work in this area. DOC buses siren / gate siren triggered the alert.
AQS #975 – 12/20/23 @ 10:00 AM	96.3 dBA	77.2 dBA	No corrective action at this time. We were not performing work in this area. DOC buses siren / gate siren triggered the alert.
AQS #975 – 12/21/23 @ 3:00 AM	95.6 dBA	80.1 dBA	No corrective action at this time. This was before working hours. We are also not performing any work in this area.
AQS #975 – 12/21/23 @ 7:30 AM	105.8 dBA	87.0 dBA	No corrective action at this time. We were not performing work in this area.DOC buses siren / gate siren triggered the alert.
AQS #975 – 12/21/23 @ 10:00 AM	100.0 dBA	80.8 dBA	No corrective action at this time. We were not performing work in this area.DOC buses siren / gate siren triggered the alert.
AQS #975 – 12/21/23 @ 1:00 PM	105.1 dBA	76.2 dBA	No corrective action at this time. We were not performing work in this area.DOC buses siren / gate siren triggered the alert.
AQS #975 – 12/21/23 @ 6:00 PM	104.3 dBA	63.5 dBA	No corrective action at this time. We were not performing work in this area and this was after working hours.
AQS #975 – 12/21/23 @ 8:00 PM	110.8 dBA	70.4 dBA	No corrective action at this time. We were not performing work in this area and this was after working hours.
AQS #975 – 12/23/23 @ 12:00 PM	99.6 dBA	73.3 dBA	No corrective action at this time. We were not performing work in this area and this was over the weekend on a Saturday.
AQS #975 – 12/23/23 @ 8:00 PM	95.9 dBA	76.8 dBA	No corrective action at this time. We were not performing work in this area and this was over the weekend on a Saturday.
AQS #975 – 12/30/23 @ 11:00 AM	114.1 dBA	71.8 dBA	No corrective action at this time. We were not performing work in this area and this was over the weekend on a Saturday.
AQS #975 – 12/31/23 @ 1:30 AM	112.7 dBA	94.0 dBA	No corrective action at this time. We were not performing work in this area and this was over the weekend on a Sunday.
AQS #975 – 12/31/23 @ 8:30 AM	114.1 dBA	94.1 dBA	No corrective action at this time. We were not performing work in this area and this was over the weekend on a Sunday.
AQS #975 – 12/31/23 @ 5:00 PM	111.5 dBA	63.4 dBA	No corrective action at this time. We were not performing work in this area and this was over the weekend on a Sunday.
AQS #975 – 12/31/23 @ 10:00 PM	109.6 dBA	94.5 dBA	No corrective action at this time. We were not performing work in this area and this was over the weekend on a Sunday.
AQS #998 – 12/04/23 @ 1:21 PM	98.7 dBA	77.4 dBA	No corrective action at this time. We responded to the alert to find heavy traffic and an ambulance stuck in traffic directly next to the monitor.
AQS #998 – 12/05/23 @ 1:27 PM	92.0 dBA	74.4 dBA	This alert was due to our mechanics repairing a pin on one of the arms of our excavator. A sledgehammer being used to hammer in / out the pins. The machine was directly next to the monitor thus triggering an alert. The corrective action going forward will be to avoid servicing equipment in this area directly next to the monitor. Hammering of the pins is something we can't avoid doing if machine needs this type of repair done.
AQS #998 – 12/06/23 @ 2:02 PM	100.6 dBA	77.8 dBA	This alert was due to us loading and sorting debris. We spoke to our operator and let him know we were above threshold and to be more cautious of the sound while crushing debris and loading containers. After speaking



			to him the noise level went back down to below the threshold.
AQS #998 – 12/06/23 @ 6:42 PM	99.3 dBA	82.5 dBA	No corrective action at this time. We were not performing work in this area and this was after working hours.
AQS #998 – 12/07/23 @ 8:20 PM	91.1 dBA	72.7 dBA	No corrective action at this time. We were not performing work in this area and this was after working hours.
AQS #998 – 12/12/23 @ 11:20 AN	191.3 dBA	75.0 dBA	This alert was due to us loading and sorting debris. We spoke to our operator and let him know we were above threshold and to be more cautious of the sound while crushing debris and loading containers. After speaking to him the noise level went back down to below the threshold.
AQS #998 – 12/14/23 @ 2:00 PM	91.2 dBA	73.3 dBA	This alert was due to us loading and sorting debris. We spoke to our operator and let him know we were above threshold and to be more cautious of the sound while crushing debris and loading containers. After speaking to him the noise level went back down to below the threshold.
AQS #998 – 12/28/23 @ 1:41 AM	91.0 dBA	77.0 dBA	No corrective action at this time. We were not performing work in this area, and this was before working hours.

Narrative Summary of Noise Monitoring, Excursions and Corrective Actions:

During the month of December 2023, we experienced noise levels greater than the alert threshold at times. Above you will see the monitors that had alerted us with dates and times. As you can see from the corrective action explanations, most of the alerts were not caused by construction activity. AQS #975 is located on Centre Street right near the traffic light / DOC sallyport where the DOC buses use their sirens to signal that they are outside the gate. Depending on how close they are to the monitor this siren will set it off and cause an alert. On top of the DOC buses sounding off the alarms to signal to the control booth they have arrived, the gate itself has a siren that sounds to alert DOC personnel that the Sally Port gate is opening, and a bus is either arriving or departing. AQS #998 experienced noise levels above threshold 8 times during the month. Four out of the eight alerts were caused by construction activity. Explanations for these exceedances are in the corrective action column above. Overall, the noise levels for an A-weighted average 8-hour workday were below the threshold for each day of the month of December.

3) Community Vibration Monitoring Monthly Summary Inches per second (in/sec)				
Number of Workdays ina Month	Number of Vibration Monitoring Days in a Month	Number of Days with Vibration Levels above Action Levels by Month (in/sec)	Comments	
21	31	0	During the month of December there were zero instances where vibration levels exceeded the stop work threshold. Below you will see on the graph for vibration monitor R14 that there are two instances that are just about touching the stop work limit of 1.0 (in/sec). Both were just under 1.0 (in/sec). The second spike on the chart that looks to be touching the stop work limit line gave a reading of 0.987 (in/sec). Neither were caused by construction. This is the monitor that is in CJA intake area and inmates, and officered walk passed it and bump into it from time to time. Vibration monitoring was continued everyday of the	



			week even when we are not working.
Community Vibration M Action Level = 0.5 in/sec Stop Work Level = 1.0 in/sec	Ionitoring Excursions an	d Corrective Actions	
Date: Time	Maximum Vibration Level before Corrective Action (in/sec)	Maximum Vibration Level after Corrective Action (in/sec)	Corrective Action
N/A	N/A	N/A	N/A
Narrative Summarv of Vi	bration Monitoring. Excurs	ions and Corrective Actio	ons:
During the Month of December 2023, there were zero vibration monitor exceedances. All monitors showed results of vibration being under the stop work limit of 1.0 (in/sec), so there was no need for corrective action at this time.			

## **ATTACHMENTS:**

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

Glossary of Terms				
Terms	Descriptions			
Warning Alerts	Warning limit line for vibration monitors is not an indication to stop work. This is to notify DB team to assess the operation an know that we are causing vibration, but not anything exceeding limits and to monitor this area more closely.			
After Hours Alert	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			
Units of Measures	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			
Action Level	eployer 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.			
Ambient Sound	The total amount of all noise present at a particular place and time in the environment at the point of			
Leq	Equivalent continues sound pressure level. A measure of the average sound pressure level during a period of time,			
Fine Particles (PM 2.5)	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.			



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## 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.



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#### Vibration Monitor – (R04) December 23:



## Vibration Monitor – (R05) December 23:





## Vibration Monitor – (R06) December 23:



## Vibration Monitor – (R07) December 23:





#### Vibration Monitor – (R08) December 23:



## Vibration Monitor – (R09) December 23:





#### Vibration Monitor – (R10) December 23:



## Vibration Monitor – (R11) December 23:





#### Vibration Monitor – (R12) December 23:



#### Vibration Monitor – (R13) December 23:

vibr62/BBJ Dismantle/Vibration/R13-UM8449 (125 White St- NYC Family Court- North Wall-Most 🖅 🗇 🖃 🚍 Holdings)/24hr Chat





#### Vibration Monitor – (R14) December 23:



## Vibration Monitor – (R15) December 23:





#### Vibration Monitor – (R16) December 23:



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





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



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





#### <u>Air Quality Systems #977 – Noise Monitoring Station – December 23:</u>



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





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



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





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



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





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

