

# AIR, NOISE AND VIBRATION MONTHLY MONITORING REPORT

Prepared By:

Hajeong Lim (HRCG)

DDC Project No.: BBJ Q DSS Period Start: 12/01/23 End 12/31/23

**DDC Pin No.:** 8502020CR0046P

Project Name: NYC Borough Based Jails System - Queens Dismantle and Swing Space

## 1) Community Air Monitoring Monthly Status Summary

TWA – Time Weighted Average mg/m³- milligrams 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 (0.1 mg/m³ 15 minute TWA)	Comments
25	22	None	Daily air monitoring was not conducted on two Saturdays when there was only abatement work and no structural dismantle work, and one day when it rained.

## **Community Air Monitoring Monthly Excursions and Corrective Actions**

Action Concentration = 0.100 mg/m<sup>3</sup> 15 minute TWA above background concentration\* Stop Work Concentration = 0.150 mg/m<sup>3</sup> 15 minute TWA above background concentration\*

\* Background concentration values vary daily. See Prestart/Background Condition Level in the attached graphs.

Date: Time	Maximum Dust Reading Before Corrective Action 15 Minute TWA (mg/m³)	Maximum Dust Reading After Corrective Action 15 Minute TWA (mg/m³)	Corrective Action
N/A	N/A	N/A	N/A

Narrative Summary of Air Monitoring, Excursions and Corrective Actions:

In 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.

The Design Builder, Hunter Roberts Construction Group, in conjunction with the Design Builder'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

Units to be a weighted decibels (dBA) level

Office to be a wel	grica accideis (adA) ievei		
Number of Workday s in a Month	Number of Noise Monitoring Days in a Month	Number of Days with Noise Levels above Action Levels by Month	Comments



25		8		1 noise mini		than required minimum biweekly follow-up to monitoring for Dismantle Phase IV and mum five days at the beginning of Dismantle to V was conducted in this month.
Community Noise Monitoring Monthly Excursions and Corrective Actions  Noise Monitoring Location 1 Action Level (Day – 7 am to 5 pm / Night – 5 pm to 7 am): 75 / NA  Noise Monitoring Location 2 Action Level (Day – 7 am to 5 pm / Night – 5 pm to 7 am): 75 / NA  Noise Monitoring Location 3 Action Level (Day – 7 am to 5 pm / Night – 5 pm to 7 am): 69 / 68  Noise Monitoring Location 4 Action Level (Day – 7 am to 5 pm / Night – 5 pm to 7 am): 65 / 55  Noise Monitoring Location 5 Action Level (Day – 7 am to 5 pm / Night – 5 pm to 7 am): 68 / 67						5 / NA 5 / NA 9 / 68 5 / 55
Date Time	Loca tion	Maximum Noise Reading before Corrective Action (dBA)	Maximum Reading Correct Action (	after tive	Baseline Noise Level Day/Night (dBA)	Corrective Action
Dec 11 11:11 am	3	69.1	N/A		69 (Day)	N/A. This exceedance event by 0.1 dBA was caused by traffic noise from Van Wyck Express Way.
Narrativ	e Sun	nmary of Noise Monitor	ina. Excursi	ons and	Corrective Action	ns:

Narrative Summary of Noise Monitoring, Excursions and Corrective Actions:

Throughout December 2023, noise levels remained below the set thresholds at all five locations except one event on 12/11 due to traffic noise from Van Wyck Express Way. Dismantle-related activities in the month stayed within or below the warning limit at various locations. No corrective actions were required as noise levels didn't surpass the limits due to ongoing dismantle activities.

Nighttime Action Levels are established for three residential location, location #3, #4, and #5, in case dismantling activities are performed between 5 pm and 7 am.

3) Commun Units (in/sec)	3) Community Vibration Monitoring Monthly Summary  Units (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	Comments			
25	25	3				

# **Community Vibration Monitoring Monthly Excursions and Corrective Actions**

Alert / Action Level = 0.3 in/s Stop Work Level = 0.5 in/s

Date: Time	Maximum Vibration Level before Corrective Action (in/s)	Exceedance Duration	Maximum Vibration Level Followed Exceedance without Corrective Action (in/s)	Corrective Action
Dec.19, 9:34 am at VM1 by Family Justice Center	0.507	< 30 sec	< 0.05	N/A. There was no active dismantle work at this time. Scaffold workers were removing scaffold around the Queens Detention Center near the Family Justice Center. The exceedance lasted for less than 30 seconds and were preceded and followed by a PPV less than 0.05 in/sec each time. Consequently, the event was likely the result of direct contact with the transducer on site rather than vibrations in the structure.



Dec 26 around 10:00 am at VM1 by Family Justice Center	> 0.5	< 30 sec	< 0.01	N/A. AKRF picked up the monitor and changed the batteries. This exceedance was caused by a direct contact by AKRF staff when changing batteries. Not
Dec 26 around 10:00 am at VM2 by DA Wing	> 0.5	< 30 sec	< 0.01	caused by dismantle activities.

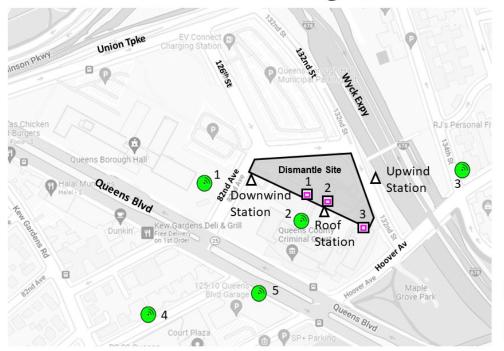
Narrative Summary of Vibration Monitoring, Excursions and Corrective Actions:

During the Month of December 2023, there was Zero vibration monitor exceedance caused by dismantle activities. All monitors showed results of vibration did not exceed the warning threshold of 0.3(in/sec) / stop work threshold of 0.5 (in/sec), except 12/19 when the vibration monitoring equipment #1 by Family Justice Center was contacted by scaffold workers, and 12/26 when the vibration monitoring equipment #1 by Family Justice Center vibration monitoring equipment #2 by DA Wing were was contacted by the AKRF staff to replace the batteries of the equipment.

#### **ATTACHMENTS:**

- 1 Map of Monitoring Station/Locations
- 2 Baseline Reference
- 3 Data Plots

# **Environmental Monitoring Queens – 12/23/23**



On 12/23/2023 per DDC/PMC's request, Upwind Station was relocated to Roof Station at DA Wing.

Vibration Monitor (VM)

▲ Air Monitoring Station (DM)

Noise Monitoring Station (NM)



## Noise Threshold Limits in dBA - Baseline Survey April 2022

## Construction Noise Threshold Limits in dBA

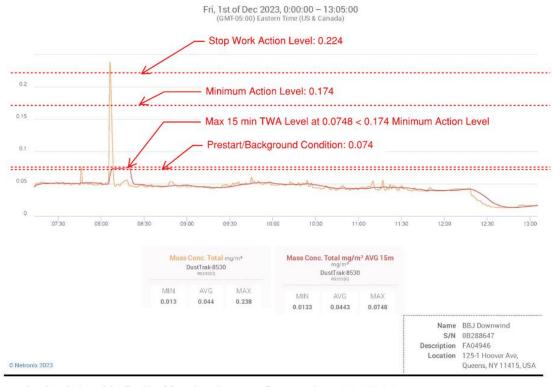
Location	Daytime Leq	Nighttime Leq
Adjacent to the easternmost façade of Queens Borough Hall	75	N/A
At the southwestern corner of the DA Wing	75	N/A
At the residences along 134th Street between 82nd Avenue and Hoover Avenue	69	68
At the residences on 82nd Road between Kew Gardens Road and Queens Boulevard, approximately 200 feet from Kew Gardens Road	65	55
At the residences on Queens Boulevard between 82nd Road and Lefferts Boulevard	68	67

## Dismantle Activity Daily Air Monitoring on December 01, 2023

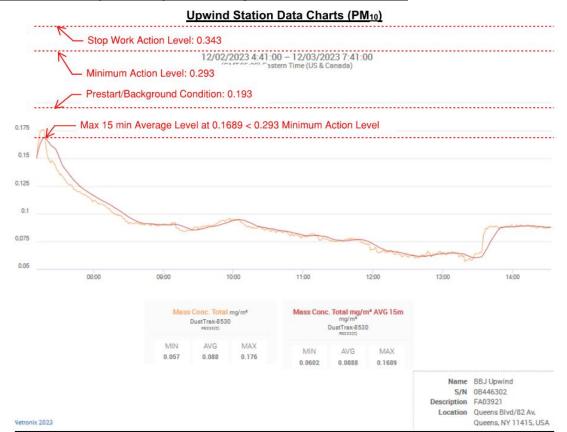
#### Upwind Station Data Charts (PM<sub>10</sub>) Stop Work Action Level: 0.224 - Minimum Action Level: 0.174 Fri, 1st of Dec 2023, 0:00:00 – 13:07:00 (GMT-05:00) Eastern Time (US & Canada) Prestart/Background Condition: 0.074 Max 15 min TWA Level at 0.0603 < 0.174 Minimum Action Level 0.02 08:00 09:00 10:00 11:00 Mass Conc. Total mg/m² Mass Conc. Total mg/m³ AVG 15m DustTrak-8530 DustTrak-8530 MIN AVG MAX MAX 0.027 0.049 0.086 0.0298 0.049 0.0603 Name BBJ Upwind S/N 0B446302 Description FA03921 Queens Blvd/82 Av, © Netronix 2023 Queens, NY 11415, USA



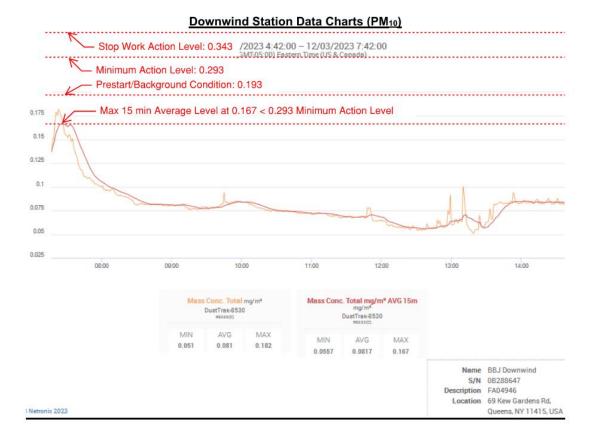
#### **Downwind Station Data Charts (PM<sub>10</sub>)**



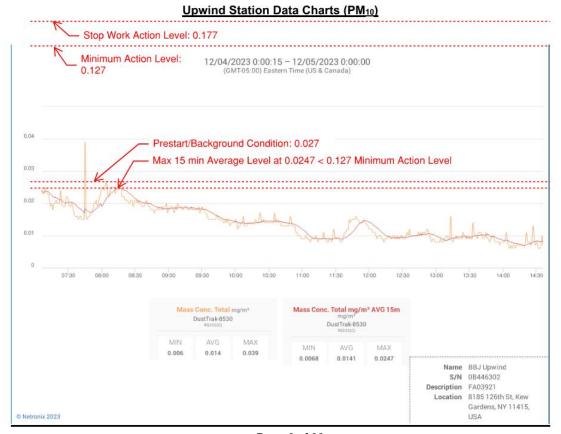
## Dismantle Activity Air Daily Monitoring on December 02, 2023



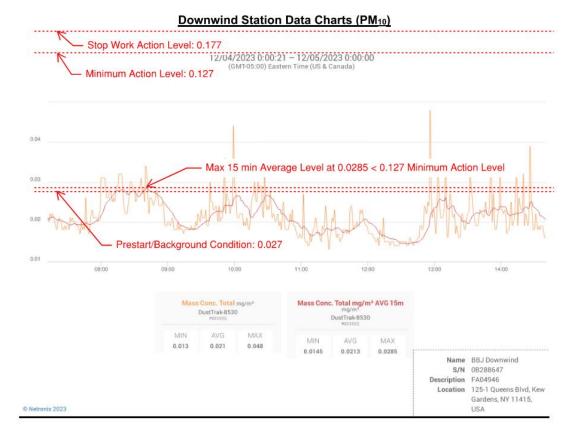




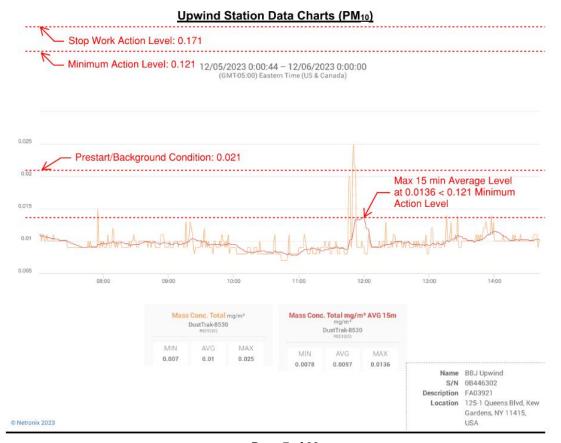
## Dismantle Activity Daily Air Monitoring on December 04, 2023





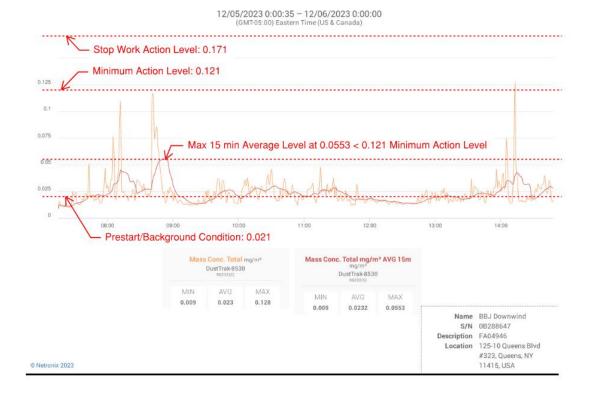


## Dismantle Activity Daily Air Monitoring on December 05, 2023





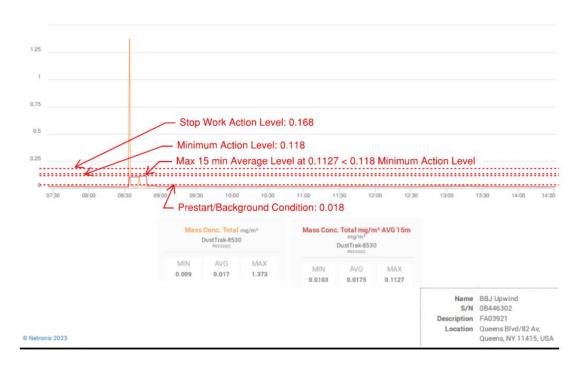
#### **Downwind Station Data Charts (PM<sub>10</sub>)**



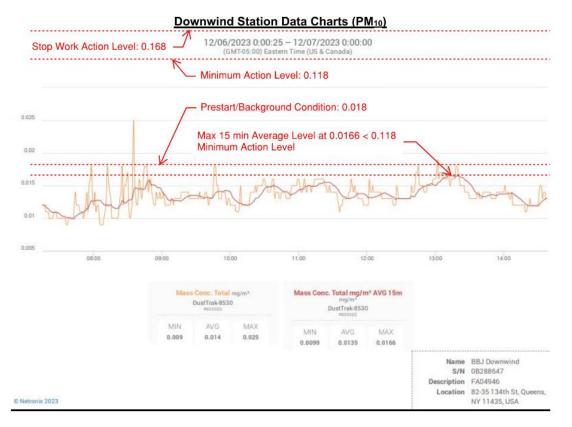
## Dismantle Activity Daily Air Monitoring on December 06, 2023

#### Upwind Station Data Charts (PM<sub>10</sub>)

12/06/2023 0:00:13 - 12/07/2023 0:00:00 (GMT-05:00) Eastern Time (US & Canada)

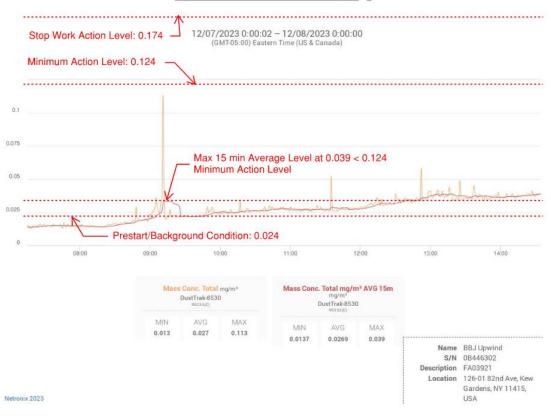




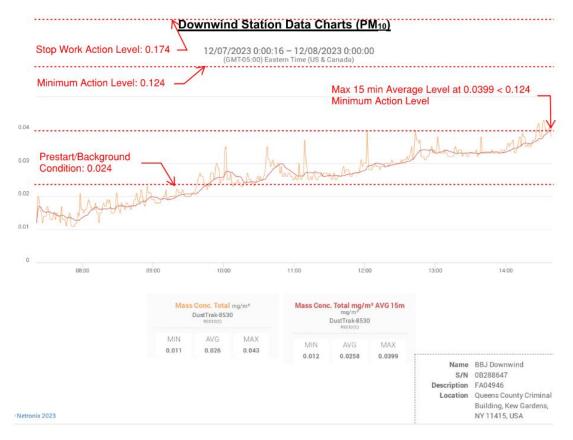


## Dismantle Activity Daily Air Monitoring on December 07, 2023

#### Upwind Station Data Charts (PM<sub>10</sub>)







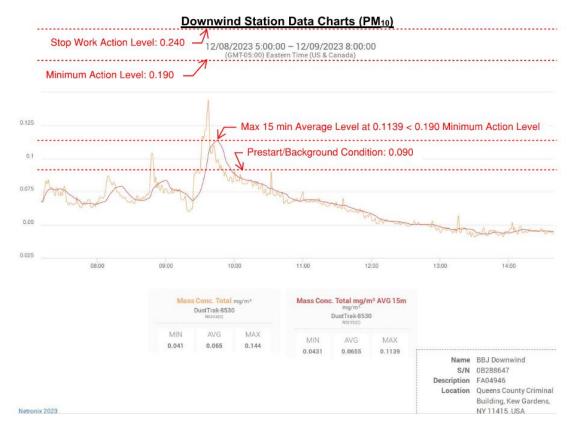
## Dismantle Activity Daily Air Monitoring on December 08, 2023

#### Upwind Station Data Charts (PM<sub>10</sub>)

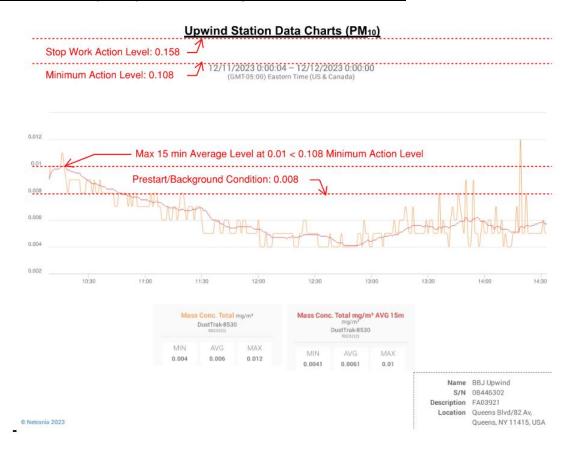
12/08/2023 4:59:00 - 12/09/2023 7:59:00 (GMT-05:00) Eastern Time (US & Canada)



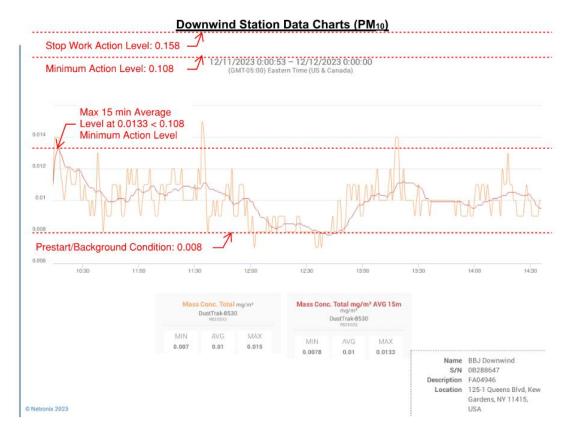




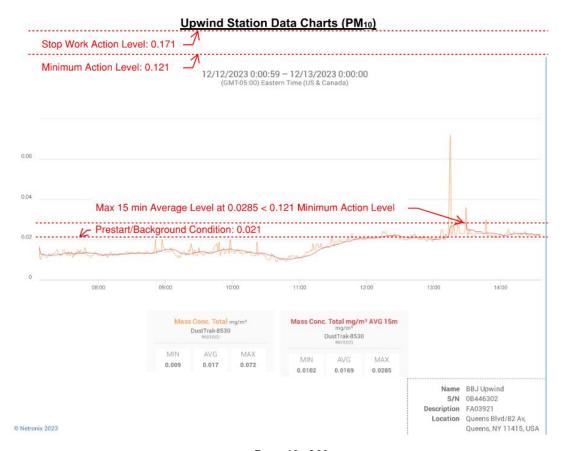
## Dismantle Activity Daily Air Monitoring on December 11, 2023





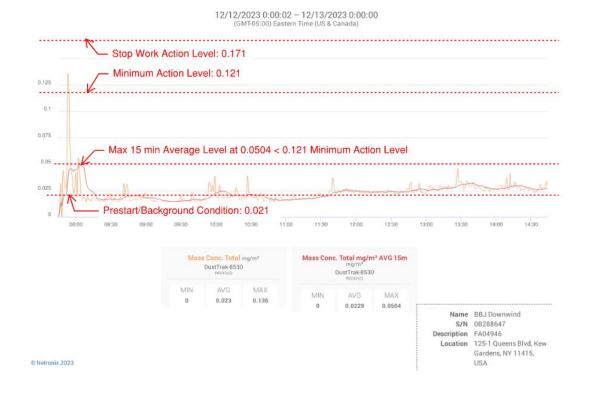


## Dismantle Activity Daily Air Monitoring on December 12, 2023

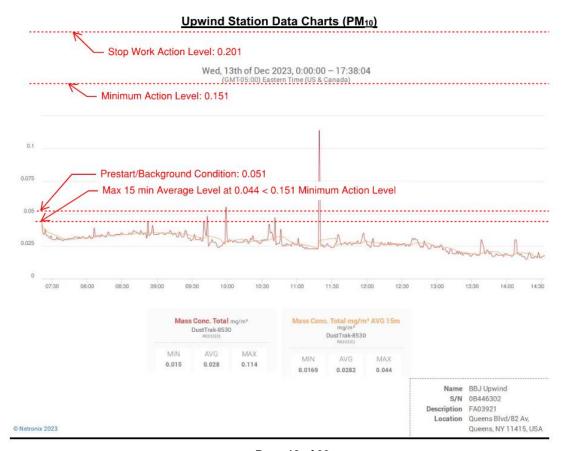




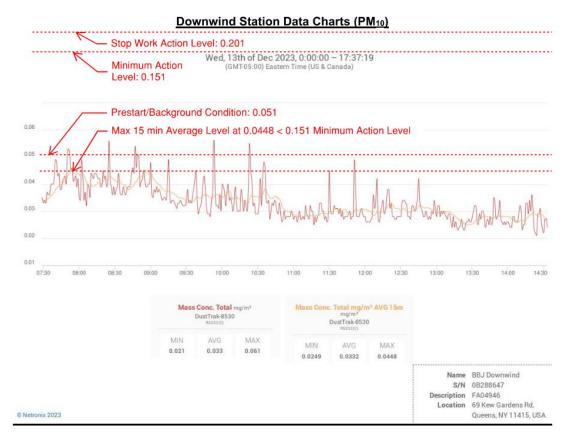
#### **Downwind Station Data Charts (PM<sub>10</sub>)**



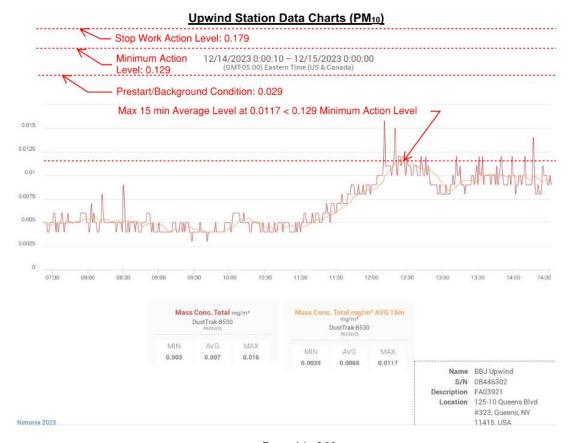
## Dismantle Activity Daily Air Monitoring on December 13, 2023



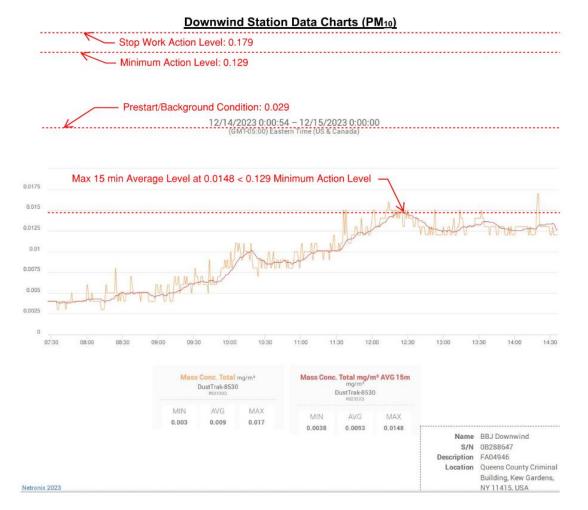




## Dismantle Activity Daily Air Monitoring on December 14, 2023

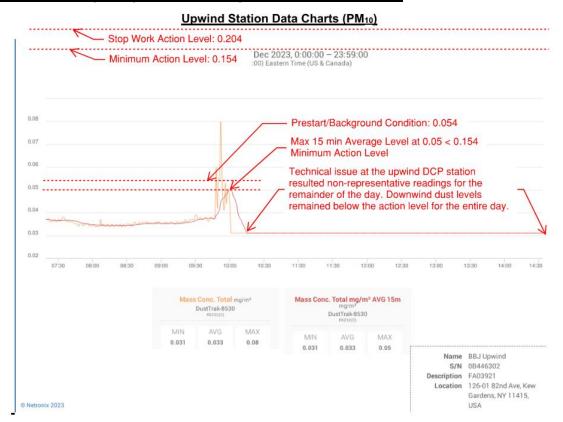


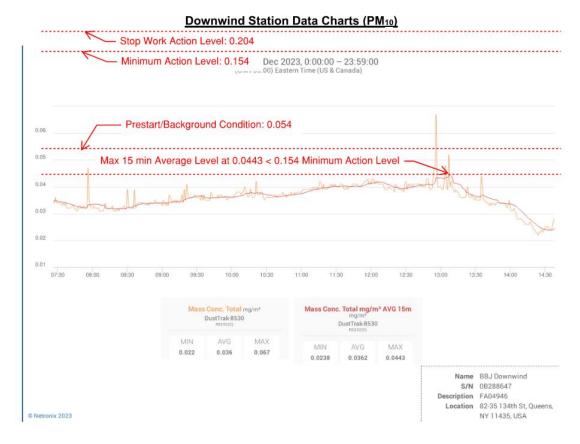






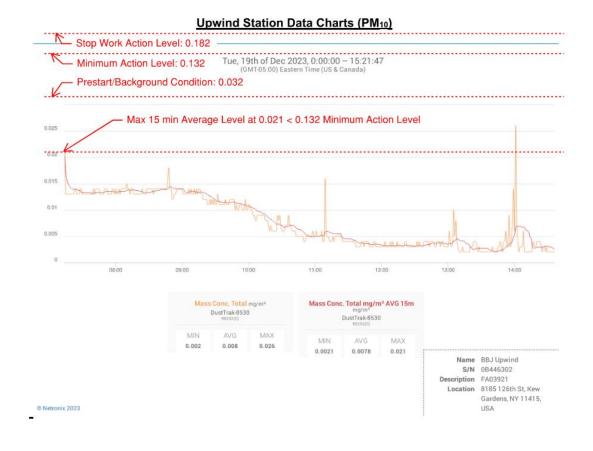
#### Dismantle Activity Daily Air Monitoring on December 15, 2023

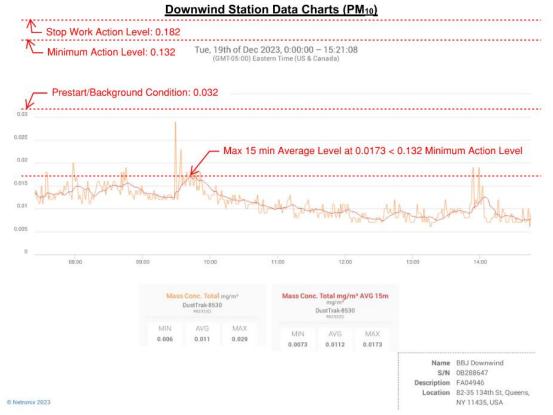






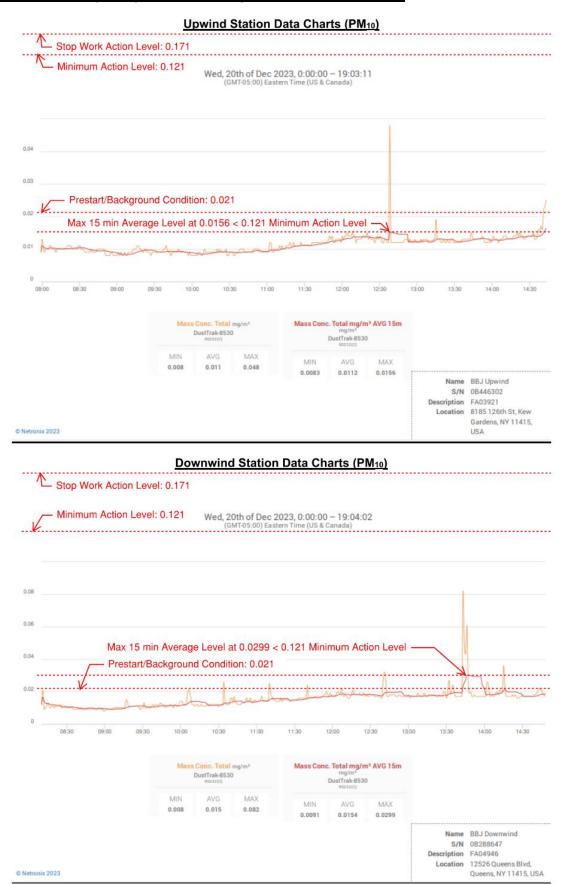
#### Dismantle Activity Daily Air Monitoring on December 19, 2023





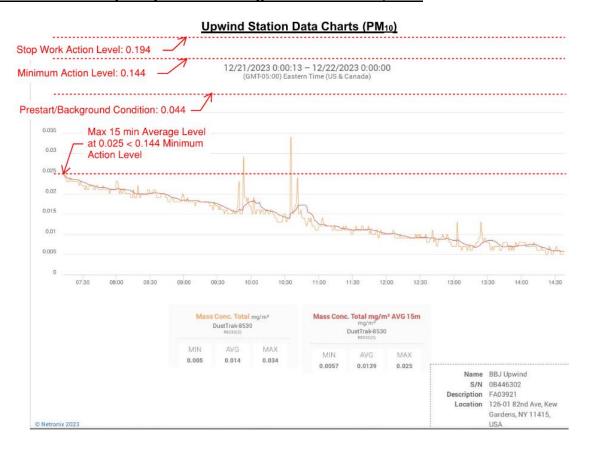


#### Dismantle Activity Daily Air Monitoring on December 20, 2023





#### Dismantle Activity Daily Air Monitoring on December 21, 2023

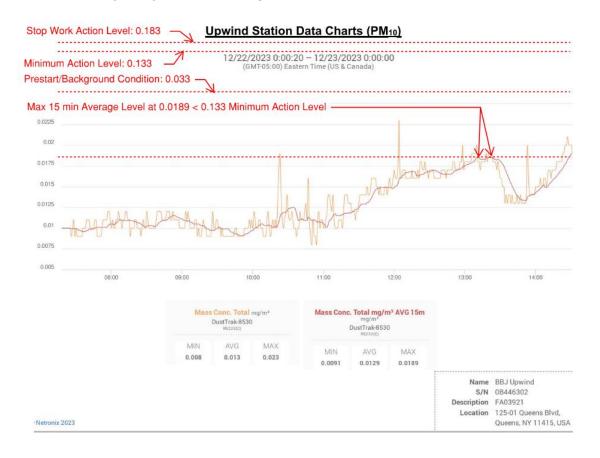


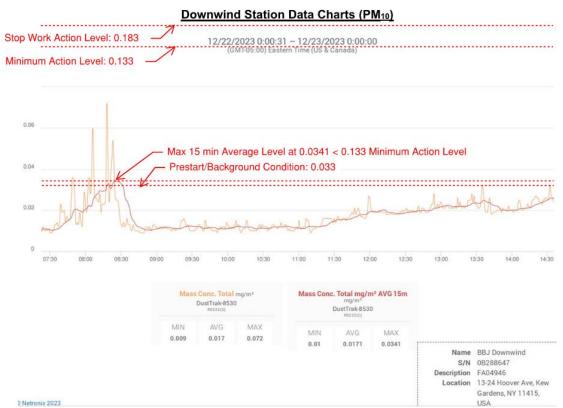
#### **Downwind Station Data Charts (PM<sub>10</sub>)**





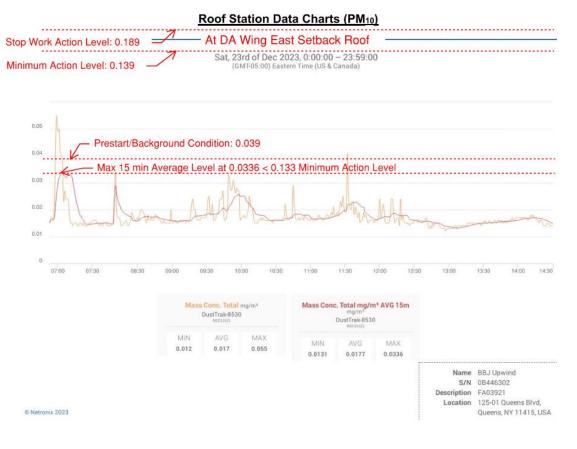
#### Dismantle Activity Daily Air Monitoring on December 22, 2023

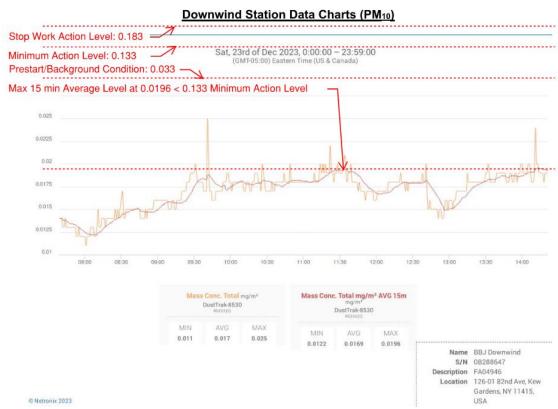






#### Dismantle Activity Daily Air Monitoring on December 23, 2023

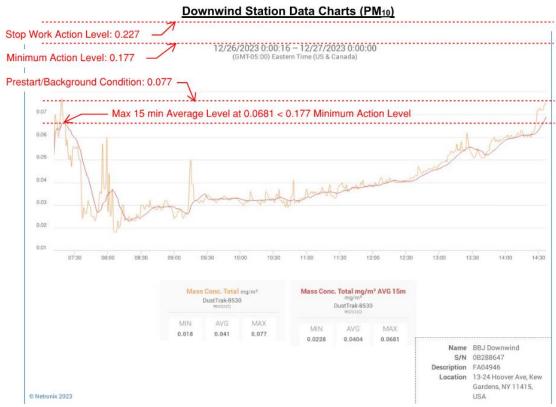






#### Dismantle Activity Daily Air Monitoring on December 26, 2023







## Dismantle Activity Daily Air Monitoring on December 27, 2023

## Roof Station Data Charts (PM<sub>10</sub>)

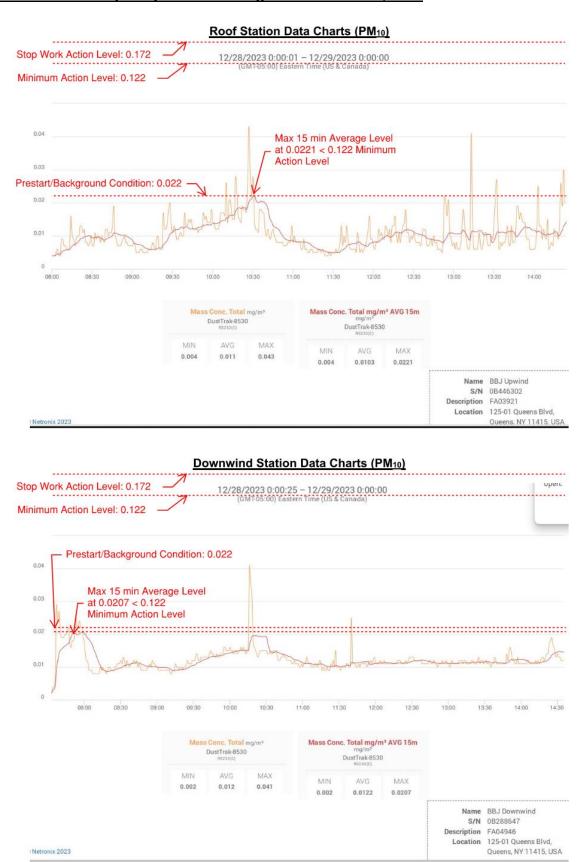








## Dismantle Activity Daily Air Monitoring on December 28, 2023

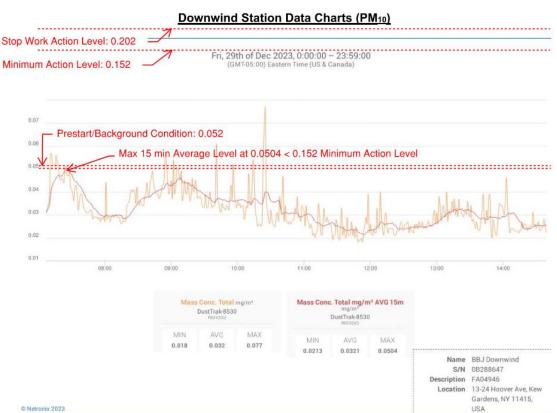




#### Dismantle Activity Daily Air Monitoring on December 29, 2023

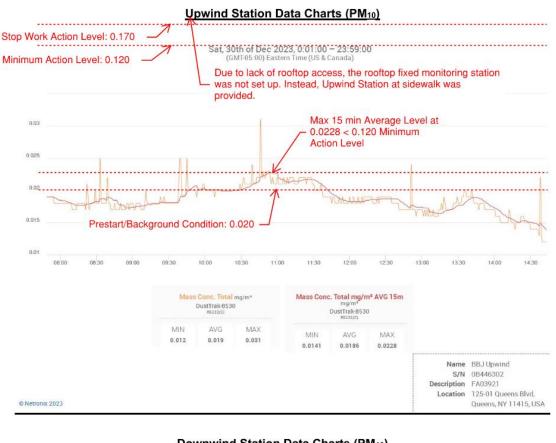
#### Roof Station Data Charts (PM<sub>10</sub>)

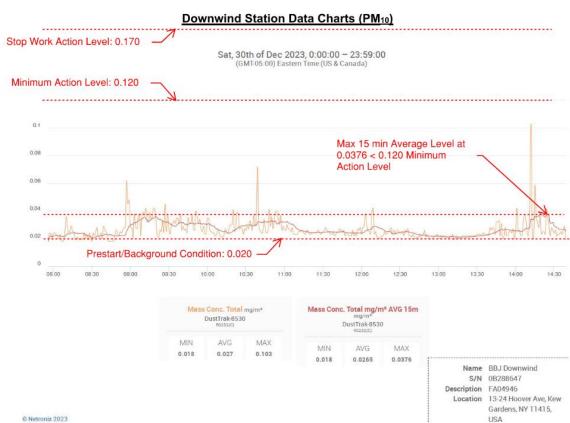






#### Dismantle Activity Daily Air Monitoring on December 30, 2023







## Noise Monitoring - Biweekly Follow Up during Dismantle Phase IV

Date: 12-6-2023 wed Weather: 40°F cloudy

Work Activities: Demo wall on 37d fl & Interior Demo on 2nd fl

Prepared by: (412)

NO.	Location	Time	Noise (dBA)	Noise Action Threshold (Day/Night)	Note
1	Queens Borough Hall	12:40	68<	75 dBA	Daytime noise action threshold not exceeded.
2	Southwest corner of DA wing	1:05	69<	75 dBA	Daytime noise action threshold not exceeded.
3	Corner of 134 <sup>th</sup> ST and Hoover Ave.	1:34	68.2	69 dBA/ -68 dBA NA	Daytime noise action threshold not exceeded.
4	200 ft away from Kew Garden Road on 82 <sup>nd</sup> Road			65 dBA/ 55 dBA	
5	Between 82 <sup>nd</sup> road and 83 <sup>rd</sup> Ave on Queens Blvd			68 dBA/ 67 dBA	

Corrective Action:

Si ...

Project: DDC Queens Dismantle & Swing Space

Date: 12-12 - 2023 Tues Weather: 41 F Sumy

Work Activities: Demo 5 (ab on 3rd fl & prep to abute 1se fl

Prepared by:

NO.	Location	Time	Noise (dBA)	Noise Action Threshold (Day/Night)	Note
1	Queens Borough Hall			75 dBA	
2	Southwest corner of DA wing			75 dBA	
3	Corner of 134 <sup>th</sup> ST and Hoover Ave.	9:30	68 <	69 dBA/ 68 dBANA	Daytime noise action threshold not exceeded.
4	200 ft away from Kew Garden Road on 82 <sup>nd</sup> Road	9:55	64	65 dBA/ -55 dBA NA	Daytime noise action threshold not exceeded.
5	Between 82 <sup>nd</sup> road and 83 <sup>rd</sup> Ave on Queens Blvd	10:18	67	68 dBA/ 67 dBA NA	Daytime noise action threshold not exceeded.

Corrective Action:



## Noise Monitoring - Initial Five Days of Dismantle Phase V

Project: DDC Queens Dismantle & Sw	ing Space
Date: 12-22-2023 Fri	_ Weather: _ cloudy 29 F
Work Activities: Full meth	Demo NW building
Prepared by:	

NO.	Location	Time	Noise (dBA)	Noise Action Threshold (Day/Night)	Note
1	Queens Borough Hall	10:42	60.1	75 dBA	Daytime noise action threshold not exceeded.
2	Southwest corner of DA wing	10:19	61.9	75 dBA	Daytime noise action threshold not exceeded.
3	Corner of 134 <sup>th</sup> ST and Hoover Ave.	11:11	69.1	69 dBA/ 68 dBA <b>NA</b>	Daytime noise action threshold not exceeded due traffic noise, not because of dismantle activities.
4	200 ft away from Kew Garden Road on 82 <sup>nd</sup> Road	1;2	64	< 65 dBA/ <del>55 dBA</del> NA	Daytime noise action
5	Between 82 <sup>nd</sup> road and 83 <sup>rd</sup> Ave on Queens Blvd	1,50	67	68 dBA/ <del>67 dBA</del> <b>NA</b>	Daytime noise action threshold not exceeded.

Project: DDC Queens Dismantle & Swing Space

Date: 12/23/2023 Weather: 41/2014, 37° F
Work Activities: NW HISh-veoul Dems

Prepared by: Much Bortolima

NO.	Location	Time	Noise (dBA)	Noise Action Threshold (Day/Night)	Note
1	Queens Borough Hall	10:46	61.6	75 dBA	Daytime noise action threshold not exceeded.
2	Southwest corner of DA wing	18:23	61.5	75 dBA	Daytime noise action threshold not exceeded.
3	Corner of 134 <sup>th</sup> ST and Hoover Ave.			69 dBA/ 68 dBA	
4	200 ft away from Kew Garden Road on 82 <sup>nd</sup> Road			65 dBA/ 55 dBA	
5	Between 82 <sup>nd</sup> road and 83 <sup>rd</sup> Ave on Queens Blvd			68 dBA/ 67 dBA	



Project: DDC Queens Dismantle & Swing Space

Date: 12-26-2023 Tues Weather: Partly Cloudy

Work Activities: Full Melli Demo

Prepared by: A L F (equipment reading) / Yao Wang (filling out the log)

NO.	Location	Time	Noise (dBA)	Noise Action Threshold (Day/Night)	Note
1	Queens Borough Hall	10:31	61	75 dBA	Daytime noise action threshold not exceeded.
2	Southwest corner of DA wing	10:55	64.6	75 dBA	Daytime noise action threshold not exceeded.
3	Corner of 134 <sup>th</sup> ST and Hoover Ave.	1:01	68.7	69 dBA/ 68 dBA NA	Daytime noise action threshold not exceeded.
4	200 ft away from Kew Garden Road on 82 <sup>nd</sup> Road	1:31	60.7	65 dBA/ 55 dBA	
5	Between 82 <sup>nd</sup> road and 83 <sup>rd</sup> Ave on Queens Blvd	11136	65.5	68 dBA/ 67 dBA	

Project: DDC Queens Dismantle & Swing Space

Date: 12-27-2023 Wed Weather: 43°F Cloudy

Work Activities: fell mech Demo

Prepared by: \_\_\_\_\_\_\_

NO.	Location	Time	Noise (dBA)	Noise Action Threshold (Day/Night)	Note
1	Queens Borough Hall	10:39	63	75 dBA	Daytime noise action threshold not exceeded.
2	Southwest corner of DA wing	10:16	64 <	75 dBA	Daytime noise action threshold not exceeded.
3	Corner of 134 <sup>th</sup> ST and Hoover Ave.	11:04	68	69 dBA/ 68 dBA NA	Daytime noise action threshold not exceeded.
4	200 ft away from Kew Garden Road on 82 <sup>nd</sup> Road	12:28	63.2	65 dBA/ 55 dBA NA	Daytime noise action threshold not exceeded.
5	Between 82 <sup>nd</sup> road and 83 <sup>rd</sup> Ave on Queens Blvd	12:50	67,2	68 dBA/ 67 dBA NA	Daytime noise action threshold not exceeded.



Project: DDC Quee	ens Dismant	le & Swing	Space	
Date: 12-28-	2021		Weather:	Cfoul
Work Activities: _	full	mech	Demo	
Prepared by:	ajeong	(.'m (e	quipment read	ing) / Yao Wang (filling out the log)

NO.	Location	Time	Noise (dBA)	Noise Action Threshold (Day/Night)	Note
1	Queens Borough Hall	1:(5	63.3	75 dBA	Daytime noise action threshold not exceeded.
2	Southwest corner of DA wing	1:40	675	75 dBA	Daytime noise action threshold not exceeded.
3	Corner of 134 <sup>th</sup> ST and Hoover Ave.	3:20	6 9.3	69 dBA/ 68 dBA NA	Daytime noise action threshold not exceeded.
4	200 ft away from Kew Garden Road on 82 <sup>nd</sup> Road			65 dBA/ 55 dBA	
5	Between 82 <sup>nd</sup> road and 83 <sup>rd</sup> Ave on Queens Blvd			68 dBA/ 67 dBA	

Corrective Action: N/A

Project: DDC Queens Dismantle & Swing Space

Date: 12-29-2:23 Weather: Sunny
Work Activities: full well Deans

Prepared by: Hajery (i'm (equipment reading) / Yao Wang (filling out the log)

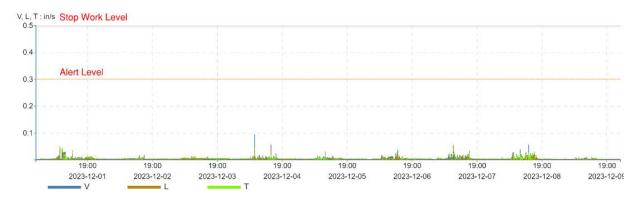
NO.	Location	Time	Noise (dBA)	Noise Action Threshold (Day/Night)	Note
1	Queens Borough Hall	2:50	58.7	<75 dBA	Daytime noise action threshold not exceeded.
2	Southwest corner of DA wing	2:25	64.2	75 dBA	Daytime noise action threshold not exceeded.
3	Corner of 134 <sup>th</sup> ST and Hoover Ave.	2:00	68.4	69 dBA/ 68 dBA NA	Daytime noise action threshold not exceeded.
4	200 ft away from Kew Garden Road on 82 <sup>nd</sup> Road	1:30	55.9	< 65 dBA/ 55 dBA NA	Daytime noise action threshold not exceeded.
5	Between 82 <sup>nd</sup> road and 83 <sup>rd</sup> Ave on Queens Blvd	11115	64,6	68 dBA/ 67 dBA NA	Daytime noise action threshold not exceeded.

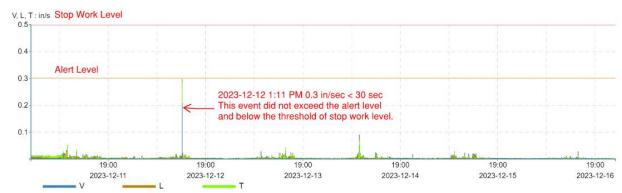
Corrective Action: N/A

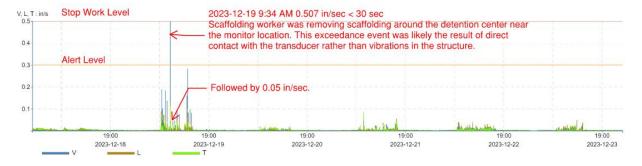


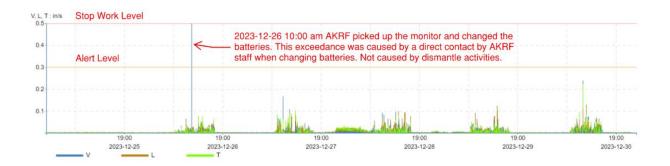
#### Vibration Monitor - VM1 December 2023

#### FAMILY JUSTICE CENTER - NORTHEAST CORNER





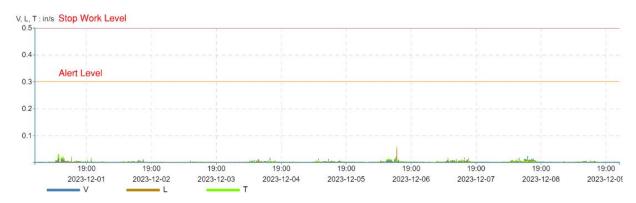


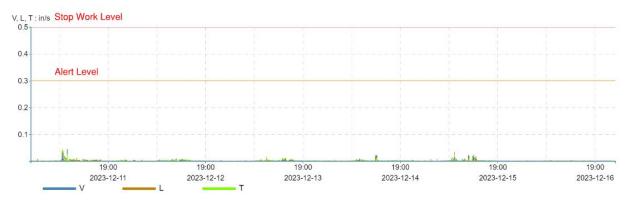


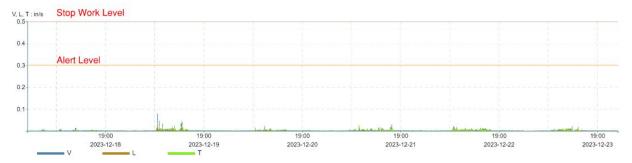


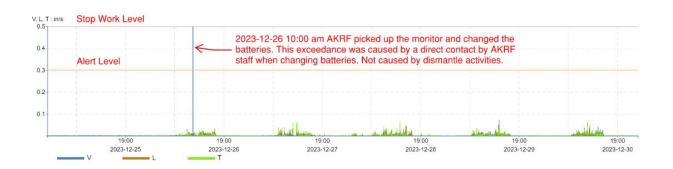
## <u>Vibration Monitor – VM2 December 2023</u>

DA WING - NORTHWEST CORNER











## <u>Vibration Monitor – VM3 December 2023</u>

ANNEX - BASEMENT FIRE PUMP ROOM

