AIR, NOISE AND VIBRATION MONTHLY MONITORING REPORT Number 016

Prepared By: Roux / Wang Technology

DDC Project No.:	BBJ-XSP	**Period Start:** 11/1/23 **End** 11/30/23
Project Name:	NYCDDC D&B – The Bronx Site Preparation	
DDC Pin No.:	8502021CR0004P-06P	

1) Community Air Monitoring Monthly Status Summary

TWA – Time Weighted Average
ug/m^3- 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
19	19	2	There were two 15-minute readings over the dust action concentration on 11/9 and three on 11/14 that are detailed below.

Community Air Monitoring Monthly Excursions and Corrective Actions
Action Concentration =100 ug/m^3 15 minute TWA above background concentration
Stop Work Concentration = 150 ug/m^3 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
11/9 10:19	0.650	0.510	An elevated reading above the dust action level was caused by the movement of blast pads. Work was temporarily stopped, and water was used to mitigate dust in the work area. Mitigative measure not fully effective upon immediate implementation.
11/9 10:34	0.510	-0.026	An elevated reading above the dust action level was caused by the movement of blast pads. Work was temporarily stopped, and water was used to mitigate dust in the work area.
11/14 11:51	0.287	0.169	An elevated reading above the dust action level was caused by nearby excavation activities. Work was temporarily stopped, and water was used to mitigate dust in the work area.

			Mitigative measure not fully effective upon immediate implementation.
11/14 12:06	0.169	0.042	An elevated reading above the dust action level was caused by nearby excavation activities. Work was temporarily stopped, and water was used to mitigate dust in the work area.
11/14 12:36	0.137	0.028	An elevated reading above the dust action level was caused by nearby excavation activities. Work was temporarily stopped, and water was used to mitigate dust in the work area.

Narrative Summary of Air Monitoring, Excursions and Corrective Actions:
In November 2023, construction-related levels of Particulate Matter (PM) PM10 did not surpass the Daily Permissible Exposure Limits (PEL) as set by federal standards for the 8-hour Time Weighted Average (TWA) and did not cause air quality concerns to the community and/or onsite workers.

2) Community Noise Monitoring Monthly Summary

Units: A-weighted decibels (dBA)

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	Comments
19	19	0	NA

Community Noise Monitoring Monthly Excursions and Corrective Actions

Action Level = 80 dBA
Stop Work Level = 80 dBA

Date: Time	Maximum Noise Reading before Corrective Action (dBA)	Maximum Noise Reading after Corrective Action (dBA)	Corrective Action
NA	NA	NA	NA

Narrative Summary of Noise Monitoring, Excursions and Corrective Actions:

In November 2023, construction-related levels of noise did not surpass the limits of Local Law 113 of 2005. The daily average was below the limits and did not cause noise concerns for the community.

3) Community Vibration Monitoring Monthly Summary

Units: 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	Comments
20	30	22	Two out of six vibration monitors recorded a total of one hundred and three exceedances. Eight exceedances were caused by the excavators in the area moving the rocks. Fourteen exceedances were caused by line drilling into rocks in the area. Eight events are not construction related; contractor confirmed that there was no work being performed in the area during the event times. Seventy-three exceedances were recorded during non-construction hours. Detailed information about exceedances is provided in the narrative summary section and plots.

Community Vibration Monitoring Excursions and Corrective Actions

Action Level = 0.5 in/sec above background for VM

Stop Work Level = 1.0 in/sec above background for VM

Date: Time	Maximum Vibration Level before Corrective Action (in/sec)	Maximum Vibration Level after Corrective Action (in/sec)	Corrective Action
11/2/2023 14:59	0.5402	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
11/4/2023 00:30	0.5859	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
11/5/2023 19:45	0.503	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
11/6/2023 02:30 & 06:45	0.5784	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
11/6/2023 07:35	0.5378	0.4953	Exceedance observed at VM11 was due to the preparation work for blasting, where excavators in the area were moving rocks. The size of rocks being loaded into the truck was reduced post event.
11/6/2023 15:45	0.5582	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
11/8/2023 00:45, 05:30, & 06:35	0.5961	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
11/8/2023 07:15, 08:45, 10:35, 11:05, & 13:00	0.5632	0.4977	Exceedances observed at VM11 were due to the preparation work for next blast, where excavators in the area were moving rocks and line drilling into rocks was performed. The size of rocks being loaded into the truck was reduced post events.
11/8/2023 15:45	0.5492	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
11/10/2023 04:25, 04:40, 06:25, & 06:45	0.7025	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
11/10/2023 07:55, 08:10, 14:45, & 14:55	0.665	N/A	Exceedances observed at VM11 were recorded during non-construction hours. There was no work due to Veteran's Day holiday.

11/10/2023 15:20 & 15:45	0.5514	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
11/12/2023 09:20, 14:05, 16:25, 19:20, & 20:10	0.5871	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
11/13/2023 08:50, 09:50, 12:15, & 14:15	0.7509	0.4633	Exceedances observed at VM11 were due to the preparation work for next blast, where line drilling into rocks was performed.
11/14/2023 05:10	0.5371	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
11/14/2023 12:40 & 13:00	0.5309	N/A	Exceedances observed at VM11 were not construction related, it is confirmed that no work was being performed in the area.
11/14/2023 16:35	0.6157	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
11/15/2023 09:05 & 09:55	0.6293	N/A	Exceedances observed at VM11 were not construction related, it is confirmed that no work was being performed in the area.
11/15/2023 10:35	0.5244	0.4431	Exceedance observed at VM11 was due to excavators in the area were moving rocks. The size of rocks being loaded into the truck was reduced post event.
11/15/2023 15:50	0.5871	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
11/16/2023 05:05	0.5657	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
11/16/2023 07:30	0.562	0.4512	Exceedance observed at VM11 was due to excavators in the area were moving rocks. The size of rocks being loaded into the truck was reduced post event.
11/16/2023 12:10	0.512	0.4515	Exceedance observed at VM11 was due to line drilling rocks in the area. The drill rig intensity was reduced post event.
11/16/2023 15:15, 16:20, & 22:00	0.5803	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
11/17/2023 00:10, 04:40, 05:30, & 06:15	0.6386	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
11/17/2023 11:20, 11:25, & 11:50	0.647	0.4465	Exceedances observed at VM11 were due to line drilling rocks in the area. The drill rig intensity was reduced post event.
11/17/2023 14:00 & 23:20	0.656	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
11/19/2023 03:30	0.5604	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
11/20/2023 00:15 & 00:20	0.5995	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
11/20/2023 10:02	0.5523	0.4949	Exceedance observed at VM11 was due to excavators in the area were moving rocks. The size of rocks being loaded into the truck was reduced post event.
11/20/2023 13:37, 15:57, 16:32, 19:12, & 22:42	0.5734	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
11/22/2023 00:15, 00:30, 04:05, 04:25, & 05:45	0.8422	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
11/23/2023 15:17, 16:12, 18:57, & 20:02	0.6125	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
11/24/2023 01:30, 03:20, & 06:45	0.6333	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
11/24/2023 07:12 & 12:22	0.5555	N/A	Exceedances observed at VM11 were not construction related, it is confirmed that no work was being performed in the area.
11/24/2023 15:12 & 16:07	0.5399	N/A	Exceedances observed at VM11 were recorded during non-construction hours.

11/25/2023 04:35	0.6389	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
11/27/2023 16:30, 17:20, & 23:25	0.66	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
11/28/2023 07:45 & 09:10	0.6855	0.4965	Exceedances observed at VM11 were due to excavators in the area were moving rocks. The size of rocks being loaded into the truck was reduced post event.
11/28/2023 17:45	0.5511	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
11/29/2023 06:25	0.5514	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
11/29/2023 08:30 & 10:50	0.5421	N/A	Exceedances observed at VM11 were not construction related, it is confirmed that no work was being performed in the area.
11/29/2023 14:55 & 16:45	0.543	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
11/30/2023 00:55	0.593	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
11/30/2023 08:35 & 09:55	0.6743	0.4782	Exceedances observed at VM11 were due to excavators in the area were moving rocks. The size of rocks being loaded into the truck was reduced post event.
11/30/2023 13:45	0.5322	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
11/10/2023 13:45	0.5157	N/A	Exceedance observed at VM12 was recorded during non-construction hours. There was no work due to Veteran's Day holiday.
11/17/2023 04:45	0.5555	N/A	Exceedance observed at VM12 was recorded during non-construction hours.
11/17/2023 11:23	0.5055	0.377	Exceedance observed at VM12 was due to line drilling rocks in the area. The drill rig intensity was reduced post event.
11/22/2023 04:04	0.7956	N/A	Exceedance observed at VM12 was recorded during non-construction hours.

Narrative Summary of Vibration Monitoring, Excursions and Corrective Actions:

In November 2023, two vibration monitors had recorded exceedances.

There were exceedances recorded during non-construction hours at VM11 and VM12. No corrective actions were required at this time.

The exceedances recorded at VM11 on November 6th, November 15th, November 16th, November 20th, November 28th, and November 30th were due to preparation work for blasting, where excavators in the area were moving rocks. The size of rocks being loaded into the truck was reduced post events.

The exceedances recorded at VM11 on November 8th and November 13th were due to excavators in the area were moving rocks and line drilling into rocks was performed in the area. The size of rocks being loaded into the truck was reduced post events.

The exceedances recorded at VM11 on November 16th and November 17th, and the exceedance recorded at VM12 on November 17th were due to line drilling into rocks was performed in the area. The intensity of the drill rig was reduced post events.

The rest of the exceedances recorded at VM11 were non-construction related. The event times when the exceedances were recorded were reviewed by the contractor, it is confirmed that no work was being performed in the area during these event periods. No corrective action was required at these times.

Note that blast monitors (BVM), situated on the sidewalk adjacent to the site and in the tunnel, fall outside the community plan's scope, which specifically addresses monitors in or on buildings. Additionally, the community plan (VM) measures PPV above background, while the blast plan (BVM) solely measures PPV.

4) Blasting Related Vibration Monitoring Monthly Summary
Units: 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	Comments
20	30	0	No vibration exceedance related to the blasting activities was observed in November. Detailed information is provided in the narrative summary section and plots.

Blasting Related Vibration Monitoring Excursions and Corrective Actions
Action Level = 2.0 in/sec for VM and BVM install at Concord Ave, 141st St, and Southern Blvd.
Action Level = 4.0 in/sec for VM and BVM install at 142nd St
Action Level = 12.0 in/sec for VM and BVM install on all underground utilities

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 Summary of Vibration Monitoring, Excursions and Corrective Actions:

There are two sets of project limits for vibration monitoring, one for general onsite construction activities and another specifically for blasting activities. No vibration exceedance related to the blasting activities was observed in November.

Four portable vibration monitors for blasting monitoring were deployed at the following locations:
BVM-A was installed at location no. 10, BVM-B at location no. 3, BVM-C at location no. 7, and BVM-D at location no. 5 on November 2nd, November 3rd, November 6th, November 7th, November 9th, November 20th, and November 21st.

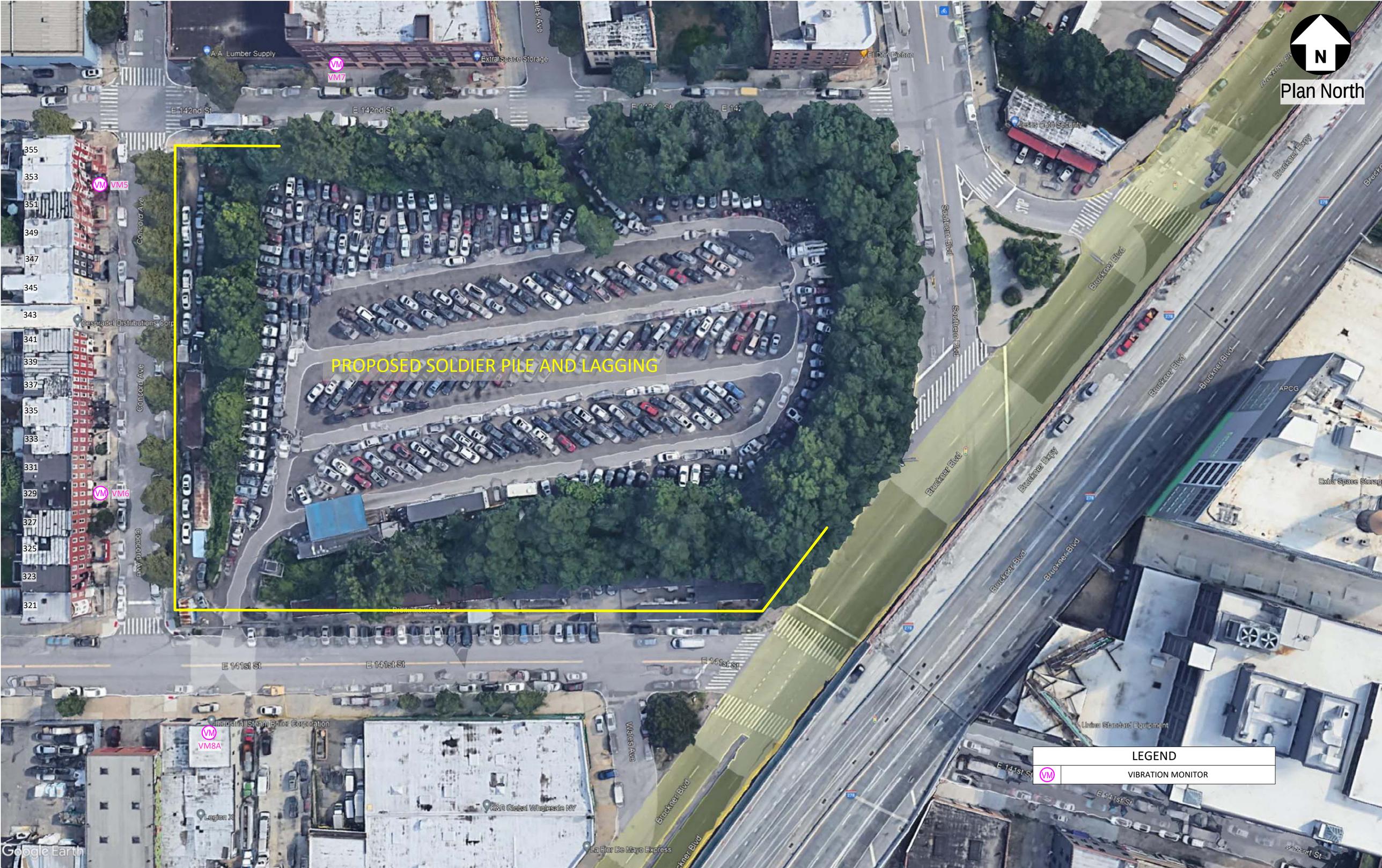
Note that blast monitors (BVM), situated on the sidewalk adjacent to the site and in the tunnel, fall outside the community plan's scope, which specifically addresses monitors in or on buildings. Additionally, the community plan (VM) measures PPV above background, while the blast plan (BVM) solely measures PPV.

ATTACHMENTS:

1 – Include one map of monitoring station/locations

2 – Include Data Plots

3 – Include Baseline Reference


Plan North
N
PROPOSED SOLDIER PILE AND LAGGING
VM5
VM6
VM7
VM8A
A A Lumber Supply
Extra Space Storage
El Don Pichon
Jesus Auto Security
Despradel Distributions Corp
Industrial Steam Boiler Corporation
K&B Global Wholesale NY
La Flor De Mayo Express
Legion X
Union Standard Equipment
APCG
E 142nd St
E 141st St
Concord Ave
Sheridan Blvd
Bruckner Blvd
Bruckner Expy
Wales Ave
355
353
351
349
347
345
343
341
339
337
335
333
331
329
327
325
323
321
LEGEND
VM
VIBRATION MONITOR
Google Earth
Image Landsat / Copernicus

NYC BBJ - SUPPORT OF EXCAVATION PLAN

North oil static line – VM11

South oil static line - VM12

EAST 142ND STREET

WALES AVE.

CONCORD AVE

PROPOSED SEWER (TYP.)

TOP OF SLOPE (TYP.)

BOTTOM OF SLOPE (TYP.)

A SOE-210 SOE-220

B SOE-210 SOE-220

SITE

NYCT REVIEW JURISDICTION LINE

EXISTING SOLDIER PILE AND LAGGING WALL (TYP.)

200'-0"

LIMITS OF NYCT STRUCTURE (6 LINE SUBWAY)

BRUCKNER BOULEVARD

PROPERTY LINE (TYP)

102'-6"

EXISTING CURB (TYP)

PROPOSED TIMBER TRENCH AND ROCK CUT (TYP.)

EAST 141ST STREET

PARTIAL PLAN 2 SOE-210 SOE-212

WALES AVE.

NOTES:

1. FOR GENERAL NOTES REFER TO DRAWING SOE-200.
2. APPROXIMATE TOP OF CLASS 1D ROCK CONTOURS ARE SHOWN, REFER TO THE GEOTECHNICAL REPORT.

PLAN
SCALE: 1/32"=1'-0"
GRAPHIC SCALE
32' 16' 0 32' 64'

NO.	DATE	DESCRIPTIONS	BY	APPR'D
		REVISIONS		

745 EAST 141 STREET, BRONX, NY DOB#: X007314241-I1

DESIGN SUBMITTED BY: MRCE built on firm foundations; ROUX Roux Environmental Engineering and Geology, D.P.C.; BOHLER 225 W 34TH STREET, SUITE 814 NEW YORK, NY 10122 www.BohlerEngineering.com

DESIGN PREPARED BY: MRCE built on firm foundations MUESER RUTLEDGE CONSULTING ENGINEERS, PLLC

DRAWN BY

SIGNATURE XX-XX-XXXX DATE

CONTRACTOR: Yonkers Contracting Company, Inc.

OWNER: NYC DDC Department of Design and Construction

F. WU DRAWN BY

8502021CR0001P3-SOE-210.00.DWG CADD FILE

SUPPORT OF EXCAVATION PLAN

NYC BOROUGH-BASED JAILS PROGRAM
THE BRONX SITE PREPARATION
BRONX BOROUGH

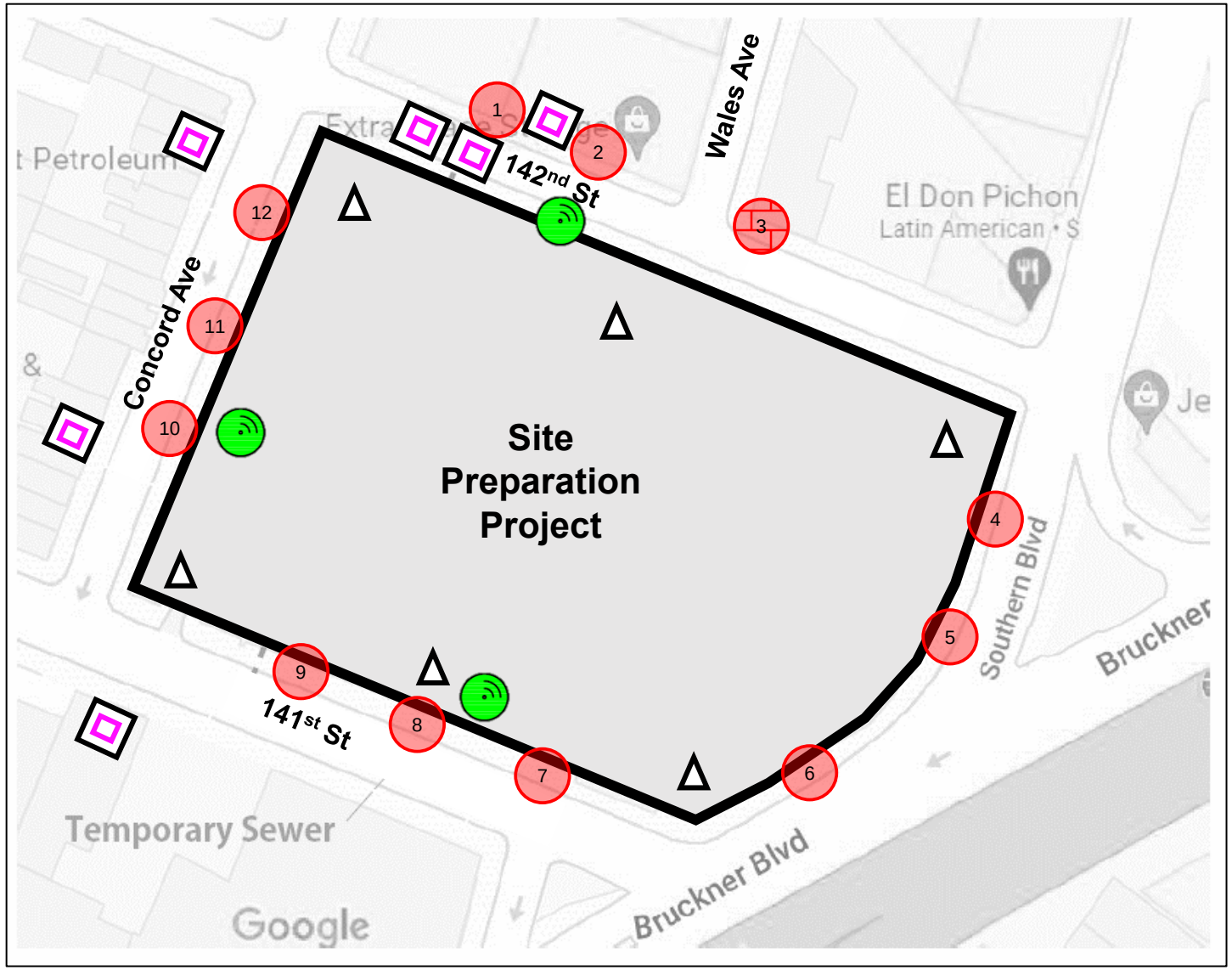
CAPITAL PROJECT NO. 8502021CR000 1P-3

SHEET 5 OF 10 SOE-210

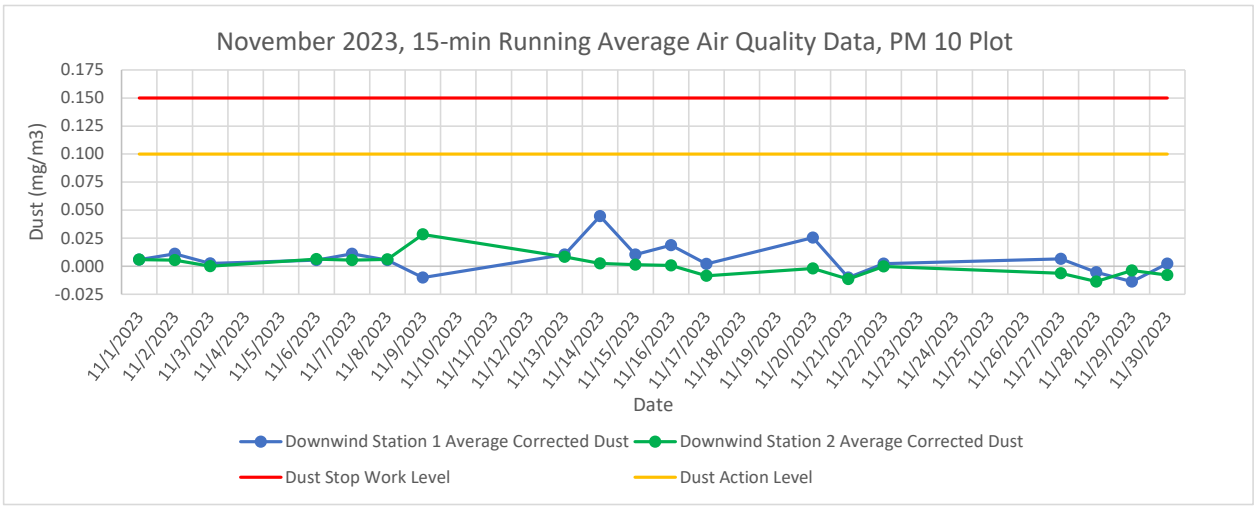

Plan North
Blasting - Vibration Monitor Locations
1
2
3
4
5
6
7
8
9
10
11
12
E 142nd St
Southern Blvd
Bruckner Blvd
Concord Ave
E 141st St
353
343
333

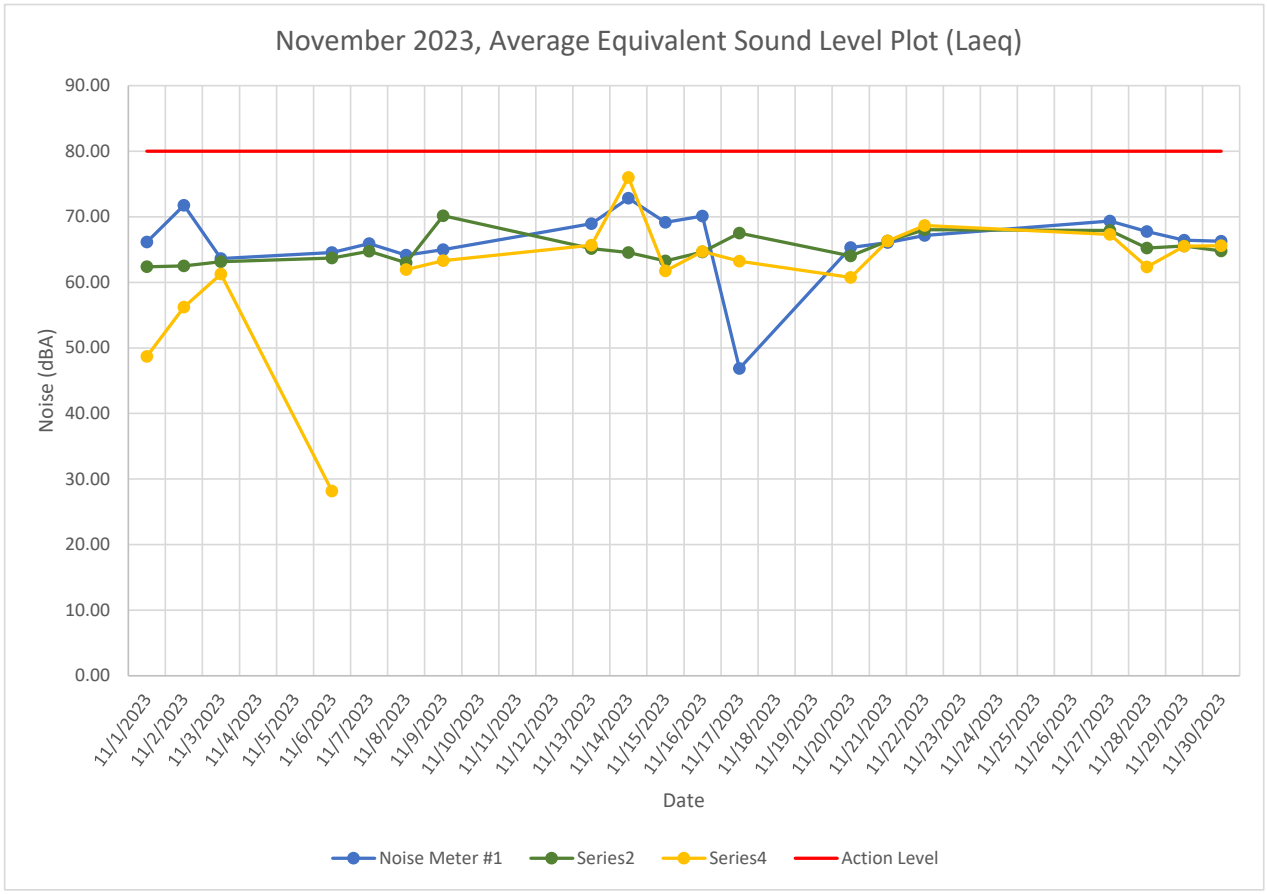
Attachments

Environmental Monitoring The Bronx

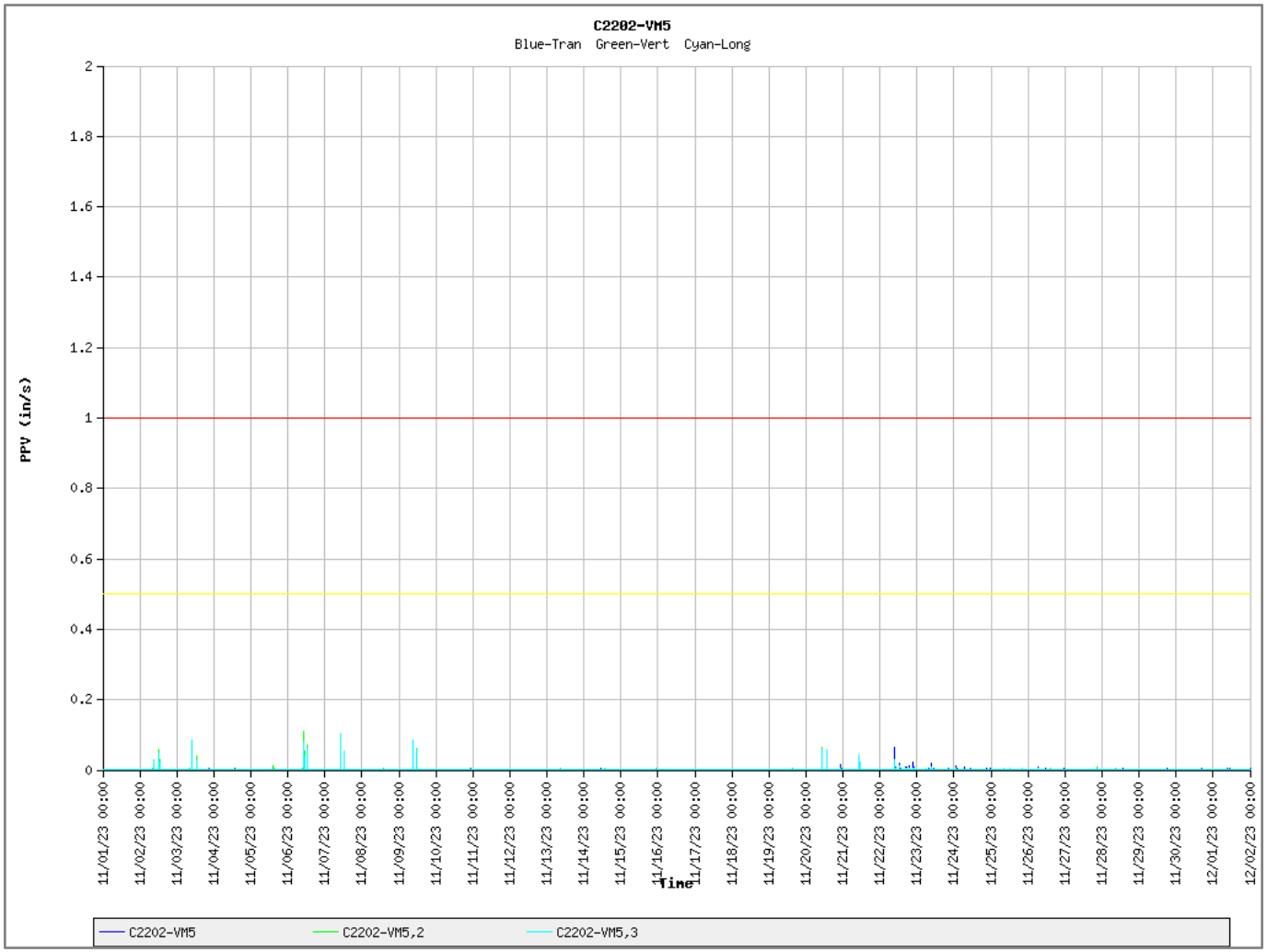


- Vibration Monitor (VM)
- Air Monitoring Station (DM)
- Noise Monitoring Station (NM)
- 1 Blasting - Vibration Monitor (BVM)


November 2023, 15-min Running Average Air Quality Data, PM 10 Plot
Dust (mg/m3)
0.175
0.150
0.125
0.100
0.075
0.050
0.025
0.000
-0.025
11/1/2023
11/2/2023
11/3/2023
11/4/2023
11/5/2023
11/6/2023
11/7/2023
11/8/2023
11/9/2023
11/10/2023
11/11/2023
11/12/2023
11/13/2023
11/14/2023
11/15/2023
11/16/2023
11/17/2023
11/18/2023
11/19/2023
11/20/2023
11/21/2023
11/22/2023
11/23/2023
11/24/2023
11/25/2023
11/26/2023
11/27/2023
11/28/2023
11/29/2023
11/30/2023
Date
Downwind Station 1 Average Corrected Dust
Downwind Station 2 Average Corrected Dust
Dust Stop Work Level
Dust Action Level


November 2023, Average Equivalent Sound Level Plot (Laeq)
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
Noise (dBA)
11/1/2023
11/2/2023
11/3/2023
11/4/2023
11/5/2023
11/6/2023
11/7/2023
11/8/2023
11/9/2023
11/10/2023
11/11/2023
11/12/2023
11/13/2023
11/14/2023
11/15/2023
11/16/2023
11/17/2023
11/18/2023
11/19/2023
11/20/2023
11/21/2023
11/22/2023
11/23/2023
11/24/2023
11/25/2023
11/26/2023
11/27/2023
11/28/2023
11/29/2023
11/30/2023
Date
Noise Meter #1
Series2
Series4
Action Level

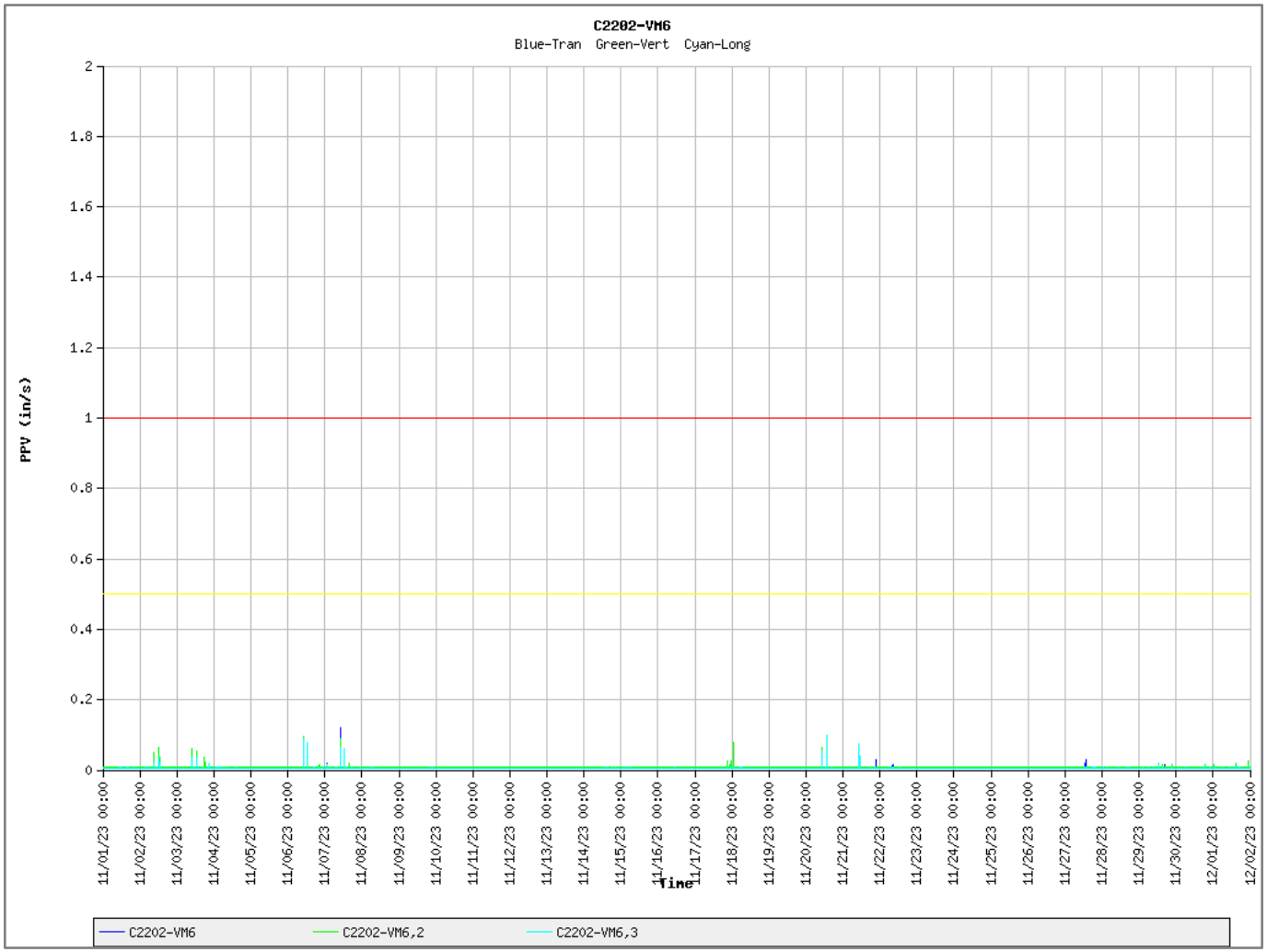
The Bronx Site Preparation November 2023 Vibration Monitoring Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM5 Transverse
C2202-VM5,2 Vertical
C2202-VM5,3 Longitudinal

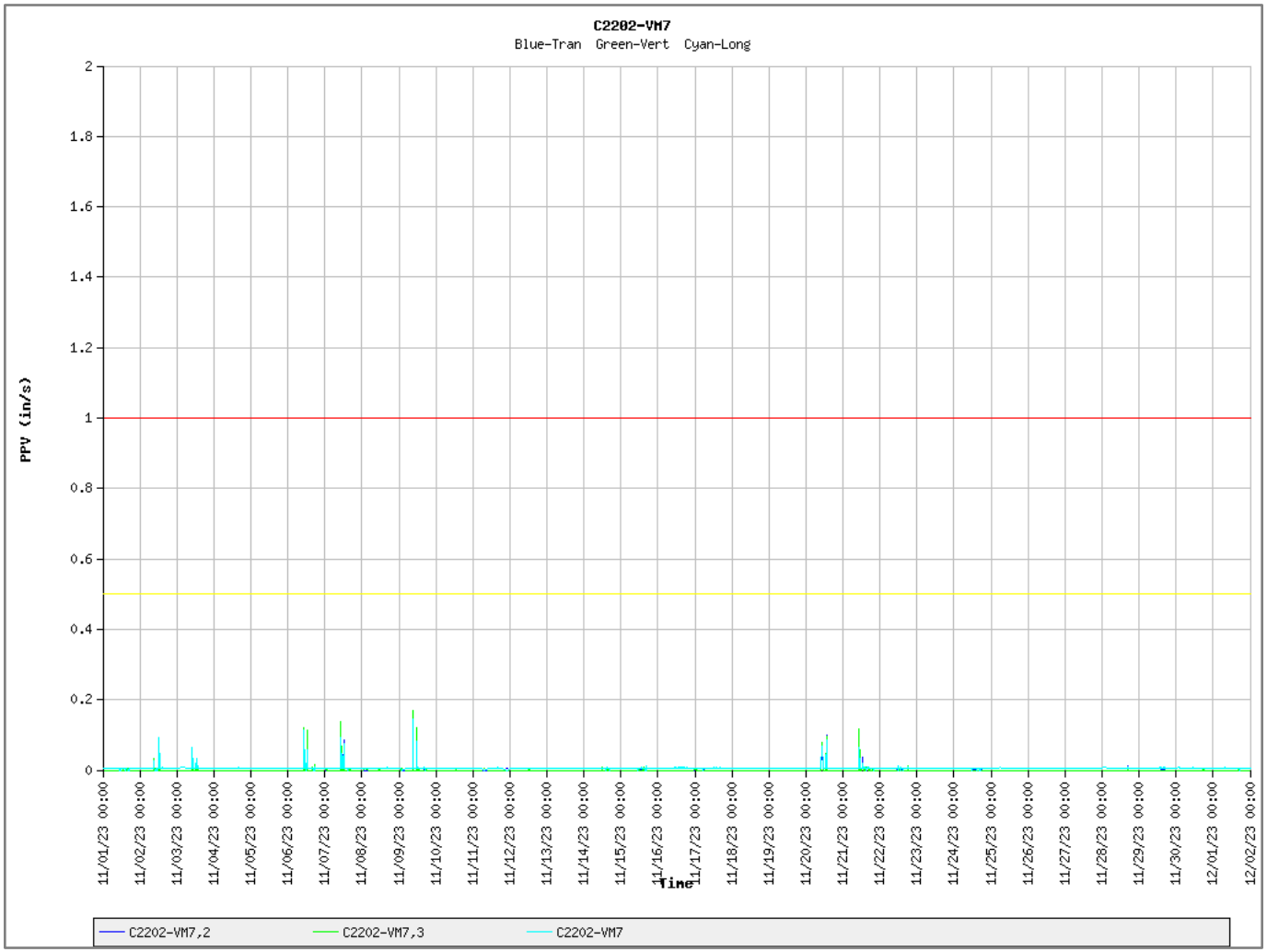
The Bronx Site Preparation November 2023 Vibration Monitoring Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM6 Transverse
C2202-VM6,2 Vertical
C2202-VM6,3 Longitudinal

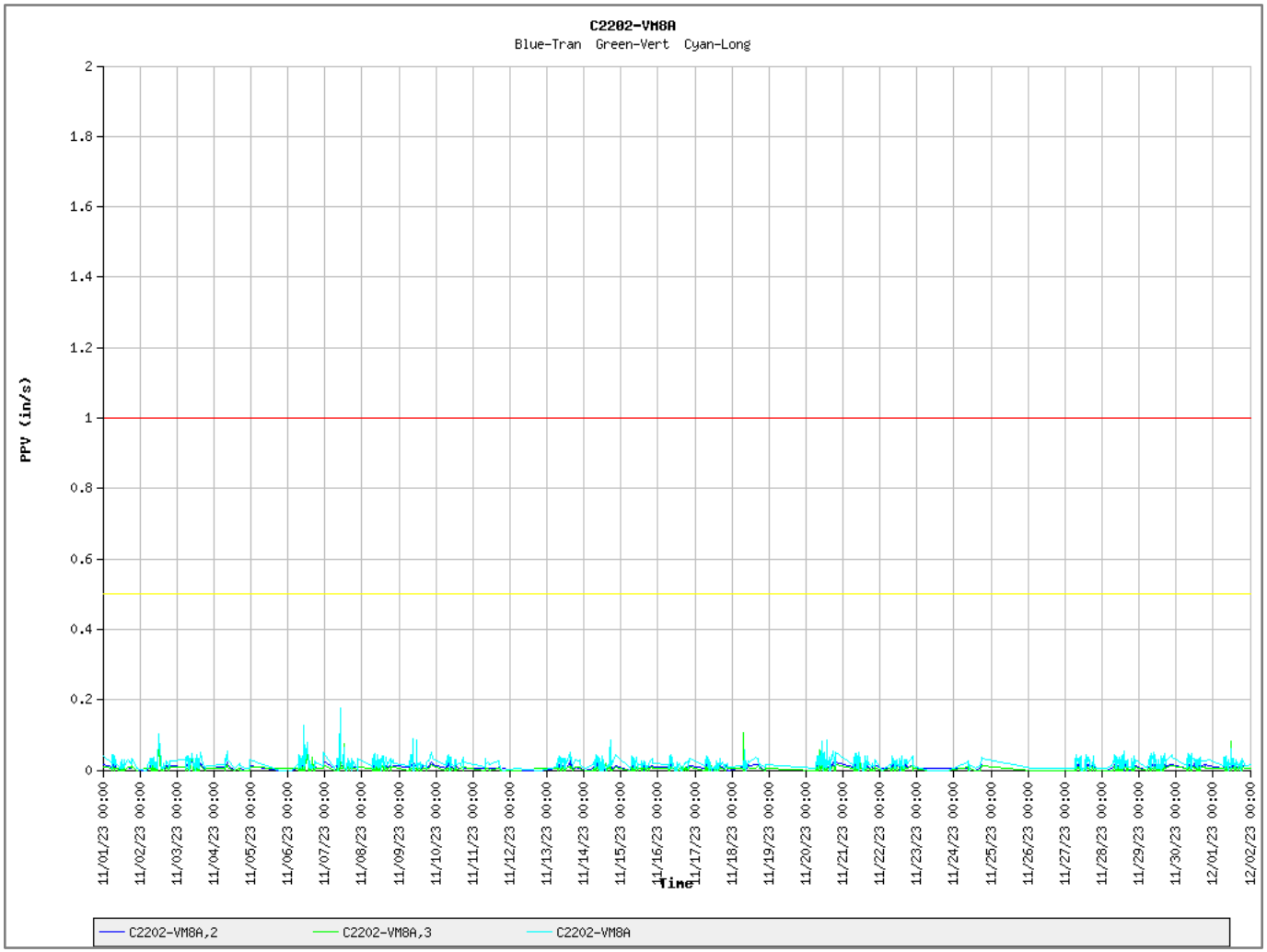
The Bronx Site Preparation November 2023 Vibration Monitoring Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM7 Longitudinal
C2202-VM7,2 Transverse
C2202-VM7,3 Vertical

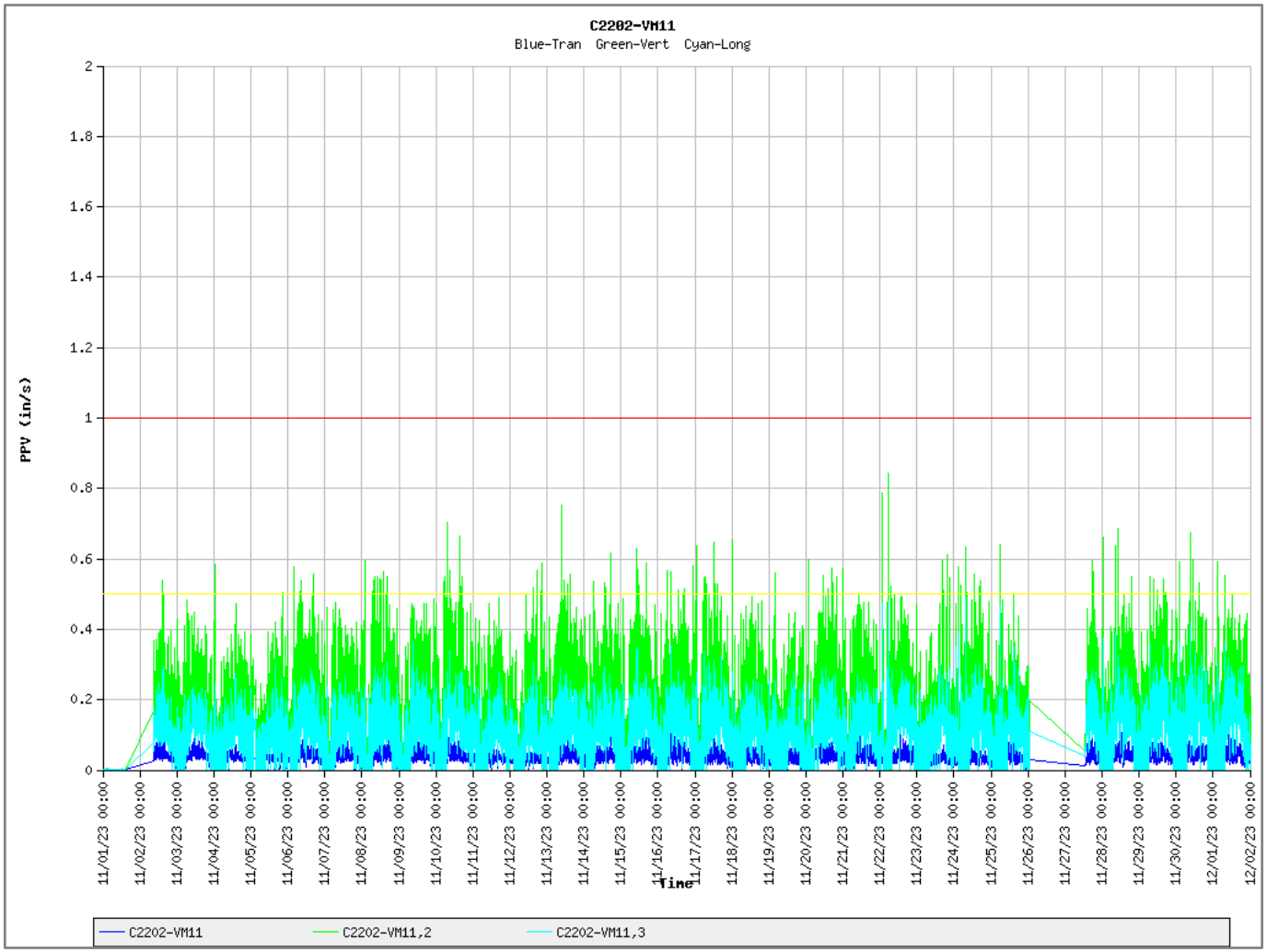
The Bronx Site Preparation November 2023 Vibration Monitoring Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM8A Longitudinal
C2202-VM8A,2 Transverse
C2202-VM8A,3 Vertical

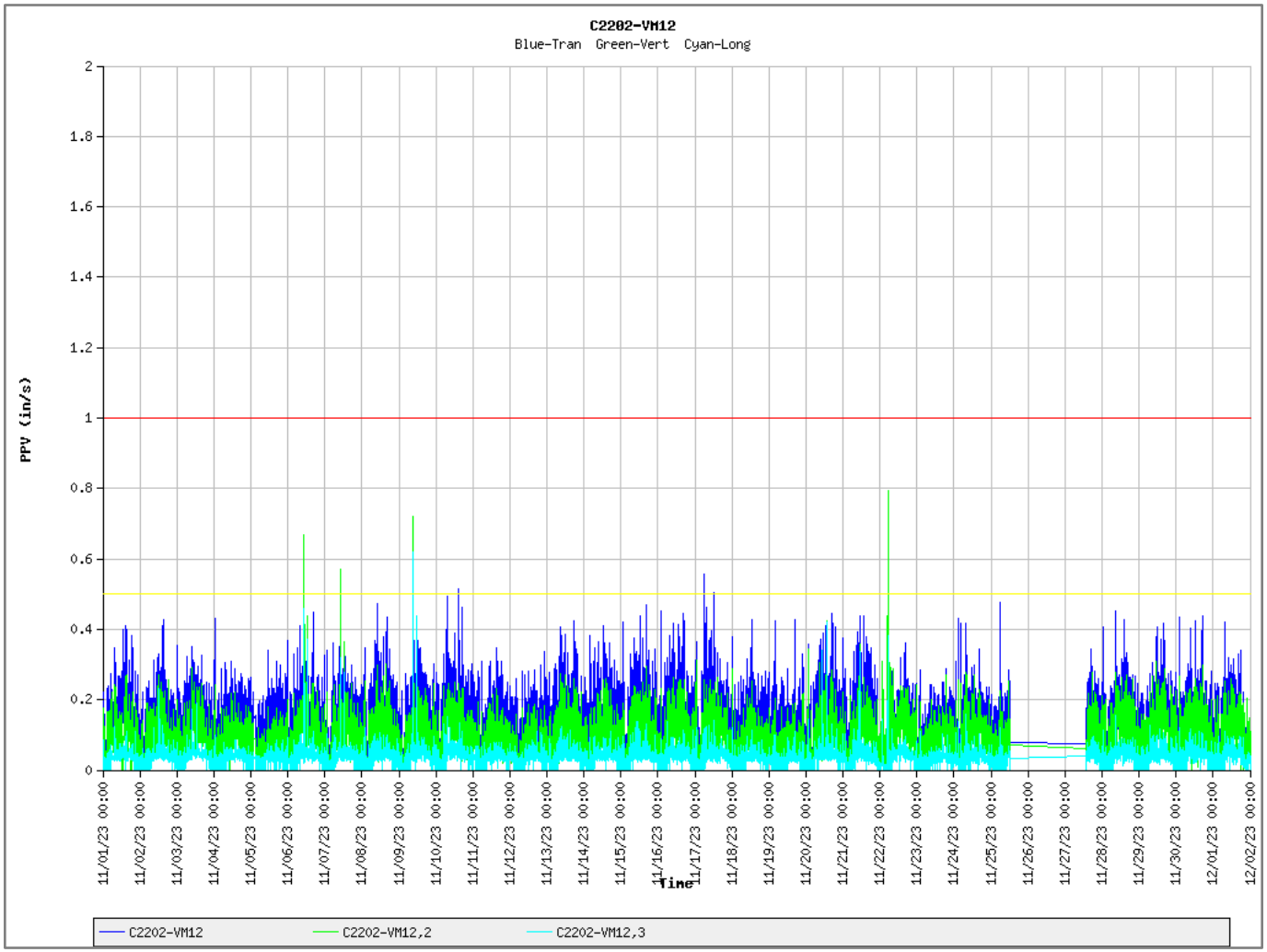
The Bronx Site Preparation November 2023 Vibration Monitoring Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM11 Transverse
C2202-VM11,2 Vertical
C2202-VM11,3 Longitudinal

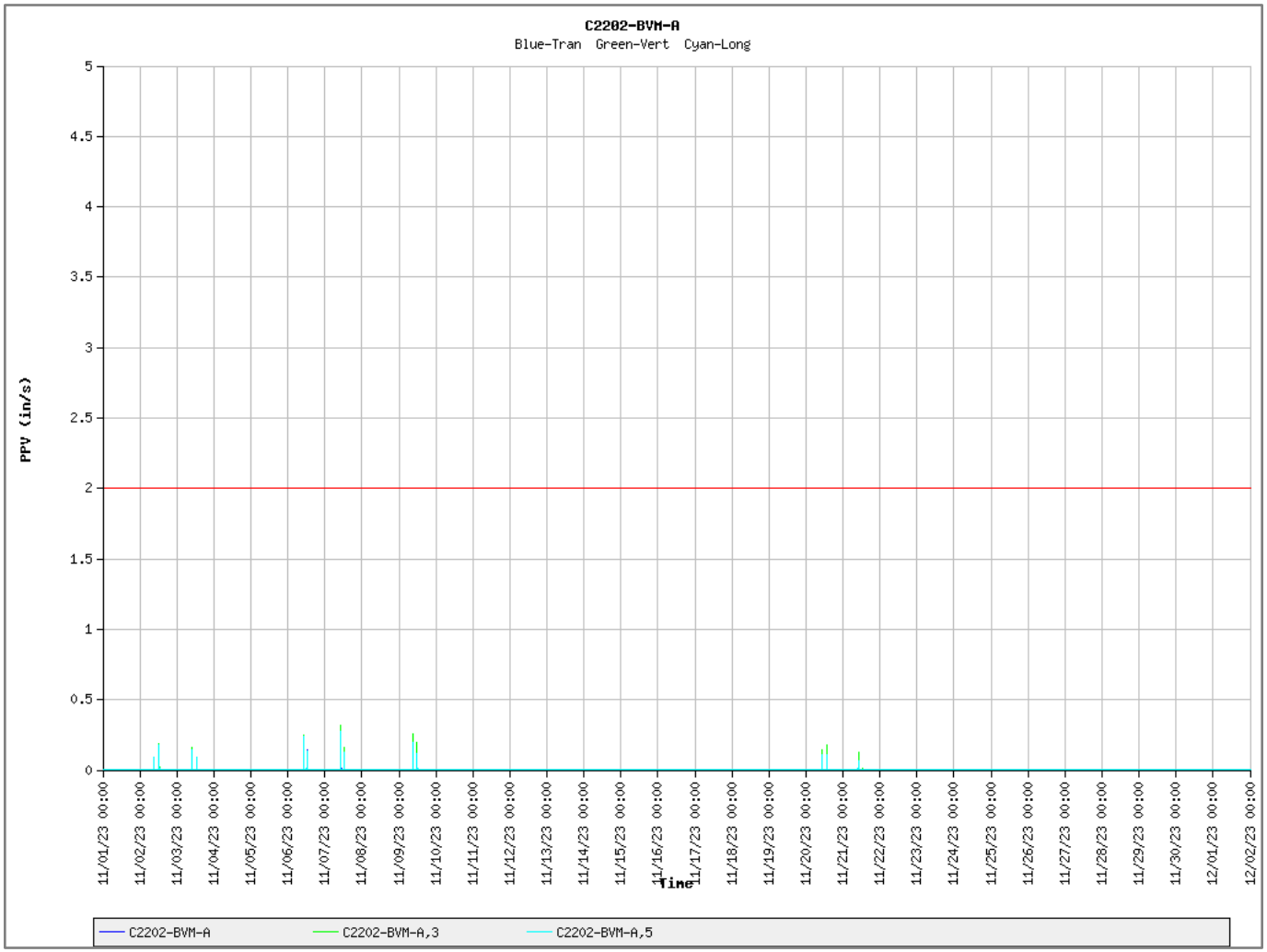
The Bronx Site Preparation November 2023 Vibration Monitoring Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM12 Transverse
C2202-VM12,2 Vertical
C2202-VM12,3 Longitudinal

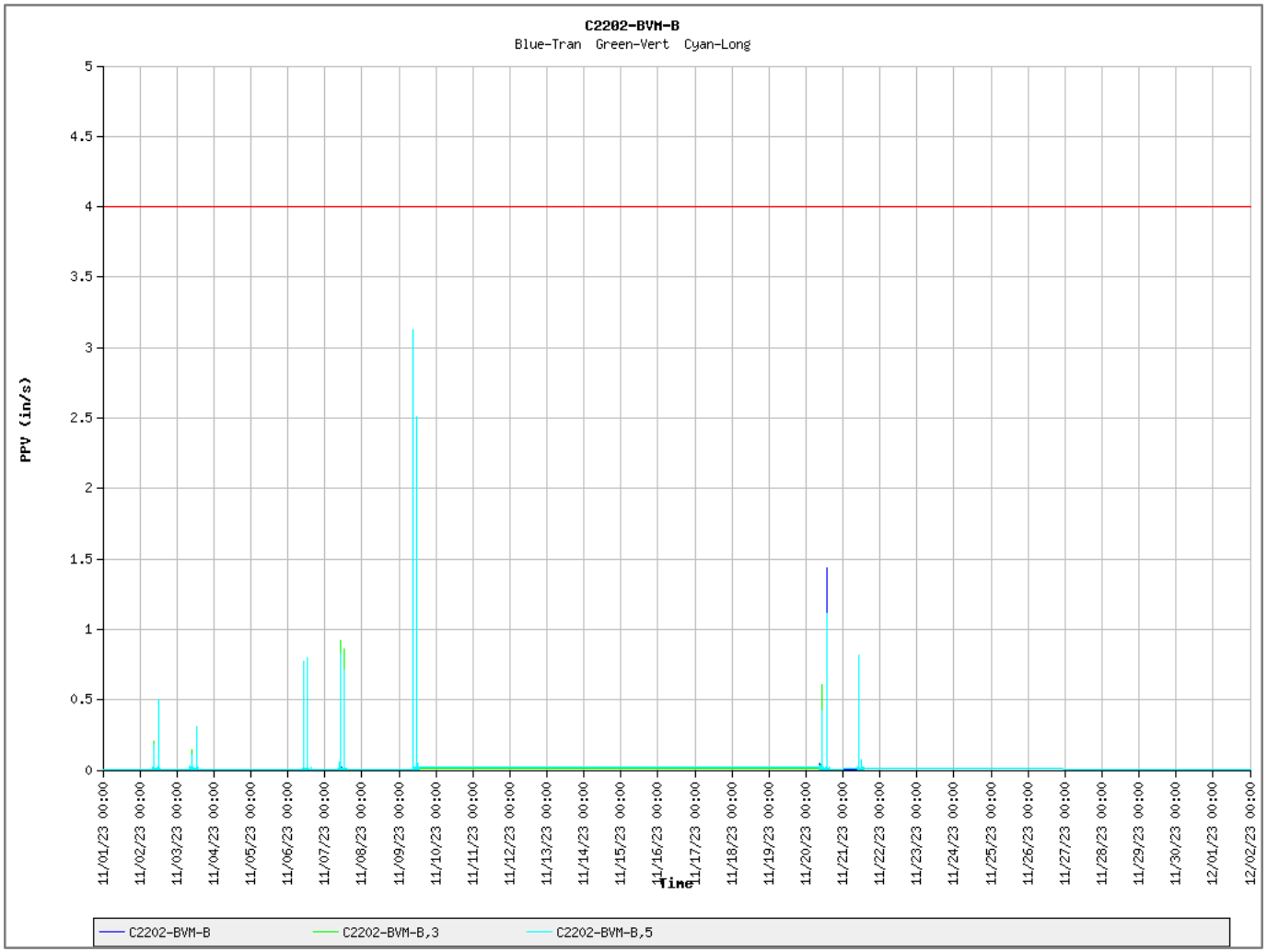
The Bronx Site Preparation November 2023 Vibration Monitoring Data Plots



Exceedance level: 2 in/sec
11/1/2023-11/30/2023 at location# 10

C2202-BVM-A Transverse
C2202-BVM-A,3 Vertical
C2202-BVM-A,5 Longitudinal

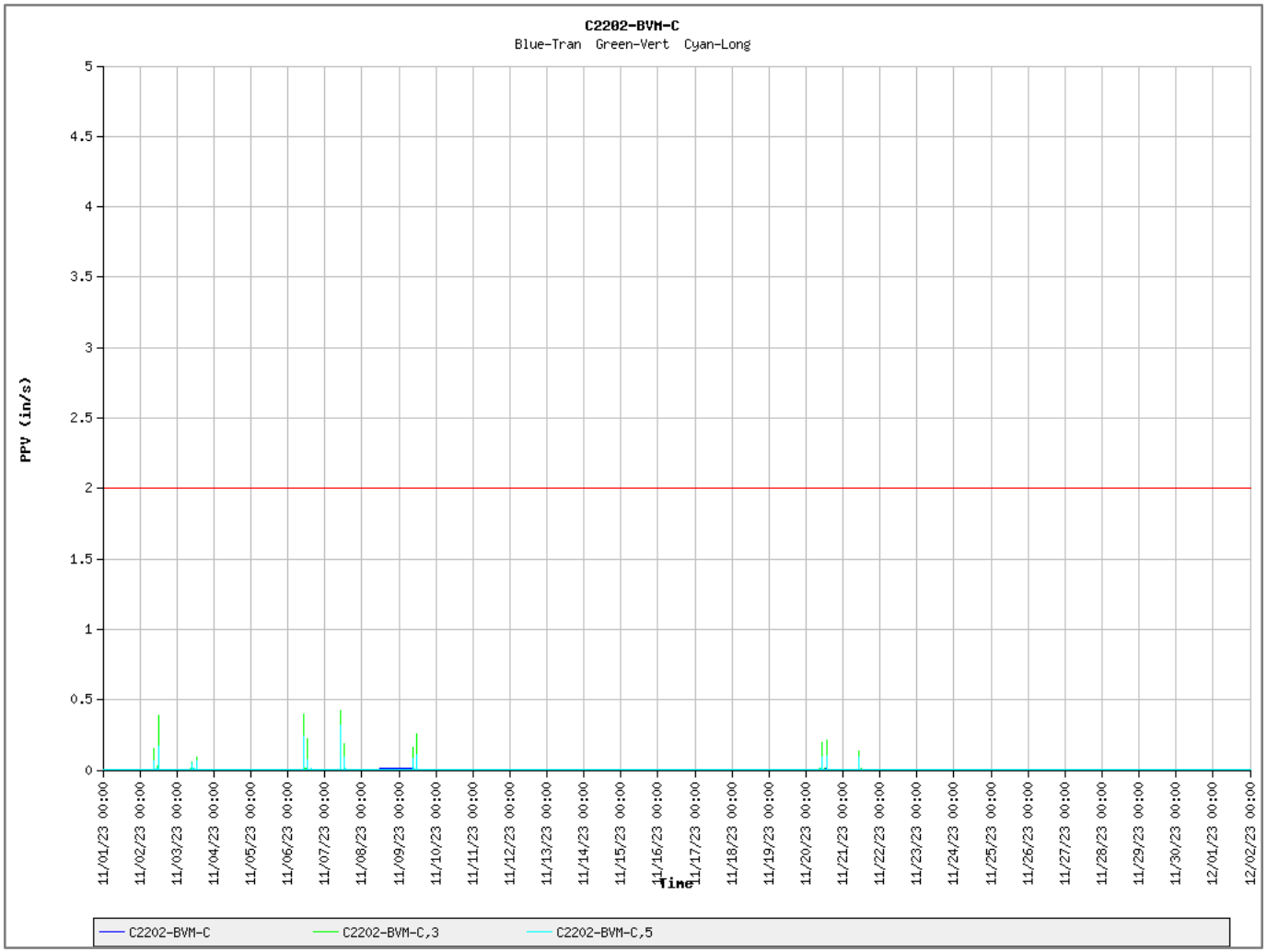
The Bronx Site Preparation November 2023 Vibration Monitoring Data Plots



Exceedance level: 4 in/sec
11/1/2023-11/30/2023 at location# 3

C2202-BVM-B Transverse
C2202-BVM-B,3 Vertical
C2202-BVM-B,5 Longitudinal

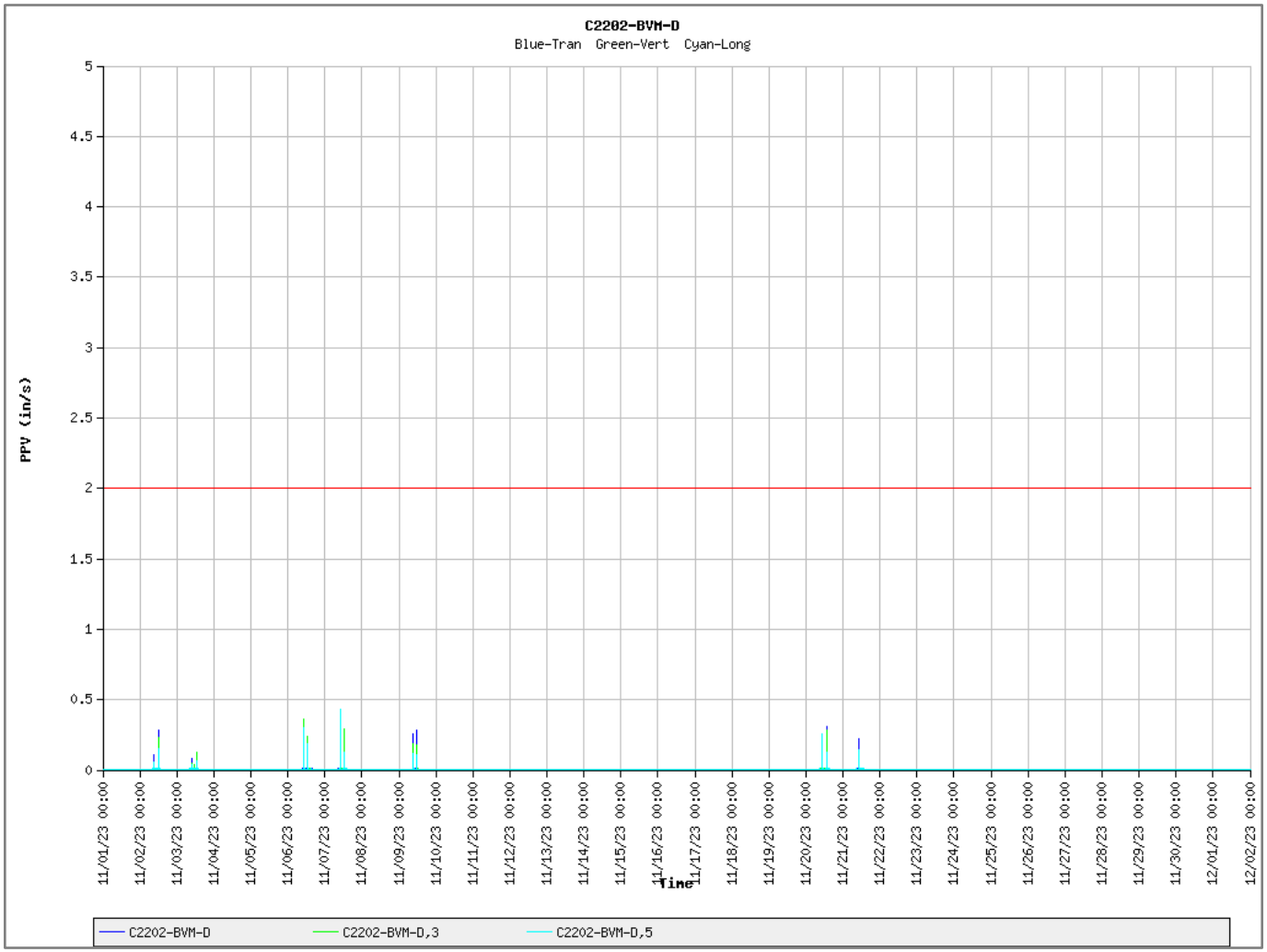
The Bronx Site Preparation November 2023 Vibration Monitoring Data Plots



Exceedance level: 2 in/sec
11/1/2023-11/30/2023 at location# 7

C2202-BVM-C Transverse
C2202-BVM-C,3 Vertical
C2202-BVM-C,5 Longitudinal

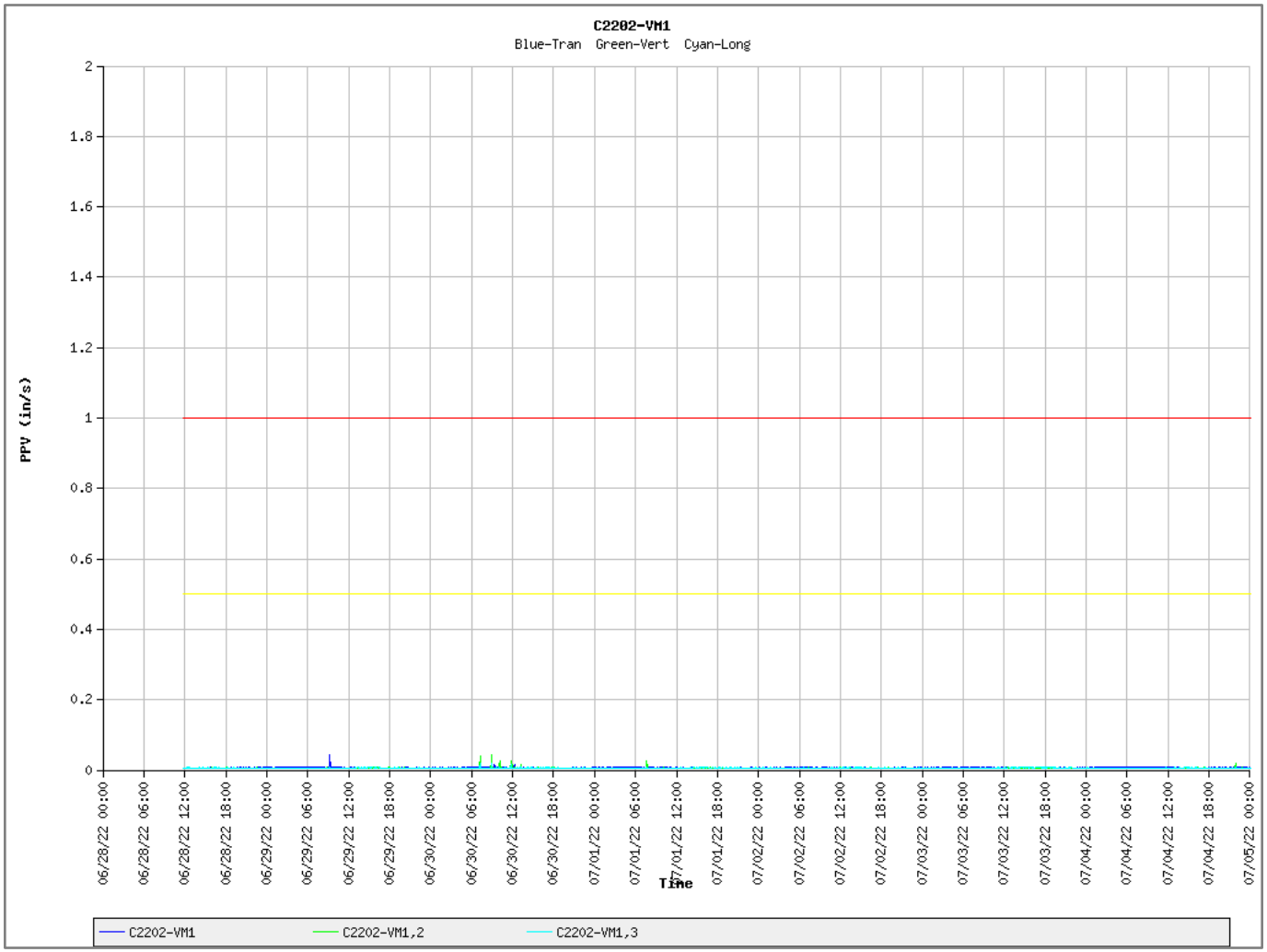
The Bronx Site Preparation November 2023 Vibration Monitoring Data Plots



Exceedance level: 2 in/sec
11/1/2023-11/30/2023 at location# 5

C2202-BVM-D Transverse
C2202-BVM-D,3 Vertical
C2202-BVM-D,5 Longitudinal

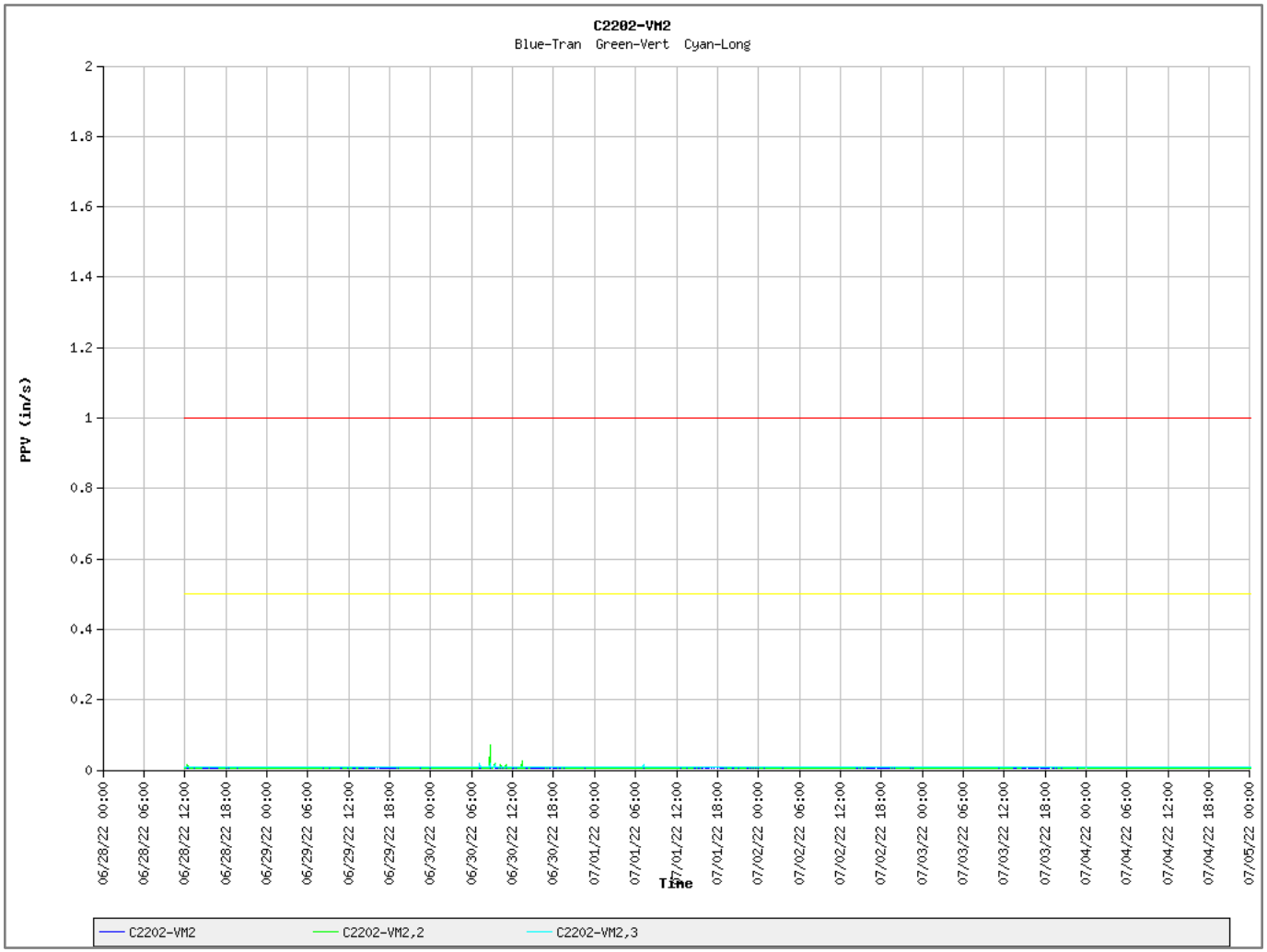
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM1 Transverse
C2202-VM1,2 Vertical
C2202-VM1,3 Longitudinal

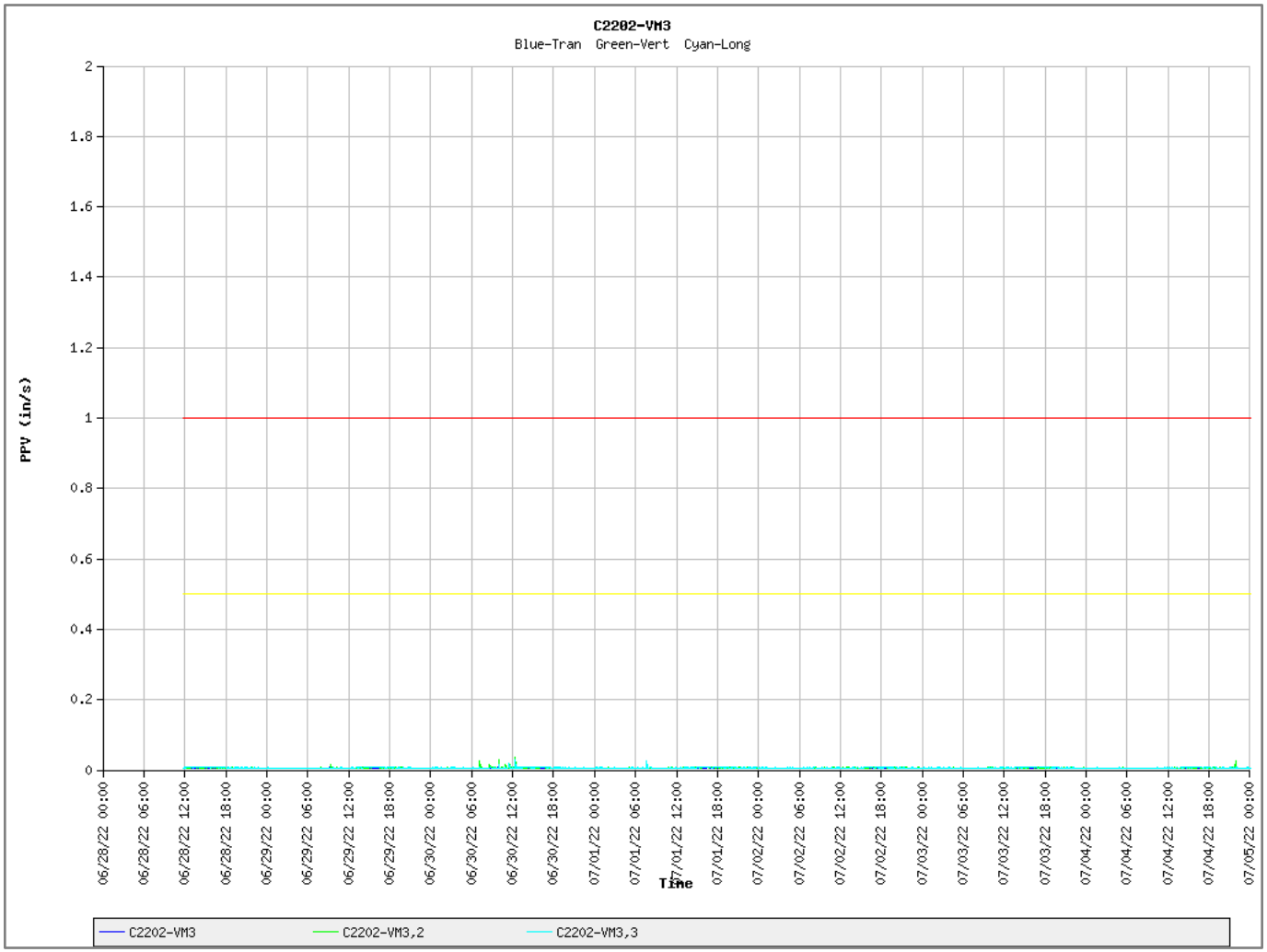
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM2 Transverse
C2202-VM2,2 Vertical
C2202-VM2,3 Longitudinal

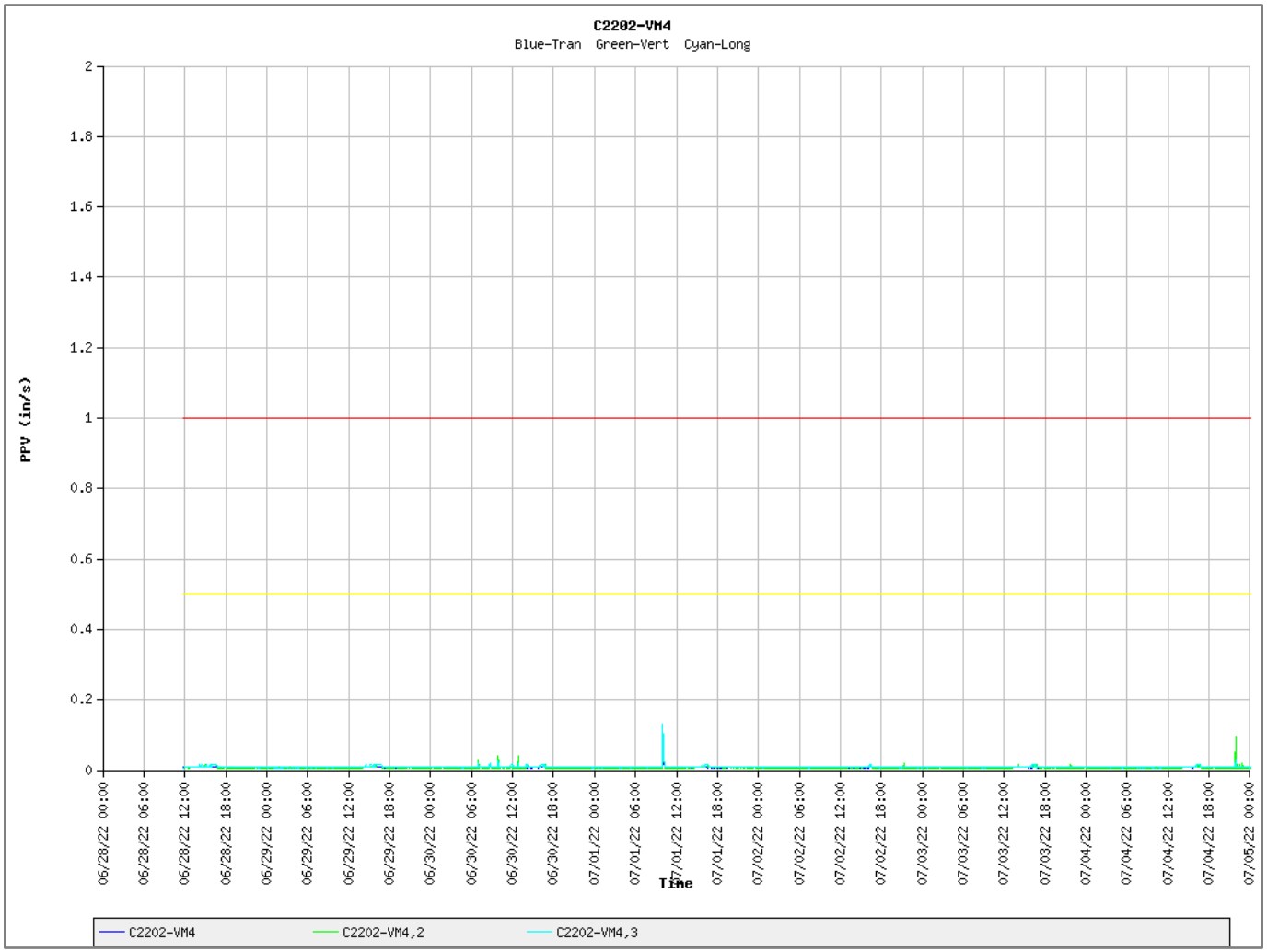
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM3 Transverse
C2202-VM3,2 Vertical
C2202-VM3,3 Longitudinal

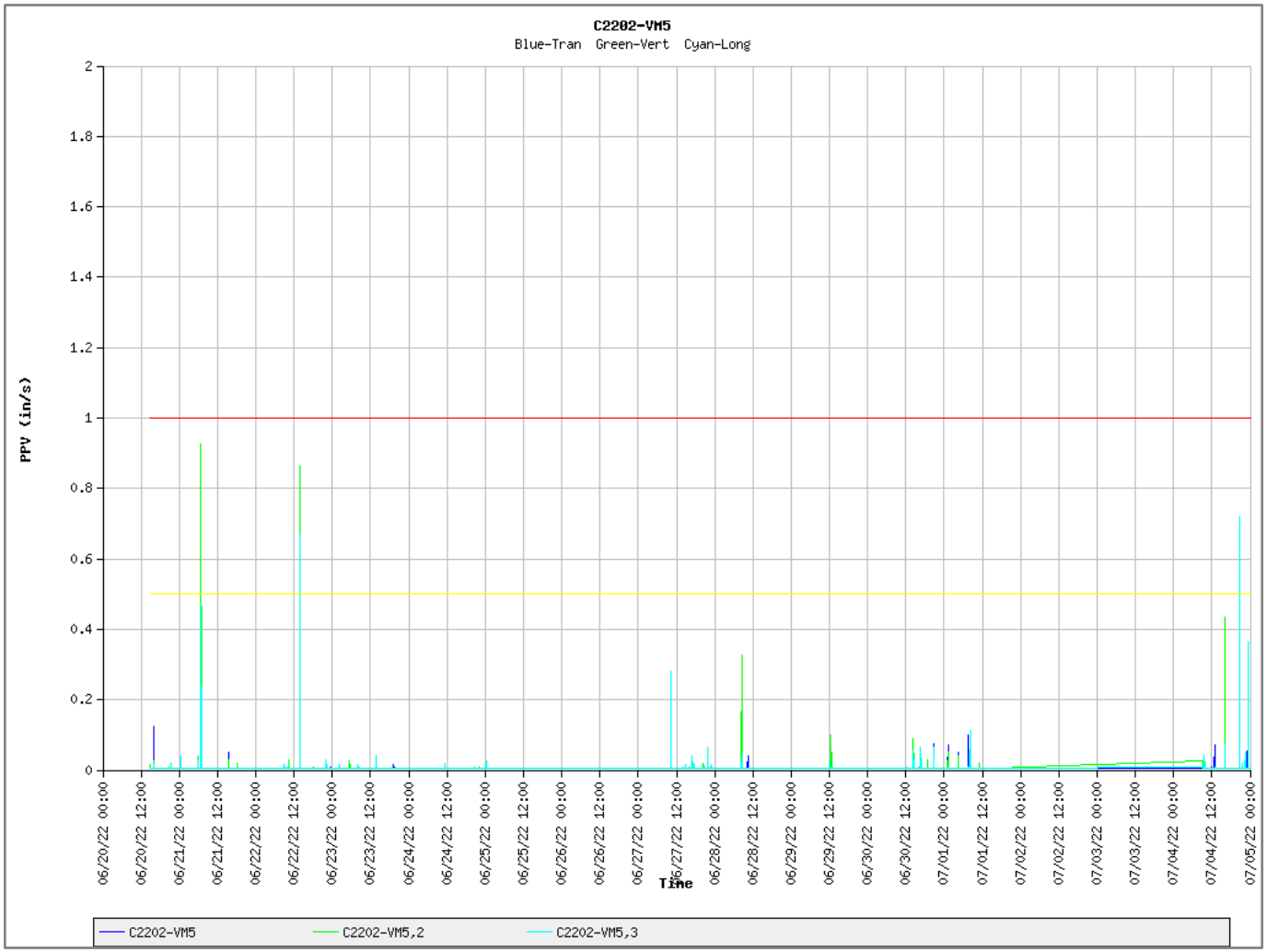
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM4 Transverse
C2202-VM4,2 Vertical
C2202-VM4,3 Longitudinal

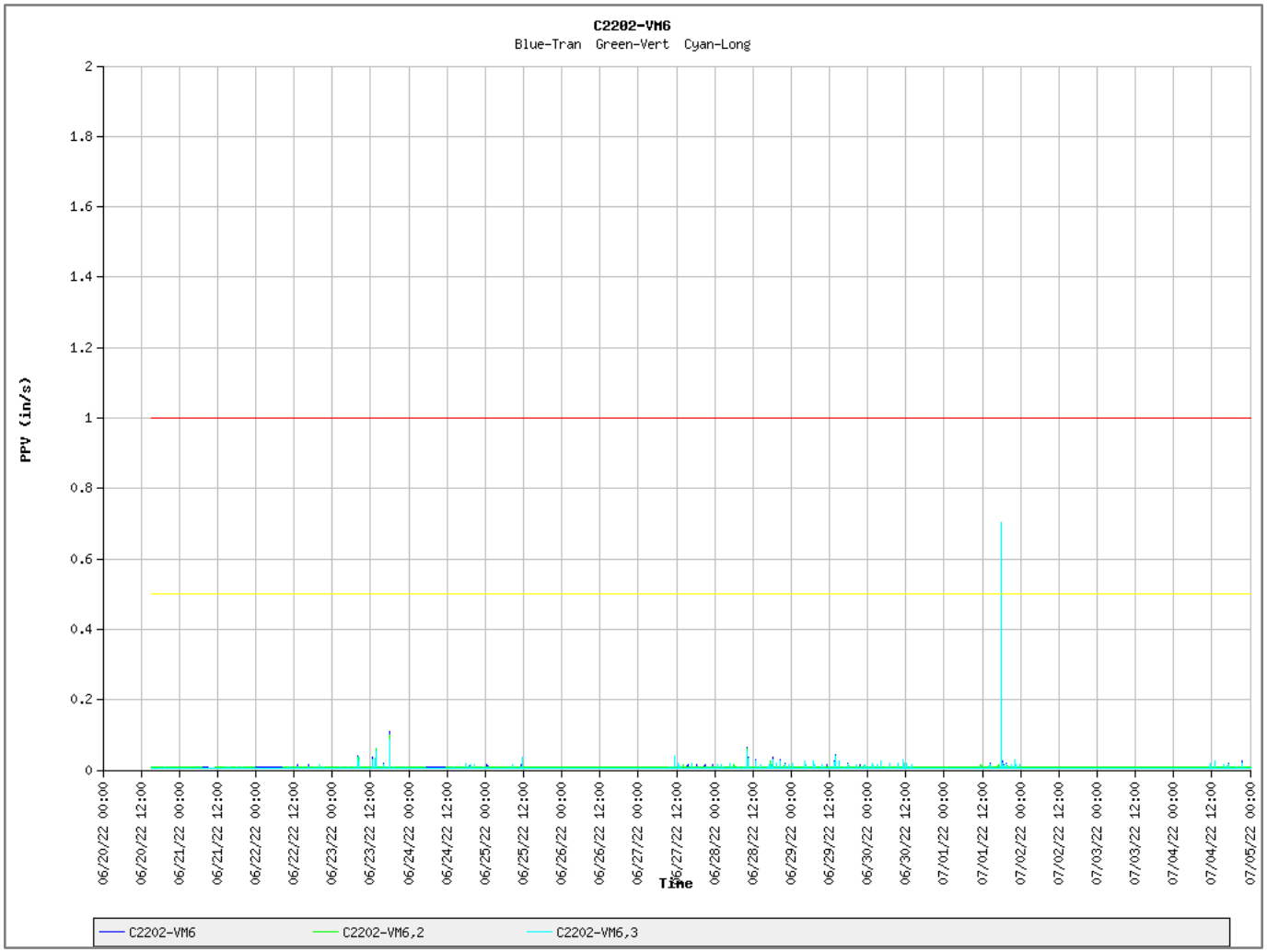
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM5 Transverse
C2202-VM5,2 Vertical
C2202-VM5,3 Longitudinal

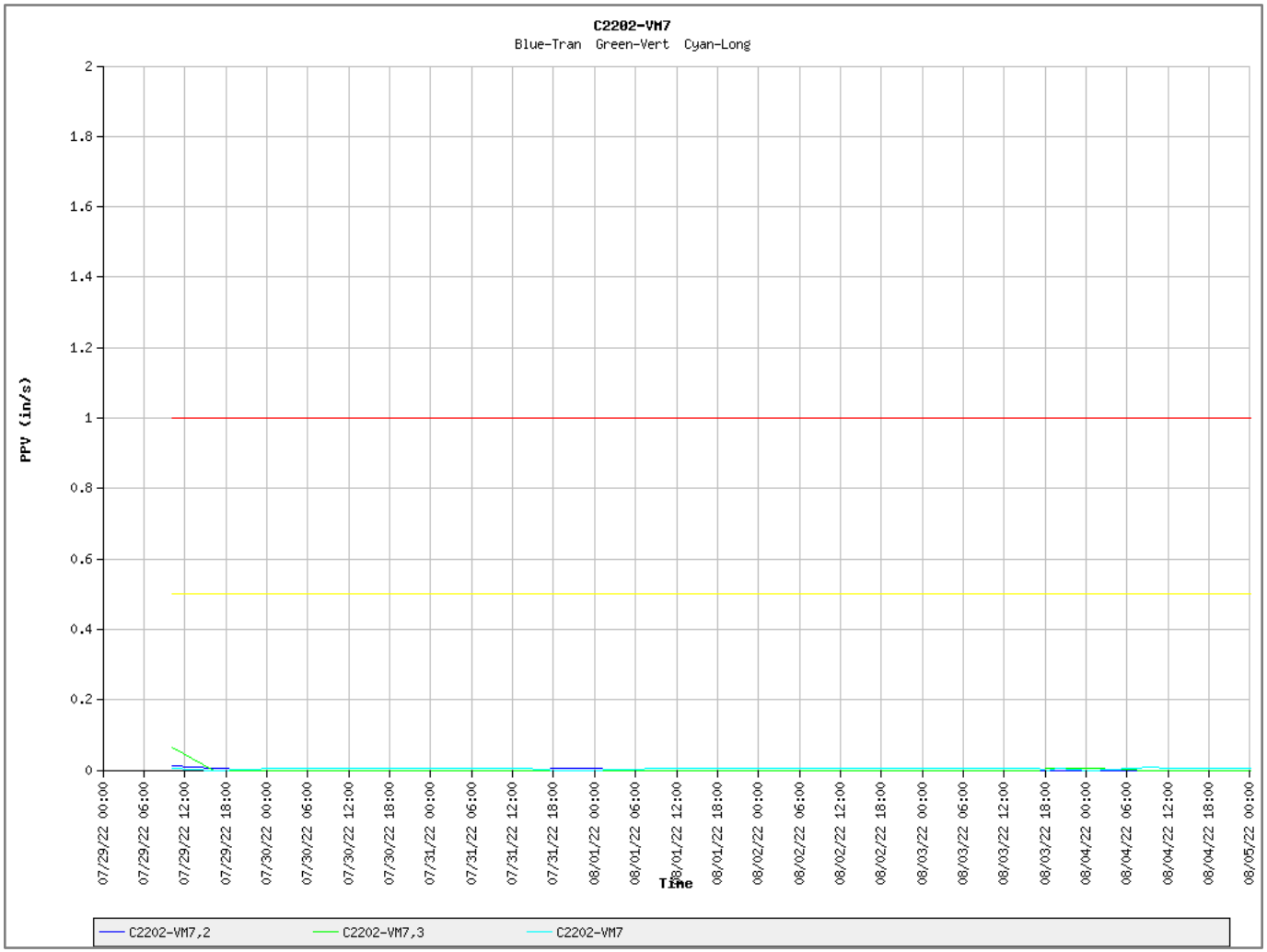
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM6 Transverse
C2202-VM6,2 Vertical
C2202-VM6,3 Longitudinal

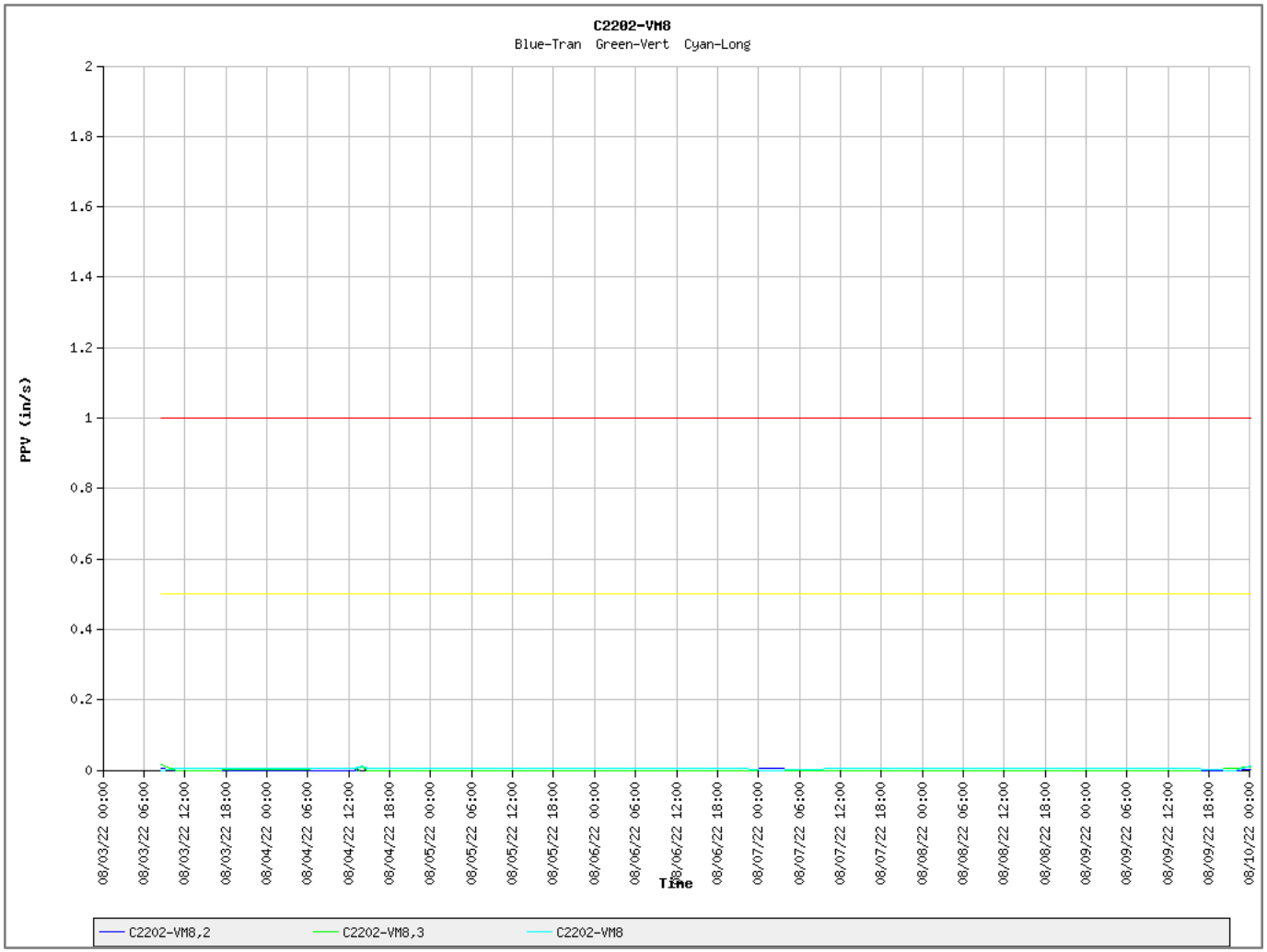
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM7 Longitudinal
C2202-VM7,2 Transverse
C2202-VM7,3 Vertical

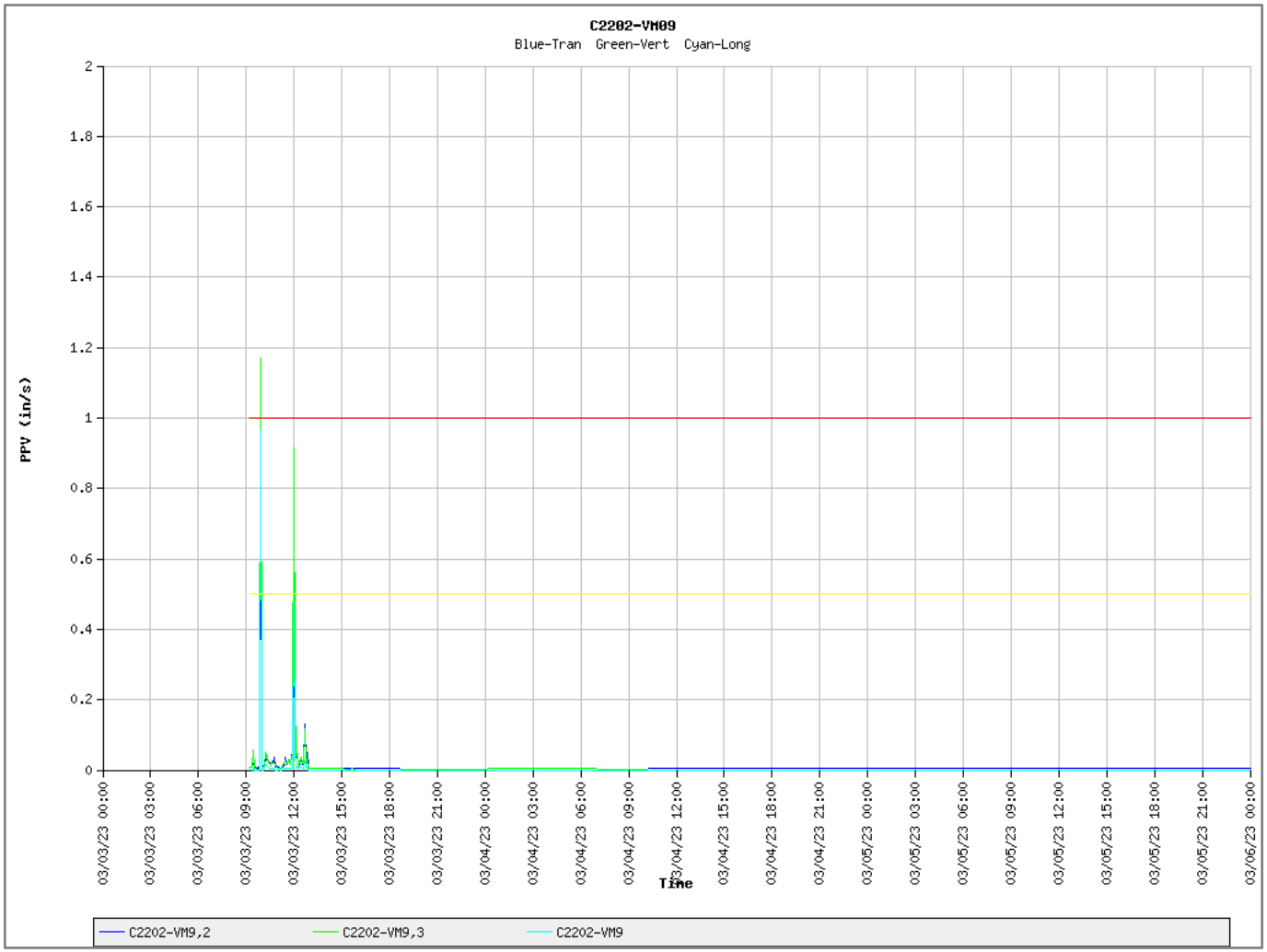
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM8 Longitudinal
C2202-VM8,2 Transverse
C2202-VM8,3 Vertical

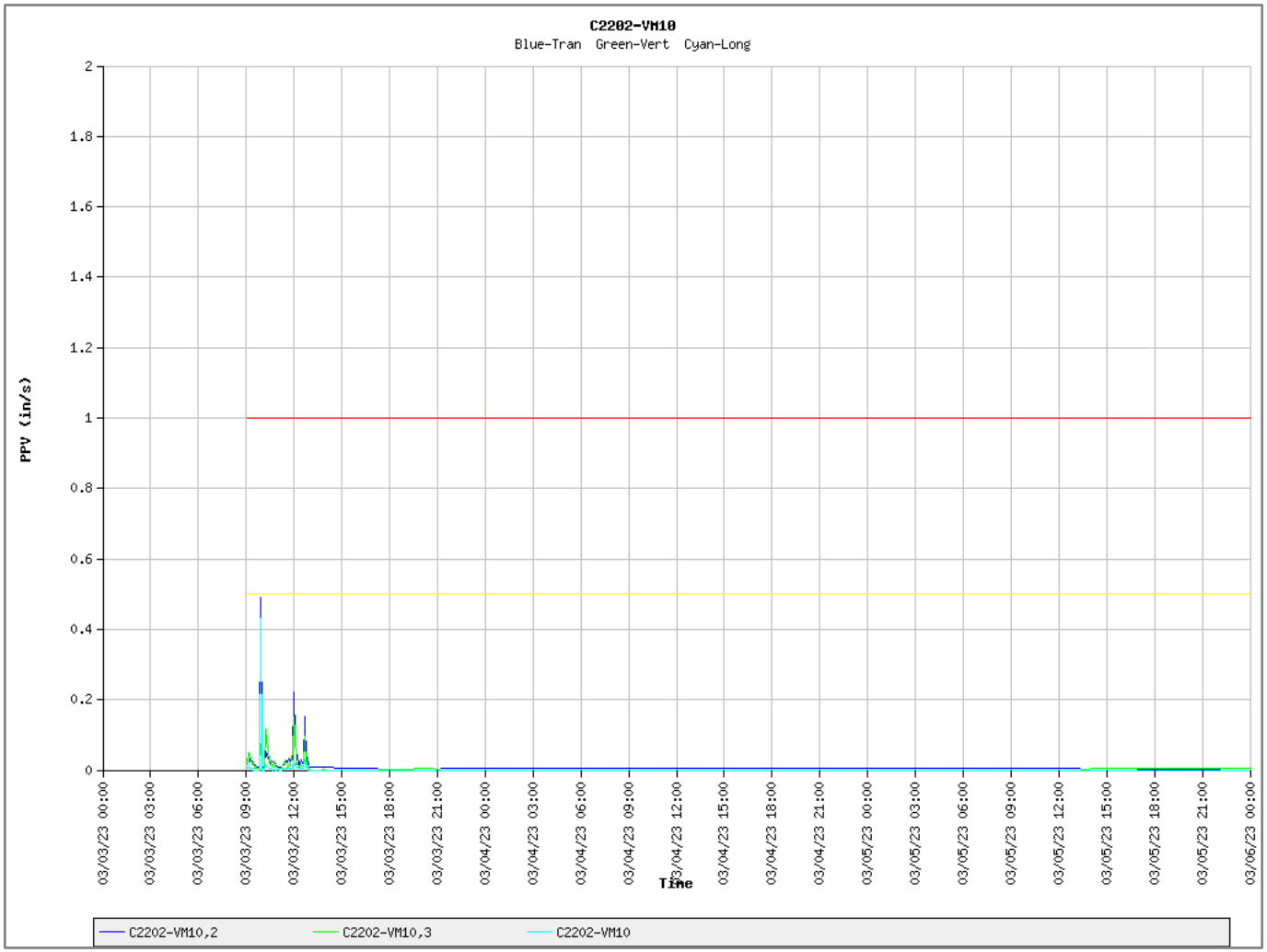
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM9 Longitudinal
C2202-VM9,2 Transverse
C2202-VM9,3 Vertical

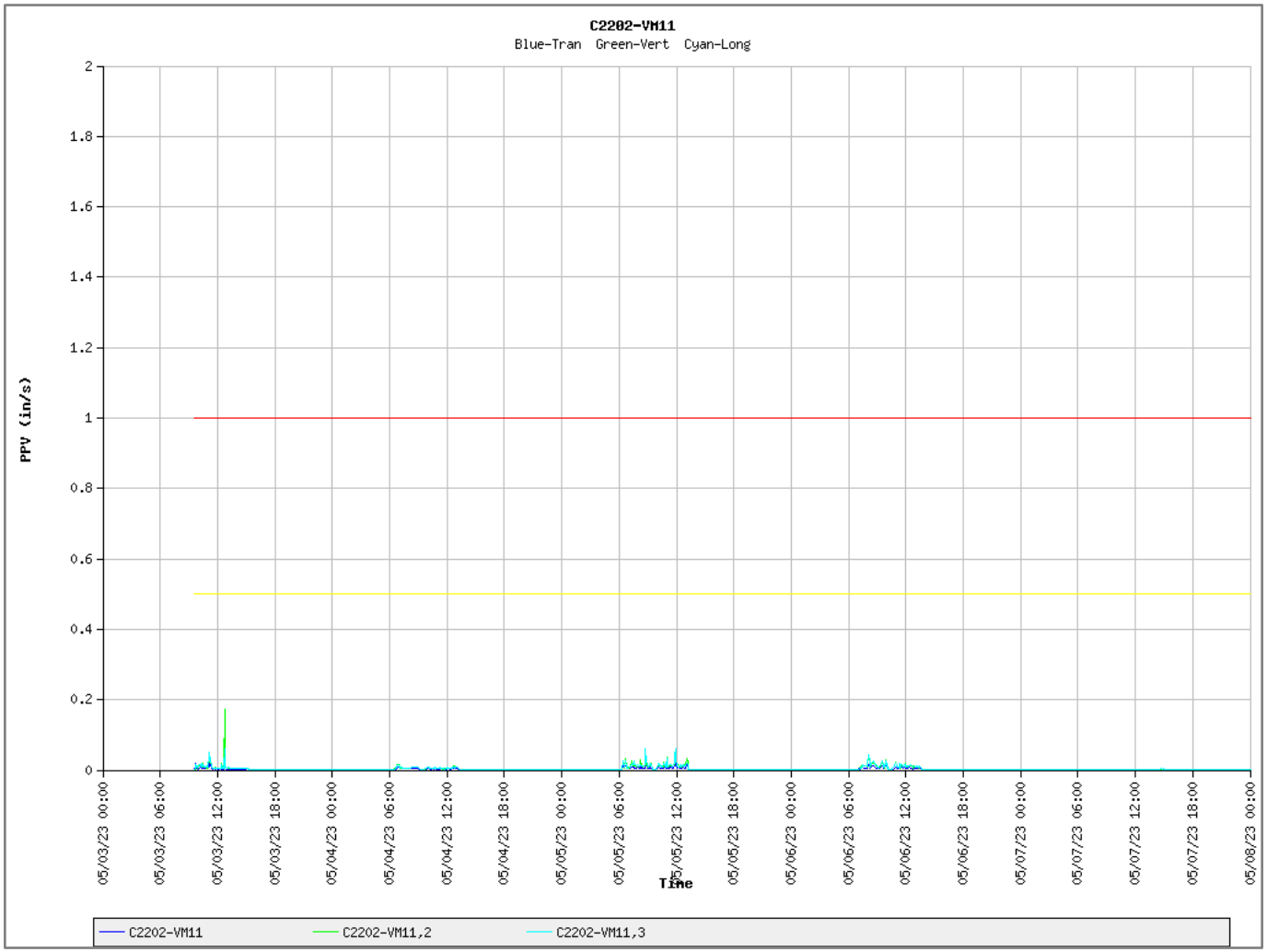
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM10 Longitudinal
C2202-VM10,2 Transverse
C2202-VM10,3 Vertical

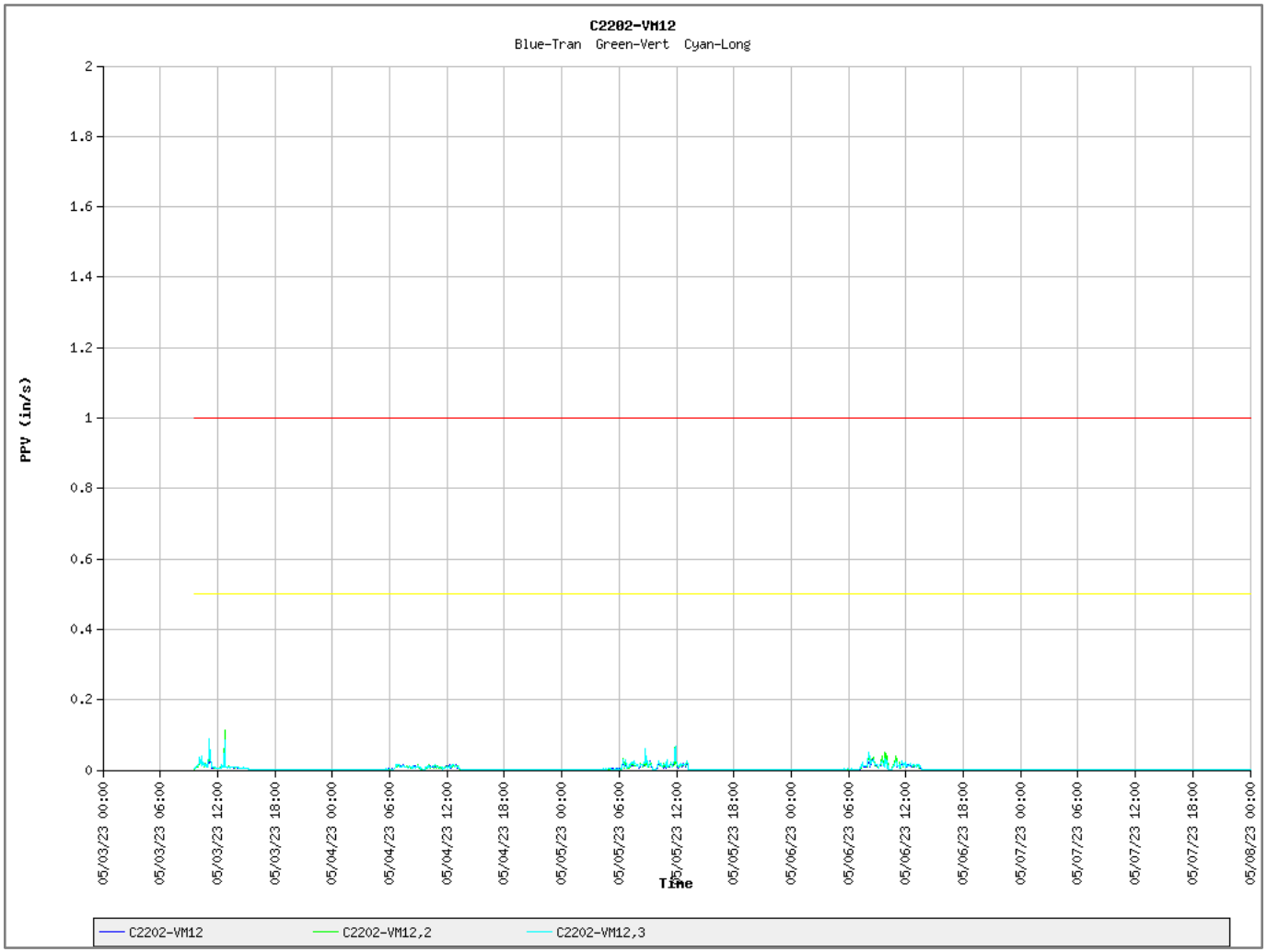
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM11 Transverse
C2202-VM11,2 Vertical
C2202-VM11,3 Longitudinal

The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM12 Transverse
C2202-VM12,2 Vertical
C2202-VM12,3 Longitudinal