



Surf House Weekly Vibration Monitoring Report

For Fort Partners

04/12/2023 to 04/23/2023

Project Narrative

PROJECT INFORMATION

The project consists of the construction of a 12-level condominium structure. The new development will have a footprint of about 65 by 180 feet, and will rise to a maximum elevation of +140 feet NGVD. A single level basement is also planned for the development, with an anticipated finished floor elevation of -6' 8" feet NGVD. The underground parking garage will have approximate measurements of 206 feet in the east-west direction, and up to 65 feet in the north-south direction. The footprint of the garage structure is anticipated to be roughly 13,600 square feet. The garage will be accessed on the North side by car lifts. The eastern portion of the undeveloped land will include a pool and garden for the residents.

REMOTE VIBRATION MONITORS

A total of twelve (12) vibration monitors have been installed at this time. The units run continuously for a 24-hour period, with the exception of a short period of time to allow for the devices to download the data collected during the day. The location and identification of each device is presented in the table below and shown graphically on the map. A graph will be displayed for each monitor showing the data point collected during the specified time period. This report will display the historical data and data collected from the week of this report.

The vibration monitors were installed on the dates as listed in the table below:

Installation Date	Location/Name of Vibration Monitor	Serial Number of Vibration Monitor
04/12/2023	8926 Collins VM	UM10647
	8955 Collins VM1	UM6135
	8955 Collins VM2	UM6842
	8955 Collins VM3	UM12622
	8955 Collins VM4	UM13655
04/19/2023	9001 Collins VM1	UM9384
	9001 Collins VM2	UM12058
	9001 Collins VM3	UM12036
	9008 Collins VM1	UM6881
04/20/2023	9008 Collins VM2	UM13186
	8966 Collins VM	UM13654
	8925 Collins VM	UM12761

REVIEW OF VIBRATION MONITORING DATA

The following definitions identify the wording that will be used in the report to describe the vibration readings:

- Longitudinal: a vibration measurement in the axis in line with the vibration source (back and forth).
- Transverse: a vibration measurement in the axis perpendicular to the vibration source (side to side).
- Vertical: a vibration measurement in the vertical axis (up and down).
- Peak Particle Velocity (PPV): movement within the ground of molecular particles. This is not related to surface movement.

THRESHOLD EXCEEDANCES

A vibration level threshold limit of 0.50 in/sec is being used for the project, with trigger alerts set at 0.30 in/sec, or 60 percent of the established threshold level. Listed below are the instances when the seismographs have exceeded the established threshold limit of 0.50 in/sec.:

Date	Vibration Monitor (VM) Name/Location	Peak Particle Velocity (in./sec.)

Notes:

DATES WHEN VIBRATION DATA WAS NOT RECORDED

Below is a table of dates when readings were not recorded on the vibration monitor, along with the cause of the reason for each occurrence.

Date	Vibration Monitor (VM) Name/Location
4/12/2023 17:00 – 4/19/2023 18:00	8955 Collins VM2 ¹
4/17/2023 14:00 – 4/24/2023 00:00	8955 Collins VM3 ²

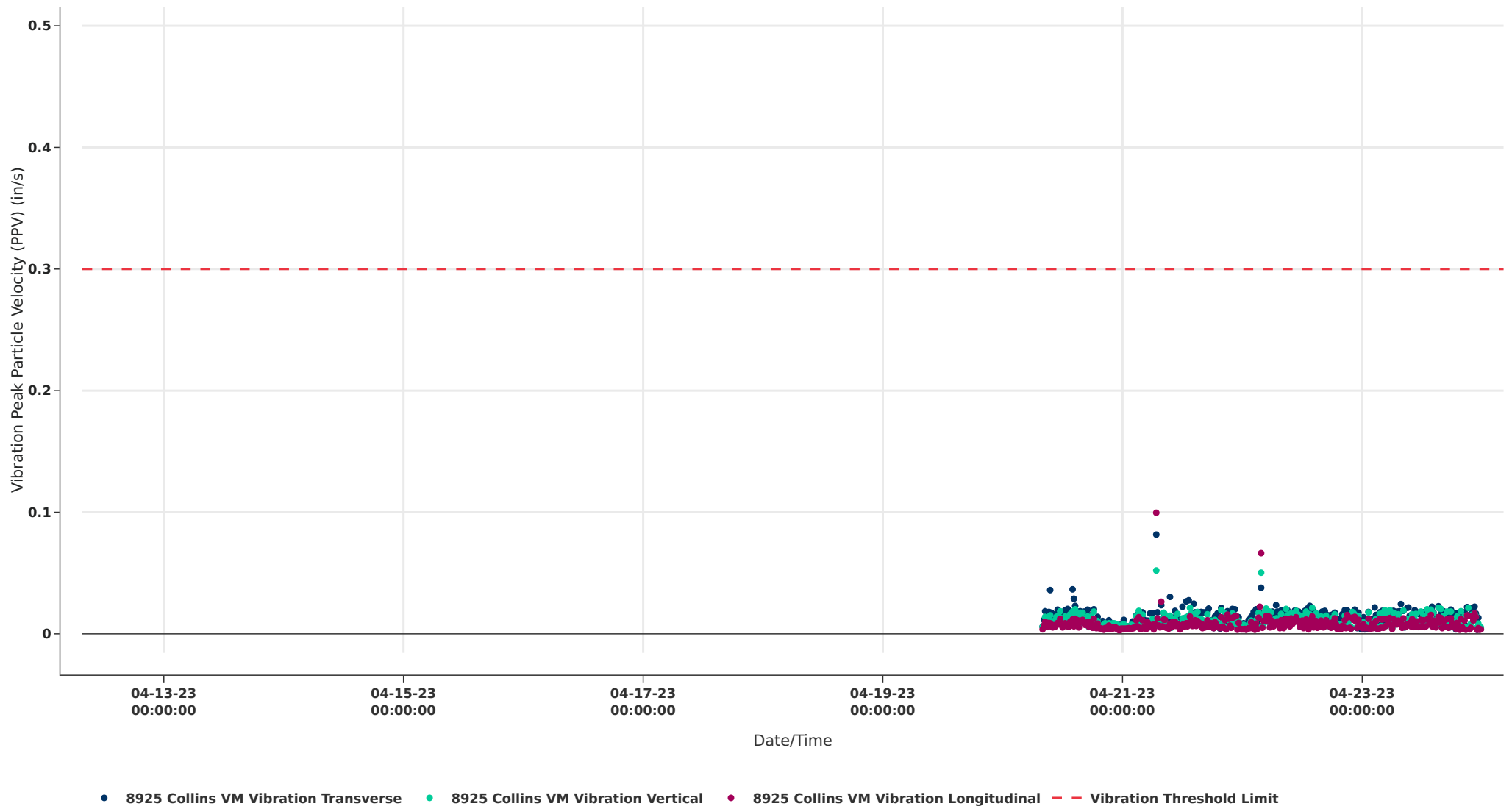
¹ During the setup of this system, the modem was not allowing connection to the system. Due to the communication issue, the unit was not activated. The modem was replaced on 4/19/2023 to allow communication and the unit was activated at that time.

² Communication to this system was interrupted on 4/17/2023. An inspection of this system will be performed this week to resolve the communication issue and process data from the system.

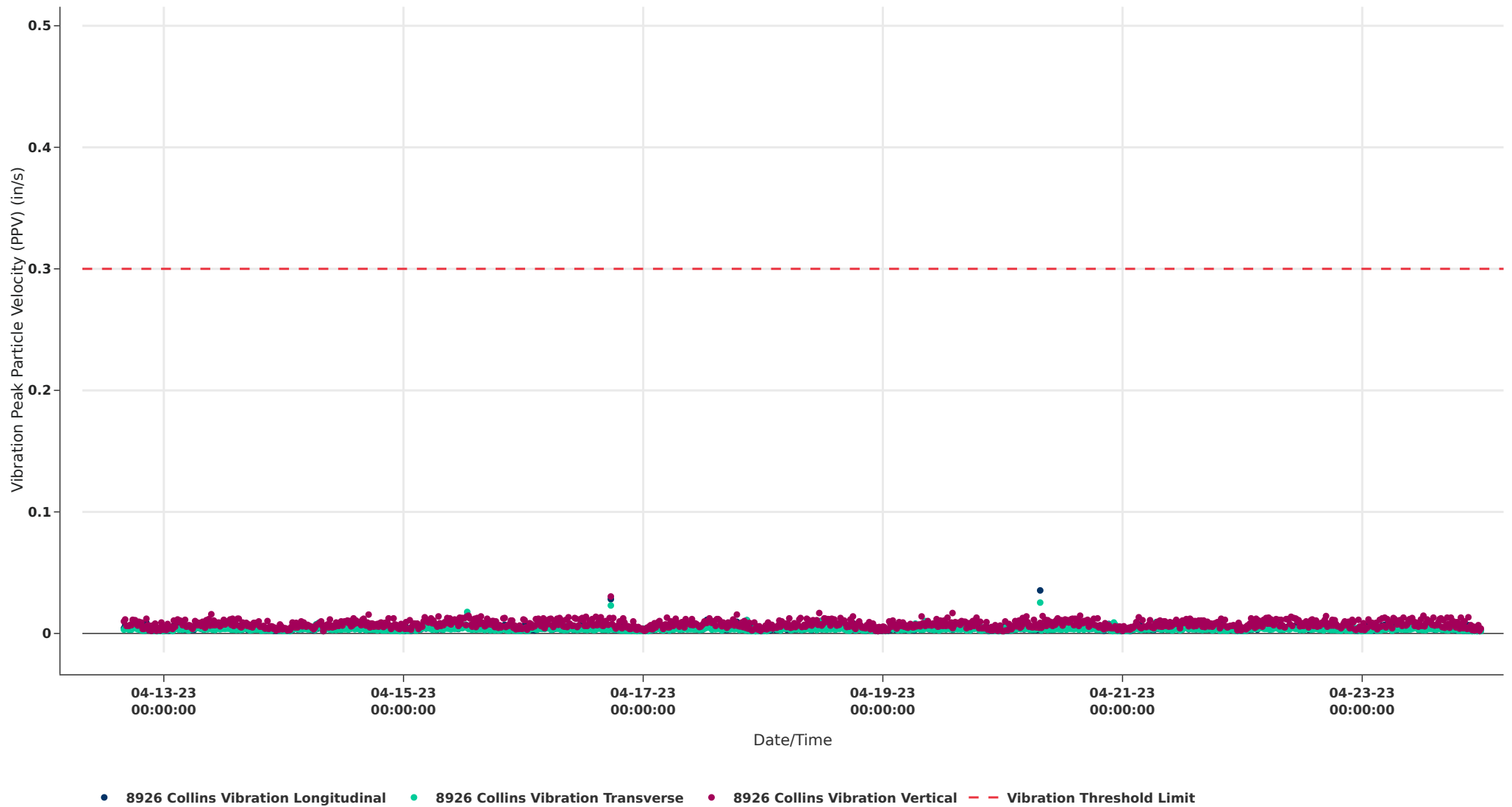
Report Map View



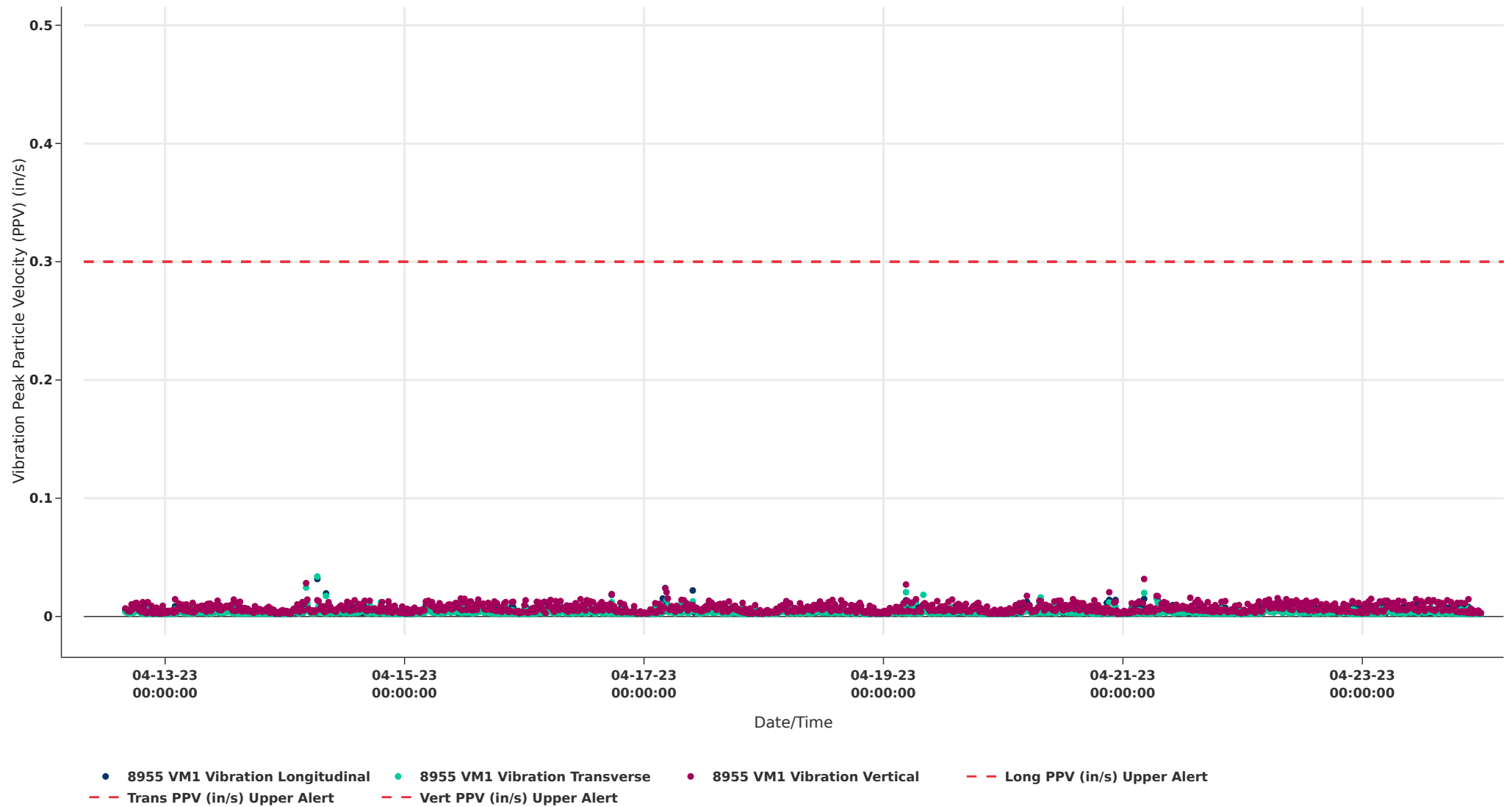
8925 Collins Vibration



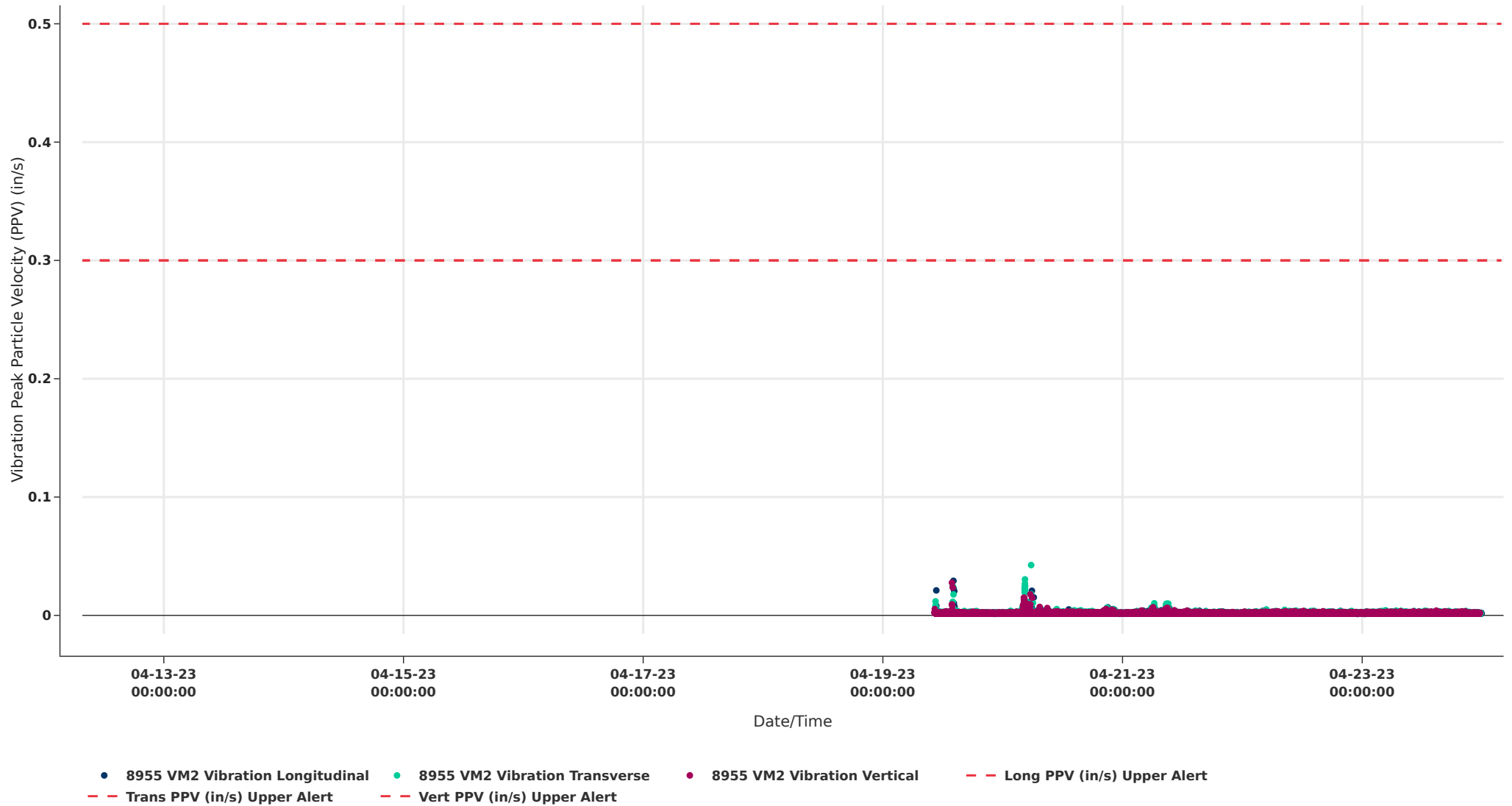
8926 Collins Vibration



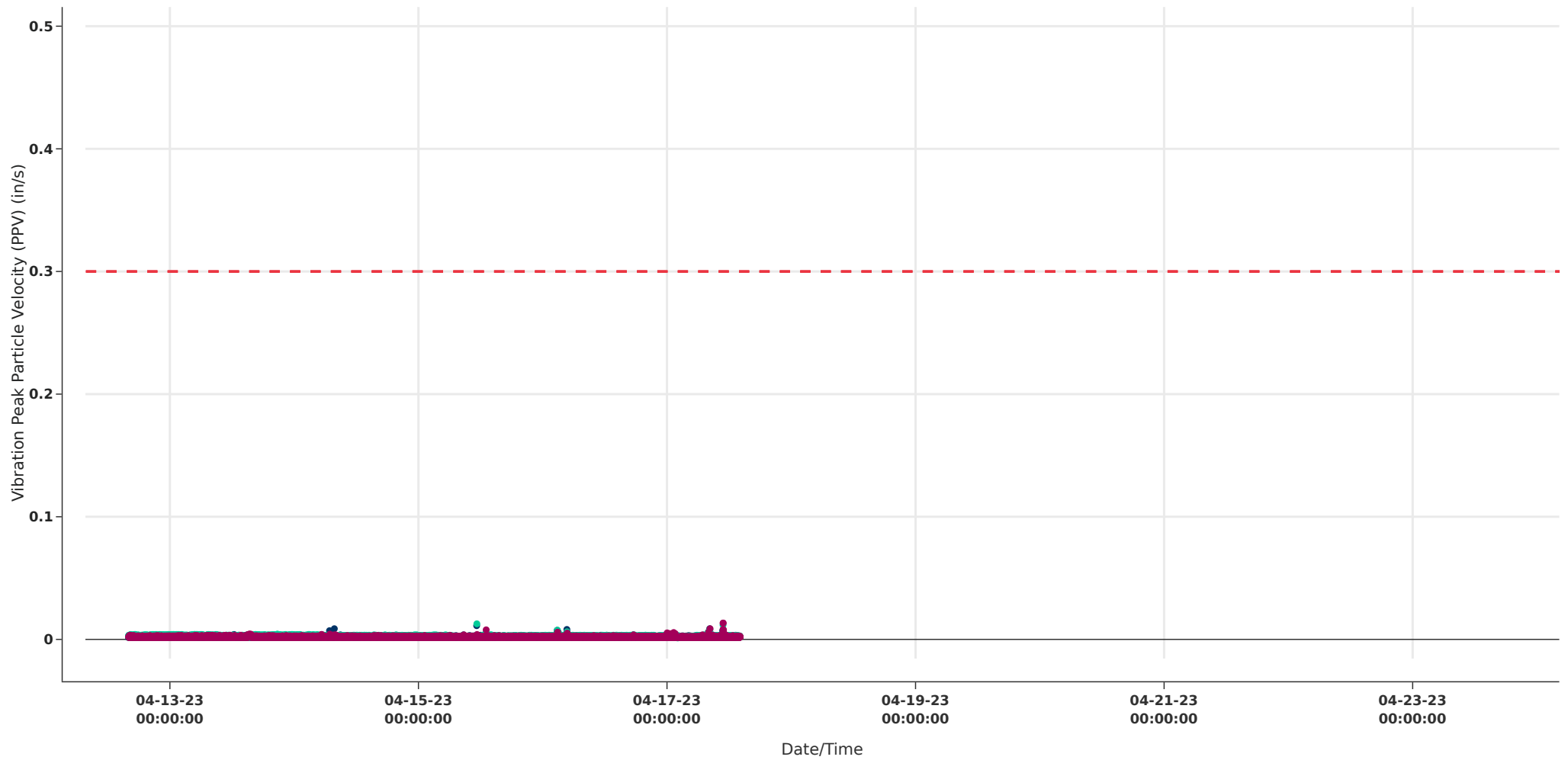
8955 Collins VM1 Vibration



8955 Collins VM2 Vibration

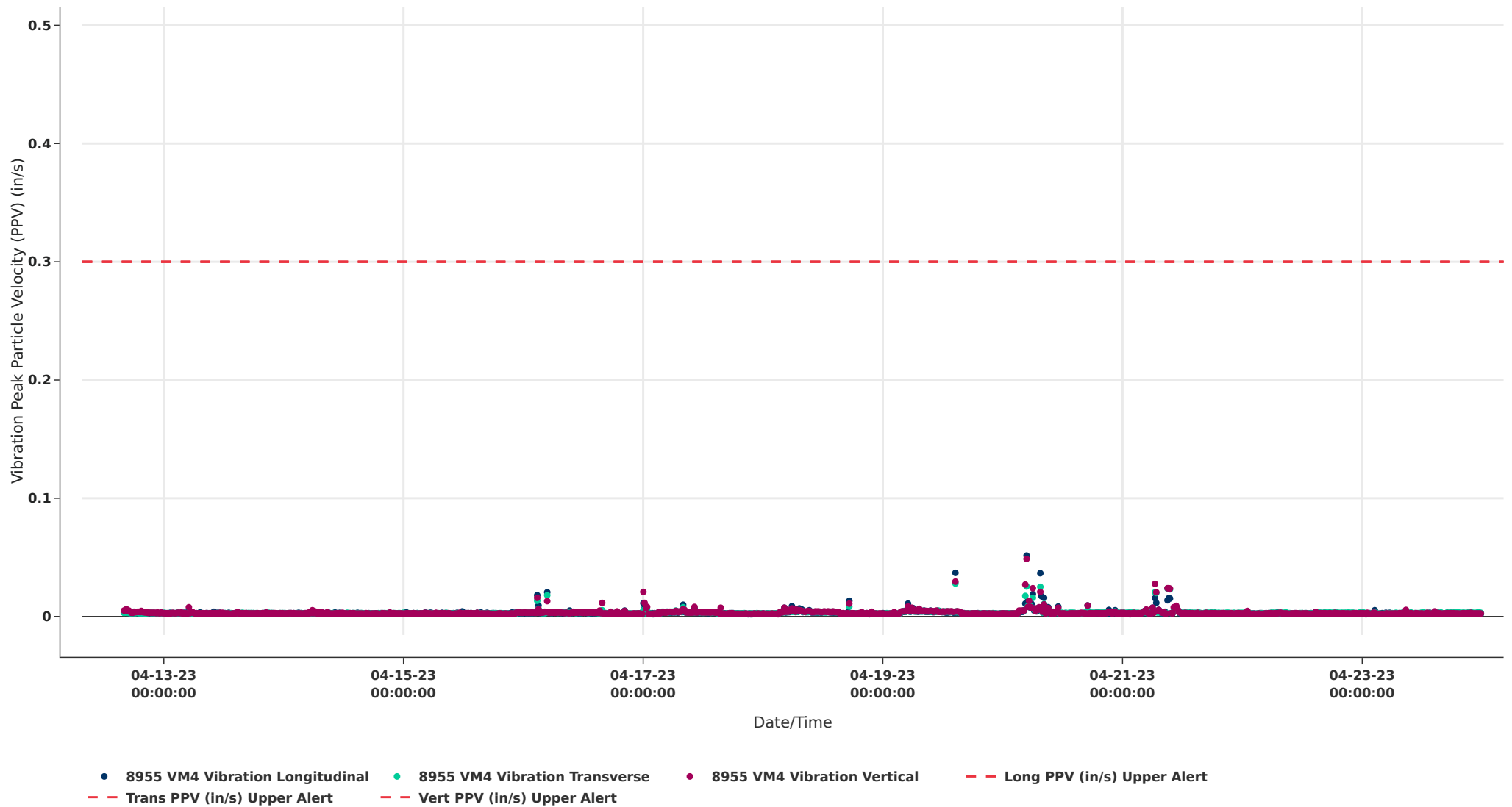


8955 Collins VM3 Vibration

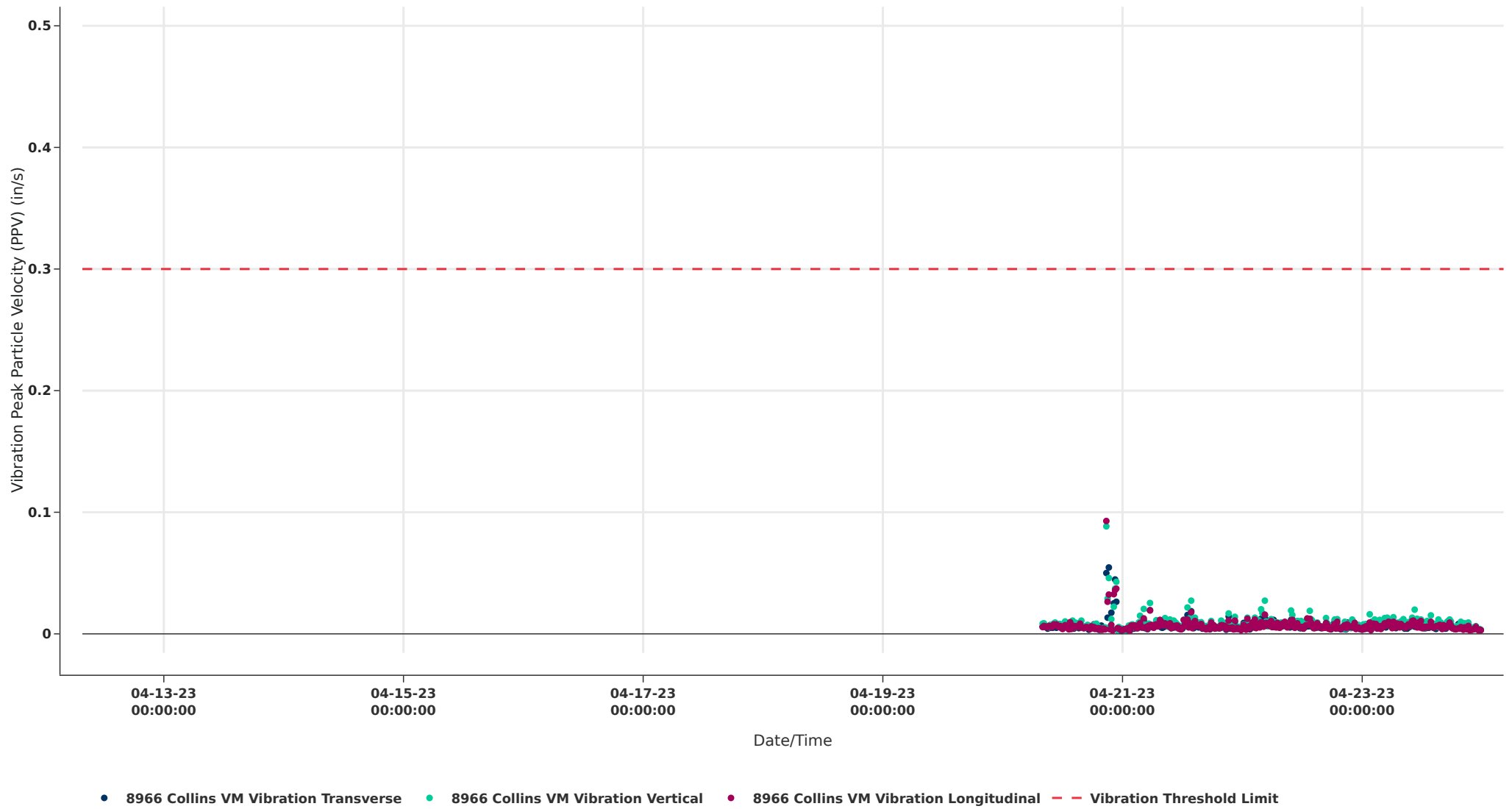


● 8955 VM3 Vibration Longitudinal ● 8955 VM3 Vibration Transverse ● 8955 VM3 Vibration Vertical --- Long PPV (in/s) Upper Alert
--- Trans PPV (in/s) Upper Alert --- Vert PPV (in/s) Upper Alert

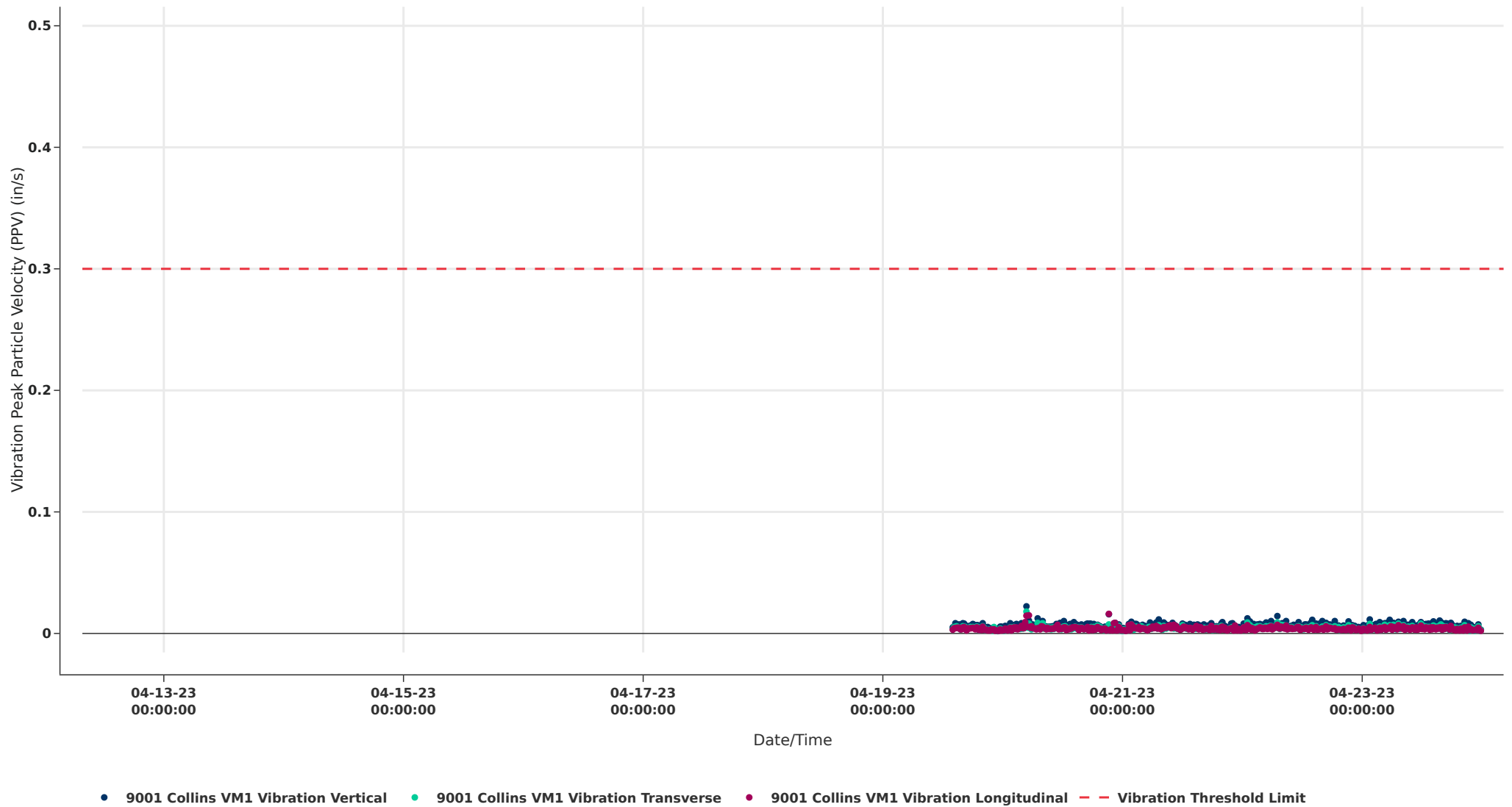
8955 Collins VM4 Vibration



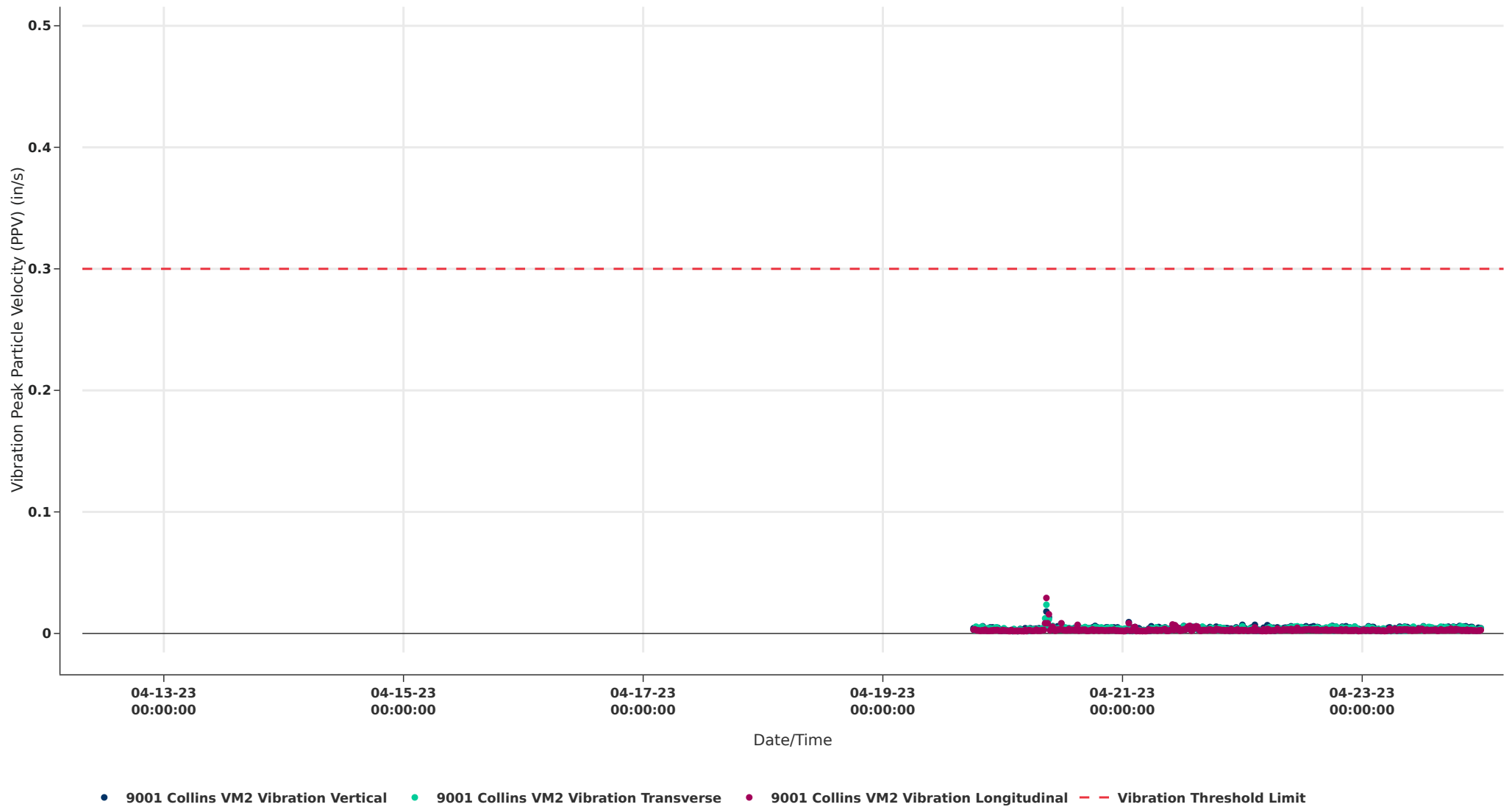
8966 Collins Vibration



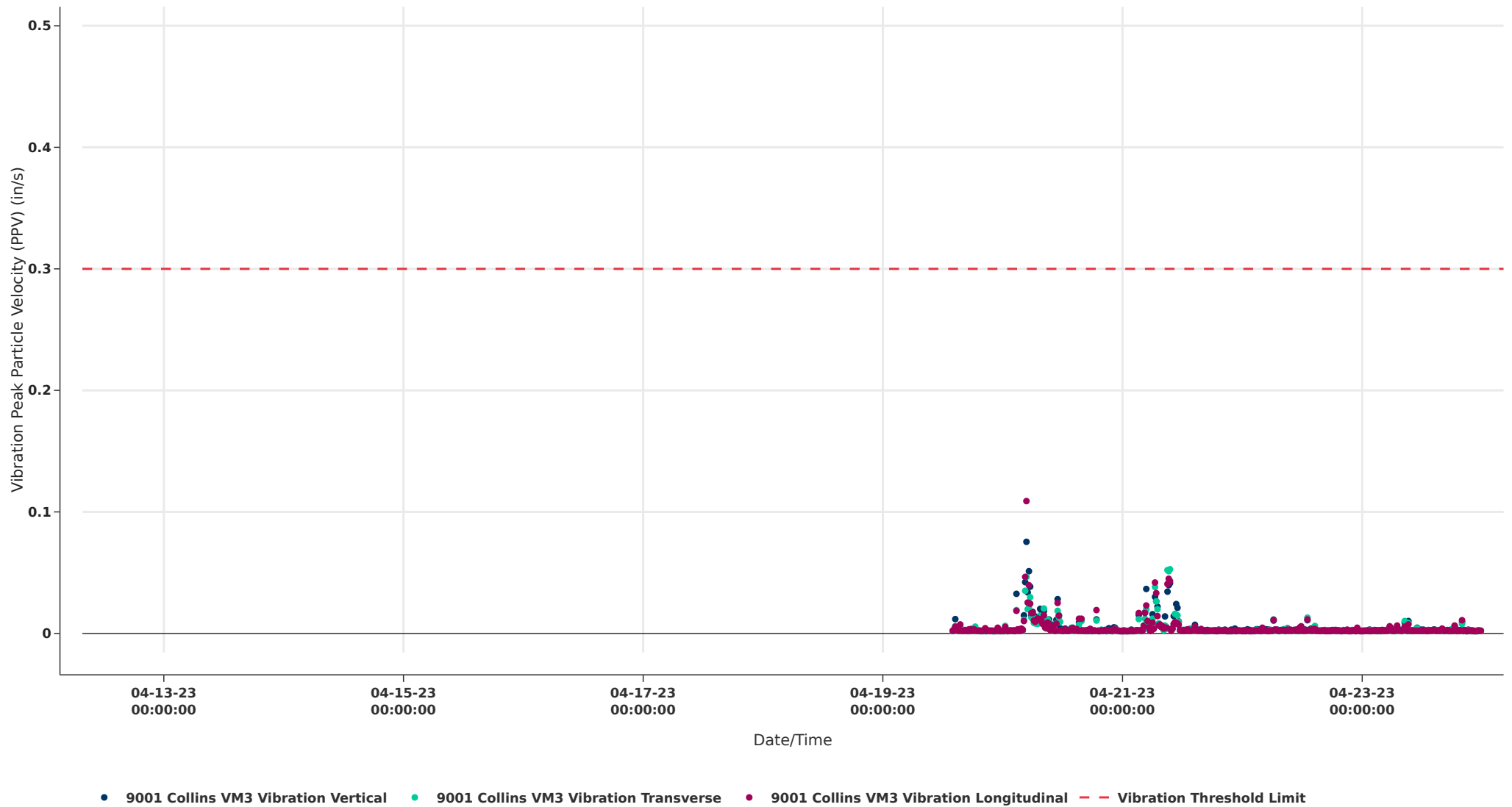
9001 Collins VM1 Vibration



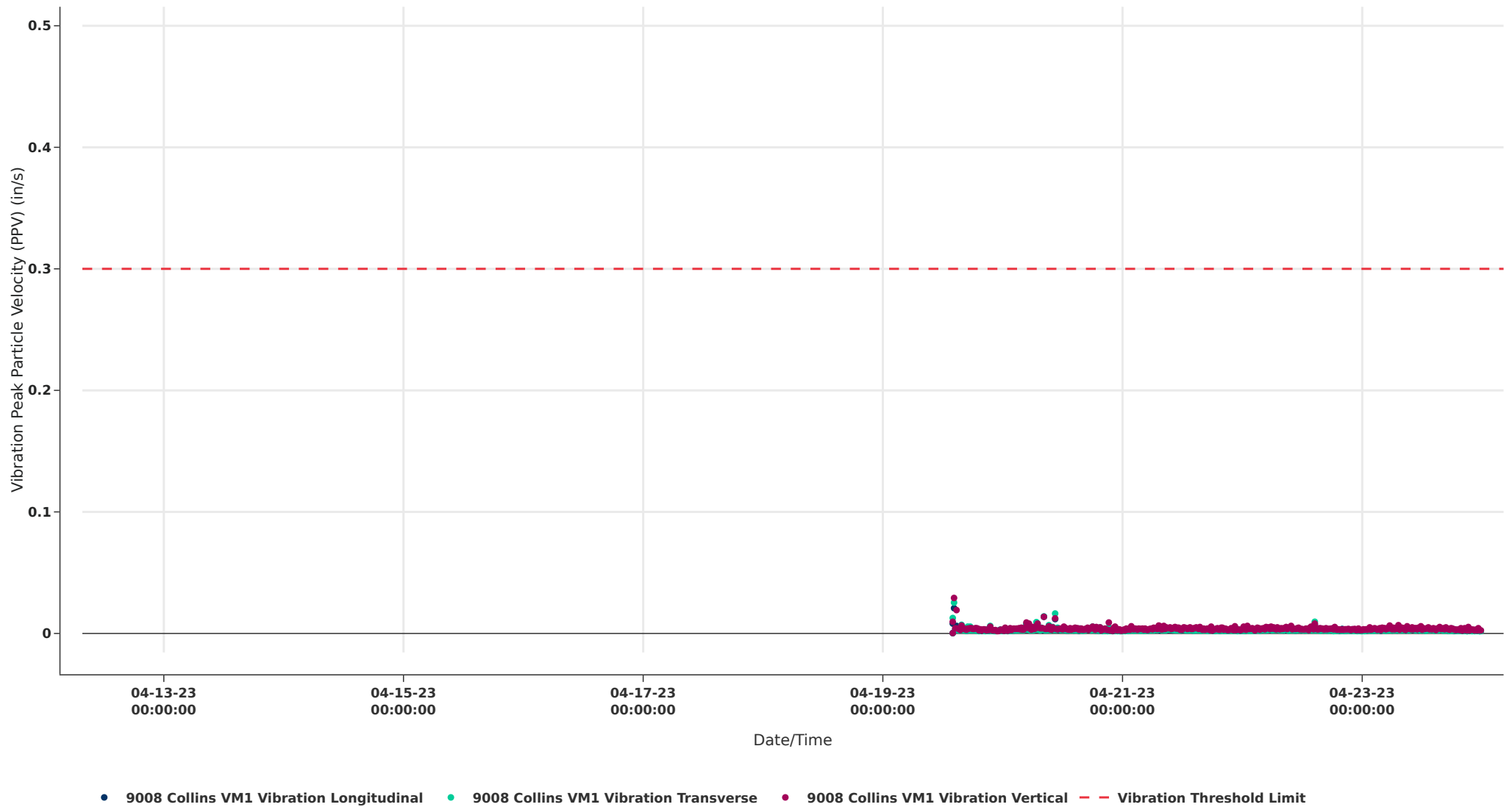
9001 Collins VM2 Vibration



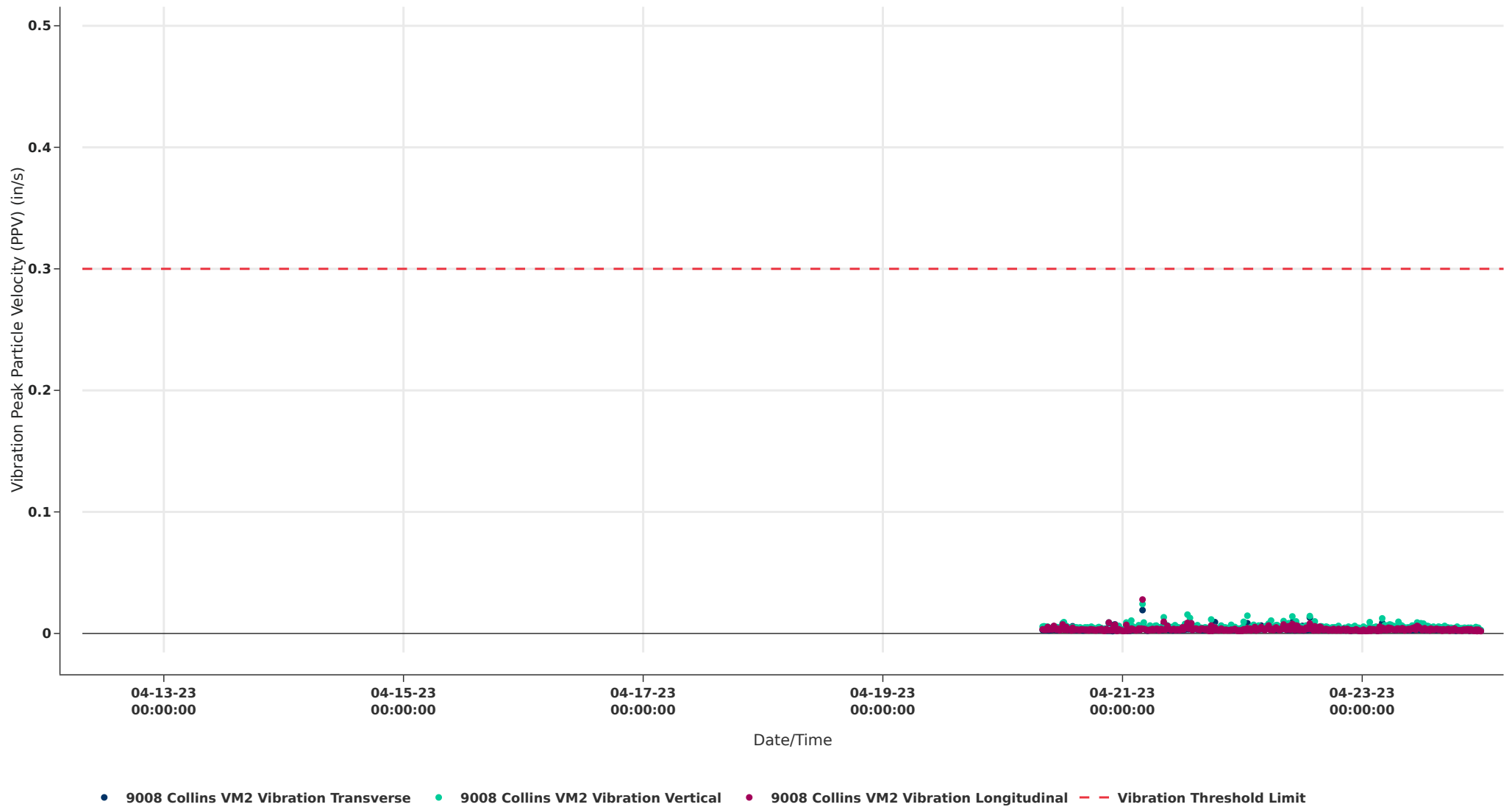
9001 Collins VM3 Vibration



9008 Collins VM1 Vibration



9008 Collins VM2 Vibration



8925 Collins VM Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/20/2023 13:59	0.0366	Transverse
4/21/2023 6:45	0.0996	Longitudinal
4/22/2023 3:45	0.0664	Longitudinal
4/23/2023 7:45	0.0245	Transverse

8926 Collins VM Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/12/2023 20:30	0.0121	Vertical
4/13/2023 9:30	0.0158	Vertical
4/14/2023 17:00	0.0155	Vertical
4/15/2023 12:45	0.0177	Transverse
4/16/2023 17:31	0.0304	Vertical
4/17/2023 18:45	0.0155	Vertical
4/18/2023 11:15	0.0168	Vertical
4/19/2023 13:57	0.0168	Vertical
4/20/2023 7:30	0.0354	Longitudinal
4/21/2023 3:15	0.0133	Vertical
4/22/2023 16:45	0.0143	Vertical
4/23/2023 12:15	0.0146	Vertical

8955 Collins VM1 Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/13/2023 1:59	0.0121	Vertical
4/13/2023 1:59	0.0146	Vertical
4/14/2023 6:30	0.0338	Transverse
4/15/2023 11:16	0.0152	Vertical
4/16/2023 17:30	0.0189	Vertical
4/17/2023 4:15	0.0242	Transverse
4/18/2023 13:46	0.014	Vertical
4/19/2023 4:31	0.027	Vertical
4/20/2023 21:16	0.0205	Vertical
4/21/2023 4:15	0.0317	Vertical
4/22/2023 7:00	0.0155	Vertical
4/23/2023 1:45	0.0149	Vertical

8955 Collins VM2 Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/19/2023 14:08	0.0292	Longitudinal
4/20/2023 5:52	0.0425	Transverse
4/21/2023 6:34	0.0102	Transverse
4/22/2023 5:02	0.005	Transverse
4/23/2023 4:58	0.0043	Transverse

8955 Collins VM3 Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/12/2023 17:09	0.004	Transverse
4/13/2023 15:18	0.0043	Vertical
4/14/2023 7:45	0.0087	Longitudinal
4/15/2023 11:13	0.0127	Transverse
4/16/2023 4:38	0.0081	Longitudinal
4/17/2023 10:45	0.0133	Vertical

8955 Collins VM4 Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/12/2023 16:30	0.0062	Vertical
4/13/2023 5:01	0.0078	Vertical
4/14/2023 5:45	0.0053	Vertical
4/15/2023 11:46	0.0043	Longitudinal
4/16/2023 4:47	0.0205	Longitudinal
4/17/2023 0:02	0.0208	Vertical
4/18/2023 17:17	0.0133	Longitudinal
4/19/2023 14:32	0.0369	Longitudinal
4/20/2023 4:47	0.0515	Longitudinal
4/21/2023 6:30	0.0276	Vertical
4/22/2023 1:00	0.0047	Vertical
4/23/2023 8:45	0.0056	Vertical

8966 Collins VM Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/20/2023 20:45	0.0928	Longitudinal
4/21/2023 13:45	0.0273	Vertical
4/22/2023 4:30	0.0273	Vertical
4/23/2023 10:30	0.0199	Vertical

9001 Collins VM1 Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/19/2023 20:00	0.0084	Vertical
4/20/2023 21:15	0.0161	Longitudinal
4/21/2023 7:15	0.0115	Vertical
4/22/2023 7:00	0.0143	Vertical
4/23/2023 1:30	0.0115	Vertical

9001 Collins VM2 Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/19/2023 19:59	0.0059	Vertical
4/20/2023 8:45	0.0292	Longitudinal
4/21/2023 1:15	0.0093	Vertical
4/22/2023 2:30	0.0071	Vertical
4/23/2023 19:30	0.0062	Vertical

9001 Collins VM3 Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/19/2023 14:30	0.0118	Vertical
4/20/2023 11:00	0.0282	Vertical
4/21/2023 9:30	0.0528	Transverse
4/22/2023 13:02	0.013	Transverse
4/23/2023 19:59	0.0109	Longitudinal

9008 Collins VM1 Site Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/19/2023 15:45	0.0071	Transverse
4/20/2023 10:30	0.0164	Transverse
4/21/2023 7:15	0.0065	Vertical
4/22/2023 14:30	0.0096	Transverse
4/23/2023 7:15	0.0068	Vertical

9008 Collins VM2 Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/20/2023 12:15	0.0093	Vertical
4/21/2023 4:00	0.0279	Longitudinal
4/22/2023 1:00	0.0146	Vertical
4/23/2023 4:00	0.0124	Vertical