



# **Hillcrest Weekly Vibration Monitoring Report**

**For Fort Partners**

**04/03/2023 to 04/09/2023**

# Project Narrative

## PROJECT INFORMATION

The project consists of the construction of a 10-level condominium structure. The new development will have a footprint of about 75 by 180 feet, and will rise to a maximum elevation of +158 feet NGVD. A single level basement is also planned for the development, with an anticipated finished floor elevation of 14'-2" feet NGVD. The underground parking garage will have approximate measurements of 246 feet in the east-west direction, and up to 94 feet in the north-south direction. The footprint of the garage structure is anticipated to be roughly 22,000 square feet. The new structure will be constructed about 20 feet south of the northern boundary of the site. The southern portion of the undeveloped land will include a lap pool, while the northwest portion will provide access to underground parking.

## REMOTE VIBRATION MONITORS

A total of thirteen (13) 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
11/21/2022	9201 Collins	UM17294
	9225 Collins	UM16748
1/31/2023	9111 Collins	UM17094
	9141 Harding	UM16715
2/13/2023	9124 Collins	UM17719
	9140 Collins	UM16754
	9156 Collins	UM17715
	9170 Collins	UM13183
2/21/2023	SE Site	UM17710
	SW Site	UM6841
	NE Site	UM11936
	NW Site	UM16712
	Center Site (relocated on 3/16/2023)	UM8401
3/16/2023	9200 Collins	UM8401

## 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.)
3/2/2023 8:14	Center Site VM	0.8757 <sup>1</sup>
3/6/2023 8:53	SE Site VM	0.6827 <sup>2</sup>
3/7/2023 8:59	SE Site VM	1.218 <sup>3</sup>
3/7/2023 9:07		0.6209
3/7/2023 9:20		0.5797
3/7/2023 9:28		0.7829
3/7/2023 15:24	NW Site VM	1.4162 <sup>4</sup>
3/7/2023 15:42	SE Site VM	2.7419 <sup>5</sup>
3/14/2023 9:59	Center Site VM	0.6523 <sup>6</sup>
3/16/2023 13:39	SE Site VM	7.0986 <sup>7</sup>
3/24/2023 8:14	SW Site VM	0.7522 <sup>8</sup>
3/27/2023 9:47	SE Site VM	1.6223 <sup>9</sup>
3/29/2023 12:10	SE Site VM	10.003 <sup>10</sup>
4/3/2023 12:27	NW Site VM	1.5224 <sup>11</sup>
4/3/2023 12:29		1.1962 <sup>11</sup>
4/3/2023 12:30		1.5081 <sup>11</sup>
4/5/2023 14:42	NW Site VM	0.5129 <sup>12</sup>

### Notes:

<sup>1</sup> Digging with backhoe near geophone.

<sup>2</sup> Movement of debris on-site with excavator near geophone.

<sup>3</sup> Demolition of the sea wall near geophone.

- <sup>4</sup> Demolition of asphalt with excavator near geophone.
- <sup>5</sup> Digging and moving materials with backhoe near geophone.
- <sup>6</sup> Excavator moving construction debris near monitor.
- <sup>7</sup> Monitor inadvertently bumped during inspection of the VM equipment.
- <sup>8</sup> Excavator moving in close proximity to VM equipment.
- <sup>9</sup> Unit was bumped into during excavation activity. No damage was caused but resulted in a disturbance of the readings at this time.
- <sup>10</sup> VM system was relocated by a subcontractor on-site while the unit was monitoring.
- <sup>11</sup> Excavation activity in the vicinity of the vibration monitoring unit.
- <sup>12</sup> Excavation activity in the vicinity of the vibration monitoring unit.

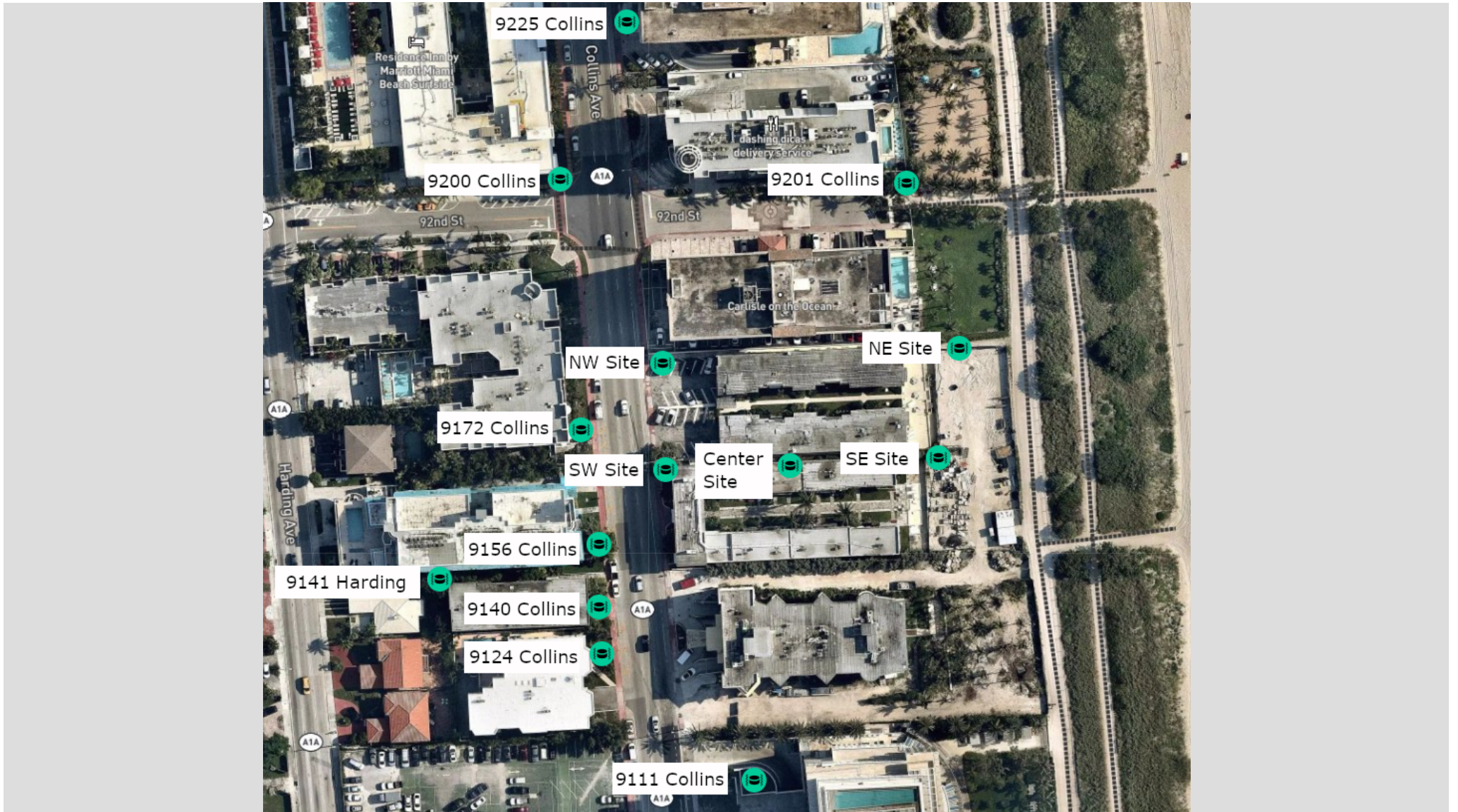
**THRESHOLD EXCEEDANCES**

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.

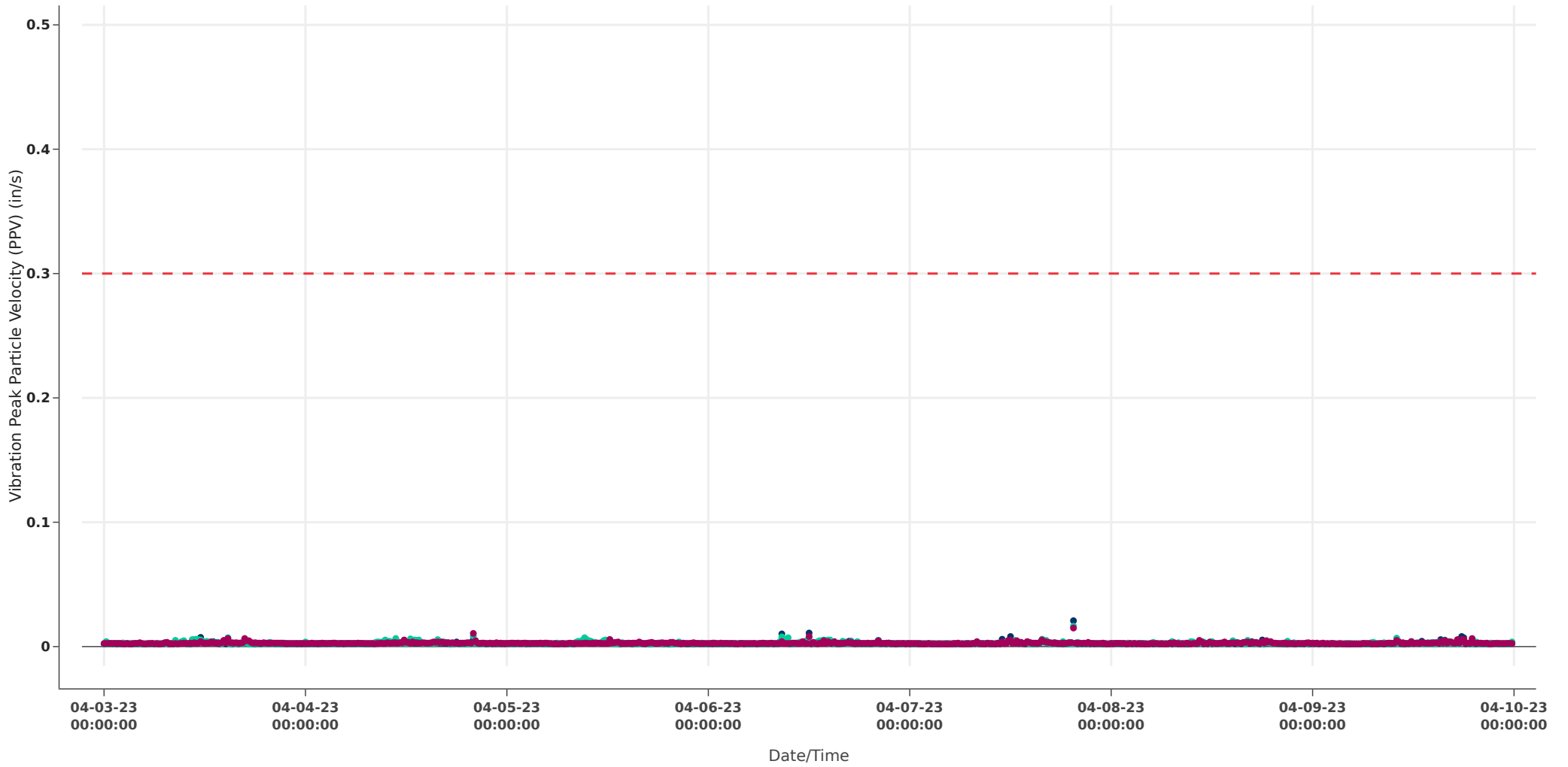
Date	Vibration Monitor (VM) Name/Location
3/30/2023 at 12 pm through 4/3/2023 at 9 AM	SE Site VM <sup>1</sup>

<sup>1</sup>This unit was inspected and adjusted following the relocation performed by another contractor on 3/29/2023. Following the adjustment of the unit setup, the unit was

# Map View

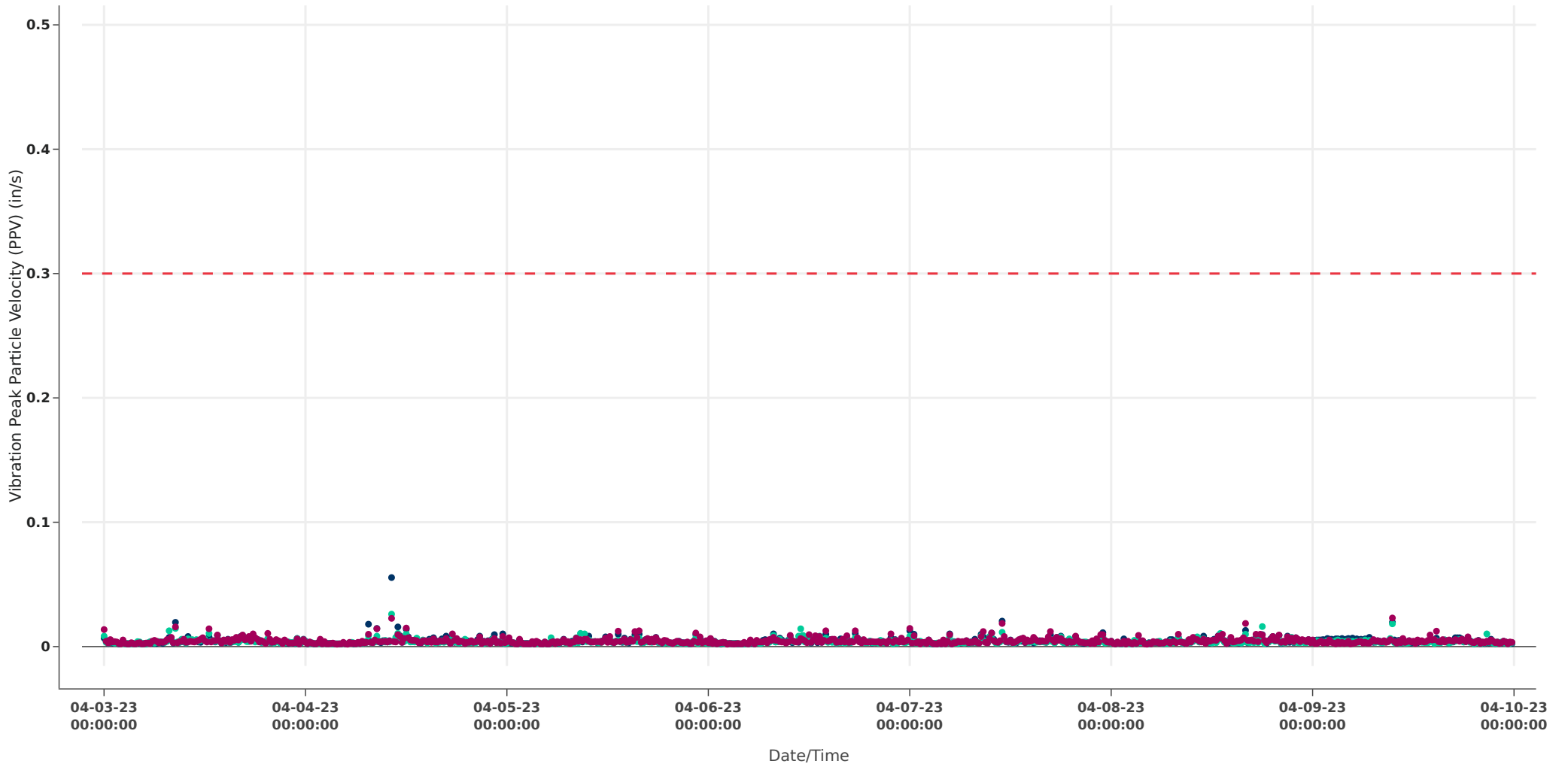


# 9201 Collins Vibration



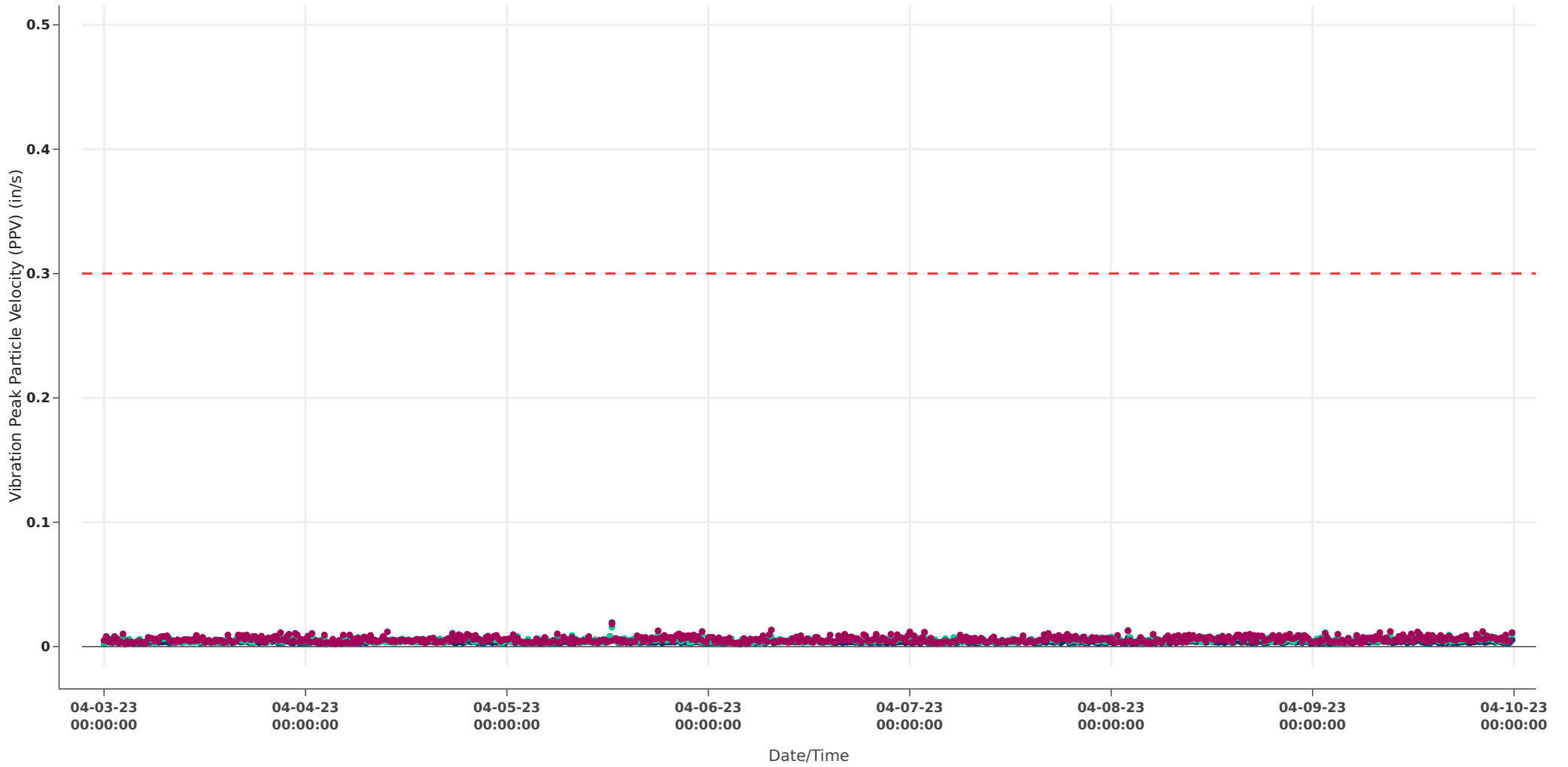
● 9201 Collins Vibration Longitudinal ● 9201 Collins Vibration Transverse ● 9201 Collins Vibration Vertical - - Vibration Threshold Limit

# 9225 Collins Vibration



● 9225 Collins Vibration Longitudinal   ● 9225 Collins Vibration Transverse   ● 9225 Collins Vibration Vertical   - - - Vibration Threshold Limit

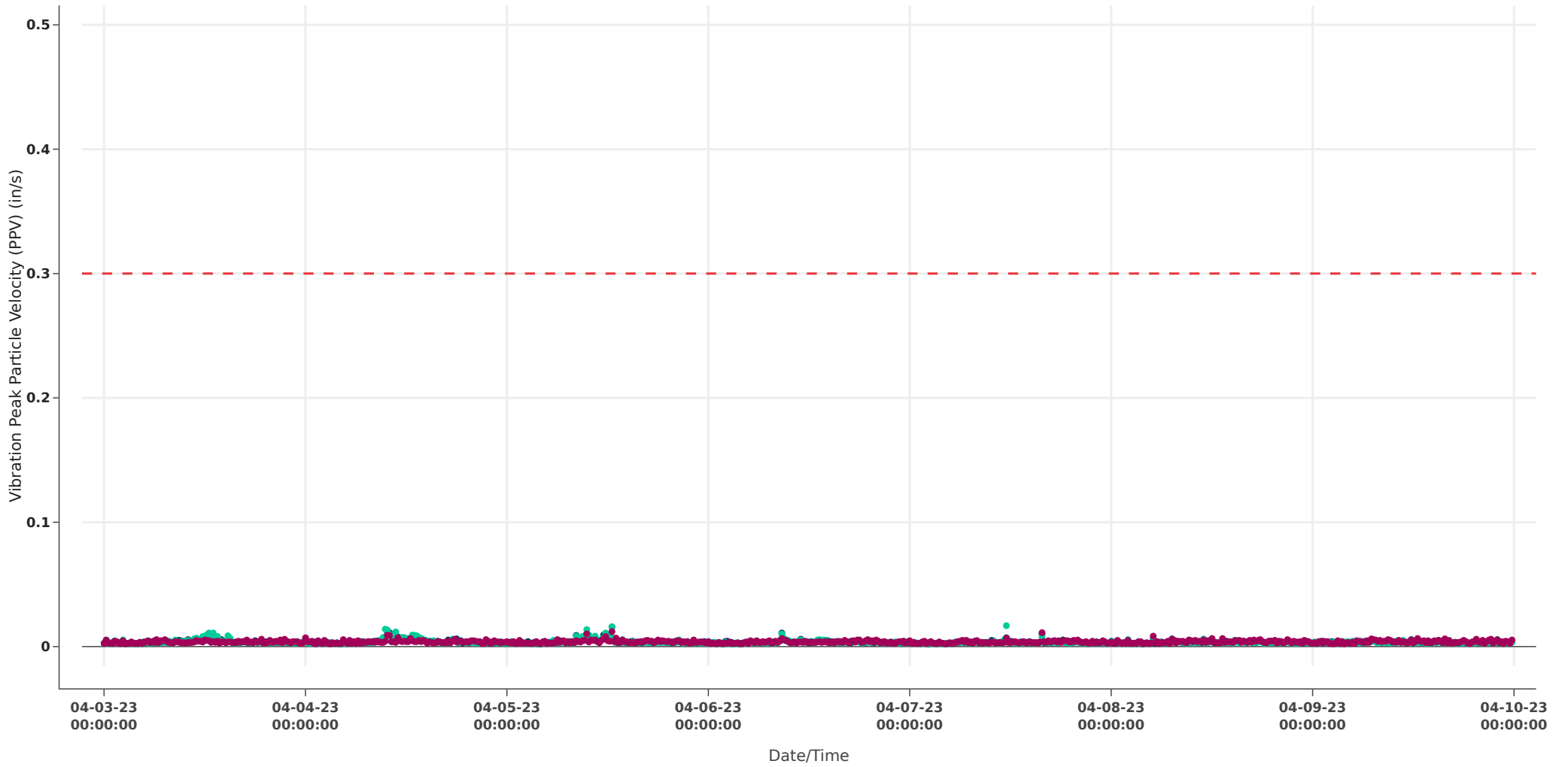
# 9111 Collins Vibration



● 9111 Collins Vibration Longitudinal ● 9111 Collins Vibration Transverse ● 9111 Collins Vibration Vertical - - Vibration Threshold Limit

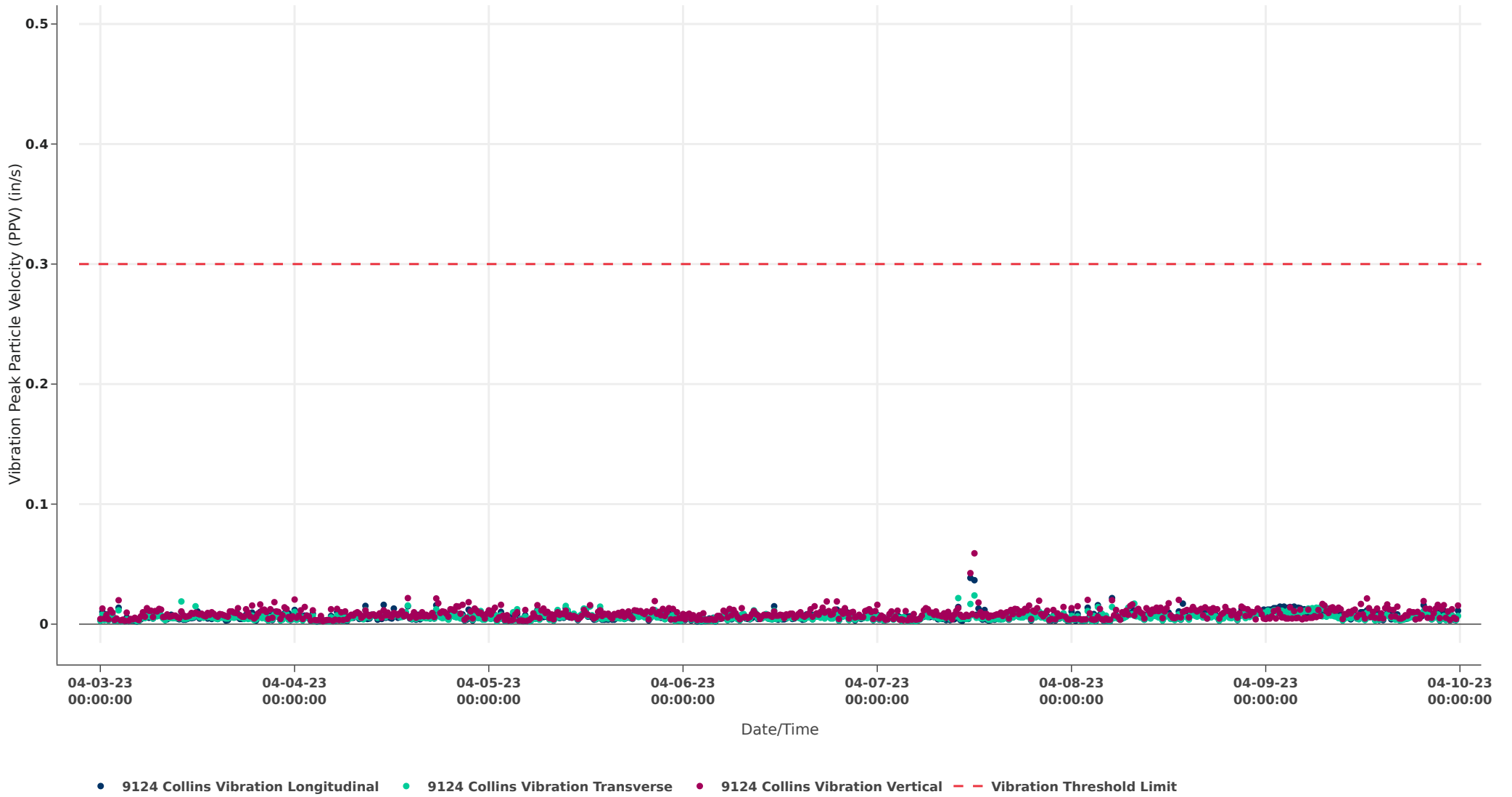


# 9141 Harding Vibration

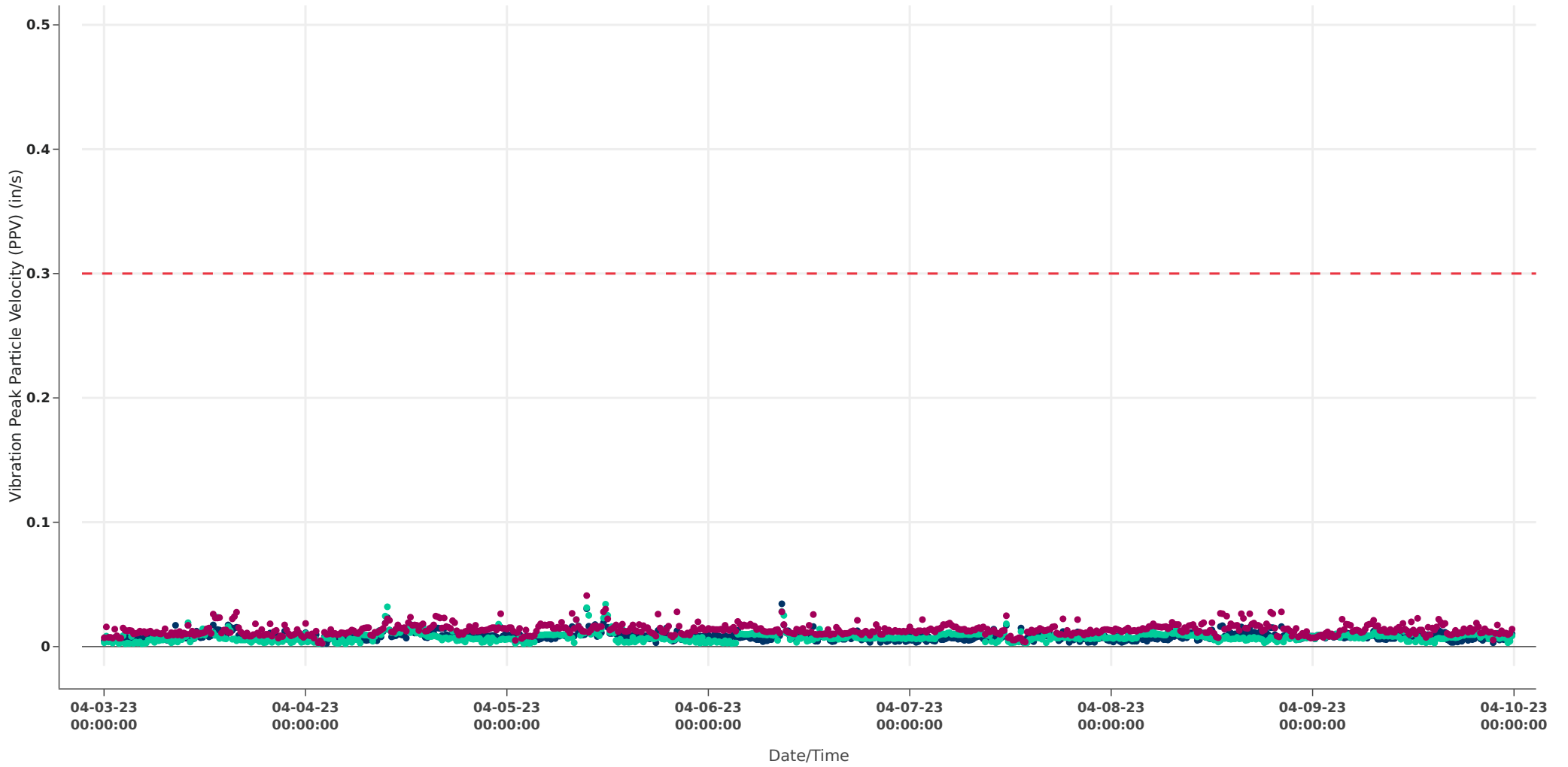


● 9141 Harding Vibration Longitudinal ● 9141 Harding Vibration Transverse ● 9141 Harding Vibration Vertical - - Vibration Threshold Limit

# 9124 Collins Vibration

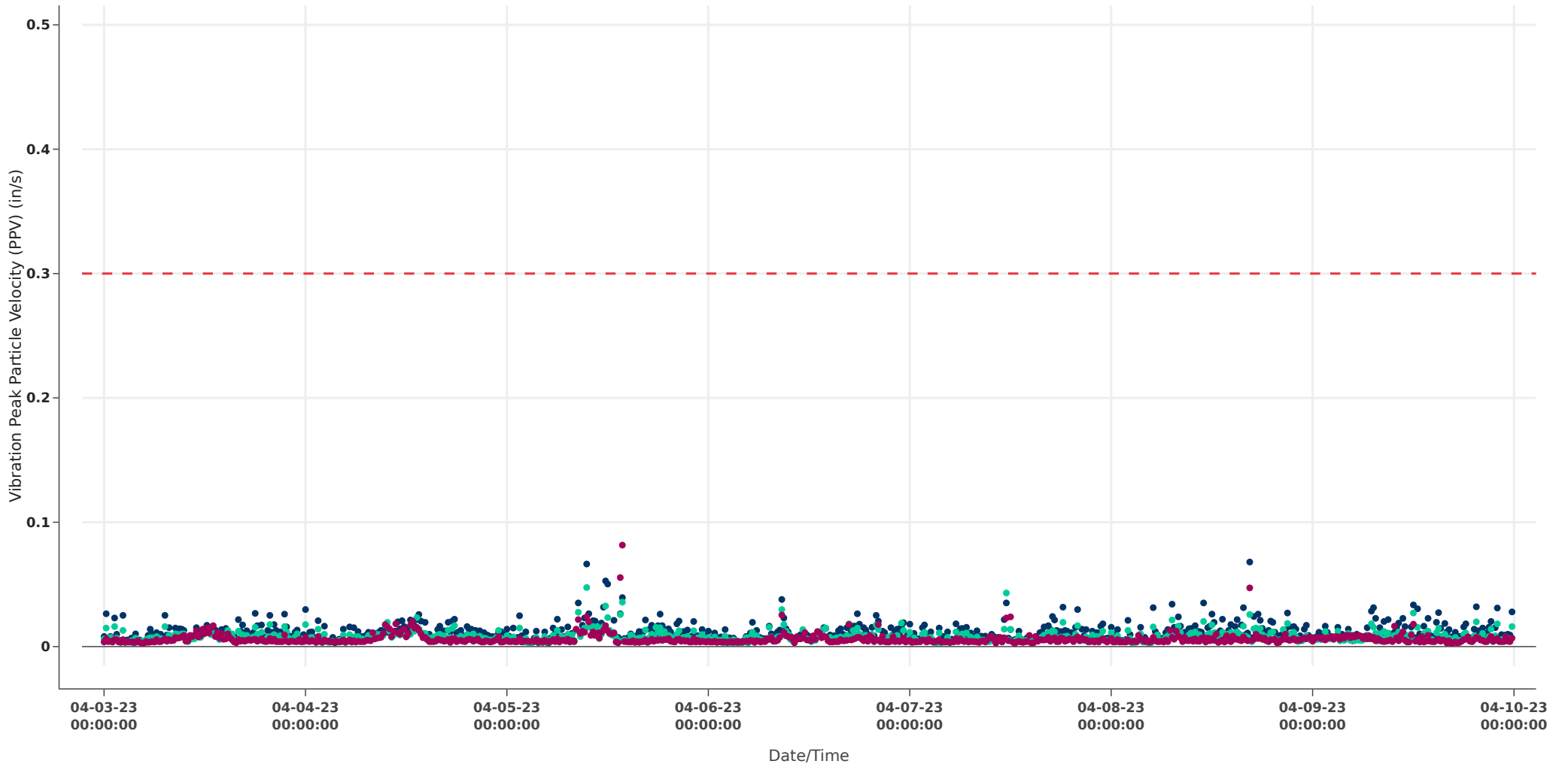


# 9156 Collins Vibration



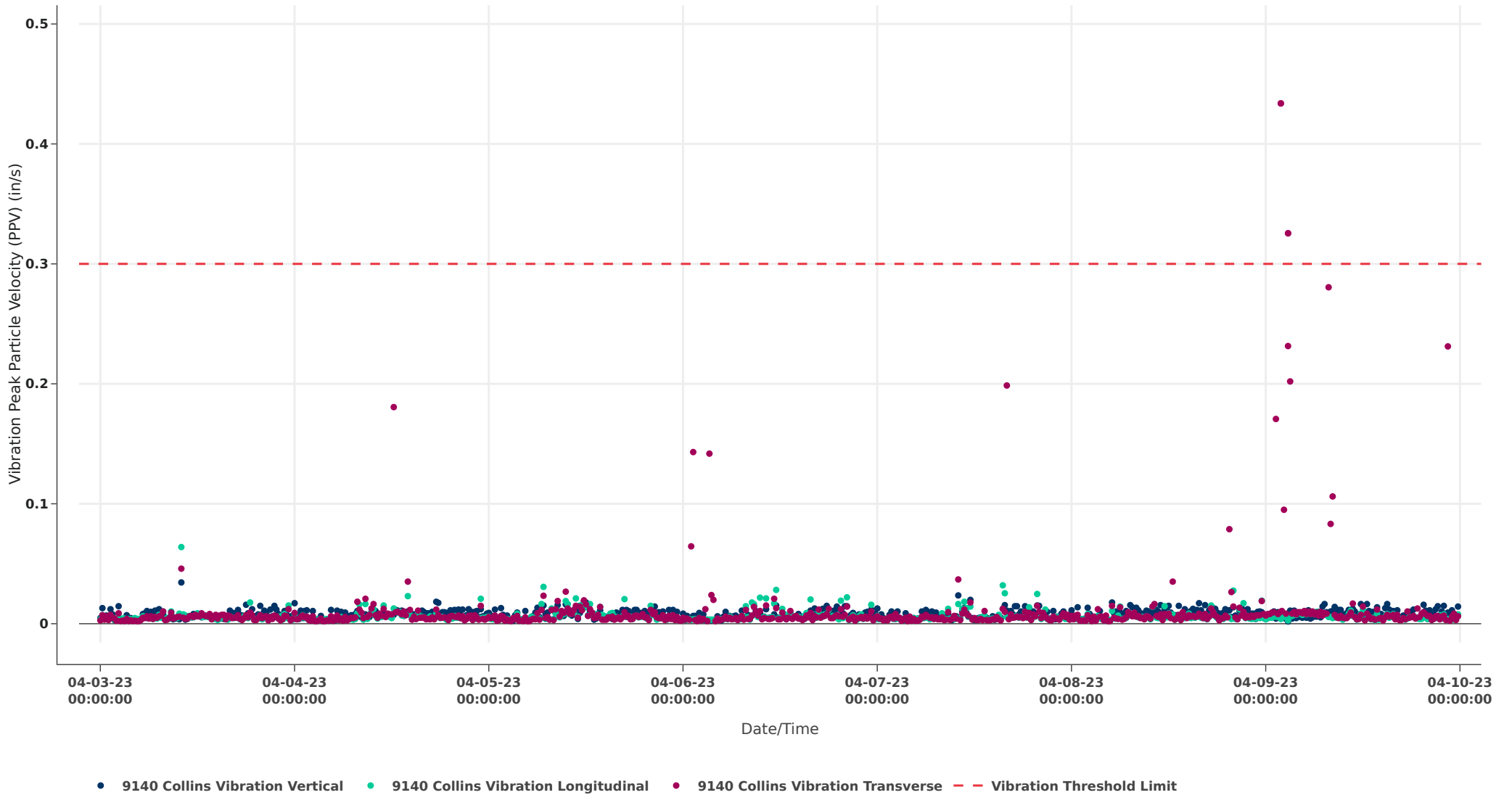
● 9156 VM Collins Vibration Longitudinal ● 9156 VM Collins Vibration Transverse ● 9156 VM Collins Vibration Vertical - - Vibration Threshold Limit

# 9172 Collins Vibration

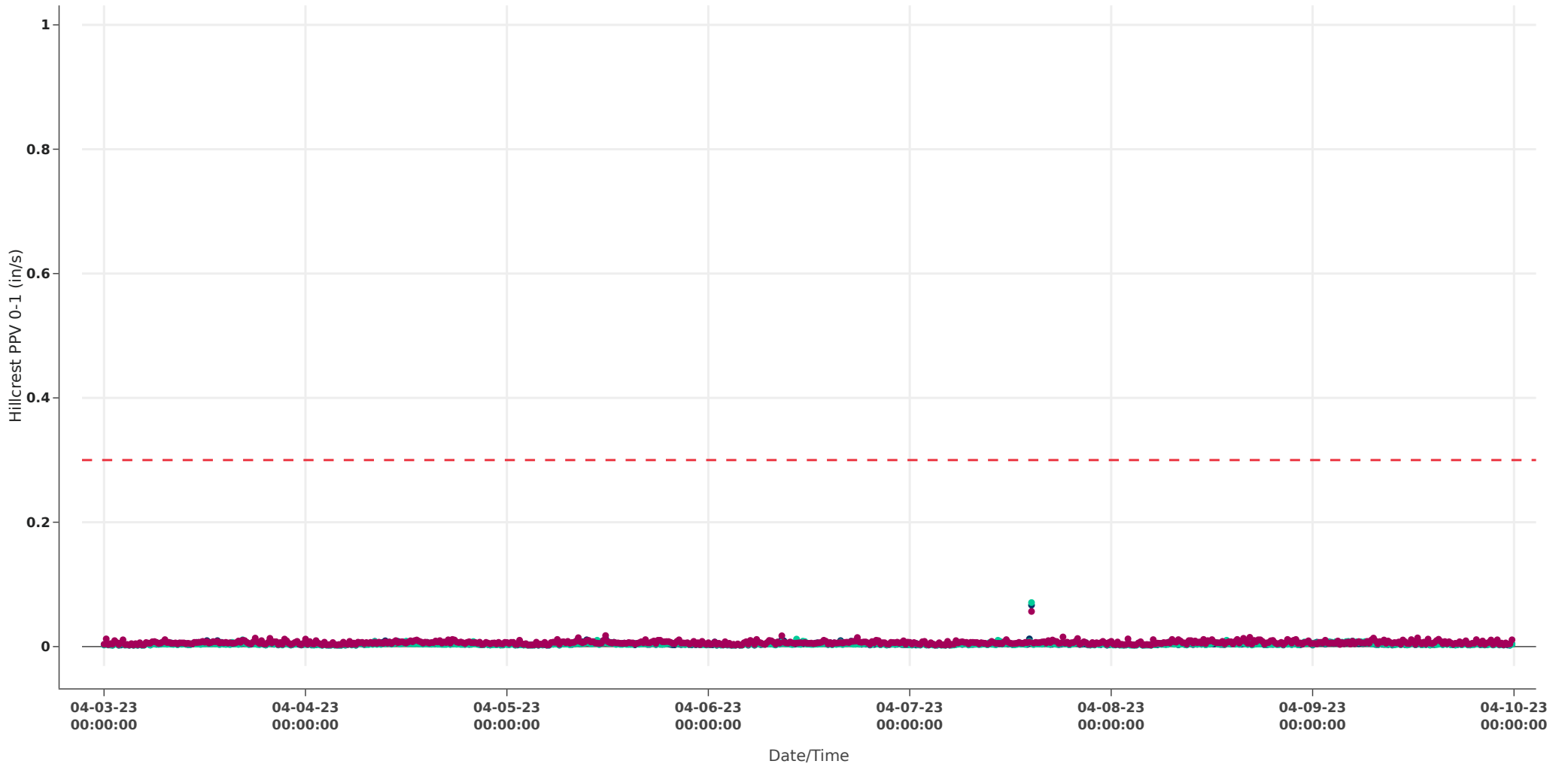


● 9172 VM Collins Vibration Vertical ● 9172 VM Collins Vibration Longitudinal ● 9172 VM Collins Vibration Transverse - - Vibration Threshold Limit

# 9140 Collins Vibration

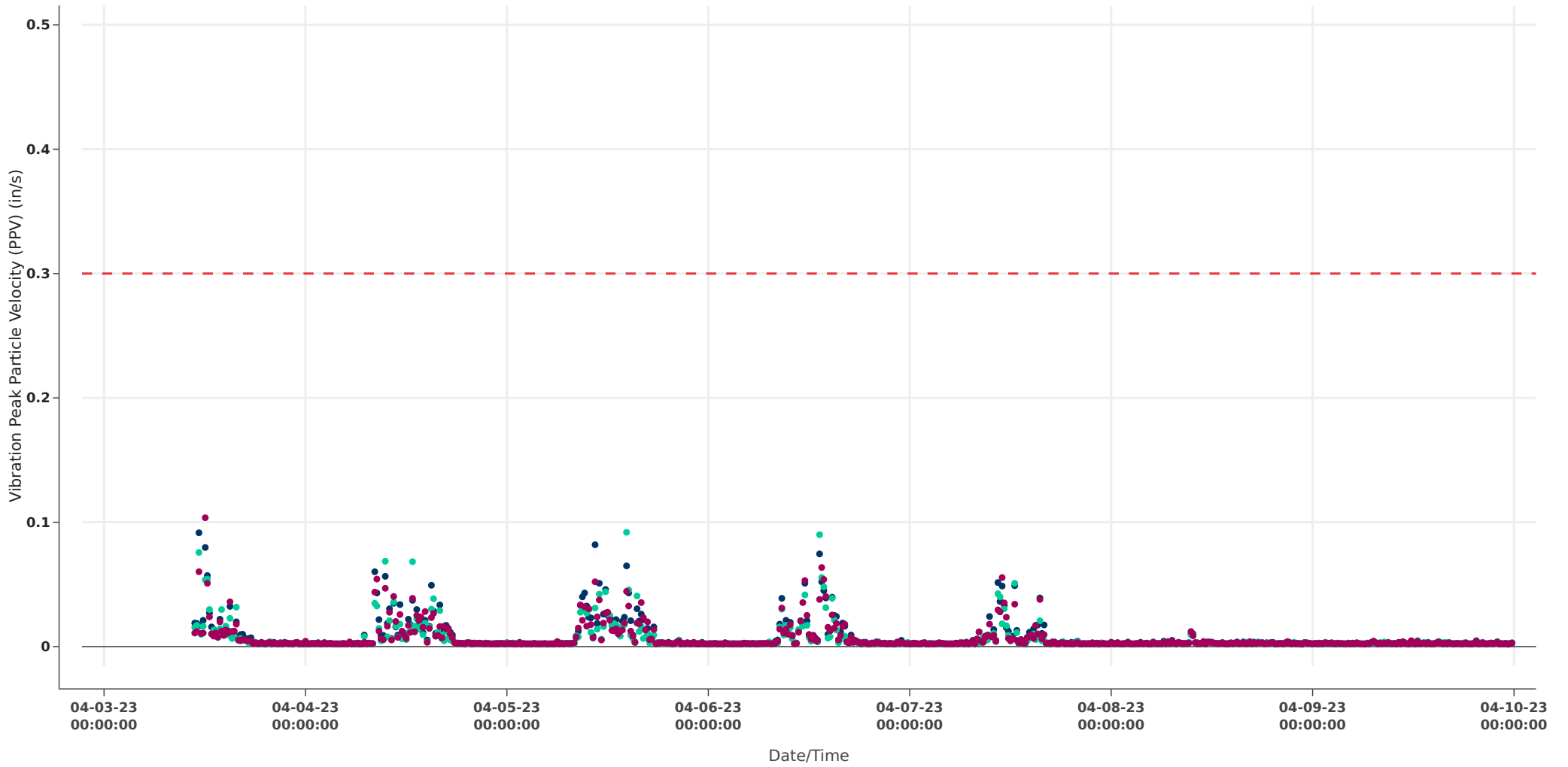


# 9200 Collins Vibration



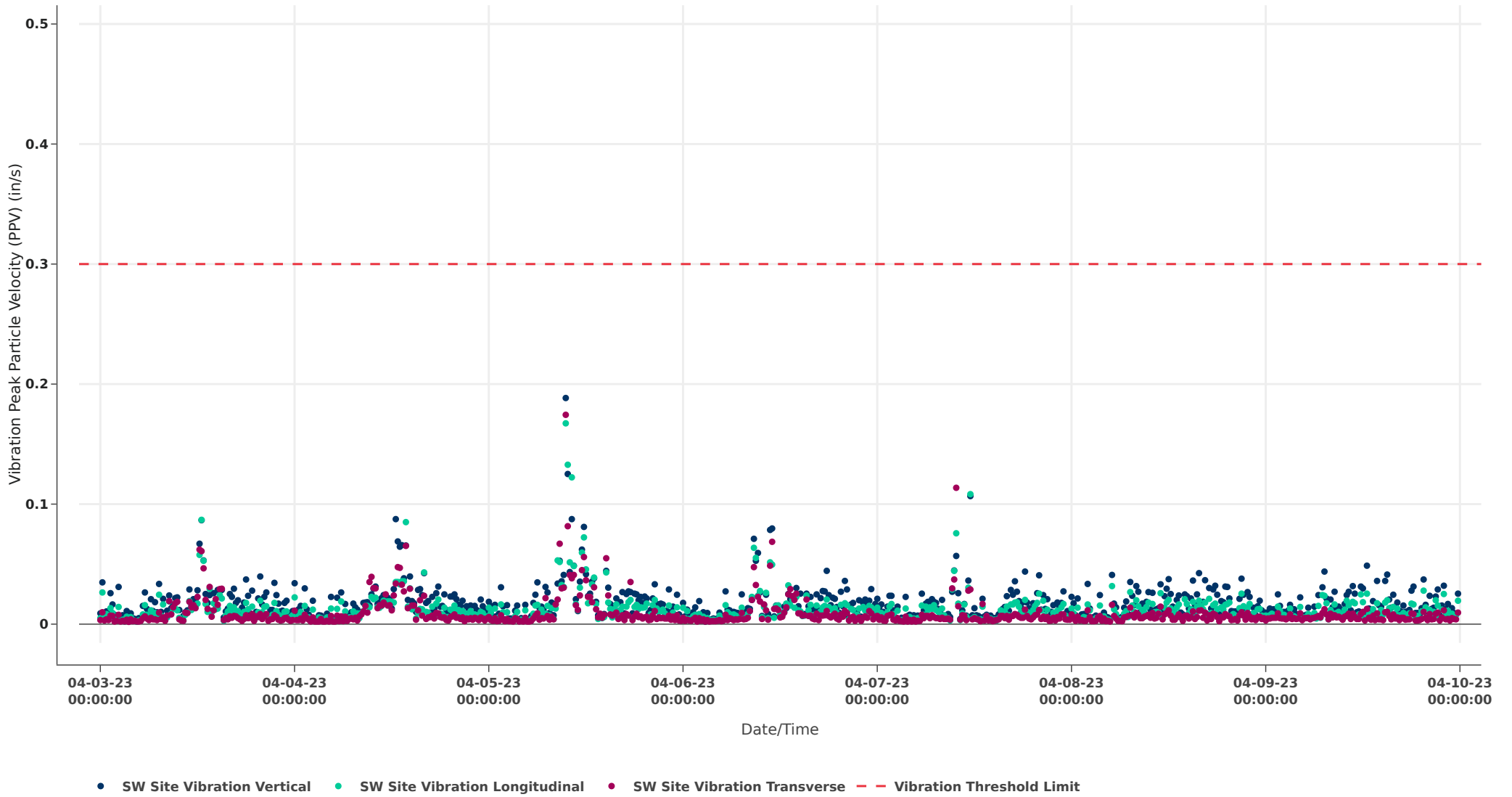
● 9200 Collins Vibration Transverse ● 9200 Collins Vibration Longitudinal ● 9200 Collins Vibration Vertical - - Vibration Threshold Limit

# SE Site Vibration



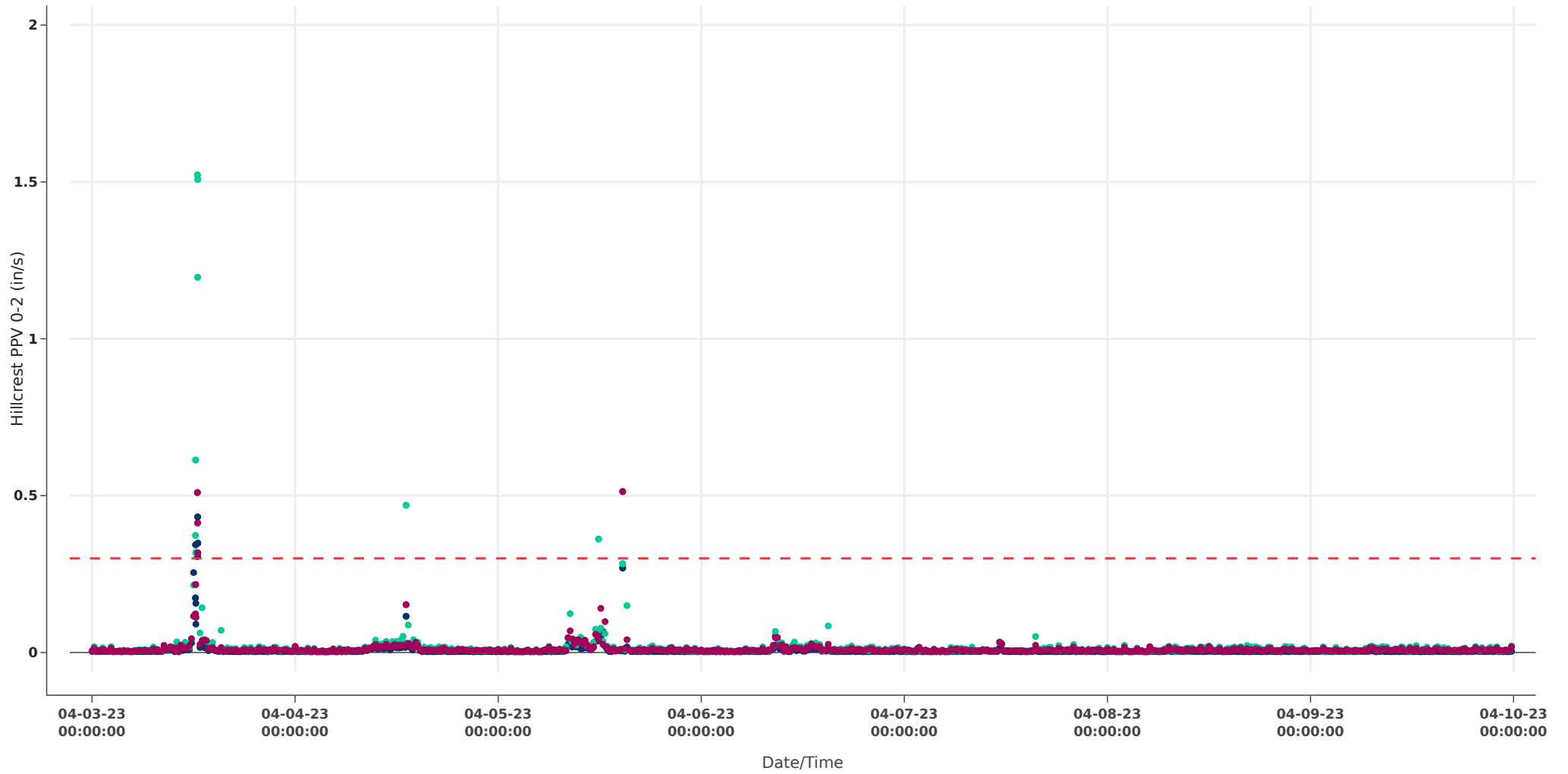
● SE Site Vibration Vertical ● SE Site Vibration Transverse ● SE Site Vibration Longitudinal - - Vibration Threshold Limit

# SW Site Vibration



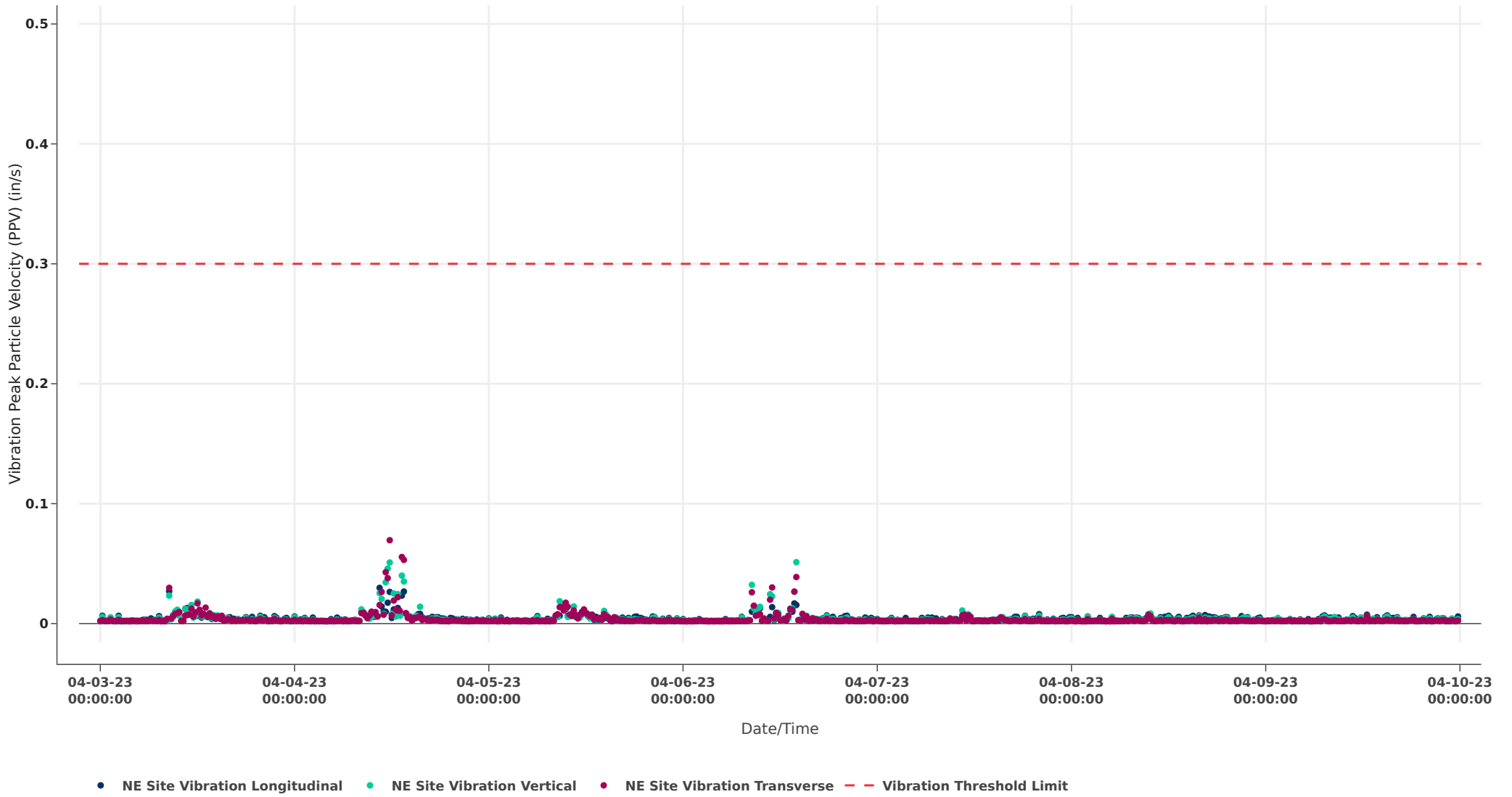


# NW Site Vibration



• NW Site Vibration Transverse • NW Site Vibration Vertical • NW Site Vibration Longitudinal - - Vibration Threshold Limit

# NE Site Vibration



9111 Collins Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
2/21/2023 10:30	0.0112	Longitudinal
2/22/2023 11:00	0.0118	Longitudinal
2/23/2023 10:15	0.0102	Longitudinal
2/24/2023 4:16	0.0087	Longitudinal
2/25/2023 11:45	0.0074	Longitudinal
2/26/2023 20:31	0.0071	Longitudinal
2/27/2023 6:16	0.0112	Longitudinal
2/28/2023 2:45	0.0115	Vertical
3/1/2023 7:01	0.1036	Longitudinal
3/2/2023 8:34	0.3749	Transverse
3/3/2023 7:59	0.013	Vertical
3/4/2023 9:00	0.0133	Vertical
3/5/2023 8:30	0.0168	Vertical
3/6/2023 3:31	0.0233	Vertical
3/7/2023 21:00	0.0121	Vertical
3/8/2023 0:15	0.0192	Vertical
3/9/2023 5:15	0.0133	Vertical
3/10/2023 23:00	0.0124	Vertical
3/11/2023 11:15	0.0133	Vertical
3/12/2023 17:30	0.0127	Vertical
3/13/2023 9:45	0.0115	Vertical
3/14/2023 3:30	0.0124	Vertical
3/15/2023 5:30	0.0133	Vertical
3/16/2023 23:45	0.0112	Vertical
3/17/2023 1:45	0.0124	Transverse
3/18/2023 10:30	0.0143	Transverse
3/19/2023 15:15	0.014	Vertical
3/20/2023 5:15	0.0109	Vertical
3/21/2023 16:00	0.0155	Longitudinal
3/22/2023 21:00	0.0096	Vertical
3/23/2023 6:45	0.0096	Vertical
3/24/2023 15:45	0.0121	Vertical
3/25/2023 6:15	0.0143	Vertical
3/26/2023 8:59	0.0149	Transverse
3/27/2023 6:00	0.0161	Vertical
3/28/2023 20:15	0.0124	Vertical
3/29/2023 12:45	0.0118	Vertical
3/30/2023 5:45	0.0137	Vertical
3/31/2023 17:45	0.0106	Vertical
4/1/2023 11:00	0.0146	Vertical
4/2/2023 9:45	0.013	Vertical
4/3/2023 21:01	0.0112	Vertical
4/4/2023 9:45	0.0118	Vertical

9111 Collins Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/5/2023 12:30	0.0192	Longitudinal
4/6/2023 7:30	0.0133	Vertical
4/7/2023 0:00	0.0118	Vertical
4/8/2023 1:59	0.013	Transverse
4/9/2023 9:15	0.0121	Vertical

9124 Collins Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
2/21/2023 13:30	0.0307	Longitudinal
2/22/2023 6:00	0.0171	Longitudinal
2/23/2023 12:59	0.0168	Longitudinal
2/24/2023 9:00	0.0379	Longitudinal
2/25/2023 2:00	0.0164	Longitudinal
2/26/2023 9:15	0.0168	Longitudinal
2/27/2023 11:00	0.0357	Longitudinal
2/28/2023 23:00	0.0192	Vertical
3/1/2023 22:00	0.0186	Vertical
3/2/2023 15:30	0.224	Longitudinal
3/3/2023 9:15	0.0267	Transverse
3/4/2023 6:30	0.018	Vertical
3/5/2023 12:15	0.0195	Vertical
3/6/2023 11:01	0.0264	Longitudinal
3/7/2023 15:00	0.0341	Transverse
3/8/2023 11:30	0.0158	Transverse
3/9/2023 18:45	0.0195	Longitudinal
3/10/2023 9:45	0.0242	Longitudinal
3/11/2023 16:00	0.0239	Vertical
3/12/2023 15:30	0.0223	Vertical
3/13/2023 11:15	0.0199	Transverse
3/14/2023 17:15	0.0183	Vertical
3/15/2023 2:15	0.0205	Vertical
3/16/2023 21:30	0.0205	Vertical
3/17/2023 20:45	0.0335	Longitudinal
3/18/2023 22:15	0.022	Vertical
3/19/2023 7:30	0.0199	Vertical
3/20/2023 11:30	0.0282	Transverse
3/21/2023 14:30	0.0292	Transverse
3/22/2023 9:30	0.0348	Transverse
3/23/2023 11:00	0.023	Longitudinal
3/24/2023 19:45	0.0227	Vertical
3/25/2023 11:00	0.0164	Vertical
3/26/2023 8:59	0.0245	Vertical
3/27/2023 0:15	0.0205	Vertical
3/28/2023 11:45	0.0214	Longitudinal
3/29/2023 11:30	0.0183	Longitudinal
3/30/2023 18:00	0.0158	Vertical
3/31/2023 6:15	0.0195	Vertical
4/1/2023 7:30	0.0195	Vertical
4/2/2023 7:15	0.0205	Vertical
4/3/2023 2:15	0.0199	Vertical
4/4/2023 13:59	0.0217	Vertical
4/5/2023 20:30	0.0192	Vertical

9124 Collins Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/6/2023 17:45	0.0189	Vertical
4/7/2023 12:00	0.059	Vertical
4/8/2023 5:00	0.0217	Longitudinal
4/9/2023 12:30	0.0214	Vertical

9140 Collins Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
2/21/2023 13:30	0.0174	Longitudinal
2/22/2023 7:15	0.023	Longitudinal
2/23/2023 22:45	0.0313	Longitudinal
2/24/2023 9:00	0.0298	Longitudinal
2/25/2023 17:45	0.0273	Longitudinal
2/26/2023 15:30	0.0282	Longitudinal
2/27/2023 18:30	0.085	Longitudinal
2/28/2023 18:00	0.0422	Longitudinal
3/1/2023 15:15	0.0292	Transverse
3/2/2023 12:45	0.0264	Longitudinal
3/3/2023 9:15	0.036	Transverse
3/4/2023 15:00	0.0422	Transverse
3/5/2023 20:00	0.0168	Vertical
3/6/2023 10:53	0.04	Transverse
3/7/2023 15:00	0.0447	Longitudinal
3/8/2023 18:00	0.0354	Longitudinal
3/9/2023 14:00	0.0416	Longitudinal
3/10/2023 9:15	0.0472	Transverse
3/11/2023 10:15	0.0258	Transverse
3/12/2023 22:30	0.0459	Longitudinal
3/13/2023 10:30	0.0357	Longitudinal
3/14/2023 16:00	0.0596	Longitudinal
3/15/2023 9:15	0.0369	Transverse
3/16/2023 14:30	0.0431	Vertical
3/17/2023 20:45	0.0251	Longitudinal
3/18/2023 20:30	0.0301	Longitudinal
3/19/2023 13:00	0.0673	Transverse
3/20/2023 11:30	0.0335	Transverse
3/21/2023 14:30	0.1027	Transverse
3/22/2023 9:30	0.0338	Transverse
3/23/2023 18:45	0.0279	Longitudinal
3/24/2023 18:00	0.0344	Longitudinal
3/25/2023 17:30	0.0304	Transverse
3/26/2023 22:15	0.0205	Vertical
3/27/2023 10:45	0.0214	Transverse
3/28/2023 17:15	0.0164	Vertical
3/29/2023 9:15	0.0183	Longitudinal
3/30/2023 12:45	0.0726	Transverse
3/31/2023 9:15	0.045	Transverse
4/1/2023 21:30	0.0962	Transverse
4/2/2023 15:45	0.1763	Transverse
4/3/2023 10:00	0.0639	Longitudinal
4/4/2023 12:15	0.1806	Transverse

9140 Collins Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/5/2023 6:45	0.0307	Longitudinal
4/6/2023 1:15	0.1431	Transverse
4/7/2023 16:00	0.1986	Transverse
4/8/2023 19:30	0.0788	Transverse
4/9/2023 1:51	0.4338	Transverse



9141 Harding Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
2/21/2023 2:45	0.0121	Longitudinal
2/22/2023 18:30	0.0127	Longitudinal
2/23/2023 5:15	0.0195	Longitudinal
2/24/2023 10:15	0.0115	Longitudinal
2/25/2023 2:30	0.0102	Longitudinal
2/26/2023 7:00	0.0189	Longitudinal
2/27/2023 5:01	0.0186	Transverse
2/28/2023 3:15	0.0189	Transverse
3/1/2023 11:15	0.0183	Longitudinal
3/2/2023 7:45	0.0208	Transverse
3/3/2023 3:45	0.0183	Transverse
3/4/2023 0:15	0.0127	Longitudinal
3/5/2023 17:01	0.0121	Longitudinal
3/6/2023 11:51	0.0735	Vertical
3/7/2023 15:00	0.0155	Longitudinal
3/8/2023 15:30	0.1223	Longitudinal
3/9/2023 13:30	0.0099	Longitudinal
3/10/2023 16:45	0.0087	Vertical
3/11/2023 15:45	0.0161	Longitudinal
3/12/2023 9:15	0.0093	Vertical
3/13/2023 5:30	0.041	Transverse
3/14/2023 15:30	0.0087	Vertical
3/15/2023 2:15	0.0078	Vertical
3/16/2023 10:30	0.0195	Transverse
3/17/2023 12:30	0.0115	Longitudinal
3/18/2023 15:15	0.0397	Vertical
3/19/2023 7:30	0.0074	Vertical
3/20/2023 21:45	0.0068	Vertical
3/21/2023 19:15	0.0081	Vertical
3/22/2023 13:45	0.0087	Transverse
3/23/2023 8:45	0.0099	Transverse
3/24/2023 16:00	0.0608	Vertical
3/25/2023 16:00	0.0124	Vertical
3/26/2023 22:15	0.0087	Vertical
3/27/2023 10:45	0.0093	Transverse
3/28/2023 13:59	0.0158	Transverse
3/29/2023 8:59	0.0121	Transverse
3/30/2023 13:15	0.014	Transverse
3/31/2023 10:45	0.0155	Transverse
4/1/2023 16:00	0.0106	Transverse
4/2/2023 17:00	0.0112	Longitudinal
4/3/2023 12:30	0.0109	Transverse
4/4/2023 9:30	0.014	Transverse

9141 Harding Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/5/2023 12:30	0.0158	Longitudinal
4/6/2023 8:45	0.0109	Longitudinal
4/7/2023 11:30	0.0168	Transverse
4/8/2023 5:00	0.0084	Vertical
4/9/2023 12:30	0.0065	Vertical

9156 Collins Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
2/21/2023 17:45	0.027	Longitudinal
2/22/2023 8:30	0.0227	Longitudinal
2/23/2023 22:46	0.023	Longitudinal
2/24/2023 18:15	0.018	Longitudinal
2/25/2023 8:15	0.0239	Longitudinal
2/26/2023 9:15	0.0133	Longitudinal
2/27/2023 19:17	0.0344	Longitudinal
2/28/2023 8:15	0.0292	Transverse
3/1/2023 12:31	0.0223	Transverse
3/2/2023 12:45	0.0285	Transverse
3/3/2023 18:00	0.027	Vertical
3/4/2023 14:15	0.0211	Vertical
3/5/2023 20:00	0.0217	Vertical
3/6/2023 17:15	0.0254	Vertical
3/7/2023 15:00	0.0636	Longitudinal
3/8/2023 12:30	0.0326	Vertical
3/9/2023 23:30	0.0177	Vertical
3/10/2023 0:45	0.0171	Transverse
3/11/2023 13:15	0.0192	Vertical
3/12/2023 0:30	0.0202	Vertical
3/13/2023 7:00	0.0192	Vertical
3/14/2023 16:00	0.022	Longitudinal
3/15/2023 18:45	0.0211	Vertical
3/16/2023 14:30	0.1055	Vertical
3/17/2023 3:45	0.0202	Vertical
3/18/2023 6:00	0.0199	Vertical
3/19/2023 13:00	0.0341	Transverse
3/20/2023 23:00	0.0227	Vertical
3/21/2023 14:30	0.0354	Vertical
3/22/2023 20:30	0.0298	Vertical
3/23/2023 16:17	0.0279	Vertical
3/24/2023 11:45	0.0245	Vertical
3/25/2023 13:00	0.0214	Vertical
3/26/2023 7:47	0.027	Vertical
3/27/2023 2:32	0.0261	Vertical
3/28/2023 19:00	0.0264	Vertical
3/29/2023 23:15	0.0285	Vertical
3/30/2023 12:47	0.0804	Longitudinal
3/31/2023 15:00	0.0317	Longitudinal
4/1/2023 16:46	0.027	Vertical
4/2/2023 14:45	0.0233	Vertical
4/3/2023 15:47	0.0276	Vertical
4/4/2023 9:45	0.032	Transverse

9156 Collins Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/5/2023 9:30	0.041	Vertical
4/6/2023 8:45	0.0344	Longitudinal
4/7/2023 11:30	0.0248	Vertical
4/8/2023 20:17	0.0279	Vertical
4/9/2023 12:30	0.0227	Vertical

9172 Collins Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
2/21/2023 16:30	0.0298	Longitudinal
2/22/2023 11:45	0.0258	Longitudinal
2/23/2023 11:45	0.0285	Longitudinal
2/24/2023 7:30	0.0258	Longitudinal
2/25/2023 13:30	0.0208	Longitudinal
2/26/2023 12:30	0.0217	Longitudinal
2/27/2023 12:15	0.0642	Longitudinal
2/28/2023 8:15	0.0431	Vertical
3/1/2023 9:30	0.0586	Vertical
3/2/2023 12:45	0.0661	Vertical
3/3/2023 13:15	0.0438	Vertical
3/4/2023 0:15	0.036	Vertical
3/5/2023 20:00	0.0298	Vertical
3/6/2023 12:03	0.0493	Vertical
3/7/2023 15:15	0.0676	Vertical
3/8/2023 9:45	0.0323	Vertical
3/9/2023 9:00	0.0326	Longitudinal
3/10/2023 23:15	0.0251	Vertical
3/11/2023 16:00	0.0304	Vertical
3/12/2023 9:15	0.0326	Vertical
3/13/2023 7:00	0.0298	Vertical
3/14/2023 3:30	0.0261	Vertical
3/15/2023 2:15	0.0323	Vertical
3/16/2023 19:30	0.0289	Vertical
3/17/2023 8:59	0.0304	Longitudinal
3/18/2023 23:00	0.0354	Vertical
3/19/2023 0:45	0.032	Vertical
3/20/2023 21:45	0.0285	Vertical
3/21/2023 17:15	0.0279	Vertical
3/22/2023 6:30	0.0332	Vertical
3/23/2023 15:45	0.0295	Vertical
3/24/2023 21:45	0.0276	Vertical
3/25/2023 11:00	0.0292	Vertical
3/26/2023 8:59	0.0351	Vertical
3/27/2023 1:15	0.0295	Vertical
3/28/2023 13:59	0.0341	Vertical
3/29/2023 18:30	0.0329	Vertical
3/30/2023 13:00	0.1269	Transverse
3/31/2023 15:00	0.0323	Vertical
4/1/2023 7:30	0.0298	Vertical
4/2/2023 19:15	0.0341	Vertical
4/3/2023 18:00	0.0267	Vertical
4/4/2023 0:00	0.0298	Vertical

9172 Collins Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/5/2023 13:45	0.0816	Transverse
4/6/2023 8:45	0.0379	Vertical
4/7/2023 11:30	0.0431	Longitudinal
4/8/2023 16:30	0.068	Vertical
4/9/2023 12:00	0.0335	Vertical

9200 Collins Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
3/16/2023 19:37	0.0127	Vertical
3/17/2023 7:15	0.013	Vertical
3/18/2023 10:00	0.013	Vertical
3/19/2023 15:15	0.0137	Vertical
3/20/2023 18:30	0.0133	Vertical
3/21/2023 15:45	0.0127	Vertical
3/22/2023 6:32	0.014	Vertical
3/23/2023 17:45	0.0127	Vertical
3/24/2023 19:30	0.013	Vertical
3/25/2023 15:17	0.0124	Vertical
3/26/2023 12:17	0.0143	Vertical
3/27/2023 21:17	0.0137	Vertical
3/28/2023 23:17	0.0233	Transverse
3/29/2023 1:02	0.0419	Vertical
3/30/2023 13:17	0.077	Longitudinal
3/31/2023 13:59	0.0168	Vertical
4/1/2023 18:00	0.0133	Vertical
4/2/2023 22:00	0.013	Vertical
4/3/2023 18:00	0.0137	Vertical
4/4/2023 0:00	0.0121	Vertical
4/5/2023 11:45	0.0177	Vertical
4/6/2023 8:45	0.0174	Vertical
4/7/2023 14:30	0.0708	Longitudinal
4/8/2023 16:31	0.0149	Vertical
4/9/2023 12:30	0.014	Vertical

9201 Collins Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
2/21/2023 10:15	0.0171	Longitudinal
2/22/2023 6:45	0.0074	Longitudinal
2/23/2023 4:45	0.0059	Longitudinal
2/24/2023 11:00	0.0071	Longitudinal
2/25/2023 13:46	0.0084	Longitudinal
2/26/2023 8:15	0.0189	Longitudinal
2/27/2023 10:30	0.0164	Transverse
2/28/2023 3:15	0.013	Transverse
3/1/2023 7:46	0.0127	Transverse
3/2/2023 9:30	0.0155	Transverse
3/3/2023 4:00	0.0251	Transverse
3/4/2023 8:15	0.0071	Vertical
3/5/2023 13:46	0.0307	Longitudinal
3/6/2023 12:23	0.0168	Transverse
3/7/2023 15:30	0.0112	Transverse
3/8/2023 12:00	0.0099	Transverse
3/9/2023 15:00	0.0372	Longitudinal
3/10/2023 23:00	0.0183	Longitudinal
3/11/2023 15:45	0.0155	Longitudinal
3/12/2023 11:30	0.0115	Longitudinal
3/13/2023 17:15	0.0053	Vertical
3/14/2023 14:45	0.0053	Vertical
3/15/2023 12:30	0.0115	Longitudinal
3/16/2023 16:30	0.0065	Vertical
3/17/2023 10:30	0.009	Vertical
3/18/2023 18:00	0.0065	Longitudinal
3/19/2023 11:45	0.0043	Longitudinal
3/20/2023 14:15	0.0254	Longitudinal
3/21/2023 23:30	0.0254	Vertical
3/22/2023 12:15	0.009	Longitudinal
3/23/2023 11:15	0.0459	Vertical
3/24/2023 7:45	0.0109	Vertical
3/25/2023 15:45	0.0084	Longitudinal
3/26/2023 12:45	0.0469	Longitudinal
3/27/2023 12:15	0.0106	Vertical
3/28/2023 12:00	0.0208	Longitudinal
3/29/2023 11:15	0.0248	Vertical
3/30/2023 14:15	0.2318	Longitudinal
3/31/2023 12:45	0.0096	Longitudinal
4/1/2023 18:15	0.0279	Vertical
4/2/2023 18:45	0.0102	Vertical
4/3/2023 11:30	0.0074	Longitudinal
4/4/2023 19:59	0.0106	Vertical



9201 Collins Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/5/2023 9:15	0.0071	Transverse
4/6/2023 12:00	0.0109	Transverse
4/7/2023 19:30	0.0208	Longitudinal
4/8/2023 18:00	0.0053	Longitudinal
4/9/2023 17:45	0.0081	Longitudinal

9225 Collins Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
2/21/2023 3:15	0.0127	Longitudinal
2/22/2023 6:00	0.0087	Longitudinal
2/23/2023 18:46	0.0143	Longitudinal
2/24/2023 12:59	0.0109	Longitudinal
2/25/2023 4:00	0.0112	Longitudinal
2/26/2023 13:46	0.0127	Longitudinal
2/27/2023 4:15	0.0112	Transverse
2/28/2023 2:45	0.0112	Longitudinal
3/1/2023 12:59	0.0115	Transverse
3/2/2023 11:00	0.2271	Longitudinal
3/3/2023 11:45	0.0137	Vertical
3/4/2023 17:00	0.0118	Transverse
3/5/2023 15:15	0.0143	Vertical
3/6/2023 17:15	0.0183	Longitudinal
3/7/2023 7:30	0.0388	Longitudinal
3/8/2023 7:45	0.018	Vertical
3/9/2023 10:15	0.0285	Transverse
3/10/2023 9:00	0.0208	Vertical
3/11/2023 9:15	0.0161	Longitudinal
3/12/2023 7:45	0.0124	Vertical
3/13/2023 8:00	0.0146	Transverse
3/14/2023 16:45	0.0146	Longitudinal
3/15/2023 10:00	0.0137	Longitudinal
3/16/2023 7:45	0.0388	Vertical
3/17/2023 7:45	0.0155	Transverse
3/18/2023 19:00	0.0155	Transverse
3/19/2023 4:45	0.0133	Longitudinal
3/20/2023 10:15	0.0177	Transverse
3/21/2023 14:45	0.0168	Vertical
3/22/2023 8:59	0.0112	Transverse
3/23/2023 18:00	0.018	Vertical
3/24/2023 19:30	0.022	Transverse
3/25/2023 8:00	0.0338	Vertical
3/26/2023 19:45	0.0109	Transverse
3/27/2023 13:45	0.0112	Transverse
3/28/2023 23:15	0.0351	Longitudinal
3/29/2023 0:45	0.0379	Longitudinal
3/30/2023 7:00	0.0174	Longitudinal
3/31/2023 17:15	0.0121	Vertical
4/1/2023 9:30	0.013	Transverse
4/2/2023 12:00	0.0096	Vertical
4/3/2023 8:30	0.0195	Longitudinal
4/4/2023 10:15	0.0555	Longitudinal
4/5/2023 15:45	0.0127	Vertical

9225 Collins Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/6/2023 11:00	0.0143	Transverse
4/7/2023 11:00	0.0205	Longitudinal
4/8/2023 16:00	0.0186	Vertical
4/9/2023 9:30	0.023	Vertical

Center Site Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
2/22/2023 8:15	0.1319	Longitudinal
2/23/2023 5:45	0.1123	Longitudinal
2/24/2023 10:45	0.1061	Longitudinal
2/25/2023 11:45	0.0043	Longitudinal
2/26/2023 8:30	0.005	Longitudinal
2/27/2023 9:30	0.1573	Longitudinal
2/28/2023 9:16	0.3584	Longitudinal
3/1/2023 4:30	0.1148	Longitudinal
3/2/2023 8:14	0.8757	Transverse
3/3/2023 6:30	0.2057	Vertical
3/4/2023 5:00	0.0053	Vertical
3/5/2023 8:30	0.0037	Vertical
3/6/2023 12:04	0.0382	Vertical
3/7/2023 10:30	0.054	Longitudinal
3/8/2023 11:30	0.0478	Vertical
3/9/2023 15:15	0.0295	Vertical
3/10/2023 9:30	0.0245	Vertical
3/11/2023 2:00	0.0031	Vertical
3/12/2023 16:45	0.0034	Longitudinal
3/13/2023 8:15	0.0937	Vertical
3/14/2023 9:59	0.6523	Vertical
3/15/2023 14:32	0.3311	Vertical
3/16/2023 12:15	0.0829	Vertical

NE Site Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
2/22/2023 8:00	0.0441	Longitudinal
2/23/2023 4:30	0.0394	Longitudinal
2/24/2023 6:00	0.1167	Longitudinal
2/25/2023 8:31	0.0074	Longitudinal
2/26/2023 8:30	0.0071	Longitudinal
2/27/2023 9:15	0.0881	Transverse
2/28/2023 6:31	0.0366	Transverse
3/1/2023 4:31	0.0369	Transverse
3/2/2023 9:52	0.0723	Vertical
3/3/2023 4:00	0.3475	Vertical
3/4/2023 9:16	0.0071	Vertical
3/5/2023 8:31	0.0071	Vertical
3/6/2023 4:00	0.0915	Longitudinal
3/7/2023 11:00	0.045	Vertical
3/8/2023 12:00	0.0245	Longitudinal
3/9/2023 16:45	0.0099	Vertical
3/10/2023 12:15	0.0152	Vertical
3/11/2023 6:00	0.0071	Vertical
3/12/2023 0:30	0.0065	Longitudinal
3/13/2023 12:15	0.0261	Longitudinal
3/14/2023 12:00	0.0087	Longitudinal
3/15/2023 15:15	0.0109	Transverse
3/16/2023 12:00	0.0174	Vertical
3/17/2023 15:45	0.0164	Vertical
3/18/2023 23:00	0.0071	Vertical
3/19/2023 15:16	0.0068	Longitudinal
3/20/2023 11:00	0.0586	Transverse
3/21/2023 15:45	0.0059	Longitudinal
3/22/2023 9:15	0.0419	Longitudinal
3/23/2023 13:45	0.0524	Transverse
3/24/2023 11:00	0.0202	Transverse
3/25/2023 22:45	0.0071	Longitudinal
3/26/2023 13:30	0.0074	Vertical
3/27/2023 10:45	0.0233	Longitudinal
3/28/2023 13:59	0.0382	Transverse
3/29/2023 8:30	0.0223	Longitudinal
3/30/2023 13:15	0.023	Transverse
3/31/2023 9:15	0.0186	Transverse
4/1/2023 10:00	0.0099	Longitudinal
4/2/2023 19:30	0.0171	Vertical
4/3/2023 8:30	0.0298	Transverse
4/4/2023 11:45	0.0695	Transverse
4/5/2023 8:45	0.0186	Vertical

NE Site Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/6/2023 13:59	0.0512	Vertical
4/7/2023 10:30	0.0109	Vertical
4/8/2023 9:45	0.0084	Vertical
4/9/2023 12:30	0.0074	Longitudinal

NW Site Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
2/22/2023 6:45	0.0586	Longitudinal
2/23/2023 7:45	0.0348	Longitudinal
2/24/2023 10:15	0.0326	Longitudinal
2/25/2023 8:30	0.018	Longitudinal
2/26/2023 4:16	0.0164	Longitudinal
2/27/2023 5:00	0.1036	Vertical
2/28/2023 3:15	0.0959	Vertical
3/1/2023 4:31	0.0813	Vertical
3/2/2023 6:15	0.0751	Transverse
3/3/2023 8:30	0.063	Vertical
3/4/2023 3:15	0.0211	Vertical
3/5/2023 8:30	0.022	Vertical
3/6/2023 5:01	0.0965	Vertical
3/7/2023 15:24	1.4162	Vertical
3/8/2023 13:30	0.1061	Vertical
3/9/2023 15:15	0.0611	Transverse
3/10/2023 23:15	0.0186	Vertical
3/11/2023 6:00	0.0227	Vertical
3/12/2023 5:15	0.0211	Vertical
3/13/2023 15:45	0.0289	Vertical
3/14/2023 3:30	0.0199	Vertical
3/15/2023 15:45	0.0717	Vertical
3/16/2023 11:45	0.0363	Longitudinal
3/17/2023 8:59	0.0403	Longitudinal
3/18/2023 23:00	0.0223	Vertical
3/19/2023 18:00	0.0214	Vertical
3/20/2023 15:30	0.1477	Vertical
3/21/2023 15:15	0.0639	Vertical
3/22/2023 9:00	0.0351	Vertical
3/23/2023 15:15	0.0428	Vertical
3/24/2023 15:00	0.0317	Vertical
3/25/2023 11:00	0.0214	Vertical
3/26/2023 8:00	0.022	Vertical
3/27/2023 11:00	0.0459	Vertical
3/28/2023 13:59	0.0797	Vertical
3/29/2023 12:15	0.0618	Vertical
3/30/2023 15:00	0.086	Vertical
3/31/2023 15:16	0.4524	Vertical
4/1/2023 18:00	0.022	Vertical
4/2/2023 19:15	0.0227	Vertical
4/3/2023 12:27	1.5224	Vertical
4/4/2023 13:07	0.4692	Vertical
4/5/2023 14:42	0.5129	Longitudinal

NW Site Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/6/2023 15:00	0.0847	Vertical
4/7/2023 15:30	0.0509	Vertical
4/8/2023 1:59	0.023	Vertical
4/9/2023 12:30	0.022	Vertical



SE Site Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
2/22/2023 8:32	0.1949	Longitudinal
2/23/2023 3:46	0.1098	Longitudinal
2/24/2023 11:00	0.0999	Longitudinal
2/25/2023 1:30	0.0124	Longitudinal
2/26/2023 2:00	0.0053	Longitudinal
2/27/2023 6:45	0.1403	Transverse
2/28/2023 8:15	0.0891	Longitudinal
3/1/2023 8:30	0.1055	Vertical
3/2/2023 11:15	0.0987	Vertical
3/3/2023 4:00	0.1114	Longitudinal
3/4/2023 9:15	0.005	Longitudinal
3/5/2023 17:31	0.0053	Transverse
3/6/2023 8:53	0.6827	Vertical
3/7/2023 15:42	2.7419	Longitudinal
3/8/2023 12:59	0.122	Transverse
3/9/2023 9:15	0.0906	Vertical
3/10/2023 12:15	0.1266	Longitudinal
3/11/2023 6:00	0.0053	Vertical
3/12/2023 16:15	0.0059	Vertical
3/13/2023 11:15	0.0742	Transverse
3/14/2023 15:30	0.144	Vertical
3/15/2023 9:30	0.0559	Longitudinal
3/16/2023 13:39	7.0986	Vertical
3/17/2023 15:45	0.2228	Transverse
3/18/2023 23:00	0.0053	Vertical
3/19/2023 15:15	0.022	Transverse
3/20/2023 10:30	0.0407	Vertical
3/21/2023 12:45	0.0537	Vertical
3/22/2023 12:30	0.1378	Transverse
3/23/2023 9:15	0.0878	Transverse
3/24/2023 16:30	0.0512	Transverse
3/25/2023 19:45	0.0043	Vertical
3/26/2023 22:15	0.0056	Vertical
3/27/2023 9:47	1.6223	Transverse
3/28/2023 10:00	0.126	Transverse
3/29/2023 12:10	10.0003	Longitudinal
3/30/2023 8:59	0.0524	Transverse
4/3/2023 12:03	0.1036	Longitudinal
4/4/2023 9:30	0.0686	Transverse
4/5/2023 14:15	0.0919	Transverse
4/6/2023 13:15	0.09	Transverse
4/7/2023 11:00	0.0555	Longitudinal
4/8/2023 9:30	0.0121	Longitudinal

SE Site Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/9/2023 11:45	0.0047	Longitudinal

SW Site Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
2/22/2023 10:45	0.0354	Longitudinal
2/23/2023 10:15	0.0348	Longitudinal
2/24/2023 9:30	0.0605	Longitudinal
2/25/2023 4:45	0.0239	Longitudinal
2/26/2023 20:30	0.0208	Longitudinal
2/27/2023 5:00	0.1036	Vertical
2/28/2023 3:15	0.0959	Vertical
3/1/2023 4:31	0.0813	Vertical
3/2/2023 6:15	0.0751	Transverse
3/3/2023 8:30	0.063	Vertical
3/4/2023 3:15	0.0211	Vertical
3/5/2023 8:30	0.022	Vertical
3/6/2023 12:03	0.0534	Vertical
3/7/2023 15:15	0.2461	Vertical
3/8/2023 15:00	0.0801	Vertical
3/9/2023 9:00	0.081	Transverse
3/10/2023 16:02	0.0407	Vertical
3/11/2023 7:17	0.0397	Vertical
3/12/2023 4:17	0.0428	Vertical
3/13/2023 18:02	0.0313	Vertical
3/14/2023 14:45	0.0797	Vertical
3/15/2023 12:30	0.0968	Longitudinal
3/16/2023 8:45	0.0444	Vertical
3/17/2023 8:59	0.122	Vertical
3/18/2023 23:00	0.0543	Vertical
3/19/2023 12:30	0.0369	Vertical
3/20/2023 13:15	0.0633	Longitudinal
3/21/2023 15:00	0.117	Longitudinal
3/22/2023 13:45	0.0937	Vertical
3/23/2023 16:15	0.1769	Longitudinal
3/24/2023 8:14	0.7522	Longitudinal
3/25/2023 13:02	0.0372	Vertical
3/26/2023 22:17	0.0444	Vertical
3/27/2023 8:32	0.0586	Transverse
3/28/2023 14:00	0.0984	Transverse
3/29/2023 15:47	0.0509	Vertical
3/30/2023 13:02	0.0773	Vertical
3/31/2023 15:00	0.0723	Vertical
4/1/2023 11:45	0.0394	Vertical
4/2/2023 22:00	0.0469	Vertical
4/3/2023 12:30	0.0869	Longitudinal
4/4/2023 12:30	0.0875	Vertical
4/5/2023 9:30	0.1884	Vertical

SW Site Vibration Monitor - Maximum Daily Values		
Timestamp	Peak Particle Velocity (in./sec.)	Axis (Longitudinal/Transverse/Vertical)
4/6/2023 11:00	0.0797	Vertical
4/7/2023 9:45	0.1136	Transverse
4/8/2023 15:45	0.0425	Vertical
4/9/2023 12:30	0.0487	Vertical