Weston Solutions, Inc.
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June 21, 2017

Mr. Kerry Guy
On-Scene Coordinator
United States Environmental Protection Agency, Region VIII
Mail Code: 8EPR-ER
1595 Wynkoop Street
Denver, CO 80202

Re: VB I-70/OU2 Time Critical Removal
Denver, Denver County, Colorado
TDD: 0001/1612-11
WO#: 20408.012.001.0441.00

Dear Mr. Guy:

The United States Environmental Protection Agency (U.S. EPA) tasked the Weston Solutions, Inc., (WESTON®) Superfund Technical Assessment and Response Team (START) under Technical Direction Document (TDD) 0001/1612-11 to support U.S. EPA's oversight at the VB I-70/OU2 Time Critical Removal site (the Site) (Figure 1) in Denver, Denver County, Colorado.

AIR MONITORING ATIVITIES

The Clean Air Act which was last amended in 1990, requires EPA to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Clean Air Act identifies two types of national ambient air quality standards. Primary standards provide public health protection, including protecting the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.[1]

Particulate matter (PM) is the term for a mixture of solid particles and liquid droplets found in the air. Some particles, such as dust, dirt, soot, or smoke are large enough to be seen with the naked eye. Others are so small they can only be detected using an electron microscope. Fine inhalable particles with diameters that are 2.5 micrometers and smaller are $PM_{2.5}$. Inhalable particles with diameters that are 10 micrometers and smaller (including all of $PM_{2.5}$) are PM_{10}.[2] In general, PM_{10} may be attributed to activities such as construction, demolition, etc., while $PM_{2.5}$ may be attributed to combustions, emmissions, smog, etc.

[1] NAAQS Table https://www.epa.gov/criteria-air-pollutants/naaqs-table (accessed March 14, 2017).
[2] Particulate Matter (PM) Basics https://www.epa.gov/pm-pollution/particulate-matter-pm-basics#PM (accessed March 14, 2017).

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U.S. EPA On Scene Coordinator Kerry Guy instructed contractors under the START IV contract to prepare and mobilize particulate air monitoring equipment to the site to quantify the particulate concentrations at the site. All air monitoring performed by EPA was conducted as per the Final Sampling and Analysis Plan for the Site. The site target levels for $PM_{2.5}$ is 35 micrograms per cubic meter (µg/m^3) or 0.035 milligrams per cubic meter (mg/m^3) and for PM_{10} 150 µg/m^3 or 0.15 mg/m^3. These target levels are based on the 24 hour time weighted averages (TWA) from the NAAQS[3]. The table below is a summary of the data with respect to each location compared to the site target levels.

From May 22, to June 2, 2017, EPA conducted 8 days of particulate air monitoring at the site. During this period, no exceedance of the TWA for PM_{10} occurred at the construction perimeter fence line. The $PM_{2.5}$ TWA was below NAAQS for the duration of the monitoring event as well. TWA PM_{10} levels were consistently similar or slightly elevated above the PM2.5 levels, indicating that particulate matter at the site was predominately in the $PM_{2.5}$ range. The results (see attached graphs) indicate that dust suppression activities at the site were effective at minimizing dust emissions. A summary of the May to June 2017 particulate monitoring event including monitoring dates, locations where monitoring equipment was stationed, and if the particulate concentrations exceeded any NAAQS 24 hour TWA is detailed below.

Date	Location	$PM_{2.5}$ TWA Exceeded[4]	PM_{10} TWA Exceeded[5]
5/23/2017	VBI-DT-01	No	No
5/23/2017	VBI-DT-03	No	No
5/24/2017	VBI-DT-01	No	No
5/24/2017	VBI-DT-03	No	No
5/25/2017	VBI-DT-01	No	No
5/25/2017	VBI-DT-03	No	No
5/26/2017	VBI-DT-01	No	No
5/26/2017	VBI-DT-03	No	No
5/30/2017	VBI-DT-01	No	No
5/30/2017	VBI-DT-03	No	No
5/31/2017	VBI-DT-01	No	No

[3] Particulate Matter Standards – Table of Historical PM NAAQS (accessed March 9, 2017) https://www3.epa.gov/ttn/naaqs/standards/pm/s_pm_history.html
[4] 24 Hour Time Weighted Average for $PM_{2.5}$ is 35 µg/m^3
[5] 24 Hour Time Weighted Average for PM_{10} is 150 µg/m^3

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5/31/2017	VBI-DT-03	No	No
6/1/2017	VBI-DT-01	No	No
6/1/2017	VBI-DT-03	No	No
6/2/2017	VBI-DT-01	No	No
6/2/2017	VBI-DT-03	No	No

The preparation of this air monitoring summary report was per the request of OSC Guy. If there are any questions or comments regarding this report, please do not hesitate to contact me at 303-729-6131, or Robert Reed, Project Manager, at 303-729-6113.

Very truly yours,

WESTON SOLUTIONS, INC.

Michael Worden

Digitally signed by Michael Worden
DN: cn=Michael Worden, o=Weston Solutions, Inc., ou=START, email=michael.worden@westonsolutions.com, c=US
Date: 2017.06.21 17:42:21 -06'00'

Michael Worden
START Project Leader

Attachments:
A – Air Monitoring Graphs
B – Figures

cc: Robert Reed, Project Manager

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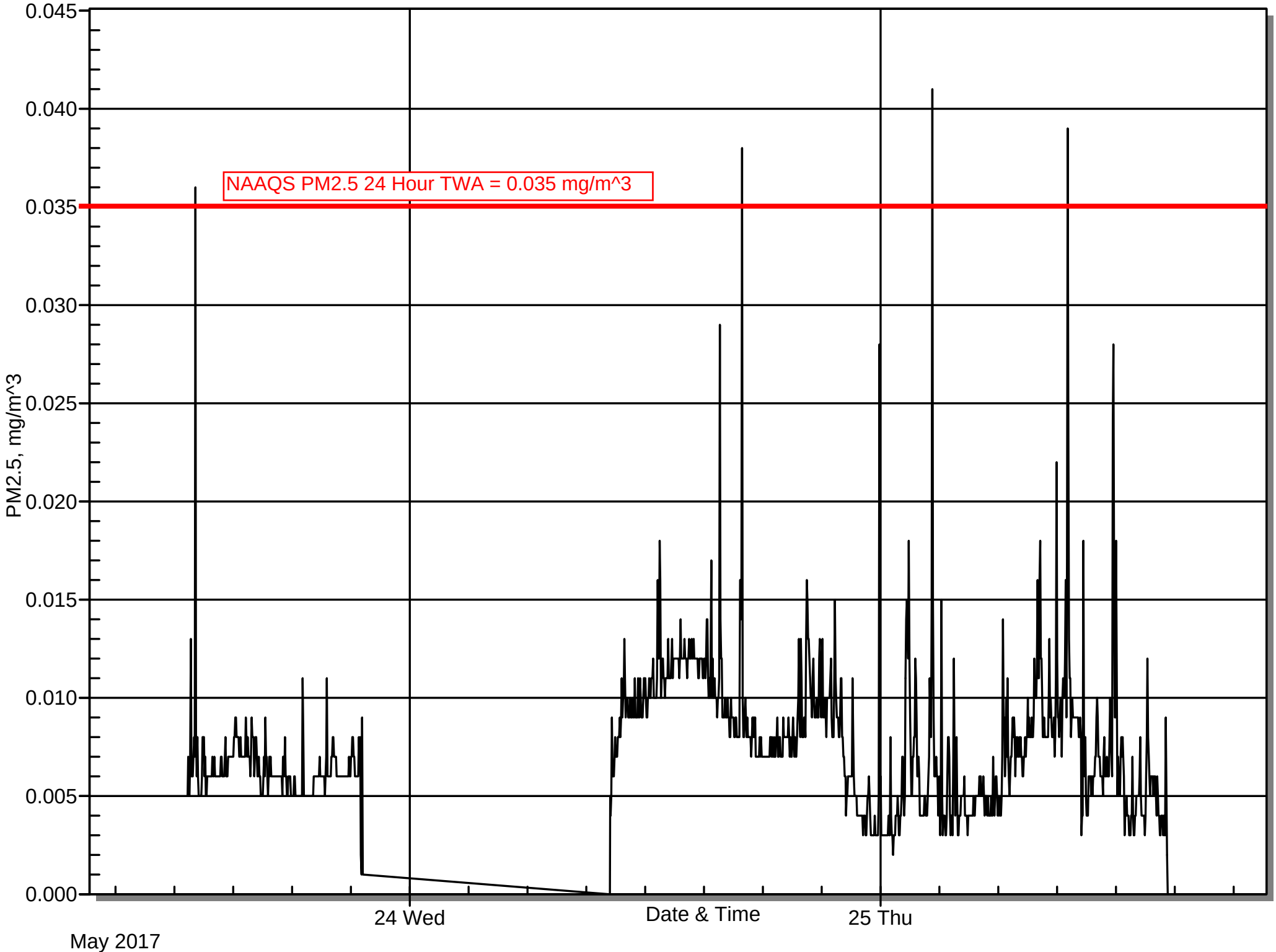
Attachment A

Air Monitoring Graphs

VBI-01 PM2.5

5/23/2017 - 5/25/2017

PM2.5 24-hr Max TWA = 0.0100 mg/m^3

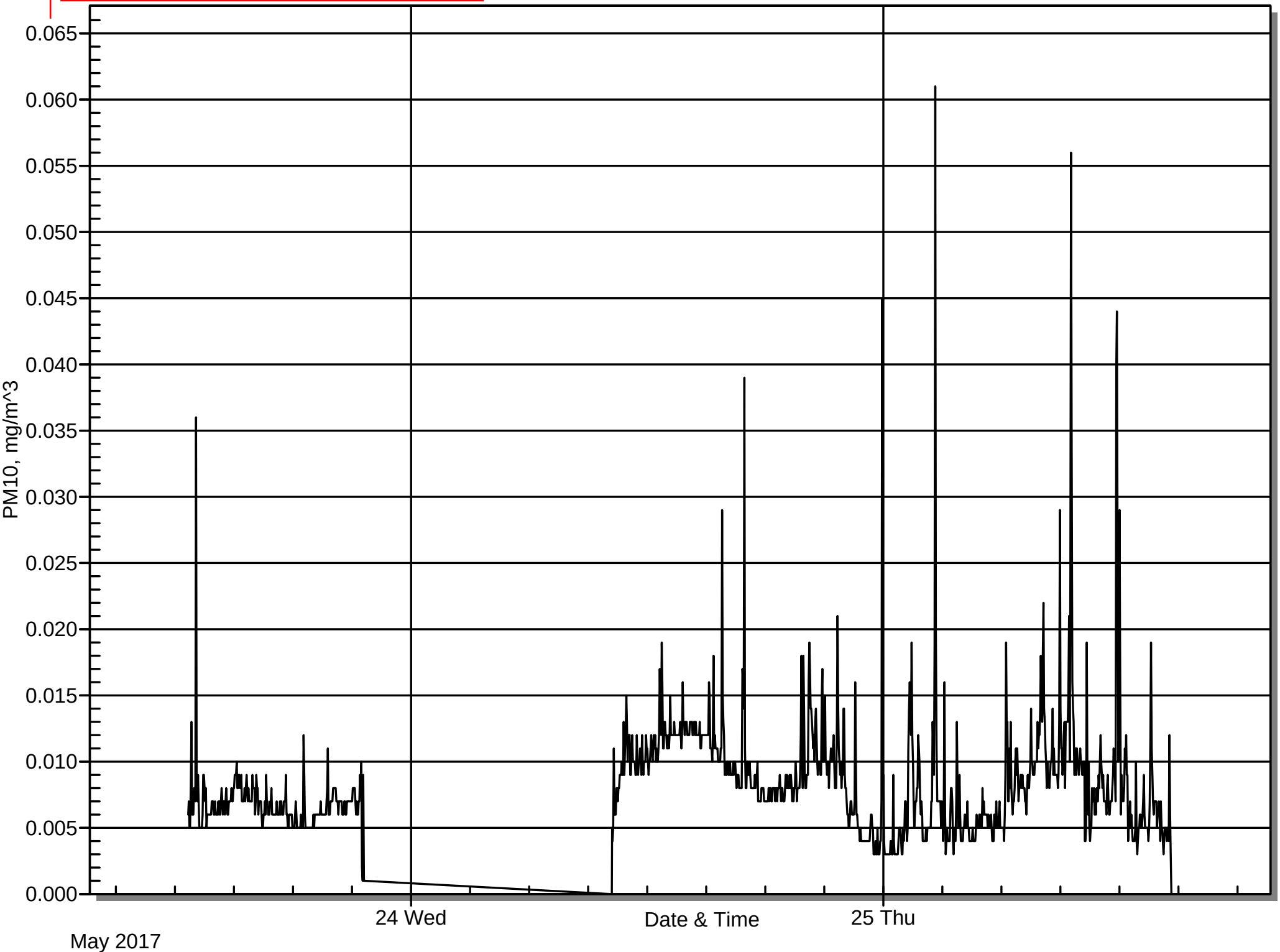


VBI-01 PM10

5/23/2017 - 5/25/2017

NAAQS PM10 24 Hour TWA = 0.150 mg/m^3

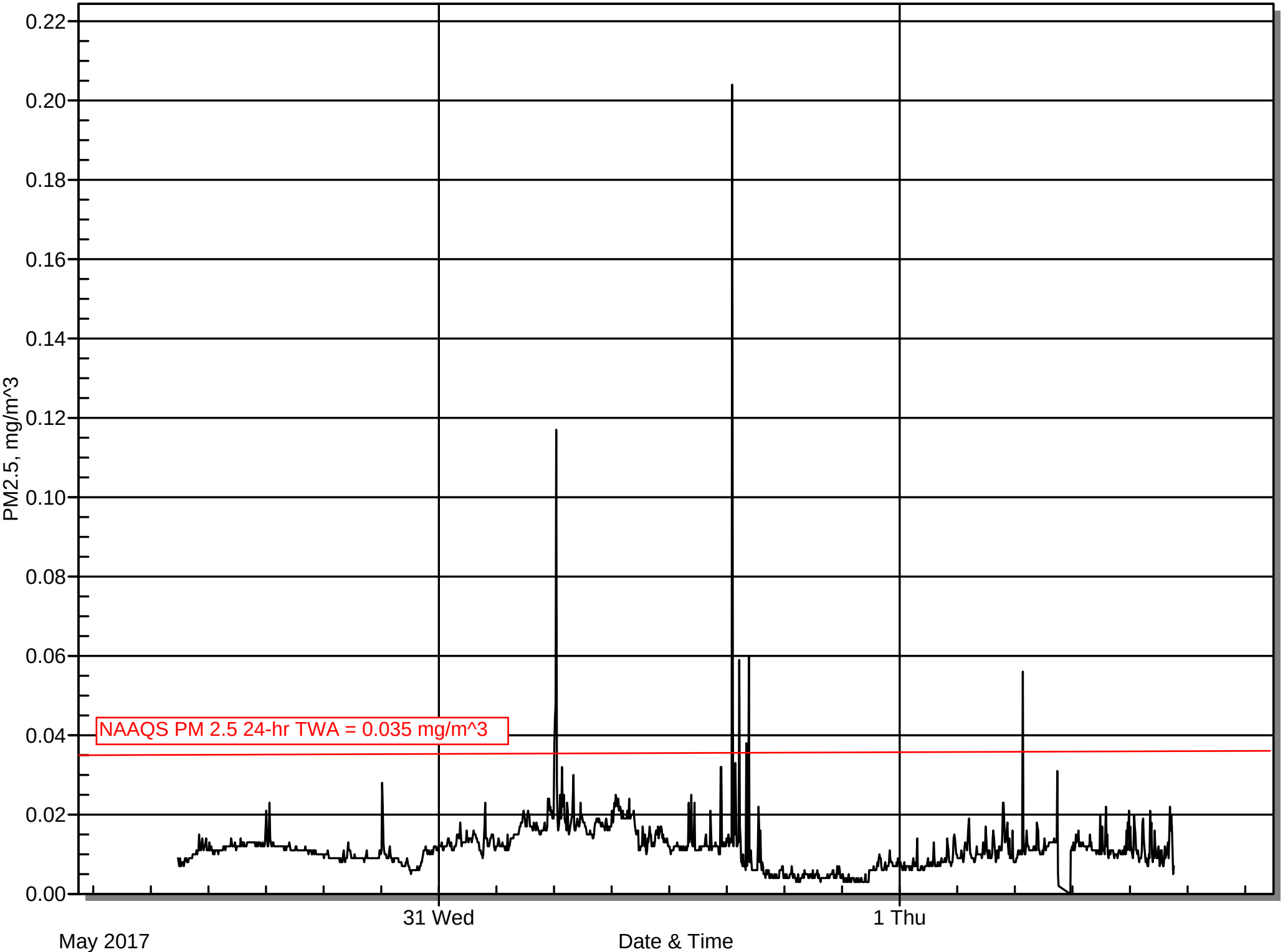
PM10 24-hr Max TWA = 0.0106 mg/m^3



VBI-01 PM2.5

5/30/2017 - 6/1/2017

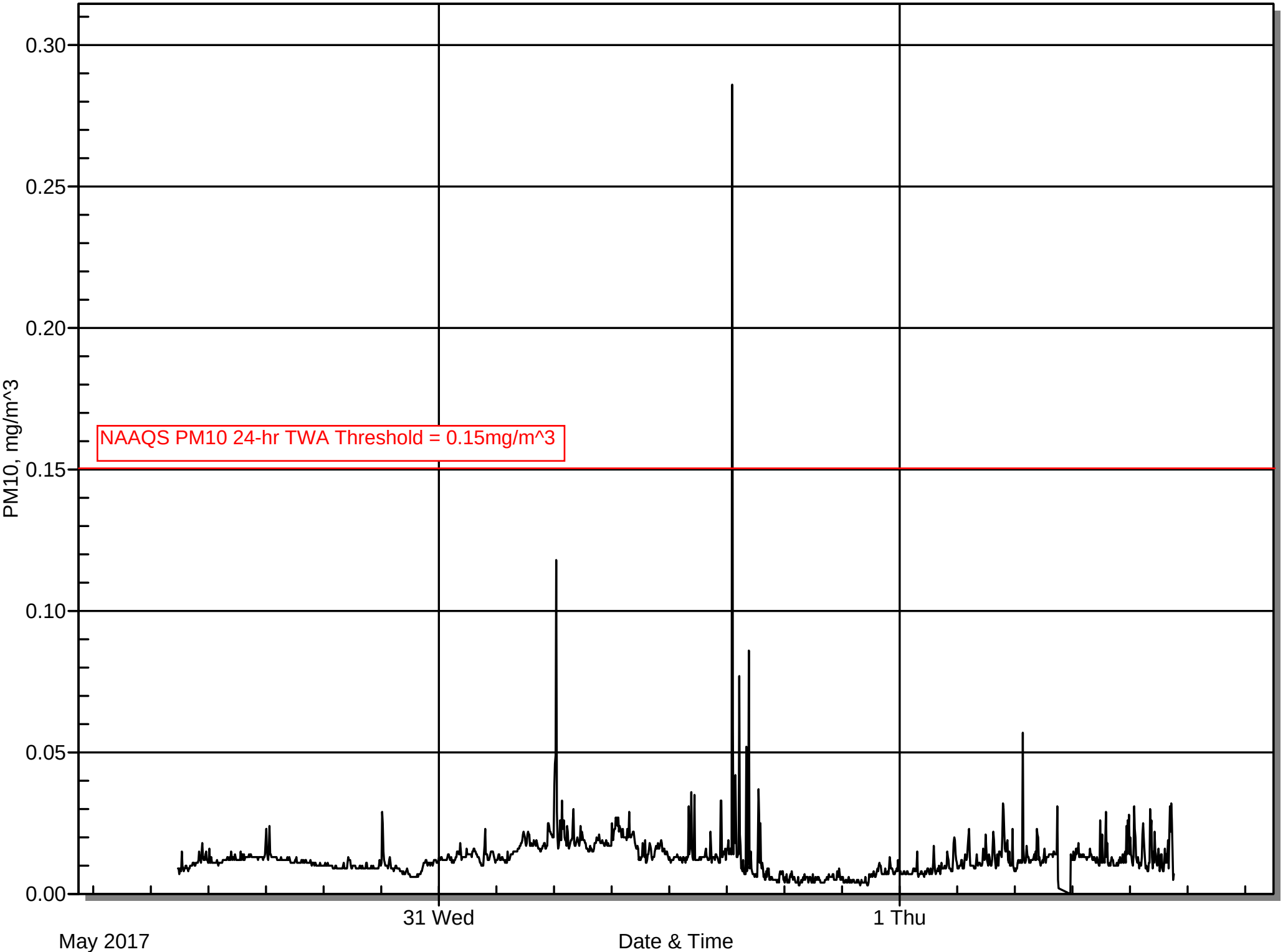
PM2.5 24-hr Max TWA = 0.014097 mg/m^3



VBI-01 PM10

5/30/2017 - 6/1/2017

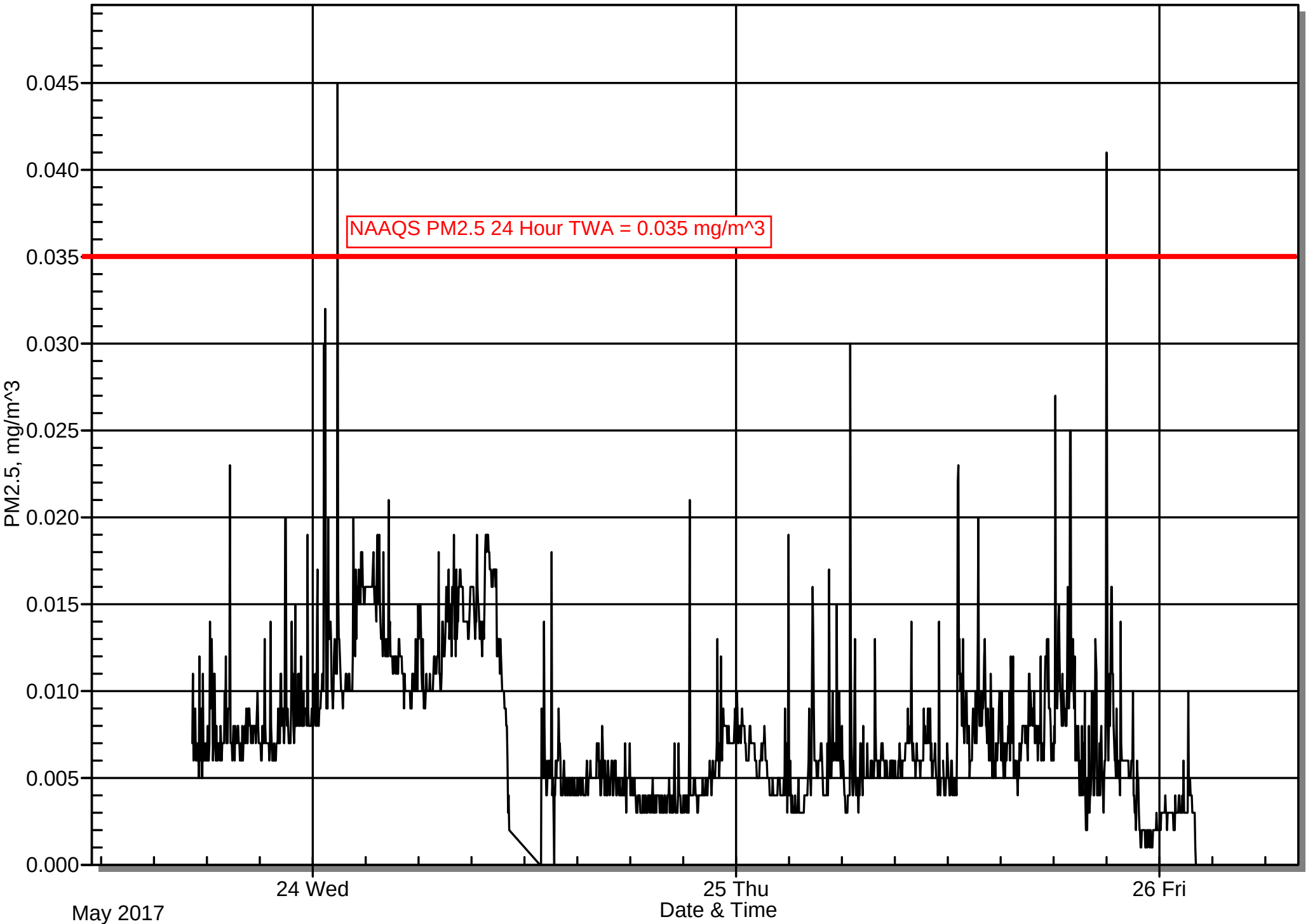
PM10 24-hr Max TWA = 0.015011 mg/m^3



VBI-03 PM2.5

5/23/2017 - 5/26/2017

PM2.5 24-hr Max TWA = 0.0102 mg/m^3

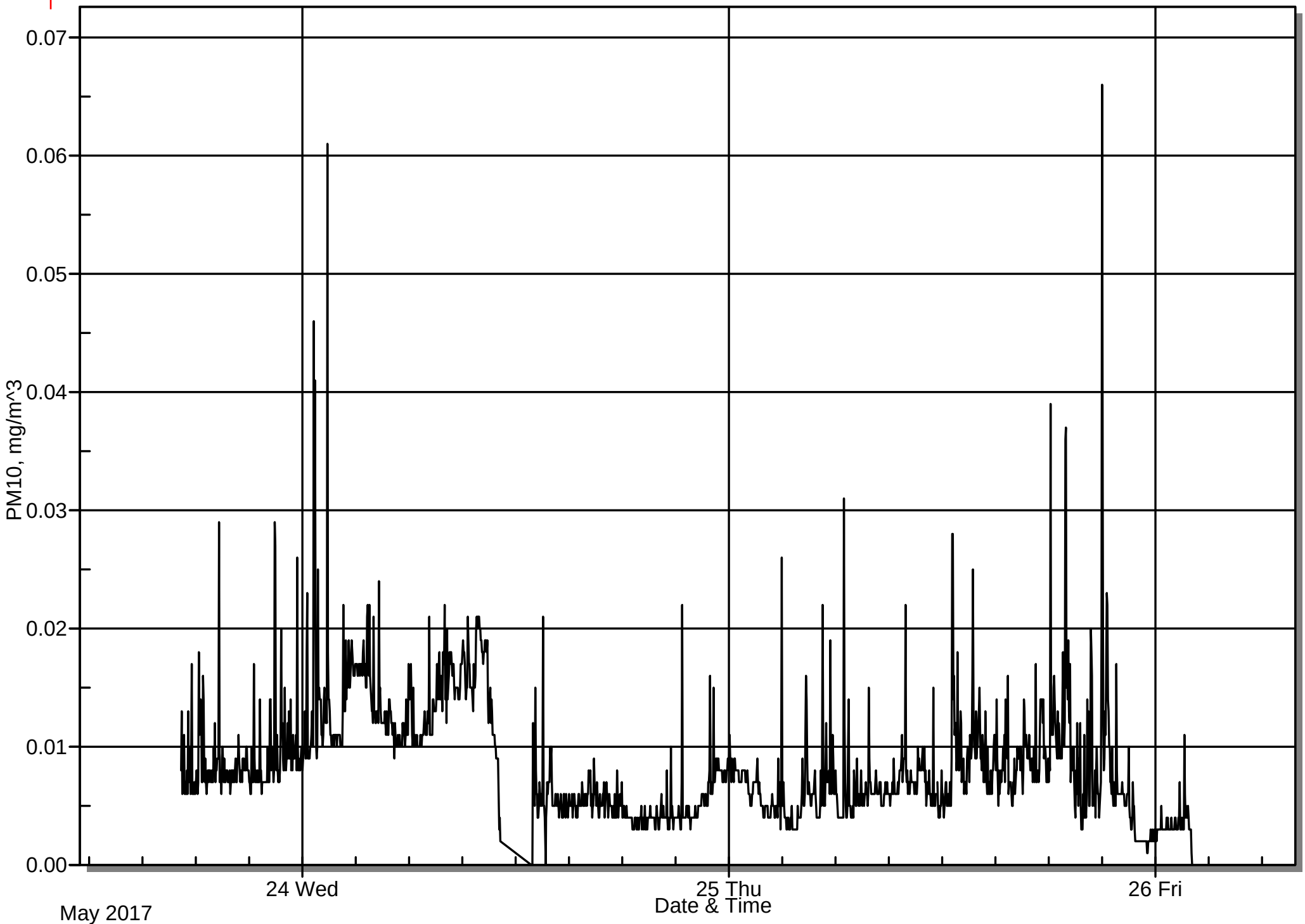


VBI-03 PM10

5/23/2017 - 5/26/2017

NAAQS PM10 24 Hour TWA = 0.150 mg/m^3

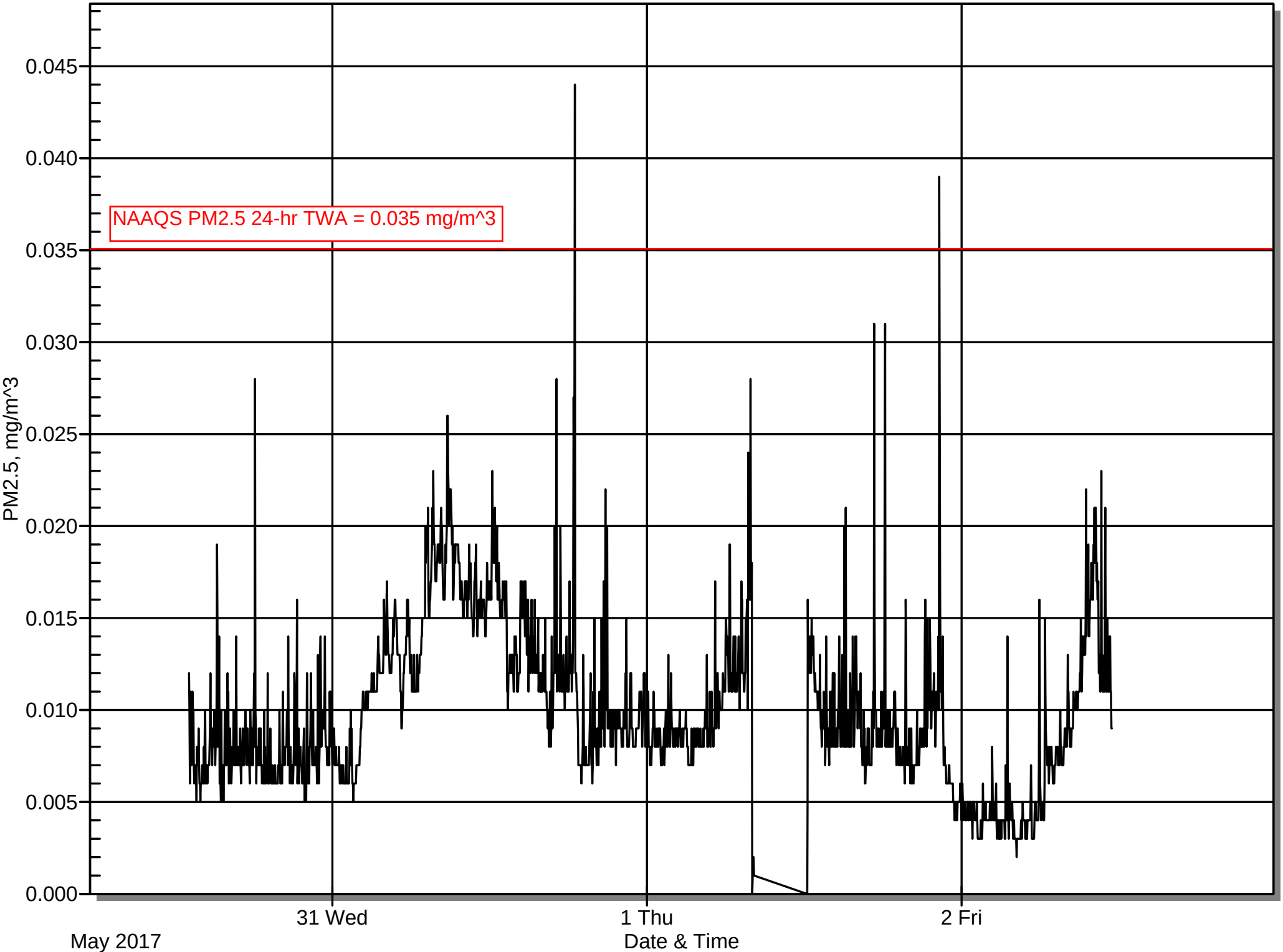
PM10 24-hr Max TWA = 0.0104 mg/m^3



VBI-03 PM2.5

5/30/2017 - 6/2/2017

PM2.5 24-hr Max TWA = 0.0128 mg/m^3

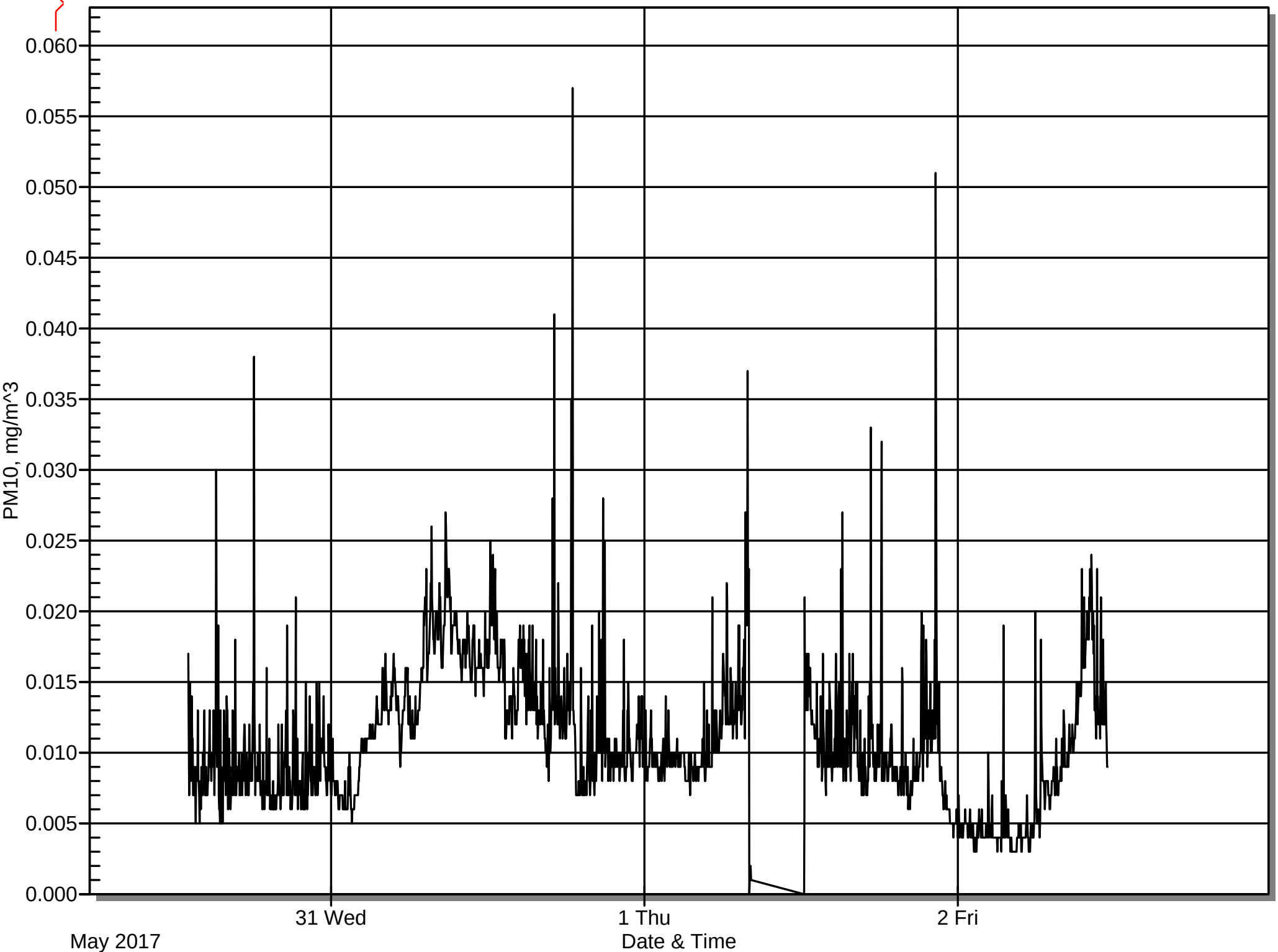


VBI-03 PM10

5/30/2017 - 6/2/2017

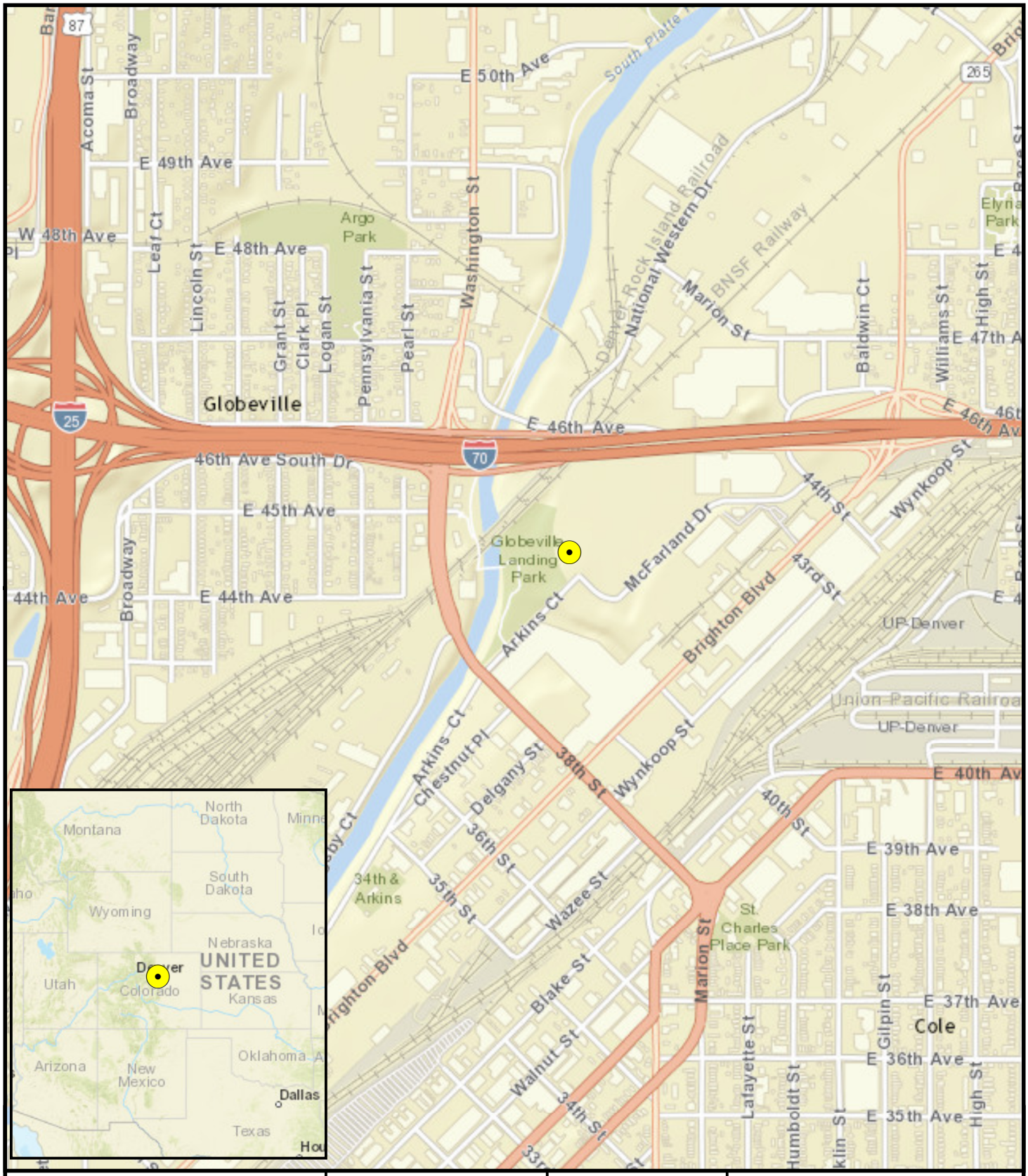
NAAQS PM10 24-hr TWA = 0.15 mg/m^3

PM10 24-hr Max TWA = 0.0137 mg/m^3



Attachment B

Figures



Legend

Site Location

0 475 950 1,900 Feet

N

Prepared for:
U.S. EPA Region 8

Contract No.:
EP-S8-13-01

TDD:
1612-11

TO:
0001

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FIGURE 1
SITE LOCATIONS MAP
GLOBEVILLE LANDING
OUTFALL CONSTRUCTION
DENVER, COLORADO

Date: 1/27/2017

0 155 310 620 Feet

N

Prepared for:
U.S. EPA Region 8

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FIGURE 2
SAMPLE LOCATION MAP
GLOBEVILLE LANDING
OUTFALL CONSTRUCTION
DENVER, COLORADO

Date: 6/9/2017