



DEPARTMENT OF THE NAVY

COMMANDER
NAVY REGION HAWAII
850 TICONDEROGA ST STE 110
JBPHH, HAWAII 96860-5101

FEB 20 2018 

5090
Ser N45/0433
February 13, 2018

CERTIFIED NO: 7015 0640 0002 4677 9473

Mr. Richard Takaba
Hawaii State Department of Health
Environmental Management Division
Solid and Hazardous Waste Branch
Underground Storage Tank Section
2827 Waimano Home Road
Pearl City, HI 96782

Dear Mr. Takaba:

**SUBJECT: RED HILL TANK COMPLEX
SOIL VAPOR SAMPLING RESULTS FOR JANUARY 2018
DOH FACILITY ID NO. 9-102271
DOH RELEASE ID NO. 990051, 010011, 020028, AND 140010**

Soil vapor samples were collected from beneath all active and accessible Red Hill tanks on January 24, 2018.

Soil vapor VOC concentrations were measured in the field using a photo-ionization detector. The soil vapor sampling results are being submitted as Enclosure 1.

A conservative approach is to assess the integrity of the associated tank system if VOC concentrations exceed 280,000 ppbv in soil vapor monitoring points (SVMPs) beneath tanks containing JP-5 or JP-8, or 14,000 ppbv in SVMPs beneath tanks containing marine diesel fuel. These values are 50 percent of the calculated vapor concentration from fuel-saturated water.

At Tank 5, the concentrations of VOCs detected in the front, middle, and outer edge soil vapor monitoring probes were 19,520 ppbv, 3,957 ppbv, and 15,060 ppbv, respectively. Tank 5 was emptied in January 2014 and has not contained fuel since that time. VOC concentrations in all down-gradient soil vapor monitors were below 250 ppbv.

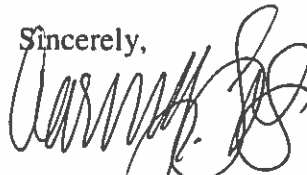
All other VOC concentrations measured in January were about 10 to 900 times below the action levels, with no consistent trends observed. NAVSUP FLC Pearl Harbor Causative Research Report is submitted as Enclosure 2. Possible reasons for the results are speculative and may include, but not be limited to, ongoing projects in the tunnel, groundwater level fluctuations, rainfall (or lack thereof), bi-product of biodegradation, and fuel movement in the tanks and piping.

5090
Ser N45/0433
February 13, 2018

Soil vapor VOC concentration trends will continue to be monitored. The next soil vapor sampling event is scheduled for February 2018, and will include collecting samples from soil vapor monitoring probes beneath all active and accessible tanks.

If there are any questions regarding this matter, or if more information is needed, please contact Mr. Melvin Muraoka at (808) 471-3869.

Sincerely,



AARON Y. POENTIS
Director
Regional Environmental Department
By direction of the
Commander

- Enclosures: 1. Summary of Soil Vapor Sampling Results for Tanks 2 through 18 and 20 through January 2018 (18 pages)
2. NAVSUP FLC Pearl Harbor Causative Research Report IRT Red Hill Soil Vapor Monitoring Report for January 2018

Copy to: Mr. Omer Shalev, U.S. EPA Region 9, Underground Storage Tank Program Office
Mr. John Floyd, NAVSUP FLC Pearl Harbor
Mr. Rockne Krill, DLA Energy Pacific

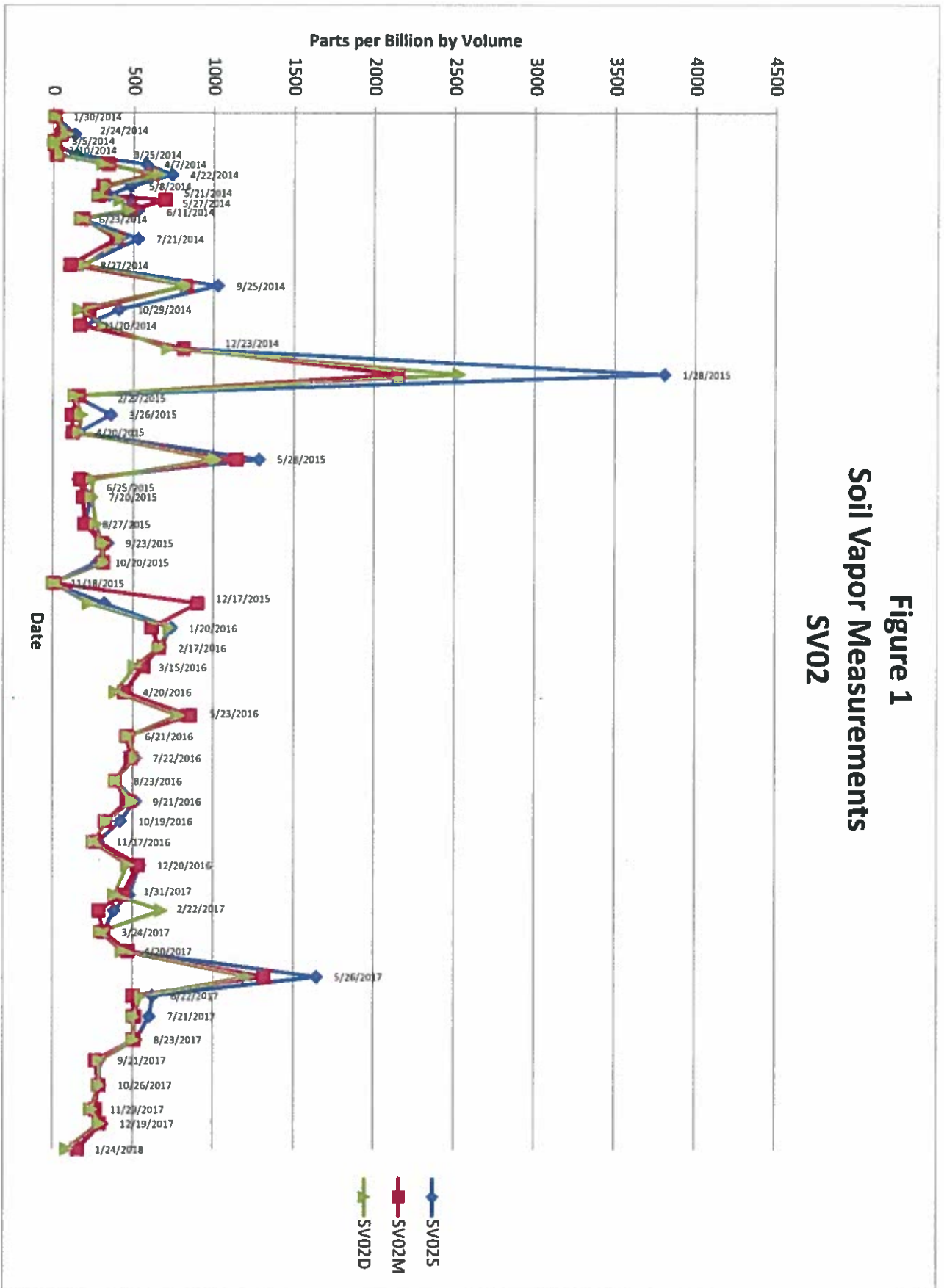


Figure 1
Soil Vapor Measurements
SV02

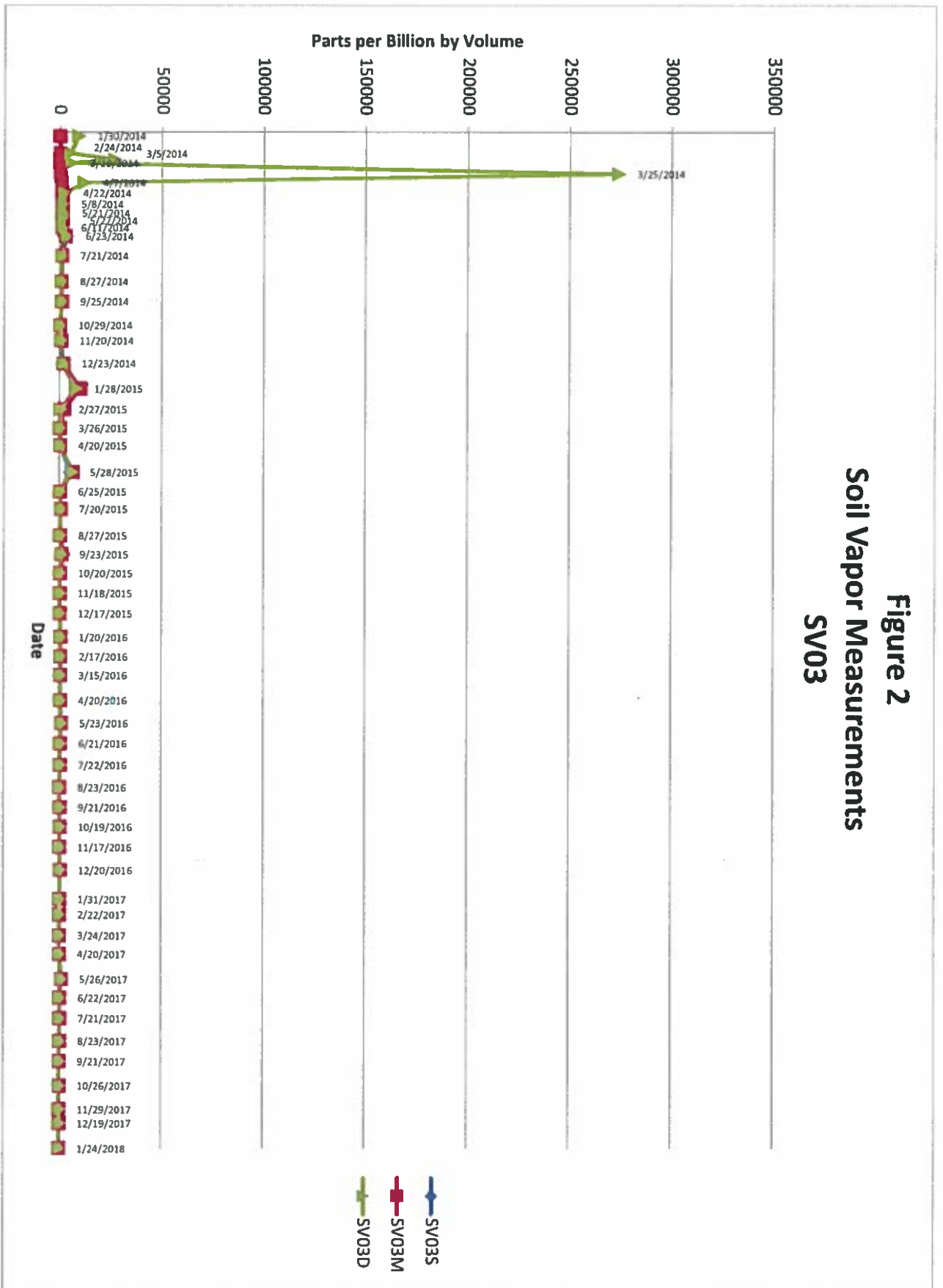


Figure 2
Soil Vapor Measurements
SV03

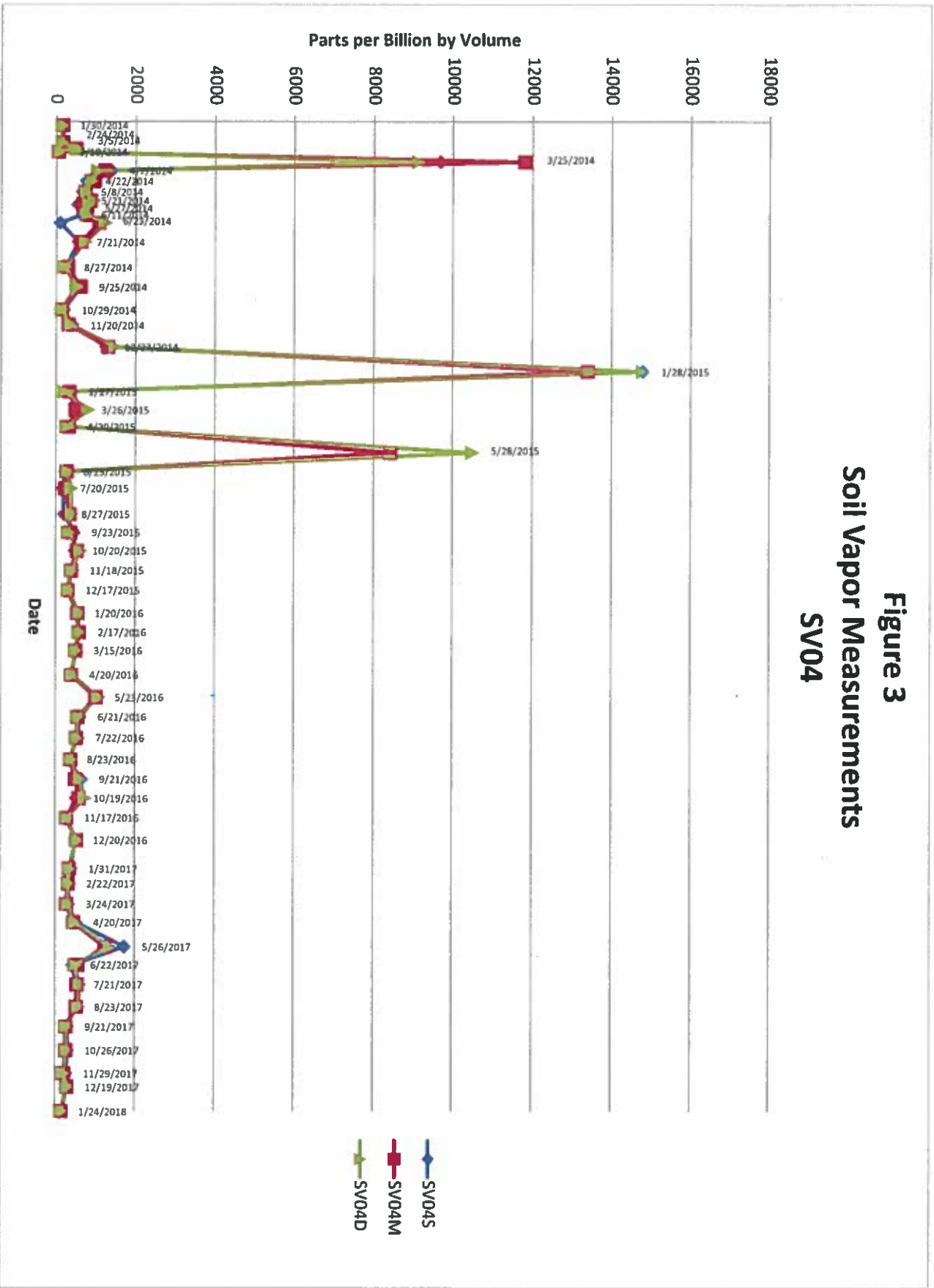
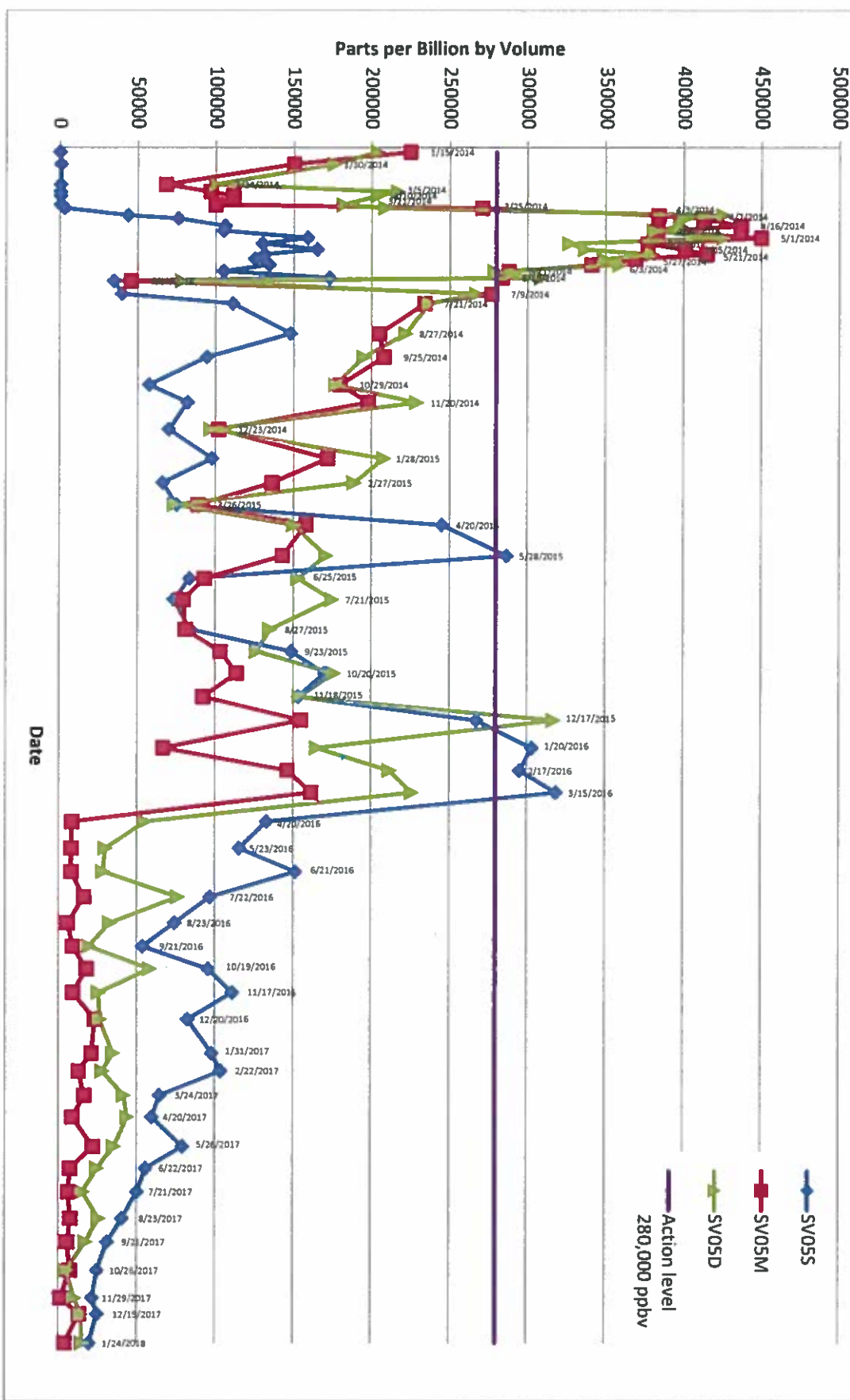


Figure 3
Soil Vapor Measurements
SV04

Figure 4
Soil Vapor Measurements
SV05



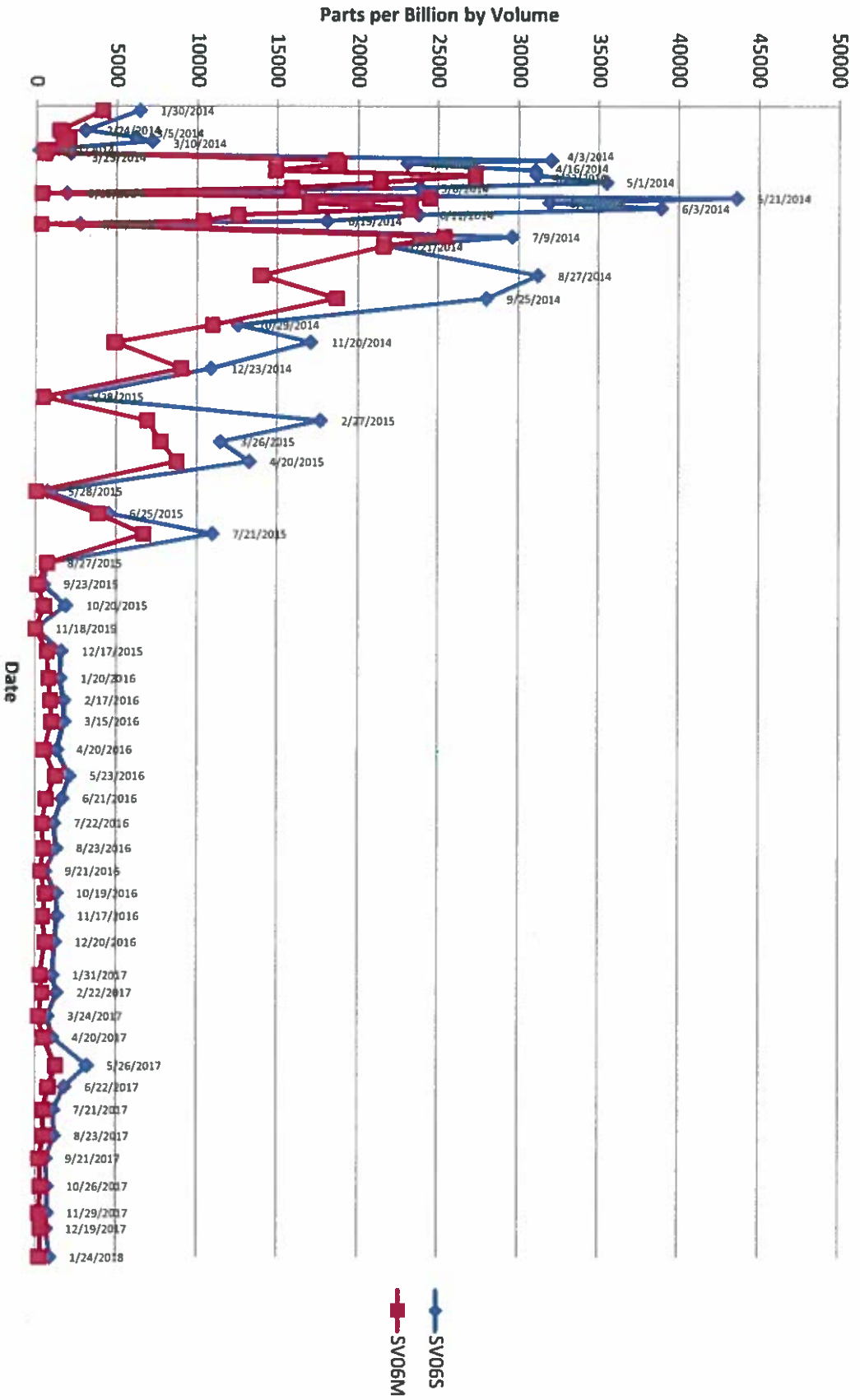
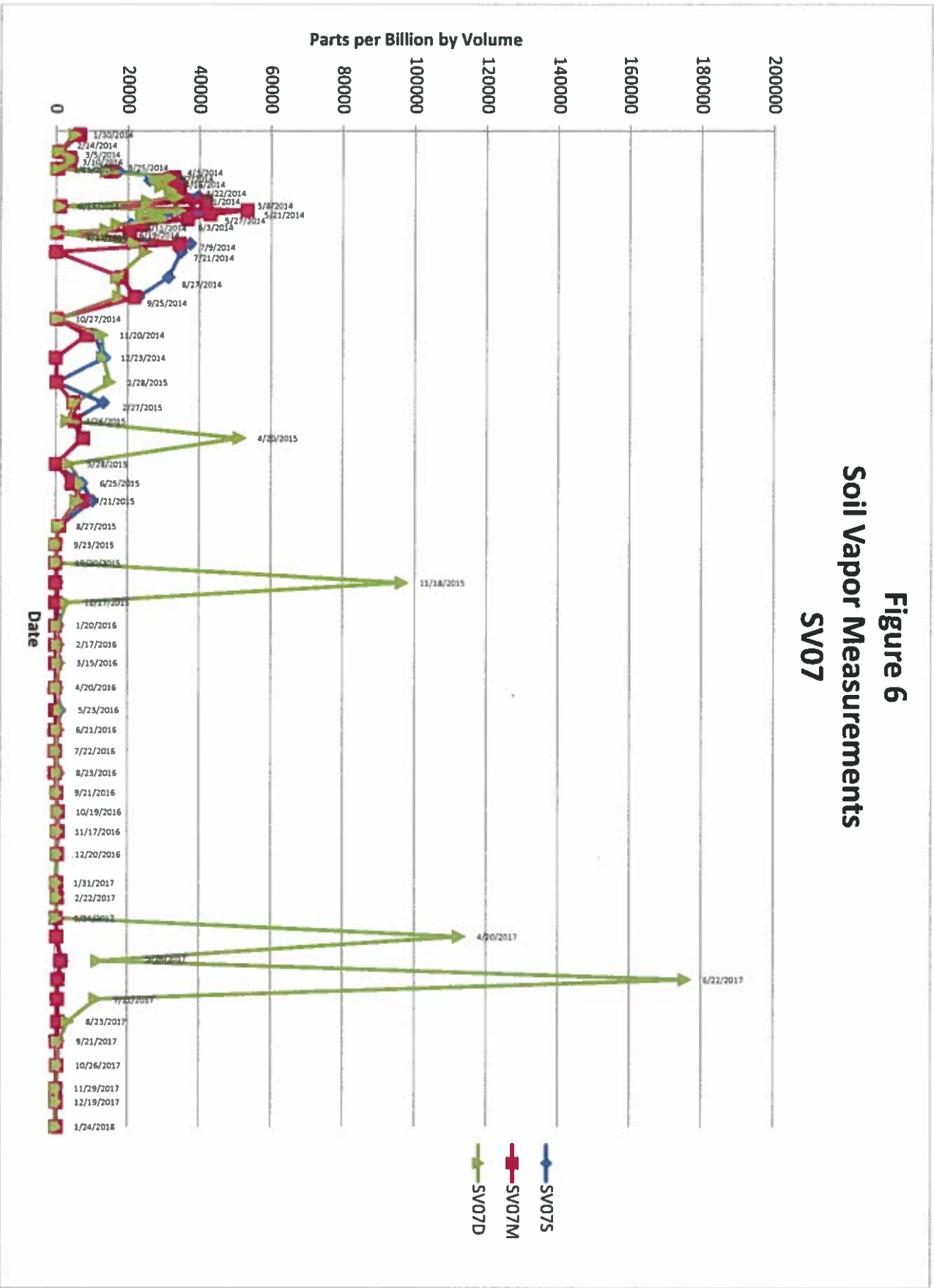
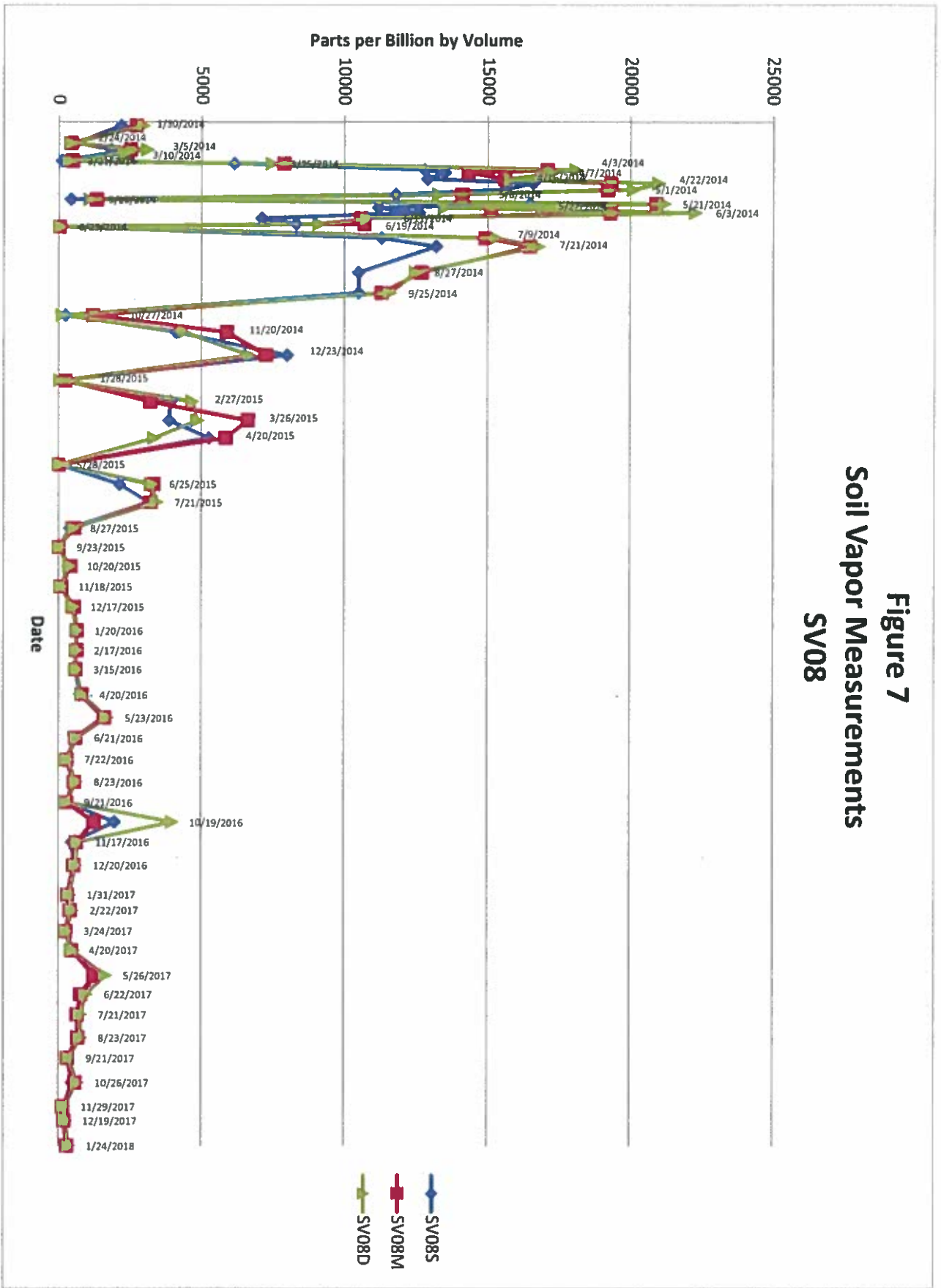


Figure 5
Soil Vapor Measurements
SV06

Figure 6
Soil Vapor Measurements
SV07





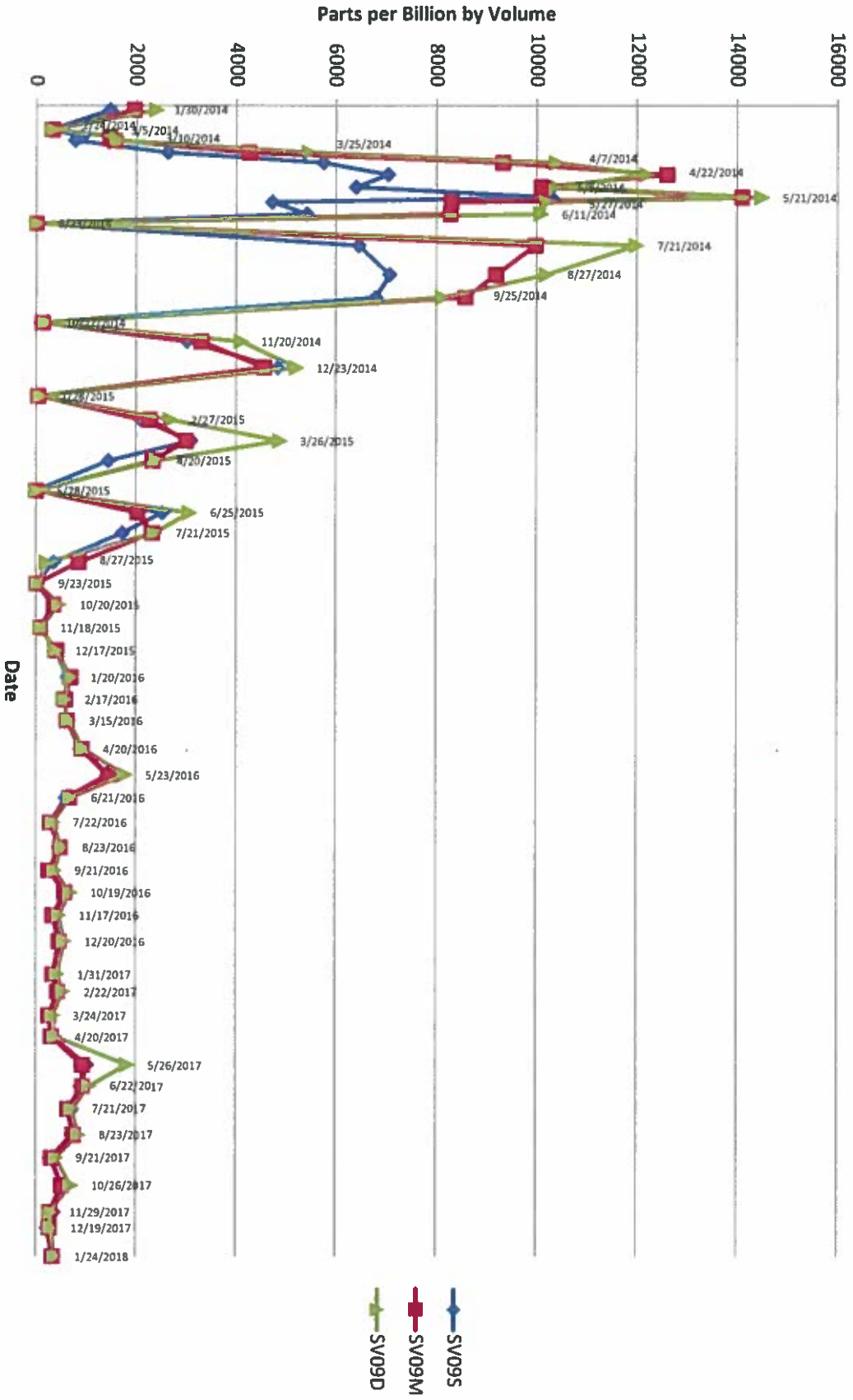


Figure 8
Soil Vapor Measurements
SV09

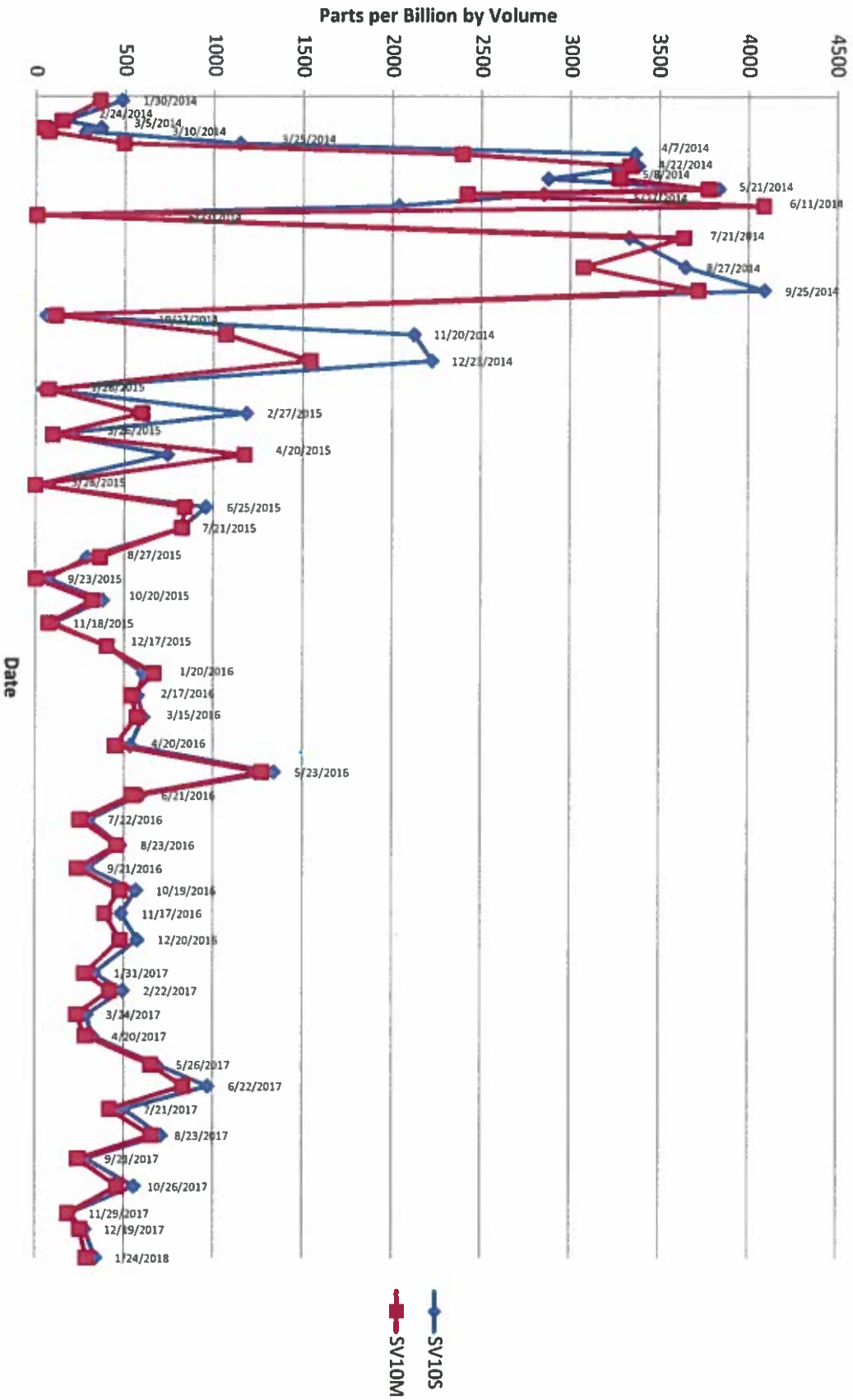
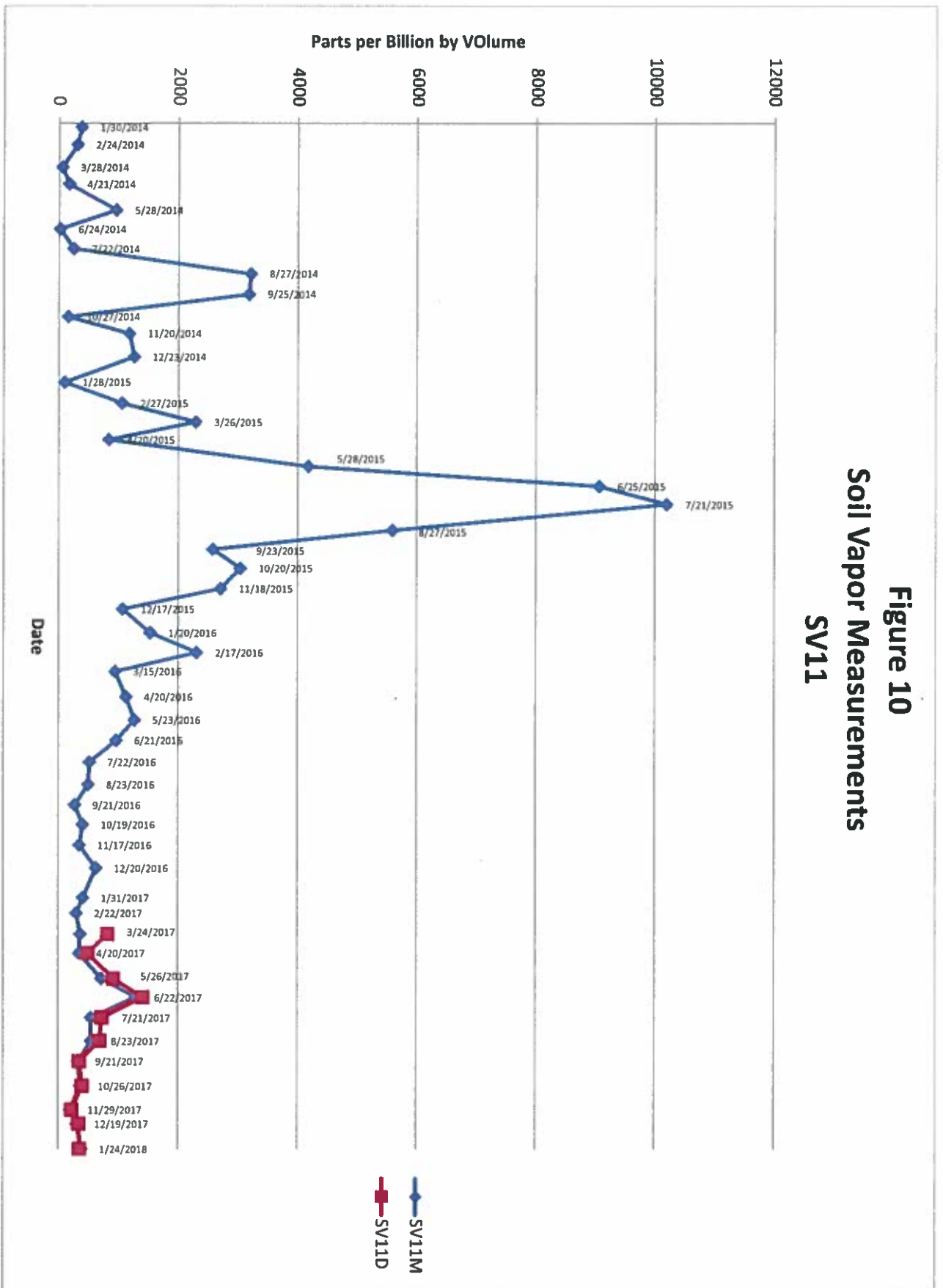


Figure 9
Soil Vapor Measurements
SV10



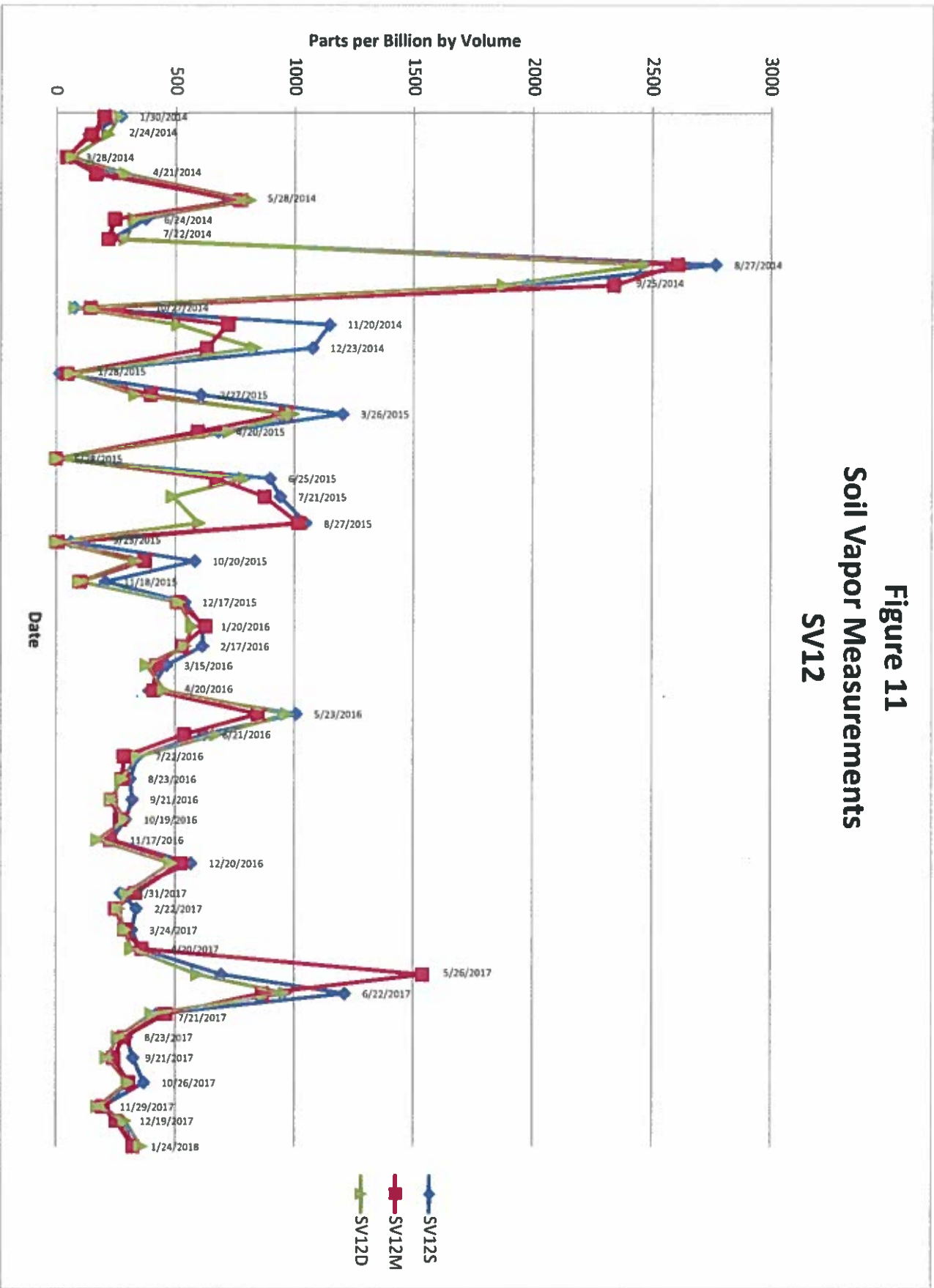
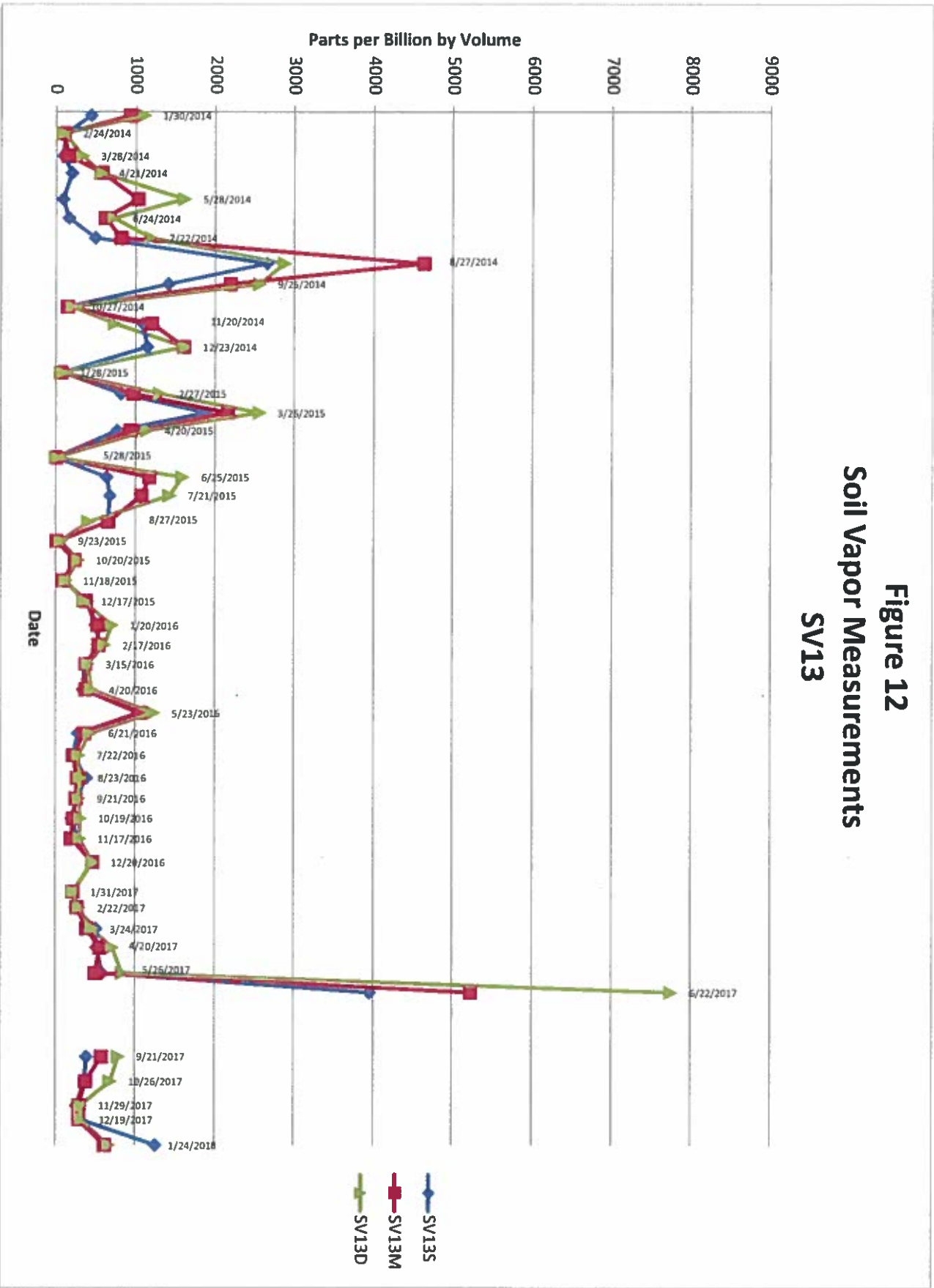


Figure 11
Soil Vapor Measurements
SV12

Figure 12
Soil Vapor Measurements
SV13



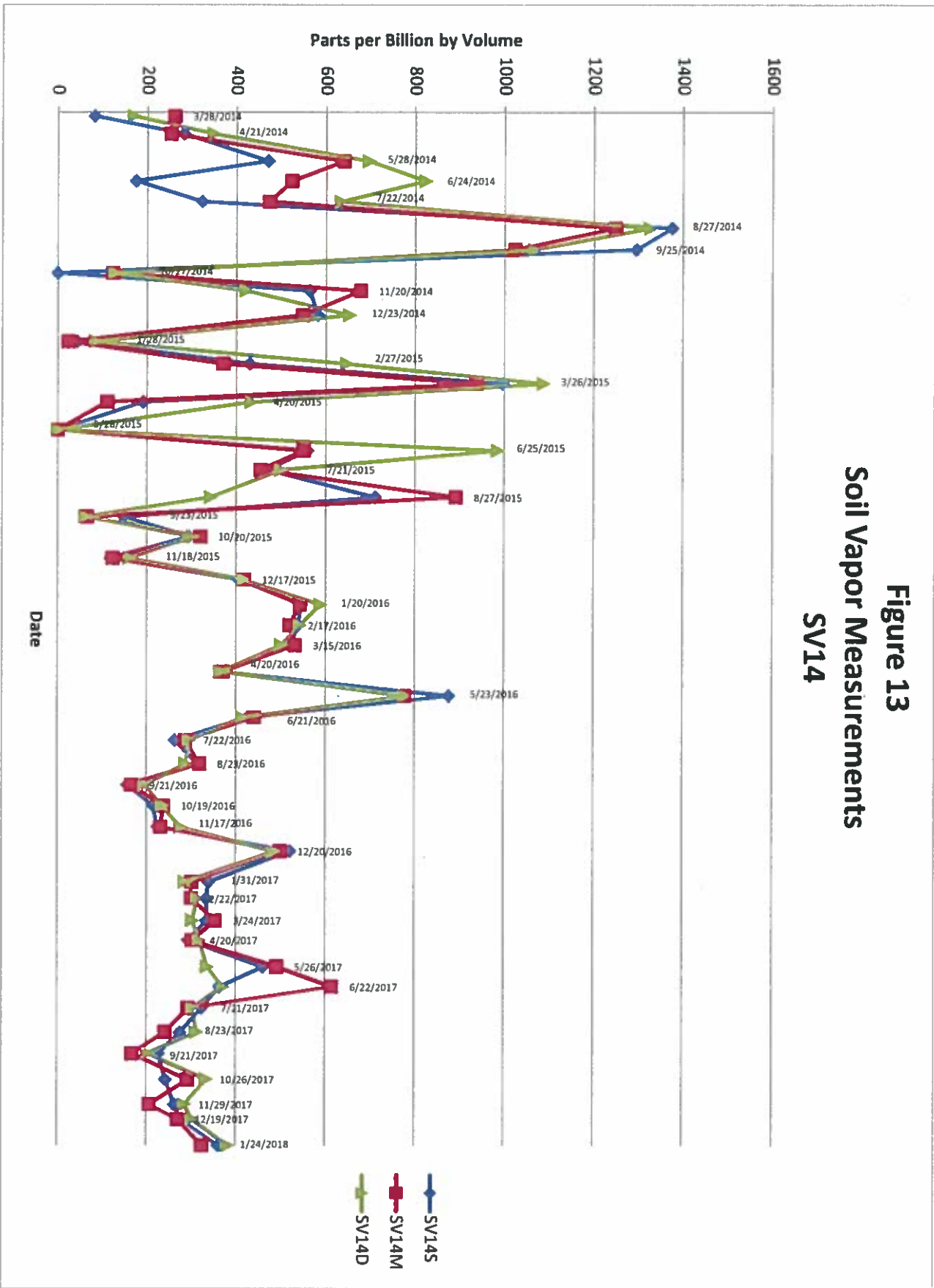


Figure 13
Soil Vapor Measurements
SV14

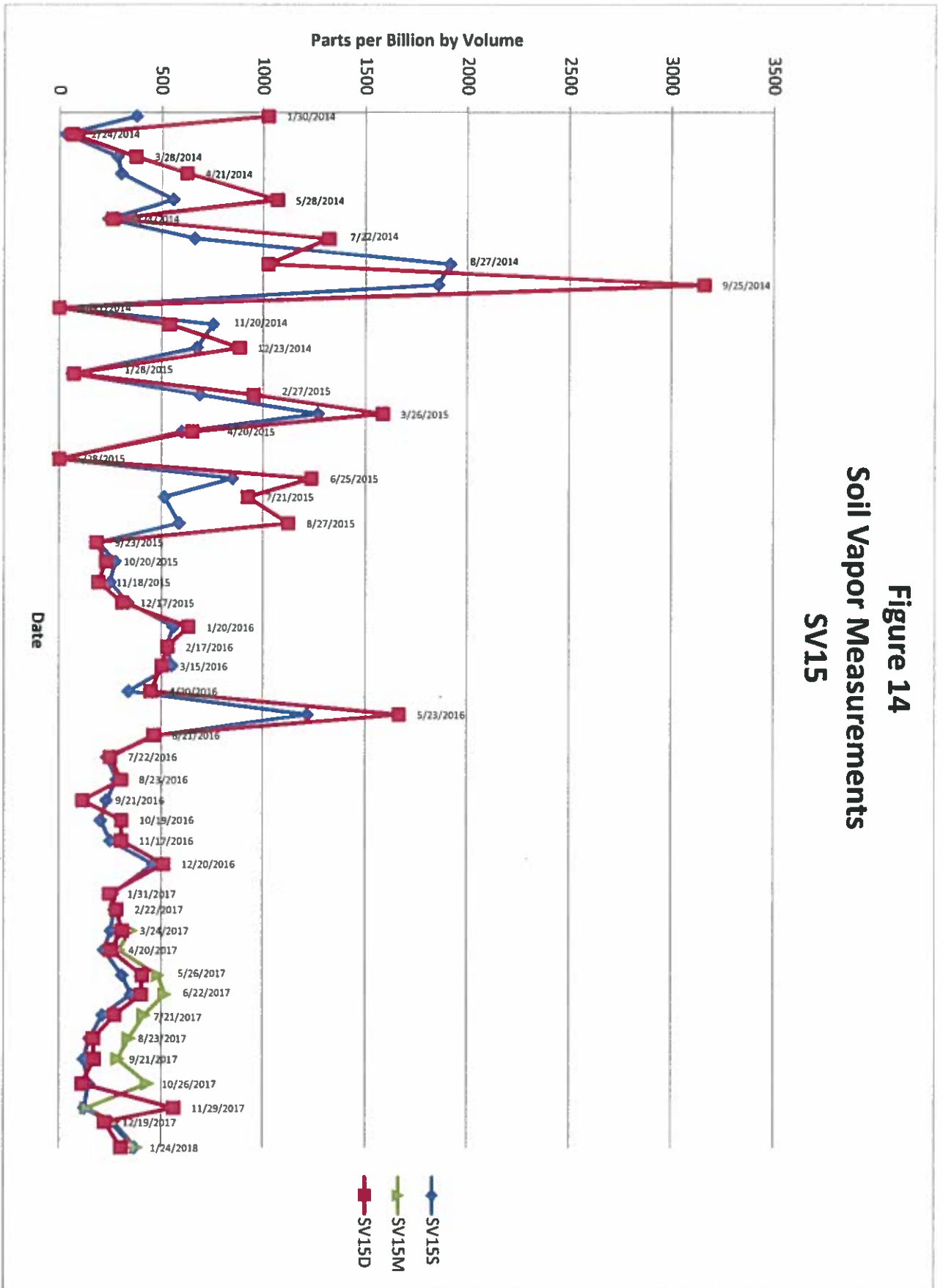


Figure 14
Soil Vapor Measurements
SV15

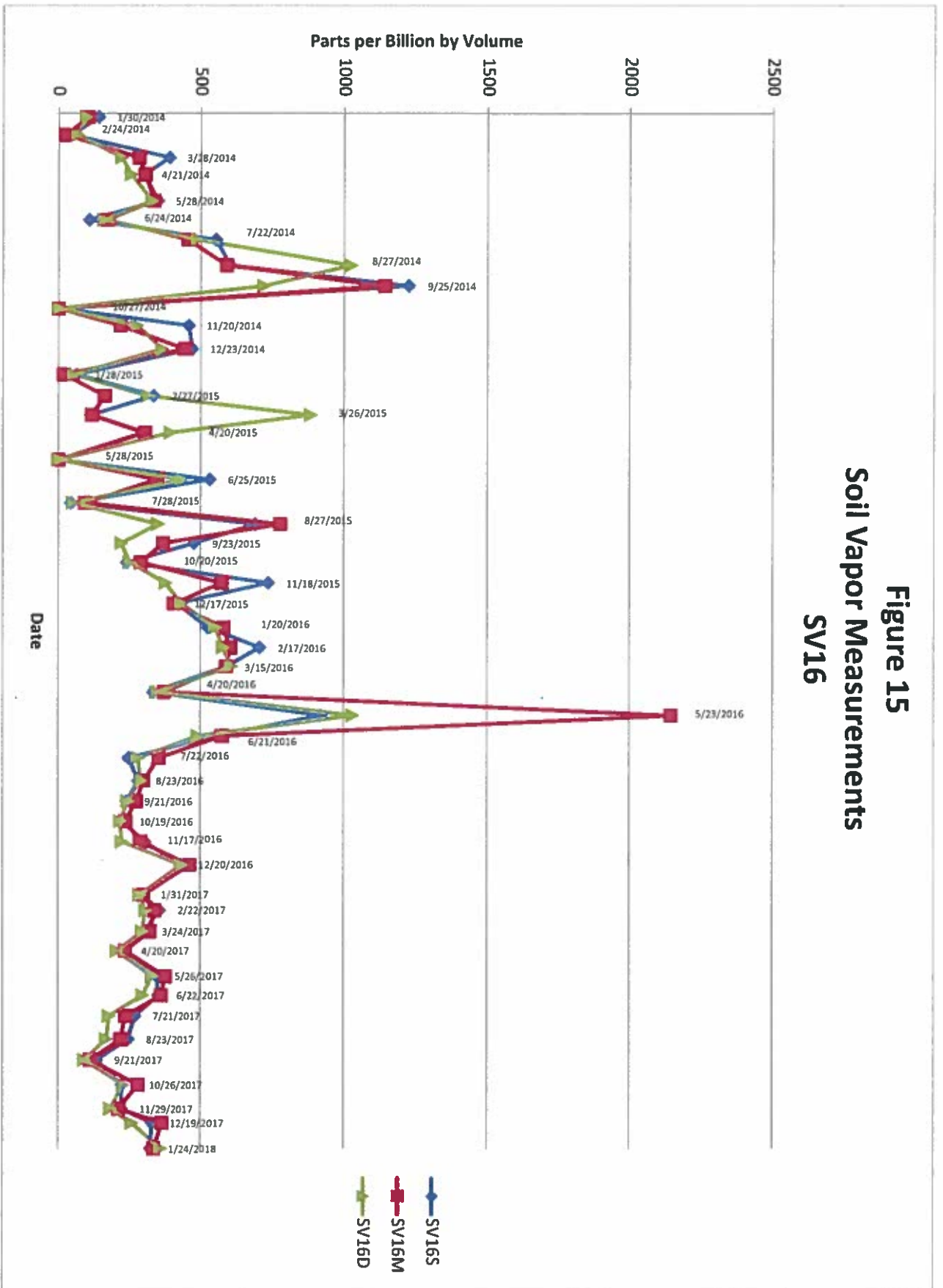


Figure 15
Soil Vapor Measurements
SV16

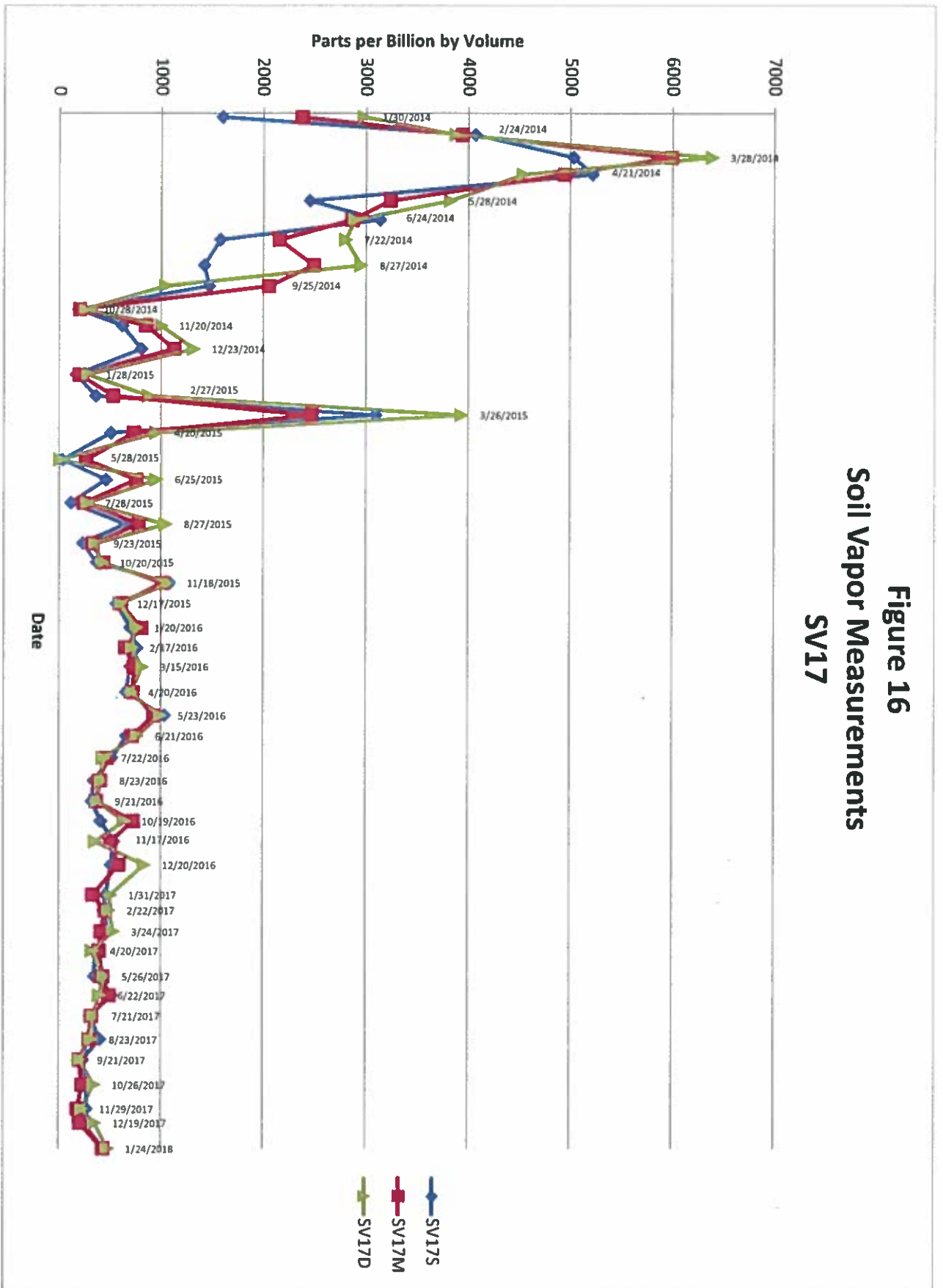


Figure 16
Soil Vapor Measurements
SV17

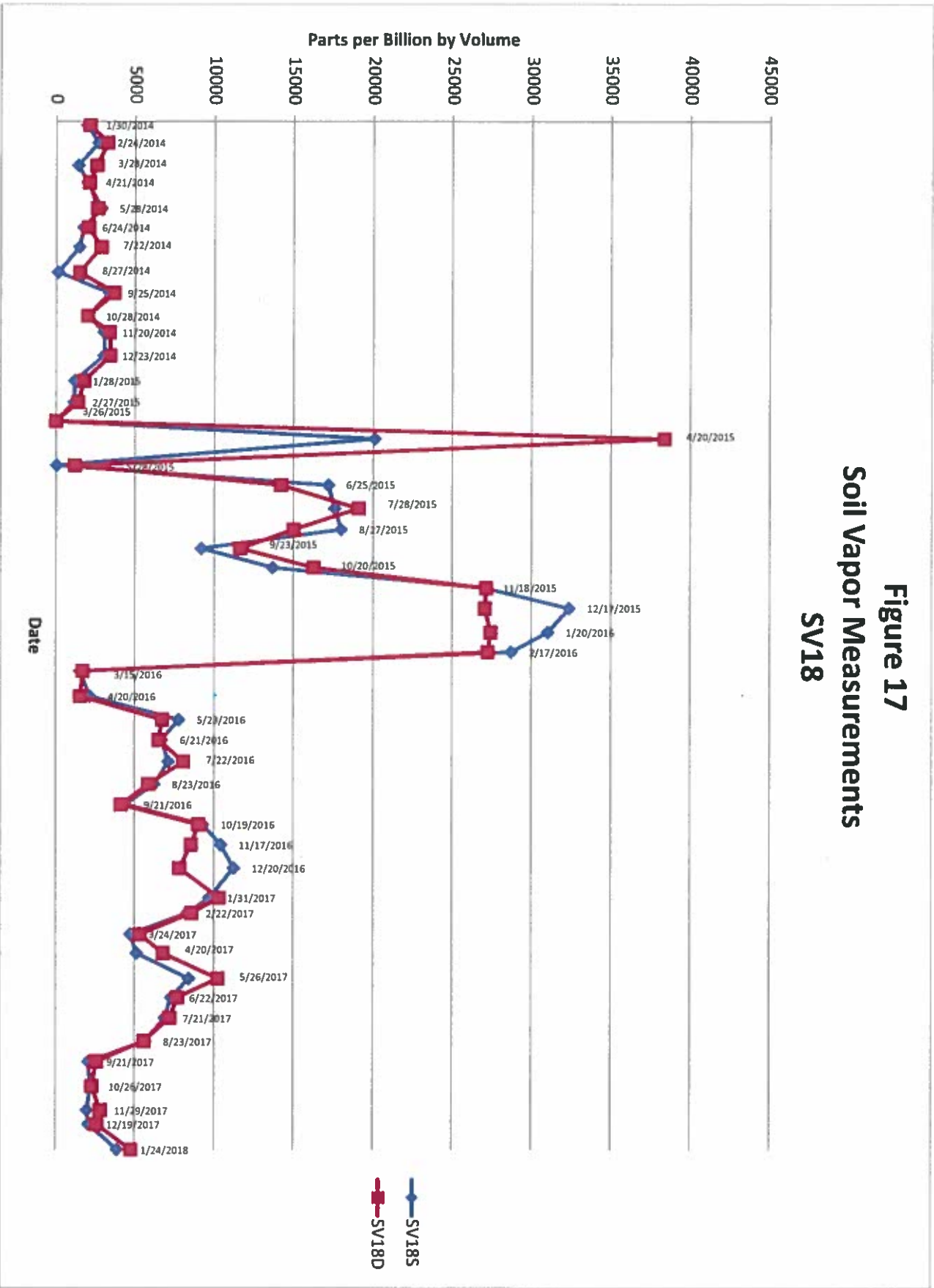


Figure 17
Soil Vapor Measurements
SV18

