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DEPARTMENT OF THE NAVY

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

5090

Ser N45/0460
February 25, 2016

CERTIFIED NO: 7015 0640 0002 4677 5147

Mr. Richard Takaba
Hawaii State Department of Health
Environmental Management Division
Solid and Hazardous Waste Branch
Underground Storage Tank Section
919 Ala Moana Boulevard, Room 212
Honolulu, HI 96814

Dear Mr. Takaba:

SUBJECT: RED HILL TANK COMPLEX
SOIL VAPOR SAMPLING RESULTS FOR FEBRUARY 2016
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 February 17, 2015.

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.

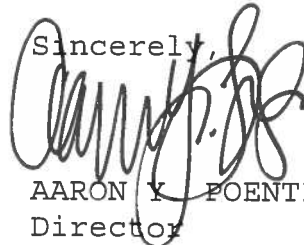
At Tank 5, the concentrations of VOCs detected in the front, middle, and outer edge soil vapor monitoring probes were 295,600 ppbv, 146,400 ppbv, and 211,900 ppbv, respectively. Tank 5 was emptied in January 2014 and has not contained fuel since that time. No fuel level discrepancies were observed in the other tanks, and VOC concentrations in all down-gradient soil vapor monitors were below 2,000 ppbv.

All other VOC concentrations measured in February were about 10 to 500 times below the action levels, with no consistent trending.

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Soil vapor VOC concentration trends will continue to be monitored. The next soil vapor sampling event is scheduled for March 2016, 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 Ms. Raelynn Kishaba at (808) 471-1171, extension 233.

Sincerely,


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

Enclosure: 1. Summary of Soil Vapor Sampling Results for Tanks
2 through 18 and 20 through February 2016
(18 pages)

Copy to: Mr. Bob Pallarino, U.S. EPA Region 9, Underground
Storage Tank Program Office
LCDR Andrew Lovgren, NAVSUP FLC Pearl Harbor
Mr. Rockne Krill, DLA Energy Pacific

Figure 1
Soil Vapor Measurements
SV02

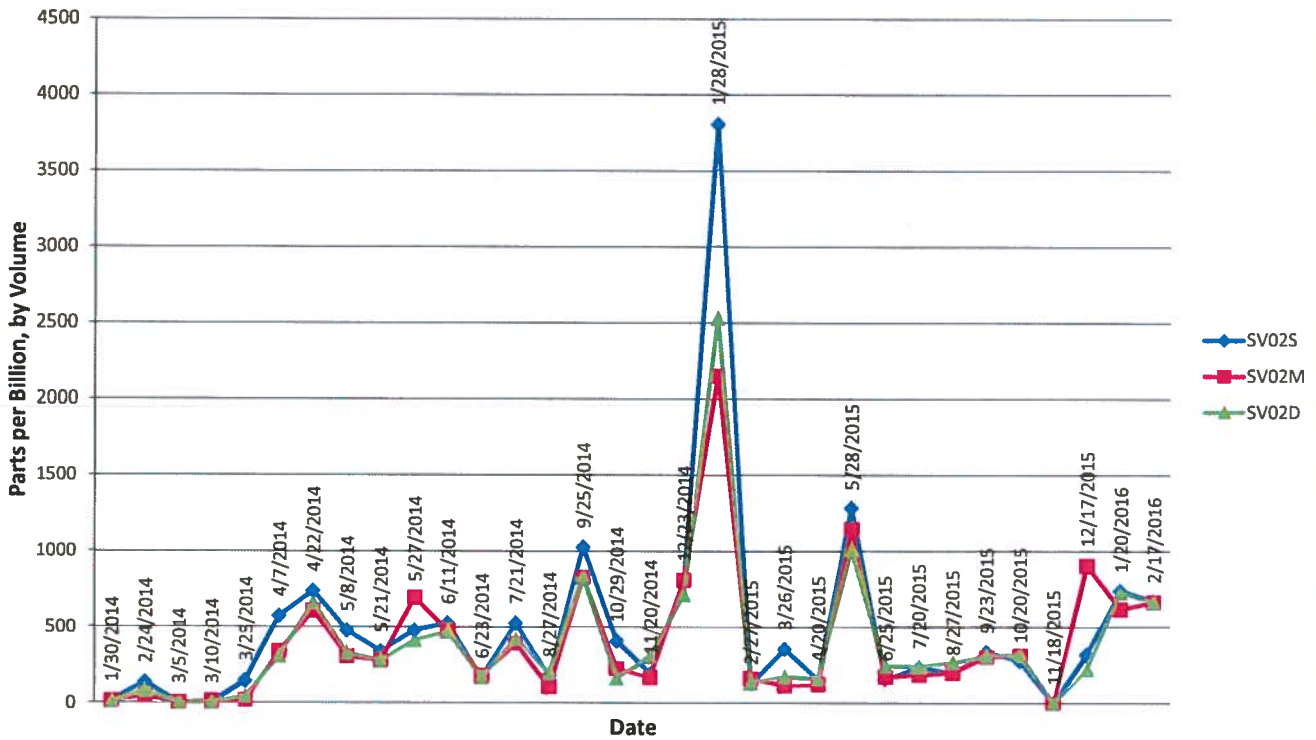


Table1
Soil Vapor Results for SV02 (ppbv)
Historical Soil Vapor Monitoring Results - January 2014 Through Present Event
Red Hill Bulk Fuel Storage Facility

| Date | SV02S | SV02M | SV02D |
|------------|-----------------|-----------------|-----------------|
| 1/30/2014 | 11 | 11 | 8 |
| 2/24/2014 | 135 | 51 | 82 |
| 3/5/2014 | 1 | 0 | 0 |
| 3/10/2014 | 1 | 11 | 1 |
| 3/25/2014 | 146 | 19 | 47 |
| 4/7/2014 | 575 | 342 | 308 |
| 4/22/2014 | 739 | 610 | 662 |
| 5/8/2014 | 481 | 308 | 333 |
| 5/21/2014 | 344 | 280 | 278 |
| 5/27/2014 | 481 | 697 | 413 |
| 6/11/2014 | 527 | 475 | 468 |
| 6/23/2014 | 170 | 183 | 169 |
| 7/21/2014 | 527 | 392 | 426 |
| 8/27/2014 | 180 | 105 | 199 |
| 9/25/2014 | 1028 | 827 | 830 |
| 10/29/2014 | 409 | 227 | 164 |
| 11/20/2014 | 194 | 167 | 309 |
| 12/23/2014 | 810 | 811 | 715 |
| 1/28/2015 | 3808 | 2150 | 2530 |
| 2/27/2015 | 129 | 160 | 133 |
| 3/26/2015 | 360 | 115 | 176 |
| 4/20/2015 | 157 | 123 | 164 |
| 5/28/2015 | 1285 | 1146 | 1011 |
| 6/25/2015 | 159 | 172 | 248 |
| 7/20/2015 | 238 | 187 | 243 |
| 8/27/2015 | 196 | 199 | 270 |
| 9/23/2015 | 341 | 305 | 311 |
| 10/20/2015 | 276 | 314 | 323 |
| 11/18/2015 | NC ₁ | NC ₁ | NC ₁ |
| 12/17/2015 | 320 | 904 | 226 |
| 1/20/2016 | 739 | 616 | 731 |
| 2/17/2016 | 671 | 664 | 662 |

ppbv: parts per billion by volume
 NC: Not collected due to maintenance work

ENCLOSURE (3)

Figure 2
Soil Vapor Measurements
SV03

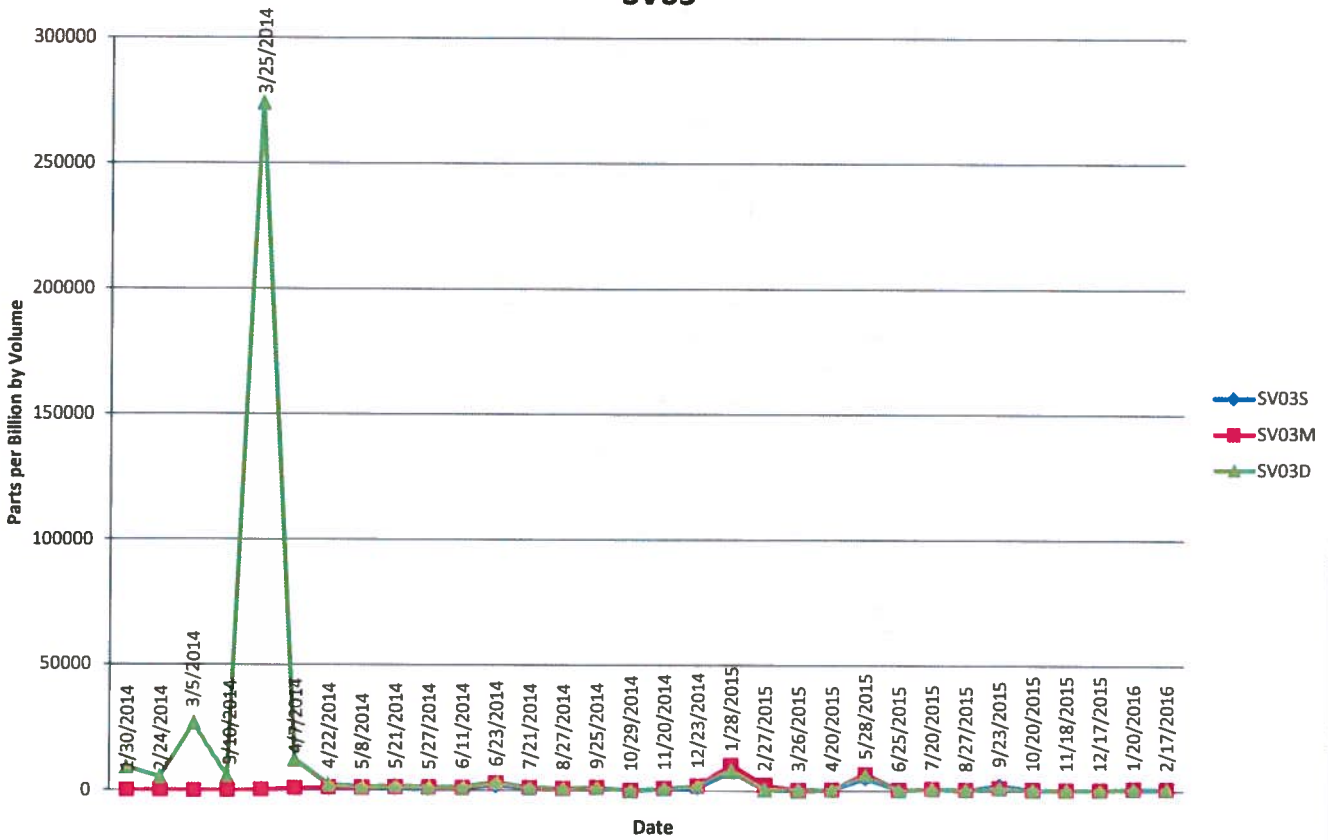


Table 2
Soil Vapor Results for SV03 (ppbv)
Historical Soil Vapor Monitoring Results - January 2014 Through Present Event
Red Hill Bulk Fuel Storage Facility

| Date | SV03S | SV03M | SV03D |
|-------------|--------------|--------------|--------------|
| 1/30/2014 | 41 | 46 | 9444 |
| 2/24/2014 | 70 | 162 | 5290 |
| 3/5/2014 | 20 | 17 | 26800 |
| 3/10/2014 | 8 | 27 | 5922 |
| 3/25/2014 | 87 | 385 | 274000 |
| 4/7/2014 | 676 | 1054 | 12300 |
| 4/22/2014 | 1056 | 1266 | 2442 |
| 5/8/2014 | 877 | 1096 | 1525 |
| 5/21/2014 | 1085 | 1378 | 1864 |
| 5/27/2014 | 915 | 1278 | 1536 |
| 6/11/2014 | 1148 | 1138 | 1424 |
| 6/23/2014 | 1970 | 2931 | 3530 |
| 7/21/2014 | 1021 | 1133 | 1215 |
| 8/27/2014 | 749 | 885 | 1050 |
| 9/25/2014 | 1298 | 1214 | 1187 |
| 10/29/2014 | 199 | 222 | 254 |
| 11/20/2014 | 731 | 919 | 856 |
| 12/23/2014 | 1403 | 1860 | 2004 |
| 1/28/2015 | 8037 | 10300 | 8075 |
| 2/27/2015 | 422 | 2231 | 435 |
| 3/26/2015 | 210 | 236 | 554 |
| 4/20/2015 | 363 | 422 | 436 |
| 5/28/2015 | 5289 | 6657 | 6075 |
| 6/25/2015 | 287 | 435 | 386 |
| 7/20/2015 | 849 | 880 | 880 |
| 8/27/2015 | 381 | 496 | 576 |
| 9/23/2015 | 2316 | 1334 | 1223 |
| 10/20/2015 | 488 | 552 | 619 |
| 11/18/2015 | 469 | 451 | 435 |
| 12/17/2015 | 418 | 434 | 506 |
| 1/20/2016 | 844 | 908 | 963 |
| 2/17/2016 | 761 | 801 | 888 |

ppbv: parts per billion by volume

Figure 3
Soil Vapor Measurements
SV04

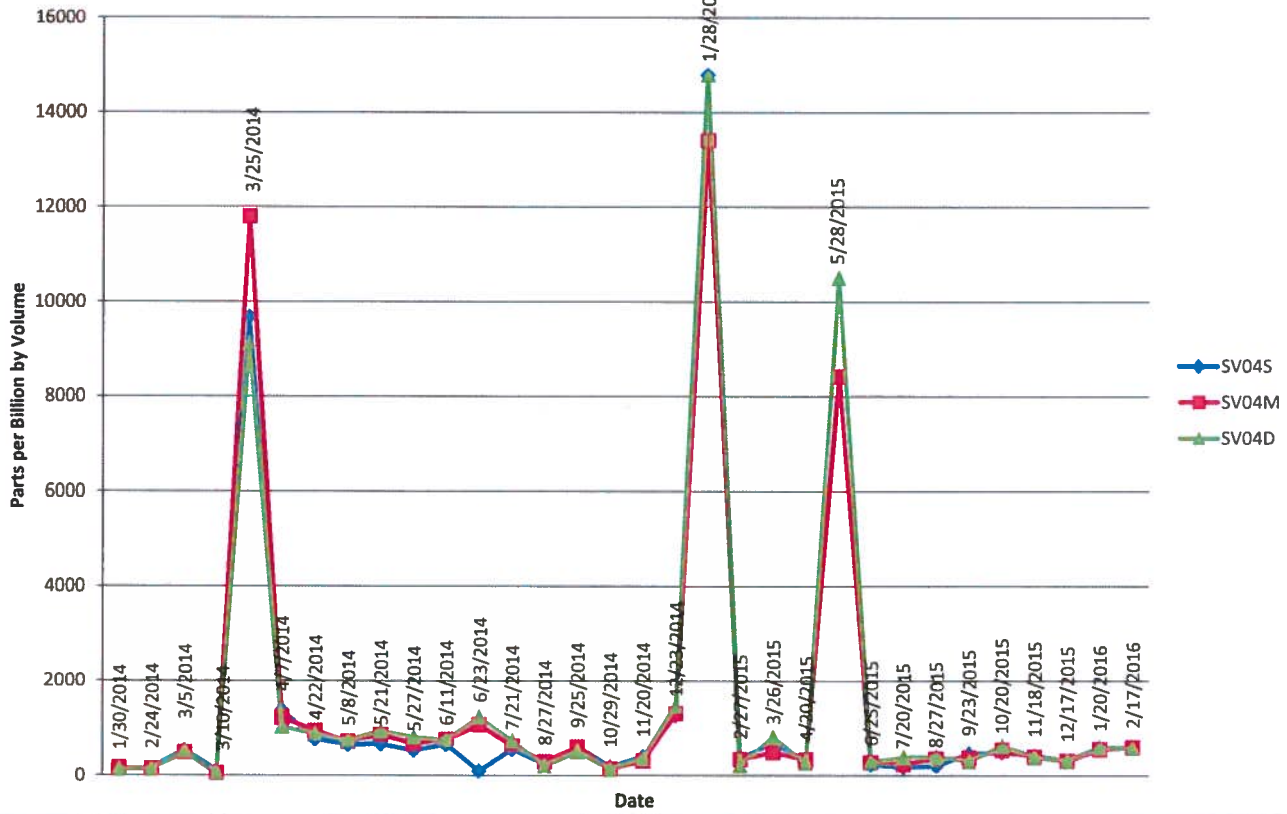


Table 3
Soil Vapor Results for SV04 (ppbv)
Historical Soil Vapor Monitoring Results - January 2014 Through Present Event
Red Hill Bulk Fuel Storage Facility

| Date | SV04S | SV04M | SV04D |
|------------|-------|-------|-------|
| 1/30/2014 | 132 | 165 | 135 |
| 2/24/2014 | 163 | 149 | 138 |
| 3/5/2014 | 536 | 493 | 520 |
| 3/10/2014 | 116 | 51 | 72 |
| 3/25/2014 | 9682 | 11800 | 9134 |
| 4/7/2014 | 1382 | 1217 | 1035 |
| 4/22/2014 | 769 | 948 | 870 |
| 5/8/2014 | 658 | 721 | 748 |
| 5/21/2014 | 666 | 861 | 944 |
| 5/27/2014 | 540 | 670 | 817 |
| 6/11/2014 | 657 | 762 | 754 |
| 6/23/2014 | 98 | 1075 | 1233 |
| 7/21/2014 | 557 | 625 | 735 |
| 8/27/2014 | 245 | 296 | 210 |
| 9/25/2014 | 614 | 612 | 512 |
| 10/29/2014 | 194 | 136 | 139 |
| 11/20/2014 | 409 | 315 | 373 |
| 12/23/2014 | 1265 | 1311 | 1483 |
| 1/28/2015 | 14800 | 13400 | 14800 |
| 2/27/2015 | 370 | 343 | 217 |
| 3/26/2015 | 682 | 488 | 814 |
| 4/20/2015 | 339 | 336 | 268 |
| 5/28/2015 | 8401 | 8427 | 10500 |
| 6/25/2015 | 233 | 276 | 295 |
| 7/20/2015 | 179 | 241 | 385 |
| 8/27/2015 | 209 | 357 | 406 |
| 9/23/2015 | 460 | 376 | 304 |
| 10/20/2015 | 489 | 541 | 627 |
| 11/18/2015 | 425 | 395 | 405 |
| 12/17/2015 | 323 | 310 | 320 |
| 1/20/2016 | 543 | 557 | 602 |
| 2/17/2016 | 617 | 594 | 585 |

ppbv: parts per billion by volume

Figure 4
Soil Vapor Measurements
SV05

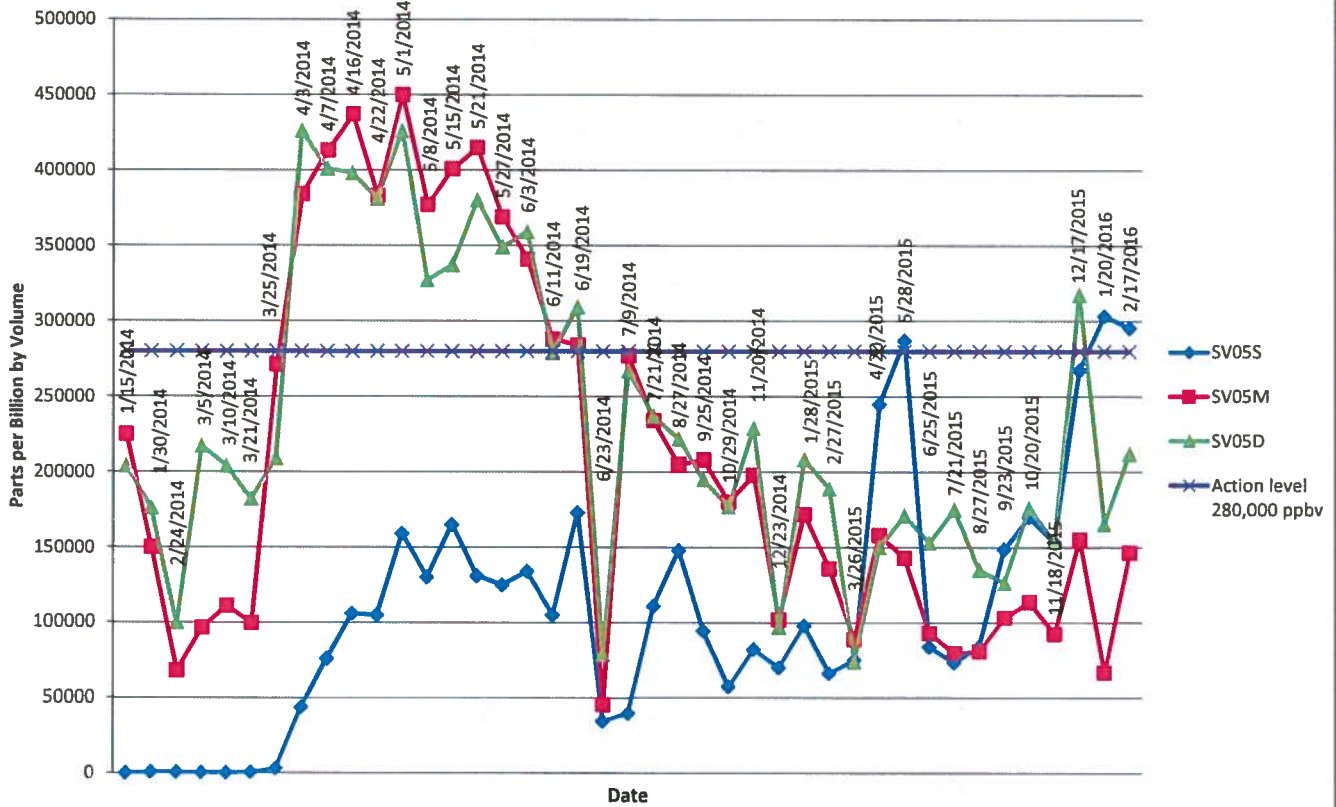


Table 4
Soil Vapor Results for SV05 (ppbv)
Historical Soil Vapor Monitoring Results - January 2014 Through Present Event
Red Hill Bulk Fuel Storage Facility

| Date | SV05S | SV05M | SV05D |
|------------|--------|--------|--------|
| 1/15/2014 | 96 | 225000 | 204000 |
| 1/30/2014 | 818 | 150000 | 176000 |
| 2/24/2014 | 597 | 68200 | 100000 |
| 3/5/2014 | 492 | 96600 | 217000 |
| 3/10/2014 | 308 | 111000 | 204000 |
| 3/21/2014 | 593 | 99600 | 182000 |
| 3/25/2014 | 3144 | 271000 | 209000 |
| 4/3/2014 | 43700 | 384000 | 426000 |
| 4/7/2014 | 76100 | 413000 | 401000 |
| 4/16/2014 | 106000 | 437000 | 398000 |
| 4/22/2014 | 105000 | 383000 | 381000 |
| 5/1/2014 | 159000 | 450000 | 426000 |
| 5/8/2014 | 130000 | 377000 | 327000 |
| 5/15/2014 | 165000 | 401000 | 337000 |
| 5/21/2014 | 131000 | 415000 | 380000 |
| 5/27/2014 | 125000 | 369000 | 349000 |
| 6/3/2014 | 134000 | 341000 | 359000 |
| 6/11/2014 | 105000 | 288000 | 279000 |
| 6/19/2014 | 173000 | 284000 | 309000 |
| 6/23/2014 | 34500 | 45600 | 78700 |
| 7/9/2014 | 39700 | 277000 | 267000 |
| 7/21/2014 | 111000 | 234000 | 237000 |
| 8/27/2014 | 148000 | 205000 | 222000 |
| 9/25/2014 | 94500 | 208000 | 195000 |
| 10/29/2014 | 57400 | 180000 | 177000 |
| 11/20/2014 | 82200 | 198000 | 229000 |
| 12/23/2014 | 70100 | 102000 | 97000 |
| 1/28/2015 | 97900 | 172000 | 208000 |
| 2/27/2015 | 66300 | 136000 | 189000 |
| 3/26/2015 | 75200 | 88900 | 73800 |
| 4/20/2015 | 245000 | 158000 | 150000 |
| 5/28/2015 | 287000 | 143000 | 171000 |
| 6/25/2015 | 83800 | 93000 | 153000 |
| 7/21/2015 | 73400 | 79800 | 175000 |
| 8/27/2015 | 84000 | 81000 | 135000 |
| 9/23/2015 | 148667 | 103123 | 126433 |
| 10/20/2015 | 170300 | 113700 | 176267 |
| 11/18/2015 | 153333 | 92350 | 153867 |
| 12/17/2015 | 267467 | 155000 | 317400 |
| 1/20/2016 | 303367 | 66763 | 165267 |
| 2/17/2016 | 295600 | 146400 | 211900 |

ppbv: parts per billion by volume
Action Level (ppbv) = 280,000

Figure 5
Soil Vapor Measurements
SV06

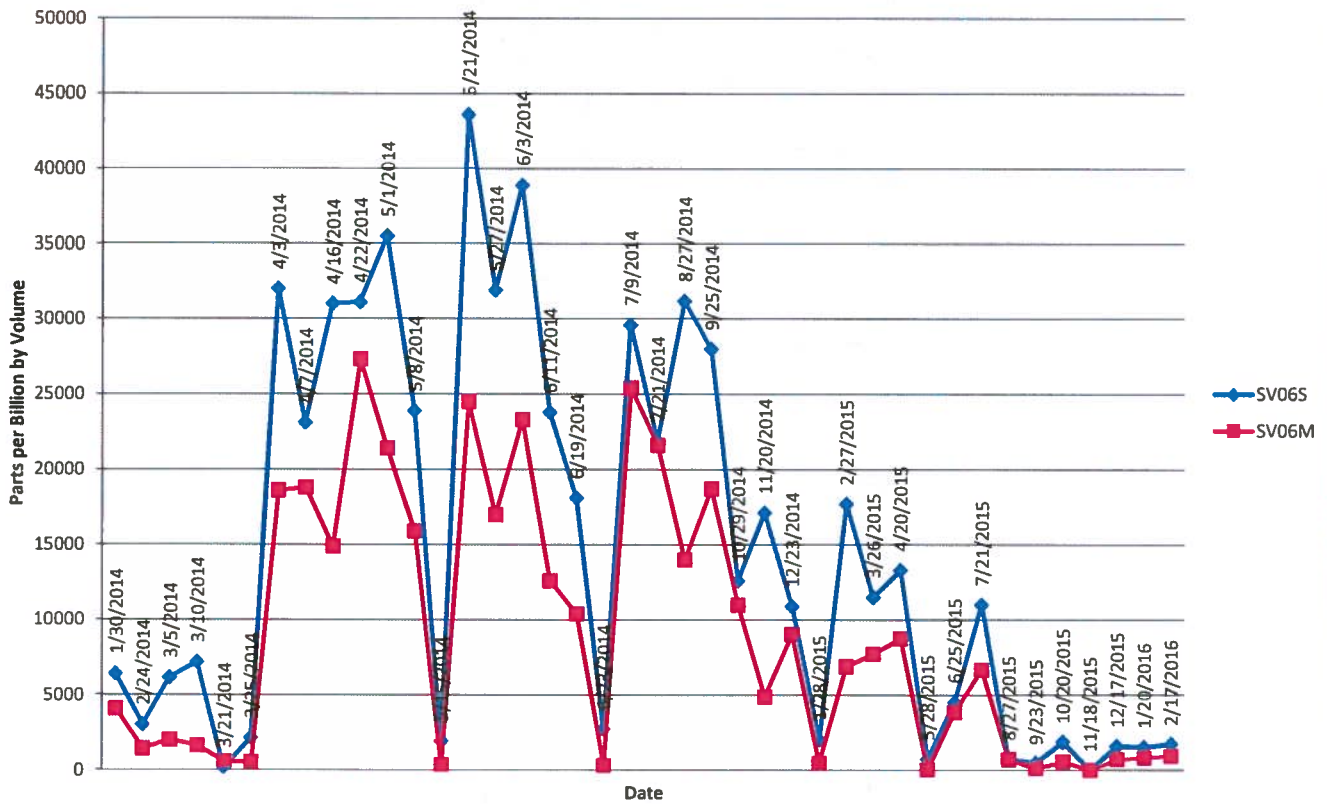


Table 5
Soil Vapor Results for SV06 (ppbv)
Historical Soil Vapor Monitoring Results - January 2014 Through Present Event
Red Hill Bulk Fuel Storage Facility

| Date | SV06S | SV06M |
|------------|-----------------|-----------------|
| 1/30/2014 | 6424 | 4097 |
| 2/24/2014 | 3046 | 1457 |
| 3/5/2014 | 6165 | 2033 |
| 3/10/2014 | 7204 | 1644 |
| 3/21/2014 | 195 | 605 |
| 3/25/2014 | 2169 | 551 |
| 4/3/2014 | 32000 | 18600 |
| 4/7/2014 | 23100 | 18800 |
| 4/16/2014 | 31000 | 14900 |
| 4/22/2014 | 31100 | 27300 |
| 5/1/2014 | 35500 | 21400 |
| 5/8/2014 | 23900 | 15900 |
| 5/15/2014 | 1948 | 365 |
| 5/21/2014 | 43600 | 24500 |
| 5/27/2014 | 31900 | 17000 |
| 6/3/2014 | 38900 | 23300 |
| 6/11/2014 | 23800 | 12600 |
| 6/19/2014 | 18100 | 10400 |
| 6/23/2014 | 2747 | 314 |
| 7/9/2014 | 29600 | 25400 |
| 7/21/2014 | 21900 | 21600 |
| 8/27/2014 | 31200 | 14000 |
| 9/25/2014 | 28000 | 18700 |
| 10/29/2014 | 12600 | 11000 |
| 11/20/2014 | 17100 | 4886 |
| 12/23/2014 | 10900 | 9042 |
| 1/28/2015 | 2051 | 482 |
| 2/27/2015 | 17700 | 6909 |
| 3/26/2015 | 11500 | 7734 |
| 4/20/2015 | 13300 | 8747 |
| 5/28/2015 | 763 | 33 |
| 6/25/2015 | 4536 | 3873 |
| 7/21/2015 | 11000 | 6679 |
| 8/27/2015 | 718 | 731 |
| 9/23/2015 | 486 | 130 |
| 10/20/2015 | 1881 | 586 |
| 11/18/2015 | NC ₁ | NC ₁ |
| 12/17/2015 | 1620 | 739 |
| 1/20/2016 | 1548 | 846 |
| 2/17/2016 | 1763 | 966 |

ppbv: parts per billion by volume
 NC1: Not collected due to maintenance work

Figure 6
Soil Vapor Measurements
SV07

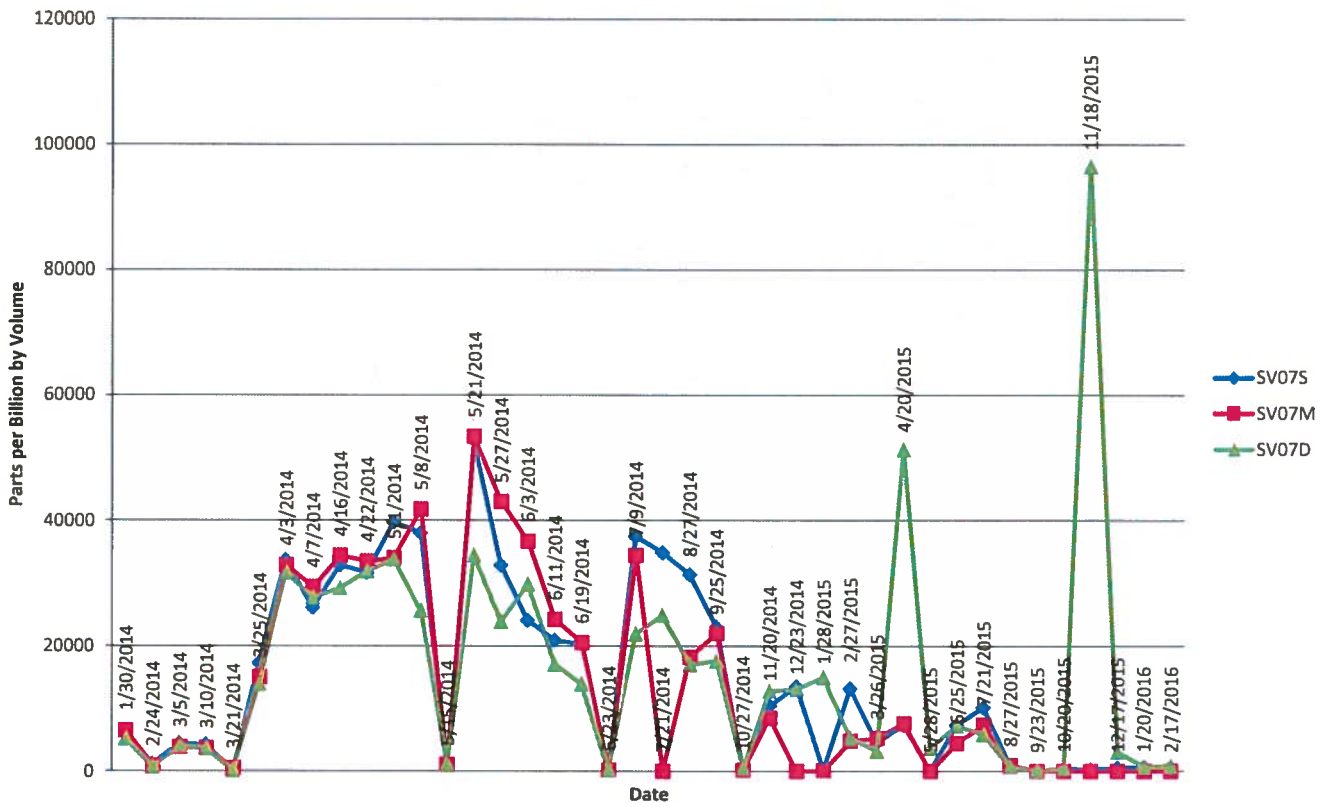


Table 6
Soil Vapor Results for SV07 (ppbv)
Historical Soil Vapor Monitoring Results - January 2014 Through Present Event
Red Hill Bulk Fuel Storage Facility

| Date | SV07S | SV07M | SV07D |
|------------|-------|-----------------|-------|
| 1/30/2014 | 6350 | 6539 | 5180 |
| 2/24/2014 | 1187 | 849 | 690 |
| 3/5/2014 | 4406 | 3890 | 4119 |
| 3/10/2014 | 4287 | 3687 | 3654 |
| 3/21/2014 | 102 | 512 | 170 |
| 3/25/2014 | 17300 | 15000 | 13900 |
| 4/3/2014 | 33700 | 32900 | 31700 |
| 4/7/2014 | 26100 | 29400 | 27700 |
| 4/16/2014 | 32900 | 34400 | 29200 |
| 4/22/2014 | 31700 | 33500 | 31900 |
| 5/1/2014 | 39700 | 34000 | 33800 |
| 5/8/2014 | 38000 | 41800 | 25600 |
| 5/15/2014 | 1209 | 1063 | 1188 |
| 5/21/2014 | 52800 | 53400 | 34500 |
| 5/27/2014 | 32900 | 43000 | 23900 |
| 6/3/2014 | 24100 | 36700 | 29800 |
| 6/11/2014 | 20900 | 24200 | 17100 |
| 6/19/2014 | 20300 | 20500 | 13900 |
| 6/23/2014 | 495 | 193 | 198 |
| 7/9/2014 | 37500 | 34400 | 21900 |
| 7/21/2014 | 34900 | NC ₂ | 24900 |
| 8/27/2014 | 31400 | 18200 | 17000 |
| 9/25/2014 | 23000 | 22000 | 17600 |
| 10/27/2014 | 310 | 209 | 540 |
| 11/20/2014 | 10500 | 8478 | 12800 |
| 12/23/2014 | 13500 | NC ₂ | 13100 |
| 1/28/2015 | 208 | 108 | 15000 |
| 2/27/2015 | 13200 | 4855 | 5347 |
| 3/26/2015 | 4567 | 5280 | 3260 |
| 4/20/2015 | 7434 | 7660 | 51300 |
| 5/28/2015 | 8 | 0 | 3740 |
| 6/25/2015 | 7341 | 4485 | 7246 |
| 7/21/2015 | 10200 | 7399 | 5863 |
| 8/27/2015 | 1025 | 957 | 726 |
| 9/23/2015 | 0 | 0 | 113 |
| 10/20/2015 | 474 | NC | 569 |
| 11/18/2015 | 328 | NC | 96503 |
| 12/17/2015 | 596 | NC | 3086 |
| 1/20/2016 | 719 | NC | 714 |
| 2/17/2016 | 699 | NC | 832 |

ppbv: parts per billion by volume
NC: Not collected due to an obstruction in the vapor line

Figure 7
Soil Vapor Measurements
SV08

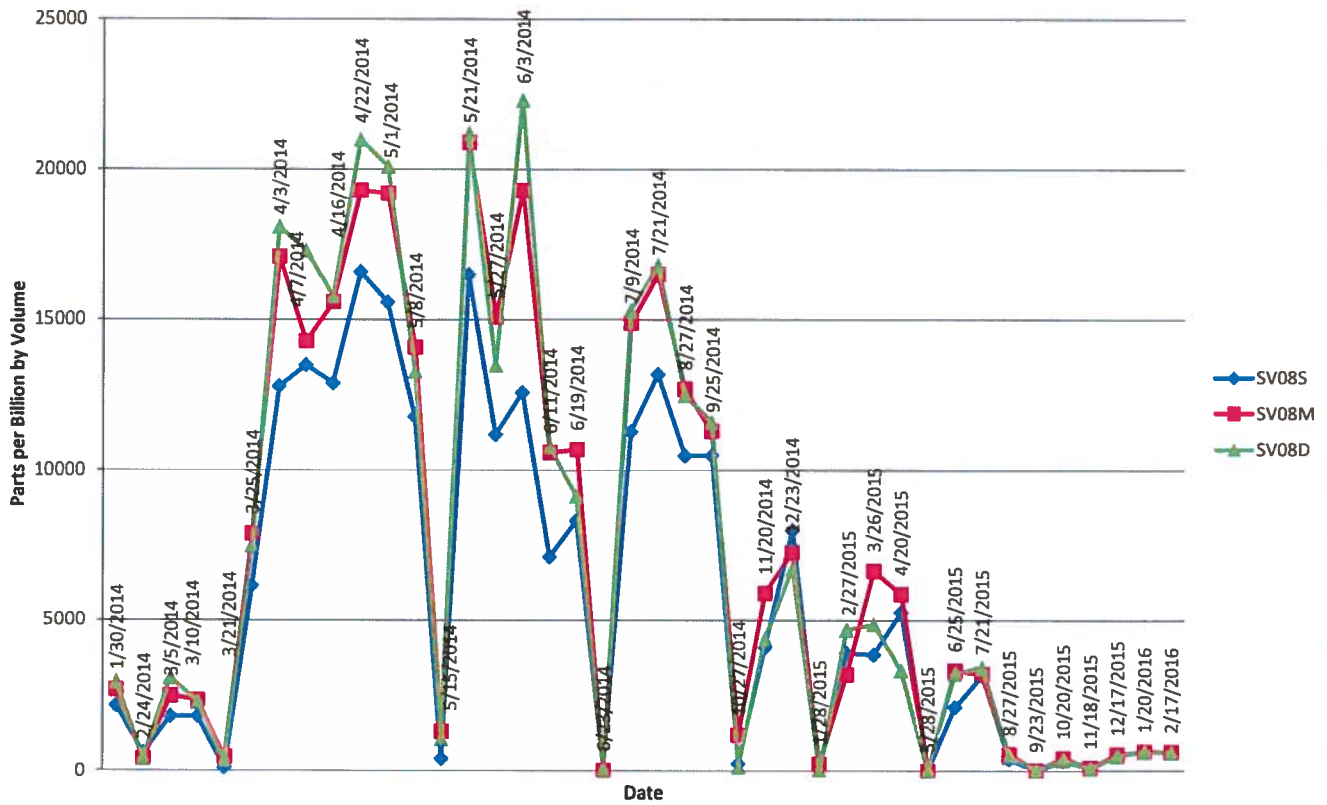


Table 7
Soil Vapor Results for SV08 (ppbv)
Historical Soil Vapor Monitoring Results - January 2014 Through Present Event
Red Hill Bulk Fuel Storage Facility

| Date | SV08S | SV08M | SV08D |
|------------|-------|-------|-------|
| 1/30/2014 | 2170 | 2698 | 2952 |
| 2/24/2014 | 601 | 423 | 428 |
| 3/5/2014 | 1814 | 2492 | 3097 |
| 3/10/2014 | 1819 | 2348 | 2274 |
| 3/21/2014 | 102 | 469 | 354 |
| 3/25/2014 | 6152 | 7880 | 7474 |
| 4/3/2014 | 12800 | 17100 | 18100 |
| 4/7/2014 | 13500 | 14300 | 17300 |
| 4/16/2014 | 12900 | 15600 | 15800 |
| 4/22/2014 | 16600 | 19300 | 21000 |
| 5/1/2014 | 15600 | 19200 | 20100 |
| 5/8/2014 | 11800 | 14100 | 13300 |
| 5/15/2014 | 419 | 1315 | 1073 |
| 5/21/2014 | 16500 | 20900 | 21200 |
| 5/27/2014 | 11200 | 15100 | 13500 |
| 6/3/2014 | 12600 | 19300 | 22300 |
| 6/11/2014 | 7109 | 10600 | 10800 |
| 6/19/2014 | 8307 | 10700 | 9120 |
| 6/23/2014 | 133 | 22 | 54 |
| 7/9/2014 | 11300 | 14900 | 15300 |
| 7/21/2014 | 13200 | 16500 | 16800 |
| 8/27/2014 | 10500 | 12700 | 12500 |
| 9/25/2014 | 10500 | 11300 | 11600 |
| 10/27/2014 | 248 | 1196 | 129 |
| 11/20/2014 | 4113 | 5894 | 4398 |
| 12/23/2014 | 7996 | 7265 | 6710 |
| 1/28/2015 | 74 | 237 | 50 |
| 2/27/2015 | 3916 | 3201 | 4689 |
| 3/26/2015 | 3867 | 6634 | 4870 |
| 4/20/2015 | 5268 | 5860 | 3343 |
| 5/28/2015 | 0 | 0 | 0 |
| 6/25/2015 | 2124 | 3323 | 3232 |
| 7/21/2015 | 3163 | 3223 | 3430 |
| 8/27/2015 | 401 | 549 | 475 |
| 9/23/2015 | 0 | 0 | 0 |
| 10/20/2015 | 339 | 412 | 373 |
| 11/18/2015 | 87 | 93 | 69 |
| 12/17/2015 | 486 | 538 | 494 |
| 1/20/2016 | 642 | 644 | 635 |
| 2/17/2016 | 611 | 633 | 608 |

ppbv: parts per billion by volume

Figure 8
Soil Vapor Measurements
SV09

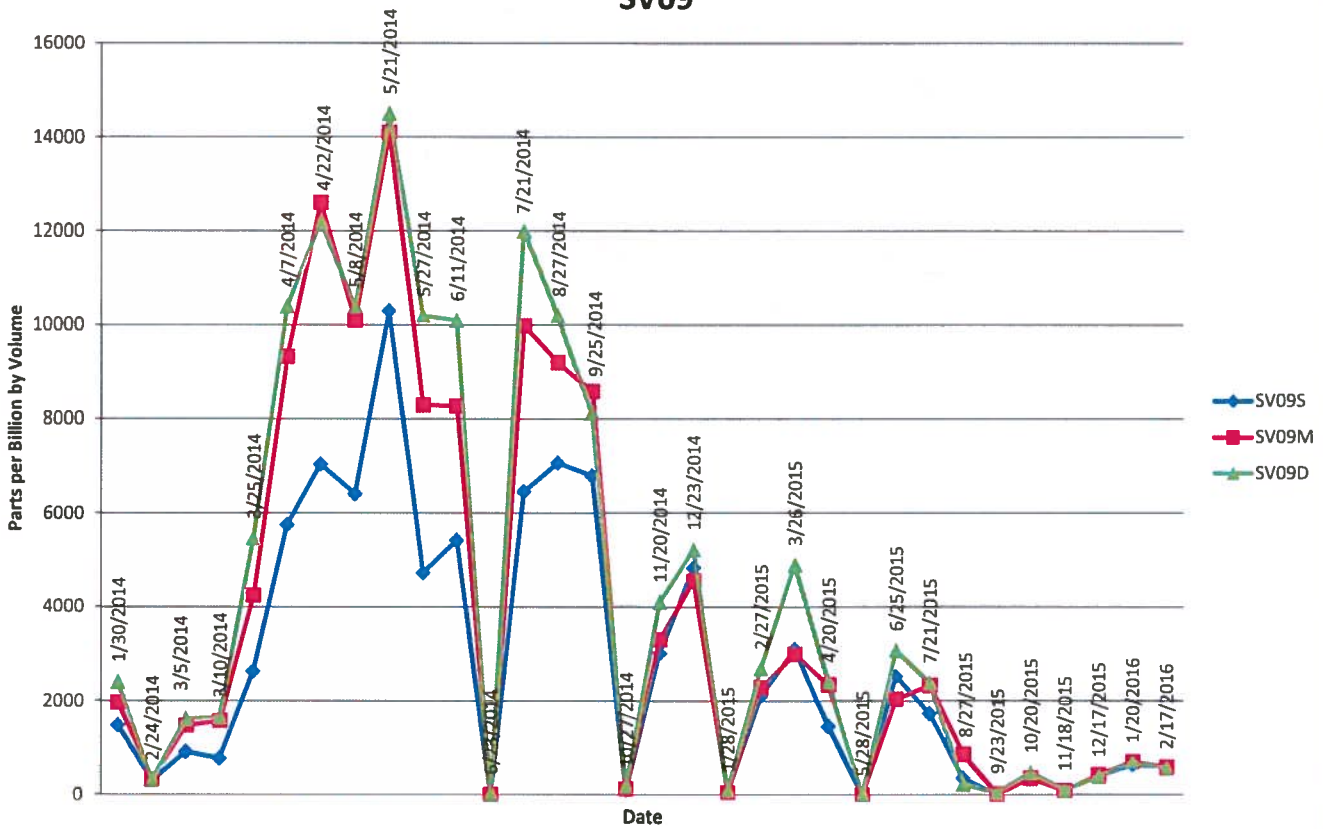


Table 8
Soil Vapor Results for SV09 (ppbv)
Historical Soil Vapor Monitoring Results - January 2014 Through Present Event
Red Hill Bulk Fuel Storage Facility

| Date | SV09S | SV09M | SV09D |
|------------|-------|-------|-------|
| 1/30/2014 | 1488 | 1963 | 2408 |
| 2/24/2014 | 307 | 330 | 319 |
| 3/5/2014 | 915 | 1474 | 1614 |
| 3/10/2014 | 777 | 1569 | 1656 |
| 3/25/2014 | 2629 | 4246 | 5465 |
| 4/7/2014 | 5750 | 9329 | 10400 |
| 4/22/2014 | 7038 | 12600 | 12200 |
| 5/8/2014 | 6407 | 10100 | 10400 |
| 5/21/2014 | 10300 | 14100 | 14500 |
| 5/27/2014 | 4725 | 8296 | 10200 |
| 6/11/2014 | 5415 | 8278 | 10100 |
| 6/23/2014 | 10 | 7 | 22 |
| 7/21/2014 | 6459 | 9981 | 12000 |
| 8/27/2014 | 7069 | 9198 | 10200 |
| 9/25/2014 | 6795 | 8583 | 8125 |
| 10/27/2014 | 95 | 127 | 185 |
| 11/20/2014 | 3016 | 3303 | 4102 |
| 12/23/2014 | 4832 | 4555 | 5213 |
| 1/28/2015 | 41 | 43 | 87 |
| 2/27/2015 | 2106 | 2286 | 2689 |
| 3/26/2015 | 3101 | 2997 | 4885 |
| 4/20/2015 | 1456 | 2342 | 2410 |
| 5/28/2015 | 0 | 0 | 2 |
| 6/25/2015 | 2527 | 2039 | 3074 |
| 7/21/2015 | 1734 | 2331 | 2383 |
| 8/27/2015 | 360 | 859 | 224 |
| 9/23/2015 | 5 | 11 | 44 |
| 10/20/2015 | 388 | 357 | 476 |
| 11/18/2015 | 103 | 89 | 97 |
| 12/17/2015 | 399 | 420 | 390 |
| 1/20/2016 | 647 | 703 | 693 |
| 2/17/2016 | 590 | 591 | 567 |

ppbv: parts per billion by volume

Figure 9
Soil Vapor Measurements
SV10

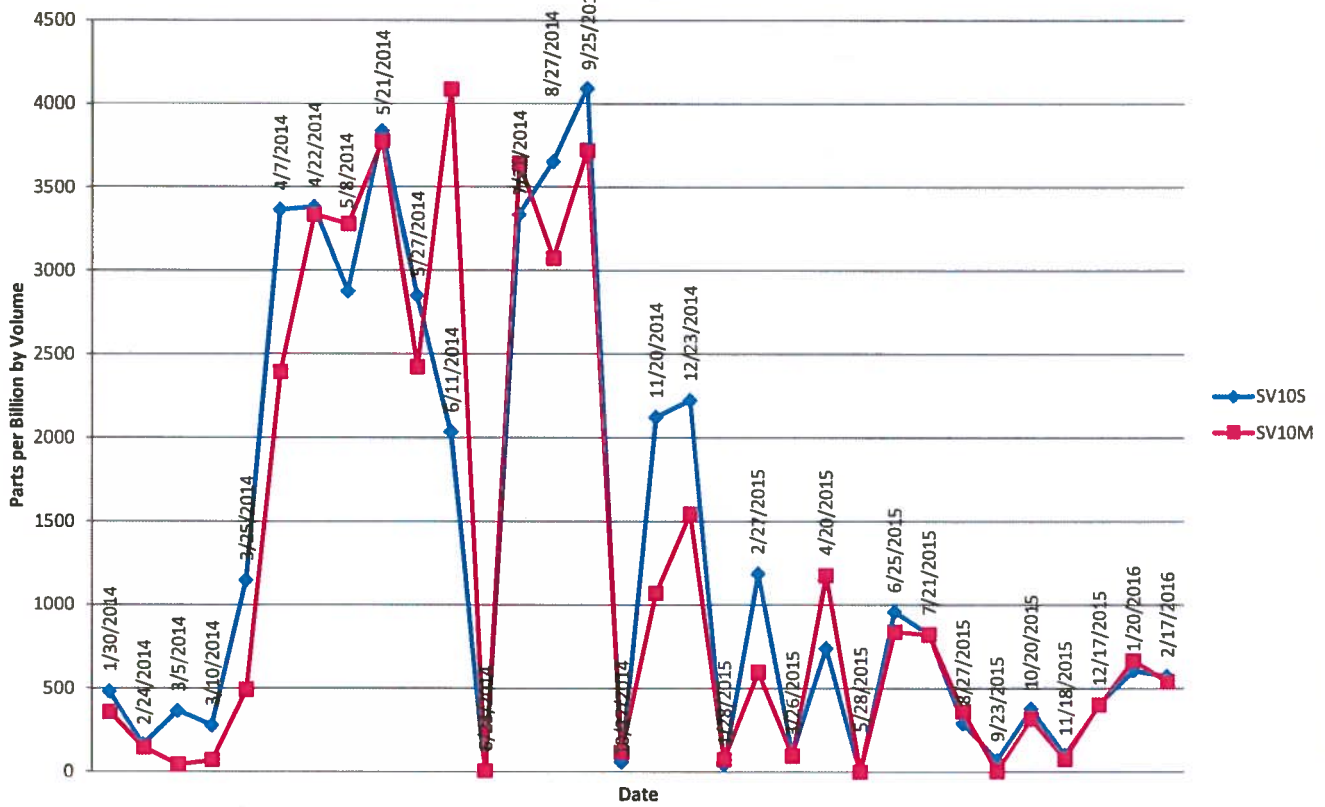


Table 9
Soil Vapor Results for SV10 (ppbv)
Historical Soil Vapor Monitoring Results - January 2014 Through Present Event
Red Hill Bulk Fuel Storage Facility

| Date | SV10S | SV10M |
|------------|-------|-------|
| 1/30/2014 | 483 | 358 |
| 2/24/2014 | 165 | 147 |
| 3/5/2014 | 365 | 45 |
| 3/10/2014 | 280 | 73 |
| 3/25/2014 | 1148 | 493 |
| 4/7/2014 | 3364 | 2393 |
| 4/22/2014 | 3381 | 3335 |
| 5/8/2014 | 2876 | 3278 |
| 5/21/2014 | 3836 | 3776 |
| 5/27/2014 | 2850 | 2424 |
| 6/11/2014 | 2037 | 4089 |
| 6/23/2014 | 10 | 7 |
| 7/21/2014 | 3334 | 3640 |
| 8/27/2014 | 3650 | 3073 |
| 9/25/2014 | 4093 | 3720 |
| 10/27/2014 | 62 | 117 |
| 11/20/2014 | 2124 | 1069 |
| 12/23/2014 | 2225 | 1543 |
| 1/28/2015 | 46 | 74 |
| 2/27/2015 | 1187 | 598 |
| 3/26/2015 | 104 | 97 |
| 4/20/2015 | 741 | 1175 |
| 5/28/2015 | 0 | 0 |
| 6/25/2015 | 959 | 839 |
| 7/21/2015 | 823 | 822 |
| 8/27/2015 | 292 | 363 |
| 9/23/2015 | 71 | 3 |
| 10/20/2015 | 380 | 318 |
| 11/18/2015 | 103 | 77 |
| 12/17/2015 | 403 | 403 |
| 1/20/2016 | 608 | 667 |
| 2/17/2016 | 574 | 541 |

ppbv: parts per billion by volume

Figure 10
Soil Vapor Measurements
SV11

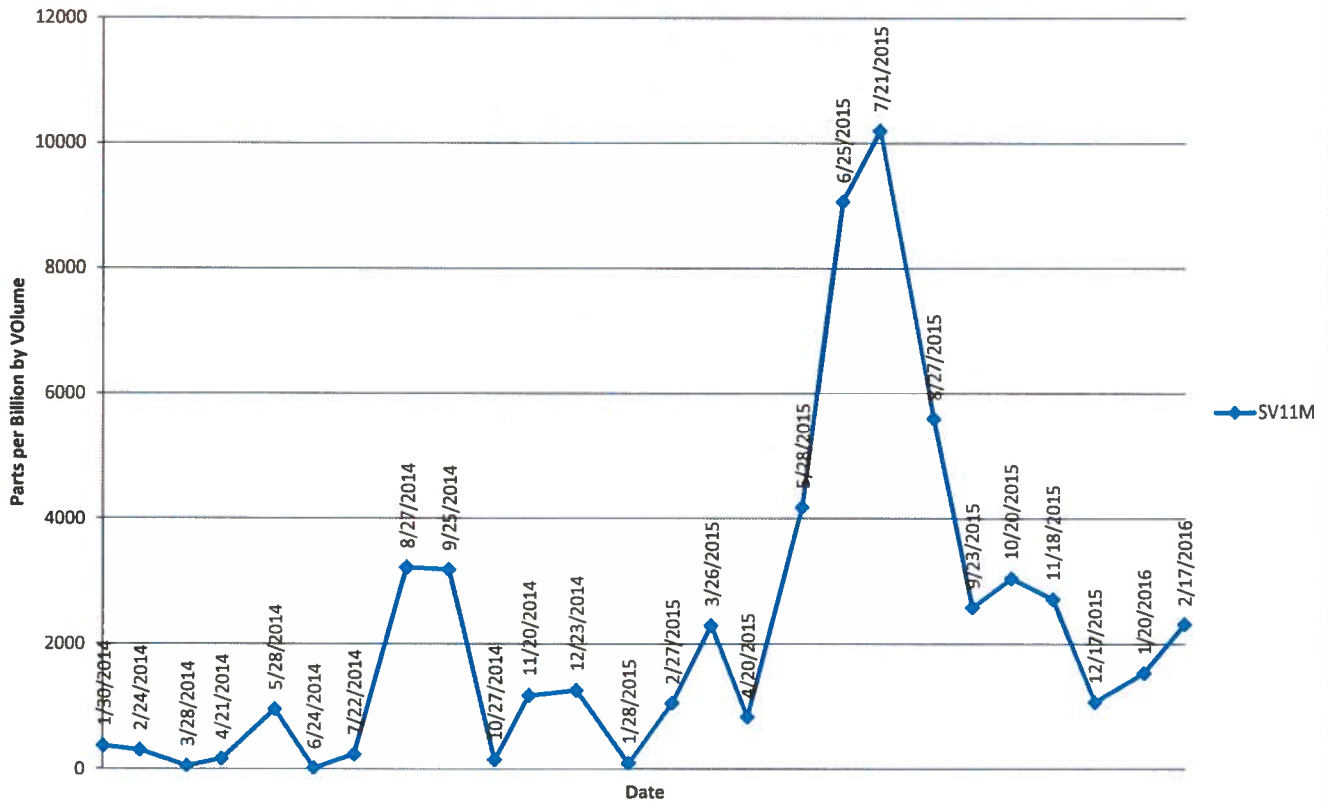


Table 10
Soil Vapor Results for SV11 (ppbv)
Historical Soil Vapor Monitoring Results - January 2014 Through Present Event
Red Hill Bulk Fuel Storage Facility

| Date | SV11M | SV11D |
|-------------|--------------|-----------------|
| 1/30/2014 | 374 | NC ₂ |
| 2/24/2014 | 307 | NC ₂ |
| 3/28/2014 | 53 | NC ₂ |
| 4/21/2014 | 167 | NC ₂ |
| 5/28/2014 | 959 | NC ₂ |
| 6/24/2014 | 17 | NC ₂ |
| 7/22/2014 | 240 | NC ₂ |
| 8/27/2014 | 3218 | NC ₂ |
| 9/25/2014 | 3185 | NC ₂ |
| 10/27/2014 | 154 | NC ₂ |
| 11/20/2014 | 1182 | NC ₂ |
| 12/23/2014 | 1261 | NC ₂ |
| 1/28/2015 | 99 | NC ₂ |
| 2/27/2015 | 1056 | NC ₂ |
| 3/26/2015 | 2294 | NC ₂ |
| 4/20/2015 | 835 | NC ₂ |
| 5/28/2015 | 4184 | NC ₂ |
| 6/25/2015 | 9065 | NC ₂ |
| 7/21/2015 | 10200 | NC ₂ |
| 8/27/2015 | 5595 | NC ₂ |
| 9/23/2015 | 2584 | NC ₂ |
| 10/20/2015 | 3045 | NC ₂ |
| 11/18/2015 | 2714 | NC ₂ |
| 12/17/2015 | 1071 | NC ₂ |
| 1/20/2016 | 1534 | NC ₂ |
| 2/17/2016 | 2316 | NC ₃ |

ppbv: parts per billion by volume
 NC₂: Not collected due to an obstruction in the vapor line

Figure 11
Soil Vapor Measurements
SV12

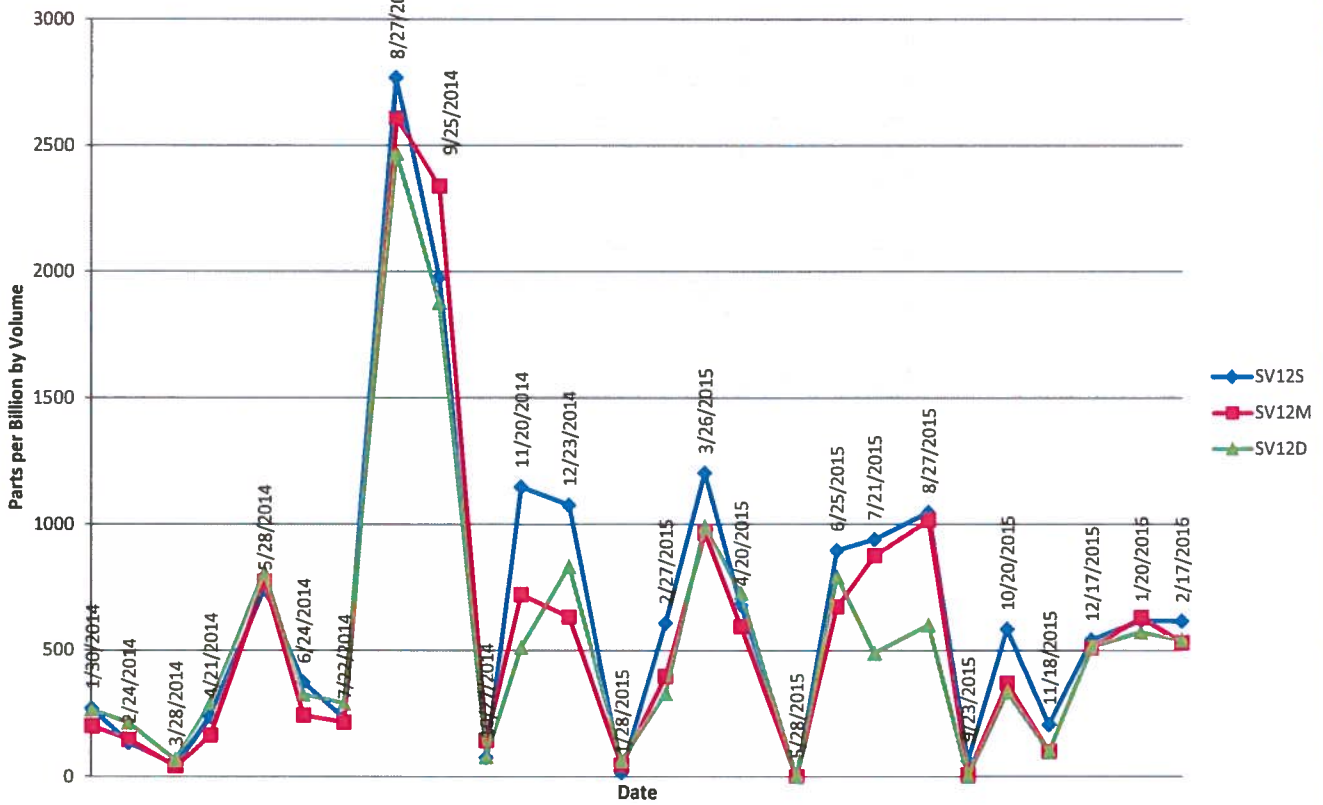


Table 11
Soil Vapor Results for SV12 (ppbv)
Historical Soil Vapor Monitoring Results - January 2014 Through Present Event
Red Hill Bulk Fuel Storage Facility

| Date | SV12S | SV12M | SV12D |
|-------------|--------------|--------------|--------------|
| 1/30/2014 | 270 | 200 | 264 |
| 2/24/2014 | 135 | 148 | 215 |
| 3/28/2014 | 45 | 42 | 66 |
| 4/21/2014 | 237 | 166 | 290 |
| 5/28/2014 | 743 | 774 | 810 |
| 6/24/2014 | 374 | 244 | 326 |
| 7/22/2014 | 232 | 217 | 290 |
| 8/27/2014 | 2769 | 2607 | 2469 |
| 9/25/2014 | 1979 | 2338 | 1877 |
| 10/27/2014 | 77 | 144 | 81 |
| 11/20/2014 | 1147 | 721 | 512 |
| 12/23/2014 | 1075 | 632 | 834 |
| 1/28/2015 | 15 | 46 | 63 |
| 2/27/2015 | 609 | 396 | 331 |
| 3/26/2015 | 1203 | 964 | 992 |
| 4/20/2015 | 681 | 595 | 728 |
| 5/28/2015 | 0 | 0 | 0 |
| 6/25/2015 | 897 | 673 | 792 |
| 7/21/2015 | 940 | 875 | 490 |
| 8/27/2015 | 1047 | 1016 | 601 |
| 9/23/2015 | 64 | 8 | 1 |
| 10/20/2015 | 584 | 371 | 334 |
| 11/18/2015 | 207 | 101 | 99 |
| 12/17/2015 | 541 | 510 | 514 |
| 1/20/2016 | 618 | 630 | 573 |
| 2/17/2016 | 616 | 530 | 543 |

ppbv: parts per billion by volume

Figure 12
Soil Vapor Measurements
SV13

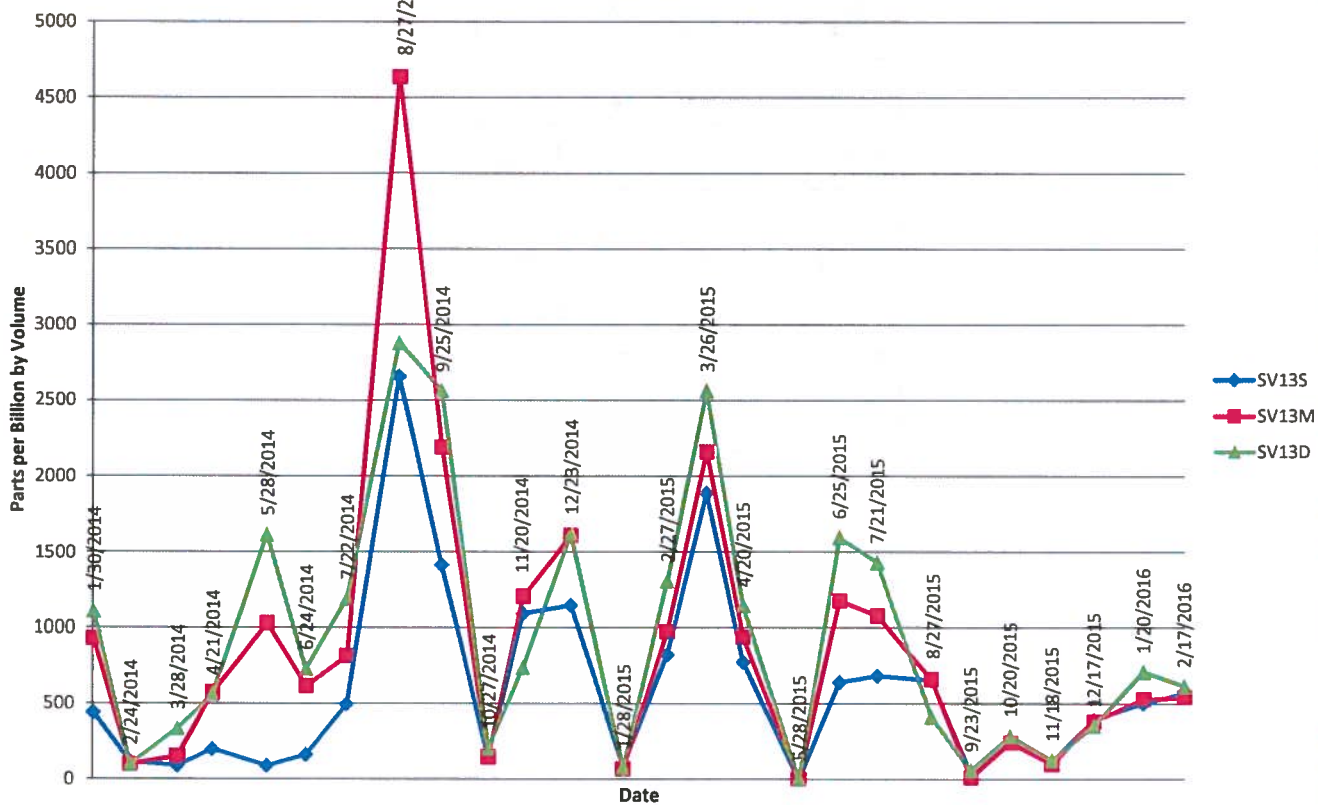


Table 12
Soil Vapor Results for SV13 (ppbv)
Historical Soil Vapor Monitoring Results - January 2014 Through Present Event
Red Hill Bulk Fuel Storage Facility

| Date | SV13S | SV13M | SV13D |
|------------|-------|-------|-------|
| 1/30/2014 | 440 | 929 | 1109 |
| 2/24/2014 | 116 | 98 | 99 |
| 3/28/2014 | 90 | 151 | 332 |
| 4/21/2014 | 198 | 575 | 560 |
| 5/28/2014 | 89 | 1031 | 1615 |
| 6/24/2014 | 161 | 616 | 727 |
| 7/22/2014 | 495 | 815 | 1191 |
| 8/27/2014 | 2657 | 4638 | 2877 |
| 9/25/2014 | 1414 | 2193 | 2562 |
| 10/27/2014 | 149 | 145 | 205 |
| 11/20/2014 | 1093 | 1208 | 738 |
| 12/23/2014 | 1148 | 1610 | 1621 |
| 1/28/2015 | 85 | 66 | 75 |
| 2/27/2015 | 822 | 973 | 1309 |
| 3/26/2015 | 1889 | 2160 | 2562 |
| 4/20/2015 | 774 | 939 | 1145 |
| 5/28/2015 | 0 | 0 | 0 |
| 6/25/2015 | 640 | 1178 | 1594 |
| 7/21/2015 | 682 | 1079 | 1431 |
| 8/27/2015 | 654 | 659 | 412 |
| 9/23/2015 | 37 | 10 | 59 |
| 10/20/2015 | 270 | 242 | 286 |
| 11/18/2015 | 115 | 98 | 125 |
| 12/17/2015 | 393 | 382 | 350 |
| 1/20/2016 | 502 | 530 | 707 |
| 2/17/2016 | 567 | 542 | 615 |

ppbv: parts per billion by volume

Figure 13
Soil Vapor Measurements
SV14

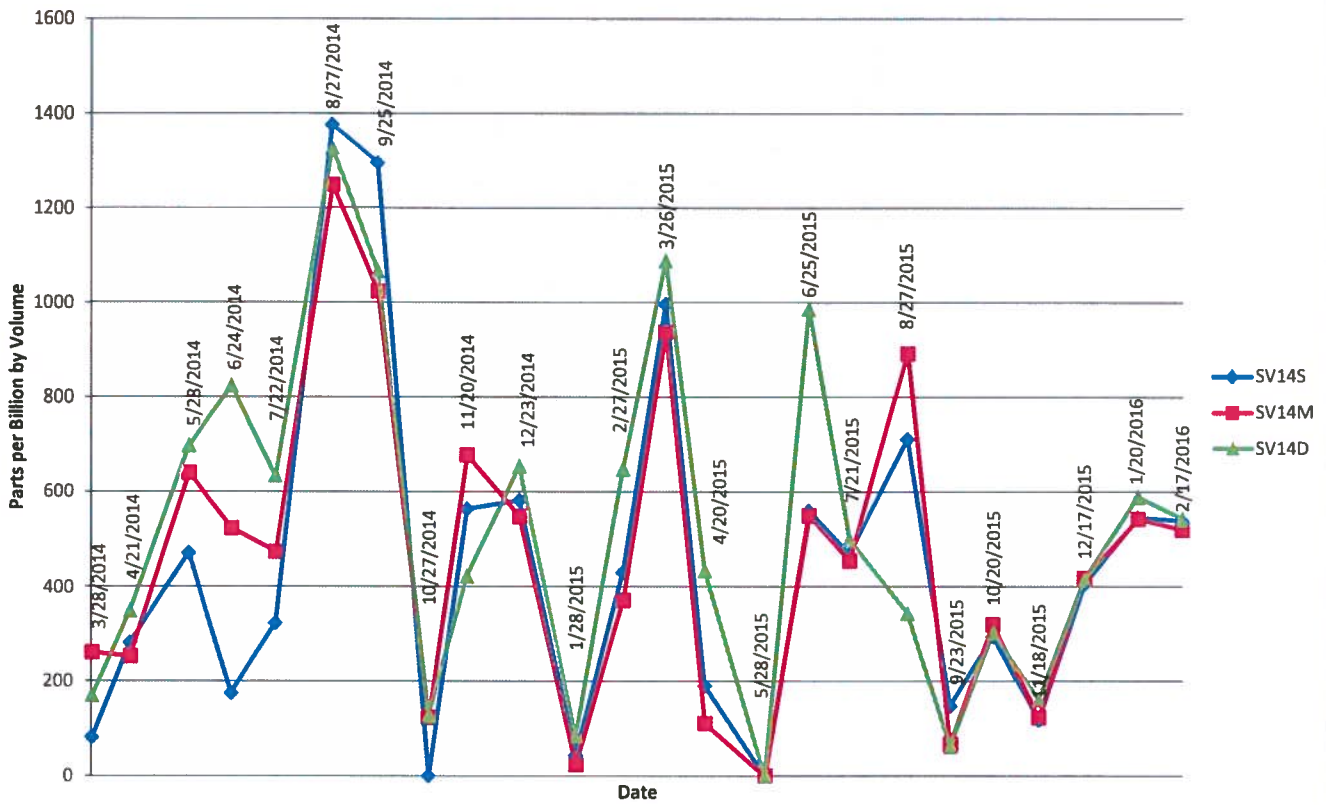


Table 13
Soil Vapor Results for SV14 (ppbv)
Historical Soil Vapor Monitoring Results - January 2014 Through Present Event
Red Hill Bulk Fuel Storage Facility

| Date | SV14S | SV14M | SV14D |
|-------------|--------------|--------------|--------------|
| 3/28/2014 | 82 | 261 | 170 |
| 4/21/2014 | 282 | 253 | 349 |
| 5/28/2014 | 471 | 640 | 697 |
| 6/24/2014 | 175 | 523 | 824 |
| 7/22/2014 | 323 | 474 | 634 |
| 8/27/2014 | 1376 | 1248 | 1327 |
| 9/25/2014 | 1295 | 1023 | 1067 |
| 10/27/2014 | 0 | 123 | 127 |
| 11/20/2014 | 564 | 678 | 422 |
| 12/23/2014 | 582 | 548 | 654 |
| 1/28/2015 | 44 | 24 | 85 |
| 2/27/2015 | 430 | 371 | 648 |
| 3/26/2015 | 996 | 937 | 1088 |
| 4/20/2015 | 191 | 111 | 434 |
| 5/28/2015 | 0 | 0 | 0 |
| 6/25/2015 | 560 | 550 | 986 |
| 7/21/2015 | 469 | 454 | 500 |
| 8/27/2015 | 711 | 892 | 344 |
| 9/23/2015 | 148 | 66 | 62 |
| 10/20/2015 | 295 | 320 | 303 |
| 11/18/2015 | 118 | 123 | 161 |
| 12/17/2015 | 406 | 418 | 415 |
| 1/20/2016 | 546 | 543 | 589 |
| 2/17/2016 | 539 | 520 | 543 |

ppbv: parts per billion by volume

Figure 14
Soil Vapor Measurements
SV15

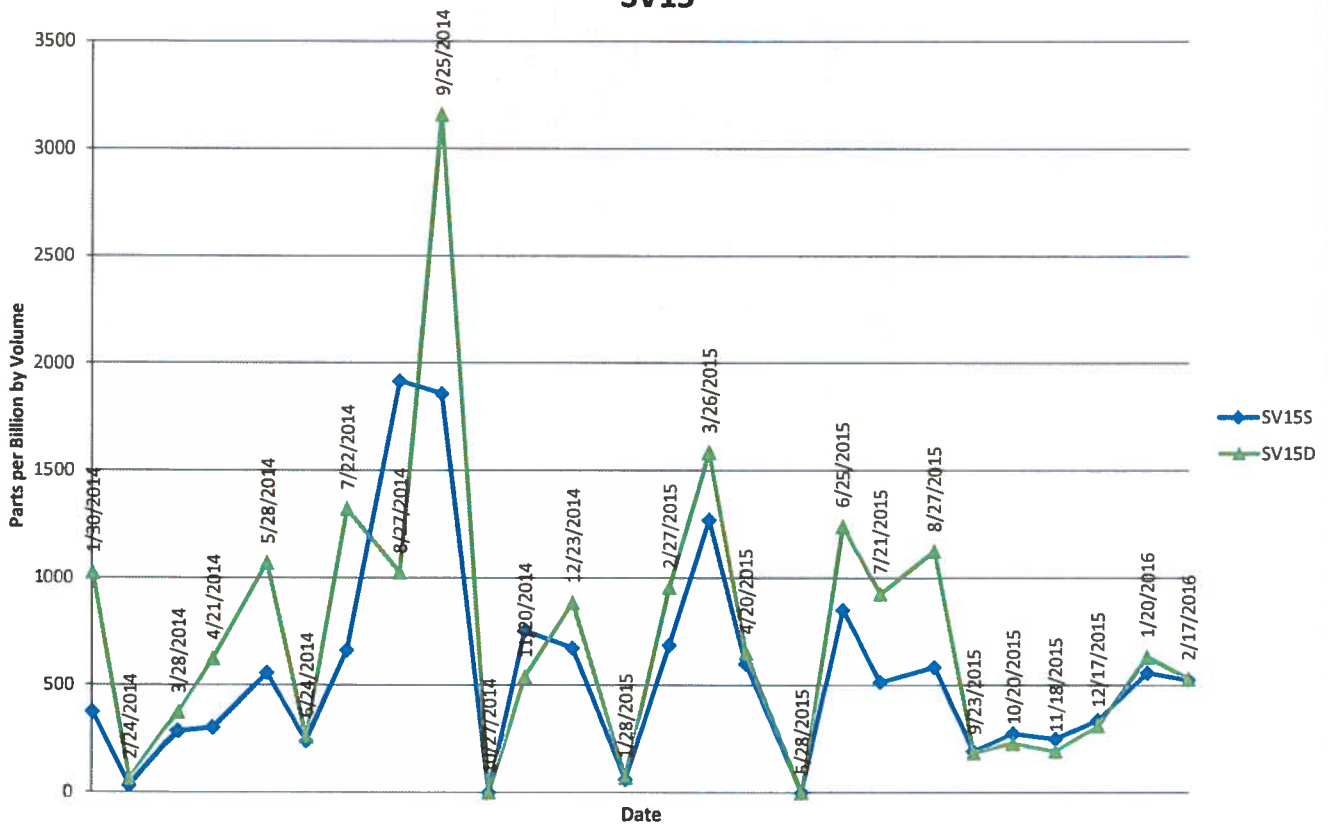


Table 14
Soil Vapor Results for SV15 (ppbv)
Historical Soil Vapor Monitoring Results - January 2014 Through Present Event
Red Hill Bulk Fuel Storage Facility

| Date | SV15S | SV15M | SV15D |
|------------|-------|-----------------|-------|
| 1/30/2014 | 376 | NC ₂ | 1025 |
| 2/24/2014 | 32 | NC ₂ | 65 |
| 3/28/2014 | 285 | NC ₂ | 372 |
| 4/21/2014 | 302 | NC ₂ | 623 |
| 5/28/2014 | 558 | NC ₂ | 1071 |
| 6/24/2014 | 240 | NC ₂ | 260 |
| 7/22/2014 | 663 | NC ₂ | 1321 |
| 8/27/2014 | 1916 | NC ₂ | 1026 |
| 9/25/2014 | 1857 | NC ₂ | 3159 |
| 10/27/2014 | 0 | NC ₂ | 0 |
| 11/20/2014 | 754 | NC ₂ | 539 |
| 12/23/2014 | 673 | NC ₂ | 886 |
| 1/28/2015 | 62 | NC ₂ | 71 |
| 2/27/2015 | 687 | NC ₂ | 956 |
| 3/26/2015 | 1270 | NC ₂ | 1585 |
| 4/20/2015 | 600 | NC ₂ | 651 |
| 5/28/2015 | 0 | NC ₂ | 0 |
| 6/25/2015 | 851 | NC ₂ | 1239 |
| 7/21/2015 | 515 | NC ₂ | 927 |
| 8/27/2015 | 586 | NC ₂ | 1126 |
| 9/23/2015 | 193 | NC ₂ | 185 |
| 10/20/2015 | 277 | NC ₂ | 230 |
| 11/18/2015 | 253 | NC ₂ | 194 |
| 12/17/2015 | 338 | NC ₂ | 311 |
| 1/20/2016 | 560 | NC ₃ | 633 |
| 2/17/2016 | 527 | NC ₄ | 530 |

ppbv: parts per billion by volume

NC₂: Not collected due to an obstruction in the vapor line

Figure 15
Soil Vapor Measurements
SV16

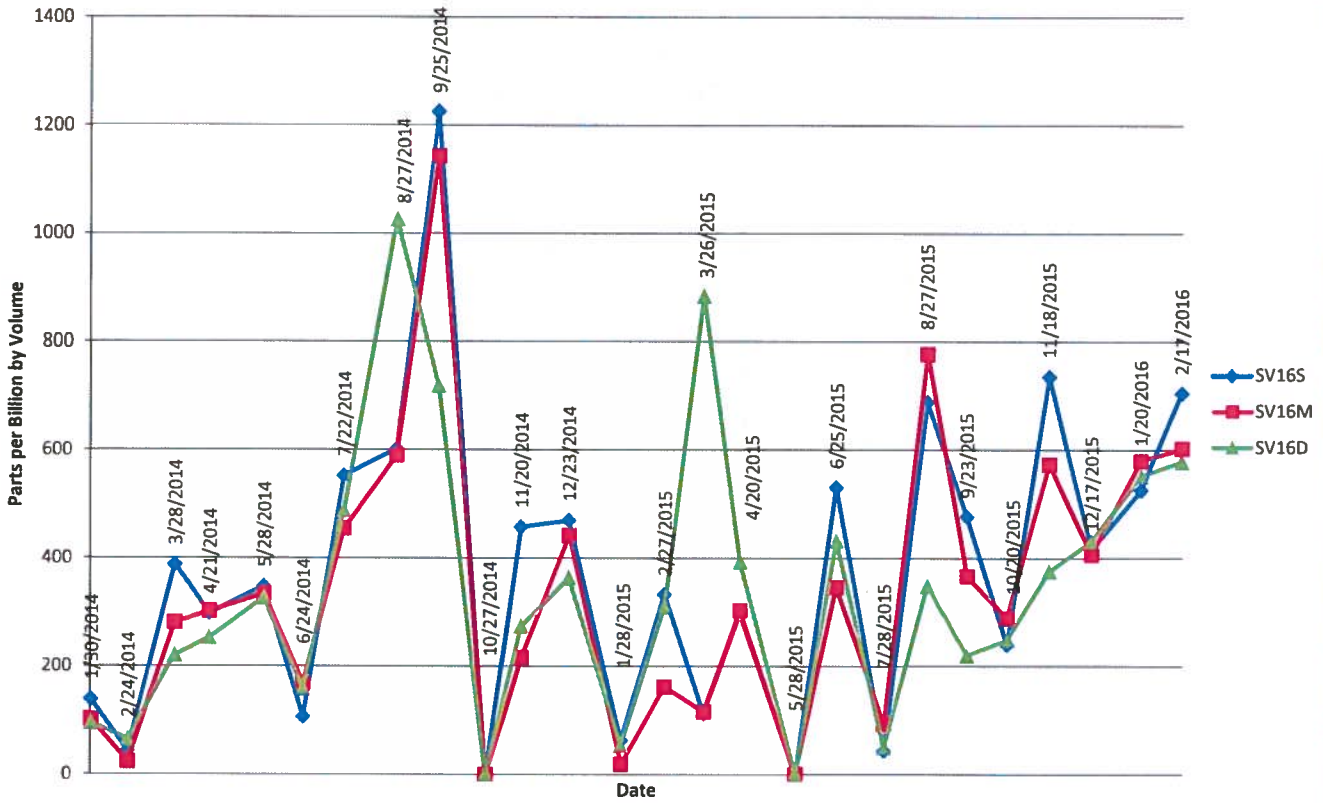


Table 15
Soil Vapor Results for SV16 (ppbv)
Historical Soil Vapor Monitoring Results - January 2014 Through Present Event
Red Hill Bulk Fuel Storage Facility

| Date | SV16S | SV16M | SV16D |
|------------|-------|-------|-------|
| 1/30/2014 | 139 | 102 | 95 |
| 2/24/2014 | 44 | 24 | 65 |
| 3/28/2014 | 388 | 281 | 220 |
| 4/21/2014 | 298 | 302 | 253 |
| 5/28/2014 | 348 | 334 | 327 |
| 6/24/2014 | 107 | 169 | 158 |
| 7/22/2014 | 552 | 455 | 488 |
| 8/27/2014 | 602 | 590 | 1026 |
| 9/25/2014 | 1226 | 1143 | 719 |
| 10/27/2014 | 0 | 0 | 0 |
| 11/20/2014 | 458 | 216 | 274 |
| 12/23/2014 | 470 | 442 | 363 |
| 1/28/2015 | 63 | 19 | 54 |
| 2/27/2015 | 333 | 162 | 310 |
| 3/26/2015 | 113 | 116 | 884 |
| 4/20/2015 | 297 | 303 | 393 |
| 5/28/2015 | 0 | 0 | 0 |
| 6/25/2015 | 531 | 346 | 432 |
| 7/28/2015 | 44 | 93 | 50 |
| 8/27/2015 | 689 | 777 | 349 |
| 9/23/2015 | 477 | 367 | 220 |
| 10/20/2015 | 240 | 289 | 249 |
| 11/18/2015 | 735 | 573 | 376 |
| 12/17/2015 | 416 | 406 | 432 |
| 1/20/2016 | 526 | 580 | 552 |
| 2/17/2016 | 705 | 603 | 578 |

ppbv: parts per billion by volume

Figure 16
Soil Vapor Measurements
SV17

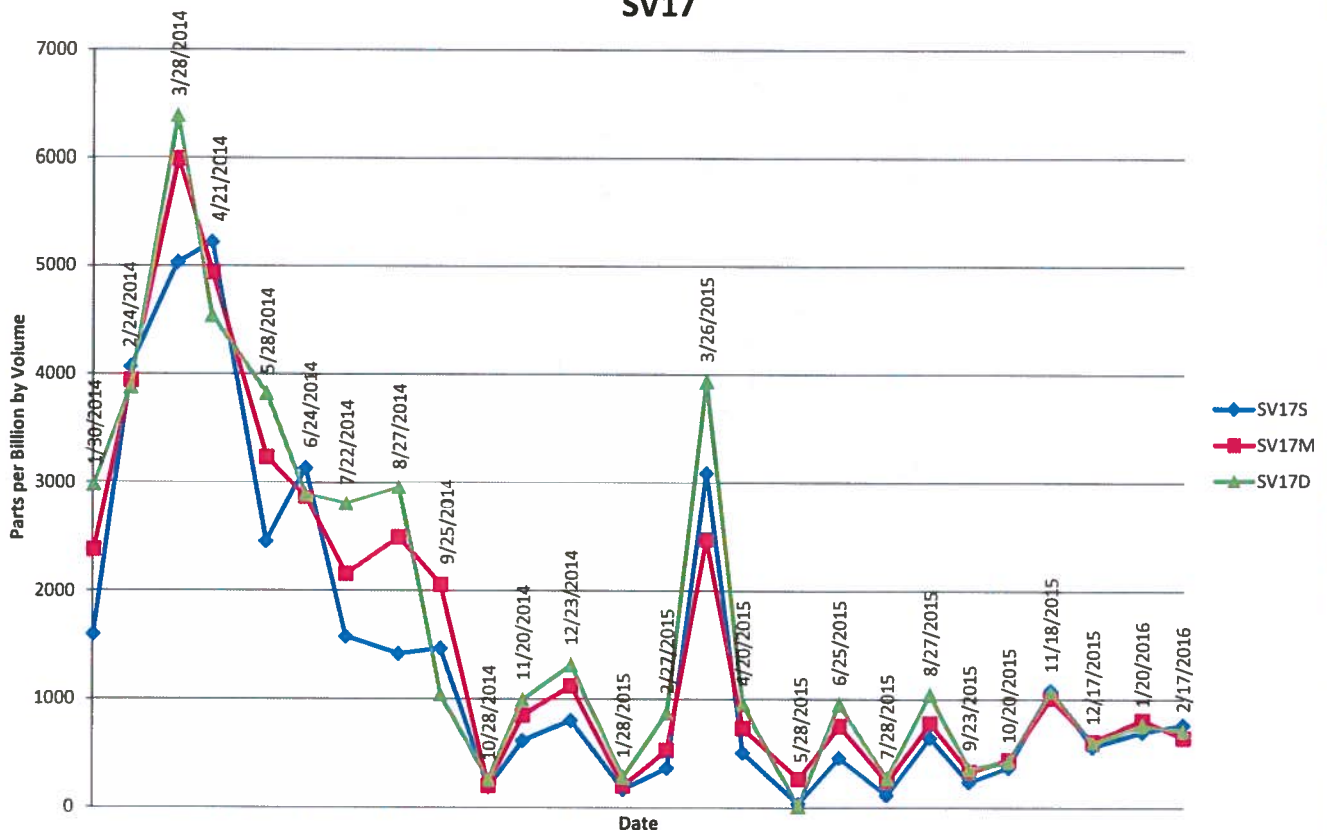


Table 16
Soil Vapor Results for SV17 (ppbv)
Historical Soil Vapor Monitoring Results - January 2014 Through Present Event
Red Hill Bulk Fuel Storage Facility

| Date | SV17S | SV17M | SV17D |
|-------------|--------------|--------------|--------------|
| 1/30/2014 | 1598 | 2378 | 2980 |
| 2/24/2014 | 4069 | 3944 | 3884 |
| 3/28/2014 | 5033 | 5987 | 6391 |
| 4/21/2014 | 5221 | 4941 | 4541 |
| 5/28/2014 | 2452 | 3239 | 3827 |
| 6/24/2014 | 3138 | 2865 | 2892 |
| 7/22/2014 | 1578 | 2156 | 2804 |
| 8/27/2014 | 1419 | 2492 | 2954 |
| 9/25/2014 | 1468 | 2056 | 1043 |
| 10/28/2014 | 190 | 205 | 257 |
| 11/20/2014 | 618 | 849 | 998 |
| 12/23/2014 | 805 | 1126 | 1319 |
| 1/28/2015 | 170 | 202 | 282 |
| 2/27/2015 | 366 | 530 | 877 |
| 3/26/2015 | 3095 | 2472 | 3938 |
| 4/20/2015 | 510 | 734 | 952 |
| 5/28/2015 | 36 | 268 | 11 |
| 6/25/2015 | 462 | 755 | 955 |
| 7/28/2015 | 117 | 243 | 275 |
| 8/27/2015 | 647 | 779 | 1045 |
| 9/23/2015 | 237 | 334 | 358 |
| 10/20/2015 | 372 | 439 | 424 |
| 11/18/2015 | 1082 | 1010 | 1078 |
| 12/17/2015 | 561 | 612 | 593 |
| 1/20/2016 | 699 | 810 | 759 |
| 2/17/2016 | 765 | 647 | 714 |

ppbv: parts per billion by volume

Figure 17
Soil Vapor Measurements
SV18

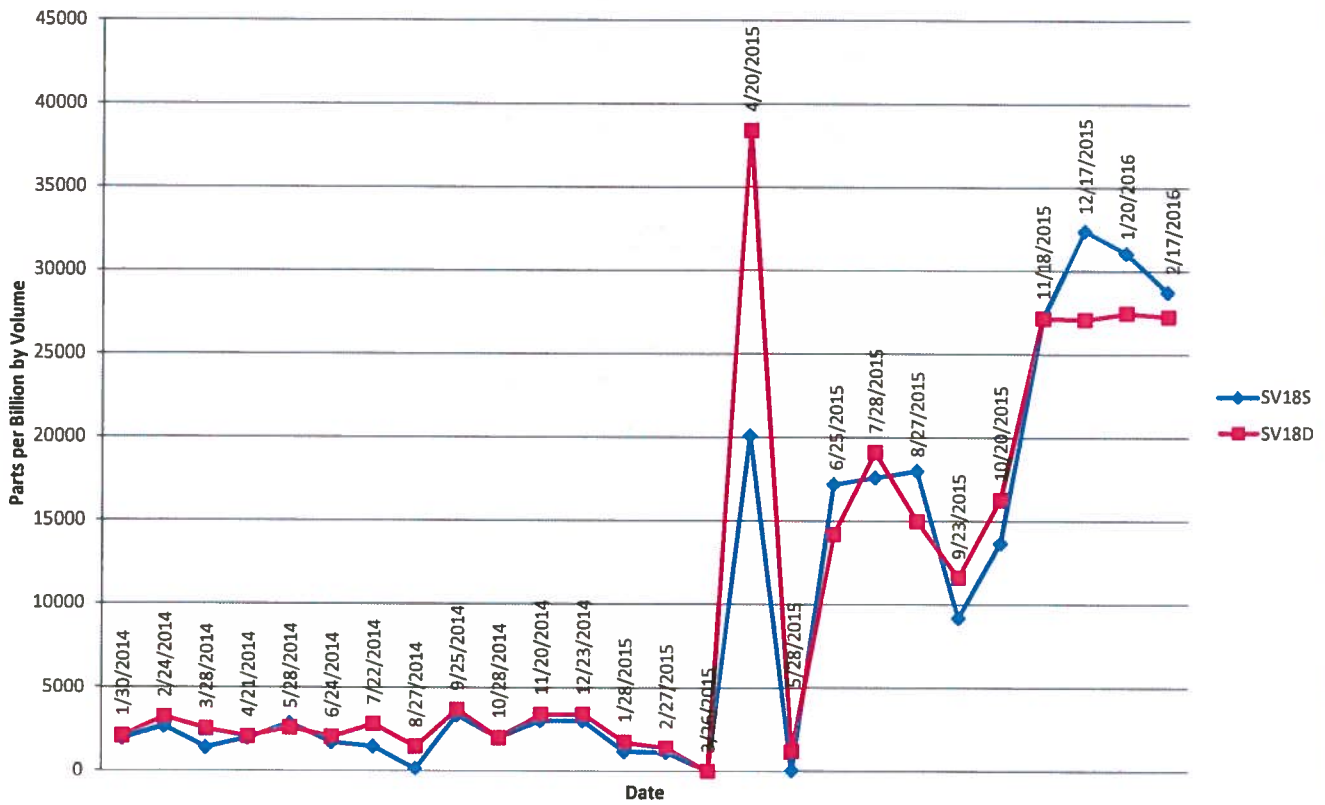


Table 17
Soil Vapor Results for SV18 (ppbv)
Historical Soil Vapor Monitoring Results - January 2014 Through Present Event
Red Hill Bulk Fuel Storage Facility

| Date | SV18S | SV18D |
|------------|-----------------|-----------------|
| 1/30/2014 | 1949 | 2116 |
| 2/24/2014 | 2674 | 3241 |
| 3/28/2014 | 1392 | 2545 |
| 4/21/2014 | 1973 | 2082 |
| 5/28/2014 | 2856 | 2607 |
| 6/24/2014 | 1727 | 2050 |
| 7/22/2014 | 1474 | 2823 |
| 8/27/2014 | 137 | 1478 |
| 9/25/2014 | 3361 | 3679 |
| 10/28/2014 | 2001 | 2008 |
| 11/20/2014 | 3033 | 3404 |
| 12/23/2014 | 3026 | 3421 |
| 1/28/2015 | 1179 | 1762 |
| 2/27/2015 | 1154 | 1398 |
| 3/26/2015 | NC ₁ | NC ₁ |
| 4/20/2015 | 20100 | 38400 |
| 5/28/2015 | 47 | 1191 |
| 6/25/2015 | 17200 | 14200 |
| 7/28/2015 | 17600 | 19100 |
| 8/27/2015 | 18000 | 15000 |
| 9/23/2015 | 9188 | 11625 |
| 10/20/2015 | 13670 | 16280 |
| 11/18/2015 | 27097 | 27153 |
| 12/17/2015 | 32387 | 27093 |
| 1/20/2016 | 31047 | 27463 |
| 2/17/2016 | 28737 | 27267 |

ppbv: parts per billion by volume
NC₁: Not collected due to maintenance work

Figure 18
Soil Vapor Measurements
SV20

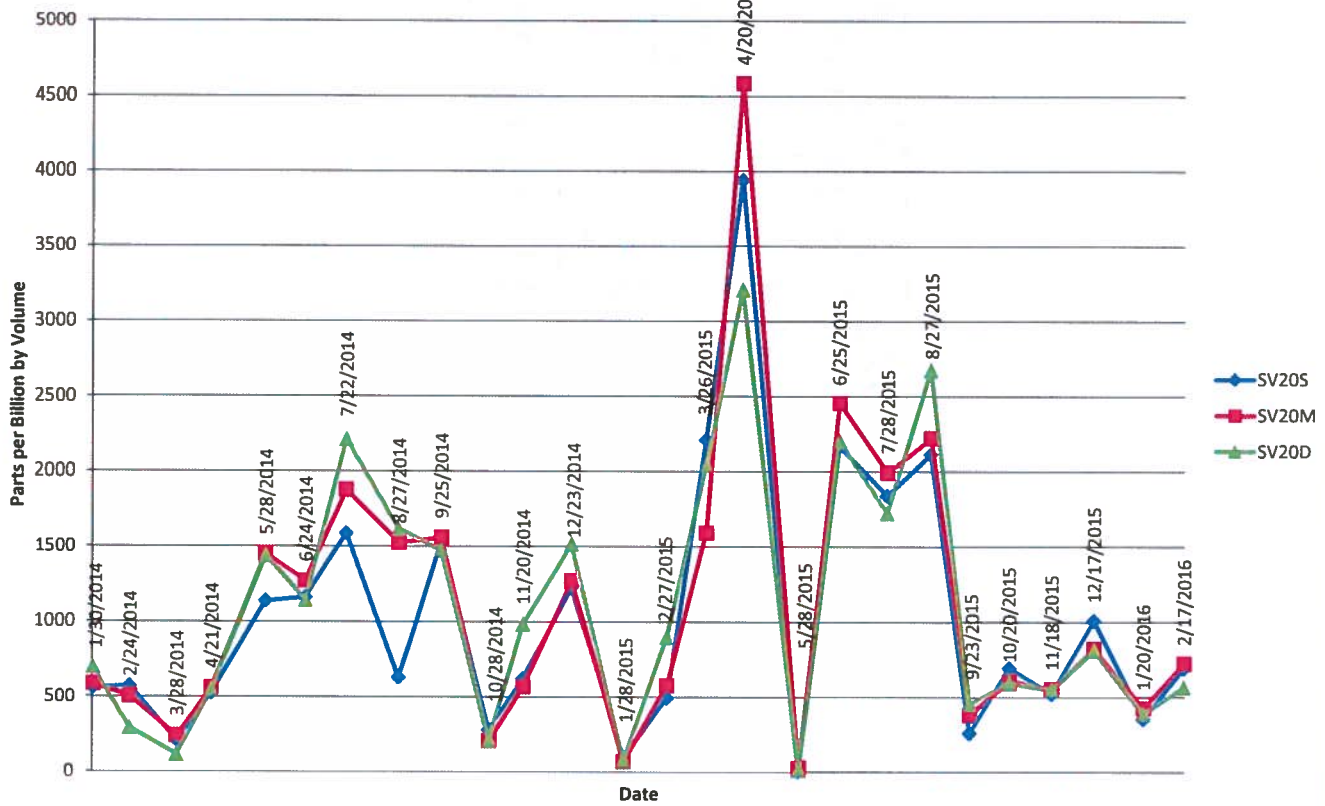


Table 18
Soil Vapor Results for SV20 (ppbv)
Historical Soil Vapor Monitoring Results - January 2014 Through Present Event
Red Hill Bulk Fuel Storage Facility

| Date | SV20S | SV20M | SV20D |
|------------|-------|-------|-------|
| 1/30/2014 | 560 | 584 | 697 |
| 2/24/2014 | 571 | 505 | 293 |
| 3/26/2014 | 214 | 242 | 118 |
| 4/21/2014 | 526 | 561 | 545 |
| 5/28/2014 | 1139 | 1451 | 1438 |
| 6/24/2014 | 1160 | 1271 | 1143 |
| 7/22/2014 | 1587 | 1877 | 2213 |
| 8/27/2014 | 630 | 1526 | 1618 |
| 9/25/2014 | 1531 | 1561 | 1472 |
| 10/28/2014 | 283 | 208 | 211 |
| 11/20/2014 | 620 | 566 | 983 |
| 12/23/2014 | 1227 | 1273 | 1516 |
| 1/28/2015 | 101 | 72 | 80 |
| 2/27/2015 | 495 | 575 | 898 |
| 3/26/2015 | 2211 | 1593 | 2041 |
| 4/20/2015 | 3939 | 4586 | 3207 |
| 5/28/2015 | 3 | 29 | 11 |
| 6/25/2015 | 2169 | 2456 | 2209 |
| 7/28/2015 | 1840 | 1994 | 1724 |
| 8/27/2015 | 2117 | 2222 | 2673 |
| 9/23/2015 | 259 | 379 | 455 |
| 10/20/2015 | 697 | 608 | 595 |
| 11/18/2015 | 523 | 556 | 549 |
| 12/17/2015 | 1010 | 820 | 813 |
| 1/20/2016 | 355 | 427 | 385 |
| 2/17/2016 | 692 | 724 | 567 |

ppbv: parts per billion by volume