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112066

February 4, 2014

Naval Facilities Engineering Command, Hawaii
400 Marshall Road
JBPHH, HI 96860-3139

Attention: Mr. Darren Uchima

Subject: Contract Number N62742-12-D-1853, Contract Task Order 0002, Soil Vapor Sampling Report for Round 69.

Dear Mr. Uchima,

Environmental Science International [ESI] has prepared this letter report documenting round 69 of the soil vapor monitoring program conducted at the Red Hill Bulk Fuel Storage Facility [RHSF], Joint Base Pearl Harbor-Hickam [JBPHH], Hawaii. The soil vapor monitoring was conducted on January 30, 2014, under Contract Number N62742-12-D-1853, Contract Task Order 0002.

Soil vapor samples were collected in tedlar bags and analyzed in the field for volatile organic compound [VOC] concentrations using a RAE Systems® ppbRAE Plus photo-ionization detector [PID]. Soil vapor monitoring points [SVMPs] were given a SV prefix, followed by the associated tank number, and then the depth identifier ("S" for shallow or front of the UST, "M" for mid depth or middle of the UST, and "D" for deep or outer edge of the UST). Soil vapor monitoring was conducting in accordance with the standard operating procedures included in Attachment A.

Round 69 Monitoring Activities

On January 30, 2014, round 69 of the soil vapor monitoring program was conducted. Prior to soil vapor monitoring, the PID was calibrated outside the tunnel. Soil vapor samples were collected and measured from 17 SVMPs located under Tanks 02 to 13, 15 to 18, and 20. The SVMPs are located inside the RHSF lower access tunnel. Soil vapor monitoring was not conducted at SVMPs beneath Tanks 01 and 19 because the tanks are no longer in service, and Tank 14 was not accessible due to construction work. A total of 45 samples were collected.

Monitoring Results

Average VOC concentrations ranged from 8 parts per billion by volume [ppbv] in SV02D to 176,000 ppbv in SV05D. An analysis of VOC concentrations collected from each SVMP was performed using linear trend lines generated from the last four sampling events. The slopes of the linear trend lines were used to evaluate the near-term trends. Negative slope trends indicate decreasing concentrations of VOCs, while positive slopes trends indicate increasing concentrations of VOCs.

If the change in VOC concentrations was less than 10 ppbv per day, the trend was termed as slight. If the change in VOCs was between 10 and 20 ppbv per day, the trend was termed as moderate. If the change in VOCs was greater than 20 ppbv per day, the trend was termed as strong. All slope trends were rounded to the nearest tenth.

Based on the slope trends, the VOC concentrations increased slightly in all SVMPs at Tanks 10, 13, and 20; and in SV05S, SV12S, SV12D, SV15S, SV15D, SV17S, and SV18S. The VOC concentrations increased moderately in SV08S, SV09S, SV09M, SV17M, SV17D, and SV18D. The VOC concentrations increased strongly in all SVMPs at Tanks 6 and 7; and in SV03D, SV05M, SV05D, SV08M, SV08D, and SV09D. The VOC concentrations decreased slightly in all SVMPs at Tanks 2, 4, and 16; and in SV03S, SV03M, SV11M, and SV12M. A slope trend could not be generated for all SVMPs at Tank 14, and in SV11D and SV15M because no sample was collected or there was not enough data to calculate a slope trend. A summary of the slope trends are included in Table 1. Soil vapor monitoring results and graphs from Round 1 to 69 are included in Attachment B.

Table 1
Summary of Soil Vapor Monitoring Results
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Facility Tank | Fuel Type in Tank | Sampling Location | Slope Trend (ppbv per day) | Description of Trend |
|---------------|-------------------|-------------------|----------------------------|----------------------|
| Tank 02 | JP-8 | SV02S | -2.9 | Slight Decrease |
| | | SV02M | -2.8 | Slight Decrease |
| | | SV02D | -2.7 | Slight Decrease |
| Tank 03 | JP-8 | SV03S | -2.4 | Slight Decrease |
| | | SV03M | -2.5 | Slight Decrease |
| | | SV03D | 88.3 | Strong Increase |
| Tank 04 | JP-8 | SV04S | -1.6 | Slight Decrease |
| | | SV04M | -1.3 | Slight Decrease |
| | | SV04D | -1.4 | Slight Decrease |
| Tank 05 | JP-8 | SV05S | 8.1 | Slight Increase |
| | | SV05M | 2923.5 | Strong Increase |
| | | SV05D | 3091.4 | Strong Increase |
| Tank 06 | JP-8 | SV06S | 50.2 | Strong Increase |
| | | SV06M | 25.6 | Strong Increase |
| Tank 07 | JP-5 | SV07S | 58.4 | Strong Increase |
| | | SV07M | 59.2 | Strong Increase |
| | | SV07D | 47.3 | Strong Increase |
| Tank 08 | JP-5 | SV08S | 18.9 | Moderate Increase |
| | | SV08M | 23.9 | Strong Increase |
| | | SV08D | 26.5 | Strong Increase |
| Tank 09 | JP-5 | SV09S | 12.3 | Moderate Increase |
| | | SV09M | 17.0 | Moderate Increase |
| | | SV09D | 21.3 | Strong Increase |

Table 1 (Continued)
Summary of Soil Vapor Monitoring Results
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Facility Tank | Fuel Type in Tank | Sampling Location | Slope Trend (ppbv per day) | Description of Trend |
|---------------|-------------------|-------------------|----------------------------|----------------------|
| Tank 10 | JP-5 | SV10S | 2.8 | Slight Increase |
| | | SV10D | 1.8 | Slight Increase |
| Tank 11 | JP-5 | SV11M | -0.8 | Slight Decrease |
| | | SV11D | NC | NA |
| Tank 12 | JP-5 | SV12S | 0.5 | Slight Increase |
| | | SV12M | -0.4 | Slight Decrease |
| | | SV12D | 0.4 | Slight Increase |
| Tank 13 | F-76 | SV13S | 2.2 | Slight Increase |
| | | SV13M | 7.2 | Slight Increase |
| | | SV13D | 8.9 | Slight Increase |
| Tank 14 | F-76 | SV14S | NC | NA |
| | | SV14M | NC | NA |
| | | SV14D | NC | NA |
| Tank 15 | F-76 | SV15S | 1.9 | Slight Increase |
| | | SV15M | NC | NA |
| | | SV15D | 8.3 | Slight Increase |
| Tank 16 | F-76 | SV16S | -0.4 | Slight Decrease |
| | | SV16M | -0.8 | Slight Decrease |
| | | SV16D | -0.8 | Slight Decrease |
| Tank 17 | JP-5 | SV17S | 2.7 | Slight Increase |
| | | SV17M | 12.1 | Moderate Increase |
| | | SV17D | 19.6 | Moderate Increase |
| Tank 18 | JP-5 | SV18S | 2.3 | Slight Increase |
| | | SV18D | 11.1 | Moderate Increase |
| Tank 20 | JP-5 | SV20S | 2.2 | Slight Increase |
| | | SV20M | 2.8 | Slight Increase |
| | | SV20D | 5.2 | Slight Increase |

NA Not enough data to calculate slope trend.
 NC No sample collected.
 JP-5 Jet Fuel Propellant Number 5.
 JP-8 Jet Fuel Propellant Number 8.
 F-76 Marine Diesel Fuel Number 76.

Conclusions and Recommendations

On January 30, 2014, ESI personnel collected 45 soil vapor samples at the RHSF. Since the previous event on December 23, 2013, there have been significant increases in VOC concentrations in the mid and deep SVMPs at Tank 5, and in many SVMPs at nearby Tanks 3, 6, 7, 8, and 9. Moderate increases in VOC concentrations were also observed in SVMPs SV17M, SV17D, and SV18D. There were no significant changes in VOC concentrations at all the other SVMPs.

VOC concentrations detected during this soil vapor monitoring event in SV05M and SV05D (150,000 and 176,000 ppbv, respectively) decreased since the last sampling conducted on January 15, 2014 (225,000 and 204,000 ppbv, respectively); and remain below the action level of 280,000 ppbv. These elevated VOC concentrations at Tank 5 and the surrounding tanks are most likely the result of the suspected release of JP-8 from Tank 5 in January 2014.

If VOC concentrations exceeding 280,000 ppbv (i.e., one-half of the calculated concentration expected above water with dissolved JP-8 at the solubility limit) in SVMPs beneath tanks containing jet fuels (i.e., JP-5 or JP-8) or 14,000 ppbv (i.e., one-half of the calculated concentration expected above water with dissolved diesel fuel at the solubility limit) are detected in SVMPs beneath tanks containing marine diesel fuel, it is recommended that aggressive and proactive actions be taken to assess the integrity of the associated tank system and mitigate, as needed, for potential fuel releases. If, after an inspection of the tank system, it is uncertain whether a leak exists, it is recommended that soil vapor samples be taken for laboratory analysis.

During this event, VOCs were not detected at concentrations greater than 14,000 ppbv in SVMPs beneath tanks containing marine diesel fuel or 280,000 ppbv in SVMPs beneath tanks containing jet fuels. However, due to the suspected release at Tank 5 and the strong increase in VOC vapor concentrations, we recommend increasing the frequency of soil vapor monitoring at SV05 and SVMPs in the vicinity of Tank 5 (specifically SV03, SV04, SV06, SV07, SV08, and SV09) from monthly to every two weeks (i.e., biweekly). If you have any questions, please call me at either (808) 261-0740 (office) or (808) 479-5217 (cell).

Mahalo,



Robert Chong
Project Manager

Attachments:

- Attachment A: Standard Operating Procedures for Soil Vapor Monitoring
- Attachment B: Soil Vapor Monitoring Results

Attachment A

Standard Operating Procedures for Soil Vapor Monitoring

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Standard Operating Procedures for Soil Vapor Monitoring

Red Hill Bulk Fuel Storage Facility Naval Supply System Command (NAVSUP) Fleet Logistics Center, Joint Base Pearl Harbor-Hickam

- I. Monitoring Equipment
 - a. ppbRAE Plus gas monitor (photo-ionization detector (PID))
 - b. Sample pump
 - c. 10 ppm isobutylene calibration gas
 - d. VOC zeroing tube
 - e. Vacuum chamber
 - f. Dedicated field notebook
 - g. Field forms
 - h. Box of nitrile gloves
 - i. Flashlight
 - j. 15/16 socket and ratchet drive

- II. Set up Procedures
 - a. Calibrate ppbRAE Plus
 - i. Zero calibrate the ppbRAE Plus outside of the tunnel by attaching the glass VOC zeroing tube and the tube adaptor directly onto the ppbRAE probe. The VOC zeroing tube is single use (THROW AWAY AFTER SINGLE USE).
 - ii. Span calibrate with 10 ppm isobutylene calibration gas.
 - iii. DO NOT attach the plastic filter until after the PID has been calibrated.
 - iv. Check the difference in readings after attaching the plastic filter. If the filter is used it may raise the ambient readings significantly. If so, change the filter to a new one.
 - b. Place all equipment next to the well being tested.
 - c. Open the well cover with the 15/16 socket and ratchet drive (place the cover and bolts at a convenient location out of the way).
 - d. Identify the deep, medium, and shallow probes using the reflective tags attached, or the color coded tape (white=deep; blue=mid; orange/yellow=shallow).

- III. Sampling Procedures
 - a. Purging
 - i. Connect the first probe purge tube to the intake nozzle on the pump.
 - ii. Open the probe purge valve by making it parallel to the rest of the apparatus.
 - iii. Turn on the pump and purge at a rate of less than 200 milliliters per minute (record purge time).
 - b. While Purging

- i. Place the tedlar bag inside the vacuum chamber. Each probe should have a dedicated tedlar bag with color coded tape (stored in a Ziploc[®] bag inside the well).
 - ii. Connect the tygon tube to the tedlar bag inside the vacuum chamber, then open the bag's valve. Connect the other end of the tygon tube to the vacuum chamber's inside "sample inlet port".
 - iii. Close the vacuum chamber to create an air tight seal.
 - iv. Attach a ¼-inch tygon tube to the vacuum chamber's outside "vacuum outlet port". The other end of this tygon tube will connect to the sample pump after purging is completed.
 - c. Collecting Samples and VOC Measurements
 - i. Once purging is complete, turn off the pump then detach the probe purge tube from the pump.
 - ii. Attach the ¼ inch tygon tube, which is attached to the vacuum chamber's "vacuum outlet port," to the pump.
 - iii. Using another tygon tube (and attachments, if necessary), connect the probe purge tube to the "sample inlet port" on the vacuum chamber.
 - iv. Be sure the tedlar bag valve and probe purge valves are open.
 - v. Start the pump and cover the compression hole (on the vacuum chamber) to fill the tedlar bag. (Note: When activated, the pump evacuates air from inside the chamber. The sample bag inflates as a result of the interior pressure drop. The air from the probe is sampled directly into the bag without passing through the pump.)
 - vi. Observe the bag to prevent overfilling.
 - vii. Once the bag is full, open the vacuum chamber, close the bag's valve, then turn off the pump (if air is escaping from the bag when the lid is opened, then try again, however, only partially cover the compression hole to relieve the pressure in the chamber while vapors are slowly collected in the tedlar bag).
 - viii. Detach the tedlar bag and reattach it to the PID.
 - ix. Be sure the PID is on survey mode, open the bag valve and begin testing.
 - x. **Once numbers begin to appear** on the PID screen take readings every 10 seconds for 30 seconds.
 - xi. Once the 30 seconds is up, press "MODE" then "Y" to stop.
 - xii. Take the average value of the 3 recorded values and the peak value over 30 seconds.
 - xiii. Place the PID back on survey mode.
 - d. Close the probe purge valve and begin purging the next probe.
 - e. While purging
 - i. Deflate the tedlar bag and begin preparations for the next sample with the appropriate dedicated tygon tubing.
 - ii. Continue this process until all points at the location have been tested.

IV. Tear Down Procedures

- a. Close all soil vapor monitoring probe purge valves.
- b. Return the dedicated tedlar bags to the Ziploc[®] bag and place back in the well, then secure the well cover.

- c. Be sure to test the PID in the main tunnel between each location, record background levels (if it reads more than typical background for the day, change the plastic filter).

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Attachment B

Soil Vapor Monitoring Results

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Table 1
Soil Vapor Results for SV02
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Date | SV02S | SV02M | SV02D |
|------------|-------|-------|-------|
| 3/24/2008 | NC | NC | NC |
| 5/6/2008 | 129 | 252 | 157 |
| 5/29/2008 | 1785 | 1217 | 657 |
| 7/3/2008 | 1090 | 984 | 525 |
| 7/31/2008 | 728 | 677 | 437 |
| 9/2/2008 | 754 | 693 | 434 |
| 9/29/2008 | 520 | 553 | 456 |
| 10/23/2008 | 493 | 555 | 413 |
| 11/25/2008 | 3396 | 1762 | 2792 |
| 1/14/2009 | 89 | 329 | 312 |
| 2/5/2009 | 188 | 264 | 202 |
| 2/26/2009 | 1912 | 348 | 184 |
| 4/1/2009 | 169 | 195 | 102 |
| 4/20/2009 | 704 | 557 | 504 |
| 5/27/2009 | 1473 | 835 | 799 |
| 6/29/2009 | 2141 | 659 | 511 |
| 7/20/2009 | 1360 | 628 | 544 |
| 8/28/2009 | 564 | 318 | 258 |
| 9/24/2009 | 488 | 294 | 241 |
| 10/29/2009 | 999 | 425 | 533 |
| 11/19/2009 | 305 | 283 | 241 |
| 12/16/2009 | 356 | 284 | 238 |
| 1/28/2010 | 684 | 283 | 299 |
| 2/22/2010 | 364 | 159 | 135 |
| 3/25/2010 | 394 | 340 | 277 |
| 4/28/2010 | 385 | 282 | 209 |
| 5/26/2010 | 374 | 252 | 294 |
| 6/28/2010 | 400 | 253 | 223 |
| 7/28/2010 | 332 | 232 | 205 |
| 9/29/2010 | 224 | 217 | 207 |
| 10/18/2010 | 525 | 577 | 565 |
| 11/16/2010 | 303 | 424 | 338 |
| 12/14/2010 | 313 | 416 | 330 |
| 1/14/2011 | 494 | 357 | 651 |
| 2/15/2011 | 280 | 298 | 283 |

| Date | SV02S | SV02M | SV02D |
|------------|-------|-------|-------|
| 3/15/2011 | 221 | 208 | 217 |
| 4/18/2011 | 327 | 270 | 305 |
| 5/18/2011 | 980 | 562 | 755 |
| 6/22/2011 | 184 | 205 | 162 |
| 7/27/2011 | 101 | 83 | 86 |
| 9/22/2011 | 318 | 268 | 313 |
| 10/27/2011 | 270 | 241 | 211 |
| 11/22/2011 | 235 | 226 | 183 |
| 12/16/2011 | 408 | 333 | 397 |
| 1/20/2012 | 103 | 111 | 239 |
| 2/23/2012 | 132 | 167 | 161 |
| 3/13/2012 | 222 | 155 | 58 |
| 4/16/2012 | 115 | 92 | 149 |
| 5/15/2012 | 146 | 145 | 131 |
| 6/19/2012 | 292 | 276 | 230 |
| 7/10/2012 | 206 | 184 | 194 |
| 8/14/2012 | 389 | 362 | 348 |
| 10/24/2012 | 166 | 139 | 144 |
| 11/26/2012 | 101 | 72 | 110 |
| 12/18/2012 | 106 | 83 | 97 |
| 1/31/2013 | 546 | 914 | 966 |
| 2/28/2013 | 47 | 26 | 18 |
| 3/28/2013 | 12 | 12 | 5 |
| 4/25/2013 | 13 | 15 | 18 |
| 5/30/2013 | 204 | 153 | 176 |
| 6/27/2013 | 13 | 15 | 15 |
| 7/25/2013 | 258 | 252 | 316 |
| 8/29/2013 | 165 | 28 | 11 |
| 9/26/2013 | 304 | 263 | 306 |
| 10/24/2013 | 281 | 271 | 285 |
| 11/21/2013 | 186 | 172 | 140 |
| 12/23/2013 | 21 | 33 | 61 |
| 1/30/2014 | 11 | 11 | 8 |

ppbv: parts per billion by volume
 NC: Not collected

Figure 1
Soil Vapor Measurements
SV02

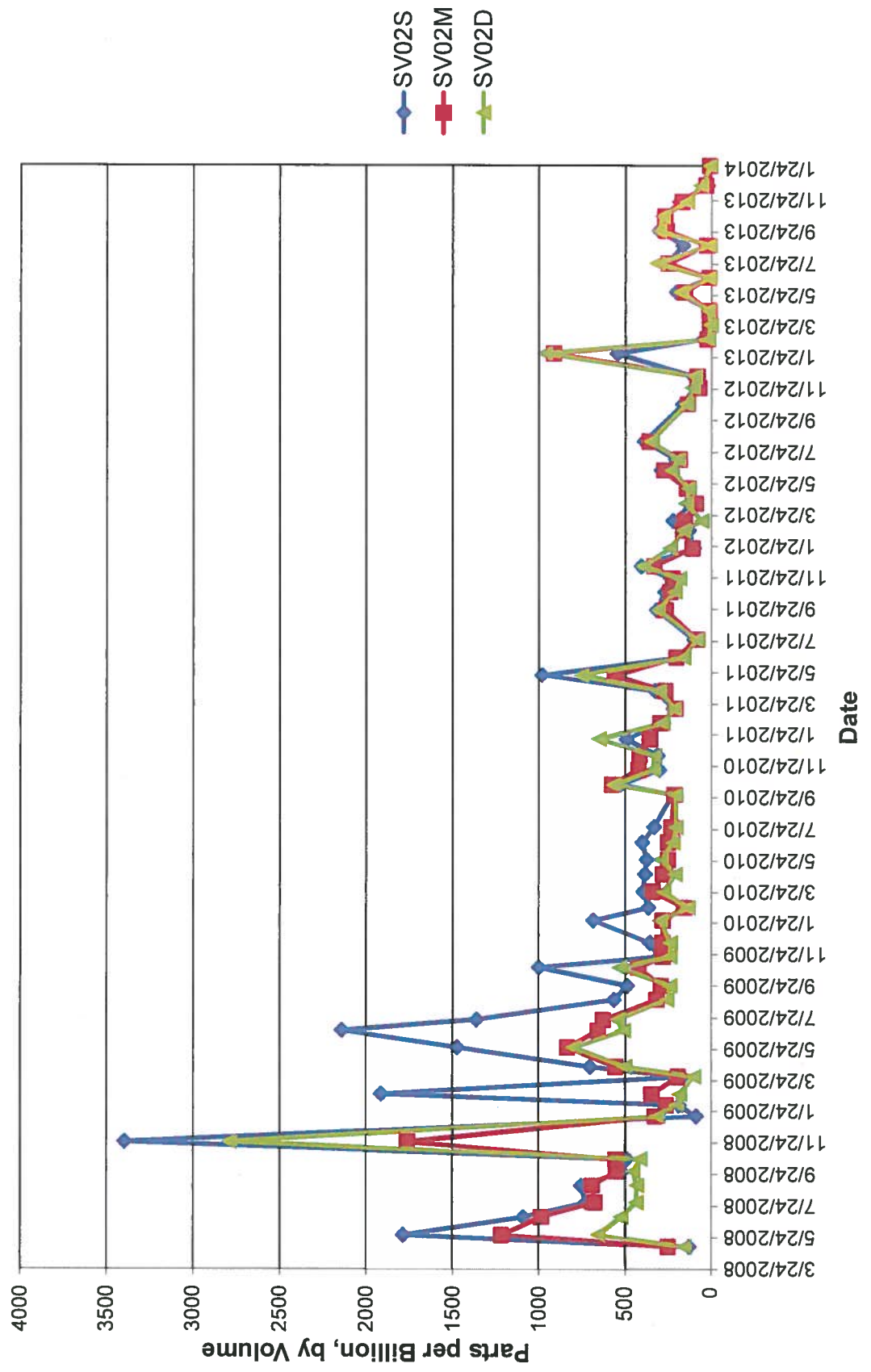


Table 2
Soil Vapor Results for SV03
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Date | SV03S | SV03M | SV03D |
|------------|-------|-------|-------|
| 3/24/2008 | 458 | 248 | 579 |
| 5/6/2008 | 668 | 521 | 328 |
| 5/29/2008 | 652 | 685 | 458 |
| 7/3/2008 | 1504 | 1044 | 1024 |
| 7/31/2008 | 1313 | 1245 | 951 |
| 9/2/2008 | 1645 | 1458 | 1237 |
| 9/29/2008 | 4425 | 3982 | 1804 |
| 10/23/2008 | 1423 | 1261 | 1058 |
| 11/25/2008 | 1060 | 1417 | 742 |
| 1/14/2009 | 4658 | 1593 | 1635 |
| 2/5/2009 | 710 | 1756 | 1470 |
| 2/26/2009 | 2616 | 1486 | 822 |
| 4/1/2009 | 407 | 611 | 571 |
| 4/20/2009 | 419 | 573 | 546 |
| 5/27/2009 | 568 | 528 | 481 |
| 6/29/2009 | 592 | 665 | 662 |
| 7/20/2009 | 1000 | 971 | 1272 |
| 8/28/2009 | 615 | 703 | 587 |
| 9/24/2009 | 658 | 838 | 860 |
| 10/29/2009 | 782 | 816 | 902 |
| 11/19/2009 | 697 | 707 | 740 |
| 12/16/2009 | 553 | 800 | 632 |
| 1/28/2010 | 531 | 569 | 575 |
| 2/22/2010 | 469 | 641 | 457 |
| 3/25/2010 | 410 | 919 | 750 |
| 4/28/2010 | 478 | 733 | 642 |
| 5/26/2010 | 467 | 470 | 621 |
| 6/28/2010 | 540 | 645 | 582 |
| 6/28/2010 | 540 | 645 | 582 |
| 7/28/2010 | 504 | 528 | 520 |
| 9/29/2010 | 242 | 257 | 259 |
| 10/18/2010 | 876 | 691 | 863 |
| 11/16/2010 | 492 | 367 | 581 |
| 12/14/2010 | 178 | 463 | 732 |
| 1/14/2011 | 436 | 555 | 627 |
| 2/15/2011 | 438 | 474 | 542 |

| Date | SV03S | SV03M | SV03D |
|------------|-------|-------|-------|
| 3/15/2011 | 272 | 300 | 350 |
| 4/18/2011 | 354 | 316 | 401 |
| 5/18/2011 | 565 | 672 | 840 |
| 6/22/2011 | 386 | 268 | 328 |
| 7/27/2011 | 126 | 115 | 127 |
| 8/26/2011 | 108 | 94 | 146 |
| 9/22/2011 | 318 | 309 | 346 |
| 10/27/2011 | 246 | 294 | 269 |
| 11/22/2011 | 265 | 265 | 338 |
| 12/16/2011 | 274 | 218 | 161 |
| 1/20/2012 | 223 | 101 | 151 |
| 2/23/2012 | 150 | 174 | 190 |
| 3/13/2012 | 173 | 341 | 104 |
| 4/16/2012 | 230 | 100 | 131 |
| 5/15/2012 | 166 | 162 | 196 |
| 6/19/2012 | 329 | 422 | 402 |
| 7/10/2012 | 245 | 246 | 265 |
| 8/14/2012 | 356 | 365 | 410 |
| 10/24/2012 | 246 | 178 | 168 |
| 11/26/2012 | 108 | 136 | 139 |
| 12/18/2012 | 109 | 79 | 78 |
| 1/31/2013 | 17 | 12 | 54 |
| 2/28/2013 | 215 | 104 | 127 |
| 3/28/2013 | 52 | 15 | 42 |
| 4/25/2013 | 27 | 34 | 39 |
| 5/30/2013 | 145 | 160 | 141 |
| 6/27/2013 | 25 | 35 | 35 |
| 7/25/2013 | 179 | 146 | 145 |
| 8/29/2013 | 8 | 2 | 13 |
| 9/26/2013 | 49 | 27 | 35 |
| 10/24/2013 | 277 | 277 | 277 |
| 11/21/2013 | 128 | 150 | 129 |
| 12/23/2013 | 8 | 6 | 17 |
| 1/30/2014 | 41 | 46 | 9444 |

ppbv: parts per billion by volume

Figure 2
Soil Vapor Measurements
SV03

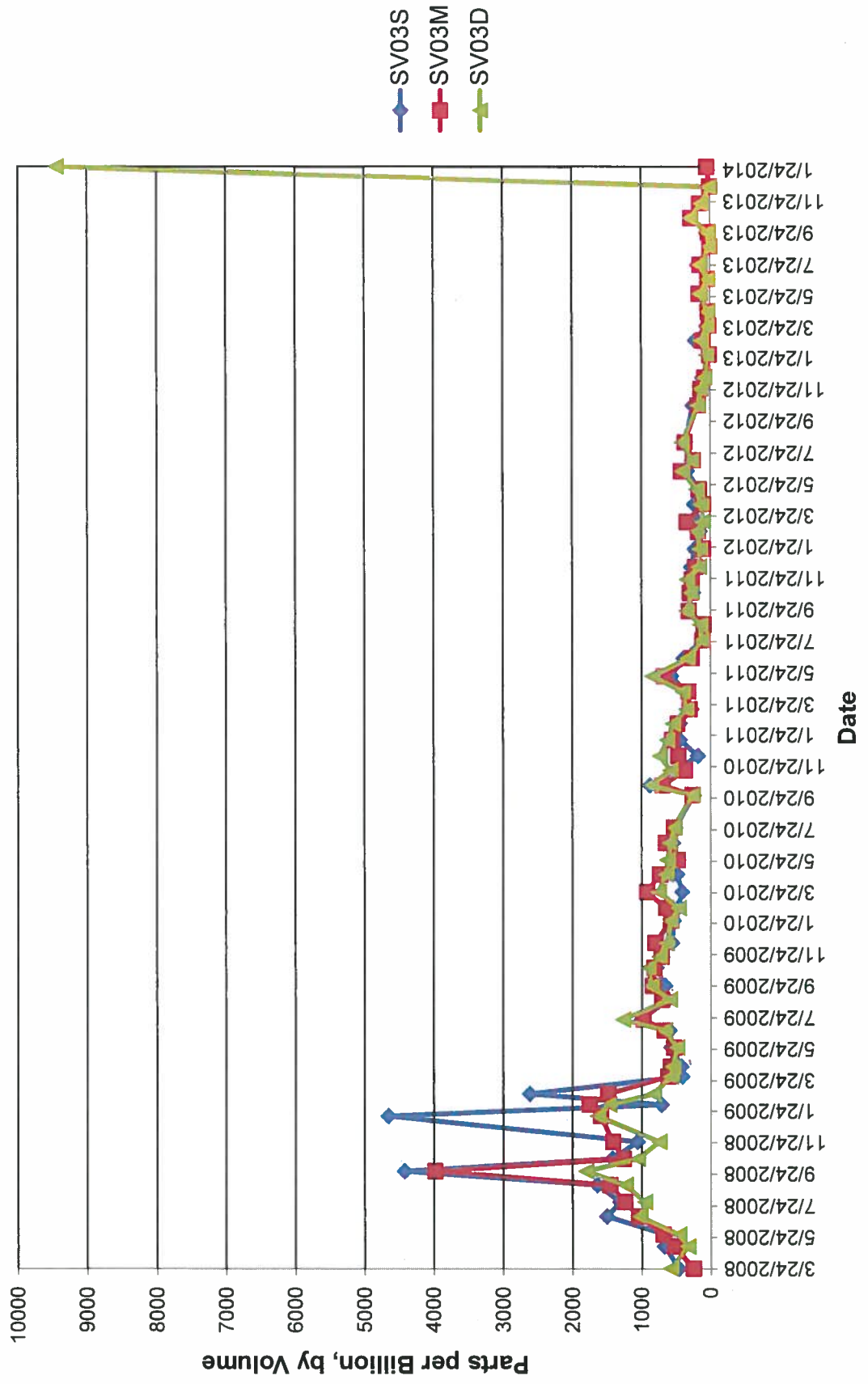


Table 3
Soil Vapor Results for SV04
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Date | SV04S | SV04M | SV04D |
|------------|-------|-------|-------|
| 3/24/2008 | 468 | 641 | 827 |
| 5/6/2008 | 1076 | 1235 | 1228 |
| 5/29/2008 | 613 | 634 | 681 |
| 7/3/2008 | 696 | 898 | 806 |
| 7/31/2008 | 836 | 1009 | 1144 |
| 9/2/2008 | 972 | 1270 | 1233 |
| 9/29/2008 | 941 | 1454 | 1436 |
| 10/23/2008 | 802 | 1192 | 1321 |
| 11/25/2008 | 460 | 799 | 893 |
| 1/14/2009 | 72 | 1081 | 1138 |
| 2/5/2009 | 136 | 561 | 746 |
| 2/26/2009 | 1920 | 1147 | 847 |
| 4/1/2009 | 365 | 586 | 608 |
| 4/20/2009 | 465 | 662 | 695 |
| 5/27/2009 | 489 | 627 | 740 |
| 6/29/2009 | 526 | 714 | 796 |
| 7/20/2009 | 603 | 1354 | 1010 |
| 8/28/2009 | 511 | 647 | 751 |
| 9/24/2009 | 609 | 734 | 846 |
| 10/29/2009 | 682 | 931 | 881 |
| 11/19/2009 | 569 | 739 | 788 |
| 12/16/2009 | 464 | 655 | 726 |
| 1/28/2010 | 448 | 592 | 616 |
| 2/22/2010 | 381 | 555 | 713 |
| 3/25/2010 | 539 | 761 | 656 |
| 4/28/2010 | 505 | 627 | 683 |
| 5/26/2010 | 463 | 618 | 600 |
| 6/28/2010 | 460 | 582 | 626 |
| 7/28/2010 | 449 | 566 | 588 |
| 9/29/2010 | 297 | 306 | 318 |
| 10/18/2010 | 715 | 843 | 788 |
| 11/16/2010 | 422 | 644 | 440 |
| 12/14/2010 | 335 | 306 | 270 |
| 1/14/2011 | 568 | 555 | 633 |
| 2/15/2011 | 501 | 609 | 609 |

| Date | SV04S | SV04M | SV04D |
|------------|-------|-------|-------|
| 3/15/2011 | 292 | 375 | 471 |
| 4/18/2011 | 394 | 475 | 394 |
| 5/18/2011 | 652 | 983 | 978 |
| 6/22/2011 | 356 | 339 | 317 |
| 7/27/2011 | 102 | 187 | 162 |
| 8/26/2011 | 137 | 205 | 162 |
| 9/22/2011 | 359 | 373 | 363 |
| 10/27/2011 | 236 | 281 | 238 |
| 11/22/2011 | 337 | 356 | 345 |
| 12/16/2011 | 709 | 799 | 652 |
| 1/20/2012 | 104 | 121 | 141 |
| 2/23/2012 | 175 | 209 | 436 |
| 3/13/2012 | 146 | 139 | 114 |
| 4/16/2012 | 241 | 141 | 116 |
| 5/15/2012 | 224 | 228 | 253 |
| 6/19/2012 | 360 | 464 | 404 |
| 7/10/2012 | 276 | 287 | 289 |
| 8/14/2012 | 340 | 351 | 358 |
| 10/24/2012 | 221 | 162 | 155 |
| 11/26/2012 | 138 | 187 | 159 |
| 12/18/2012 | 85 | 99 | 66 |
| 1/31/2013 | 38 | 54 | 423 |
| 2/28/2013 | 87 | 79 | 51 |
| 3/28/2013 | 12 | 24 | 24 |
| 4/25/2013 | 28 | 39 | 36 |
| 5/30/2013 | 117 | 131 | 135 |
| 6/27/2013 | 16 | 23 | 26 |
| 7/25/2013 | 115 | 130 | 123 |
| 8/29/2013 | 121 | 192 | 190 |
| 9/26/2013 | 5 | 18 | 11 |
| 10/24/2013 | 295 | 285 | 254 |
| 11/21/2013 | 98 | 129 | 159 |
| 12/23/2013 | 4 | 14 | 11 |
| 1/30/2014 | 132 | 165 | 135 |

ppbv: parts per billion by volume

Figure 3
Soil Vapor Measurements
SV04

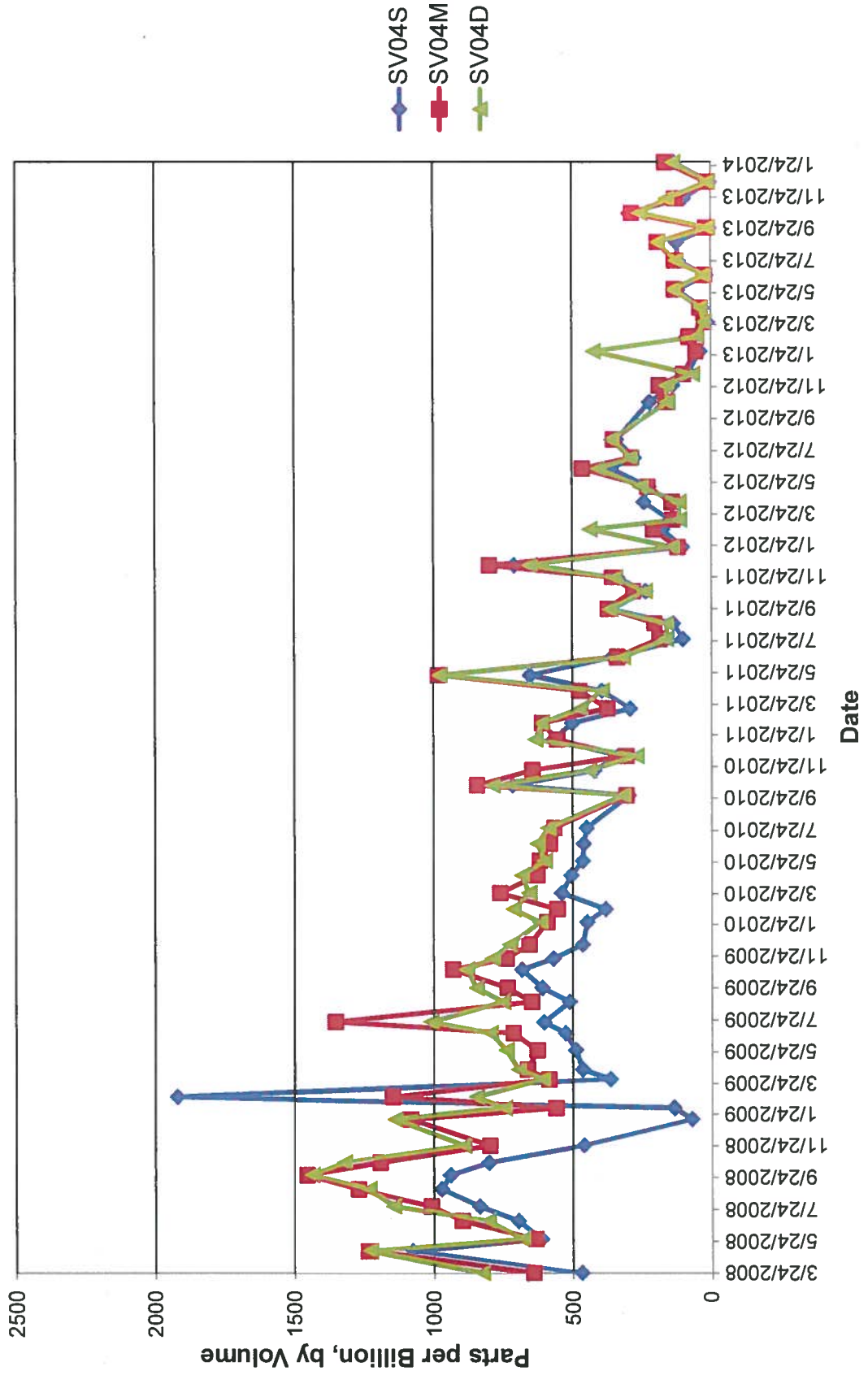


Table 4
Soil Vapor Results for SV05
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Date | SV05S | SV05M | SV05D |
|------------|-----------------|-----------------|-----------------|
| 3/24/2008 | 1295 | 716 | 697 |
| 5/6/2008 | 5441 | 4214 | 4012 |
| 5/29/2008 | 6523 | 4636 | 3984 |
| 7/3/2008 | 5195 | 4218 | 3957 |
| 7/31/2008 | 5190 | 3785 | 2894 |
| 9/2/2008 | 6905 | 5581 | 3681 |
| 9/29/2008 | 7149 | 6405 | 3960 |
| 10/23/2008 | 3497 | 3690 | 2518 |
| 11/25/2008 | 3750 | 5221 | 3741 |
| 1/14/2009 | 9519 | 20567 | 12473 |
| 2/5/2009 | 1744 | 1824 | 1638 |
| 2/26/2009 | 7015 | 2820 | 1616 |
| 4/1/2009 | 1178 | 996 | 1179 |
| 4/20/2009 | 1209 | 1146 | 1326 |
| 5/27/2009 | 1120 | 1054 | 1123 |
| 6/29/2009 | 1055 | 1061 | 1131 |
| 7/20/2009 | 1237 | 1296 | 1582 |
| 8/28/2009 | 1776 | 1314 | 1457 |
| 9/24/2009 | 1901 | 1722 | 1906 |
| 10/29/2009 | 1430 | 1507 | 1724 |
| 11/19/2009 | 780 | 2100 | 2715 |
| 12/16/2009 | 210 | 2068 | 3418 |
| 1/28/2010 | 818 | 976 | 1227 |
| 2/22/2010 | 487 | 1453 | 2234 |
| 3/25/2010 | 1028 | 1473 | 1484 |
| 4/26/2010 | 398 | 1417 | 1532 |
| 5/26/2010 | 1002 | 980 | 1147 |
| 6/28/2010 | 64900 | 42100 | 25600 |
| 7/28/2010 | 38167 | 46633 | 59433 |
| 9/29/2010 | NC ₁ | NC ₁ | NC ₁ |
| 10/18/2010 | NC ₁ | NC ₁ | NC ₁ |
| 11/16/2010 | NC ₁ | NC ₁ | NC ₁ |
| 12/14/2010 | NC ₁ | NC ₁ | NC ₁ |
| 1/13/2011 | NC ₁ | NC ₁ | NC ₁ |
| 2/15/2011 | NC ₁ | NC ₁ | NC ₁ |
| 3/15/2011 | NC ₁ | NC ₁ | NC ₁ |
| 4/18/2011 | NC ₁ | NC ₁ | NC ₁ |

| Date | SV05S | SV05M | SV05D |
|------------|-----------------|-----------------|-----------------|
| 5/18/2011 | NC ₁ | NC ₁ | NC ₁ |
| 6/22/2011 | NC ₁ | NC ₁ | NC ₁ |
| 7/27/2011 | NC ₁ | NC ₁ | NC ₁ |
| 8/26/2011 | NC ₁ | NC ₁ | NC ₁ |
| 9/22/2011 | NC ₁ | NC ₁ | NC ₁ |
| 10/27/2011 | NC ₁ | NC ₁ | NC ₁ |
| 11/22/2011 | NC ₁ | NC ₁ | NC ₁ |
| 12/16/2011 | NC ₁ | NC ₁ | NC ₁ |
| 1/20/2012 | NC ₁ | NC ₁ | NC ₁ |
| 2/23/2012 | NC ₁ | NC ₁ | NC ₁ |
| 3/13/2012 | NC ₁ | NC ₁ | NC ₁ |
| 4/16/2012 | NC ₁ | NC ₁ | NC ₁ |
| 5/15/2012 | NC ₁ | NC ₁ | NC ₁ |
| 6/19/2012 | NC ₁ | NC ₁ | NC ₁ |
| 7/10/2012 | NC ₁ | NC ₁ | NC ₁ |
| 8/14/2012 | NC ₁ | NC ₁ | NC ₁ |
| 10/24/2012 | NC ₁ | NC ₁ | NC ₁ |
| 11/26/2012 | NC ₁ | NC ₁ | NC ₁ |
| 12/18/2012 | NC ₁ | NC ₁ | NC ₁ |
| 1/31/2013 | NC ₁ | NC ₁ | NC ₁ |
| 2/28/2013 | NC ₁ | NC ₁ | NC ₁ |
| 3/28/2013 | NC ₁ | NC ₁ | NC ₁ |
| 4/25/2013 | NC ₁ | NC ₁ | NC ₁ |
| 5/30/2013 | 215 | 221 | 184 |
| 6/27/2013 | 115 | 233 | 232 |
| 7/25/2013 | 208 | 218 | 322 |
| 8/29/2013 | 63 | 68 | 161 |
| 9/26/2013 | 14 | 29 | 114 |
| 10/24/2013 | 229 | 250 | 201 |
| 11/21/2013 | 94 | 120 | 109 |
| 12/23/2013 | 50 | 622 | 794 |
| 1/15/2014 | 96 | 225000 | 204000 |
| 1/30/2014 | 818 | 150000 | 176000 |

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

Figure 4
Soil Vapor Measurements
SV05

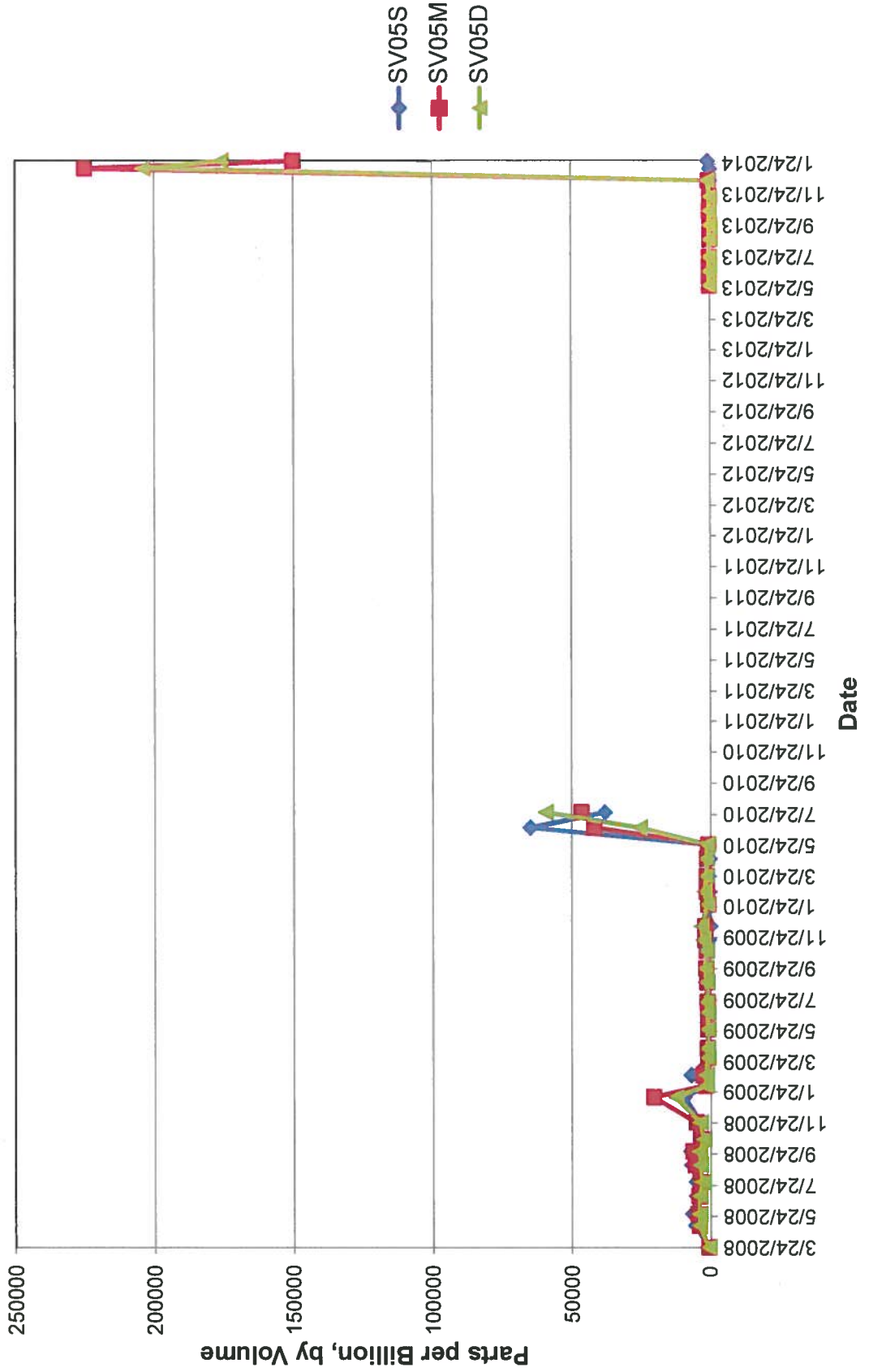


Table 5
Soil Vapor Results for SV06
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Date | SV06S | SV06M |
|------------|-------|-------|
| 3/24/2008 | 18567 | 8861 |
| 5/6/2008 | 13733 | 9828 |
| 5/29/2008 | 13333 | 6932 |
| 7/3/2008 | 10560 | 5075 |
| 7/31/2008 | 10502 | 3373 |
| 9/2/2008 | 11416 | 3030 |
| 9/29/2008 | 10456 | 2772 |
| 10/23/2008 | 8337 | 2255 |
| 11/25/2008 | 10683 | 2143 |
| 1/14/2009 | 32867 | 13533 |
| 2/5/2009 | 7624 | 1128 |
| 2/26/2009 | 7936 | 1160 |
| 4/1/2009 | 6857 | 688 |
| 4/20/2009 | 6872 | 692 |
| 5/27/2009 | 6940 | 535 |
| 6/29/2009 | 6161 | 584 |
| 7/20/2009 | 7120 | 860 |
| 8/28/2009 | 5901 | 1075 |
| 9/24/2009 | 6917 | 1417 |
| 10/29/2009 | 5430 | 1027 |
| 11/19/2009 | 6129 | 2937 |
| 12/16/2009 | 5549 | 2673 |
| 1/28/2010 | 5721 | 559 |
| 2/22/2010 | 4841 | 2775 |
| 3/25/2010 | 5709 | 1043 |
| 4/28/2010 | 5905 | 1997 |
| 5/26/2010 | 4483 | 1261 |
| 6/28/2010 | 4800 | 1539 |
| 7/28/2010 | 4347 | 1693 |
| 9/29/2010 | 1090 | 457 |
| 10/18/2010 | 675 | 1084 |
| 11/16/2010 | 1142 | 413 |
| 12/14/2010 | 2043 | 646 |
| 1/14/2011 | 566 | 1282 |
| 2/15/2011 | 2245 | 352 |
| 3/15/2011 | 2542 | 173 |

| Date | SV06S | SV06M |
|------------|-----------------|-----------------|
| 4/18/2011 | 2412 | 484 |
| 5/18/2011 | 2343 | 613 |
| 6/22/2011 | 221 | 1558 |
| 7/27/2011 | 100 | 909 |
| 8/26/2011 | 210 | 924 |
| 9/22/2011 | 380 | 1385 |
| 10/27/2011 | 189 | 1155 |
| 11/22/2011 | 200 | 1098 |
| 12/16/2011 | 621 | 651 |
| 1/20/2012 | 342 | 537 |
| 2/23/2012 | 943 | 348 |
| 3/13/2012 | 330 | 816 |
| 4/16/2012 | 357 | 756 |
| 5/15/2012 | 699 | 462 |
| 6/19/2012 | 384 | 498 |
| 7/10/2012 | 305 | 373 |
| 8/14/2012 | 476 | 417 |
| 10/24/2012 | 225 | 474 |
| 11/26/2012 | NC ₁ | NC ₁ |
| 12/18/2012 | NC ₁ | NC ₁ |
| 1/31/2013 | NC ₁ | NC ₁ |
| 2/28/2013 | NC ₁ | NC ₁ |
| 3/28/2013 | NC ₁ | NC ₁ |
| 4/25/2013 | NC ₁ | NC ₁ |
| 5/30/2013 | NC ₁ | NC ₁ |
| 6/27/2013 | 143 | 378 |
| 7/25/2013 | 280 | 742 |
| 8/29/2013 | 131 | 1066 |
| 9/26/2013 | 9 | 566 |
| 10/24/2013 | 1291 | 1485 |
| 11/21/2013 | 160 | 322 |
| 12/23/2013 | 3 | 39 |
| 1/30/2014 | 6424 | 4097 |

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

Figure 5
Soil Vapor Measurements
SV06

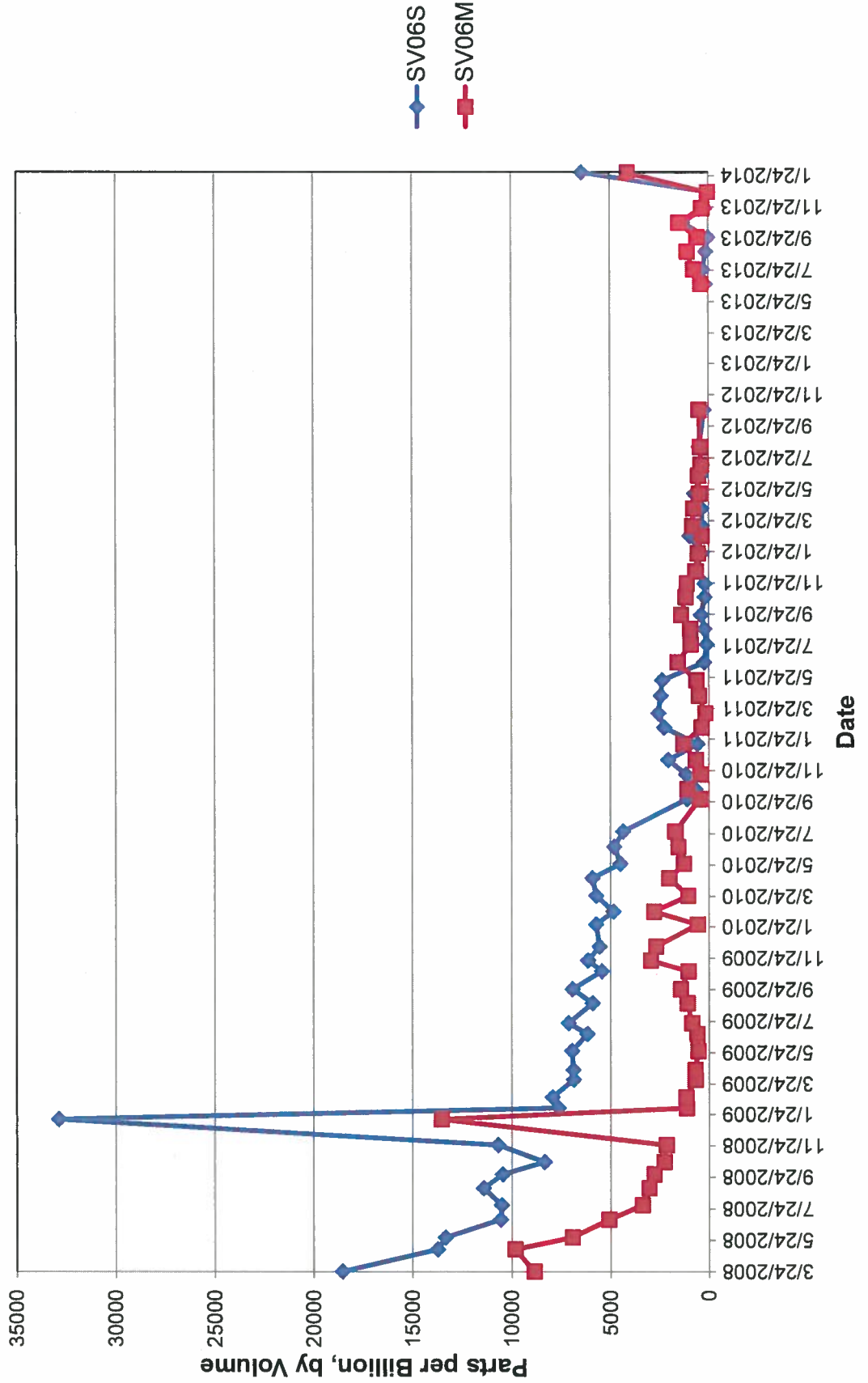


Table 6
Soil Vapor Results for SV07
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Date | SV07S | SV07M | SV07D |
|------------|-------|-------|-------|
| 3/24/2008 | 981 | 1966 | 21667 |
| 5/6/2008 | 5331 | 9047 | 12433 |
| 5/29/2008 | NC | 8698 | 12867 |
| 7/3/2008 | 6074 | 8759 | 16000 |
| 7/31/2008 | 4572 | 6737 | 20367 |
| 9/2/2008 | 4852 | 7576 | 21067 |
| 9/29/2008 | 4786 | 8620 | 22100 |
| 10/23/2008 | 3224 | 5459 | 21733 |
| 11/25/2008 | 1894 | 4069 | 12867 |
| 1/14/2009 | 2707 | 2567 | 10667 |
| 2/5/2009 | 1208 | 1780 | 7718 |
| 2/26/2009 | 7846 | 3623 | 9532 |
| 4/1/2009 | 1227 | 1268 | 12033 |
| 4/20/2009 | 1334 | 1434 | 12700 |
| 5/27/2009 | 1144 | 1353 | 18233 |
| 6/29/2009 | 1107 | 1184 | 9743 |
| 7/20/2009 | 1660 | 1595 | 11667 |
| 8/28/2009 | 1550 | 1207 | 3078 |
| 9/24/2009 | 1716 | 1481 | 2213 |
| 10/29/2009 | 1042 | 1214 | 6121 |
| 11/19/2009 | 657 | 1210 | 5342 |
| 12/16/2009 | 599 | 875 | 12633 |
| 1/28/2010 | 1032 | 872 | 4079 |
| 2/22/2010 | 444 | 728 | 3519 |
| 3/25/2010 | 762 | 886 | 16200 |
| 4/28/2010 | 288 | 689 | 2365 |
| 5/26/2010 | 782 | 731 | 3244 |
| 6/28/2010 | 629 | 628 | 1786 |
| 7/28/2010 | 703 | 801 | 6775 |
| 9/29/2010 | 344 | 363 | 372 |
| 10/18/2010 | 839 | 685 | 712 |
| 11/16/2010 | 701 | 288 | 356 |
| 12/14/2010 | 369 | 335 | 323 |
| 1/13/2011 | 210 | 283 | 451 |
| 2/15/2011 | 550 | 351 | 364 |
| 3/15/2011 | 267 | 255 | 296 |

| Date | SV07S | SV07M | SV07D |
|------------|-----------------|-----------------|-----------------|
| 4/18/2011 | 321 | 326 | 333 |
| 5/18/2011 | 851 | 871 | 900 |
| 6/22/2011 | 279 | 475 | 274 |
| 7/27/2011 | 137 | 342 | 166 |
| 8/26/2011 | 96 | 132 | 135 |
| 9/22/2011 | 298 | 443 | 361 |
| 10/27/2011 | 310 | 537 | 351 |
| 11/22/2011 | 249 | 431 | 311 |
| 12/16/2011 | 424 | 157 | 114 |
| 1/20/2012 | 96 | 356 | 133 |
| 2/23/2012 | 153 | 213 | 148 |
| 3/13/2012 | 68 | 782 | 144 |
| 4/16/2012 | 258 | 708 | 385 |
| 5/15/2012 | 148 | 1877 | 394 |
| 6/19/2012 | 421 | 686 | 483 |
| 7/10/2012 | 288 | 638 | 388 |
| 8/14/2012 | 348 | 680 | 477 |
| 10/24/2012 | 232 | 552 | 278 |
| 11/26/2012 | 88 | 87 | 100 |
| 12/18/2012 | NC ₁ | NC ₁ | NC ₁ |
| 1/31/2013 | NC ₁ | NC ₁ | NC ₁ |
| 2/28/2013 | NC ₁ | NC ₁ | NC ₁ |
| 3/28/2013 | NC ₁ | NC ₁ | NC ₁ |
| 4/25/2013 | NC ₁ | NC ₁ | NC ₁ |
| 5/30/2013 | NC ₁ | NC ₁ | NC ₁ |
| 6/27/2013 | 234 | 676 | 273 |
| 7/25/2013 | 164 | 583 | 232 |
| 8/29/2013 | 173 | 104 | 38 |
| 9/26/2013 | 7 | 253 | 7 |
| 10/24/2013 | 281 | 396 | 228 |
| 11/21/2013 | 122 | 122 | 191 |
| 12/23/2013 | 2 | 8 | 5 |
| 1/30/2014 | 6350 | 6539 | 5180 |

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

Figure 6
Soil Vapor Measurements
SV07

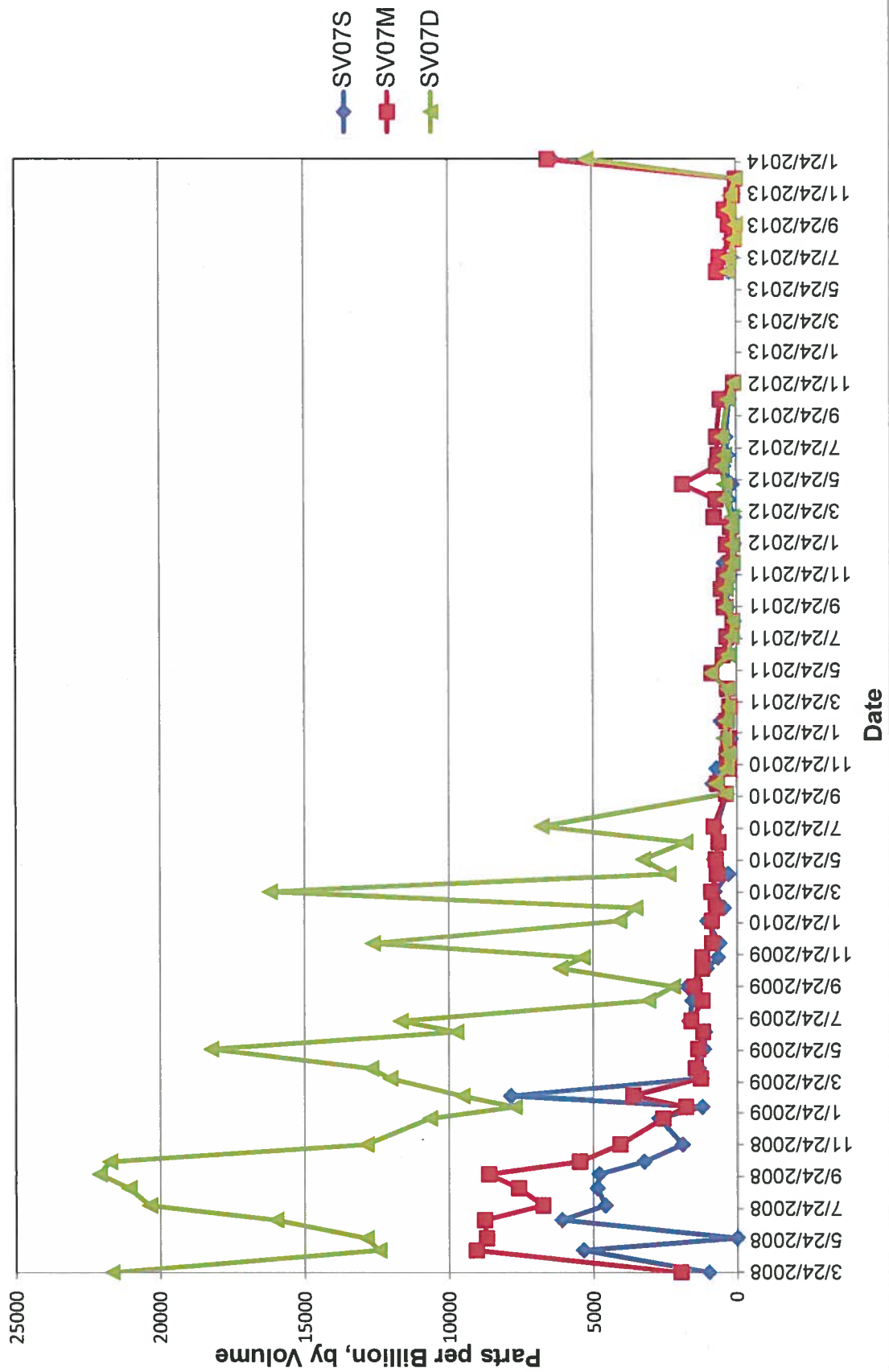


Table 7
Soil Vapor Results for SV08
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Date | SV08S | SV08M | SV08D |
|------------|-------|-------|-------|
| 3/24/2008 | 324 | 353 | 428 |
| 5/6/2008 | 4266 | 3274 | 2286 |
| 5/29/2008 | 541 | 607 | 482 |
| 7/3/2008 | 1764 | 1730 | 1397 |
| 7/31/2008 | 602 | 804 | 684 |
| 9/2/2008 | 1463 | 1605 | 1051 |
| 9/29/2008 | 2397 | 1859 | 1152 |
| 10/23/2008 | 1358 | 1119 | 866 |
| 11/25/2008 | 2780 | 2166 | 1393 |
| 1/14/2009 | 7153 | 6517 | 4762 |
| 2/5/2009 | 1211 | 1263 | 797 |
| 2/26/2009 | 1289 | 1019 | 669 |
| 4/1/2009 | 310 | 416 | 367 |
| 4/20/2009 | 400 | 484 | 454 |
| 5/27/2009 | 258 | 367 | 358 |
| 6/29/2009 | 464 | 491 | 474 |
| 7/20/2009 | 612 | 690 | 727 |
| 8/28/2009 | 450 | 546 | 563 |
| 9/24/2009 | 627 | 726 | 752 |
| 10/29/2009 | 617 | 697 | 762 |
| 11/19/2009 | 779 | 860 | 877 |
| 12/16/2009 | 1157 | 1247 | 1382 |
| 1/28/2010 | 508 | 579 | 621 |
| 2/22/2010 | 690 | 727 | 840 |
| 3/25/2010 | 555 | 573 | 612 |
| 4/28/2010 | 688 | 742 | 756 |
| 5/26/2010 | 477 | 560 | 553 |
| 6/28/2010 | 525 | 607 | 609 |
| 7/28/2010 | 515 | 539 | 610 |
| 9/29/2010 | 295 | 345 | 352 |
| 10/18/2010 | 582 | 1221 | 988 |
| 11/16/2010 | 629 | 612 | 740 |
| 12/14/2010 | 488 | 657 | 471 |
| 1/13/2011 | 556 | 796 | 862 |
| 2/15/2011 | 431 | 485 | 541 |
| 3/15/2011 | 169 | 284 | 304 |

| Date | SV08S | SV08M | SV08D |
|------------|-----------------|-----------------|-----------------|
| 4/18/2011 | 364 | 456 | 489 |
| 5/18/2011 | 909 | 1222 | 1263 |
| 6/22/2011 | 172 | 412 | 266 |
| 7/27/2011 | 99 | 139 | 320 |
| 8/26/2011 | 84 | 157 | 180 |
| 9/22/2011 | 277 | 301 | 309 |
| 10/27/2011 | 250 | 338 | 309 |
| 11/22/2011 | 177 | 268 | 355 |
| 12/16/2011 | 67 | 211 | 162 |
| 1/20/2012 | 169 | 105 | 340 |
| 2/23/2012 | 222 | 222 | 129 |
| 3/13/2012 | 85 | 134 | 391 |
| 4/16/2012 | 485 | 204 | 377 |
| 5/15/2012 | 106 | 157 | 153 |
| 6/19/2012 | 428 | 466 | 418 |
| 7/10/2012 | 291 | 325 | 290 |
| 8/14/2012 | 296 | 285 | 285 |
| 10/24/2012 | 214 | 216 | 400 |
| 11/26/2012 | 53 | 76 | 51 |
| 12/18/2012 | NC ₁ | NC ₁ | NC ₁ |
| 1/31/2013 | NC ₁ | NC ₁ | NC ₁ |
| 2/28/2013 | NC ₁ | NC ₁ | NC ₁ |
| 3/28/2013 | NC ₁ | NC ₁ | NC ₁ |
| 4/25/2013 | NC ₁ | NC ₁ | NC ₁ |
| 5/30/2013 | NC ₁ | NC ₁ | NC ₁ |
| 6/27/2013 | 224 | 235 | 402 |
| 7/25/2013 | 133 | 176 | 132 |
| 8/29/2013 | 16 | 28 | 19 |
| 9/26/2013 | 15 | 2 | 2 |
| 10/24/2013 | 207 | 2013 | 197 |
| 11/21/2013 | 76 | 73 | 88 |
| 12/23/2013 | 4 | 2 | 6 |
| 1/30/2014 | 2170 | 2698 | 2952 |

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

Figure 7
Soil Vapor Measurements
SV08

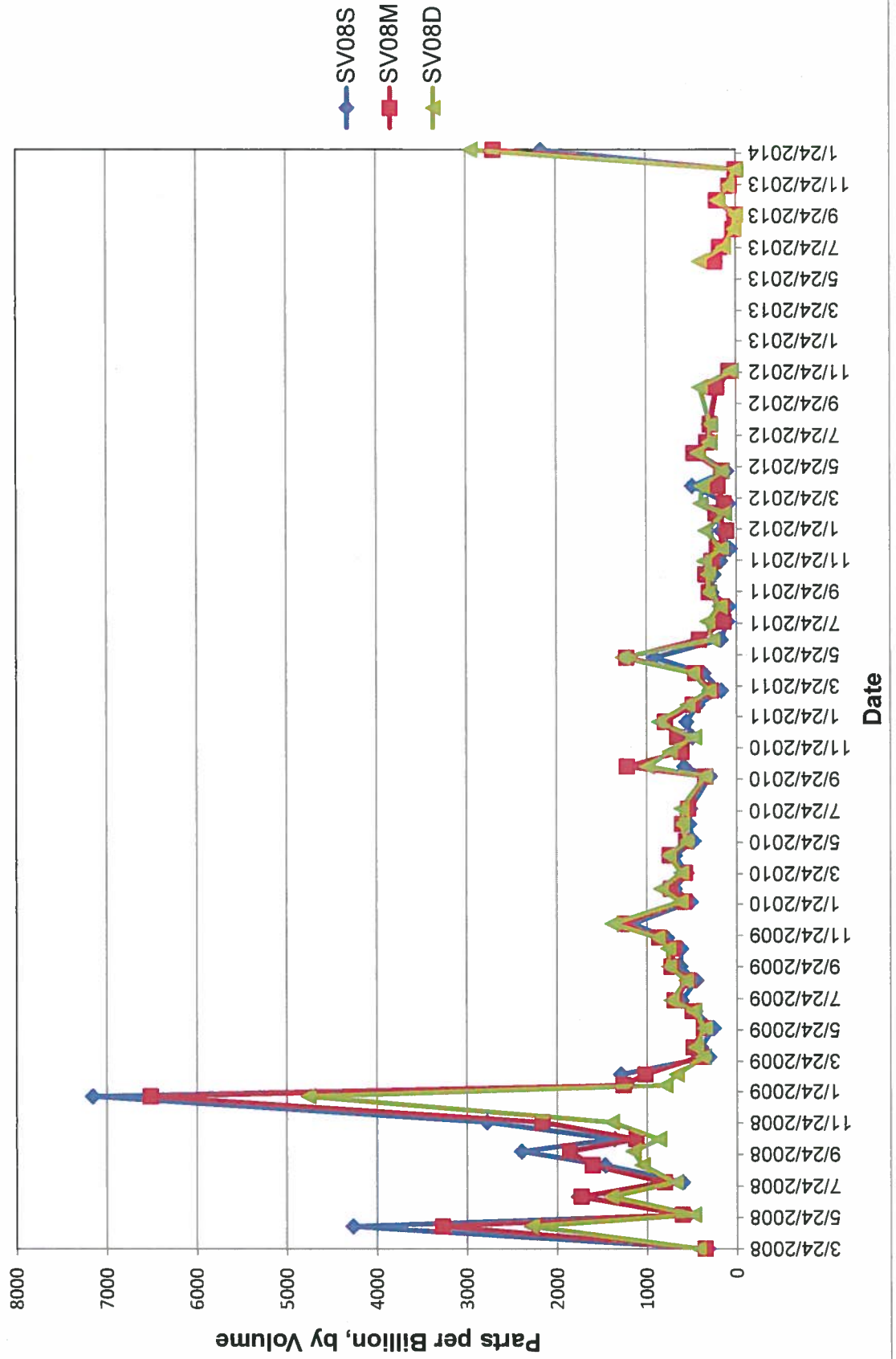


Table 8
Soil Vapor Results for SV09
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Date | SV08S | SV08M | SV08D |
|------------|-------|-------|-----------------|
| 3/24/2008 | 309 | 405 | NC |
| 5/6/2008 | 6462 | 7644 | 654 |
| 5/29/2008 | 878 | 825 | 451 |
| 7/3/2008 | 4190 | 4238 | 2301 |
| 7/31/2008 | 1024 | 961 | 646 |
| 9/2/2008 | 1949 | 1616 | 1047 |
| 9/29/2008 | 2714 | 2058 | 1232 |
| 10/23/2008 | 1458 | 1114 | 673 |
| 11/25/2008 | 2142 | 1855 | 1134 |
| 1/14/2009 | 4851 | 3250 | NC |
| 2/5/2009 | 786 | 457 | NC |
| 2/26/2009 | 930 | 503 | NC |
| 4/1/2009 | 241 | 233 | NC |
| 4/20/2009 | 329 | 361 | NC |
| 5/27/2009 | 234 | 326 | 183 |
| 6/29/2009 | 400 | 425 | 342 |
| 7/20/2009 | 566 | 645 | 704 |
| 8/28/2009 | 434 | 515 | 512 |
| 9/24/2009 | 663 | 708 | 630 |
| 10/29/2009 | 689 | 710 | 709 |
| 11/19/2009 | 861 | 898 | 928 |
| 12/16/2009 | 1084 | 1176 | 1410 |
| 1/28/2010 | 421 | 473 | 510 |
| 2/22/2010 | 659 | 716 | 877 |
| 3/25/2010 | 555 | 625 | 670 |
| 4/28/2010 | 575 | 743 | 858 |
| 5/26/2010 | 461 | 519 | 543 |
| 6/28/2010 | 531 | 590 | 627 |
| 7/28/2010 | 455 | 549 | 630 |
| 9/29/2010 | 304 | 357 | 377 |
| 10/18/2010 | 592 | 700 | 923 |
| 11/16/2010 | 488 | 567 | 607 |
| 12/14/2010 | 437 | 495 | 633 |
| 1/13/2011 | 574 | 572 | 668 |
| 2/15/2011 | 407 | 405 | 586 |
| 3/15/2011 | 261 | 312 | NC ₂ |
| 4/18/2011 | 320 | 365 | NC ₂ |

| Date | SV08S | SV08M | SV08D |
|------------|-------|-------|-----------------|
| 5/18/2011 | 918 | 1102 | NC ₂ |
| 6/22/2011 | 223 | 141 | NC ₂ |
| 7/27/2011 | 181 | 158 | NC ₂ |
| 8/26/2011 | 122 | 100 | NC ₂ |
| 9/22/2011 | 302 | 296 | NC ₂ |
| 10/27/2011 | 270 | 271 | NC ₂ |
| 11/22/2011 | 180 | 243 | NC ₂ |
| 12/16/2011 | 170 | 80 | 379 |
| 1/20/2012 | 80 | 148 | NC ₂ |
| 2/23/2012 | 130 | 135 | 110 |
| 3/13/2012 | 73 | 360 | NC ₂ |
| 4/16/2012 | 344 | 1212 | NC ₂ |
| 5/15/2012 | 137 | 122 | NC ₂ |
| 6/19/2012 | 626 | 518 | NC ₂ |
| 7/10/2012 | 325 | 298 | NC ₂ |
| 8/14/2012 | 339 | 350 | NC ₂ |
| 10/24/2012 | 204 | 335 | 208 |
| 11/26/2012 | 72 | 60 | 78 |
| 12/18/2012 | 63 | 83 | 87 |
| 1/31/2013 | 16 | 13 | 66 |
| 2/28/2013 | 58 | 20 | 133 |
| 3/28/2013 | 47 | 37 | 14 |
| 4/25/2013 | 42 | 42 | 59 |
| 5/30/2013 | 226 | 189 | 184 |
| 6/27/2013 | 38 | 39 | 47 |
| 7/25/2013 | 110 | 119 | 184 |
| 8/29/2013 | 8 | 39 | 23 |
| 9/26/2013 | 0 | 3 | 2 |
| 10/24/2013 | 200 | 170 | 167 |
| 11/21/2013 | 89 | 127 | 133 |
| 12/23/2013 | 13 | 8 | 2 |
| 1/30/2014 | 1488 | 1963 | 2408 |

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

Figure 8
Soil Vapor Measurements
SV09

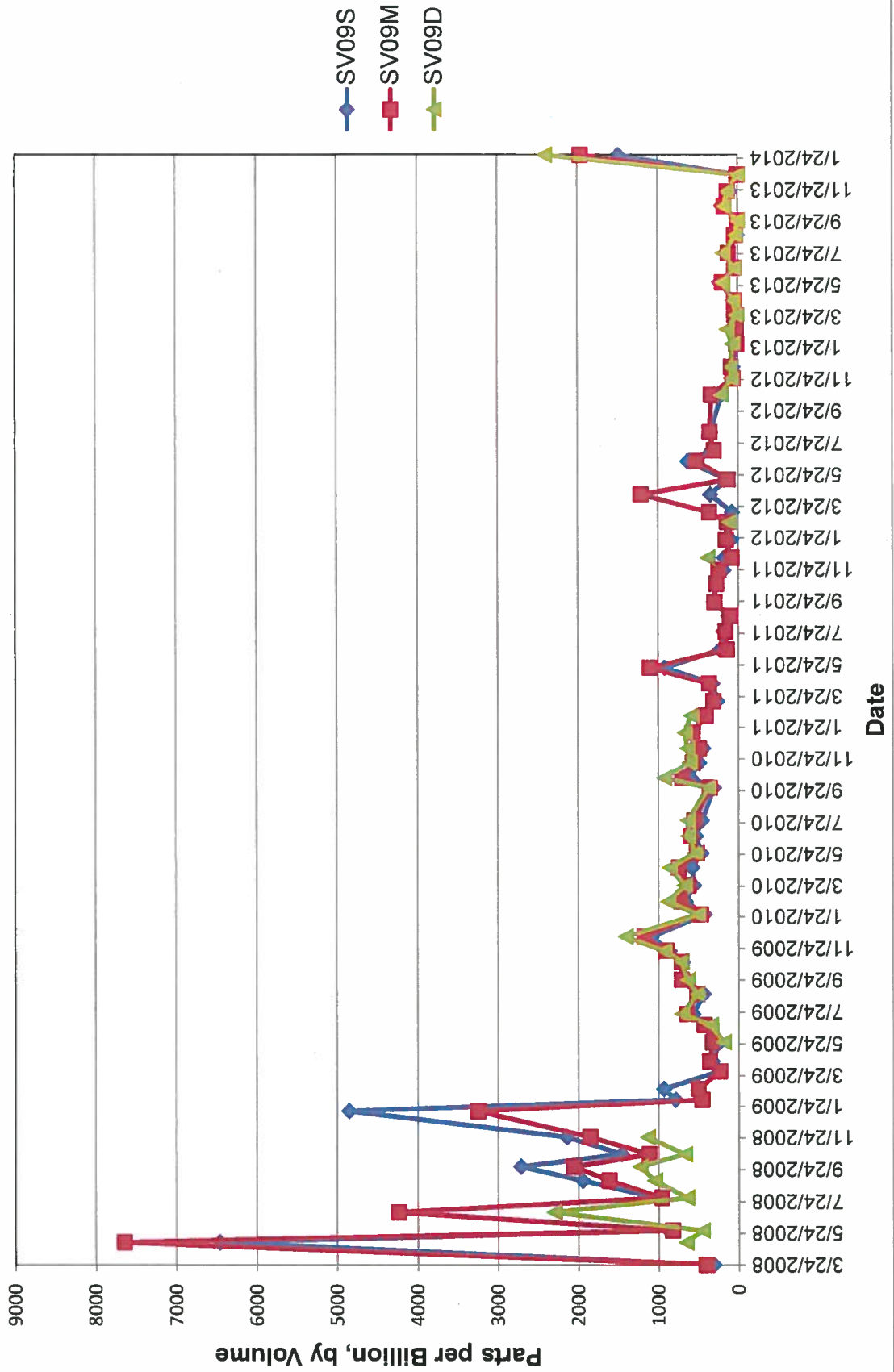


Table 9
Soil Vapor Results for SV10
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Date | SV10S | SV10D |
|------------|-------|-------|
| 3/24/2008 | 246 | 158 |
| 5/6/2008 | 5368 | 3713 |
| 5/29/2008 | 521 | 316 |
| 7/3/2008 | 3212 | 1677 |
| 7/31/2008 | 855 | 443 |
| 9/2/2008 | 1410 | 848 |
| 9/29/2008 | 2266 | 1205 |
| 10/23/2008 | 1043 | 646 |
| 11/25/2008 | 1825 | 860 |
| 1/14/2009 | 5568 | 2867 |
| 2/5/2009 | 957 | 423 |
| 2/26/2009 | 798 | 270 |
| 4/1/2009 | 194 | 135 |
| 4/20/2009 | 241 | 174 |
| 5/27/2009 | 194 | 110 |
| 6/29/2009 | 312 | 258 |
| 7/20/2009 | 340 | 424 |
| 8/28/2009 | 352 | 302 |
| 9/24/2009 | 539 | 479 |
| 10/29/2009 | 546 | 496 |
| 11/19/2009 | 751 | 604 |
| 12/16/2009 | 1093 | 1141 |
| 1/28/2010 | 356 | 333 |
| 2/22/2010 | 711 | 708 |
| 3/25/2010 | 521 | 815 |
| 4/28/2010 | 662 | 695 |
| 5/26/2010 | 420 | 337 |
| 6/28/2010 | 440 | 402 |
| 7/28/2010 | 417 | 994 |
| 9/29/2010 | 288 | 273 |
| 10/18/2010 | 639 | 686 |
| 11/16/2010 | 454 | 625 |
| 12/14/2010 | 385 | 335 |
| 1/13/2011 | 467 | 501 |
| 2/15/2011 | 310 | 302 |

| Date | SV10S | SV10D |
|------------|-------|-------|
| 3/15/2011 | 222 | 246 |
| 4/18/2011 | 288 | 297 |
| 5/18/2011 | 979 | 1077 |
| 6/22/2011 | 103 | 216 |
| 7/27/2011 | 82 | 88 |
| 8/26/2011 | 64 | 97 |
| 9/22/2011 | 260 | 301 |
| 10/27/2011 | 245 | 204 |
| 11/22/2011 | 189 | 195 |
| 12/16/2011 | 141 | 92 |
| 1/20/2012 | 224 | 196 |
| 2/23/2012 | 139 | 112 |
| 3/13/2012 | 387 | 283 |
| 4/16/2012 | 323 | 201 |
| 5/15/2012 | 75 | 87 |
| 6/19/2012 | 319 | 306 |
| 7/10/2012 | 288 | 353 |
| 8/14/2012 | 220 | 225 |
| 10/24/2012 | 164 | 130 |
| 11/26/2012 | 51 | 41 |
| 12/18/2012 | 6 | 36 |
| 1/31/2013 | 11 | 2 |
| 2/28/2013 | 91 | 83 |
| 3/28/2013 | 23 | 20 |
| 4/25/2013 | 31 | 40 |
| 5/30/2013 | 91 | 301 |
| 6/27/2013 | 137 | 301 |
| 7/25/2013 | 100 | 61 |
| 8/29/2013 | 529 | 1621 |
| 9/26/2013 | 0 | 3 |
| 10/24/2013 | 191 | 167 |
| 11/21/2013 | 69 | 76 |
| 12/23/2013 | 7 | 12 |
| 1/30/2014 | 483 | 358 |

ppbv: parts per billion by volume

Figure 9
Soil Vapor Measurements
SV10

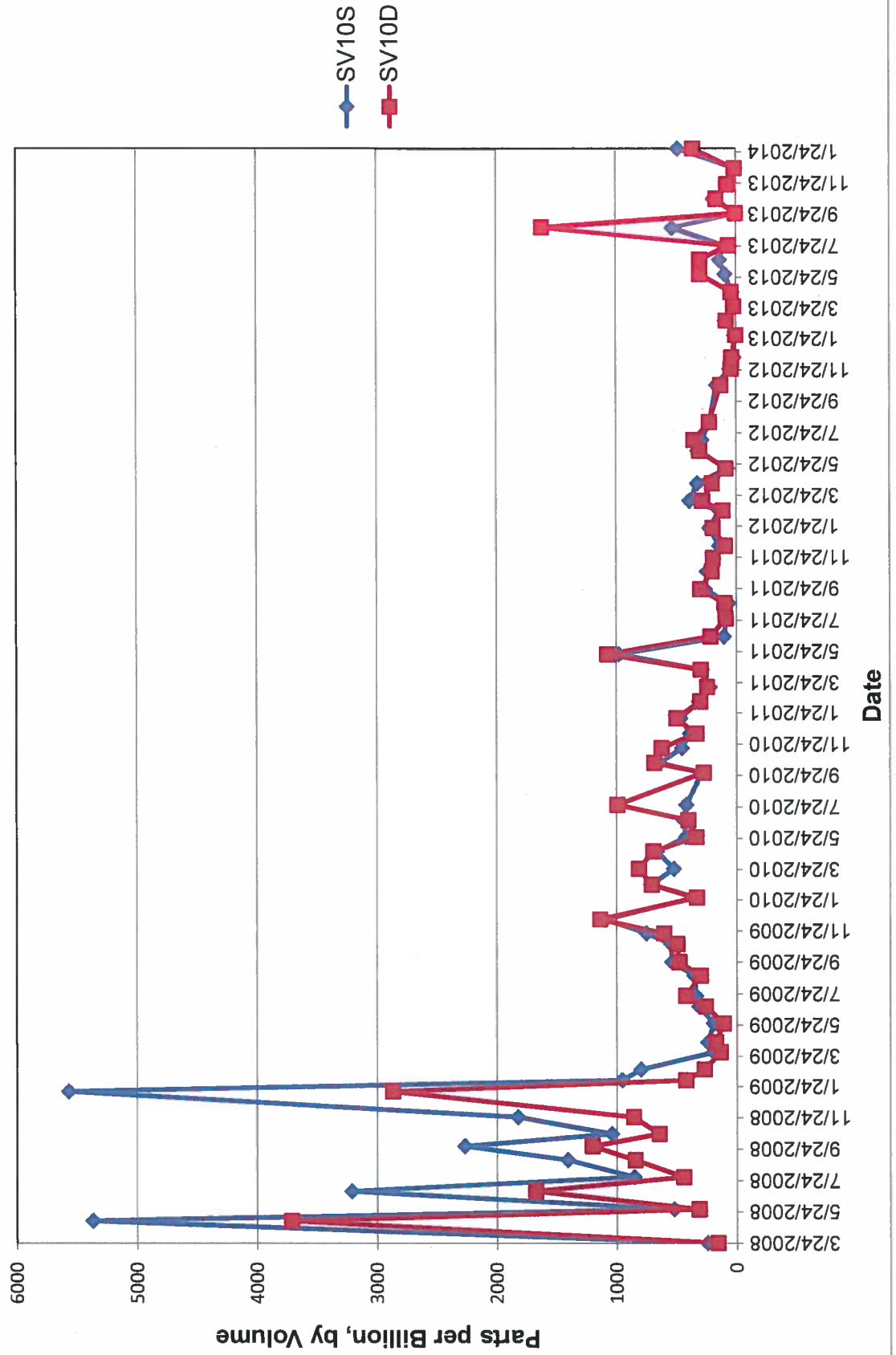


Table 10
Soil Vapor Results for SV11
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Date | SV11M | SV11D |
|------------|-------|-----------------|
| 3/24/2008 | 304 | 419 |
| 5/6/2008 | 2770 | NC ₂ |
| 5/29/2008 | 1507 | NC ₂ |
| 7/3/2008 | 2318 | NC ₂ |
| 7/31/2008 | 1409 | NC ₂ |
| 9/2/2008 | 3459 | NC ₂ |
| 9/29/2008 | 3157 | NC ₂ |
| 10/23/2008 | 1234 | NC ₂ |
| 11/25/2008 | 1238 | NC ₂ |
| 1/14/2009 | 2123 | NC ₂ |
| 2/5/2009 | 425 | NC ₂ |
| 2/26/2009 | 298 | NC ₂ |
| 4/1/2009 | 117 | NC ₂ |
| 4/20/2009 | 333 | NC ₂ |
| 5/27/2009 | 210 | NC ₂ |
| 6/29/2009 | 364 | NC ₂ |
| 7/20/2009 | 462 | NC ₂ |
| 8/28/2009 | 403 | NC ₂ |
| 9/24/2009 | 763 | NC ₂ |
| 10/29/2009 | 734 | NC ₂ |
| 11/19/2009 | 744 | NC ₂ |
| 12/16/2009 | 1142 | NC ₂ |
| 1/28/2010 | 396 | NC ₂ |
| 2/22/2010 | 619 | NC ₂ |
| 3/25/2010 | 847 | NC ₂ |
| 4/28/2010 | 738 | NC ₂ |
| 5/26/2010 | 880 | NC ₂ |
| 6/28/2010 | 444 | NC ₂ |
| 7/28/2010 | 440 | NC ₂ |
| 9/29/2010 | 321 | NC ₂ |
| 10/18/2010 | 720 | NC ₂ |
| 11/16/2010 | 326 | NC ₂ |
| 12/14/2010 | 198 | NC ₂ |
| 1/13/2011 | 418 | NC ₂ |
| 2/15/2011 | 343 | NC ₂ |
| 3/15/2011 | 224 | NC ₂ |

| Date | SV11M | SV11D |
|------------|-------|-----------------|
| 4/18/2011 | 260 | NC ₂ |
| 5/18/2011 | 920 | NC ₂ |
| 6/22/2011 | 183 | NC ₂ |
| 7/27/2011 | 145 | NC ₂ |
| 8/26/2011 | 86 | NC ₂ |
| 9/22/2011 | 333 | NC ₂ |
| 10/27/2011 | 290 | NC ₂ |
| 11/22/2011 | 183 | NC ₂ |
| 12/16/2011 | 75 | NC ₂ |
| 1/20/2012 | 272 | NC ₂ |
| 2/23/2012 | 135 | NC ₂ |
| 3/13/2012 | 144 | NC ₂ |
| 4/16/2012 | 157 | NC ₂ |
| 5/15/2012 | 66 | NC ₂ |
| 6/19/2012 | 347 | NC ₂ |
| 7/10/2012 | 252 | NC ₂ |
| 8/14/2012 | 342 | NC ₂ |
| 10/24/2012 | 163 | 303 |
| 11/26/2012 | 121 | 45 |
| 12/18/2012 | 31 | 35 |
| 1/31/2013 | 0 | 10 |
| 2/28/2013 | 9 | 100 |
| 3/28/2013 | 14 | NC ₂ |
| 4/25/2013 | 44 | NC ₂ |
| 5/30/2013 | 122 | 158 |
| 6/27/2013 | 27 | NC ₂ |
| 7/25/2013 | 138 | NC ₂ |
| 8/29/2013 | 784 | 448 |
| 9/26/2013 | 52 | NC ₂ |
| 10/24/2013 | 321 | NC ₂ |
| 11/21/2013 | 471 | NC ₂ |
| 12/23/2013 | 14 | NC ₂ |
| 1/30/2014 | 374 | NC ₂ |

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

Figure 10
Soil Vapor Measurements
SV11

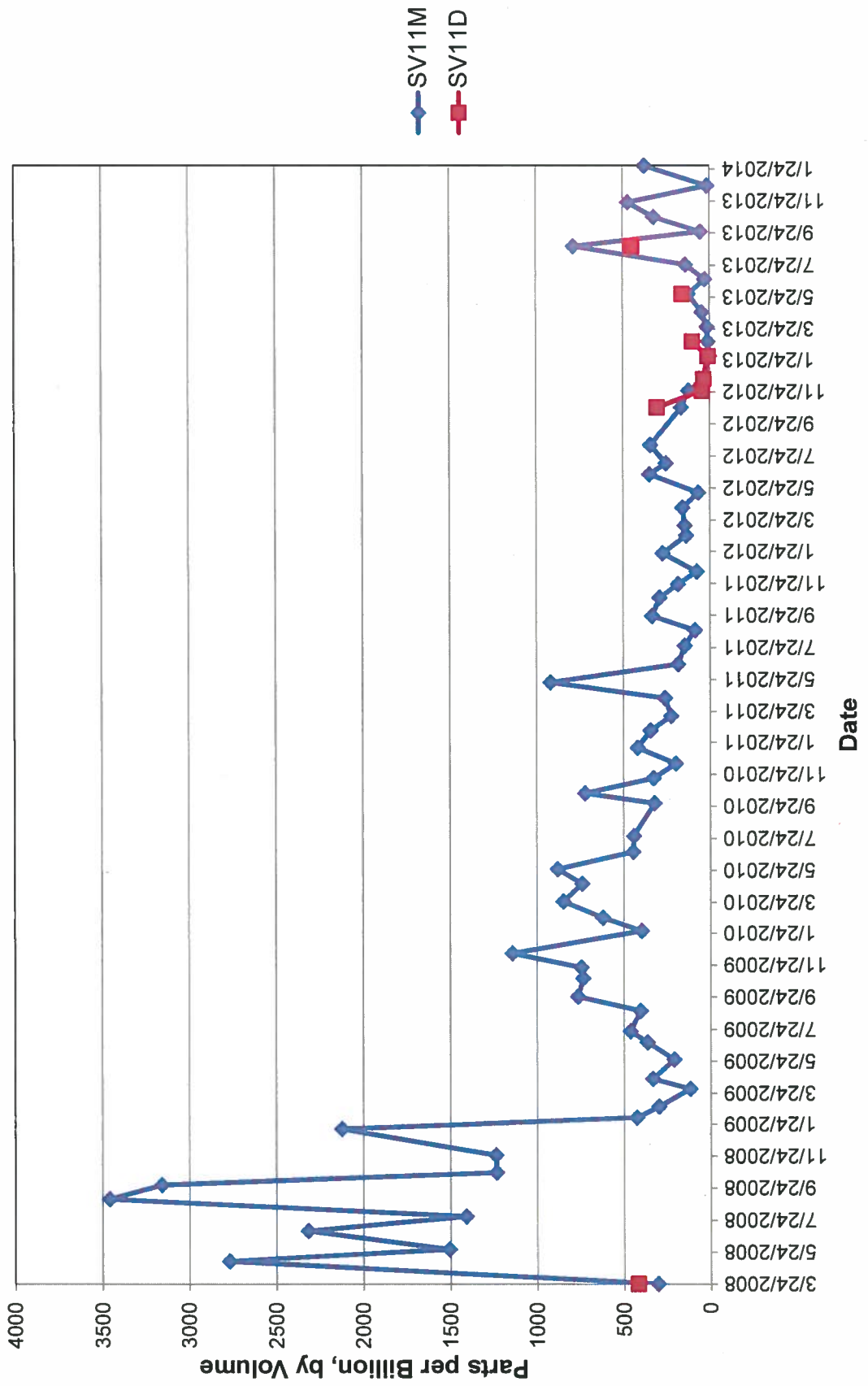


Table 11
Soil Vapor Results for SV12
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Date | SV12S | SV12M | SV12D |
|------------|-------|-------|-------|
| 3/24/2008 | 231 | 183 | 191 |
| 5/6/2008 | 6055 | 5542 | 3161 |
| 5/29/2008 | 3915 | 2840 | 1461 |
| 7/3/2008 | 5374 | 3809 | 2209 |
| 7/31/2008 | 4420 | 4202 | 989 |
| 9/2/2008 | 5132 | 5948 | 2929 |
| 9/29/2008 | 5794 | 5435 | 2544 |
| 10/23/2008 | 2237 | 2067 | 471 |
| 11/25/2008 | 1376 | 2066 | 532 |
| 1/14/2009 | -1 | -1 | 11 |
| 2/5/2009 | 46 | 210 | 226 |
| 2/26/2009 | 463 | 257 | 266 |
| 4/1/2009 | 122 | 120 | 149 |
| 4/20/2009 | 245 | 229 | 244 |
| 5/27/2009 | 162 | 95 | 113 |
| 6/29/2009 | 274 | 245 | 257 |
| 7/20/2009 | 402 | 354 | 510 |
| 8/28/2009 | 360 | 304 | 326 |
| 9/24/2009 | 680 | 621 | 542 |
| 10/29/2009 | 675 | 651 | 597 |
| 11/19/2009 | 1058 | 273 | 280 |
| 12/16/2009 | 311 | 43 | 50 |
| 1/28/2010 | 279 | 281 | 336 |
| 2/22/2010 | 12 | 14 | 104 |
| 3/25/2010 | 265 | 569 | 467 |
| 4/28/2010 | 175 | 401 | 444 |
| 5/26/2010 | 439 | 403 | 319 |
| 6/28/2010 | 341 | 351 | 383 |
| 7/28/2010 | 397 | 280 | 346 |
| 9/29/2010 | 276 | 247 | 283 |
| 10/18/2010 | 722 | 668 | 560 |
| 11/16/2010 | 12 | 146 | 252 |
| 12/14/2010 | 251 | 242 | 272 |
| 1/13/2011 | 333 | 195 | 221 |
| 2/15/2011 | 357 | 331 | 312 |

| Date | SV12S | SV12M | SV12D |
|------------|-------|-------|-------|
| 3/15/2011 | 317 | 339 | 228 |
| 4/18/2011 | 278 | 269 | 285 |
| 5/18/2011 | 943 | 988 | 1005 |
| 6/22/2011 | 274 | 278 | 228 |
| 7/27/2011 | 78 | 84 | 132 |
| 8/26/2011 | 134 | 111 | 80 |
| 9/22/2011 | 279 | 347 | 1631 |
| 10/27/2011 | 237 | 256 | 243 |
| 11/22/2011 | 303 | 280 | 244 |
| 12/16/2011 | 69 | 185 | 154 |
| 1/20/2012 | 103 | 200 | 297 |
| 2/23/2012 | 145 | 148 | 104 |
| 3/13/2012 | 231 | 190 | 423 |
| 4/16/2012 | 116 | 95 | 123 |
| 5/15/2012 | 115 | 98 | 130 |
| 6/19/2012 | 303 | 309 | 315 |
| 7/10/2012 | 337 | 288 | 345 |
| 8/14/2012 | 285 | 258 | 228 |
| 10/24/2012 | 153 | 140 | 135 |
| 11/26/2012 | 21 | 29 | 34 |
| 12/15/2012 | 12 | 23 | 17 |
| 1/31/2013 | 6 | 8 | 7 |
| 2/28/2013 | 98 | 54 | 14 |
| 3/28/2013 | 10 | 16 | 9 |
| 4/25/2013 | 31 | 62 | 35 |
| 5/30/2013 | 73 | 46 | 39 |
| 6/27/2013 | 39 | 32 | 44 |
| 7/25/2013 | 70 | 101 | 66 |
| 8/29/2013 | 75 | 8 | 270 |
| 9/26/2013 | 8 | 8 | 4 |
| 10/24/2013 | 192 | 221 | 198 |
| 11/21/2013 | 140 | 124 | 110 |
| 12/23/2013 | 11 | 4 | 2 |
| 1/30/2014 | 270 | 200 | 264 |

ppbv: parts per billion by volume

Figure 11
Soil Vapor Measurements
SV12

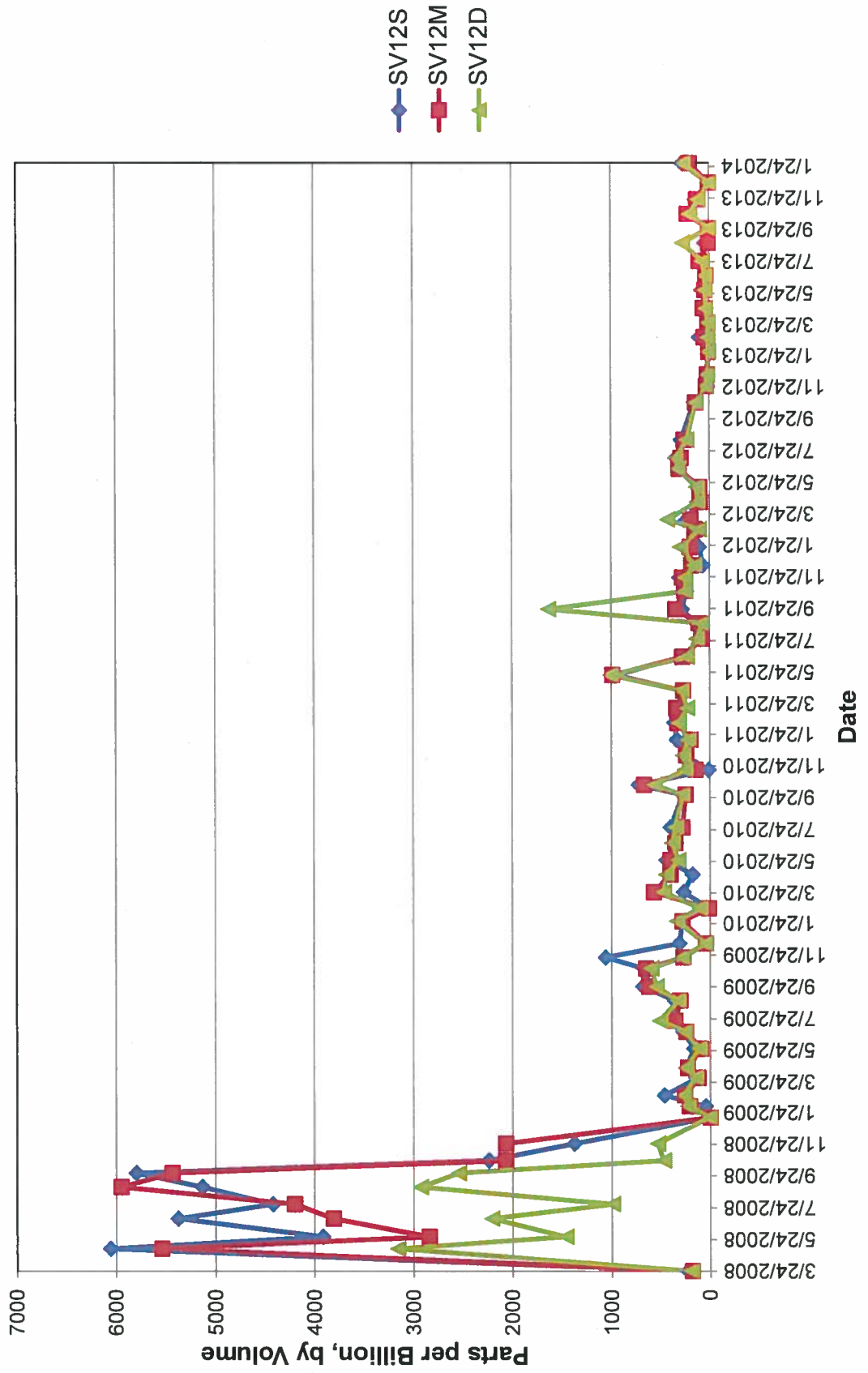


Table 12
Soil Vapor Results for SV13
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Date | SV13S | SV13M | SV13D |
|------------|-------|-------|-------|
| 3/24/2008 | 283 | 385 | 1195 |
| 5/6/2008 | 177 | 258 | 640 |
| 5/29/2008 | 3108 | 2384 | 1792 |
| 7/3/2008 | 3464 | 2566 | 1880 |
| 7/31/2008 | 3469 | 2529 | 1421 |
| 9/2/2008 | 5475 | 4141 | 2931 |
| 9/29/2008 | 4872 | 3471 | 1978 |
| 10/23/2008 | 1504 | 1148 | 838 |
| 11/25/2008 | 2961 | 2176 | 1256 |
| 1/14/2009 | 2832 | 4390 | 8757 |
| 2/5/2009 | 250 | 453 | 815 |
| 2/26/2009 | 713 | 596 | 604 |
| 4/1/2009 | 154 | 230 | 362 |
| 4/20/2009 | 294 | 340 | 492 |
| 5/27/2009 | 202 | 280 | 452 |
| 6/29/2009 | 353 | 387 | 516 |
| 7/20/2009 | 402 | 493 | 667 |
| 8/28/2009 | 360 | 464 | 622 |
| 9/24/2009 | 554 | 648 | 791 |
| 10/29/2009 | 674 | 800 | 1016 |
| 11/19/2009 | 774 | 904 | 1622 |
| 12/16/2009 | 507 | 729 | 2026 |
| 1/28/2010 | 334 | 410 | 542 |
| 2/22/2010 | 254 | 315 | 792 |
| 3/25/2010 | 414 | 483 | 863 |
| 4/28/2010 | 3406 | 4463 | 1736 |
| 5/26/2010 | 438 | 513 | 600 |
| 6/28/2010 | 418 | 503 | 637 |
| 7/28/2010 | 417 | 508 | 661 |
| 9/29/2010 | 258 | 306 | 382 |
| 10/18/2010 | 585 | 632 | 737 |
| 11/16/2010 | 386 | 500 | 626 |
| 12/14/2010 | 422 | 562 | 572 |
| 1/13/2011 | 577 | 825 | 878 |
| 2/15/2011 | 513 | 429 | 565 |

| Date | SV13S | SV13M | SV13D |
|------------|-------|-------|-------|
| 3/15/2011 | 255 | 306 | 434 |
| 4/18/2011 | 318 | 364 | 501 |
| 5/18/2011 | 1374 | 1557 | 1915 |
| 6/22/2011 | 290 | 253 | 370 |
| 7/27/2011 | 159 | 132 | 150 |
| 8/26/2011 | 154 | 151 | 207 |
| 9/22/2011 | 283 | 352 | 390 |
| 10/27/2011 | 206 | 217 | 361 |
| 11/22/2011 | 177 | 264 | 394 |
| 12/16/2011 | 860 | 125 | 107 |
| 1/20/2012 | 69 | 229 | 170 |
| 2/23/2012 | 115 | 116 | 201 |
| 3/13/2012 | 82 | 83 | 282 |
| 4/16/2012 | 122 | 85 | 161 |
| 5/15/2012 | 152 | 103 | 233 |
| 6/19/2012 | 266 | 373 | 382 |
| 7/10/2012 | 252 | 256 | 369 |
| 8/14/2012 | 121 | 287 | 334 |
| 10/24/2012 | 152 | 138 | 195 |
| 11/26/2012 | 59 | 43 | 20 |
| 12/18/2012 | 42 | 2 | 9 |
| 1/31/2013 | 3 | 0 | 2 |
| 2/28/2013 | 25 | 44 | 38 |
| 3/28/2013 | 32 | 7 | 4 |
| 4/25/2013 | 18 | 25 | 43 |
| 5/30/2013 | 39 | 40 | 39 |
| 6/27/2013 | 36 | 35 | 44 |
| 7/25/2013 | 77 | 81 | 148 |
| 8/29/2013 | 0 | 205 | 255 |
| 9/26/2013 | 0 | 3 | 0 |
| 10/24/2013 | 206 | 183 | 186 |
| 11/21/2013 | 83 | 66 | 68 |
| 12/23/2013 | 9 | 6 | 11 |
| 1/30/2014 | 440 | 929 | 1109 |

ppbv: parts per billion by volume

Figure 12
Soil Vapor Measurements
SV13

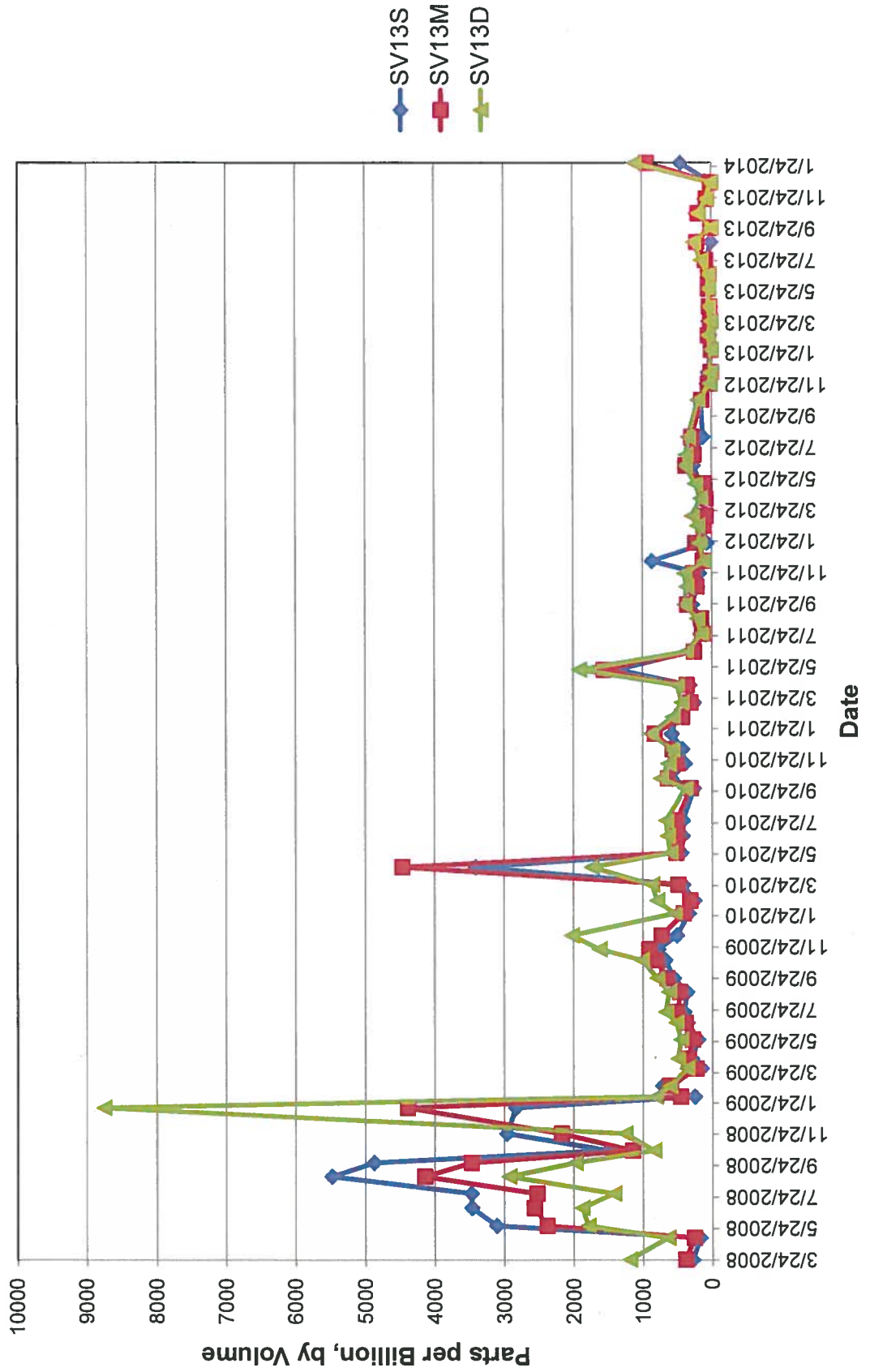


Table 13
Soil Vapor Results for SV14
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Date | SV14S | SV14M | SV14D |
|------------|-------|-------|-------|
| 3/24/2008 | NC | NC | 347 |
| 5/6/2008 | 761 | 2302 | 438 |
| 5/29/2008 | 728 | 2056 | 619 |
| 7/3/2008 | 1898 | 2816 | 620 |
| 7/31/2008 | 698 | 2204 | 871 |
| 9/2/2008 | 868 | 2325 | 960 |
| 9/29/2008 | 480 | 2101 | 1359 |
| 10/23/2008 | 106 | 2477 | 663 |
| 11/25/2008 | 86 | 2666 | 705 |
| 1/14/2009 | 0 | 2977 | 4798 |
| 2/5/2009 | 27 | 3042 | 596 |
| 2/26/2009 | 8 | 3080 | 746 |
| 4/1/2009 | 225 | 3971 | 468 |
| 4/20/2009 | 267 | 3385 | 506 |
| 5/27/2009 | 154 | 3392 | 477 |
| 6/29/2009 | 184 | 2912 | 588 |
| 7/20/2009 | 408 | 3312 | 692 |
| 8/28/2009 | 617 | 3080 | 674 |
| 9/24/2009 | 646 | 3903 | 858 |
| 10/29/2009 | 378 | 3199 | 795 |
| 11/19/2009 | 63 | 3249 | 756 |
| 12/16/2009 | 0 | 3417 | 854 |
| 1/28/2010 | 349 | 3550 | 589 |
| 2/22/2010 | 72 | 2795 | 481 |
| 3/25/2010 | 312 | 4006 | 676 |
| 4/28/2010 | 83 | 3617 | 666 |
| 5/26/2010 | 405 | 4383 | 751 |
| 6/28/2010 | 387 | 5258 | 789 |
| 7/28/2010 | 375 | 5447 | 753 |
| 9/29/2010 | 280 | 334 | 255 |
| 10/18/2010 | 567 | 597 | 498 |
| 11/16/2010 | 152 | 438 | 431 |
| 12/14/2010 | 248 | 176 | 452 |
| 1/13/2011 | 539 | 604 | 473 |
| 2/15/2011 | 359 | 525 | 522 |
| 3/15/2011 | 228 | 217 | 311 |

| Date | SV14S | SV14M | SV14D |
|------------|-----------------|-----------------|-----------------|
| 4/18/2011 | 128 | 460 | 550 |
| 5/18/2011 | 1049 | 1481 | 1767 |
| 6/22/2011 | 242 | 266 | 306 |
| 7/27/2011 | 67 | 109 | 158 |
| 8/26/2011 | 89 | 169 | 254 |
| 9/22/2011 | 88 | 58 | 112 |
| 10/27/2011 | 142 | 148 | 236 |
| 11/22/2011 | 162 | 189 | 257 |
| 12/16/2011 | 61 | 156 | 72 |
| 1/20/2012 | 48 | 105 | 71 |
| 2/23/2012 | 127 | 133 | 180 |
| 3/13/2012 | 140 | 514 | 89 |
| 4/16/2012 | 222 | 68 | 77 |
| 5/15/2012 | 72 | 190 | 124 |
| 6/19/2012 | 356 | 352 | 406 |
| 7/10/2012 | 238 | 241 | 292 |
| 8/14/2012 | 179 | 234 | 237 |
| 10/24/2012 | 123 | 157 | 128 |
| 11/26/2012 | 7 | 13 | 11 |
| 12/18/2012 | 2 | 2 | 5 |
| 1/31/2013 | 0 | 4 | 6 |
| 2/28/2013 | 5 | 518 | 84 |
| 3/28/2013 | 12 | 16 | 5 |
| 4/25/2013 | 14 | 29 | 20 |
| 5/30/2013 | 25 | 112 | 47 |
| 6/27/2013 | 29 | 280 | 39 |
| 7/25/2013 | 58 | 124 | 87 |
| 8/29/2013 | 426 | 53 | 862 |
| 9/26/2013 | 8 | 12 | 4 |
| 10/24/2013 | 170 | 170 | 160 |
| 11/21/2013 | 75 | 70 | 69 |
| 12/23/2013 | NC ₁ | NC ₁ | NC ₁ |
| 1/30/2014 | NC ₁ | NC ₁ | NC ₁ |

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

Figure 13
Soil Vapor Measurements
SV14

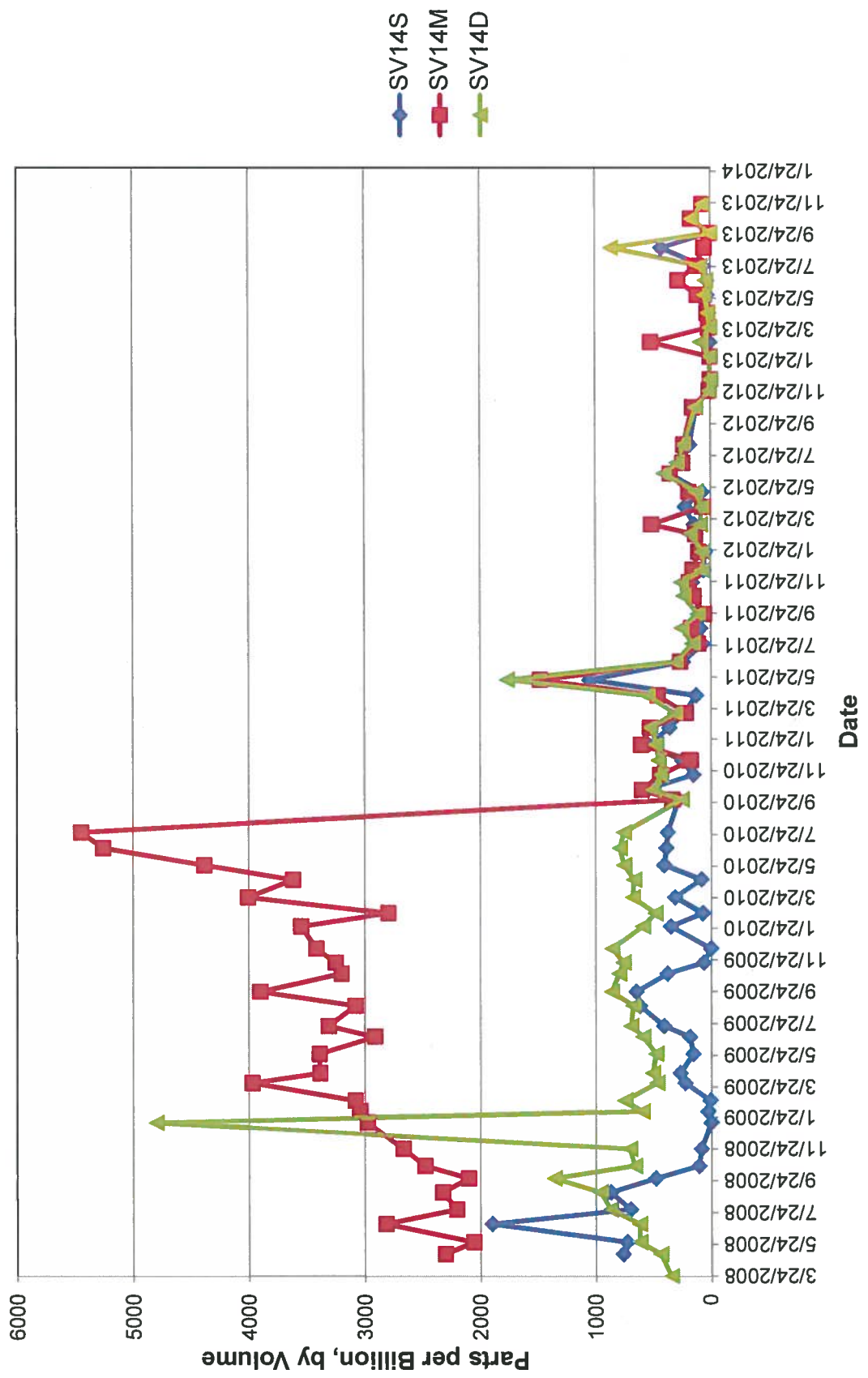


Table 14
Soil Vapor Results for SV15
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Date | SV15S | SV15M | SV15D |
|------------|-------|-----------------|-------|
| 3/24/2008 | 318 | 600 | 415 |
| 5/6/2008 | 831 | 709 | 478 |
| 5/29/2008 | 763 | 2082 | 1135 |
| 7/3/2008 | 1541 | 1073 | 649 |
| 7/31/2008 | 2349 | 2076 | 1540 |
| 9/2/2008 | 2585 | 2087 | 1510 |
| 9/29/2008 | 4746 | 3991 | 2496 |
| 10/23/2008 | 1905 | 1711 | 1116 |
| 11/25/2008 | 2886 | 2483 | 1045 |
| 1/14/2009 | 7650 | 6457 | 4743 |
| 2/5/2009 | 1892 | 1182 | 904 |
| 2/26/2009 | 605 | 448 | 324 |
| 4/1/2009 | 175 | 249 | 247 |
| 4/20/2009 | 288 | 343 | 351 |
| 5/27/2009 | 194 | 251 | 216 |
| 6/29/2009 | 367 | 417 | 882 |
| 7/20/2009 | 383 | 457 | 977 |
| 8/28/2009 | 328 | 388 | 711 |
| 9/24/2009 | 475 | 569 | 759 |
| 10/29/2009 | 472 | 571 | 708 |
| 11/19/2009 | 442 | 483 | 673 |
| 12/16/2009 | 182 | 200 | 541 |
| 1/28/2010 | 346 | 779 | 527 |
| 2/22/2010 | 204 | NC ₂ | 442 |
| 3/25/2010 | 806 | NC ₂ | 542 |
| 4/28/2010 | 451 | NC ₂ | 599 |
| 5/26/2010 | 407 | NC ₂ | 608 |
| 6/28/2010 | 378 | NC ₂ | 592 |
| 7/28/2010 | 353 | NC ₂ | 623 |
| 9/29/2010 | 264 | NC ₂ | 328 |
| 10/18/2010 | 552 | NC ₂ | 677 |
| 11/16/2010 | 550 | NC ₂ | 605 |
| 12/14/2010 | 556 | NC ₂ | 544 |
| 1/13/2011 | 539 | NC ₂ | 625 |
| 2/15/2011 | 439 | NC ₂ | 552 |
| 3/15/2011 | 289 | NC ₂ | 367 |
| 4/18/2011 | 264 | NC ₂ | 368 |

| Date | SV15S | SV15M | SV15D |
|------------|-----------------|-----------------|-----------------|
| 5/18/2011 | 2031 | NC ₂ | 2864 |
| 6/22/2011 | 285 | NC ₂ | 314 |
| 7/27/2011 | 164 | NC ₂ | 193 |
| 8/26/2011 | 131 | NC ₂ | 192 |
| 9/22/2011 | 112 | NC ₂ | 136 |
| 10/27/2011 | 199 | NC ₂ | 196 |
| 11/22/2011 | 150 | NC ₂ | 230 |
| 12/16/2011 | 85 | NC ₂ | 94 |
| 1/20/2012 | 101 | NC ₂ | 36 |
| 2/23/2012 | 271 | NC ₂ | 130 |
| 3/13/2012 | 117 | NC ₂ | 86 |
| 4/16/2012 | 832 | NC ₂ | 398 |
| 5/15/2012 | 142 | NC ₂ | 153 |
| 6/19/2012 | 561 | NC ₂ | 570 |
| 7/10/2012 | 361 | NC ₂ | 454 |
| 8/14/2012 | 303 | NC ₂ | 59 |
| 10/24/2012 | 145 | 69 | 146 |
| 11/26/2012 | 15 | 19 | 12 |
| 12/18/2012 | 10 | 7 | 9 |
| 1/31/2013 | 4 | 2 | 2 |
| 2/28/2013 | 38 | NC ₂ | 85 |
| 3/28/2013 | 11 | NC ₂ | 13 |
| 4/25/2013 | 18 | NC ₂ | 25 |
| 5/30/2013 | NC ₁ | NC ₁ | NC ₁ |
| 6/27/2013 | 59 | NC ₂ | 24 |
| 7/25/2013 | 68 | NC ₂ | 90 |
| 8/29/2013 | 266 | 573 | 710 |
| 9/26/2013 | 14 | NC ₂ | 7 |
| 10/24/2013 | 181 | NC ₂ | 170 |
| 11/21/2013 | 46 | NC ₂ | 43 |
| 12/23/2013 | 18 | NC ₂ | 13 |
| 1/30/2014 | 376 | NC ₂ | 1025 |

ppbv: parts per billion by volume
NC₁ : Not collected due to maintenance work
NC₂ : Not collected due to an obstruction in the vapor line

Figure 14
Soil Vapor Measurements
SV15

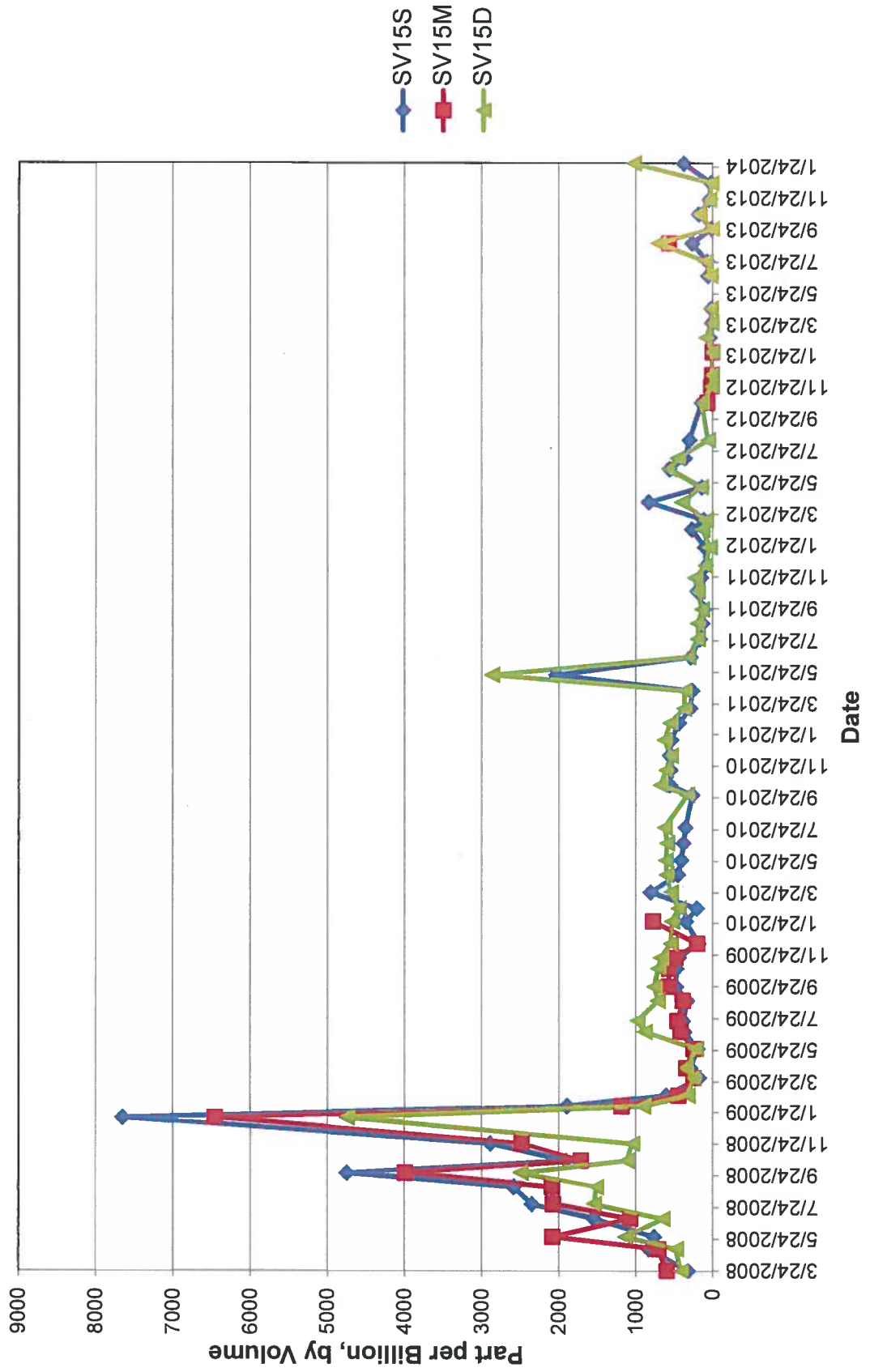


Table 15
Soil Vapor Results for SV16
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Date | SV16S | SV16M | SV16D |
|------------|-------|-------|-------|
| 3/24/2008 | 73 | 81 | 195 |
| 5/6/2008 | 1521 | 561 | 445 |
| 5/29/2008 | 1576 | 636 | 359 |
| 7/3/2008 | 2395 | 1108 | 1022 |
| 7/31/2008 | 936 | 528 | 448 |
| 9/2/2008 | 1300 | 347 | 383 |
| 9/29/2008 | 1461 | 580 | 808 |
| 10/23/2008 | 788 | 143 | 356 |
| 11/25/2008 | 2594 | 106 | 293 |
| 1/14/2009 | 0 | 91 | 361 |
| 2/5/2009 | 1738 | 655 | 294 |
| 2/26/2009 | 70 | 39 | 176 |
| 4/1/2009 | 24 | 32 | 87 |
| 4/20/2009 | 198 | 182 | 238 |
| 5/27/2009 | 25 | 0 | 86 |
| 6/29/2009 | 181 | 154 | 256 |
| 7/20/2009 | 238 | 140 | 245 |
| 8/28/2009 | 178 | 157 | 269 |
| 9/24/2009 | 346 | 284 | 356 |
| 10/29/2009 | 248 | 215 | 326 |
| 11/19/2009 | 216 | 192 | 327 |
| 12/16/2009 | 238 | 116 | 301 |
| 1/28/2010 | 175 | 167 | 288 |
| 2/22/2010 | 106 | 80 | 209 |
| 3/25/2010 | 581 | 214 | 707 |
| 4/28/2010 | 217 | 184 | 447 |
| 5/26/2010 | 1633 | 211 | 489 |
| 6/28/2010 | 1144 | 210 | 307 |
| 7/28/2010 | 1112 | 199 | 300 |
| 9/29/2010 | 302 | 359 | 297 |
| 10/18/2010 | 576 | 562 | 535 |
| 11/16/2010 | 461 | 435 | 467 |
| 12/14/2010 | 198 | 225 | 327 |
| 1/13/2011 | 923 | 492 | 256 |
| 2/15/2011 | 1348 | 386 | 470 |

| Date | SV16S | SV16M | SV16D |
|------------|-------|-------|-------|
| 3/15/2011 | 331 | 235 | 240 |
| 4/18/2011 | 230 | 106 | 190 |
| 5/18/2011 | 2334 | 2654 | 2985 |
| 6/22/2011 | 305 | 330 | 227 |
| 7/27/2011 | 113 | 470 | 98 |
| 8/26/2011 | 765 | 257 | 157 |
| 9/22/2011 | 151 | 219 | 121 |
| 10/27/2011 | 214 | 180 | 155 |
| 11/22/2011 | 183 | 239 | 245 |
| 12/16/2011 | 93 | 121 | 77 |
| 1/20/2012 | 198 | 134 | 95 |
| 2/23/2012 | 195 | 66 | 111 |
| 3/13/2012 | 172 | 154 | 282 |
| 4/16/2012 | 1280 | 226 | 780 |
| 5/15/2012 | 247 | 159 | 116 |
| 6/19/2012 | 89 | 67 | 570 |
| 7/10/2012 | 199 | 152 | 340 |
| 8/14/2012 | 155 | 131 | 344 |
| 10/24/2012 | 166 | 91 | 81 |
| 11/26/2012 | 92 | 79 | 11 |
| 12/18/2012 | 4 | 28 | 3 |
| 1/31/2013 | 13 | 5 | 4 |
| 2/28/2013 | 77 | 12 | 51 |
| 3/28/2013 | 21 | 7 | 10 |
| 4/25/2013 | 27 | 28 | 36 |
| 5/30/2013 | 56 | 27 | 28 |
| 6/27/2013 | 51 | 28 | 24 |
| 7/25/2013 | 76 | 62 | 63 |
| 8/29/2013 | 0 | 0 | 0 |
| 9/26/2013 | 2 | 18 | 20 |
| 10/24/2013 | 173 | 145 | 172 |
| 11/21/2013 | 74 | 163 | 67 |
| 12/23/2013 | 5 | 2 | 6 |
| 1/30/2014 | 139 | 102 | 95 |

ppbv: parts per billion by volume

Figure 15
Soil Vapor Measurements
SV16

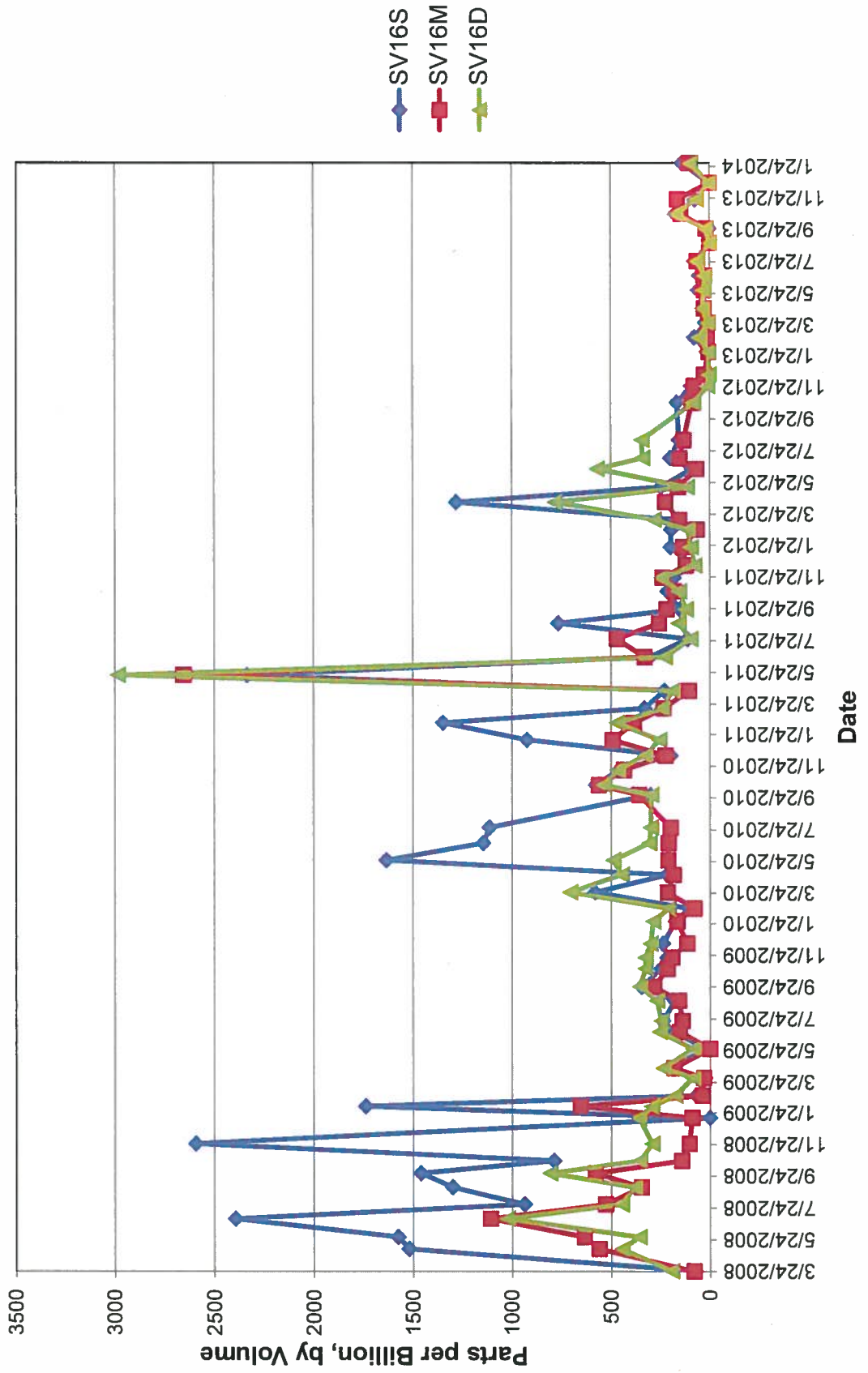


Table 16
Soil Vapor Results for SV17
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Date | SV17S | SV17M | SV17D |
|------------|-----------------|-----------------|-----------------|
| 3/24/2008 | NC | NC | NC |
| 5/6/2008 | NC | NC | NC |
| 5/29/2008 | NC | NC | NC |
| 7/3/2008 | NC | NC | NC |
| 7/31/2008 | NC | NC | NC |
| 9/2/2008 | NC | NC | NC |
| 9/29/2008 | NC | NC | NC |
| 10/23/2008 | NC | NC | NC |
| 11/25/2008 | 967 | 980 | 896 |
| 1/14/2009 | 9419 | 11433 | 13567 |
| 2/5/2009 | 10594 | 12100 | 12933 |
| 2/26/2009 | 8678 | 11367 | 15567 |
| 4/1/2009 | 8397 | 11867 | 15633 |
| 4/20/2009 | 9344 | 10967 | 11000 |
| 5/27/2009 | 7656 | 9032 | 10567 |
| 6/29/2009 | 6046 | 7697 | 8982 |
| 7/20/2009 | 6489 | 7536 | 9093 |
| 8/28/2009 | 5075 | 5971 | 6506 |
| 9/24/2009 | 4882 | 5345 | 5290 |
| 10/29/2009 | 5158 | 5709 | 8051 |
| 11/19/2009 | 4031 | 4441 | 5115 |
| 12/16/2009 | 2550 | 2564 | 2840 |
| 1/28/2010 | 1866 | 2367 | 2497 |
| 2/22/2010 | 2304 | 2793 | 2846 |
| 3/25/2010 | 1488 | 1853 | 1865 |
| 4/28/2010 | 1442 | 1797 | 2072 |
| 5/26/2010 | 1240 | 1445 | 1637 |
| 6/28/2010 | 1405 | 1483 | 1773 |
| 7/28/2010 | 2035 | 2238 | 3745 |
| 9/29/2010 | NC ₁ | NC ₁ | NC ₁ |
| 10/18/2010 | NC ₁ | NC ₁ | NC ₁ |
| 11/16/2010 | NC ₁ | NC ₁ | NC ₁ |
| 12/14/2010 | NC ₁ | NC ₁ | NC ₁ |
| 1/13/2011 | NC ₁ | NC ₁ | NC ₁ |
| 2/15/2011 | NC ₁ | NC ₁ | NC ₁ |
| 3/15/2011 | NC ₁ | NC ₁ | NC ₁ |
| 4/18/2011 | NC ₁ | NC ₁ | NC ₁ |

| Date | SV17S | SV17M | SV17D |
|------------|-----------------|-----------------|-----------------|
| 5/18/2011 | NC ₁ | NC ₁ | NC ₁ |
| 6/22/2011 | NC ₁ | NC ₁ | NC ₁ |
| 7/27/2011 | NC ₁ | NC ₁ | NC ₁ |
| 8/26/2011 | NC ₁ | NC ₁ | NC ₁ |
| 9/22/2011 | NC ₁ | NC ₁ | NC ₁ |
| 10/27/2011 | NC ₁ | NC ₁ | NC ₁ |
| 11/22/2011 | NC ₁ | NC ₁ | NC ₁ |
| 12/16/2011 | NC ₁ | NC ₁ | NC ₁ |
| 1/20/2012 | NC ₁ | NC ₁ | NC ₁ |
| 2/23/2012 | NC ₁ | NC ₁ | NC ₁ |
| 3/13/2012 | NC ₁ | NC ₁ | NC ₁ |
| 4/16/2012 | NC ₁ | NC ₁ | NC ₁ |
| 5/15/2012 | NC ₁ | NC ₁ | NC ₁ |
| 6/19/2012 | NC ₁ | NC ₁ | NC ₁ |
| 7/10/2012 | NC ₁ | NC ₁ | NC ₁ |
| 8/14/2012 | NC ₁ | NC ₁ | NC ₁ |
| 10/24/2012 | NC ₁ | NC ₁ | NC ₁ |
| 11/26/2012 | NC ₁ | NC ₁ | NC ₁ |
| 12/18/2012 | NC ₁ | NC ₁ | NC ₁ |
| 1/31/2013 | NC ₁ | NC ₁ | NC ₁ |
| 2/28/2013 | NC ₁ | NC ₁ | NC ₁ |
| 3/28/2013 | NC ₁ | NC ₁ | NC ₁ |
| 4/25/2013 | NC ₁ | NC ₁ | NC ₁ |
| 5/30/2013 | NC ₁ | NC ₁ | NC ₁ |
| 6/27/2013 | 274 | NC ₃ | NC ₃ |
| 7/25/2013 | 672 | 837 | 876 |
| 8/29/2013 | 2162 | 2884 | 3069 |
| 9/26/2013 | 1716 | 945 | 1209 |
| 10/24/2013 | 601 | 638 | 648 |
| 11/21/2013 | 3065 | 3349 | 3218 |
| 12/23/2013 | 1243 | 2496 | 3023 |
| 1/30/2014 | 1598 | 2378 | 2980 |

ppbv: parts per billion by volume
NC : Not collected
NC₁ : Not collected due to maintenance work
NC₃ : Not collected due to insufficient tedlar bags

Figure 16
Soil Vapor Measurements
SV17

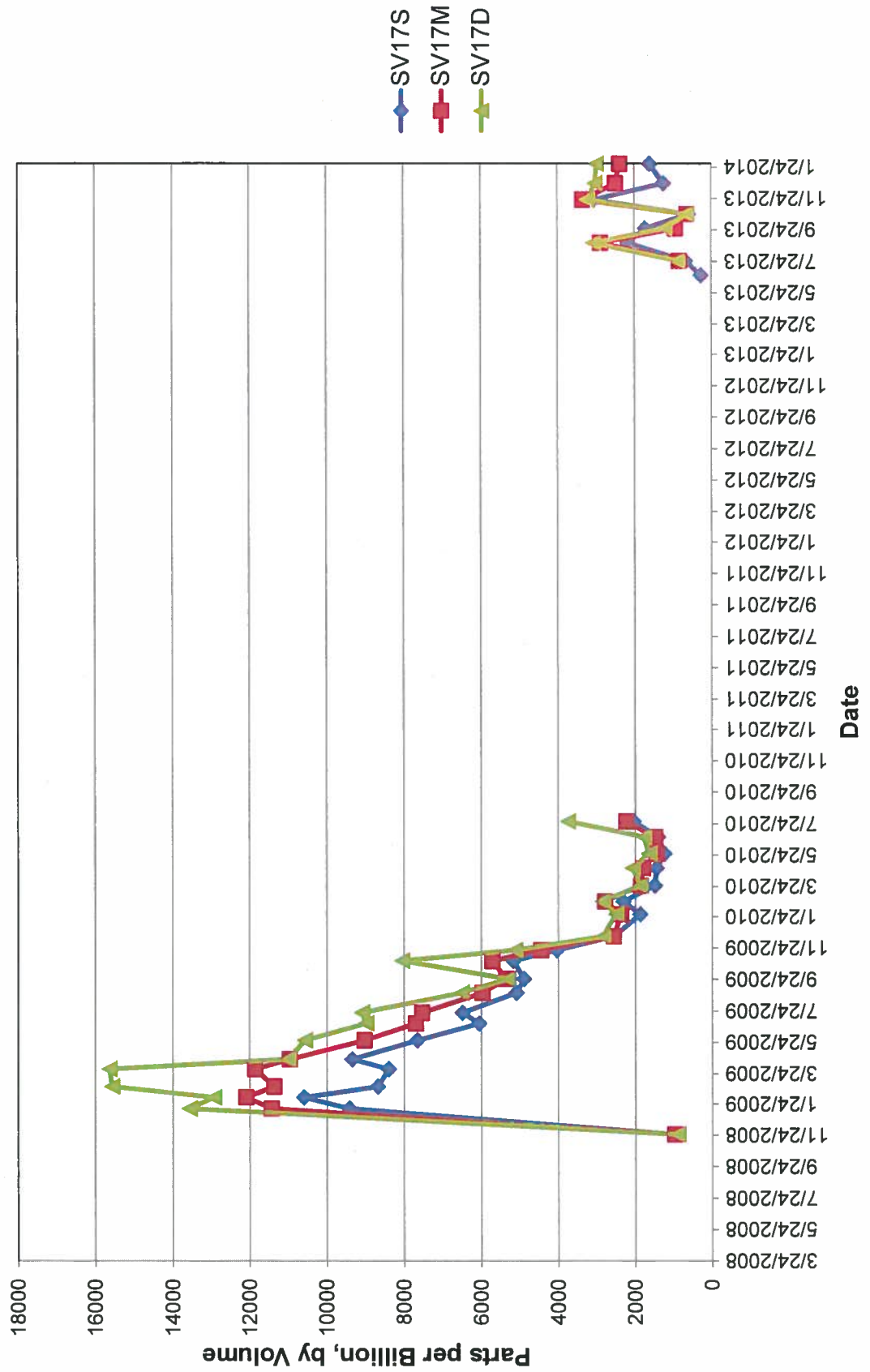


Table 17
Soil Vapor Results for SV18
Soil Vapor Monitoring Letter Report
Red Hill Bulk Fuel Storage Facility

| Date | SV18S | SV18D |
|------------|-------|-------|
| 3/24/2008 | 385 | 662 |
| 5/6/2008 | 1162 | 1033 |
| 5/29/2008 | 1127 | 1224 |
| 7/3/2008 | 1844 | 1287 |
| 7/31/2008 | 1679 | 1380 |
| 9/2/2008 | 1724 | 1792 |
| 9/29/2008 | 2515 | 2509 |
| 10/23/2008 | 1377 | 1481 |
| 11/25/2008 | 1130 | 1262 |
| 1/14/2009 | 364 | 996 |
| 2/5/2009 | 2099 | 1861 |
| 2/26/2009 | 454 | 915 |
| 4/1/2009 | 681 | 820 |
| 4/20/2009 | 772 | 963 |
| 5/27/2009 | 931 | 1146 |
| 6/29/2009 | 900 | 1122 |
| 7/20/2009 | 1180 | 1597 |
| 8/28/2009 | 1447 | 2156 |
| 9/24/2009 | 1362 | 1549 |
| 10/29/2009 | 1341 | 1888 |
| 11/19/2009 | 1817 | 2209 |
| 12/16/2009 | 534 | 776 |
| 1/28/2010 | 693 | 888 |
| 2/22/2010 | 1327 | 1631 |
| 3/25/2010 | 1072 | 1222 |
| 4/28/2010 | 991 | 1575 |
| 5/26/2010 | 845 | 1190 |
| 6/28/2010 | 939 | 1299 |
| 7/28/2010 | 1131 | 1485 |
| 9/29/2010 | 422 | 580 |
| 10/18/2010 | 595 | 839 |
| 11/16/2010 | 577 | 778 |
| 12/14/2010 | 212 | 725 |
| 1/13/2011 | 390 | 512 |
| 2/15/2011 | 400 | 662 |

| Date | SV18S | SV18D |
|------------|-------|-------|
| 3/15/2011 | 450 | 515 |
| 4/18/2011 | 449 | 518 |
| 5/18/2011 | 460 | 742 |
| 6/22/2011 | 405 | 551 |
| 7/27/2011 | 250 | 380 |
| 8/26/2011 | 216 | 382 |
| 9/22/2011 | 241 | 367 |
| 10/27/2011 | 269 | 358 |
| 11/22/2011 | 286 | 403 |
| 12/16/2011 | 237 | 327 |
| 1/20/2012 | 107 | 233 |
| 2/23/2012 | 283 | 326 |
| 3/13/2012 | 190 | 373 |
| 4/16/2012 | 248 | 402 |
| 5/15/2012 | 399 | 594 |
| 6/19/2012 | 684 | 875 |
| 7/10/2012 | 1425 | 992 |
| 8/14/2012 | 824 | 853 |
| 10/24/2012 | 752 | 584 |
| 11/26/2012 | 215 | 185 |
| 12/18/2012 | 171 | 142 |
| 1/31/2013 | 1423 | 1275 |
| 2/28/2013 | 913 | 654 |
| 3/28/2013 | 460 | 572 |
| 4/25/2013 | 266 | 293 |
| 5/30/2013 | 307 | 239 |
| 6/27/2013 | 244 | 264 |
| 7/25/2013 | 1037 | 1197 |
| 8/29/2013 | 5225 | 5326 |
| 9/26/2013 | 3190 | 3132 |
| 10/24/2013 | 2333 | 2309 |
| 11/21/2013 | 5227 | 3157 |
| 12/23/2013 | 8679 | 8606 |
| 1/30/2014 | 1949 | 2116 |

ppbv: parts per billion by volume