# COPC Recommendations
# Long Term Groundwater Monitoring
### Red Hill Bulk Fuel Storage Fuel Facility

## 1. Background

The Red Hill Bulk Storage Fuel Facility (RHSF) is located on federal government land (zoned F1-Military and Federal), in Halawa Heights, approximately 2.5 miles northeast of Pearl Harbor (Figure 1). It is located on a low ridge on the western edge of the Koolau Mountain Range that divides Halawa Valley from Moanalua Valley. The RHSF is bordered on the north by Halawa Correctional Facility and private businesses in the Halawa Industrial Park, on the southwest by the United States of America (U.S.) Coast Guard reservation, on the south by residential neighborhoods, and on the east by Moanalua Valley. A quarry is located less than a quarter mile away to the northwest. The RHSF occupies 144 acres of land and the majority of the site is at an elevation of approximately 200 to 500 feet above mean sea level.

The RHSF contains 18 active and 2 inactive USTs that are operated by Naval Supply Fleet Logistics Center (NAVSUP FLC) Pearl Harbor. Each UST has a capacity of approximately 12.5 million gallons. The USTs contain Jet Fuel Propellant-5 (JP-5), Jet Fuel Propellant-8 (JP-8), and Marine Diesel Fuel (F-76). The current status of each UST is summarized in Table A-1.

The bottoms of the tanks at the RHSF are located approximately 100 feet above the underlying basal aquifer. The groundwater surface is located at an elevation of approximately 16 ft msl. The nearest surface water bodies, the Halawa and Moanalua streams, are approximately 600 feet and 1,800 feet away from the nearest tanks, respectively. However, these are both losing streams that lie at a higher elevation than the aquifer and the tank bottoms.

The underlying aquifer is above the underground injection control (UIC) line, and is currently used as a drinking water source. The nearest water supply source is the Navy's Red Hill Shaft, located approximately 2,400 feet southwest and down-gradient of the tanks. The Red Hill Shaft is designated as the Department of the Navy [DON] drinking water supply Well 2254-01, and provides potable water to the Joint Base Pearl Harbor-Hickam Water System and serves approximately 65,200 military customers. The DON operates the infiltration gallery and Well 2254-01.

## 2. Long-Term Groundwater Monitoring Program

The potential impact of an inadvertent fuel release to the groundwater system is the main risk driver for the RHSF. A long-term groundwater monitoring (LTM) program was implemented at the site in 2005 as part of a Groundwater Protection Plan (DON 2008). Ten wells are currently sampled and analyzed on a quarterly basis (see Figure 2 and Table A-2). For the purpose of this analysis, the wells were grouped into three categories:

- Within the underground access tunnel, approximately 2,400 feet downgradient of the USTs, is a sampling point, RHMW2254-01, that draws water from the infiltration gallery of the Red Hill Shaft. This sampling point monitors the Navy's drinking water source.
- Four groundwater monitoring wells are also located within the underground access tunnel. Three of these wells, wells RHMW01, RHMW02, and RHMW03, are essentially within the tank farm footprint, and well RHMW05 is approximately 1,000 feet down-gradient of the tank farm and approximately 1,500 feet upgradient of the Red Hill Shaft.
- The other five groundwater monitoring wells (wells RHMW04, RHMW06, RHMW07, HDMW2253 03, and OWDFMW01) are located outside of the tunnel system (Figure 2), and generally farther

away from the tank farm. Well HDMW2253-03 is located at the Halawa Correctional Facility (outside of the RHSF); well OWDFMW01 is located at the former Oily Waste Disposal Facility near the RHSF entrance (or "adit") number 3, downgradient of the Navy supply well; and wells RHMW04, RHMW06, and RHMW07 are located on the north side of the RHSF, along the road to the Navy Firing Range.

The LTM program currently analyzes all of these groundwater and supply water samples for the following analyte groups: total petroleum hydrocarbon (TPH)-gasoline range organics (also known as TPH as gasoline [TPH-g]), TPH-diesel range organics (also known as TPH as diesel fuel [TPH-d]), and TPH-residual range organics (also known as TPH-Oil [TPH-o]); volatile organic compounds (VOCs); polynuclear aromatic hydrocarbons (PAHs); and dissolved and total lead. The samples are also analyzed for lead scavengers.

# 3. Screening Criteria

The Hawaii Department of Health (DOH) *Screening for Environmental Hazards at Site with Contaminated Soil and Groundwater* ("EHE" guidance) (DOH 2012) provides the COPC screening criteria used for the LTM program. The EHE Guidance is divided into two volumes: Volume 1 is the user's guide and provides guidance for the identification and evaluation of environmental hazards; and Volume 2 is the background documentation used to develop the Tier 1 EALs.

The DOH Tier 1 EALs are the lowest action level representing the concentration of the contaminant where the threat of human health or the environment is considered to be insignificant under any site condition (DOH 2012). Exceeding the Tier 1 EAL for a specific analyte does not necessarily indicate that the contamination poses significant environmental concerns, only that additional evaluation is warranted (DOH 2012). In general, groundwater action levels are more stringent for sites that threaten a potential source of drinking water. This is particularly true for chemicals that are highly mobile in the subsurface and easily leached from impacted soil. For chemicals that are especially toxic to aquatic life, however, Tier 1 action levels for sites that threaten drinking water resources may be driven by surface water or aquatic habitat protection concerns rather than by drinking water concerns (DOH 2012). Portions of Figure 1-2 and Figure 2-5 of the EHE guidance that are related to groundwater (DOH 2012) are shown in Table 1 below. Table 1 briefly discusses the models and approaches used to develop the Tier 1 EALs for groundwater for each type of environmental hazard.

**Table 1. Summary of Models and Approaches to Develop DOH Groundwater Tier 1 EALs**

| Environmental Hazard | Description | Model and Approach |
|---|---|---|
| Human Health Risk: Contamination of drinking water supplies | Toxicity concerns related to contamination of groundwater that is a current or potential source of drinking water. | Hawai'i DOH promulgated drinking water standards or USEPA Regional Screening Levels model for tapwater. Refer to EHE Guidance Appendix 1 (Section 5.2 & Table D-3 series) and Appendix 2 (DOH 2012). |
| Human Health Risk: Vapor Intrusion | Emission of volatile contaminants from groundwater and intrusion into overlying buildings. | USEPA vapor intrusion spreadsheets. Refer to EHE Guidance Appendix 1 (Section 5.4 & Table C-1a) and Appendix 4 (DOH 2012). |
| Impact to Aquatic Habitats | Discharges of contaminated groundwater and toxicity to aquatic organisms | Hawai'i DOH promulgated surface water standards or USEPA and other references if not available. Refer to EHE Guidance Appendix 1 (Section 5.3 and Table D-4 series) (DOH 2012). |
| Gross contamination | Includes taste and odor concerns for contaminated drinking water supplies, free product, potential, sheens and odors on surface water, general resource degradation, etc. | Massachusetts DEP approach, modified as indicated. Refer to EHE Guidance Appendix 1 (Section 5.5 & Table G series) (DOH 2012). |

The LTM program uses two sets of Tier 1 EALs depending on each monitoring well's distance to the nearest surface water body, as presented in Table A-2 in Appendix A. Wells located within 150 meters of the nearest water body (i.e., Halawa Stream) are compared to EALs in Table D-1a, and wells located greater than 150 meters from Halawa Stream are compared to EALs in Table D-1b. The difference between these two sets of groundwater Tier 1 EALs is that Table D-1a takes into consideration the chronic or long-term toxicity of each analyte to aquatic habitats in the determination of the EAL—that is, contaminant concentrations in groundwater should meet chronic surface water goals at the point that the groundwater discharges into a sensitive aquatic habitat (DOH 2012). In contrast, Table D-1b uses the acute or immediate toxicity of the analyte to the aquatic habitat.

Table 2 presents a comparison between the two sets of Tier 1 EALs used in the LTM program for select analytes that have been detected at RHSF. As shown on Table 2, EALs between Table D-1a and D-1b tend to be identical for each environmental hazard type, with the exception of the aquatic habitat impacts showing a significant decrease in the EALs once the site is within 150 meters of a surface water body.

The EHE Guidance (DOH 2012) establishes that the primary purpose of the Tier 1 EALs is to identify contaminants of potential concern at the site. Comparing analyte concentrations to the Tier 1 EALs allows for the narrowing down of COPCs investigated for a site. Assuming that existing data for the site is representative of overall site conditions, further consideration of contaminants that do not exceed Tier 1 EALs is deemed not necessary (DOH 2012). Section 4 below discusses the comparison of historical groundwater LTM results to the appropriate Tier 1 EALs, as well as recommendations to narrowing down the COPCs for the LTM program.

While the analysis in this memo uses the two sets of EALs, for consistency with the current LTM program it may be more appropriate at this site to use only the Table D-1b EALs because there are no indications of any completed pathways (and thus no threat) to ecological receptors in nearby water bodies. The nearest surface water body, Halawa Stream, is a losing stream located at a higher elevation than the tanks, which therefore should not be affected by any releases. More importantly, both Halawa and Moanalua streams are losing streams located approximately 100 feet or more above the groundwater table. Therefore, even if a release from Red Hill were to migrate to the groundwater table, current data does not support that groundwater would migrate up to the streams, and as such groundwater impacts would not affect the streams or ecological receptors that use the streams. Accordingly, the EHE guidance states that if "long-term monitoring of groundwater (e.g., two-plus years) adequately demonstrates that a plume is not likely to discharge into a surface water body above chronic goals even though it is within 150m of the body, then acute surface water goals can be used as final cleanup and closure levels" (DOH 2012). Similarly, petroleum plumes in groundwater greater than 150 meters from release site "will never naturally migrate to a surface water body and that this concern does not need to be addressed" (DOH 2012). Therefore, it appears to be more appropriate to compare all of the analytical results to the Table D-1b EALs.

**Table 2. Comparison of Groundwater Tier 1 EALs for Select Analytes in the LTM Program[a]**

| | Table D-1a (<150m to Surface Water Body) | | | | | | Table D-1b (>150m to Surface Water Body) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analytes | Groundwater Tier 1 EAL (ug/L) | Basis | Gross Contamination (Taste & Odors, etc.) Table G-1 | Drinking Water Toxicity Table D-3a | Vapor Intrusion Into Buildings Table C-1a | Aquatic Habitat Impacts (chronic) Table D-4a | Groundwater Tier 1 EAL (ug/L) | Basis | Gross Contamination (Taste & Odors, etc.) Table G-1 | Drinking Water Toxicity Table D-3a | Vapor Intrusion Into Buildings Table C-1a | Aquatic Habitat Impacts (acute) Table D-4a |
| Benzene | 5.0E+00 | Drinking Water Toxicity | 1.7E+02 | 5.0E+00 | 1.9E+03 | 4.6E+01 | 5.0E+00 | Drinking Water Toxicity | 1.7E+02 | 5.0E+00 | 1.9E+03 | 1.7E+03 |
| Bromodichloromethane | 1.2E-01 | Drinking Water Toxicity | 5.0E+04 | 1.2E-01 | 9.8E+01 | 3.2E+03 | 1.2E-01 | Drinking Water Toxicity | 5.0E+04 | 1.2E-01 | 9.8E+01 | 1.1E+04 |
| Dichloropropene, 1,3- | 4.3E-01 | Drinking Water Toxicity | 5.0E+04 | 4.3E-01 | 5.5E+02 | 1.2E+02 | 4.3E-01 | Drinking Water Toxicity | 5.0E+04 | 4.3E-01 | 5.5E+02 | 2.6E+02 |
| Ethylbenzene | 3.0E+01 | Gross Contamination | 3.0E+01 | 7.0E+02 | 6.6E+04 | 2.9E+02 | 3.0E+01 | Gross Contamination | 3.0E+01 | 7.0E+02 | 6.6E+04 | 4.3E+02 |
| Lead | 5.6E+00 | Aquatic Habitat Goal | 5.0E+04 | 1.5E+01 | | 5.6E+00 | 1.5E+01 | Drinking Water Toxicity | 5.0E+04 | 1.5E+01 | | 2.9E+01 |
| Methylene chloride | 4.8E+00 | Drinking Water Toxicity | 9.1E+03 | 4.8E+00 | 3.9E+03 | 2.2E+03 | 4.8E+00 | Drinking Water Toxicity | 9.1E+03 | 4.8E+00 | 3.9E+03 | 1.1E+04 |
| Methylnaphthalene, 1- | 2.1E+00 | Aquatic Habitat Goal | 1.0E+01 | 4.7E+00 | 2.5E+04 | 2.1E+00 | 4.7E+00 | Drinking Water Toxicity | 1.0E+01 | 4.7E+00 | 2.5E+04 | 3.0E+02 |
| Methylnaphthalene, 2- | 2.1E+00 | Aquatic Habitat Goal | 1.0E+01 | 2.4E+01 | 2.5E+04 | 2.1E+00 | 1.0E+01 | Gross Contamination | 1.0E+01 | 2.4E+01 | 2.5E+04 | 3.0E+02 |
| Naphthalene | 1.7E+01 | Drinking Water Toxicity | 2.1E+01 | 1.7E+01 | 2.8E+04 | 2.4E+01 | 1.7E+01 | Drinking Water Toxicity | 2.1E+01 | 1.7E+01 | 2.8E+04 | 7.7E+02 |
| Toluene | 4.0E+01 | Gross Contamination | 4.0E+01 | 1.0E+03 | 5.3E+05 | 1.3E+02 | 4.0E+01 | Gross Contamination | 4.0E+01 | 1.0E+03 | 5.3E+05 | 5.8E+03 |
| TPH (gasolines) | 1.0E+02 | Gross Contamination | 1.0E+02 | 1.0E+02 | (Use soil gas) | 5.0E+02 | 1.0E+02 | Gross Contamination | 1.0E+02 | 1.0E+02 | (Use soil gas) | 5.0E+03 |
| TPH (middle distillates) | 1.0E+02 | Gross Contamination | 1.0E+02 | 1.9E+02 | (Use soil gas) | 6.4E+02 | 1.0E+02 | Gross Contamination | 1.0E+02 | 1.9E+02 | (Use soil gas) | 2.5E+03 |
| TPH (residual fuels) | 1.0E+02 | Gross Contamination | 1.0E+02 | 4.4E+03 | | 6.4E+02 | 1.0E+02 | Gross Contamination | 1.0E+02 | 4.4E+03 | | 2.5E+03 |
| Trichloroethylene | 5.0E+00 | Drinking Water Toxicity | 3.1E+02 | 5.0E+00 | 6.1E+02 | 3.6E+02 | 5.0E+00 | Drinking Water Toxicity | 3.1E+02 | 5.0E+00 | 6.1E+02 | 7.0E+02 |
| Xylenes | 2.0E+01 | Gross Contamination | 2.0E+01 | 1.0E+04 | 1.5E+05 | 1.0E+02 | 2.0E+01 | Gross Contamination | 2.0E+01 | 1.0E+04 | 1.5E+05 | 1.0E+03 |

[a] Table adapted from DOH Tier 1 EALs Table D-1a and Table D-1b (DOH 2012).

# 4. Analysis of GW LTM Program Results and Recommended Revised Analyte List

Summary statistics for all of the analytical results are presented in Tables A-3 through A-6, the summary statistics for the lead scavengers presented separately in Tables A-7 through A-9, and the summary statistics for analytical results within the last 5 years are presented in Tables A-10 through A-12.

The DOH Office of Hazard Evaluation and Emergency Response (HEER) Technical Guidance Manual (TGM) recommends specific analytes to be tested for sites with residual petroleum contamination (DOH 2009). Table 9-5 of the DOH HEER TGM list recommended target analytes for middle distillates (e.g., diesel, kerosene, Stoddard solvent, heating fuels, jet fuels, etc.) for groundwater including TPH, benzene, toluene, ethylbenzene, and xylenes (BTEX), naphthalene, and methylnaphthalenes (1- and 2-). Recommended target analytes for gasolines are TPH, BTEX, naphthalene, methyl tert-butyl ether and appropriate additives and breakdown products (e.g., tert-butyl alcohol, lead, ethanol, etc.) (DOH 2009). The site currently stores JP-5, JP-8 and F-76 (marine diesel) fuels, and has not stored leaded fuels since 1968. The existing LTM program includes the analytes listed in the Table 9-5 of the DOH HEER TGM (DOH 2009) for gasolines and middle distillates, plus additional VOCs and PAHs. These additional VOCs and PAHs are not related to the fuels stored in the tanks, but may have been included in the LTM analyte list because these analytes are part of the list of analytes often reported by the laboratories for the VOC and PAH analytical methods. Therefore, if these additional VOCs and PAHs are not associated with fuels stored on-site, have not been detected at the site, and are not known to be degradation products of those analytes detected at the site, there is no reason to continue monitoring for them. Based on all of the data described above, Table 3 presents the recommendation for each analyte and discusses the rationale for each recommendation.

The summary statistics (Tables A-3 through A-6 for all results and Tables A-10 through A-12 for results within the last 5 years) for the analytical results show the frequency of detections for each analyte and whether results exceeded the DOH EALs. Analytes that have never been detected or have been detected below EALs consistently are recommended to be removed from the program. During the course of the program, 40 analytes have been detected in at least one monitoring well. However, only ten (10) of these 40 analytes were detected at concentrations exceeding the DOH EALs at least once since 2006, and an additional 9 of the 40 analytes were reported at non-detect concentrations above the DOH EALs since 2006. These 19 analytes are highlighted in Table 3 below.

Four (4) of the 10 detect EAL exceedances (i.e., total 1,3-dichloropropene, bromodichloromethane, methylene chloride, and trichloroethylene) are either likely from contamination during the analysis, or were only present at the Oily Waste Disposal Facility, which itself was the far more likely (and down-gradient) source of contamination, based on its historical site use, and especially considering that none of these analytes have been detected in the wells directly below or down-gradient of the tank farm.

The 9 analytes reported as non-detect above EALs (specifically VOCs and PAHs) are likely not present at the site. Many of the VOC analytes are known contaminants from historical agricultural activities, and therefore these VOC analytes are unlikely to be present because there have been no known agricultural activities at the facility. Additionally, several PAHs are unlikely to be present in the groundwater due to the very low solubility properties of heavy molecular weight PAHs.

Lead scavengers (i.e., 1,2-dibromoethane and 1,2-dichloroethane) are also recommended to be removed from the LTM program. Lead scavengers have only been detected at the Oily Waste Disposal Facility monitoring well, and have never been detected above the EAL (see Tables 7 through Table 9). Well OWDFMW01 was installed to investigate the Oily Waste Disposal Facility, not the RHSF. Because these detections were at a different (down-gradient) facility, and because lead scavengers have never been

detected at any of the RHSF-installed wells, RHSF was not the source of these detections. Moreover, fuels stored at the RHSF in recent decades did not have lead additives; the only fuel known to have lead additives (AVGAS) was last stored at the RHSF prior to 1968.

Therefore, of the chemicals analyzed in the LTM program, 10 are recommended to be maintained in the LTM program. These 10 analytes include the six analytes consistently exceeding EALs and four VOCs that have not been detected above EALs but are associated with middle distillate fuels: TPH-g, TPH-d, TPH-o, naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, benzene, toluene, ethylbenzene, and xylenes. This is similar to the DOH HEER TGM Middle Distillate List: TPH, BTEX, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene (DOH 2009, Table 9-5 Target Analytes for Releases of Petroleum Products).

**Table 3. Analyte Recommendations and Rationales**

| Analytical Group/Method | Analyte | Recommend to retain in analytical program? | Rationale |
|---|---|---|---|
| **TPH/8015** | **TPH-d** | **Yes** | **Detected above EAL. Analyte associated with fuels stored on site.** |
| **TPH/8015** | **TPH-g** | **Yes** | **Detected above EAL. Analyte associated with fuels stored on site.** |
| **TPH/8015** | **TPH-o** | **Yes** | **Detected above EAL. Analyte associated with fuels stored on site.** |
| VOC/8260 | 1,1,1-Trichloroethane | No | Not detected throughout LTM program |
| VOC/8260 | 1,1,2-Trichloroethane | No | Not detected throughout LTM program |
| VOC/8260 | 1,1-Dichloroethane | No | Non-detect above EAL. 1,1-Dichloroethane is used mostly as an intermediate in the manufacture of 1,1,1-trichloroethane. Because 1,1,1-trichloroethane was not detected throughout the LTM program, 1,1-dichloroethane is unlikely to be present as well[a]. |
| VOC/8260 | 1,1-Dichloroethylene | No | Detected only once throughout LTM program (at RHMW03), and detected below EAL. This analyte is not associated with fuels stored on-site, and are not known to be degradation products of those analytes detected at the site. |
| VOC/8260 | 1,2,3-Trichloropropane | No | Detected in samples below EALs, with some non-detect above EAL. This analyte is not associated with fuels stored on-site. TCP is an impurity associated with a soil fumigant D-D (a mixture of 1,2-dichloropropane, 1,3-dichloropropene and 2,3-dichloropropene) used to control nematodes on pineapple farms in Hawaii. The site area has no history of pineapple cultivation. There is no known documentation of pineapple agriculture in Halawa Valley or Moanalua Valley[b]. |
| VOC/8260 | 1,2,4-Tricholorobenzene | No | Detected only once throughout LTM program (at RHMW2254), and detected below EAL. This analyte is not associated with fuels stored on-site. |
| VOC/8260 | 1,2-Dibromo-3-chloropropane | No | Non-detect above EAL. DBCP has been used agriculturally as a nematocide[b]. This analyte is not associated with fuels stored on-site. |
| VOC/8260 | 1,2-Dibromoethane | No | Non-detect above EAL. EDB has been used as a soil fumigant used to kill nematodes in pineapple industry[b]. This analyte is not associated with fuels stored on-site. |
| VOC/8260 | 1,2-Dichlorobenzene | No | Not detected throughout LTM program |
| VOC/8260 | 1,2-Dichloroethane | No | Non-detect above EAL. The most common use of 1,2-dichloroethane is in the production of vinyl chloride which is used to make a variety of plastic and vinyl products including polyvinyl chloride (PVC) pipes, furniture and automobile upholstery, wall coverings, housewares, and automobile parts. It is also used to as a solvent and is added to leaded gasoline to remove lead. Vinyl chloride has never been detected in any of the GW samples and PVC is not manufactured in Hawaii. Also leaded gasoline has never been stored within the tanks. It is unlikely that 1,2-dichloroethane is present at the site[c]. This analyte is not associated with fuels stored on-site. |
| VOC/8260 | 1,2-Dichloropropane | No | Not detected throughout LTM program. Soil fumigant used to kill nematodes in pineapple industry[b]. |
| VOC/8260 | 1,3-Dichlorobenzene | No | Not detected throughout LTM program |

| Analytical Group/Method | Analyte | Recommend to retain in analytical program? | Rationale |
|---|---|---|---|
| VOC/8260 | 1,3-Dichloropropene (total of cis/trans) | No | Detected only at the Oily Waste Disposal Facility, and reported as non-detect above EAL in other wells. Soil fumigant used to kill nematodes in pineapple industry[b]. This analyte is not associated with fuels stored on-site. |
| VOC/8260 | 1,4-Dichlorobenzene | No | Not detected throughout LTM program |
| VOC/8260 | Acetone | No | Detected in samples below EALs. This analyte is not associated with fuels stored on-site. |
| **VOC/8260** | **Benzene** | **Yes** | **Detected in samples below EALs. Analyte associated with fuels stored on site.** |
| VOC/8260 | Bromodichloromethane | No | Detected only at the Oily Waste Disposal Facility, and reported as non-detect above EAL in other wells. BDCM, is a chlorination disinfection byproduct, and therefore not associated with petroleum stored at the facility[d]. This analyte is not associated with fuels stored on-site. |
| VOC/8260 | Bromoform | No | Not detected throughout LTM program |
| VOC/8260 | Bromomethane | No | Detected in samples below EALs. This analyte is not associated with fuels stored on-site. |
| VOC/8260 | Carbon Tetrachloride | No | Not detected throughout LTM program |
| VOC/8260 | Chlorobenzene | No | Not detected throughout LTM program |
| VOC/8260 | Chloroethane | No | Not detected throughout LTM program |
| VOC/8260 | Chloroform | No | Detected in samples below EALs. This analyte is not associated with fuels stored on-site. |
| VOC/8260 | Chloromethane | No | Detected in samples below EALs, with some non-detect above EAL. Most of the chloromethane that is released into the environment is from natural sources, such as chemical reactions that occur in the oceans." Thus, not affiliated with activities associated with the Red Hill site[e]. |
| VOC/8260 | cis-1,2-Dichloroethylene | No | Not detected throughout LTM program |
| VOC/8260 | Dibromochloromethane | No | Non-detect above EAL. Most dibromochloromethane that enters the environment is formed as byproducts when chlorine is added to drinking water to kill bacteria. Chlorination activities are not associated with the project site. Also associated with DBCM is Bromoform (a disinfection by-product) and bromoform was not detected throughout the LTM program[f]. |
| **VOC/8260** | **Ethylbenzene** | **Yes** | **Detected in samples below EALs. Analyte associated with fuels stored on site.** |
| VOC/8260 | Hexachlorobutadiene | No | Non-detect above EAL. Hexachlorobutadiene is mainly used to make rubber compounds. It is also used as a solvent, and to make lubricants, in gyroscopes, as a heat transfer liquid, and as a hydraulic fluid. These activities are not associated with our site and unlikely to be present[g]. |
| VOC/8260 | Methyl ethyl ketone (2-Butanone) | No | Detected in samples below EALs. This analyte is not associated with fuels stored on-site. |
| VOC/8260 | Methyl isobutyl ketone (4-Methyl-2-Pentanone) | No | Not detected throughout LTM program |
| VOC/8260 | Methyl tert-butyl Ether | No | Not detected throughout LTM program |
| VOC/8260 | Methylene chloride | No | Detected above EAL. Detections are more likely the result of laboratory contaminant. The highest detection reported is associated with method blank contamination and the duplicate of a primary sample with no detections reported for that sample. This analyte is not associated with fuels stored on-site. |

| Analytical Group/Method | Analyte | Recommend to retain in analytical program? | Rationale |
|---|---|---|---|
| VOC/8260 | Styrene | No | Not detected throughout LTM program |
| VOC/8260 | Tetrachloroethane, 1,1,1,2- | No | Non-detect above EAL. Although 1,1,1,2-tetrachloroethane apparently is not produced or used commercially in large quantities, it may be formed incidentally during the manufacture of other chlorinated ethanes. It is present as an unisolated intermediate in some processes for the manufacture of trichloroethylene and tetrachloroethylene from 1,2-dichloroethane. Because it is associated as an impurity of the manufacturing of TCE and PCE and detections of TCE and PCE were sparse, it is unlikely that it is present at concentrations of concern[h]. |
| VOC/8260 | Tetrachloroethane, 1,1,2,2- | No | Detected in samples below EALs, with some non-detect above EAL. 1,1,2,2-Tetrachloroethane was used in large amounts to produce other chemicals, as an industrial solvent to clean and degrease metals, and as an ingredient in paints and pesticides but is not commonly found in drinking water, soil, or food[i]. |
| VOC/8260 | Tetrachloroethylene | No | Not detected throughout LTM program |
| **VOC/8260** | **Toluene** | **Yes** | **Detected in samples below EALs. Analyte associated with fuels stored on site.** |
| VOC/8260 | trans-1,2- Dichloroethylene | No | Not detected throughout LTM program |
| VOC/8260 | Trichloroethylene | No | Detected above EAL. TCE was detected in MW02 in the first LTM event. In that first event, the primary sample had a detection of 8.2 µg/L (exceeding the EAL of 5 µg/L) and the associated field duplicate was non-detect at 5 µg/L (RL) and 2.5 µg/L (MDL). The subsequent 178 sampling events report no detections of TCE. It is more likely that the detection of TCE was the result of contamination. This analyte is not associated with fuels stored on-site. |
| VOC/8260 | Vinyl chloride | No | Non-detect above EAL. Vinyl chloride is used to make polyvinyl chloride (PVC) and is also a breakdown product of TCE and PCE. PVC is not manufactured in Hawaii and cis and trans-1,2-dichloroethylene are intermediate breakdown products of TCE and PCE prior to vinyl chloride and which have not been detected in the LTM and therefore not likely to present. |
| **VOC/8260** | **Xylenes, Total (p/m-, o-xylene)** | **Yes** | **Detected in samples below EALs. Analyte associated with fuels stored on site.** |
| PAH/8270 SIM | Acenaphthene | No | Detected in samples below EALs. This analyte is not associated with fuels stored on-site, and are not known to be degradation products of those analytes detected at the site. |
| PAH/8270 SIM | Acenaphthylene | No | Detected in samples below EALs. This analyte is not associated with fuels stored on-site, and are not known to be degradation products of those analytes detected at the site. |
| PAH/8270 SIM | Anthracene | No | Detected in samples below EALs. This analyte is not associated with fuels stored on-site, and are not known to be degradation products of those analytes detected at the site. |

| Analytical Group/Method | Analyte | Recommend to retain in analytical program? | Rationale |
|---|---|---|---|
| PAH/8270 SIM | Benzo[a]anthracene | No | Detected in samples below EALs, with some non-detect above EAL. This is a 4-ring PAH. Physical and chemical characteristics of PAHs vary with molecular weight. Resistance to oxidation, reduction and vaporization increases with increasing molecular weight but decreases in aqueous solubility. 2-ring PAH, naphthalene has a water solubility of 12500 to 34000 µg/L at 25 degrees C whereas 4-ring PAHs such as chrysene and fluoranthene has a water solubility of 1.9 µg/L and 260 µg/L, respectively. Because fluoranthene has been detected at trace levels below the EALs, it is unlikely that PAHs with same number of rings or higher would be present in the groundwater[j]. |
| PAH/8270 SIM | Benzo[g,h,i]perylene | No | Detected in samples below EALs, with some non-detect above EAL. This is a 6-ring PAH. Because fluoranthene (a 4-ring PAH) has been detected at trace levels below the EALs, it is unlikely that PAHs with same number of rings or higher would be present in the groundwater due to decreasing solubility of the larger PAH compounds. |
| PAH/8270 SIM | Benzo[a]pyrene | No | Detected in samples below EALs, with some non-detect above EAL. This is a 5-ring PAH. Because fluoranthene (a 4-ring PAH) has been detected at trace levels below the EALs, it is unlikely that PAHs with same number of rings or higher would be present in the groundwater due to decreasing solubility of the larger PAH compounds. |
| PAH/8270 SIM | Benzo[b]fluoranthene | No | Detected in samples below EALs, with some non-detect above EAL. This is a 5-ring PAH. Because fluoranthene (a 4-ring PAH) has been detected at trace levels below the EALs, it is unlikely that PAHs with same number of rings or higher would be present in the groundwater due to decreasing solubility of the larger PAH compounds. |
| PAH/8270 SIM | Benzo[k]fluoranthene | No | Detected in samples below EALs. This is a 5-ring PAH. Because fluoranthene (a 4-ring PAH) has been detected at trace levels below the EALs, it is unlikely that PAHs with same number of rings or higher would be present in the groundwater due to decreasing solubility of the larger PAH compounds. |
| PAH/8270 SIM | Chrysene | No | Detected in samples below EALs. This analyte is not associated with fuels stored on-site, and are not known to be degradation products of those analytes detected at the site. |
| PAH/8270 SIM | Dibenzo[a,h]anthracene | No | Non-detect above EAL. This is a 5-ring PAH. Because fluoranthene (a 4-ring PAH) has been detected at trace levels below the EALs, it is unlikely that PAHs with same number of rings or higher would be present in the groundwater due to decreasing solubility of the larger PAH compounds. |
| PAH/8270 SIM | Fluoranthene | No | Detected in samples below EALs. This analyte is not associated with fuels stored on-site, and are not known to be degradation products of those analytes detected at the site. |
| PAH/8270 SIM | Fluorene | No | Detected in samples below EALs. This analyte is not associated with fuels stored on-site, and are not known to be degradation products of those analytes detected at the site. |

| Analytical Group/Method | Analyte | Recommend to retain in analytical program? | Rationale |
|---|---|---|---|
| PAH/8270 SIM | Indeno[1,2,3-cd]pyrene | No | Detected in samples below EALs, with some non-detect above EAL. This is a 6-ring PAH. Because fluoranthene (a 4-ring PAH) has been detected at trace levels below the EALs, it is unlikely that PAHs with same number of rings or higher would be present in the groundwater due to decreasing solubility of the larger PAH compounds. |
| **PAH/8270 SIM** | **1-Methylnaphthalene** | **Yes** | **Detected above EAL. Analyte associated with fuels stored on site.** |
| **PAH/8270 SIM** | **2-Methylnaphthalene** | **Yes** | **Detected above EAL. Analyte associated with fuels stored on site.** |
| **PAH/8270 SIM** | **Naphthalene** | **Yes** | **Detected above EAL. Analyte associated with fuels stored on site.** |
| PAH/8270 SIM | Phenanthrene | No | Detected in samples below EALs. This analyte is not associated with fuels stored on-site, and are not known to be degradation products of those analytes detected at the site. |
| PAH/8270 SIM | Pyrene | No | Detected in samples below EALs. This analyte is not associated with fuels stored on-site, and are not known to be degradation products of those analytes detected at the site. |
| Lead/6010 | Dissolved Lead (filtered) | No | Detected in samples below EALs, with some non-detect above EAL. Dissolved lead has only been reported non-detect above the EAL once (at RHMW04). All positive detections have been below EAL. Additionally, leaded petroleum has not been stored on site since the 1960s. |
| Lead/6010 | Total Lead (unfiltered) | No | Detected in samples below EALs. Analyzed only the RHMW2254 (Navy supply well); all other samples are field filtered. |

**Bold text** indicates analytes that are recommended to be retained in the analytical program.

Blue row indicates analytes that were detected above the DOH EALs.

Gray row indicates analytes that were reported as only non-detects above the EAL.

[a] Information taken from ASTDR: http://www.atsdr.cdc.gov/toxfaqs/TF.asp?id=717&tid=129.

[b] Information taken from DOH HEER TGM (2009).

[c] Information taken from ASTDR: http://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=110.

[d] Information taken from ASTDR: http://www.atsdr.cdc.gov/PHS/PHS.asp?id=706&tid=127.

[e] Information taken from ASTDR: http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=586&tid=109.

[f] Information taken from ASTDR: http://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=128.

[g] Information taken from ASTDR: http://www.atsdr.cdc.gov/toxfaqs/TF.asp?id=864&tid=168.

[h] Information taken from http://monographs.iarc.fr/ENG/Monographs/vol71/mono71-53.pdf.

[i] Information taken from ASTDR: http://www.atsdr.cdc.gov/toxguides/toxguide-93.pdf.

[j] Information taken from http://www.env.gov.bc.ca/wat/wq/BCguidelines/pahs/pahs-01.htm.

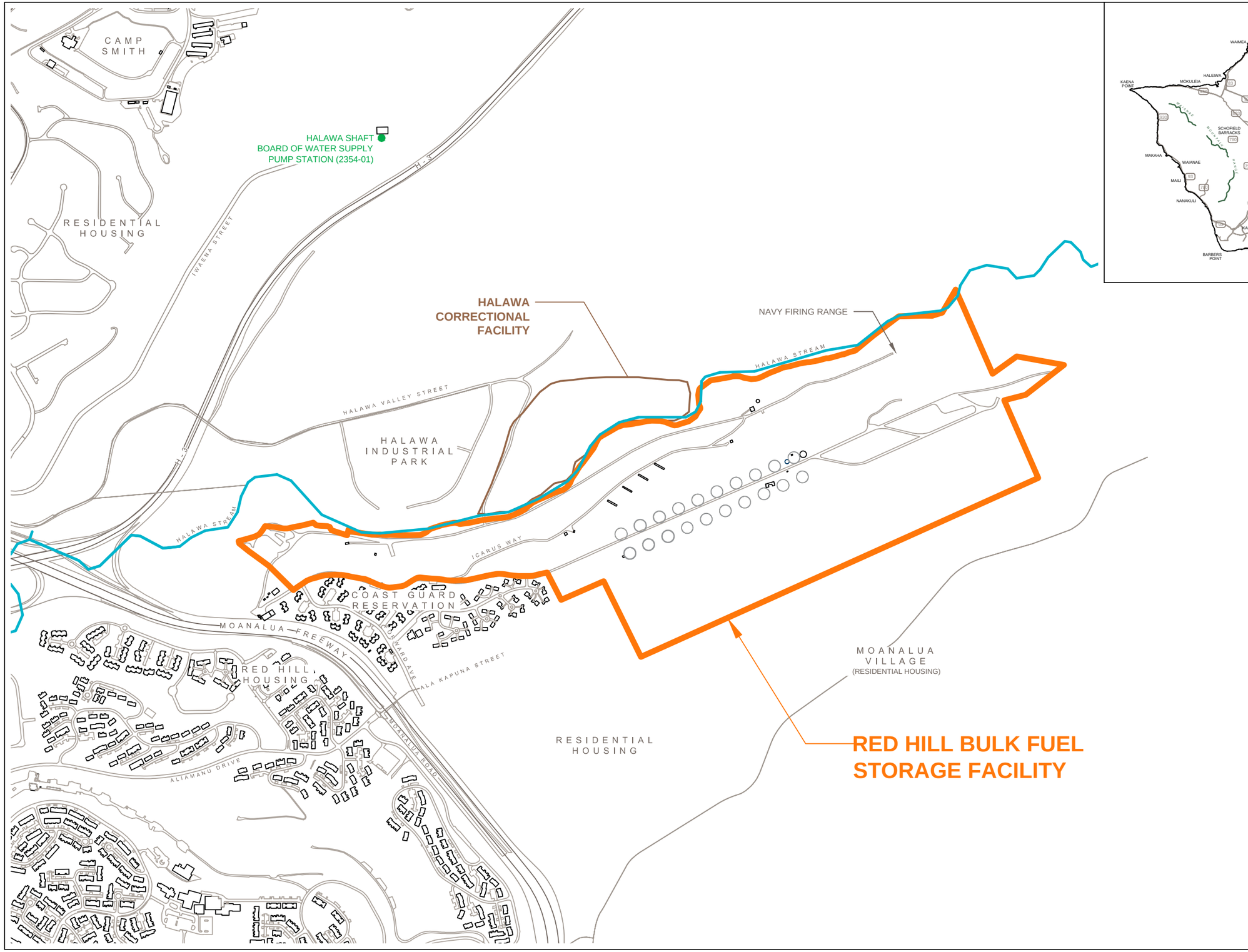
# 5. References

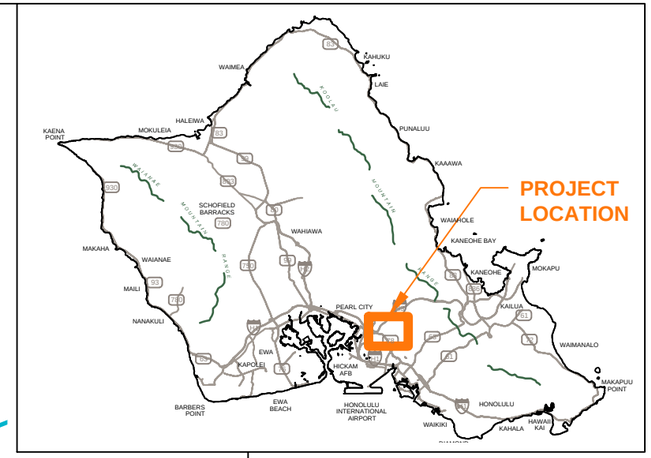
Department of Health, Hawaii (DOH). 2009. Technical Guidance Manual for the Implementation of the Hawaii State Contingency Plan. Interim Final. Honolulu, HI: Office of Hazard Evaluation and Emergency Response. 12 November.

———. 2012. *Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater, Hawaii Edition.* Office of Hazard Evaluation and Emergency Response. Fall 2011 (revised January 2012)

Department of the Navy (DON). 2008. Final Groundwater Protection Plan, Red Hill Fuel Storage Facility. Pearl Harbor, Hawaii. January 2008.

**Appendices**




## NOTES

The accuracy of this document is limited to the quality and scale of the source information. This document is not a legal representation of an engineered survey.

## SOURCES

Pearl Harbor Base Map

Navy GIS files

NORTH

*GRAPHIC SCALE*

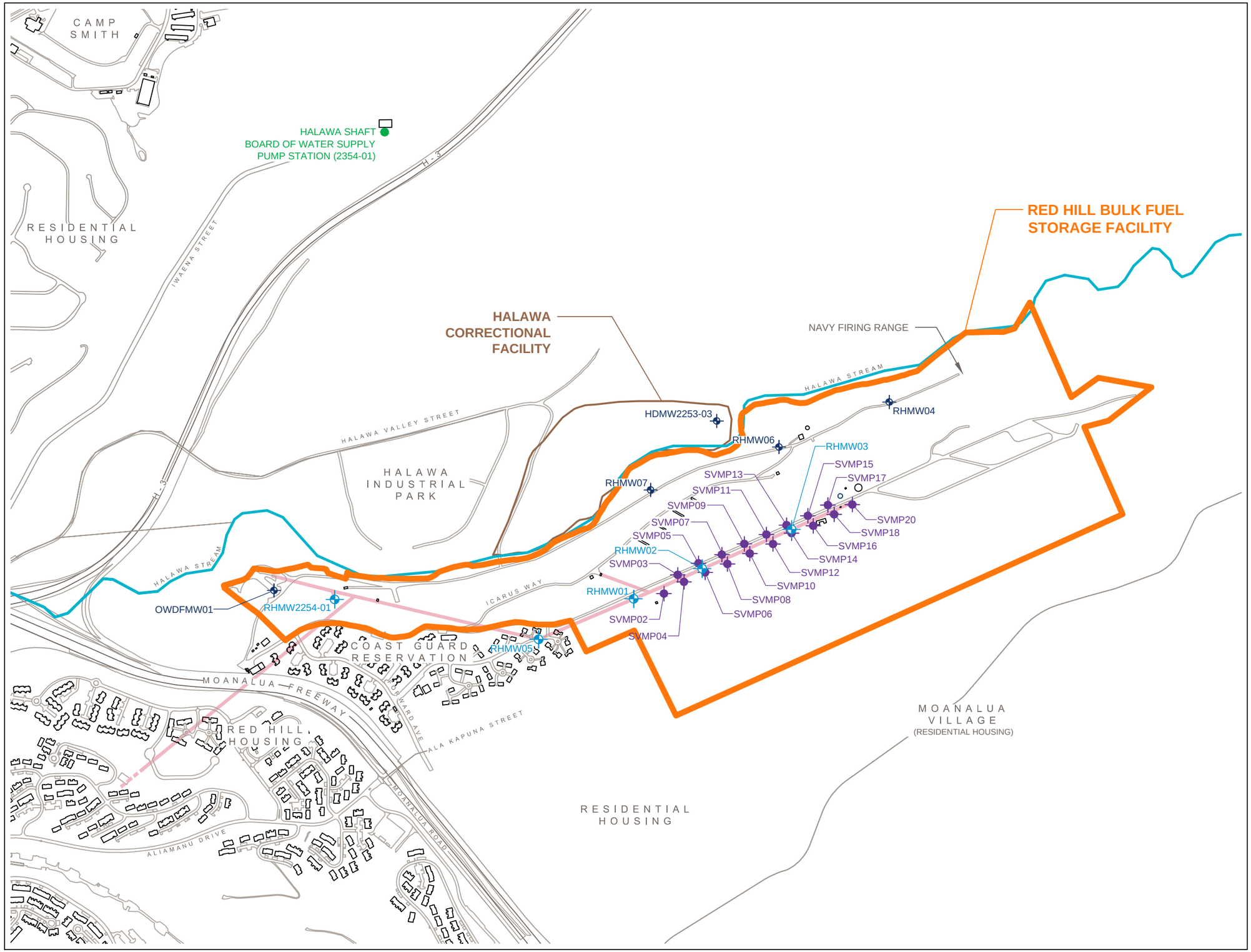
900 0 900

Scale in Feet

**FIGURE 1**

**SITE LOCATION**

GROUNDWATER MONITORING
RED HILL BULK FUEL STORAGE FACILITY
NAVAL SUPPLY SYSTEM COMMAND (NAVSUP)
FLEET LOGISTICS CENTER
JBPHH, OAHU, HAWAII




## LEGEND

- RED HILL BULK FUEL STORAGE FACILITY
- HALAWA CORRECTIONAL FACILITY
- HALAWA STREAM
- BUILDING
- ROAD
- ABOVEGROUND STORAGE TANK
- WATER TANK
- SOIL VAPOR MONITORING POINT
- GROUNDWATER MONITORING WELL LOCATED INSIDE TUNNEL
- GROUNDWATER MONITORING WELL LOCATED OUTSIDE TUNNEL
- BOARD OF WATER SUPPLY PUMP STATION
- TUNNEL

## NOTES

The accuracy of this document is limited to the quality and scale of the source information. This document is not a legal representation of an engineered survey.

## SOURCES

Pearl Harbor Base Map

Navy GIS files

Well Installation Report, Battelle, March 2015

NORTH

*GRAPHIC SCALE*

800 0 800

Scale in Feet

**FIGURE 2**

**SITE LAYOUT**

GROUNDWATER MONITORING
RED HILL BULK FUEL STORAGE FACILITY
NAVAL SUPPLY SYSTEM COMMAND (NAVSUP)
FLEET LOGISTICS CENTER
JBPHH, OAHU, HAWAII

**Table A-1**
**Current Status of the USTs (as of July 2015)**
**Red Hill Bulk Fuel Storage Facility**

| Tank Identification | Fuel Type | Status | Capacity |
|---|---|---|---|
| F-1 | None | Inactive | 12.5 million gallons |
| F-2 | JP-8 | Active | 12.5 million gallons |
| F-3 | JP-8 | Active | 12.5 million gallons |
| F-4 | JP-8 | Active | 12.5 million gallons |
| F-5 | JP-8 | Inactive | 12.5 million gallons |
| F-6 | JP-8 | Active | 12.5 million gallons |
| F-7 | JP-5 | Active | 12.5 million gallons |
| F-8 | JP-5 | Active | 12.5 million gallons |
| F-9 | JP-5 | Active | 12.5 million gallons |
| F-10 | JP-5 | Active | 12.5 million gallons |
| F-11 | JP-5 | Active | 12.5 million gallons |
| F-12 | JP-5 | Active | 12.5 million gallons |
| F-13 | F-76 | Active | 12.5 million gallons |
| F-14 | F-76 | Active | 12.5 million gallons |
| F-15 | F-76 | Active | 12.5 million gallons |
| F-16 | F-76 | Active | 12.5 million gallons |
| F-17 | JP-5 | Active | 12.5 million gallons |
| F-18 | JP-5 | Active | 12.5 million gallons |
| F-19 | None | Inactive | 12.5 million gallons |
| F-20 | JP-5 | Active | 12.5 million gallons |

F-76 Marine Diesel Fuel
JP-5 Jet Fuel Propellant-5
JP-8 Jet Fuel Propellant-8

**Table A-2**
**Sampling Locations**
**Red Hill Bulk Fuel Storage Facility**

| Sampling Location | Well Location in Relation to Tunnels | Distance to Halawa Stream (meters) | First Sampled | Number Quarterly Monitoring Events as of July 2015 |
|---|---|---|---|---|
| RHMW2254-01 | Inside Well | 84.67 | Feb 2005 | 43 |
| RHMW01 | Inside Well | 231.77 | Feb 2005 | 43 |
| RHMW02 | Inside Well | 598.61 | Sept 2005 | 37 |
| RHMW03 | Inside Well | 270.53 | Sept 2005 | 37 |
| RHMW05 | Inside Well | 2254.14 | May 2009 | 27 |
| HDMW2253-03 | Outside Well | 64.25 | Oct 2009 | 24 |
| OWDFMW01 | Outside Well | 142.68 | Oct 2009 | 24 |
| RHMW04 | Outside Well | 80.85 | Sept 2005 | 11* |
| RHMW06 | Outside Well | 104.09 | Oct 2014 | 4 |
| RHMW07 | Outside Well | 81.20 | Oct 2014 | 4 |

* RHMW04 was not sampled as part of the groundwater monitoring program from fourth quarter 2006 until second quarter 2009.

| Table A-3a. Summary Detect Statistics | | | RHMW2254, All Data | | | | | All Inside Wells, All Data | | | | | | All Outside Wells, All Data | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Method | Analyte | Units | DOH EAL (<150m from surface water) | No. of Detects | Percent Detected | Did Detects Exceed EALs? | Date Sampled of Max Concentration | DOH EAL (>150m from surface water) | No. of Detects | Percent Detected | Did Detects Exceed EALs? | Location of Max Concentration | Date Sampled of Max Concentration | DOH EAL (<150m from surface water) | No. of Detects | Percent Detected | Did Detects Exceed EALs? | Location of Max Concentration | Date Sampled of Max Concentration |
| 8015 | TPH-d | µg/L | 100 | 10 | 18% | No | 28-Jun-05 | 100 | 172 | 82% | **Yes** | RHMW02 | 22-Oct-08 | 100 | 49 | 53% | **Yes** | OWDFMW01 | 22-Jul-15 |
| 8015 | TPH-g | µg/L | 100 | 2 | 7% | No | 13-May-09 | 100 | 39 | 43% | **Yes** | RHMW02 | 27-Mar-07 | 100 | 0 | 0% | - | - | - |
| 8015 | TPH-o | µg/L | 100 | 3 | 30% | No | 8-Sep-05 | 100 | 17 | 65% | **Yes** | RHMW01 | 17-Feb-05 | 100 | 11 | 46% | **Yes** | OWDFMW01 | 22-Jul-15 |
| 8260B | TPH-g | µg/L | 100 | 3 | 17% | No | 22-Oct-12 | 100 | 37 | 41% | **Yes** | RHMW02 | 28-Jan-13 | 100 | 10 | 18% | No | OWDFMW01 | 23-Apr-14 |
| 8260B | 1,1-Dichloroethylene | µg/L | 7 | 0 | 0% | - | - | 7 | 1 | 1% | No | RHMW03 | 20-Sep-05 | 7 | 0 | 0% | - | - | - |
| 8260B | 1,2,3-Trichloropropane | µg/L | 0.6 | 0 | 0% | - | - | 0.6 | 1 | 1% | No | RHMW02 | 20-Jul-15 | 0.6 | 0 | 0% | - | - | - |
| 8260B | 1,2,4-Tricholorobenzene | µg/L | 25 | 1 | 3% | No | 10-Sep-07 | 70 | 0 | 0% | - | - | - | 25 | 0 | 0% | - | - | - |
| 8260B | 1,3-Dichloropropene (total of cis/trans) | µg/L | 0.43 | 0 | 0% | - | - | 0.43 | 0 | 0% | - | - | - | 0.43 | 5 | 6% | **Yes** | OWDFMW01 | 26-Jan-10 |
| 8260B | Acetone | µg/L | 1500 | 0 | 0% | - | - | 1500 | 7 | 4% | No | RHMW05 | 15-Jul-09 | 1500 | 37 | 41% | No | OWDFMW01 | 22-Jul-15 |
| 8260B | Benzene | µg/L | 5 | 0 | 0% | - | - | 5 | 13 | 6% | No | RHMW02 | 4-Feb-09 | 5 | 24 | 26% | No | OWDFMW01 | 19-Jul-12 |
| 8260B | Bromodichloromethane | µg/L | 0.12 | 0 | 0% | - | - | 0.12 | 0 | 0% | - | - | - | 0.12 | 1 | 1% | **Yes** | OWDFMW01 | 7-Nov-12 |
| 8260B | Bromomethane | µg/L | 8.7 | 1 | 3% | No | 29-Jul-08 | 8.7 | 0 | 0% | - | - | - | 8.7 | 0 | 0% | - | - | - |
| 8260B | Chloroform | µg/L | 70 | 0 | 0% | - | - | 70 | 1 | 1% | No | RHMW01 | 2-Nov-11 | 70 | 0 | 0% | - | - | - |
| 8260B | Chloromethane | µg/L | 1.8 | 0 | 0% | - | - | 1.8 | 0 | 0% | - | - | - | 1.8 | 3 | 3% | No | OWDFMW01 | 29-Jul-15 |
| 8260B | Ethylbenzene | µg/L | 30 | 0 | 0% | - | - | 30 | 47 | 22% | No | RHMW02 | 10-Jul-06 | 30 | 0 | 0% | - | - | - |
| 8260B | Methyl ethyl ketone (2-Butanone) | µg/L | 7100 | 0 | 0% | - | - | 7100 | 1 | 1% | No | RHMW01 | 14-Oct-09 | 7100 | 10 | 11% | No | OWDFMW01 | 19-Jul-12 |
| 8260B | Methylene chloride | µg/L | 4.8 | 0 | 0% | - | - | 4.8 | 3 | 2% | **Yes** | RHMW02 | 10-Jul-06 | 4.8 | 2 | 2% | No | OWDFMW01 | 22-Jul-15 |
| 8260B | Naphthalene | µg/L | 17 | 0 | 0% | - | - | 17 | 33 | 45% | **Yes** | RHMW02 | 10-Jul-06 | 10 | 0 | 0% | - | - | - |
| 8260B | Toluene | µg/L | 40 | 4 | 7% | No | 16-Feb-05 | 40 | 10 | 5% | No | RHMW01 | 15-Jan-14 | 40 | 4 | 4% | No | HDMW2253-03 | 22-Oct-14 |
| 8260B | Trichloroethylene | µg/L | 5 | 1 | 3% | No | 17-Apr-12 | 5 | 1 | 1% | **Yes** | RHMW02 | 20-Sep-05 | 5 | 0 | 0% | - | - | - |
| 8260B | Xylenes, Total (p/m-, o-xylene) | µg/L | 20 | 0 | 0% | - | - | 20 | 57 | 27% | No | RHMW02 | 15-Jan-08 | 20 | 1 | 1% | No | OWDFMW01 | 21-Apr-11 |
| 8260SIM | Bromodichloromethane | µg/L | 0.12 | 0 | 0% | - | - | 0.12 | 0 | 0% | - | - | - | 0.12 | 1 | 8% | No | RHMW06 | 23-Apr-15 |
| 8260SIM | Tetrachloroethane, 1,1,2,2- | µg/L | 0.067 | 0 | 0% | - | - | 0.067 | 2 | 20% | No | RHMW02 | 20-Apr-15 | 0.067 | 0 | 0% | - | - | - |
| 8270C | Acenaphthene | µg/L | 20 | 0 | 0% | - | - | 20 | 85 | 47% | No | RHMW02 | 12-Jun-07 | 20 | 0 | 0% | - | - | - |
| 8270C | Acenaphthylene | µg/L | 30 | 2 | 4% | No | 6-Dec-05 | 240 | 11 | 6% | No | RHMW02 | 20-Apr-15 | 30 | 1 | 1% | No | RHMW04 | 22-Apr-15 |
| 8270C | Anthracene | µg/L | 0.73 | 0 | 0% | - | - | 22 | 1 | 1% | No | RHMW01 | 6-Dec-15 | 0.73 | 1 | 1% | No | RHMW04 | 22-Apr-15 |
| 8270C | Benzo[a]anthracene | µg/L | 0.027 | 2 | 4% | No | 6-Dec-05 | 0.092 | 13 | 7% | No | RHMW02 | 20-Sep-05 | 0.027 | 7 | 8% | No | OWDFMW01 | 22-Jul-15 |
| 8270C | Benzo[g,h,i]perylene | µg/L | 0.1 | 0 | 0% | - | - | 0.13 | 4 | 2% | No | RHMW01 | 28-Jun-05 | 0.1 | 0 | 0% | - | - | - |
| 8270C | Benzo[a]pyrene | µg/L | 0.014 | 0 | 0% | - | - | 0.2 | 5 | 3% | No | RHMW01 | 28-Jun-05 | 0.014 | 0 | 0% | - | - | - |
| 8270C | Benzo[b]fluoranthene | µg/L | 0.092 | 0 | 0% | - | - | 0.092 | 6 | 3% | No | RHMW02 | 20-Sep-05 | 0.092 | 0 | 0% | - | - | - |
| 8270C | Benzo[k]fluoranthene | µg/L | 0.4 | 0 | 0% | - | - | 0.4 | 4 | 2% | No | RHMW01 | 28-Jun-05 | 0.4 | 0 | 0% | - | - | - |
| 8270C | Chrysene | µg/L | 0.35 | 2 | 4% | No | 6-Dec-05 | 1 | 4 | 2% | No | RHMW01 | 28-Jun-05 | 0.35 | 0 | 0% | - | - | - |
| 8270C | Fluoranthene | µg/L | 8 | 2 | 4% | No | 6-Dec-05 | 130 | 13 | 7% | No | RHMW01 | 28-Jun-05 | 8 | 0 | 0% | - | - | - |
| 8270C | Fluorene | µg/L | 3.9 | 0 | 0% | - | - | 240 | 86 | 47% | No | RHMW02 | 10-Jul-06 | 3.9 | 4 | 4% | No | RHMW04 | 22-Apr-15 |
| 8270C | Indeno[1,2,3-cd]pyrene | µg/L | 0.092 | 0 | 0% | - | - | 0.092 | 4 | 2% | No | RHMW01 | 28-Jun-05 | 0.092 | 0 | 0% | - | - | - |
| 8270C | 1-Methylnaphthalene | µg/L | 2.1 | 2 | 5% | No | 15-Apr-08 | 4.7 | 104 | 51% | **Yes** | RHMW02 | 10-Jul-06 | 2.1 | 5 | 5% | No | OWDFMW01 | 22-Apr-15 |
| 8270C | 2-Methylnaphthalene | µg/L | 2.1 | 5 | 9% | No | 15-Apr-08 | 10 | 111 | 53% | **Yes** | RHMW02 | 20-Sep-05 | 2.1 | 10 | 11% | No | OWDFMW01 | 22-Apr-15 |
| 8270C | Naphthalene | µg/L | 17 | 14 | 26% | No | 23-Jul-13 | 17 | 137 | 65% | **Yes** | RHMW02 | 10-Jul-06 | 17 | 27 | 29% | No | HDMW2253-03 | 24-Apr-13 |
| 8270C | Phenanthrene | µg/L | 4.6 | 2 | 4% | No | 6-Dec-05 | 240 | 20 | 11% | No | RHMW01 | 28-Jun-05 | 4.6 | 7 | 8% | No | OWDFMW01 | 22-Jul-15 |
| 8270C | Pyrene | µg/L | 2 | 2 | 4% | No | 6-Dec-05 | 68 | 14 | 8% | No | RHMW01 | 28-Jun-05 | 2 | 1 | 1% | No | OWDFMW01 | 22-Jul-15 |
| 6020 | Dissolved Lead (filtered) | µg/L | 5.6 | 10 | 29% | No | 19-Oct-10 | 15 | 63 | 31% | No | RHMW01 | 17-Feb-05 | 5.6 | 30 | 33% | No | HDMW2253-03 | 26-Oct-11 |
| 6010B/6020/200.8 | Total Lead (unfiltered) | µg/L | - | 14 | 40% | No | 28-Jun-05 | - | - | - | - | - | - | - | - | - | - | - | - |

Analyte detected above DOH EAL

| Table A-3b. Summary Non-Detect Statistics | | | RHMW2254, All Data | | | | | All Inside Wells, All Data | | | | | | All Outside Wells, All Data | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Method | Analyte | Units | DOH EAL (<150m from surface water) | No. of Non-Detects | Percent Non-Detected | Did Non-Detects Exceed EALs? | Date Sampled of Max Concentration | DOH EAL (>150m from surface water) | No. of Non-Detects | Percent Non-Detected | Did Non-Detects Exceed EALs? | Location of Max Concentration | Date Sampled of Max Concentration | DOH EAL (<150m from surface water) | No. of Non-Detects | Percent Non-Detected | Did Non-Detects Exceed EALs? | Location of Max Concentration | Date Sampled of Max Concentration |
| 8015 | TPH-d | µg/L | 100 | 45 | 82% | **Yes** | 1/27/2010 | 100 | 39 | 18% | **Yes** | RHMW03 | 1/27/2010 | 100 | 44 | 47% | **Yes** | HDMW2253-03 | 4/26/2010 |
| 8015 | TPH-g | µg/L | 100 | 28 | 93% | No | 1/27/2010 | 100 | 52 | 57% | No | RHMW01 | 1/27/2010 | 100 | 37 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8015 | TPH-o | µg/L | 100 | 7 | 70% | **Yes** | 7/20/2011 | 100 | 9 | 35% | **Yes** | RHMW01 | 7/20/2011 | 100 | 13 | 54% | **Yes** | OWDFMW01 | 7/21/2011 |
| 8260B | TPH-g | µg/L | 100 | 15 | 83% | No | 1/29/2013 | 100 | 54 | 59% | No | RHMW01 | 4/22/2013 | 100 | 45 | 82% | No | OWDFMW01 | 11/7/2012 |
| 8260B | 1,1,1-Trichloroethane | µg/L | 62 | 40 | 100% | No | 1/27/2010 | 200 | 179 | 100% | No | RHMW02 | 9/20/2005 | 62 | 91 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | 1,1,2-Trichloroethane | µg/L | 5 | 40 | 100% | No | 1/27/2010 | 5 | 179 | 100% | No | RHMW02 | 9/20/2005 | 5 | 91 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | 1,1-Dichloroethane | µg/L | 2.4 | 40 | 100% | No | 1/27/2010 | 2.4 | 179 | 100% | **Yes** | RHMW02 | 9/20/2005 | 2.4 | 91 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | 1,1-Dichloroethylene | µg/L | 7 | 40 | 100% | No | 1/27/2010 | 7 | 176 | 99% | No | RHMW02 | 9/20/2005 | 7 | 87 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | 1,2,3-Trichloropropane | µg/L | 0.6 | 40 | 100% | **Yes** | 1/29/2013 | 0.6 | 178 | 99% | **Yes** | RHMW02 | 9/20/2005 | 0.6 | 91 | 100% | **Yes** | OWDFMW01 | 11/7/2012 |
| 8260B | 1,2,4-Tricholorobenzene | µg/L | 25 | 39 | 98% | No | 10/22/2012 | 70 | 179 | 100% | No | RHMW02 | 9/20/2005 | 25 | 91 | 100% | No | OWDFMW01 | 11/7/2012 |
| 8260B | 1,2-Dibromo-3-chloropropane | µg/L | 0.04 | 40 | 100% | **Yes** | 10/22/2012 | 0.04 | 179 | 100% | **Yes** | RHMW01 | 10/22/2012 | 0.04 | 91 | 100% | **Yes** | OWDFMW01 | 11/7/2012 |
| 8260B | 1,2-Dibromoethane | µg/L | 0.04 | 52 | 100% | **Yes** | 1/27/2010 | 0.04 | 187 | 100% | **Yes** | RHMW02 | 9/20/2005 | 0.04 | 91 | 100% | **Yes** | OWDFMW01 | 1/26/2010 |
| 8260B | 1,2-Dichlorobenzene | µg/L | 10 | 40 | 100% | No | 1/27/2010 | 10 | 179 | 100% | No | RHMW02 | 9/20/2005 | 10 | 91 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | 1,2-Dichloroethane | µg/L | 0.15 | 50 | 100% | **Yes** | 2/16/2005 | 0.15 | 177 | 100% | **Yes** | RHMW02 | 9/20/2005 | 0.15 | 79 | 100% | **Yes** | OWDFMW01 | 11/7/2012 |
| 8260B | 1,2-Dichloropropane | µg/L | 5 | 40 | 100% | No | 1/27/2010 | 5 | 179 | 100% | No | RHMW02 | 9/20/2005 | 5 | 91 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | 1,3-Dichlorobenzene | µg/L | 5 | 40 | 100% | No | 1/27/2010 | 5 | 179 | 100% | No | RHMW02 | 9/20/2005 | 5 | 91 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | 1,3-Dichloropropene (total of cis/trans) | µg/L | 0.43 | 40 | 100% | **Yes** | 1/27/2010 | 0.43 | 179 | 100% | **Yes** | RHMW02 | 9/20/2005 | 0.43 | 78 | 94% | **Yes** | OWDFMW01 | 11/7/2012 |
| 8260B | 1,4-Dichlorobenzene | µg/L | 5 | 40 | 100% | No | 9/20/2005 | 5 | 179 | 100% | No | RHMW02 | 9/20/2005 | 5 | 91 | 100% | No | OWDFMW01 | 11/7/2012 |
| 8260B | Acetone | µg/L | 1500 | 38 | 100% | No | 9/10/2007 | 1500 | 163 | 96% | No | RHMW02 | 9/20/2005 | 1500 | 54 | 59% | No | OWDFMW01 | 11/7/2012 |
| 8260B | Benzene | µg/L | 5 | 56 | 100% | No | 2/16/2005 | 5 | 196 | 94% | No | RHMW02 | 9/20/2005 | 5 | 69 | 74% | No | OWDFMW01 | 10/23/2013 |
| 8260B | Bromodichloromethane | µg/L | 0.12 | 38 | 100% | **Yes** | 9/20/2005 | 0.12 | 169 | 100% | **Yes** | RHMW02 | 9/20/2005 | 0.12 | 78 | 99% | **Yes** | OWDFMW01 | 11/7/2012 |
| 8260B | Bromoform | µg/L | 80 | 40 | 100% | No | 1/29/2013 | 80 | 179 | 100% | No | RHMW02 | 9/20/2005 | 80 | 91 | 100% | No | OWDFMW01 | 11/7/2012 |
| 8260B | Bromomethane | µg/L | 8.7 | 39 | 98% | No | 1/29/2013 | 8.7 | 179 | 100% | No | RHMW01 | 10/22/2012 | 8.7 | 91 | 100% | No | OWDFMW01 | 11/7/2012 |
| 8260B | Carbon Tetrachloride | µg/L | 5 | 40 | 100% | No | 1/27/2010 | 5 | 179 | 100% | No | RHMW02 | 9/20/2005 | 5 | 91 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | Chlorobenzene | µg/L | 25 | 40 | 100% | No | 9/20/2005 | 50 | 179 | 100% | No | RHMW02 | 9/20/2005 | 25 | 91 | 100% | No | OWDFMW01 | 11/7/2012 |
| 8260B | Chloroethane | µg/L | 16 | 40 | 100% | No | 10/22/2012 | 16 | 179 | 100% | No | RHMW01 | 10/22/2012 | 16 | 91 | 100% | No | OWDFMW01 | 11/7/2012 |
| 8260B | Chloroform | µg/L | 70 | 40 | 100% | No | 1/27/2010 | 70 | 178 | 99% | No | RHMW02 | 9/20/2005 | 70 | 91 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | Chloromethane | µg/L | 1.8 | 40 | 100% | **Yes** | 10/22/2012 | 1.8 | 179 | 100% | **Yes** | RHMW01 | 10/22/2012 | 1.8 | 86 | 97% | **Yes** | OWDFMW01 | 11/7/2012 |
| 8260B | cis-1,2-Dichloroethylene | µg/L | 70 | 40 | 100% | No | 1/27/2010 | 70 | 179 | 100% | No | RHMW02 | 9/20/2005 | 70 | 91 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | Dibromochloromethane | µg/L | 0.16 | 38 | 100% | **Yes** | 10/22/2012 | 0.16 | 169 | 100% | **Yes** | RHMW02 | 9/20/2005 | 0.16 | 79 | 100% | **Yes** | OWDFMW01 | 11/7/2012 |
| 8260B | Ethylbenzene | µg/L | 30 | 56 | 100% | No | 1/27/2010 | 30 | 162 | 78% | No | RHMW02 | 9/20/2005 | 30 | 93 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | Hexachlorobutadiene | µg/L | 0.86 | 40 | 100% | No | 1/27/2010 | 0.86 | 179 | 100% | **Yes** | RHMW02 | 9/20/2005 | 0.86 | 91 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | Methyl ethyl ketone (2-Butanone) | µg/L | 7100 | 40 | 100% | No | 1/27/2010 | 7100 | 178 | 99% | No | RHMW02 | 9/20/2005 | 7100 | 81 | 89% | No | OWDFMW01 | 1/26/2010 |
| 8260B | Methyl isobutyl ketone (4-Methyl-2-Pentanone) | µg/L | 170 | 40 | 100% | No | 4/21/2015 | 170 | 179 | 100% | No | RHMW02 | 9/20/2005 | 170 | 91 | 100% | No | OWDFMW01 | 4/22/2015 |
| 8260B | Methyl tert-butyl Ether | µg/L | 5 | 51 | 100% | No | 10/22/2012 | 5 | 182 | 100% | No | RHMW01 | 1/27/2010 | 5 | 81 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | Methylene chloride | µg/L | 4.8 | 40 | 100% | No | 1/27/2010 | 4.8 | 176 | 98% | **Yes** | RHMW02 | 9/20/2005 | 4.8 | 89 | 98% | No | OWDFMW01 | 1/26/2010 |
| 8260B | Naphthalene | µg/L | 17 | 19 | 100% | No | 1/27/2010 | 17 | 41 | 55% | No | RHMW01 | 1/27/2010 | 10 | 18 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | Styrene | µg/L | 10 | 40 | 100% | No | 1/27/2010 | 10 | 179 | 100% | No | RHMW02 | 9/20/2005 | 10 | 91 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | Tetrachloroethane, 1,1,1,2- | µg/L | 0.52 | 40 | 100% | No | 9/20/2005 | 0.52 | 179 | 100% | **Yes** | RHMW02 | 9/20/2005 | 0.52 | 91 | 100% | No | OWDFMW01 | 11/7/2012 |
| 8260B | Tetrachloroethane, 1,1,2,2- | µg/L | 0.067 | 38 | 100% | **Yes** | 10/22/2012 | 0.067 | 169 | 100% | **Yes** | RHMW02 | 9/20/2005 | 0.067 | 79 | 100% | **Yes** | OWDFMW01 | 11/7/2012 |
| 8260B | Tetrachloroethylene | µg/L | 5 | 40 | 100% | No | 1/27/2010 | 5 | 179 | 100% | No | RHMW02 | 9/20/2005 | 5 | 91 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | Toluene | µg/L | 40 | 52 | 93% | No | 1/27/2010 | 40 | 199 | 95% | No | RHMW01 | 12/6/2005 | 40 | 89 | 96% | No | OWDFMW01 | 1/26/2010 |
| 8260B | trans-1,2- Dichloroethylene | µg/L | 100 | 40 | 100% | No | 1/27/2010 | 100 | 179 | 100% | No | RHMW02 | 9/20/2005 | 100 | 91 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | Trichloroethylene | µg/L | 5 | 39 | 98% | No | 1/27/2010 | 5 | 178 | 99% | No | RHMW02 | 9/20/2005 | 5 | 91 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | Vinyl chloride | µg/L | 2 | 40 | 100% | No | 1/27/2010 | 2 | 179 | 100% | **Yes** | RHMW02 | 9/20/2005 | 2 | 91 | 100% | No | OWDFMW01 | 1/26/2010 |
| 8260B | Xylenes, Total (p/m-, o-xylene) | µg/L | 20 | 56 | 100% | No | 1/27/2010 | 20 | 152 | 73% | No | RHMW02 | 9/20/2005 | 20 | 92 | 99% | No | OWDFMW01 | 1/26/2010 |
| 8260SIM | Bromodichloromethane | µg/L | 0.12 | 2 | 100% | No | 4/21/2015 | 0.12 | 10 | 100% | No | RHMW01 | 4/20/2015 | 0.12 | 11 | 92% | No | OWDFMW01 | 4/22/2015 |
| 8260SIM | Dibromochloromethane | µg/L | 0.16 | 2 | 100% | No | 4/21/2015 | 0.16 | 10 | 100% | No | RHMW01 | 4/20/2015 | 0.16 | 12 | 100% | No | OWDFMW01 | 4/22/2015 |
| 8260SIM | Tetrachloroethane, 1,1,2,2- | µg/L | 0.067 | 2 | 100% | No | 4/21/2015 | 0.067 | 8 | 80% | **Yes** | RHMW02 | 7/20/2015 | 0.067 | 12 | 100% | No | OWDFMW01 | 4/22/2015 |
| 8011 | 1,2-Dibromo-3- chloropropane | µg/L | 0.04 | 2 | 100% | No | 4/21/2015 | 0.04 | 10 | 100% | No | RHMW01 | 4/20/2015 | 0.04 | 18 | 100% | No | RHMW06 | 10/21/2014 |
| 8270C | Acenaphthene | µg/L | 20 | 48 | 100% | No | 7/10/2006 | 20 | 97 | 53% | No | RHMW02 | 9/20/2005 | 20 | 91 | 100% | No | RHMW04 | 9/19/2005 |
| 8270C | Acenaphthylene | µg/L | 30 | 46 | 96% | No | 7/10/2006 | 240 | 171 | 94% | No | RHMW02 | 7/10/2006 | 30 | 90 | 99% | No | RHMW04 | 9/19/2005 |
| 8270C | Anthracene | µg/L | 0.73 | 48 | 100% | No | 7/10/2006 | 22 | 181 | 99% | No | RHMW02 | 7/10/2006 | 0.73 | 90 | 99% | No | RHMW04 | 9/19/2005 |
| 8270C | Benzo[a]anthracene | µg/L | 0.027 | 46 | 96% | **Yes** | 10/19/2010 | 0.092 | 169 | 93% | **Yes** | RHMW02 | 9/20/2005 | 0.027 | 84 | 92% | **Yes** | OWDFMW01 | 10/21/2010 |
| 8270C | Benzo[g,h,i]perylene | µg/L | 0.1 | 48 | 100% | **Yes** | 10/19/2010 | 0.13 | 178 | 98% | **Yes** | RHMW02 | 2/4/2009 | 0.1 | 91 | 100% | **Yes** | OWDFMW01 | 10/21/2010 |
| 8270C | Benzo[a]pyrene | µg/L | 0.014 | 48 | 100% | **Yes** | 10/19/2010 | 0.2 | 177 | 97% | No | RHMW02 | 2/4/2009 | 0.014 | 91 | 100% | **Yes** | OWDFMW01 | 10/21/2010 |

| Table A-3b. Summary Non-Detect Statistics | | | RHMW2254, All Data | | | | | All Inside Wells, All Data | | | | | | All Outside Wells, All Data | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Method | Analyte | Units | DOH EAL (<150m from surface water) | No. of Non-Detects | Percent Non-Detected | Did Non-Detects Exceed EALs? | Date Sampled of Max Concentration | DOH EAL (>150m from surface water) | No. of Non-Detects | Percent Non-Detected | Did Non-Detects Exceed EALs? | Location of Max Concentration | Date Sampled of Max Concentration | DOH EAL (<150m from surface water) | No. of Non-Detects | Percent Non-Detected | Did Non-Detects Exceed EALs? | Location of Max Concentration | Date Sampled of Max Concentration |
| 8270C | Benzo[b]fluoranthene | µg/L | 0.092 | 48 | 100% | **Yes** | 10/19/2010 | 0.092 | 176 | 97% | **Yes** | RHMW02 | 2/4/2009 | 0.092 | 91 | 100% | **Yes** | OWDFMW01 | 10/21/2010 |
| 8270C | Benzo[k]fluoranthene | µg/L | 0.4 | 48 | 100% | No | 10/19/2010 | 0.4 | 178 | 98% | No | RHMW02 | 2/4/2009 | 0.4 | 91 | 100% | No | OWDFMW01 | 10/21/2010 |
| 8270C | Chrysene | µg/L | 0.35 | 46 | 96% | No | 7/10/2006d | 1 | 178 | 98% | No | RHMW02 | 2/4/2009 | 0.35 | 91 | 100% | No | RHMW04 | 9/19/2005 |
| 8270C | Dibenzo[a,h]anthracene | µg/L | 0.0092 | 48 | 100% | **Yes** | 10/19/2010 | 0.0092 | 182 | 100% | **Yes** | RHMW02 | 2/4/2009 | 0.0092 | 91 | 100% | **Yes** | OWDFMW01 | 10/21/2010 |
| 8270C | Fluoranthene | µg/L | 8 | 46 | 96% | No | 7/10/2006d | 130 | 169 | 93% | No | RHMW02 | 7/10/2006 | 8 | 91 | 100% | No | RHMW04 | 9/19/2005 |
| 8270C | Fluorene | µg/L | 3.9 | 48 | 100% | No | 7/10/2006d | 240 | 96 | 53% | No | RHMW02 | 9/20/2005 | 3.9 | 87 | 96% | No | RHMW04 | 9/19/2005 |
| 8270C | Indeno[1,2,3-cd]pyrene | µg/L | 0.092 | 48 | 100% | **Yes** | 10/19/2010 | 0.092 | 178 | 98% | **Yes** | RHMW02 | 2/4/2009 | 0.092 | 91 | 100% | **Yes** | OWDFMW01 | 10/21/2010 |
| 8270C | 1-Methylnaphthalene | µg/L | 2.1 | 39 | 95% | No | 7/10/2006 | 4.7 | 99 | 49% | No | RHMW01 | 7/10/2006 | 2.1 | 88 | 95% | No | RHMW04 | 9/19/2005 |
| 8270C | 2-Methylnaphthalene | µg/L | 2.1 | 48 | 91% | No | 7/10/2006 | 10 | 100 | 47% | No | RHMW01 | 7/10/2006 | 2.1 | 83 | 89% | No | RHMW04 | 9/19/2005 |
| 8270C | Naphthalene | µg/L | 17 | 39 | 74% | No | 7/10/2006 | 17 | 74 | 35% | No | RHMW01 | 7/10/2006 | 17 | 66 | 71% | No | RHMW04 | 9/19/2005 |
| 8270C | Phenanthrene | µg/L | 4.6 | 46 | 96% | No | 7/10/2006 | 240 | 162 | 89% | No | RHMW02 | 7/10/2006 | 4.6 | 84 | 92% | No | RHMW04 | 9/19/2005 |
| 8270C | Pyrene | µg/L | 2 | 46 | 96% | No | 7/10/2006 | 68 | 168 | 92% | No | RHMW02 | 7/10/2006 | 2 | 90 | 99% | No | RHMW04 | 9/19/2005 |
| 6020 | Dissolved Lead (filtered) | µg/L | 5.6 | 25 | 71% | No | 6/12/2007 | 15 | 141 | 69% | No | RHMW02 | 9/20/2005 | 5.6 | 60 | 67% | **Yes** | RHMW04 | 7/10/2006 |
| 6010B/6020/200.8 | Total Lead (unfiltered) | µg/L | - | 21 | 60% | No | 10/22/2013 | - | - | - | - | RHMW02 | 7/10/2006 | - | - | - | - | - | - |

Analyte reported at a non-detect value above DOH EAL

**Table A-4a** **RHMW2254 Summary Detect Statistics**

| Method | Analyte | Units | DOH EAL (<150m from surface water) | No. of Samples | No. of Detects | Percent Detected | Detects Min | | Detects Max | | Date Sampled of Max Concentration | Did Detects Exceed EALs? | No. of Detect Exceedances | Percent Detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8015 | TPH-d | µg/L | 100 | 55 | 10 | 18% | 14 | BJ | 67 | Z | 28-Jun-2005 | No | 0 | 0% |
| 8015 | TPH-g | µg/L | 100 | 30 | 2 | 7% | 14 | J | 19.1 | J | 13-May-2009 | No | 0 | 0% |
| 8015 | TPH-o | µg/L | 100 | 10 | 3 | 30% | 37 | BJ | 59 | J | 8-Sep-2005 | No | 0 | 0% |
| 8260B | TPH-g | µg/L | 100 | 18 | 3 | 17% | 13 | BJ | 18 | BJ | 22-Oct-2012 | No | 0 | 0% |
| 8260B | 1,2,4-Tricholorobenzene | µg/L | 25 | 40 | 1 | 3% | 0.24 | J | 0.24 | J | 10-Sep-2007 | No | 0 | 0% |
| 8260B | Bromomethane | µg/L | 8.7 | 40 | 1 | 3% | 1.26 | J | 1.26 | J | 29-Jul-2008 | No | 0 | 0% |
| 8260B | Toluene | µg/L | 40 | 56 | 4 | 7% | 0.71 | J | 1.2 | | 16-Feb-2005 | No | 0 | 0% |
| 8260B | Trichloroethylene | µg/L | 5 | 40 | 1 | 3% | 0.17 | J | 0.17 | J | 17-Apr-2012 | No | 0 | 0% |
| 8270C | Acenaphthylene | µg/L | 30 | 48 | 2 | 4% | 0.0023 | J | 0.0024 | J | 6-Dec-2005 | No | 0 | 0% |
| 8270C | Benzo[a]anthracene | µg/L | 0.027 | 48 | 2 | 4% | 0.002 | J | 0.003 | J | 6-Dec-2005 | No | 0 | 0% |
| 8270C | Chrysene | µg/L | 0.35 | 48 | 2 | 4% | 0.004 | J | 0.004 | J | 6-Dec-2005 | No | 0 | 0% |
| 8270C | Fluoranthene | µg/L | 8 | 48 | 2 | 4% | 0.008 | J | 0.009 | J | 6-Dec-2005 | No | 0 | 0% |
| 8270C | 1-Methylnaphthalene | µg/L | 2.1 | 41 | 2 | 5% | 0.0276 | J | 0.044 | J | 15-Apr-2008 | No | 0 | 0% |
| 8270C | 2-Methylnaphthalene | µg/L | 2.1 | 53 | 5 | 9% | 0.0071 | J | 0.056 | | 15-Apr-2008 | No | 0 | 0% |
| 8270C | Naphthalene | µg/L | 17 | 53 | 14 | 26% | 0.011 | J | 0.099 | J | 23-Jul-2013 | No | 0 | 0% |
| 8270C | Phenanthrene | µg/L | 4.6 | 48 | 2 | 4% | 0.007 | J | 0.008 | J | 6-Dec-2005 | No | 0 | 0% |
| 8270C | Pyrene | µg/L | 2 | 48 | 2 | 4% | 0.007 | J | 0.0075 | J | 6-Dec-2005 | No | 0 | 0% |
| 6020 | Dissolved Lead (filtered) | µg/L | 5.6 | 35 | 10 | 29% | 0.02 | B | 3.3 | | 19-Oct-2010 | No | 0 | 0% |
| 6010B/6020/200.8 | Total Lead (unfiltered) | µg/L | - | 22 | 14 | 40% | 0.05 | | 0.952 | | 28-Jun-2005 | No | 0 | 0% |

Notes:

HDOH, Tier 1 Environmental Action Levels, Table D-1a. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS located within 150 meters of release site)
Qualifiers:
B - analyte was present in the associated method lank
J - indicates an estimated value
Z - the chromatoraphic pattern was inconsistent with the profile of the reference fuel standard

**Table A-4b** **RHMW2254 Summary Non-Detect Statistics**

| Method | Analyte | Units | DOH EAL (<150m from surface water) | No. of Samples | No. of Non-detects | Percent Non-Detected | Non-Detects Min | | Non-Detects Max | | Did Non-Detects Exceed EALs? | No. of Non-Detect Exceedances | Percent Non-detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8015 | TPH-d | µg/L | 100 | 55 | 45 | 82% | 10 | U | 320 | U | Yes | 8 | 18% |
| 8015 | TPH-g | µg/L | 100 | 30 | 28 | 93% | 10 | U | 60 | U | No | 0 | 0% |
| 8015 | TPH-o | µg/L | 100 | 10 | 7 | 70% | 28 | U | 212 | U | Yes | 3 | 43% |
| 8260B | TPH-g | µg/L | 100 | 18 | 15 | 83% | 12.12 | U | 30 | U | No | 0 | 0% |
| 8260B | 1,1,1-Trichloroethane | µg/L | 62 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,1,2-Trichloroethane | µg/L | 5 | 40 | 40 | 100% | 0.3 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,1-Dichloroethane | µg/L | 2.4 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,1-Dichloroethylene | µg/L | 7 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,2,3-Trichloropropane | µg/L | 0.6 | 40 | 40 | 100% | 0.31 | U | 2 | U | Yes | 27 | 68% |
| 8260B | 1,2,4-Tricholorobenzene | µg/L | 25 | 40 | 39 | 98% | 0.3 | U | 1 | U | No | 0 | 0% |
| 8260B | 1,2-Dibromo-3-chloropropane | µg/L | 0.04 | 40 | 40 | 100% | 0.41 | U | 5 | U | Yes | 40 | 100% |
| 8260B | 1,2-Dibromoethane | µg/L | 0.04 | 52 | 52 | 100% | 0.00096 | U | 0.62 | U | Yes | 43 | 83% |
| 8260B | 1,2-Dichlorobenzene | µg/L | 10 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,2-Dichloroethane | µg/L | 0.15 | 50 | 50 | 100% | 0.12 | U | 0.5 | U | Yes | 34 | 68% |
| 8260B | 1,2-Dichloropropane | µg/L | 5 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,3-Dichlorobenzene | µg/L | 5 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,3-Dichloropropene (total of cis/trans) | µg/L | 0.43 | 40 | 40 | 100% | 0.15 | U | 0.62 | U | Yes | 17 | 43% |
| 8260B | 1,4-Dichlorobenzene | µg/L | 5 | 40 | 40 | 100% | 0.15 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Acetone | µg/L | 1500 | 38 | 38 | 100% | 1.9 | U | 10 | U | No | 0 | 0% |
| 8260B | Benzene | µg/L | 5 | 56 | 56 | 100% | 0.1 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Bromodichloromethane | µg/L | 0.12 | 38 | 38 | 100% | 0.15 | U | 0.5 | U | Yes | 38 | 100% |
| 8260B | Bromoform | µg/L | 80 | 40 | 40 | 100% | 0.28 | U | 2 | U | No | 0 | 0% |
| 8260B | Bromomethane | µg/L | 8.7 | 40 | 39 | 98% | 0.3 | U | 5 | U | No | 0 | 0% |
| 8260B | Carbon Tetrachloride | µg/L | 5 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Chlorobenzene | µg/L | 25 | 40 | 40 | 100% | 0.15 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Chloroethane | µg/L | 16 | 40 | 40 | 100% | 0.2 | U | 5 | U | No | 0 | 0% |
| 8260B | Chloroform | µg/L | 70 | 40 | 40 | 100% | 0.14 | U | 0.6 | U | No | 0 | 0% |
| 8260B | Chloromethane | µg/L | 1.8 | 40 | 40 | 100% | 0.2 | U | 5 | U | Yes | 11 | 28% |
| 8260B | cis-1,2-Dichloroethylene | µg/L | 70 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Dibromochloromethane | µg/L | 0.16 | 38 | 38 | 100% | 0.15 | U | 0.5 | U | Yes | 28 | 74% |
| 8260B | Ethylbenzene | µg/L | 30 | 56 | 56 | 100% | 0.1 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Hexachlorobutadiene | µg/L | 0.86 | 40 | 40 | 100% | 0.18 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Methyl ethyl ketone (2-Butanone) | µg/L | 7,100 | 40 | 40 | 100% | 1.2 | U | 6.2 | U | No | 0 | 0% |
| 8260B | Methyl isobutyl ketone (4-Methyl-2-Pentanone) | µg/L | 170 | 40 | 40 | 100% | 2.2 | U | 10 | U | No | 0 | 0% |
| 8260B | Methyl tert-butyl Ether | µg/L | 5 | 51 | 51 | 100% | 0.2 | U | 5 | U | No | 0 | 0% |
| 8260B | Methylene chloride | µg/L | 4.8 | 40 | 40 | 100% | 0.2 | U | 2 | U | No | 0 | 0% |
| 8260B | Naphthalene | µg/L | 17 | 19 | 19 | 100% | 0.44 | U | 1.24 | U | No | 0 | 0% |
| 8260B | Styrene | µg/L | 10 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Tetrachloroethane, 1,1,1,2- | µg/L | 0.52 | 40 | 40 | 100% | 0.15 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Tetrachloroethane, 1,1,2,2- | µg/L | 0.067 | 38 | 38 | 100% | 0.15 | U | 0.5 | U | Yes | 38 | 100% |
| 8260B | Tetrachloroethylene | µg/L | 5 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Toluene | µg/L | 40 | 56 | 52 | 93% | 0.1 | U | 0.62 | U | No | 0 | 0% |
| 8260B | trans-1,2- Dichloroethylene | µg/L | 100 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Trichloroethylene | µg/L | 5 | 40 | 39 | 98% | 0.1 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Vinyl chloride | µg/L | 2 | 40 | 40 | 100% | 0.1 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Xylenes, Total (p/m-, o-xylene) | µg/L | 20 | 56 | 56 | 100% | 0.2 | U | 1.24 | U | No | 0 | 0% |
| 8260SIM | Bromodichloromethane | µg/L | 0.12 | 2 | 2 | 100% | 0.01 | U | 0.01 | U | No | 0 | 0% |
| 8260SIM | Dibromochloromethane | µg/L | 0.16 | 2 | 2 | 100% | 0.01 | U | 0.01 | U | No | 0 | 0% |
| 8260SIM | Tetrachloroethane, 1,1,2,2- | µg/L | 0.067 | 2 | 2 | 100% | 0.015 | U | 0.015 | U | No | 0 | 0% |
| 8011 | 1,2-Dibromo-3- chloropropane | µg/L | 0.04 | 2 | 2 | 100% | 0.004 | U | 0.004 | U | No | 0 | 0% |
| 8270C | Acenaphthene | µg/L | 20 | 48 | 48 | 100% | 0.002 | U | 0.51 | U | No | 0 | 0% |
| 8270C | Acenaphthylene | µg/L | 30 | 48 | 46 | 96% | 0.0018 | U | 0.51 | U | No | 0 | 0% |
| 8270C | Anthracene | µg/L | 0.73 | 48 | 48 | 100% | 0.0011 | U | 0.51 | U | No | 0 | 0% |
| 8270C | Benzo[a]anthracene | µg/L | 0.027 | 48 | 46 | 96% | 0.0021 | U | 0.14 | U | Yes | 26 | 57% |

**Table A-4b** **RHMW2254 Summary Non-Detect Statistics**

| Method | Analyte | Units | DOH EAL (<150m from surface water) | No. of Samples | No. of Non-detects | Percent Non-Detected | Non-Detects Min | | Non-Detects Max | | Did Non-Detects Exceed EALs? | No. of Non-Detect Exceedances | Percent Non-detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8270C | Benzo[g,h,i]perylene | µg/L | 0.1 | 48 | 48 | 100% | 0.0037 | U | 0.16 | U | **Yes** | 8 | 17% |
| 8270C | Benzo[a]pyrene | µg/L | 0.014 | 48 | 48 | 100% | 0.0016 | U | 0.14 | U | **Yes** | 43 | 90% |
| 8270C | Benzo[b]fluoranthene | µg/L | 0.092 | 48 | 48 | 100% | 0.002 | U | 0.12 | U | **Yes** | 8 | 17% |
| 8270C | Benzo[k]fluoranthene | µg/L | 0.4 | 48 | 48 | 100% | 0.0014 | U | 0.14 | U | No | 0 | 0% |
| 8270C | Chrysene | µg/L | 0.35 | 48 | 46 | 96% | 0.0013 | U | 0.1 | U | No | 0 | 0% |
| 8270C | Dibenzo[a,h]anthracene | µg/L | 0.0092 | 48 | 48 | 100% | 0.0017 | U | 0.1 | U | **Yes** | 43 | 90% |
| 8270C | Fluoranthene | µg/L | 8 | 48 | 46 | 96% | 0.0024 | U | 0.26 | U | No | 0 | 0% |
| 8270C | Fluorene | µg/L | 3.9 | 48 | 48 | 100% | 0.0026 | U | 0.26 | U | No | 0 | 0% |
| 8270C | Indeno[1,2,3-cd]pyrene | µg/L | 0.092 | 48 | 48 | 100% | 0.0021 | U | 0.14 | U | **Yes** | 8 | 17% |
| 8270C | 1-Methylnaphthalene | µg/L | 2.1 | 41 | 39 | 95% | 0.005 | U | 0.26 | U | No | 0 | 0% |
| 8270C | 2-Methylnaphthalene | µg/L | 2.1 | 53 | 48 | 91% | 0.005 | U | 0.26 | U | No | 0 | 0% |
| 8270C | Naphthalene | µg/L | 17 | 53 | 39 | 74% | 0.005 | U | 0.26 | U | No | 0 | 0% |
| 8270C | Phenanthrene | µg/L | 4.6 | 48 | 46 | 96% | 0.0032 | U | 0.51 | U | No | 0 | 0% |
| 8270C | Pyrene | µg/L | 2 | 48 | 46 | 96% | 0.0023 | U | 0.26 | U | No | 0 | 0% |
| 6020 | Dissolved Lead (filtered) | µg/L | 5.6 | 35 | 25 | 71% | 0.2 | U | 3.4 | U | No | 0 | 0% |
| 6010B/6020/200.8 | Total Lead (unfiltered) | µg/L | - | 22 | 21 | 95% | 0.0898 | U | 0.0898 | U | No | 0 | 0% |

Notes:

HDOH, Tier 1 Environmental Action Levels, Table D-1a. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS located within 150 meters of release site)
**Blue text** indicates analyte reported non-detect above DOH EAL
Qualifiers:
U - non-detect

**Table A-5a** **All Inside Wells Summary Detect Statistics**

| Method | Analyte | Units | DOH EAL | No. of Samples | No. of Detects | Percent Detected | Detects Min | | Detects Max | | Location of Max Concentration | Date Sampled of Max Concentration | Did Detects Exceed EALs? | No. of Detect Exceedances | Percent Detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8015 | TPH-d | µg/L | 100 | 211 | 172 | 82% | 15 | J | 6300 | | RHMW02 | 22-Oct-2008 | **Yes** | 138 | 80% |
| 8015 | TPH-g | µg/L | 100 | 91 | 39 | 43% | 13.2 | J | 148 | O | RHMW02 | 27-Mar-2007 | **Yes** | 6 | 15% |
| 8015 | TPH-o | µg/L | 100 | 26 | 17 | 65% | 21 | J | 890 | | RHMW01 | 17-Feb-2005 | **Yes** | 11 | 65% |
| 8260B | TPH-g | µg/L | 100 | 91 | 37 | 41% | 13 | J | 660 | | RHMW02 | 28-Jan-2013 | **Yes** | 6 | 16% |
| 8260B | 1,1-Dichloroethylene | µg/L | 7 | 177 | 1 | 1% | 0.5 | | 0.5 | | RHMW03 | 20-Sep-2005 | No | 0 | 0% |
| 8260B | 1,2,3-Trichloropropane | µg/L | 0.6 | 179 | 1 | 1% | 0.27 | J | 0.27 | J | RHMW02 | 20-Jul-2015 | No | 0 | 0% |
| 8260B | Acetone | µg/L | 1500 | 170 | 7 | 4% | 2.4 | J | 65 | | RHMW05 | 15-Jul-2009 | No | 0 | 0% |
| 8260B | Benzene | µg/L | 5 | 209 | 13 | 6% | 0.08 | J | 0.26 | J | RHMW02 | 4-Feb-2009 | No | 0 | 0% |
| 8260B | Chloroform | µg/L | 70 | 179 | 1 | 1% | 0.13 | J | 0.13 | J | RHMW01 | 2-Nov-2011 | No | 0 | 0% |
| 8260B | Ethylbenzene | µg/L | 30 | 209 | 47 | 22% | 0.14 | J | 1.3 | | RHMW02 | 10-Jul-2006 | No | 0 | 0% |
| 8260B | Methyl ethyl ketone (2-Butanone) | µg/L | 7,100 | 179 | 1 | 1% | 4.27 | F | 4.27 | F | RHMW01 | 14-Oct-2009 | No | 0 | 0% |
| 8260B | Methylene chloride | µg/L | 4.8 | 179 | 3 | 2% | 0.1 | J | 24.9 | JB | RHMW02 | 10-Jul-2006 | **Yes** | 1 | 33% |
| 8260B | Toluene | µg/L | 40 | 209 | 10 | 5% | 0.06 | J | 2.5 | | RHMW01 | 15-Jan-2014 | No | 0 | 0% |
| 8260B | Trichloroethylene | µg/L | 5 | 179 | 1 | 1% | 8.2 | | 8.2 | | RHMW02 | 20-Sep-2005 | **Yes** | 1 | 100% |
| 8260B | Xylenes, Total (p/m-, o-xylene) | µg/L | 20 | 209 | 57 | 27% | 0.26 | J | 1.1 | | RHMW02 | 15-Jan-2008 | No | 0 | 0% |
| 8260SIM | Tetrachloroethane, 1,1,2,2- | µg/L | 0.067 | 10 | 2 | 20% | 0.59 | | 0.065 | | RHMW02 | 20-Apr-2015 | No | 0 | 0% |
| 8270C | Acenaphthene | µg/L | 20 | 182 | 85 | 47% | 0.0053 | J | 0.86 | J | RHMW02 | 12-Jun-2007 | No | 0 | 0% |
| 8270C | Acenaphthylene | µg/L | 240 | 182 | 11 | 6% | 0.0041 | J | 0.26 | X | RHMW02 | 20-Apr-2015 | No | 0 | 0% |
| 8270C | Anthracene | µg/L | 22 | 182 | 1 | 1% | 0.26 | J | 0.0051 | J | RHMW01 | 6-Dec-2015 | No | 0 | 0% |
| 8270C | Benzo[a]anthracene | µg/L | 0.092 | 182 | 13 | 7% | 0.0026 | B, J | 0.071 | J | RHMW02 | 20-Sep-2005 | No | 0 | 0% |
| 8270C | Benzo[g,h,i]perylene | µg/L | 0.13 | 182 | 4 | 2% | 0.0057 | J | 0.034 | | RHMW01 | 28-Jun-2005 | No | 0 | 0% |
| 8270C | Benzo[a]pyrene | µg/L | 0.2 | 182 | 5 | 3% | 0.0086 | J | 0.045 | | RHMW01 | 28-Jun-2005 | No | 0 | 0% |
| 8270C | Benzo[b]fluoranthene | µg/L | 0.092 | 182 | 6 | 3% | 0.0072 | J | 0.069 | J | RHMW02 | 20-Sep-2005 | No | 0 | 0% |
| 8270C | Benzo[k]fluoranthene | µg/L | 0.4 | 182 | 4 | 2% | 0.0068 | J | 0.051 | | RHMW01 | 28-Jun-2005 | No | 0 | 0% |
| 8270C | Chrysene | µg/L | 1 | 182 | 4 | 2% | 0.0068 | J | 0.051 | | RHMW01 | 28-Jun-2005 | No | 0 | 0% |
| 8270C | Fluoranthene | µg/L | 130 | 182 | 13 | 7% | 0.019 | J | 0.093 | | RHMW01 | 28-Jun-2005 | No | 0 | 0% |
| 8270C | Fluorene | µg/L | 240 | 182 | 86 | 47% | 0.0096 | J | 0.39 | J | RHMW02 | 10-Jul-2006 | No | 0 | 0% |
| 8270C | Indeno[1,2,3-cd]pyrene | µg/L | 0.092 | 182 | 4 | 2% | 0.0075 | J | 0.037 | | RHMW01 | 28-Jun-2005 | No | 0 | 0% |
| 8270C | 1-Methylnaphthalene | µg/L | 4.7 | 203 | 104 | 51% | 0.0041 | J | 142 | | RHMW02 | 10-Jul-2006 | **Yes** | 75 | 72% |
| 8270C | 2-Methylnaphthalene | µg/L | 10 | 211 | 111 | 53% | 0.0029 | J | 88.5 | | RHMW02 | 20-Sep-2005 | **Yes** | 37 | 33% |
| 8270C | Naphthalene | µg/L | 17 | 211 | 137 | 65% | 0.0058 | J | 180 | | RHMW02 | 10-Jul-2006 | **Yes** | 61 | 45% |
| 8270C | Phenanthrene | µg/L | 240 | 182 | 20 | 11% | 0.0052 | J | 0.14 | | RHMW01 | 28-Jun-2005 | No | 0 | 0% |
| 8270C | Pyrene | µg/L | 68 | 182 | 14 | 8% | 0.0058 | JX | 0.11 | | RHMW01 | 28-Jun-2005 | No | 0 | 0% |
| 6020 | Dissolved Lead (filtered) | µg/L | 15 | 204 | 63 | 31% | 0.011 | J | 11.9 | | RHMW01 | 17-Feb-2005 | No | 0 | 0% |

Notes:

HDOH, Tier 1 Environmental Action Levels, Table D-1b. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS NOT located within 150 meters of release site)

**Blue text** indicates analyte reported non-detect above DOH EAL

Qualifiers:

B - analyte was present in the associated method lank

F - indicates that the compound was identified ut the concentration was aove the MDL and elow the RL

J - indicates an estimated value

O - the chromatoraphic pattern was inconsistent with the profile of the reference fuel standard

X - possile hih ias due to matrix interference

**Table A-5b** **All Inside Wells Summary Non-Detect Statistics**

| Method | Analyte | Units | DOH EAL | No. of Samples | No. of Non-detects | Percent Non-Detected | Non-Detects Min | | Non-Detects Max | | Did Non-Detects Exceed EALs? | No. of Non-Detect Exceedances | Percent Non-detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8015 | TPH-d | µg/L | 100 | 211 | 39 | 18% | 10 | U | 330 | U | **Yes** | 8 | 21% |
| 8015 | TPH-g | µg/L | 100 | 91 | 52 | 57% | 0.5 | U | 60 | U | No | 0 | 0% |
| 8015 | TPH-o | µg/L | 100 | 26 | 9 | 35% | 212 | U | 212 | U | **Yes** | 9 | 100% |
| 8260B | TPH-g | µg/L | 100 | 91 | 54 | 59% | 12.12 | U | 30 | U | No | 0 | 0% |
| 8260B | 1,1,1-Trichloroethane | µg/L | 200 | 179 | 179 | 100% | 0.2 | U | 2.5 | U | No | 0 | 0% |
| 8260B | 1,1,2-Trichloroethane | µg/L | 5 | 179 | 179 | 100% | 0.3 | U | 2.5 | U | No | 0 | 0% |
| 8260B | 1,1-Dichloroethane | µg/L | 2.4 | 179 | 179 | 100% | 0.2 | U | 2.5 | U | **Yes** | 3 | 2% |
| 8260B | 1,1-Dichloroethylene | µg/L | 7 | 177 | 176 | 99% | 0.2 | U | 2.5 | U | No | 0 | 0% |
| 8260B | 1,2,3-Trichloropropane | µg/L | 0.6 | 179 | 178 | 99% | 0.31 | U | 5 | U | **Yes** | 128 | 72% |
| 8260B | 1,2,4-Tricholorobenzene | µg/L | 70 | 179 | 179 | 100% | 0.22 | U | 2.5 | U | No | 0 | 0% |
| 8260B | 1,2-Dibromo-3-chloropropane | µg/L | 0.04 | 179 | 179 | 100% | 0.41 | U | 5 | U | **Yes** | 179 | 100% |
| 8260B | 1,2-Dibromoethane | µg/L | 0.04 | 187 | 187 | 100% | 0.00095 | U | 2.5 | U | **Yes** | 179 | 96% |
| 8260B | 1,2-Dichlorobenzene | µg/L | 10 | 179 | 179 | 100% | 0.2 | U | 2.5 | U | No | 0 | 0% |
| 8260B | 1,2-Dichloroethane | µg/L | 0.15 | 177 | 177 | 100% | 0.12 | U | 2.5 | U | **Yes** | 138 | 78% |
| 8260B | 1,2-Dichloropropane | µg/L | 5 | 179 | 179 | 100% | 0.2 | U | 2.5 | U | No | 0 | 0% |
| 8260B | 1,3-Dichlorobenzene | µg/L | 5 | 179 | 179 | 100% | 0.2 | U | 2.5 | U | No | 0 | 0% |
| 8260B | 1,3-Dichloropropene (total of cis/trans) | µg/L | 0.43 | 179 | 179 | 100% | 0.15 | U | 1.5 | U | **Yes** | 79 | 44% |
| 8260B | 1,4-Dichlorobenzene | µg/L | 5 | 179 | 179 | 100% | 0.15 | U | 2.5 | U | No | 0 | 0% |
| 8260B | Acetone | µg/L | 1500 | 170 | 163 | 96% | 1.9 | U | 25 | U | No | 0 | 0% |
| 8260B | Benzene | µg/L | 5 | 209 | 196 | 94% | 0.1 | U | 2.5 | U | No | 0 | 0% |
| 8260B | Bromodichloromethane | µg/L | 0.12 | 169 | 169 | 100% | 0.15 | U | 2.5 | U | **Yes** | 169 | 100% |
| 8260B | Bromoform | µg/L | 80 | 179 | 179 | 100% | 0.28 | U | 2.5 | U | No | 0 | 0% |
| 8260B | Bromomethane | µg/L | 8.7 | 179 | 179 | 100% | 0.3 | U | 5 | U | No | 0 | 0% |
| 8260B | Carbon Tetrachloride | µg/L | 5 | 179 | 179 | 100% | 0.2 | U | 2.5 | U | No | 0 | 0% |
| 8260B | Chlorobenzene | µg/L | 50 | 179 | 179 | 100% | 0.15 | U | 2.5 | U | No | 0 | 0% |
| 8260B | Chloroethane | µg/L | 16 | 179 | 179 | 100% | 0.2 | U | 5 | U | No | 0 | 0% |
| 8260B | Chloroform | µg/L | 70 | 179 | 178 | 99% | 0.14 | U | 2.5 | U | No | 0 | 0% |
| 8260B | Chloromethane | µg/L | 1.8 | 179 | 179 | 100% | 0.2 | U | 5 | U | **Yes** | 59 | 33% |
| 8260B | cis-1,2-Dichloroethylene | µg/L | 70 | 179 | 179 | 100% | 0.2 | U | 2.5 | U | No | 0 | 0% |
| 8260B | Dibromochloromethane | µg/L | 0.16 | 169 | 169 | 100% | 0.15 | U | 2 | U | **Yes** | 134 | 79% |
| 8260B | Ethylbenzene | µg/L | 30 | 209 | 162 | 78% | 0.1 | U | 2.5 | U | No | 0 | 0% |
| 8260B | Hexachlorobutadiene | µg/L | 0.86 | 179 | 179 | 100% | 0.18 | U | 2.5 | U | **Yes** | 3 | 2% |
| 8260B | Methyl ethyl ketone (2-Butanone) | µg/L | 7,100 | 179 | 178 | 99% | 0.5 | U | 13 | U | No | 0 | 0% |
| 8260B | Methyl isobutyl ketone (4-Methyl-2-Pentanone) | µg/L | 170 | 179 | 179 | 100% | 0.5 | U | 13 | U | No | 0 | 0% |
| 8260B | Methyl tert-butyl Ether | µg/L | 5 | 182 | 182 | 100% | 0.2 | U | 3 | U | No | 0 | 0% |
| 8260B | Methylene chloride | µg/L | 4.8 | 179 | 176 | 98% | 0.2 | U | 5 | U | **Yes** | 2 | 1% |
| 8260B | Naphthalene | µg/L | 17 | 74 | 41 | 55% | 0.44 | U | 1.24 | U | No | 0 | 0% |
| 8260B | Styrene | µg/L | 10 | 179 | 179 | 100% | 0.2 | U | 2.5 | U | No | 0 | 0% |
| 8260B | Tetrachloroethane, 1,1,1,2- | µg/L | 0.52 | 179 | 179 | 100% | 0.15 | U | 2.5 | U | **Yes** | 3 | 2% |
| 8260B | Tetrachloroethane, 1,1,2,2- | µg/L | 0.067 | 169 | 169 | 100% | 0.15 | U | 2 | U | **Yes** | 169 | 100% |
| 8260B | Tetrachloroethylene | µg/L | 5 | 179 | 179 | 100% | 0.2 | U | 2.5 | U | No | 0 | 0% |
| 8260B | Toluene | µg/L | 40 | 209 | 199 | 95% | 0.1 | U | 11 | U | No | 0 | 0% |
| 8260B | trans-1,2- Dichloroethylene | µg/L | 100 | 179 | 179 | 100% | 0.2 | U | 2.5 | U | No | 0 | 0% |
| 8260B | Trichloroethylene | µg/L | 5 | 179 | 178 | 99% | 0.1 | U | 2.5 | U | No | 0 | 0% |
| 8260B | Vinyl chloride | µg/L | 2 | 179 | 179 | 100% | 0.1 | U | 2.5 | U | **Yes** | 3 | 2% |
| 8260B | Xylenes, Total (p/m-, o-xylene) | µg/L | 20 | 209 | 152 | 73% | 0.2 | U | 2.5 | U | No | 0 | 0% |
| 8260SIM | Bromodichloromethane | µg/L | 0.12 | 10 | 10 | 100% | 0.01 | U | 0.01 | U | No | 0 | 0% |
| 8260SIM | Dibromochloromethane | µg/L | 0.16 | 10 | 10 | 100% | 0.01 | U | 0.01 | U | No | 0 | 0% |
| 8260SIM | Tetrachloroethane, 1,1,2,2- | µg/L | 0.067 | 10 | 8 | 80% | 0.015 | U | 0.13 | U | **Yes** | 2 | 25% |
| 8011 | 1,2-Dibromo-3- chloropropane | µg/L | 0.04 | 10 | 10 | 100% | 0.004 | U | 0.004 | U | No | 0 | 0% |
| 8270C | Acenaphthene | µg/L | 20 | 182 | 97 | 53% | 0.005 | U | 0.52 | U | No | 0 | 0% |
| 8270C | Acenaphthylene | µg/L | 240 | 182 | 171 | 94% | 0.0018 | U | 0.54 | U | No | 0 | 0% |
| 8270C | Anthracene | µg/L | 22 | 182 | 181 | 99% | 0.0011 | U | 0.54 | U | No | 0 | 0% |
| 8270C | Benzo[a]anthracene | µg/L | 0.092 | 182 | 169 | 93% | 0.005 | U | 0.52 | U | **Yes** | 44 | 26% |

**Table A-5b** **All Inside Wells Summary Non-Detect Statistics**

| Method | Analyte | Units | DOH EAL | No. of Samples | No. of Non-detects | Percent Non-Detected | Non-Detects Min | | Non-Detects Max | | Did Non-Detects Exceed EALs? | No. of Non-Detect Exceedances | Percent Non-detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8270C | Benzo[g,h,i]perylene | µg/L | 0.13 | 182 | 178 | 98% | 0.005 | U | 0.161 | U | **Yes** | 42 | 24% |
| 8270C | Benzo[a]pyrene | µg/L | 0.2 | 182 | 177 | 97% | 0.005 | U | 0.161 | U | No | 0 | 0% |
| 8270C | Benzo[b]fluoranthene | µg/L | 0.092 | 182 | 176 | 97% | 0.005 | U | 0.161 | U | **Yes** | 42 | 24% |
| 8270C | Benzo[k]fluoranthene | µg/L | 0.4 | 182 | 178 | 98% | 0.005 | U | 0.161 | U | No | 0 | 0% |
| 8270C | Chrysene | µg/L | 1 | 182 | 178 | 98% | 0.005 | U | 0.161 | U | No | 0 | 0% |
| 8270C | Dibenzo[a,h]anthracene | µg/L | 0.0092 | 182 | 182 | 100% | 0.0017 | U | 0.161 | U | **Yes** | 170 | 93% |
| 8270C | Fluoranthene | µg/L | 130 | 182 | 169 | 93% | 0.015 | U | 0.27 | U | No | 0 | 0% |
| 8270C | Fluorene | µg/L | 240 | 182 | 96 | 53% | 0.005 | U | 0.26 | U | No | 0 | 0% |
| 8270C | Indeno[1,2,3-cd]pyrene | µg/L | 0.092 | 182 | 178 | 98% | 0.005 | U | 0.161 | U | **Yes** | 42 | 24% |
| 8270C | 1-Methylnaphthalene | µg/L | 4.7 | 203 | 99 | 49% | 0.005 | U | 0.25 | U | No | 0 | 0% |
| 8270C | 2-Methylnaphthalene | µg/L | 10 | 211 | 100 | 47% | 0.005 | U | 0.25 | U | No | 0 | 0% |
| 8270C | Naphthalene | µg/L | 17 | 211 | 74 | 35% | 0.005 | U | 0.25 | U | No | 0 | 0% |
| 8270C | Phenanthrene | µg/L | 240 | 182 | 162 | 89% | 0.005 | U | 0.54 | U | No | 0 | 0% |
| 8270C | Pyrene | µg/L | 68 | 182 | 168 | 92% | 0.01 | U | 0.27 | U | No | 0 | 0% |
| 6020 | Dissolved Lead (filtered) | µg/L | 15 | 204 | 141 | 69% | 0.2 | U | 5 | U | No | 0 | 0% |

Notes:

HDOH, Tier 1 Environmental Action Levels, Table D-1b. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS NOT located within 150 meters of release site)

**Blue text** indicates analyte reported non-detect above DOH EAL

Qualifiers:

U - non-detect

**Table A-6a** **All Outside Wells Summary Detect Statistics**

| Method | Analyte | Units | DOH EAL | No. of Samples | No. of Detects | Percent Detected | Detects Min | | Detects Max | | Location of Max Concentration | Date Sampled of Max Concentration | Did Detects Exceed EALs? | No. of Detect Exceedances | Percent Detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8015 | TPH-d | µg/L | 100 | 93 | 49 | 53% | 10 | HDJ | 3100 | Z | OWDFMW01 | 22-Jul-2015 | **Yes** | 25 | 51% |
| 8015 | TPH-o | µg/L | 100 | 24 | 11 | 46% | 25 | BJ | 390 | Z | OWDFMW01 | 22-Jul-2015 | **Yes** | 4 | 36% |
| 8260B | TPH-g | µg/L | 100 | 55 | 10 | 18% | 14 | BJ | 31 | BJ | OWDFMW01 | 23-Apr-2014 | No | 0 | 0% |
| 8260B | 1,3-Dichloropropene (total of cis/trans) | µg/L | 0.43 | 83 | 5 | 6% | 0.62 | | 0.62 | | OWDFMW01 | 26-Jan-2010 | **Yes** | 5 | 100% |
| 8260B | Acetone | µg/L | 1500 | 91 | 37 | 41% | 1.4 | J | 150 | | OWDFMW01 | 22-Jul-2015 | No | 0 | 0% |
| 8260B | Benzene | µg/L | 5 | 93 | 24 | 26% | 0.07 | J | 1.3 | | OWDFMW01 | 19-Jul-2012 | No | 0 | 0% |
| 8260B | Bromodichloromethane | µg/L | 0.12 | 79 | 1 | 1% | 0.5 | BUJ | 0.5 | BUJ | OWDFMW01 | 7-Nov-2012 | **Yes** | 1 | 100% |
| 8260B | Chloromethane | µg/L | 1.8 | 89 | 3 | 3% | 0.07 | J | 0.09 | J | OWDFMW01 | 29-Jul-2015 | No | 0 | 0% |
| 8260B | Methyl ethyl ketone (2-Butanone) | µg/L | 7,100 | 91 | 10 | 11% | 1 | J | 1 | J | OWDFMW01 | 19-Jul-2012 | No | 0 | 0% |
| 8260B | Methylene chloride | µg/L | 4.8 | 91 | 2 | 2% | 0.2 | J | 0.2 | J | OWDFMW01 | 22-Jul-2015 | No | 0 | 0% |
| 8260B | Toluene | µg/L | 40 | 93 | 4 | 4% | 0.06 | J | 3.8 | | HDMW2253-03 | 22-Oct-2014 | No | 0 | 0% |
| 8260B | Xylenes, Total (p/m-, o-xylene) | µg/L | 20 | 93 | 1 | 1% | 0.39 | J | 0.39 | J | OWDFMW01 | 21-Apr-2011 | No | 0 | 0% |
| 8260SIM | Bromodichloromethane | µg/L | 0.12 | 12 | 1 | 8% | 0.0039 | BJ | 0.0039 | BJ | RHMW06 | 23-Apr-2015 | No | 0 | 0% |
| 8270C | Acenaphthylene | µg/L | 30 | 91 | 1 | 1% | 0.0037 | J | 0.0037 | J | RHMW04 | 22-Apr-2015 | No | 0 | 0% |
| 8270C | Anthracene | µg/L | 0.73 | 91 | 1 | 1% | 0.0051 | J | 0.0051 | J | RHMW04 | 22-Apr-2015 | No | 0 | 0% |
| 8270C | Benzo[a]anthracene | µg/L | 0.027 | 91 | 7 | 8% | 0.0027 | B,J | 0.0046 | J | OWDFMW01 | 22-Jul-2015 | No | 0 | 0% |
| 8270C | Fluorene | µg/L | 3.9 | 91 | 4 | 4% | 0.0039 | JX | 0.006 | J | RHMW04 | 22-Apr-2015 | No | 0 | 0% |
| 8270C | 1-Methylnaphthalene | µg/L | 2.1 | 93 | 5 | 5% | 0.0051 | J | 0.023 | | OWDFMW01 | 22-Apr-2015 | No | 0 | 0% |
| 8270C | 2-Methylnaphthalene | µg/L | 2.1 | 93 | 10 | 11% | 0.0059 | J | 0.017 | J | OWDFMW01 | 22-Apr-2015 | No | 0 | 0% |
| 8270C | Naphthalene | µg/L | 17 | 93 | 27 | 29% | 0.006 | J | 0.16 | J | HDMW2253-03 | 24-Apr-2013 | No | 0 | 0% |
| 8270C | Phenanthrene | µg/L | 4.6 | 91 | 7 | 8% | 0.0064 | J | 0.014 | J | OWDFMW01 | 22-Jul-2015 | No | 0 | 0% |
| 8270C | Pyrene | µg/L | 2 | 91 | 1 | 1% | 0.0063 | J | 0.0063 | J | OWDFMW01 | 22-Jul-2015 | No | 0 | 0% |
| 6020 | Dissolved Lead (filtered) | µg/L | 5.6 | 90 | 30 | 33% | 0.006 | J | 0.9 | | HDMW2253-03 | 26-Oct-2011 | No | 0 | 0% |

Notes:

HDOH, Tier 1 Environmental Action Levels, Table D-1a. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS located within 150 meters of release site)

**Blue text** indicates analyte reported non-detect above DOH EAL

Qualifiers:

B - analyte was present in the associated method blank

BU - sample analyzed after holding time expired

J - indicates an estimated value

HD, Z, ++ - the chromatographic pattern was inconsistent with the profile of the reference fuel standard

X - possible high bias due to matrix interference

**Table A-6b** **All Outside Wells Summary Non-Detect Statistics**

| Method | Analyte | Units | DOH EAL | No. of Samples | No. of Non-detects | Percent Non-Detected | Non-Detects Min | | Non-Detects Max | | Did Non-Detects Exceed EALs? | No. of Non-Detect Exceedances | Percent Non-detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8015 | TPH-d | µg/L | 100 | 93 | 44 | 47% | 12 | U | 352 | U | **Yes** | 13 | 30% |
| 8015 | TPH-g | µg/L | 100 | 37 | 37 | 100% | 20 | U | 60 | U | No | 0 | 0% |
| 8015 | TPH-o | µg/L | 100 | 24 | 13 | 54% | 50 | U | 212 | U | **Yes** | 6 | 46% |
| 8260B | TPH-g | µg/L | 100 | 55 | 45 | 82% | 12.12 | U | 30 | U | No | 0 | 0% |
| 8260B | 1,1,1-Trichloroethane | µg/L | 62 | 91 | 91 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,1,2-Trichloroethane | µg/L | 5 | 91 | 91 | 100% | 0.31 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,1-Dichloroethane | µg/L | 2.4 | 91 | 91 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,1-Dichloroethylene | µg/L | 7 | 87 | 87 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,2,3-Trichloropropane | µg/L | 0.6 | 91 | 91 | 100% | 0.31 | U | 1 | U | **Yes** | 72 | 79% |
| 8260B | 1,2,4-Tricholorobenzene | µg/L | 25 | 91 | 91 | 100% | 0.3 | U | 1 | U | No | 0 | 0% |
| 8260B | 1,2-Dibromo-3-chloropropane | µg/L | 0.04 | 91 | 91 | 100% | 0.62 | U | 5 | U | **Yes** | 91 | 100% |
| 8260B | 1,2-Dibromoethane | µg/L | 0.04 | 91 | 91 | 100% | 0.2 | U | 0.62 | U | **Yes** | 91 | 100% |
| 8260B | 1,2-Dichlorobenzene | µg/L | 10 | 91 | 91 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,2-Dichloroethane | µg/L | 0.15 | 79 | 79 | 100% | 0.1 | U | 0.5 | U | **Yes** | 66 | 84% |
| 8260B | 1,2-Dichloropropane | µg/L | 5 | 91 | 91 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,3-Dichlorobenzene | µg/L | 5 | 91 | 91 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,3-Dichloropropene (total of cis/trans) | µg/L | 0.43 | 83 | 78 | 94% | 0.15 | U | 0.5 | U | **Yes** | 33 | 42% |
| 8260B | 1,4-Dichlorobenzene | µg/L | 5 | 91 | 91 | 100% | 0.15 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Acetone | µg/L | 1500 | 91 | 54 | 59% | 1.9 | U | 10 | U | No | 0 | 0% |
| 8260B | Benzene | µg/L | 5 | 93 | 69 | 74% | 0.1 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Bromodichloromethane | µg/L | 0.12 | 79 | 78 | 99% | 0.15 | U | 0.5 | U | **Yes** | 79 | 101% |
| 8260B | Bromoform | µg/L | 80 | 91 | 91 | 100% | 0.28 | U | 1 | U | No | 0 | 0% |
| 8260B | Bromomethane | µg/L | 8.7 | 91 | 91 | 100% | 0.3 | U | 5 | U | No | 0 | 0% |
| 8260B | Carbon Tetrachloride | µg/L | 5 | 91 | 91 | 100% | 0.1 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Chlorobenzene | µg/L | 25 | 91 | 91 | 100% | 0.15 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Chloroethane | µg/L | 16 | 91 | 91 | 100% | 0.2 | U | 5 | U | No | 0 | 0% |
| 8260B | Chloroform | µg/L | 70 | 91 | 91 | 100% | 0.14 | U | 0.6 | U | No | 0 | 0% |
| 8260B | Chloromethane | µg/L | 1.8 | 89 | 86 | 97% | 0.2 | U | 5 | U | **Yes** | 33 | 38% |
| 8260B | cis-1,2-Dichloroethylene | µg/L | 70 | 91 | 91 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Dibromochloromethane | µg/L | 0.16 | 79 | 79 | 100% | 0.15 | U | 0.5 | U | **Yes** | 72 | 91% |
| 8260B | Ethylbenzene | µg/L | 30 | 93 | 93 | 100% | 0.1 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Hexachlorobutadiene | µg/L | 0.86 | 91 | 91 | 100% | 0.3 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Methyl ethyl ketone (2-Butanone) | µg/L | 7,100 | 91 | 81 | 89% | 1.2 | U | 6.2 | U | No | 0 | 0% |
| 8260B | Methyl isobutyl ketone (4-Methyl-2-Pentanone) | µg/L | 170 | 91 | 91 | 100% | 2.5 | U | 10 | U | No | 0 | 0% |
| 8260B | Methyl tert-butyl Ether | µg/L | 5 | 81 | 81 | 100% | 0.3 | U | 3 | U | No | 0 | 0% |
| 8260B | Methylene chloride | µg/L | 4.8 | 91 | 89 | 98% | 0.2 | U | 2 | U | No | 0 | 0% |
| 8260B | Naphthalene | µg/L | 10 | 18 | 18 | 100% | 0.62 | U | 1.24 | U | No | 0 | 0% |
| 8260B | Styrene | µg/L | 10 | 91 | 91 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Tetrachloroethane, 1,1,1,2- | µg/L | 0.52 | 91 | 91 | 100% | 0.15 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Tetrachloroethane, 1,1,2,2- | µg/L | 0.067 | 79 | 79 | 100% | 0.15 | U | 0.5 | U | **Yes** | 79 | 100% |
| 8260B | Tetrachloroethylene | µg/L | 5 | 91 | 91 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Toluene | µg/L | 40 | 93 | 89 | 96% | 0.1 | U | 0.62 | U | No | 0 | 0% |
| 8260B | trans-1,2- Dichloroethylene | µg/L | 100 | 91 | 91 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Trichloroethylene | µg/L | 5 | 91 | 91 | 100% | 0.1 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Vinyl chloride | µg/L | 2 | 91 | 91 | 100% | 0.1 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Xylenes, Total (p/m-, o-xylene) | µg/L | 20 | 93 | 92 | 99% | 0.2 | U | 1.24 | U | No | 0 | 0% |
| 8260SIM | Bromodichloromethane | µg/L | 0.12 | 12 | 11 | 92% | 0.01 | U | 0.01 | U | No | 0 | 0% |
| 8260SIM | Dibromochloromethane | µg/L | 0.16 | 12 | 12 | 100% | 0.01 | U | 0.01 | U | No | 0 | 0% |
| 8260SIM | Tetrachloroethane, 1,1,2,2- | µg/L | 0.067 | 12 | 12 | 100% | 0.02 | U | 0.015 | U | No | 0 | 0% |
| 8011 | 1,2-Dibromo-3- chloropropane | µg/L | 0.04 | 18 | 18 | 100% | 0.0040 | U | 0.019 | U | No | 0 | 0% |
| 8270C | Acenaphthene | µg/L | 20 | 91 | 91 | 100% | 0.0050 | U | 0.57 | U | No | 0 | 0% |
| 8270C | Acenaphthylene | µg/L | 30 | 91 | 90 | 99% | 0.0050 | U | 0.57 | U | No | 0 | 0% |
| 8270C | Anthracene | µg/L | 0.73 | 91 | 90 | 99% | 0.0050 | U | 0.57 | U | No | 0 | 0% |
| 8270C | Benzo[a]anthracene | µg/L | 0.027 | 91 | 84 | 92% | 0.0050 | U | 0.14 | U | **Yes** | 66 | 79% |

**Table A-6b** **All Outside Wells Summary Non-Detect Statistics**

| Method | Analyte | Units | DOH EAL | No. of Samples | No. of Non-detects | Percent Non-Detected | Non-Detects Min | | Non-Detects Max | | Did Non-Detects Exceed EALs? | No. of Non-Detect Exceedances | Percent Non-detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8270C | Benzo[g,h,i]perylene | µg/L | 0.1 | 91 | 91 | 100% | 0.0050 | U | 0.16 | U | **Yes** | 24 | 26% |
| 8270C | Benzo[a]pyrene | µg/L | 0.014 | 91 | 91 | 100% | 0.0050 | U | 0.14 | U | **Yes** | 73 | 80% |
| 8270C | Benzo[b]fluoranthene | µg/L | 0.092 | 91 | 91 | 100% | 0.0050 | U | 0.12 | U | **Yes** | 22 | 24% |
| 8270C | Benzo[k]fluoranthene | µg/L | 0.4 | 91 | 91 | 100% | 0.0050 | U | 0.14 | U | No | 0 | 0% |
| 8270C | Chrysene | µg/L | 0.35 | 91 | 91 | 100% | 0.0050 | U | 0.11 | U | No | 0 | 0% |
| 8270C | Dibenzo[a,h]anthracene | µg/L | 0.0092 | 91 | 91 | 100% | 0.0050 | U | 0.1 | U | **Yes** | 79 | 87% |
| 8270C | Fluoranthene | µg/L | 8 | 91 | 91 | 100% | 0.0050 | U | 0.28 | U | No | 0 | 0% |
| 8270C | Fluorene | µg/L | 3.9 | 91 | 87 | 96% | 0.0050 | U | 0.28 | U | No | 0 | 0% |
| 8270C | Indeno[1,2,3-cd]pyrene | µg/L | 0.092 | 91 | 91 | 100% | 0.0050 | U | 0.14 | U | **Yes** | 22 | 24% |
| 8270C | 1-Methylnaphthalene | µg/L | 2.1 | 93 | 88 | 95% | 0.0050 | U | 0.28 | U | No | 0 | 0% |
| 8270C | 2-Methylnaphthalene | µg/L | 2.1 | 93 | 83 | 89% | 0.0050 | U | 0.28 | U | No | 0 | 0% |
| 8270C | Naphthalene | µg/L | 17 | 93 | 66 | 71% | 0.0050 | U | 0.28 | U | No | 0 | 0% |
| 8270C | Phenanthrene | µg/L | 4.6 | 91 | 84 | 92% | 0.0050 | U | 0.57 | U | No | 0 | 0% |
| 8270C | Pyrene | µg/L | 2 | 91 | 90 | 99% | 0.0050 | U | 0.28 | U | No | 0 | 0% |
| 6020 | Dissolved Lead (filtered) | µg/L | 5.6 | 90 | 60 | 67% | 0.2 | U | 10 | U | **Yes** | 1 | 2% |

Notes:

HDOH, Tier 1 Environmental Action Levels, Table D-1a. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS located within 150 meters of release site)

**Blue text** indicates analyte reported non-detect above DOH EAL

Qualifiers:

U - non-detect

**Table A-7** **RHMW2254, Lead and Lead Scavengers**

| Method | Analyte | Units | DOH EAL (<150m from surface water) | No. of Samples | No. of Detects | Percent Detected | No. of Non-detects | Detects Min | Detects Max | Date Sampled of Max Concentration | Did Detects Exceed EALs? | No. of Detect Exceedances | Percent Detect Exceedance | Non-Detects Min | Non-Detects Max | Did Non-Detects Exceed EALs? | No. of Non-Detect Exceedances | Percent Non-detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 504.1 | 1,2-Dibromoethane | µg/L | 0.04 | 12 | 0 | 0% | 12 | - | - | - | - | - | - | 0.0081 U | 0.0097 U | No | 0 | 0% |
| 8260SIM | 1,2-Dibromoethane | µg/L | 0.04 | 1 | 0 | 0% | 1 | - | - | - | - | - | - | 0.01 U | 0.01 U | No | 0 | 0% |
| 8260SIM | 1,2-Dichloroethane | µg/L | 0.15 | 2 | 0 | 0% | 2 | - | - | - | - | - | - | 0.015 U | 0.015 U | No | 0 | 0% |
| 8011 | 1,2-Dibromoethane | µg/L | 0.04 | 2 | 0 | 0% | 2 | - | - | - | - | - | - | 0.004 U | 0.004 U | No | 0 | 0% |
| 6020 | Dissolved Lead (filtered) | µg/L | 5.6 | 35 | 10 | 29% | 25 | 0.02 B | 3.3 | 19-Oct-2010 | No | 0 | 0% | 0.2 U | 3.4 U | No | 0 | 0% |
| 6010B/6020/200.8 | Total Lead (unfiltered) | µg/L | - | 22 | 14 | 40% | 21 | 0.05 | 0.952 | 28-Jun-2005 | No | 0 | 0% | 0.0898 U | 0.0898 U | No | 0 | 0% |

Note:

Lead scavengers were analyzed during all 2005 sampling events and during the Q2-2015 and Q3-2015 events.
Lead results are presented for comparison purposes with the lead scavenger analytes (i.e., 1,2-dibromoethane [EDB] and 1,2-dichloroethane).

HDOH, Tier 1 Environmental Action Levels, Table D-1a. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS located within 150 meters of release site)
Qualifiers:
B - analyte also detected in associated laboratory blank sample
U - non-detect

**Table A-8** **All Inside Wells, Lead and Lead Scavengers**

| Method | Analyte | Units | DOH EAL (>150m from surface | No. of Samples | No. of Detects | Percent Detected | No. of Non-detects | Detects | | Location of Max Concentration | Date Sampled of Max Concentration | Did Detects Exceed EALs? | No. of Detect Exceedances | Percent Detect Exceedance | Non-Detects | | Did Non-Detects Exceed EALs? | No. of Non-Detect Exceedances | Percent Non-detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Min | Max | | | | | | Min | Max | | | |
| 504.1 | 1,2-Dibromoethane | µg/L | 0.04 | 7 | 0 | 0% | 7 | - | - | - | - | - | - | - | 0.0082 U | 0.0096 U | No | 0 | 0% |
| 8260SIM | 1,2-Dibromoethane | µg/L | 0.04 | 7 | 0 | 0% | 7 | - | - | - | - | - | - | - | 0.01 U | 0.01 U | No | 0 | 0% |
| 8260SIM | 1,2-Dichloroethane | µg/L | 0.15 | 5 | 0 | 0% | 5 | - | - | - | - | - | 0 | - | 0.015 U | 0.015 U | No | 0 | 0% |
| 8011 | 1,2-Dibromoethane | µg/L | 0.04 | 10 | 0 | 0% | 10 | - | - | - | - | - | - | - | 0.004 U | 0.004 U | No | 0 | 0% |
| 6020 | Dissolved Lead (filtered) | µg/L | 15 | 204 | 63 | 31% | 141 | 0.011 J | 11.9 | RHMW01 | 17-Feb-2005 | No | 0 | 0% | 0.2 U | 5 U | No | 0 | 0% |

Notes:

Lead scavengers were analyzed:

- for RHMW01, during all 2005 sampling events, and during the Q2-2015 and Q3-2015 events.
- for RHMW02, during the Q2-2015 and Q3-2015 events.
- for RHMW03, during the Q2-2015 and Q3-2015 events.
- for RHMW05, during the Q2-2015 and Q3-2015 events.

Lead results are presented for comparison purposes with the lead scavenger analytes (i.e., 1,2-dibromoethane [EDB] and 1,2-dichloroethane).

HDOH, Tier 1 Environmental Action Levels, Table D-1b. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS NOT located within 150 meters of release site)
Qualifiers:
J - estimated value
U - non-detect

**Table A-9** **All Outside Wells, Lead and Lead Scavengers**

| Method | Analyte | Units | DOH EAL (<150m from surface | No. of Samples | No. of Detects | Percent Detected | No. of Non-detects | Detects Min | Detects Max | Location of Max Concentration | Date Sampled of Max Concentration | Did Detects Exceed EALs? | No. of Detect Exceedances | Percent Detect Exceedance | Non-Detects Min | Non-Detects Max | Did Non-Detects Exceed EALs? | No. of Non-Detect Exceedances | Percent Non-detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8260SIM | 1,2-Dibromoethane | µg/L | 0.04 | 6 | 0 | 0% | 6 | - | - | - | - | - | - | - | 0.01 U | 0.01 U | No | 0 | 0% |
| 8260SIM | 1,2-Dichloroethane | µg/L | 0.15 | 12 | 4 | 33% | 8 | 0.0081 J | 0.012 J | OWDFMW01 | 22-Jul-2015 | No | 0 | 0% | 0.015 U | 0.015 U | No | 0 | 0% |
| 8011 | 1,2-Dibromoethane | µg/L | 0.04 | 18 | 0 | 0% | 18 | - | - | - | - | - | - | - | 0.0040 U | 0.02 U | No | 0 | 0% |
| 6020 | Dissolved Lead (filtered) | µg/L | 5.6 | 90 | 30 | 33% | 60 | 0.006 J | 0.9 | HDMW2253-03 | 26-Oct-2011 | No | 0 | 0% | 0.2 U | 10 U | **Yes** | 1 | 2% |

Notes:

Lead scavengers were analyzed for all outside wells during the Q2-2015 and Q3-2015 sampling events.

Lead results are presented for comparison purposes with the lead scavenger analytes (i.e., 1,2-dibromoethane [EDB] and 1,2-dichloroethane).

HDOH, Tier 1 Environmental Action Levels, Table D-1a. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS located within 150 meters of release site)
Qualifiers:
J - estimated value
U - non-detect

**Table A-10a** **RHMW2254 Summary Detect Statistics, Q4-2010 through Q3-2015**

| Method | Analyte | Units | DOH EAL (<150m from surface water) | No. of Samples | No. of Detects | Percent Detected | Detects Min | | Detects Max | | Date Sampled of Max Concentration | Did Detects Exceed EALs? | No. of Detect Exceedances | Percent Detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8015 | TPH-d | µg/L | 100 | 55 | 9 | 16% | 14 | BJ | 67 | Z | 28-Jun-2005 | No | 0 | 0% |
| 8015 | TPH-g | µg/L | 100 | 30 | 2 | 7% | 14 | J | 19.1 | J | 13-May-2009 | No | 0 | 0% |
| 8015 | TPH-o | µg/L | 100 | 10 | 3 | 30% | 37 | BJ | 59 | J | 8-Sep-2005 | No | 0 | 0% |
| 8260B | TPH-g | µg/L | 100 | 18 | 3 | 17% | 13 | BJ | 18 | BJ | 22-Oct-2012 | No | 0 | 0% |
| 8260B | 1,2,4-Tricholorobenzene | µg/L | 25 | 40 | 1 | 3% | 0.24 | J | 0.24 | J | 10-Sep-2007 | No | 0 | 0% |
| 8260B | Bromomethane | µg/L | 8.7 | 40 | 1 | 3% | 1.26 | J | 1.26 | J | 29-Jul-2008 | No | 0 | 0% |
| 8260B | Toluene | µg/L | 40 | 56 | 4 | 7% | 0.71 | J | 1.2 | | 16-Feb-2005 | No | 0 | 0% |
| 8260B | Trichloroethylene | µg/L | 5 | 40 | 1 | 3% | 0.17 | J | 0.17 | J | 17-Apr-2012 | No | 0 | 0% |
| 8270C | Acenaphthylene | µg/L | 30 | 48 | 2 | 4% | 0.002 | J | 0.002 | J | 6-Dec-2005 | No | 0 | 0% |
| 8270C | Benzo[a]anthracene | µg/L | 0.027 | 48 | 2 | 4% | 0.002 | J | 0.003 | J | 6-Dec-2005 | No | 0 | 0% |
| 8270C | Chrysene | µg/L | 0.35 | 48 | 2 | 4% | 0.004 | J | 0.004 | J | 6-Dec-2005 | No | 0 | 0% |
| 8270C | Fluoranthene | µg/L | 8 | 48 | 2 | 4% | 0.008 | J | 0.009 | J | 6-Dec-2005 | No | 0 | 0% |
| 8270C | 1-Methylnaphthalene | µg/L | 2.1 | 41 | 2 | 5% | 0.028 | J | 0.044 | J | 15-Apr-2008 | No | 0 | 0% |
| 8270C | 2-Methylnaphthalene | µg/L | 2.1 | 50 | 5 | 10% | 0.007 | J | 0.056 | | 15-Apr-2008 | No | 0 | 0% |
| 8270C | Naphthalene | µg/L | 17 | 50 | 14 | 28% | 0.011 | J | 0.099 | J | 23-Jul-2013 | No | 0 | 0% |
| 8270C | Phenanthrene | µg/L | 4.6 | 48 | 2 | 4% | 0.007 | J | 0.008 | J | 6-Dec-2005 | No | 0 | 0% |
| 8270C | Pyrene | µg/L | 2 | 48 | 2 | 4% | 0.007 | J | 0.0075 | J | 6-Dec-2005 | No | 0 | 0% |
| 6020 | Dissolved Lead (filtered) | µg/L | 5.6 | 35 | 10 | 29% | 0.02 | B | 3.3 | | 19-Oct-2010 | No | 0 | 0% |
| 6010B/6020/200.8 | Total Lead (unfiltered) | µg/L | - | 22 | 15 | 68% | 0.05 | | 0.952 | | 28-Jun-2005 | No | 0 | 0% |

Notes:

HDOH, Tier 1 Environmental Action Levels, Table D-1a. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS located within 150 meters of release site)

Qualifiers:

B - analyte was present in the associated method blank

J - indicates an estimated value

Z - the chromatographic pattern was inconsistent with the profile of the reference fuel standard

**Table A-10b** **RHMW2254 Summary Non-Detect Statistics, Q4-2010 through Q3-2015**

| Method | Analyte | Units | DOH EAL (<150m from surface water) | No. of Samples | No. of Non-detects | Percent Non-Detect | Non-Detects Min | | Non-Detects Max | | Did Non-Detects Exceed EALs? | No. of Non-Detect Exceedances | Percent Non-detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8015 | TPH-d | µg/L | 100 | 55 | 46 | 84% | 10.3 | U | 320 | U | **Yes** | 8 | 17% |
| 8015 | TPH-g | µg/L | 100 | 30 | 28 | 93% | 10 | U | 60 | U | No | 0 | 0% |
| 8015 | TPH-o | µg/L | 100 | 10 | 7 | 70% | 100 | U | 212 | U | **Yes** | 3 | 43% |
| 8260B | TPH-g | µg/L | 100 | 18 | 15 | 83% | 12.12 | U | 30 | U | No | 0 | 0% |
| 8260B | 1,1,1-Trichloroethane | µg/L | 62 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,1,2-Trichloroethane | µg/L | 5 | 40 | 40 | 100% | 0.3 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,1-Dichloroethane | µg/L | 2.4 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,1-Dichloroethylene | µg/L | 7 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,2,3-Trichloropropane | µg/L | 0.6 | 40 | 40 | 100% | 0.31 | U | 2 | U | **Yes** | 28 | 70% |
| 8260B | 1,2,4-Tricholorobenzene | µg/L | 25 | 40 | 39 | 98% | 0.3 | U | 1 | U | No | 0 | 0% |
| 8260B | 1,2-Dibromo-3- chloropropane | µg/L | 0.04 | 40 | 40 | 100% | 0.41 | U | 5 | U | **Yes** | 40 | 100% |
| 8260B | 1,2-Dibromoethane | µg/L | 0.04 | 52 | 52 | 100% | 0.00096 | U | 0.62 | U | **Yes** | 40 | 77% |
| 8260B | 1,2-Dichlorobenzene | µg/L | 10 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,2-Dichloroethane | µg/L | 0.15 | 50 | 50 | 100% | 0.12 | U | 0.5 | U | **Yes** | 34 | 68% |
| 8260B | 1,2-Dichloropropane | µg/L | 5 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,3-Dichlorobenzene | µg/L | 5 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | 1,3-Dichloropropene (total of cis/trans) | µg/L | 0.43 | 40 | 40 | 100% | 0.15 | U | 0.62 | U | **Yes** | 17 | 43% |
| 8260B | 1,4-Dichlorobenzene | µg/L | 5 | 40 | 40 | 100% | 0.15 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Acetone | µg/L | 1500 | 38 | 38 | 100% | 1.9 | U | 10 | U | No | 0 | 0% |
| 8260B | Benzene | µg/L | 5 | 56 | 56 | 100% | 0.1 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Bromodichloromethane | µg/L | 0.12 | 38 | 38 | 100% | 0.15 | U | 0.5 | U | **Yes** | 38 | 100% |
| 8260B | Bromoform | µg/L | 80 | 40 | 40 | 100% | 0.28 | U | 2 | U | No | 0 | 0% |
| 8260B | Bromomethane | µg/L | 8.7 | 40 | 39 | 98% | 0.3 | U | 5 | U | No | 0 | 0% |
| 8260B | Carbon Tetrachloride | µg/L | 5 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Chlorobenzene | µg/L | 25 | 40 | 40 | 100% | 0.15 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Chloroethane | µg/L | 16 | 40 | 40 | 100% | 0.31 | U | 5 | U | No | 0 | 0% |
| 8260B | Chloroform | µg/L | 70 | 40 | 40 | 100% | 0.14 | U | 0.6 | U | No | 0 | 0% |
| 8260B | Chloromethane | µg/L | 1.8 | 40 | 40 | 100% | 0.31 | U | 5 | U | **Yes** | 11 | 28% |
| 8260B | cis-1,2-Dichloroethylene | µg/L | 70 | 40 | 40 | 100% | 0.28 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Dibromochloromethane | µg/L | 0.16 | 40 | 40 | 100% | 0.15 | U | 0.5 | U | **Yes** | 28 | 70% |
| 8260B | Ethylbenzene | µg/L | 30 | 56 | 56 | 100% | 0.13 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Hexachlorobutadiene | µg/L | 0.86 | 40 | 40 | 100% | 0.18 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Methyl ethyl ketone (2-Butanone) | µg/L | 7,100 | 40 | 40 | 100% | 1.2 | U | 6.2 | U | No | 0 | 0% |
| 8260B | Methyl isobutyl ketone (4-Methyl-2-Pentanone) | µg/L | 170 | 40 | 40 | 100% | 2.2 | U | 10 | U | No | 0 | 0% |
| 8260B | Methyl tert-butyl Ether | µg/L | 5 | 51 | 51 | 100% | 0.2 | U | 5 | U | No | 0 | 0% |
| 8260B | Methylene chloride | µg/L | 4.8 | 40 | 40 | 100% | 0.2 | U | 2 | U | No | 0 | 0% |
| 8260B | Naphthalene | µg/L | 17 | 19 | 19 | 100% | 0.44 | U | 1.24 | U | No | 0 | 0% |
| 8260B | Styrene | µg/L | 10 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Tetrachloroethane, 1,1,1,2- | µg/L | 0.52 | 40 | 40 | 100% | 0.15 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Tetrachloroethane, 1,1,2,2- | µg/L | 0.067 | 38 | 38 | 100% | 0.15 | U | 0.5 | U | **Yes** | 38 | 100% |
| 8260B | Tetrachloroethylene | µg/L | 5 | 40 | 40 | 100% | 0.2 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Toluene | µg/L | 40 | 56 | 52 | 93% | 0.1 | U | 0.62 | U | No | 0 | 0% |
| 8260B | trans-1,2- Dichloroethylene | µg/L | 100 | 40 | 40 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Trichloroethylene | µg/L | 5 | 40 | 39 | 98% | 0.1 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Vinyl chloride | µg/L | 2 | 40 | 40 | 100% | 0.1 | U | 0.62 | U | No | 0 | 0% |
| 8260B | Xylenes, Total (p/m-, o-xylene) | µg/L | 20 | 56 | 56 | 100% | 0.2 | U | 1.24 | U | No | 0 | 0% |
| 504.1 | 1,2-Dibromoethane | µg/L | 0.04 | 12 | 12 | 100% | 0.0081 | U | 0.0097 | U | No | 0 | 0% |
| 8260SIM | 1,2-Dibromoethane | µg/L | 0.04 | 1 | 1 | 100% | 0.01 | U | 0.01 | U | No | 0 | 0% |
| 8260SIM | 1,2-Dichloroethane | µg/L | 0.15 | 2 | 2 | 100% | 0.015 | U | 0.015 | U | No | 0 | 0% |
| 8260SIM | Bromodichloromethane | µg/L | 0.12 | 2 | 2 | 100% | 0.01 | U | 0.01 | U | No | 0 | 0% |
| 8260SIM | Dibromochloromethane | µg/L | 0.16 | 2 | 2 | 100% | 0.01 | U | 0.01 | U | No | 0 | 0% |
| 8260SIM | Tetrachloroethane, 1,1,2,2- | µg/L | 0.067 | 2 | 2 | 100% | 0.015 | U | 0.015 | U | No | 0 | 0% |
| 8011 | 1,2-Dibromo-3- chloropropane | µg/L | 0.04 | 2 | 2 | 100% | 0.004 | U | 0.004 | U | No | 0 | 0% |
| 8011 | 1,2-Dibromoethane | µg/L | 0.04 | 2 | 2 | 100% | 0.004 | U | 0.004 | U | No | 0 | 0% |
| 8270C | Acenaphthene | µg/L | 20 | 48 | 48 | 100% | 0.005 | U | 0.51 | U | No | 0 | 0% |
| 8270C | Acenaphthylene | µg/L | 30 | 48 | 46 | 96% | 0.0018 | U | 0.5 | U | No | 0 | 0% |
| 8270C | Anthracene | µg/L | 0.73 | 48 | 48 | 100% | 0.0011 | U | 0.51 | U | No | 0 | 0% |
| 8270C | Benzo[a]anthracene | µg/L | 0.027 | 48 | 46 | 96% | 0.0021 | U | 0.14 | U | **Yes** | 21 | 46% |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8270C | Benzo[g,h,i]perylene | µg/L | 0.1 | 48 | 48 | 100% | 0.0037 | U | 0.16 | U | **Yes** | 8 | 17% |
| 8270C | Benzo[a]pyrene | µg/L | 0.014 | 48 | 48 | 100% | 0.005 | U | 0.14 | U | **Yes** | 43 | 90% |
| 8270C | Benzo[b]fluoranthene | µg/L | 0.092 | 48 | 48 | 100% | 0.002 | U | 0.12 | U | **Yes** | 8 | 17% |
| 8270C | Benzo[k]fluoranthene | µg/L | 0.4 | 48 | 48 | 100% | 0.0014 | U | 0.14 | U | No | 0 | 0% |
| 8270C | Chrysene | µg/L | 0.35 | 48 | 46 | 96% | 0.005 | U | 0.1 | U | No | 0 | 0% |
| 8270C | Dibenzo[a,h]anthracene | µg/L | 0.0092 | 48 | 48 | 100% | 0.0017 | U | 0.1 | U | **Yes** | 43 | 90% |
| 8270C | Fluoranthene | µg/L | 8 | 48 | 46 | 96% | 0.0024 | U | 0.16 | U | No | 0 | 0% |
| 8270C | Fluorene | µg/L | 3.9 | 48 | 48 | 100% | 0.0026 | U | 0.12 | U | No | 0 | 0% |
| 8270C | Indeno[1,2,3-cd]pyrene | µg/L | 0.092 | 48 | 48 | 100% | 0.0021 | U | 0.14 | U | **Yes** | 8 | 17% |
| 8270C | 1-Methylnaphthalene | µg/L | 2.1 | 41 | 39 | 95% | 0.005 | U | 0.12 | U | No | 0 | 0% |
| 8270C | 2-Methylnaphthalene | µg/L | 2.1 | 50 | 45 | 90% | 0.005 | U | 0.12 | U | No | 0 | 0% |
| 8270C | Naphthalene | µg/L | 17 | 50 | 36 | 72% | 0.005 | U | 0.1 | U | No | 0 | 0% |
| 8270C | Phenanthrene | µg/L | 4.6 | 48 | 46 | 96% | 0.0032 | U | 0.14 | U | No | 0 | 0% |
| 8270C | Pyrene | µg/L | 2 | 48 | 46 | 96% | 0.0023 | U | 0.16 | U | No | 0 | 0% |
| 6020 | Dissolved Lead (filtered) | µg/L | 5.6 | 35 | 25 | 71% | 0.2 | U | 0.22 | U | No | 0 | 0% |
| 6010B/6020/200.8 | Total Lead (unfiltered) | µg/L | - | 22 | 7 | 32% | 0.0898 | U | 0.0898 | U | No | 0 | 0% |

Notes:

HDOH, Tier 1 Environmental Action Levels, Table D-1a. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS located within 150 meters of release site)

**Blue text** indicates analyte reported non-detect above DOH EAL

Qualifiers:

U - non-detect

**Table A-11a** **Inside Wells Summary Detect Statistics, Q4-2010 through Q3-2015**

| Method | Analyte | Units | DOH EAL (>150m from surface water) | No. of Samples | No. of Detects | Percent Detected | Detects | | | | Location of Max Concentration | Date Sampled of Max Concentration | Did Detects Exceed EALs? | No. of Detect Exceedances | Percent Detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Min | | Max | | | | | | |
| 8015 | TPH-d | µg/L | 100 | 130 | 101 | 78% | 16 | JHD | 5400 | Y | RHMW02 | 20-Apr-2015 | **Yes** | 68 | 67% |
| 8015 | TPH-g | µg/L | 100 | 10 | 4 | 40% | 40 | Y | 47 | Y | RHMW02 | 20-Apr-2015 | No | 0 | 0% |
| 8015 | TPH-o | µg/L | 100 | 22 | 13 | 59% | 21 | Y | 360 | Y | RHMW02 | 20-Apr-2015 | **Yes** | 7 | 54% |
| 8260B | TPH-g | µg/L | 100 | 91 | 37 | 41% | 13 | | 660 | HD | RHMW02 | 28-Jan-2013 | **Yes** | 6 | 16% |
| 8260B | Acetone | µg/L | 1500 | 105 | 2 | 2% | 2.4 | JHD | 15 | JICH | RHMW01 | 15-Jan-2014 | No | 0 | 0% |
| 8260B | Benzene | µg/L | 5 | 127 | 5 | 4% | 0.08 | JHD | 0.15 | JICH | RHMW02 | 28-Jan-2014 | No | 0 | 0% |
| 8260B | Chloroform | µg/L | 70 | 105 | 1 | 1% | 0.13 | J | 0.13 | J | RHMW01 | 2-Nov-2011 | No | 0 | 0% |
| 8260B | Ethylbenzene | µg/L | 30 | 127 | 37 | 29% | 0.14 | J | 0.32 | J | RHMW02 | 18-Oct-2010 | No | 0 | 0% |
| 8260B | Methylene chloride | µg/L | 4.8 | 105 | 2 | 2% | 0.1 | J | 0.59 | BJ | RHMW01 | 14-Feb-2012 | No | 0 | 0% |
| 8260B | Toluene | µg/L | 40 | 127 | 7 | 6% | 0.06 | J | 2.5 | | RHMW01 | 15-Jan-2014 | No | 0 | 0% |
| 8260B | Xylenes, Total (p/m-, o-xylene) | µg/L | 20 | 127 | 46 | 36% | 0.26 | J | 0.69 | J | RHMW02 | 28-Jan-2013 | No | 0 | 0% |
| 8260SIM | Tetrachloroethane, 1,1,2,2- | µg/L | 0.067 | 10 | 2 | 20% | 0.059 | | 0.065 | | RHMW02 | 20-Apr-2015 | No | 0 | 0% |
| 8270C | Acenaphthene | µg/L | 20 | 101 | 42 | 42% | 0.0053 | J | 0.65 | | RHMW02 | 22-Apr-2013 | No | 0 | 0% |
| 8270C | Acenaphthylene | µg/L | 240 | 101 | 11 | 11% | 0.0041 | J | 0.26 | X | RHMW02 | 20-Apr-2015 | No | 0 | 0% |
| 8270C | Benzo[a]anthracene | µg/L | 0.092 | 101 | 7 | 7% | 0.0026 | BJ | 0.0047 | BJ | RHMW02 | 20-Apr-2015 | No | 0 | 0% |
| 8270C | Fluorene | µg/L | 240 | 101 | 39 | 39% | 0.0096 | J | 0.32 | | RHMW02 | 20-Jul-2015 | No | 0 | 0% |
| 8270C | 1-Methylnaphthalene | µg/L | 4.7 | 130 | 62 | 48% | 0.0068 | JX | 71 | JD | RHMW02 | 25-Jun-2015 | **Yes** | 42 | 68% |
| 8270C | 2-Methylnaphthalene | µg/L | 10 | 130 | 62 | 48% | 0.0058 | JX | 48 | JD | RHMW02 | 25-Jun-2015 | **Yes** | 15 | 24% |
| 8270C | Naphthalene | µg/L | 17 | 130 | 81 | 62% | 0.029 | J | 160 | D | RHMW02 | 20-Jul-2015 | **Yes** | 38 | 47% |
| 8270C | Phenanthrene | µg/L | 240 | 101 | 5 | 5% | 0.0057 | J | 0.012 | J | RHMW01 | 20-Jul-2015 | No | 0 | 0% |
| 8270C | Pyrene | µg/L | 68 | 101 | 2 | 2% | 0.0058 | JX | 0.027 | J | RHMW01 | 21-Oct-2013 | No | 0 | 0% |
| 6020 | Dissolved Lead (filtered) | µg/L | 15 | 123 | 49 | 40% | 0.011 | J | 2.06 | | RHMW01 | 21-Oct-2013 | No | 0 | 0% |

Notes:

HDOH, Tier 1 Environmental Action Levels, Table D-1b. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS NOT located within 150 meters of release site)

**Blue text** indicates analyte reported non-detect above DOH EAL

Qualifiers:

B - analyte was present in the associated method blank

D - the reported result is from a dilution

F - indicates that the compound was identified but the concentration was above the laboratory method detection limit and below the reporting limit

ICH - Initial calibration verification recovery above method calibration level for this analyte

J - indicates an estimated value

HD, Y - the chromatographic pattern was inconsistent with the profile of the reference fuel standard

X - possible high bias due to matrix interference

**Table A-11b** **Inside Wells Summary Non-Detect Statistics, Q4-2010 through Q3-2015**

| Method | Analyte | Units | DOH EAL (>150m from surface water) | No. of Samples | No. of Non-detects | Percent Non-Detect | Non-Detects Min | | Non-Detects Max | | Did Non-Detects Exceed EALs? | No. of Non-Detect Exceedances | Percent Non-detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8015 | TPH-d | µg/L | 100 | 130 | 29 | 22% | 10 | U | 80.8 | U | No | 0 | 0% |
| 8015 | TPH-g | µg/L | 100 | 10 | 6 | 60% | 25 | U | 25 | U | No | 0 | 0% |
| 8015 | TPH-o | µg/L | 100 | 22 | 9 | 41% | 212 | U | 212 | U | **Yes** | 9 | 100% |
| 8260B | TPH-g | µg/L | 100 | 91 | 54 | 59% | 12.12 | U | 30 | U | No | 0 | 0% |
| 8260B | 1,1,1-Trichloroethane | µg/L | 200 | 105 | 105 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | 1,1,2-Trichloroethane | µg/L | 5 | 105 | 105 | 100% | 0.4 | U | 0.5 | U | No | 0 | 0% |
| 8260B | 1,1-Dichloroethane | µg/L | 2.4 | 105 | 105 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | 1,1-Dichloroethylene | µg/L | 7 | 105 | 105 | 100% | 0.2 | U | 0.6 | U | No | 0 | 0% |
| 8260B | 1,2,3-Trichloropropane | µg/L | 0.6 | 105 | 105 | 100% | 0.5 | U | 2 | U | **Yes** | 95 | 90% |
| 8260B | 1,2,4-Tricholorobenzene | µg/L | 70 | 105 | 105 | 100% | 0.3 | U | 1 | U | No | 0 | 0% |
| 8260B | 1,2-Dibromo-3- chloropropane | µg/L | 0.04 | 105 | 105 | 100% | 0.5 | U | 5 | U | **Yes** | 105 | 100% |
| 8260B | 1,2-Dibromoethane | µg/L | 0.04 | 105 | 105 | 100% | 0.2 | U | 0.5 | U | **Yes** | 105 | 100% |
| 8260B | 1,2-Dichlorobenzene | µg/L | 10 | 105 | 105 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | 1,2-Dichloroethane | µg/L | 0.15 | 95 | 95 | 100% | 0.28 | U | 0.5 | U | **Yes** | 95 | 100% |
| 8260B | 1,2-Dichloropropane | µg/L | 5 | 105 | 105 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | 1,3-Dichlorobenzene | µg/L | 5 | 105 | 105 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | 1,3-Dichloropropene (total of cis/trans) | µg/L | 0.43 | 105 | 105 | 100% | 0.2 | U | 0.5 | U | **Yes** | 61 | 58% |
| 8260B | 1,4-Dichlorobenzene | µg/L | 5 | 105 | 105 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Acetone | µg/L | 1500 | 105 | 103 | 98% | 1.9 | U | 10 | U | No | 0 | 0% |
| 8260B | Benzene | µg/L | 5 | 127 | 122 | 96% | 0.1 | U | 0.501 | U | No | 0 | 0% |
| 8260B | Bromodichloromethane | µg/L | 0.12 | 95 | 95 | 100% | 0.28 | U | 0.5 | U | **Yes** | 95 | 100% |
| 8260B | Bromoform | µg/L | 80 | 105 | 105 | 100% | 0.28 | U | 2 | U | No | 0 | 0% |
| 8260B | Bromomethane | µg/L | 8.7 | 105 | 105 | 100% | 0.3 | U | 5 | U | No | 0 | 0% |
| 8260B | Carbon Tetrachloride | µg/L | 5 | 105 | 105 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Chlorobenzene | µg/L | 50 | 105 | 105 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Chloroethane | µg/L | 16 | 105 | 105 | 100% | 0.2 | U | 5 | U | No | 0 | 0% |
| 8260B | Chloroform | µg/L | 70 | 105 | 104 | 99% | 0.14 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Chloromethane | µg/L | 1.8 | 105 | 105 | 100% | 0.2 | U | 5 | U | **Yes** | 56 | 53% |
| 8260B | cis-1,2-Dichloroethylene | µg/L | 70 | 105 | 105 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Dibromochloromethane | µg/L | 0.16 | 95 | 95 | 100% | 0.38 | U | 0.5 | U | **Yes** | 95 | 100% |
| 8260B | Ethylbenzene | µg/L | 30 | 127 | 90 | 71% | 0.1 | U | 0.501 | U | No | 0 | 0% |
| 8260B | Hexachlorobutadiene | µg/L | 0.86 | 105 | 105 | 100% | 0.3 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Methyl ethyl ketone (2-Butanone) | µg/L | 7,100 | 105 | 105 | 100% | 0.5 | U | 5 | U | No | 0 | 0% |
| 8260B | Methyl isobutyl ketone (4-Methyl-2-Pentanone) | µg/L | 170 | 105 | 105 | 100% | 0.5 | U | 10 | U | No | 0 | 0% |
| 8260B | Methyl tert-butyl Ether | µg/L | 5 | 105 | 105 | 100% | 0.3 | U | 0.52 | U | No | 0 | 0% |
| 8260B | Methylene chloride | µg/L | 4.8 | 105 | 103 | 98% | 0.2 | U | 2 | U | No | 0 | 0% |
| 8260B | Styrene | µg/L | 10 | 105 | 105 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Tetrachloroethane, 1,1,1,2- | µg/L | 0.52 | 105 | 105 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Tetrachloroethane, 1,1,2,2- | µg/L | 0.067 | 95 | 95 | 100% | 0.2 | U | 0.5 | U | **Yes** | 95 | 100% |
| 8260B | Tetrachloroethylene | µg/L | 5 | 105 | 105 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Toluene | µg/L | 40 | 127 | 120 | 94% | 0.1 | U | 0.501 | U | No | 0 | 0% |
| 8260B | trans-1,2- Dichloroethylene | µg/L | 100 | 105 | 105 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Trichloroethylene | µg/L | 5 | 105 | 105 | 100% | 0.1 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Vinyl chloride | µg/L | 2 | 105 | 105 | 100% | 0.1 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Xylenes, Total (p/m-, o-xylene) | µg/L | 20 | 127 | 81 | 64% | 0.2 | U | 1.01 | U | No | 0 | 0% |
| 8260SIM | 1,2-Dibromoethane | µg/L | 0.04 | 5 | 5 | 100% | 0.01 | U | 0.01 | U | No | 0 | 0% |
| 8260SIM | 1,2-Dichloroethane | µg/L | 0.15 | 10 | 10 | 100% | 0.015 | U | 0.015 | U | No | 0 | 0% |
| 8260SIM | Bromodichloromethane | µg/L | 0.12 | 10 | 10 | 100% | 0.01 | U | 0.01 | U | No | 0 | 0% |
| 8260SIM | Dibromochloromethane | µg/L | 0.16 | 10 | 10 | 100% | 0.01 | U | 0.01 | U | No | 0 | 0% |
| 8260SIM | Tetrachloroethane, 1,1,2,2- | µg/L | 0.067 | 10 | 8 | 80% | 0.015 | U | 0.13 | U | **Yes** | 2 | 25% |
| 8011 | 1,2-Dibromo-3- chloropropane | µg/L | 0.04 | 10 | 10 | 100% | 0.004 | U | 0.004 | U | No | 0 | 0% |
| 8011 | 1,2-Dibromoethane | µg/L | 0.04 | 10 | 10 | 100% | 0.004 | U | 0.004 | U | No | 0 | 0% |
| 8270C | Acenaphthene | µg/L | 20 | 101 | 59 | 58% | 0.005 | U | 0.12 | U | No | 0 | 0% |
| 8270C | Acenaphthylene | µg/L | 240 | 101 | 90 | 89% | 0.005 | U | 0.24 | U | No | 0 | 0% |
| 8270C | Anthracene | µg/L | 22 | 101 | 101 | 100% | 0.005 | U | 0.1 | U | No | 0 | 0% |
| 8270C | Benzo[a]anthracene | µg/L | 0.092 | 101 | 94 | 93% | 0.005 | U | 0.14 | U | **Yes** | 39 | 41% |
| 8270C | Benzo[g,h,i]perylene | µg/L | 0.13 | 101 | 101 | 100% | 0.005 | U | 0.16 | U | **Yes** | 39 | 39% |
| 8270C | Benzo[a]pyrene | µg/L | 0.2 | 101 | 101 | 100% | 0.005 | U | 0.14 | U | No | 0 | 0% |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8270C | Benzo[b]fluoranthene | µg/L | 0.092 | 101 | 101 | 100% | 0.005 | U | 0.12 | U | **Yes** | 39 | 39% |
| 8270C | Benzo[k]fluoranthene | µg/L | 0.4 | 101 | 101 | 100% | 0.005 | U | 0.14 | U | No | 0 | 0% |
| 8270C | Chrysene | µg/L | 1 | 101 | 101 | 100% | 0.005 | U | 0.1 | U | No | 0 | 0% |
| 8270C | Dibenzo[a,h]anthracene | µg/L | 0.0092 | 101 | 101 | 100% | 0.005 | U | 0.1 | U | **Yes** | 91 | 90% |
| 8270C | Fluoranthene | µg/L | 130 | 101 | 101 | 100% | 0.02 | U | 0.16 | U | No | 0 | 0% |
| 8270C | Fluorene | µg/L | 240 | 101 | 62 | 61% | 0.005 | U | 0.12 | U | No | 0 | 0% |
| 8270C | Indeno[1,2,3-cd]pyrene | µg/L | 0.092 | 101 | 101 | 100% | 0.005 | U | 0.14 | U | **Yes** | 39 | 39% |
| 8270C | 1-Methylnaphthalene | µg/L | 4.7 | 130 | 68 | 52% | 0.005 | U | 0.12 | U | No | 0 | 0% |
| 8270C | 2-Methylnaphthalene | µg/L | 10 | 130 | 68 | 52% | 0.005 | U | 0.12 | U | No | 0 | 0% |
| 8270C | Naphthalene | µg/L | 17 | 130 | 49 | 38% | 0.005 | U | 0.1 | U | No | 0 | 0% |
| 8270C | Phenanthrene | µg/L | 240 | 101 | 96 | 95% | 0.005 | U | 0.14 | U | No | 0 | 0% |
| 8270C | Pyrene | µg/L | 68 | 101 | 99 | 98% | 0.01 | U | 0.16 | U | No | 0 | 0% |
| 6020 | Dissolved Lead (filtered) | µg/L | 15 | 123 | 74 | 60% | 0.2 | U | 0.22 | U | No | 0 | 0% |

Notes:

HDOH, Tier 1 Environmental Action Levels, Table D-1b. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS NOT located within 150 meters of release site)

**Blue text** indicates analyte reported non-detect above DOH EAL

Qualifiers:

U - non-detect

**Table A-12a** **Outside Wells Summary Detect Statistics, Q4-2010 through Q3-2015**

| Method | Analyte | Units | DOH EAL | No. of Samples | No. of Detects | Percent Detected | Detects | | | | Location of Max Concentration | Date Sampled of Max Concentration | Did Detects Exceed EALs? | No. of Detect Exceedances | Percent Detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Min | | Max | | | | | | |
| 8015 | TPH-d | µg/L | 100 | 75 | 45 | 60% | 10 | HDJ | 3100 | Z | OWDFMW01 | 22-Jul-2015 | **Yes** | 21 | 47% |
| 8015 | TPH-o | µg/L | 100 | 24 | 11 | 46% | 25 | BJ | 390 | Z | OWDFMW01 | 22-Jul-2015 | **Yes** | 4 | 36% |
| 8260B | TPH-g | µg/L | 100 | 55 | 8 | 15% | 14 | BJ | 31 | BJ | OWDFMW01 | 23-Apr-2014 | No | 0 | 0% |
| 8260B | Acetone | µg/L | 1500 | 73 | 27 | 37% | 1.4 | J | 150 | | OWDFMW01 | 22-Jul-2015 | No | 0 | 0% |
| 8260B | Benzene | µg/L | 5 | 75 | 20 | 27% | 0.07 | J | 1.3 | | OWDFMW01 | 19-Jul-2012 | No | 0 | 0% |
| 8260B | Chloromethane | µg/L | 1.8 | 73 | 3 | 4% | 0.07 | J | 0.09 | J | OWDFMW01 | 22-Jul-2015 | No | 0 | 0% |
| 8260B | Methyl ethyl ketone (2-Butanone) | µg/L | 7,100 | 73 | 1 | 1% | 1 | J | 1 | J | OWDFMW01 | 19-Jul-2012 | No | 0 | 0% |
| 8260B | Methylene chloride | µg/L | 4.8 | 73 | 2 | 3% | 0.2 | J | 0.2 | J | OWDFMW01 | 22-Jul-2015 | No | 0 | 0% |
| 8260B | Toluene | µg/L | 40 | 75 | 4 | 5% | 0.06 | J | 3.8 | | HDMW2253-03 | 22-Oct-2014 | No | 0 | 0% |
| 8260B | Xylenes, Total (p/m-, o-xylene) | µg/L | 20 | 75 | 1 | 1% | 0.39 | J | 0.39 | J | OWDFMW01 | 21-Apr-2011 | No | 0 | 0% |
| 8260SIM | 1,2-Dichloroethane | µg/L | 0.15 | 12 | 4 | 33% | 0.0081 | J | 0.012 | J | OWDFMW01 | 22-Jul-2015 | No | 0 | 0% |
| 8260SIM | Bromodichloromethane | µg/L | 0.12 | 12 | 1 | 8% | 0.0039 | BJ | 0.0039 | BJ | RHMW06 | 23-Apr-2015 | No | 0 | 0% |
| 8270C | Acenaphthylene | µg/L | 30 | 73 | 1 | 1% | 0.0037 | J | 0.0037 | J | RHMW04 | 22-Apr-2015 | No | 0 | 0% |
| 8270C | Anthracene | µg/L | 0.73 | 73 | 1 | 1% | 0.0051 | J | 0.0051 | J | RHMW04 | 22-Apr-2015 | No | 0 | 0% |
| 8270C | Benzo[a]anthracene | µg/L | 0.027 | 73 | 7 | 10% | 0.0027 | J | 0.0046 | J | OWDFMW01 | 22-Jul-2015 | No | 0 | 0% |
| 8270C | Fluorene | µg/L | 3.9 | 73 | 4 | 5% | 0.0039 | J | 0.006 | J | RHMW04 | 22-Apr-2015 | No | 0 | 0% |
| 8270C | 1-Methylnaphthalene | µg/L | 2.1 | 75 | 5 | 7% | 0.0051 | J | 0.023 | | OWDFMW01 | 22-Apr-2015 | No | 0 | 0% |
| 8270C | 2-Methylnaphthalene | µg/L | 2.1 | 75 | 9 | 12% | 0.0059 | J | 0.017 | J | OWDFMW01 | 22-Apr-2015 | No | 0 | 0% |
| 8270C | Naphthalene | µg/L | 17 | 75 | 26 | 35% | 0.006 | J | 0.16 | J | HDMW2253-03 | 24-Apr-2013 | No | 0 | 0% |
| 8270C | Phenanthrene | µg/L | 4.6 | 73 | 7 | 10% | 0.0064 | J | 0.014 | J | OWDFMW01 | 22-Jul-2015 | No | 0 | 0% |
| 8270C | Pyrene | µg/L | 2 | 73 | 1 | 1% | 0.0063 | J | 0.0063 | J | OWDFMW01 | 22-Jul-2015 | No | 0 | 0% |
| 6020 | Dissolved Lead (filtered) | µg/L | 5.6 | 73 | 30 | 41% | 0.006 | J | 0.9 | | HDMW2253-03 | 26-Oct-2011 | No | 0 | 0% |

Notes:

HDOH, Tier 1 Environmental Action Levels, Table D-1a. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS located within 150 meters of release site)

**Blue text** indicates analyte reported non-detect above DOH EAL

Qualifiers:

B - analyte was present in the associated method blank

J - indicates an estimated value

HD, Z - the chromatographic pattern was inconsistent with the profile of the reference fuel standard

**Table A-12b** **Outside Wells Summary Non-Detect Statistics, Q4-2010 through Q3-2015**

| Method | Analyte | Units | DOH EAL | No. of Samples | No. of Non-detects | Percent Non-Detect | Non-Detects Min | | Non-Detects Max | | Did Non-Detects Exceed EALs? | No. of Non-Detect Exceedances | Percent Non-detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8015 | TPH-d | µg/L | 100 | 75 | 30 | 40% | 12 | U | 86 | U | No | 0 | 0% |
| 8015 | TPH-g | µg/L | 100 | 19 | 19 | 100% | 20 | U | 60 | U | No | 0 | 0% |
| 8015 | TPH-o | µg/L | 100 | 24 | 13 | 54% | 50 | U | 212 | U | **Yes** | 6 | 46% |
| 8260B | TPH-g | µg/L | 100 | 55 | 47 | 85% | 12.12 | U | 30 | U | No | 0 | 0% |
| 8260B | 1,1,1-Trichloroethane | µg/L | 62 | 73 | 73 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | 1,1,2-Trichloroethane | µg/L | 5 | 73 | 73 | 100% | 0.4 | U | 0.5 | U | No | 0 | 0% |
| 8260B | 1,1-Dichloroethane | µg/L | 2.4 | 73 | 73 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | 1,1-Dichloroethylene | µg/L | 7 | 73 | 73 | 100% | 0.2 | U | 0.6 | U | No | 0 | 0% |
| 8260B | 1,2,3-Trichloropropane | µg/L | 0.6 | 73 | 73 | 100% | 0.5 | U | 1 | U | **Yes** | 61 | 84% |
| 8260B | 1,2,4-Tricholorobenzene | µg/L | 25 | 73 | 73 | 100% | 0.3 | U | 1 | U | No | 0 | 0% |
| 8260B | 1,2-Dibromo-3- chloropropane | µg/L | 0.04 | 73 | 73 | 100% | 0.8 | U | 5 | U | **Yes** | 73 | 100% |
| 8260B | 1,2-Dibromoethane | µg/L | 0.04 | 73 | 73 | 100% | 0.2 | U | 0.5 | U | **Yes** | 73 | 100% |
| 8260B | 1,2-Dichlorobenzene | µg/L | 10 | 73 | 73 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | 1,2-Dichloroethane | µg/L | 0.15 | 61 | 61 | 100% | 0.1 | U | 0.5 | U | **Yes** | 55 | 90% |
| 8260B | 1,2-Dichloropropane | µg/L | 5 | 73 | 73 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | 1,3-Dichlorobenzene | µg/L | 5 | 73 | 73 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | 1,3-Dichloropropene (total of cis/trans) | µg/L | 0.43 | 73 | 73 | 100% | 0.2 | U | 0.5 | U | **Yes** | 33 | 45% |
| 8260B | 1,4-Dichlorobenzene | µg/L | 5 | 73 | 73 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Acetone | µg/L | 1500 | 73 | 46 | 63% | 1.9 | U | 10 | U | No | 0 | 0% |
| 8260B | Benzene | µg/L | 5 | 75 | 55 | 73% | 0.1 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Bromodichloromethane | µg/L | 0.12 | 61 | 61 | 100% | 0.28 | U | 0.5 | U | **Yes** | 61 | 100% |
| 8260B | Bromoform | µg/L | 80 | 73 | 73 | 100% | 0.28 | U | 1 | U | No | 0 | 0% |
| 8260B | Bromomethane | µg/L | 8.7 | 73 | 73 | 100% | 0.3 | U | 5 | U | No | 0 | 0% |
| 8260B | Carbon Tetrachloride | µg/L | 5 | 73 | 73 | 100% | 0.1 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Chlorobenzene | µg/L | 25 | 73 | 73 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Chloroethane | µg/L | 16 | 73 | 73 | 100% | 0.2 | U | 5 | U | No | 0 | 0% |
| 8260B | Chloroform | µg/L | 70 | 73 | 73 | 100% | 0.14 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Chloromethane | µg/L | 1.8 | 73 | 70 | 96% | 0.2 | U | 5 | U | **Yes** | 33 | 47% |
| 8260B | cis-1,2-Dichloroethylene | µg/L | 70 | 73 | 73 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Dibromochloromethane | µg/L | 0.16 | 61 | 61 | 100% | 0.3 | U | 0.5 | U | **Yes** | 61 | 100% |
| 8260B | Ethylbenzene | µg/L | 30 | 75 | 75 | 100% | 0.1 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Hexachlorobutadiene | µg/L | 0.86 | 73 | 73 | 100% | 0.3 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Methyl ethyl ketone (2-Butanone) | µg/L | 7,100 | 73 | 72 | 99% | 1.2 | U | 5 | U | No | 0 | 0% |
| 8260B | Methyl isobutyl ketone (4-Methyl-2-Pentanone) | µg/L | 170 | 73 | 73 | 100% | 3.8 | U | 10 | U | No | 0 | 0% |
| 8260B | Methyl tert-butyl Ether | µg/L | 5 | 73 | 73 | 100% | 0.3 | U | 0.52 | U | No | 0 | 0% |
| 8260B | Methylene chloride | µg/L | 4.8 | 73 | 71 | 97% | 0.2 | U | 1 | U | No | 0 | 0% |
| 8260B | Styrene | µg/L | 10 | 73 | 73 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Tetrachloroethane, 1,1,1,2- | µg/L | 0.52 | 73 | 73 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Tetrachloroethane, 1,1,2,2- | µg/L | 0.067 | 61 | 61 | 100% | 0.2 | U | 0.5 | U | **Yes** | 61 | 100% |
| 8260B | Tetrachloroethylene | µg/L | 5 | 73 | 73 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Toluene | µg/L | 40 | 75 | 71 | 95% | 0.1 | U | 0.5 | U | No | 0 | 0% |
| 8260B | trans-1,2- Dichloroethylene | µg/L | 100 | 73 | 73 | 100% | 0.2 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Trichloroethylene | µg/L | 5 | 73 | 73 | 100% | 0.1 | U | 0.5 | U | No | 0 | 0% |

**Table A-12b** **Outside Wells Summary Non-Detect Statistics, Q4-2010 through Q3-2015**

| Method | Analyte | Units | DOH EAL | No. of Samples | No. of Non-detects | Percent Non-Detect | Non-Detects Min | | Non-Detects Max | | Did Non-Detects Exceed EALs? | No. of Non-Detect Exceedances | Percent Non-detect Exceedance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8260B | Vinyl chloride | µg/L | 2 | 73 | 73 | 100% | 0.1 | U | 0.5 | U | No | 0 | 0% |
| 8260B | Xylenes, Total (p/m-, o-xylene) | µg/L | 20 | 75 | 74 | 99% | 0.2 | U | 1 | U | No | 0 | 0% |
| 8260SIM | 1,2-Dibromoethane | µg/L | 0.04 | 6 | 6 | 100% | 0.01 | U | 0.01 | U | No | 0 | 0% |
| 8260SIM | 1,2-Dichloroethane | µg/L | 0.15 | 12 | 8 | 67% | 0.015 | U | 0.015 | U | No | 0 | 0% |
| 8260SIM | Bromodichloromethane | µg/L | 0.12 | 12 | 11 | 92% | 0.01 | U | 0.01 | U | No | 0 | 0% |
| 8260SIM | Dibromochloromethane | µg/L | 0.16 | 12 | 12 | 100% | 0.01 | U | 0.01 | U | No | 0 | 0% |
| 8260SIM | Tetrachloroethane, 1,1,2,2- | µg/L | 0.067 | 12 | 12 | 100% | 0.015 | U | 0.015 | U | No | 0 | 0% |
| 8011 | 1,2-Dibromo-3- chloropropane | µg/L | 0.04 | 18 | 18 | 100% | 0.004 | U | 0.019 | U | No | 0 | 0% |
| 8011 | 1,2-Dibromoethane | µg/L | 0.04 | 18 | 18 | 100% | 0.004 | U | 0.02 | U | No | 0 | 0% |
| 8270C | Acenaphthene | µg/L | 20 | 73 | 73 | 100% | 0.005 | U | 0.12 | U | No | 0 | 0% |
| 8270C | Acenaphthylene | µg/L | 30 | 73 | 72 | 99% | 0.005 | U | 0.12 | U | No | 0 | 0% |
| 8270C | Anthracene | µg/L | 0.73 | 73 | 72 | 99% | 0.005 | U | 0.1 | U | No | 0 | 0% |
| 8270C | Benzo[a]anthracene | µg/L | 0.027 | 73 | 66 | 90% | 0.005 | U | 0.14 | U | **Yes** | 55 | 83% |
| 8270C | Benzo[g,h,i]perylene | µg/L | 0.1 | 73 | 73 | 100% | 0.005 | U | 0.16 | U | **Yes** | 23 | 32% |
| 8270C | Benzo[a]pyrene | µg/L | 0.014 | 73 | 73 | 100% | 0.005 | U | 0.14 | U | **Yes** | 55 | 75% |
| 8270C | Benzo[b]fluoranthene | µg/L | 0.092 | 73 | 73 | 100% | 0.005 | U | 0.12 | U | **Yes** | 22 | 30% |
| 8270C | Benzo[k]fluoranthene | µg/L | 0.4 | 73 | 73 | 100% | 0.005 | U | 0.14 | U | No | 0 | 0% |
| 8270C | Chrysene | µg/L | 0.35 | 73 | 73 | 100% | 0.005 | U | 0.1 | U | No | 0 | 0% |
| 8270C | Dibenzo[a,h]anthracene | µg/L | 0.0092 | 73 | 73 | 100% | 0.005 | U | 0.1 | U | **Yes** | 61 | 84% |
| 8270C | Fluoranthene | µg/L | 8 | 73 | 73 | 100% | 0.0096 | U | 0.16 | U | No | 0 | 0% |
| 8270C | Fluorene | µg/L | 3.9 | 73 | 69 | 95% | 0.005 | U | 0.12 | U | No | 0 | 0% |
| 8270C | Indeno[1,2,3-cd]pyrene | µg/L | 0.092 | 73 | 73 | 100% | 0.005 | U | 0.14 | U | **Yes** | 22 | 30% |
| 8270C | 1-Methylnaphthalene | µg/L | 2.1 | 75 | 70 | 93% | 0.005 | U | 0.12 | U | No | 0 | 0% |
| 8270C | 2-Methylnaphthalene | µg/L | 2.1 | 75 | 66 | 88% | 0.005 | U | 0.12 | U | No | 0 | 0% |
| 8270C | Naphthalene | µg/L | 17 | 75 | 49 | 65% | 0.005 | U | 0.1 | U | No | 0 | 0% |
| 8270C | Phenanthrene | µg/L | 4.6 | 73 | 66 | 90% | 0.005 | U | 0.14 | U | No | 0 | 0% |
| 8270C | Pyrene | µg/L | 2 | 73 | 72 | 99% | 0.0096 | U | 0.16 | U | No | 0 | 0% |
| 6020 | Dissolved Lead (filtered) | µg/L | 5.6 | 73 | 43 | 59% | 0.2 | U | 0.8 | U | No | 0 | 0% |

Notes:

HDOH, Tier 1 Environmental Action Levels, Table D-1a. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS located within 150 meters of release site)

**Blue text** indicates analyte reported non-detect above DOH EAL

Qualifiers:

U - non-detect