REPORT

# First Quarter 2016 Remediation Progress Report SFPP Norwalk Pump Station Norwalk, California

*Prepared for*

Kinder Morgan Energy Partners, L.P.

April 15, 2016

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# Signature Page

The material and data presented in this report were prepared consistent with current and generally accepted consulting principles and practices. This work was supervised by the following CH2M licensed professional.

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# Contents

# Acronyms and Abbreviations

| | |
|---|---|
| µg/L | micrograms per liter |
| 1,2-DCA | 1,2-dichloroethane |
| Air Tech | Air Technology Laboratories |
| ASTM | ASTM International (formerly American Society for Testing and Materials) |
| ATL | Advanced Technology Laboratories |
| BTEX | benzene, toluene, ethylbenzene, and total xylenes |
| CH2M | CH2M HILL Engineers, Inc. |
| EPA | U.S. Environmental Protection Agency |
| GWE | groundwater extraction |
| GWTS | groundwater treatment system |
| LGAC | liquid-phase granular activated carbon |
| MTBE | methyl tertiary butyl ether |
| NPDES | National Pollutant Discharge Elimination System |
| O&M | operations and maintenance |
| OWS | oil-water separator |
| PID | photoionization detector |
| RAB | Restoration Advisory Board |
| RWQCB | California Regional Water Quality Control Board, Los Angeles Region |
| SCAQMD | South Coast Air Quality Management District |
| scfm | standard cubic feet per minute |
| SF6 | sulfur hexafluoride |
| SFPP | SFPP, L.P., an operating partnership of Kinder Morgan Energy Partners, L.P. |
| SVE | soil vapor extraction |
| TBA | tertiary butyl alcohol |
| TFE | total fluids extraction |
| TPH | total petroleum hydrocarbons |
| TPH-d | total petroleum hydrocarbons quantified as diesel |
| TPH-g | total petroleum hydrocarbons quantified as gasoline |
| TPH-o | total petroleum hydrocarbons quantified as oil |
| TPH-total | total petroleum hydrocarbons quantified as gasoline, diesel, and oil |
| VOC | volatile organic compound |
| WSB | West Side Barrier |

SECTION 1

# Introduction

CH2M HILL Engineers, Inc. (CH2M) has prepared this report on behalf of SFPP, L.P. (SFPP), an operating partnership of Kinder Morgan Energy Partners, L.P., to summarize remediation activities performed at the former SFPP Norwalk Pump Station located within the Defense Fuel Support Point Norwalk, located at 15306 Norwalk Boulevard, Norwalk, California (the site; Figure 1) during the first quarter 2016 reporting period.

This progress report is submitted pursuant to a request from the California Regional Water Quality Control Board, Los Angeles Region (RWQCB) in its letter dated October 25, 2006 (RWQCB, 2006). Additional site background information can be found in the report titled, *Conceptual Site Model and Proposed Alternate Interim Remedy for Soil, Groundwater, and LNAPL* (CH2M, 2013a), and in previously submitted semiannual groundwater monitoring reports.

This report summarizes the remediation systems present at the site and describes remediation activities for the period of January through March 2016 with documentation of the following tasks:

- Operations and maintenance (O&M) of remediation systems performed by SFPP field personnel
- Remediation system evaluation

The remediation activities performed during January through March 2016 and the progress achieved through those activities are summarized in the following sections.

SECTION 2

# Remediation Systems

SFPP currently operates remediation systems consisting of soil vapor extraction (SVE), total fluids extraction (TFE) of free product and/or groundwater using top-loading pumps, and treatment of extracted soil vapors and groundwater to address two specific areas at and near the site: the south-central area and the southeastern area. Operation of the West Side Barrier (WSB) groundwater extraction (GWE) system (WSB system) for remediation of the western offsite area was discontinued in August 2008. SFPP also operates a horizontal biosparge system to enhance mass removal of free-phase and dissolved-phase hydrocarbon constituents in the south-central area of the site. Further discussion of this system is provided below.

Remediation in the south-central and southeastern areas consists of SVE and TFE. At several well locations, SVE is coupled with TFE in a process referred to as dual-phase extraction. SVE is performed using a blower to remove soil vapors from the south-central and southeastern areas. The extracted vapors are conveyed to a knock-out tank that separates entrained moisture from the soil vapors. Accumulated moisture in the knock-out tank is treated by the main groundwater treatment system (GWTS) described below. The soil vapors are then treated in a thermal oxidizer where volatile organic compounds (VOCs) are converted to carbon dioxide and water prior to being discharged to the atmosphere. Operation of the GWTS and SVE system is conducted in accordance with Permits to Construct (Application Nos. 569588 and 567723, respectively; ID 110835) issued by the South Coast Air Quality Management District (SCAQMD).

The main GWTS processes free product and groundwater recovered from the south-central and southeastern parts of the site. Free product and groundwater recovered by pneumatically operated top-loading total fluids pumps are piped to an oil-water separator (OWS). Free product from the OWS is collected in a storage tank and recycled at an offsite location. Water from the OWS is treated using liquid-phase granular activated carbon (LGAC). Treated water is routed through an onsite 3,000-gallon equalization tank. Two fluidized bed bioreactors installed downstream of the equalization tank treat fuel oxygenates such as tertiary butyl alcohol (TBA) and methyl tertiary butyl ether (MTBE) that are not treated in the LGAC. The treated groundwater then passes through polishing LGAC units prior to discharge in accordance with a National Pollutant Discharge Elimination System (NPDES) permit (NPDES No. CA0063509, CI No. 7497).

SFPP recently completed installation of a horizontal biosparge system in the south-central area of the site. Construction of the biosparge well is documented in the report titled, *Horizontal Biosparge Well and Soil Vapor Monitoring Probe Completion Report* (CH2M, 2015). The biosparge system injects ambient air into the horizontal biosparge well, BS-01, via a rotary screw air compressor, at a maximum design rate of approximately 500 standard cubic feet per minute (scfm). SFPP's SVE system has an interlock that ensures the biosparge system cannot operate unless the SVE system is operating. Operation of the SVE system reduces the potential for off-gassing of VOCs during biosparge operations. Pilot testing commenced on January 6, 2016, and is anticipated to continue for approximately 1 year in order to evaluate the feasibility of system expansion. Soil vapor and groundwater data collected as part of the pilot testing will be submitted to the RWQCB and Restoration Advisory Board (RAB) under separate cover. A summary of remediation wells in the south-central, southeastern, and WSB areas is presented in Table 1. Table 1 includes well identifications, well construction details, well use, and operational status at the end of the first quarter 2016. The remediation system layout is presented in Figure 2.

SECTION 3

# Operations and Maintenance

During the first quarter 2016 reporting period, O&M of the remediation systems included the following tasks:

- Performed weekly maintenance and monitoring of the south-central and southeastern SVE and TFE wells, the SVE system and GWTS (collectively referred to as remediation systems), and the horizontal biosparge system.
- Performed cleanout of the OWS, sump, equalization tank, and transfer tank.
- Performed carbon changeout of the LGAC vessels.
- Performed carbon changeout of the vapor-phase granular activated carbon vessels used to treat off-gas from the product tank and OWS.
- Installed new conveyance piping to existing well MW-SF-17 and connected to the SVE system.

The remediation systems operated during the first quarter 2016 with the following exceptions:

- The GWTS was turned off on February 11, 2016, to facilitate collection of groundwater samples as part of a sulfur hexafluoride (SF6) tracer gas study for the biosparge pilot test. The system remained offline until March 16, 2016, for maintenance of the fluidized bed bioreactors.
- There were two biosparge system shut downs on February 16, 2016. First, due to a high temperature alarm in the compressor and, secondly, for replacement of the SF6 tracer gas canister during tracer gas testing. The system was restarted the same day.
- The SVE system shut down on February 29, 2016. No alarms were noted upon arrival. The system was restarted the same day. The biosparge system was offline during this period.
- The SVE system was turned off on March 10, 2016, to troubleshoot the destruction efficiency influent VOCs. After troubleshooting the system and collection of vapor compliance samples on March 23, 2016, the system was restarted on March 28, 2016. The biosparge system was offline during this period.

During this reporting period, remediation system inspections were performed on a weekly basis. For these inspections, volumes of extracted groundwater, hours of operation, and other system parameters were recorded during system operation.

Overall, during the first quarter 2016, the SVE system was operational 78 percent of the time (93 percent of the time excluding planned shutdowns), and the GWTS operated 70 percent of the time (96 percent of the time excluding planned shutdowns). The biosparge system operated 74 percent of the time since startup on January 6, 2016 (93 percent of the time excluding planned shutdowns). Table 2 presents the SVE system operations summary. Extracted vapor photoionization detector (PID) measurements at the end of the first quarter 2016 are summarized in Table 3. Extracted vapor analytical results for the first quarter 2016 are summarized in Table 4. The groundwater remediation system operation activities for the first quarter 2016 are summarized in Table 5. The extracted groundwater analytical results for the first quarter 2016 are summarized in Table 6. Table 7 presents the biosparge system operations summary. Historical (post-2007) gauging results of select TFE and SVE wells are provided in Table 8. Pre-2007 data can be found in previous semiannual groundwater monitoring reports.

Vapor samples from the SVE system influent and water samples from the GWTS influent were collected during the first quarter 2016 when the systems were in operation. During the first quarter 2016, influent

vapor samples were collected on January 4, February 4, and March 3, 2016. Influent water samples were collected on January 21 and February 2, 2016, when the GWTS was operating. The water samples were delivered to Advanced Technology Laboratories (ATL) of Las Vegas, Nevada, for analysis. ATL is certified by the California Department of Public Health Environmental Laboratory Accreditation Program. The vapor samples were delivered to Air Technology Laboratories (Air Tech) of City of Industry, California, for analysis.

Air Tech analyzed the vapor samples for the following:

- Fixed gases (methane, carbon dioxide, oxygen, and argon) using ASTM International (ASTM) D1946
- VOCs using U.S. Environmental Protection Agency (EPA) Method TO-15
- Total VOCs using EPA Method TO-3

ATL analyzed the water samples for the following:

- Total petroleum hydrocarbons (TPH) quantified as gasoline (TPH-g), TPH quantified as diesel (TPH-d), and TPH quantified as oil (TPH-o) (collectively referred to as TPH-total) using EPA Method 8015(M)
- VOCs using EPA Method 8260B

The laboratory analytical reports and chain-of-custody documents for these samples are included in Appendix A.

SECTION 4

# Summary of Remediation Progress

Based on weekly monitoring of the influent vapor concentration, vapor extraction flow rate, and hours of operation, the total mass of VOCs removed by SVE was 74,148 pounds during the first quarter 2016. This represents a significant increase in mass removal since fourth quarter 2015, when the mass removed was 46,061 pounds. The increase is due to higher influent concentrations resulting from operation of the horizontal biosparge system. Since SVE implementation in September 1995, the cumulative mass removed was 3,394,610 pounds (Table 2). The cumulative mass removed by SVE does not include the mass removed by naturally occurring in situ biodegradation.

A total of 767,657 gallons of groundwater was extracted during the first quarter 2016 (Table 5). No water was extracted from the WSB area during the first quarter 2016. Approximately 96.5 million gallons of groundwater has been extracted from the south-central, southeastern, and WSB areas since GWTS operations first began in 1996.

GWE was discontinued in the WSB region during the third quarter 2008 based on the reduced lateral extent and low concentrations of MTBE and 1,2-dichloroethane (1,2-DCA) west of the site. 1,2-DCA, MTBE, and TBA concentrations in the western area during the fourth quarter 2015 did not warrant restarting the WSB system in the first quarter 2016.

The amount of free product that accumulated in the product holding tank of the GWTS was estimated to be 194 gallons during the first quarter 2016. Since 1995, a total of 14,020 gallons of product has been removed by TFE, vacuum truck, or manual bailing operations. The estimated mass removal (pounds) of hydrocarbons by the GWTS is shown in Table 5. Mass removal estimates between 1996 and 2005 are based on benzene, toluene, ethylbenzene, and total xylene (BTEX) and MTBE concentrations in the groundwater influent (TPH data were not available) and total volume of extracted groundwater. Mass removal estimates between 2006 and 2011 are based on groundwater influent concentrations of TPH-g and TPH quantified as fuel product, and the total volume of extracted groundwater. Mass removal estimates between 2012 and 2016 are based on groundwater influent TPH-total concentrations (TPH-total includes TPH-g, TPH-d, and TPH-o) and the total volume of extracted groundwater. Since GWE first began in 1996, hydrocarbon mass removed by the GWTS is estimated to be 19,104 pounds. During the first quarter 2016, the mass removal of hydrocarbons was estimated to be 4,203 pounds. Since the first quarter 2014 there has been significantly more hydrocarbon removal than previous quarters. The increase in mass removal during the first quarter 2016, and since the first quarter 2014, is attributed to the higher TPH-total concentrations in the groundwater influent. The maximum TPH-total concentration in the first quarter 2016 was 2,685,000 micrograms per liter (µg/L) (Table 6). The higher concentrations of TPH-total are attributed to the free product that is emulsified in the groundwater influent during TFE operations.

The biosparge system operated for 1,524 hours in the first quarter 2016 (Table 7). During January and February 2016, biosparge system flow (air injection) rates were gradually increased to approximately 500 scfm, the maximum design rate. Injection rates were decreased in March 2016 in order to optimize destruction efficiency of influent VOCs in the SVE system.

SECTION 5

# System Evaluation and Optimization

On March 11, 2016, the SVE system was shut down to troubleshoot the reduced destruction efficiency of the SVE. As part of this effort, additional air samples were collected on March 23, 2016, at the post-dilution and effluent sampling points and analyzed for total VOCs. Samples were collected under different operational conditions including flow rate and vacuum. Data indicate that SVE destruction efficiency was improved by decreasing the process flow rate, which increased residence time in the combustion chamber. These conditions were achieved by throttling all SVE wells to 50 percent open. During future SVE operation, all offsite wells will remain fully open to ensure maximum vapor extraction from the offsite area; onsite wells will be 50 percent open to decrease the process flow rate and increase residence time.

The TFE system currently consists of three wells operated for product recovery and hydraulic control in the south-central part of the site, and three wells equipped with TFE pumps operated for product recovery and hydraulic control in the southeastern part of the site (Table 1). TFE operations from these wells will continue and pump inlets will be adjusted, as needed, to optimize GWE and product recovery.

The second semiannual 2015 groundwater monitoring event in the WSB region occurred during the fourth quarter 2015. Monitoring results support the continued shutdown of GWE in the WSB region. 1,2-DCA, MTBE, and TBA concentrations in the western area will continue to be monitored during routine semiannual groundwater monitoring events; the WSB system will be restarted if necessary. The first semiannual 2016 groundwater monitoring event is scheduled for April 2016.

As shown in Table 7, measurable free product was observed in 21 remediation wells during the previous semiannual groundwater monitoring event (conducted during the fourth quarter of 2015). Of these, 2 wells in the southeastern area had measureable product, and the remaining 18 wells with measurable product are located in the south-central area. Up to 11.27 feet of measurable product was observed in offsite well GMW-O-12 on October 30, 2015. It is believed that increased product thicknesses, previously observed, are indicative of declining water levels across the site (Figure 3). However, during recent groundwater monitoring conducted in March 2016 (for pilot test data collection), measurable free product was observed in only eight remediation wells in the south-central area. The product thicknesses ranged from 0.02 foot in MW-SF-6 to 2.12 feet in GMW-22. Only 0.8 foot of measureable product was observed in GMW-O-12, where up to approximately 11 feet of product had been observed in October 2015. The substantial decline in measurable product in the south-central area is directly attributed to biosparge system operations. Biosparge system operations will continue during the second quarter 2016. Air injection rates will be optimized to ensure adequate destruction efficiency of extracted vapors by the SVE system.

SECTION 6

# Planned Second Quarter 2016 Activities

During the second quarter 2016, SFPP plans to continue to focus remedial efforts on the south-central and southeastern areas. The following maintenance and other activities are planned to be completed during the second quarter 2016:

- Continue weekly maintenance and monitoring of the south-central and southeastern SVE and TFE/GWE treatment systems, and horizontal biosparge system.
- Measure individual well vapor concentrations.
- Collect and analyze system influent vapor and groundwater samples.
- Perform as-needed carbon changeouts of the LGAC vessels.
- Remove, inspect, and repair existing TFE/GWE pumps and associated discharge lines.
- Install pumps and associated equipment necessary for TFE at select wells with measurable free product.
- Continue to remove free product from wells without TFE pumps using manual bailing methods.
- Install the new OWS and associated pad to allow more efficient removal of free product from the influent stream.
- Place order and begin planning for installation of a new regenerative thermal oxidizer vapor extraction and treatment system.
- Continue biosparge pilot testing, as outlined in the *Horizontal Biosparge System Construction and Pilot Test Work Plan* submitted to the RWQCB on November 18, 2013 (CH2M, 2013b). Soil vapor and groundwater data collected as part of the pilot testing will be submitted to the RWQCB and RAB under separate cover.

The TFE, GWE, and SVE systems for the south-central and southeastern areas will continue to operate. Operation of the TFE system in the southeastern area will be monitored closely, and adjustments will be made to improve fluid recovery. System inspections will continue on a weekly basis; system evaluation parameters will be collected as needed. The remediation activities and progress for the second quarter 2016 will be described in the Second Quarter 2016 Remediation Progress Report, to be submitted by July 15, 2016.

Pilot testing of the horizontal biosparge system in the south-central area will continue in the second quarter 2016. Testing will be performed for a period of approximately 1 year in order to evaluate the feasibility of system expansion. Progress reports on the pilot testing activities will be submitted to the RWQCB under separate cover until completion of the pilot test, as requested in the RWQCB's work plan approval letter (RWQCB, 2014).

SECTION 7

# References

California Regional Water Quality Control Board, Los Angeles Region (RWQCB). 2006. Letter to Mr. Kola Olowu, Defense Energy Support Center, Los Angeles, and Mr. Michael Pitta, Kinder Morgan Energy Partners; Conditional Approval of Revised Remedial Action Plan and Second Addendum to Remedial Action Plan for the Defense Fuel Support Point Norwalk, 15306 Norwalk Boulevard, Norwalk (SLIC No. 0286A, DOD No. 16638). October 25.

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CH2M HILL (CH2M). 2013b. *Horizontal Biosparge System Construction and Pilot Test Work Plan, SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California*. November 18.

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# Tables

**Table 1. Remediation Well Construction and Status**

*SFPP Norwalk Pump Station, Norwalk, California*

| Remediation Area | Remediation Well ID | Installation Date | Top of Well Casing Elevation (feet msl) | Well Screen Interval (feet bgs) | Remediation Well Function | Well Operation Status at End of | |
|---|---|---|---|---|---|---|---|
| | | | | | | SVE/BS | TFE/GWE |
| South-Central | MW-SF-1 | 6/18/1990 | 78.93 | 25 - 40 | SVE | **ON** | -- |
| | MW-SF-2 | 6/18/1990 | 78.53 | 25 - 40 | SVE; TFE | **ON** | OFF |
| | MW-SF-3 | 6/18/1990 | 78.12 | 25 - 40 | SVE; TFE | **ON** | OFF |
| | MW-SF-4 | 6/19/1990 | 79.38 | 25 - 40 | SVE | **ON** | -- |
| | MW-SF-5 | 9/19/1990 | 79.74 | 23 - 38 | SVE | **ON** | -- |
| | MW-SF-6 | 9/19/1990 | 76.80 | 25 - 40 | SVE; TFE | **ON** | OFF |
| | MW-SF-9 | 6/15/1995 | 74.10 | -- | SVE | **ON** | -- |
| | MW-SF-10 | 9/23/2003 | 76.53 | 10 - 30 | SVE | **ON** | -- |
| | MW-SF-11 | 6/19/2007 | 78.56 | 20 - 40 | SVE; TFE | **ON** | OFF |
| | MW-SF-12 | 6/18/2007 | 78.07 | 20 - 40 | SVE; TFE | **ON** | OFF |
| | MW-SF-13 | 6/19/2007 | 73.40 | 20 - 40 | SVE; TFE | **ON** | OFF |
| | MW-SF-14 | 6/21/2007 | 78.16 | 20 - 40 | SVE; TFE | **ON** | OFF |
| | MW-SF-15 | 6/21/2007 | 78.27 | 20 - 40 | SVE; TFE | **ON** | OFF |
| | MW-SF-16 | 6/20/2007 | 78.21 | 20 - 40 | SVE; TFE | **ON** | OFF |
| | MW-SF-17 | -- | -- | -- | SVE | **ON** | -- |
| | GMW-9 | 7/8/1991 | 77.16 | 20 - 50 | SVE; TFE | **ON** | **ON** |
| | GMW-10 | 7/8/1991 | N/A | 25 - 50 | SVE; TFE | **ON** | OFF |
| | GMW-22 | 8/2/1991 | 77.24 | 25 - 60 | SVE; TFE | **ON** | OFF |
| | GMW-24 | 8/5/1991 | 77.48 | 25 - 60 | SVE; TFE | **ON** | OFF |
| | GMW-25 | 1/10/1992 | 78.14 | 20 - 50 | SVE; TFE | **ON** | OFF |
| | GWR-3 | 1/10/1992 | 77.60 | 20 - 50 | SVE; TFE | **ON** | OFF |
| | VEW-1 | 09/19/90 | -- | 5 - 25 | SVE | **ON** | -- |
| | VEW-2 | 09/19/90 | -- | 5 - 25 | SVE | **ON** | -- |
| | MW-O-1 | 1/22/1991 | 75.48 | 25 - 40 | SVE; TFE | **ON** | OFF |
| | MW-O-2 | 1/23/1991 | 71.90 | 25 - 40 | SVE; TFE | **ON** | OFF |
| | GMW-O-11 | 5/20/1992 | 74.17 | 20 - 50 | SVE; TFE | **ON** | OFF |
| | GMW-O-12 | 5/21/1992 | 73.49 | 20 - 50 | SVE | **ON** | -- |
| | GMW-O-20 | 6/15/1995 | 73.32 | -- | SVE; TFE | **ON** | **ON** |
| | GMW-O-21 | 10/1/1997 | 71.43 | 26 - 46 | TFE | -- | OFF |
| | GMW-O-23 | 6/25/2007 | 73.63 | 20 - 40 | SVE; TFE | **ON** | **ON** |
| | MW-18 (MID) | 6/10/1991 | 75.67 | 50 - 60 | SVE | **ON** | -- |
| | HW-1 | 09/06/92 | -- | -- | SVE | **ON** | -- |
| | HW-2 | 09/06/92 | -- | -- | SVE | **ON** | -- |
| | BS-01 | 08/27/14 | 75.06 | -- | Biosparge | **ON** | -- |
| Southeastern | GMW-O-15 | 4/19/1994 | 74.23 | 20 - 50 | SVE; TFE | **ON** | **ON** |
| | GMW-O-18 | 7/25/1994 | 74.36 | 21 - 40 | SVE; TFE | **ON** | **ON** |
| | GMW-36 | 4/11/1994 | 76.66 | 20 - 50 | SVE; TFE | **ON** | **ON** |
| | GMW-SF-9 | 4/1/2003 | 73.05 | 37 - 46 | TFE | -- | **--** |
| | GMW-SF-10 | 4/2/2003 | 75.77 | 37 - 46 | TFE | -- | -- |
| West Side Barrier | BW-2 | 5/20/1996 | 73.57 | 27 - 47 | GWE | -- | OFF |
| | BW-3 | 5/17/1996 | 74.16 | 31 - 50 | GWE | -- | OFF |
| | BW-4 | 5/20/1996 | 74.61 | 28 - 47 | GWE | -- | OFF |
| | BW-5 | 5/23/1996 | 73.59 | 27 - 46 | GWE | -- | OFF |
| | BW-6 | 5/22/1996 | 73.48 | 28 - 47 | GWE | -- | OFF |
| | BW-7 | 5/22/1996 | 74.65 | 27 - 46 | GWE | -- | OFF |
| | BW-8 | 5/21/1996 | 75.08 | 27 - 46 | GWE | -- | OFF |
| | BW-9 | 5/21/1996 | 76.19 | 27 - 46 | GWE | -- | OFF |

Notes:

-- = information not available or not applicable

BS = biosparge

feet bgs = feet below ground surface

feet msl = feet above mean sea level based on the National Geodetic Vertical Datum of 192

GWE = groundwater extraction

SVE = soil vapor extraction

TFE = total fluids extraction

**Table 2. Vapor Remediation System Operation Summary**

*SFPP Norwalk Pump Station, Norwalk, California*

| System Inspection Date | Cumulative Hours of Operation (hours) | Incremental Hours of Operation (hours) | Influent PID Reading (ppmv as hexane) | System Flow (scfm) | Header Vacuum (in. $H_2O$) | Mass Removed (pounds)[a] |
|---|---|---|---|---|---|---|
| 1995 Totals | 1,240 | | -- | -- | -- | 281,065 |
| 1996 Totals | 7,208 | 5,968 | -- | -- | -- | 516,717 |
| 1997 Totals | 12,865 | 5,657 | -- | -- | -- | 489,526 |
| 1998 Totals | 17,877 | 5,012 | -- | -- | -- | 223,055 |
| 1999 Totals | 23,600 | 5,723 | -- | -- | -- | 390,836 |
| 2000 Totals | 29,690 | 6,090 | -- | -- | -- | 359,092 |
| 2001 Totals | 33,671 | 3,981 | -- | -- | -- | 224,091 |
| 2002 Totals | 36,358 | 2,687 | -- | -- | -- | 79,363 |
| 2003 Totals | 39,676 | 3,319 | -- | -- | -- | 64,671 |
| 2004 Totals | 44,193 | 4,517 | -- | -- | -- | 120,240 |
| 2005 Totals | 49,750 | 5,557 | -- | -- | -- | 212,175 |
| 2006 Totals | 52,735 | 2,985 | -- | -- | -- | 17,263 |
| 2007 Totals[3] | 58,319 | 2,058 | -- | -- | -- | 7,378 |
| 2008 Totals | 64,233 | 5,915 | -- | -- | -- | 5,878 |
| 2009 Totals | 68,858 | 4,625 | -- | -- | -- | 9,387 |
| 2010 Totals | 72,369 | 3,511 | -- | -- | -- | 1,507 |
| 2011 Totals | 77,489 | 5,120 | -- | -- | -- | 14,629 |
| 2012 Totals | 84,173 | 6,684 | -- | -- | -- | 22,260 |
| 2013 Totals | 90,414 | 6,241 | -- | -- | -- | 90,880 |
| 2014 Totals | 94,083 | 3,688 | -- | -- | -- | 67,744 |
| 2015 Totals | 98,408 | 4,325 | -- | -- | -- | 122,706 |
| 1/5/2016 | 98,569 | 162 | 1,978 | 1,318 | 85 | 5,758 |
| 1/12/2016 | 98,719 | 150 | 3,830 | 1,433 | 65 | 10,596 |
| 1/14/2016 | 98,768 | 49 | 3,830 | 1,489 | 65 | 3,478 |
| 1/19/2016 | 98,881 | 113 | 1,620 | 1,413 | 70 | 3,523 |
| 1/26/2016 | 99,046 | 165 | 2,116 | 1,364 | 70 | 6,439 |
| 2/2/2016 | 99,192 | 146 | 1,654 | 1,346 | 70 | 4,608 |
| 2/4/2016 | 99,243 | 51 | 1,780 | 1,200 | 70 | 1,738 |
| 2/9/2016 | 99,360 | 117 | 1,616 | 1,177 | 70 | 3,601 |
| 2/16/2016 | 99,530 | 171 | 1,054 | 1,058 | 65 | 3,129 |
| 2/23/2016 | 99,696 | 165 | 2,810 | 1,052 | 65 | 8,508 |
| 2/29/2016 | 99,821 | 125 | 2,810 | 1,128 | 60 | 6,420 |
| 3/1/2016 | 99,844 | 23 | 3,586 | 1,072 | 60 | 1,594 |
| 3/8/2016 | 100,008 | 165 | 3,704 | 1,182 | 60 | 12,108 |
| 3/10/2016 | 100,056 | 48 | -- | 1,155 | 60 | 0 |
| 3/16/2016 | 100,056 | 0 | -- | 0 | 0 | 0 |
| 3/22/2016 | 100,056 | 0 | 1,238 | 1,753 | 60 | 0 |
| 3/23/2016 | 100,079 | 23 | 3,000 | 1,890 | 73 | 1,853 |
| 3/29/2016 | 100,105 | 25 | 1,810 | 1,906 | 70 | 795 |
| **First Quarter 2016 Totals** | 100,105 | 1,697 | -- | -- | -- | 74,148 |
| **Cumulative Totals** | **100,105** | -- | -- | -- | -- | **3,394,610** |

Notes:

[a] The total mass removed is based on influent FID or PID readings, hours of operation, and flow rate.

-- = not applicable or not available

FID = flame ionization detector

in. $H_2O$ = inches of water

PID = photoionization detector

ppmv = parts per million by volume

scfm = standard cubic feet per minute

TPH-g = total petroleum hydrocarbons quantified as gasoline (C4-C12)

**Table 3. Remediation Well Vapor Concentrations**

*SFPP Norwalk Pump Station, Norwalk, California*

| Remediation Area | Remediation Well ID | Remediation Well Function | 01/12/2016 (ppmv as Hexane)[a] | 02/16/2016 (ppmv as Hexane)[a] |
|---|---|---|---|---|
| South-Central | MW-SF-1 | SVE | >5000 | 280 |
| | MW-SF-2 | SVE; TFE | >5000 | 592 |
| | MW-SF-3 | SVE; TFE | >5000 | 490 |
| | MW-SF-4 | SVE | >5000 | 364 |
| | MW-SF-5 | SVE | 326 | 116 |
| | MW-SF-6 | SVE; TFE | 222 | 890 |
| | MW-SF-9 | SVE | >5000 | 2,384 |
| | MW-SF-10 | SVE | >5000 | 1,086 |
| | MW-SF-11 | SVE; TFE | 672 | Water in Line |
| | MW-SF-12 | SVE; TFE | 1,822 | 340 |
| | MW-SF-13 | SVE; TFE | >5000 | 524 |
| | MW-SF-14 | SVE; TFE | >5000 | 582 |
| | MW-SF-15 | SVE; TFE | >5000 | 666 |
| | MW-SF-16 | SVE; TFE | >5000 | 722 |
| | MW-SF-17 | SVE; TFE | -- | 722 |
| | GMW-9 | SVE; TFE | 1,730 | 742 |
| | GMW-10 | SVE | 1,860 | 1,218 |
| | GMW-22 | SVE; TFE | 1,730 | 742 |
| | GMW-24 | SVE; TFE | >5000 | 1,440 |
| | GMW-25 | SVE; GWE | >5000 | 1,440 |
| | GWR-3 | SVE; GWE | 3,990 | 1,536 |
| | VEW-1 | SVE | Water in Line | Water in Line |
| | VEW-2 | SVE | 1062 | 288 |
| | MW-O-1 | SVE; TFE | Water in Line | 1212 |
| | MW-O-2 | SVE; TFE | 1,876 | 1,574 |
| | GMW-O-11 | SVE; TFE | 386 | 112 |
| | GMW-O-12 | SVE | 1,306 | 200 |
| | GMW-O-20 | SVE; TFE | >5000 | 764 |
| | GMW-O-23 | SVE; TFE | >5000 | 1,494 |
| | MW-18 (MID) | SVE | 722 | 478 |
| | HW-1 | SVE | 1,100 | 448 |
| | HW-2 | SVE | 2,604 | 1,418 |
| Southeastern | GMW-36 | SVE; TFE | 1,176 | 662 |
| | GMW-O-15 | SVE; TFE | 1,176 | 662 |
| | GMW-O-18 | SVE; TFE | 1,176 | 662 |

Notes:

[a] Vapor readings measured in the field with an Eagle 2 photoionization detector (PID) calibrated using 50 ppmv of hexane.

-- = not applicable or not available

GWE = groundwater extraction

ppmv = parts per million by volume

SVE = soil vapor extraction

TFE = total fluids extraction

**Table 4. Extracted Vapor Analytical Results[a]**

*SFPP Norwalk Pump Station, Norwalk, California*

| | ASTM D-1946 | | | EPA TO-3 | | SCAQMD 25.1 | EPA TO-15 (VOCs)[b] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Sampled | Methane (%v) | Carbon Dioxide (%v) | Oxygen and Argon (%v) | TPH-g (ppmv) | TVOC (ppmv) | TGNMOC (ppmv) | Benzene (ppbv) | Ethylbenzene (ppbv) | Toluene (ppbv) | Xylenes (ppbv) | MTBE (ppbv) |
| 8/3/2007 | <0.5 | <0.5 | 22.0 | 63 | --- | --- | 650 | 220 | 1,100 | 1,420 | 55 |
| 9/5/2007 | <0.5 | <0.5 | 22.0 | 9 | --- | --- | 32 | 48 | 140 | 320 | 18 |
| 10/2/2007 | <0.5 | <0.5 | 21.9 | 27 | --- | --- | 250 | 75 | 430 | 610 | 20 |
| 11/2/2007 | <0.5 | <0.5 | 22.1 | 5 | --- | --- | 40 | 10 | 74 | 95 | 7 |
| 2/1/2008 | <0.5 | <0.5 | 21.8 | 100 | --- | --- | 830 | 260 | 2,200 | 1,850 | <50 |
| 3/4/2008 | <0.5 | <0.5 | 21.7 | 50 | --- | --- | 380 | 98 | 570 | 1,250 | 36 |
| 4/8/2008 | <0.5 | <0.5 | 22.2 | 69 | --- | --- | 290 | 110 | 480 | 1,040 | 41 |
| 5/23/2008 | <0.5 | <0.5 | 21.8 | 14 | --- | --- | 180 | 24 | 190 | 280 | 23 |
| 6/3/2008 | <0.5 | <0.5 | 21.7 | 30 | --- | --- | 380 | 42 | 400 | 330 | 70 |
| 7/2/2008 | <0.5 | <0.5 | 21.4 | 49 | --- | --- | 32 | 6 | 34 | 45 | 10 |
| 8/19/2008 | <0.5 | 1.7 | 20.8 | 50 | --- | --- | 390 | 63 | 230 | 450 | 40 |
| 9/5/2008 | <0.5 | 2.0 | 21.2 | 22 | --- | --- | 130 | 39 | 130 | 340 | 42 |
| 10/7/2008 | <0.5 | 1.43 | 21.4 | 10 | --- | --- | 41 | 15 | 54 | 181 | 6.8 |
| 11/4/2008 | <0.5 | 2.08 | 21.1 | 7.5 | --- | --- | 31 | 47 | 190 | 242 | <2.0 |
| 3/6/2009 | <0.5 | <0.5 | 22.0 | 83 | --- | --- | 1,900 | 180 | 990 | 770 | 240 |
| 4/17/2009 | <0.5 | <0.5 | 22.2 | 3.1 | --- | --- | 140 | 8 | 37 | 68 | 26 |
| 5/29/2009 | <0.5 | 1.08 | 21.0 | 130 | --- | --- | 1,700 | 640 | 3,700 | 3,100 | 100 |
| 8/18/2009 | <0.5 | 0.78 | 21.7 | 28 | --- | --- | 380 | 37 | 290 | 310 | 33 |
| 8/25/2009 | <0.5 | 0.87 | 20.6 | 37 | --- | --- | 500 | 44 | 320 | 293 | 20 |
| 9/18/2009 | <0.5 | 0.37 | 21.6 | 11 | --- | --- | 75 | 11 | 39 | 107 | 3 |
| 10/29/2009 | <0.5 | 1.80 | 18.2 | 77 | --- | --- | 350 | 45 | 250 | 440 | 4 |
| 11/25/2009 | <0.5 | <0.5 | 21.1 | 14 | --- | --- | 110 | 12 | 110 | 164 | 11 |
| 12/15/2009 | <0.5 | <0.5 | 21.7 | 7 | --- | --- | 28 | 3 | 20 | 47 | <3.2 |
| 2/26/2010 | <0.5 | 0.4 | 21.2 | 20 | --- | --- | 300 | 18 | 220 | 260 | 21 |
| 3/26/2010 | <0.5 | 1.0 | 20.2 | 18 | --- | --- | 380 | 20 | 110 | 90 | 5 |
| 5/4/2010 | <0.5 | 0.4 | 21.4 | 13 | --- | --- | 100 | 42 | 170 | 222 | 3 |
| 6/29/2010 | <0.5 | 0.4 | 21.3 | 9 | --- | --- | 74 | 13 | 66 | 82 | <5.0 |
| 8/3/2010 | <0.5 | 0.6 | 20.4 | 29 | --- | --- | 210 | 13 | 64 | 85 | 9 |
| 8/31/2010 | 0.0039[c] | <0.5 | 21.4 | 11 | --- | --- | 72 | 12 | 66 | 87 | 8 |
| 9/14/2010 | <0.5 | <0.5 | 21.6 | 6 | --- | --- | 63 | 15 | 57 | 84 | <3.2 |
| 11/2/2010 | -- | -- | -- | 11 | --- | --- | 140 | <10 | 31 | 28 | <10 |
| 11/17/2010 | 0.00075 | 0.4 | 22.0 | -- | --- | --- | -- | -- | -- | -- | -- |
| 12/28/2010 | 0.0052 | 0.27 | 22.0 | 16 | --- | --- | 160 | 37 | 230 | 324 | 4.5 |
| 1/14/2011 | 0.016 | 0.20 | 22.0 | 68 | --- | --- | 340 | 34 | 89 | 183 | <10 |
| 2/8/2011 | 0.026 | 0.24 | 21.0 | 210 | --- | --- | 3,000 | 1,700 | 11,000 | 7,400 | 110 |
| 3/29/2011 | 0.013 | 0.13 | 20.0 | 5 | --- | --- | 170 | 15 | 18 | 41.5 | <2.5 |
| 4/26/2011 | 0.0011 | 0.079 | 20.0 | 1.9 | --- | --- | 16 | 2.4 | 8.8 | 7.7 | <1.2 |
| 5/17/2011 | 0.021 | 0.65 | 22.0 | 90 | --- | --- | 2,600 | 140 | 2,200 | 1,100 | 220 |
| 6/17/2011 | 0.001 | 0.20 | 22.0 | 3 | --- | --- | 59 | 8.1 | 31 | 56 | <0.25 |
| 7/19/2011 | 0.0056 | 0.49 | 22.0 | 80 | --- | --- | 1,800 | 130 | 2,200 | 1,000 | <31 |
| 8/16/2011 | 0.0026 | 0.31 | 22.0 | 140 | --- | --- | 3,000 | 600 | 4,000 | 2,330 | 490 |
| 9/20/2011 | -- | -- | -- | 100 | --- | --- | 2,100 | 740.0 | 2,700 | 2,040 | 660 |
| 11/22/2011 | 0.070 | 0.70 | 20.0 | 11 | --- | --- | 150 | 12.0 | 67 | 35 | <5.0 |
| 12/20/2011 | 0.020 | 0.34 | 22.0 | 0 | --- | --- | 110 | <25 | 260 | 216 | <25 |
| 1/10/2012 | 0.010 | 0.66 | 20.0 | 11 | --- | --- | 150 | 14 | 86 | 160 | <12 |
| 2/28/2012 | 0.0067 | 0.90 | 20.0 | 27 | --- | --- | 140 | 42 | 140 | 224 | <25 |
| 3/13/2012 | 0.0044 | 0.71 | 20.0 | 27 | --- | --- | 440 | 38 | 450 | 241 | <25 |
| 4/27/2012 | 0.0290 | 0.22 | 21.0 | 39 | --- | --- | 540 | 42 | 630 | 299 | <25 |
| 5/22/2012 | 0.0100 | 0.31 | 20.0 | 65 | --- | --- | 590 | 350 | 770 | 2,070 | <12 |
| 6/19/2012 | 0.0028 | 0.41 | 21.0 | 17 | --- | --- | 130 | 26 | 150 | 162 | <12 |
| 7/27/2012 | 0.0059 | 0.40 | 21.0 | 13 | --- | --- | 46 | <5 | 33 | 78 | <5 |
| 8/30/2012 | 0.0049 | 0.56 | 21.0 | 69 | --- | --- | 150 | <25 | 66 | 194 | <25 |
| 9/25/2012 | 0.0073 | 0.80 | 21.0 | 57 | --- | --- | 190 | 19 | 120 | 283 | <2.5 |
| 10/30/2012 | 0.0099 | 0.96 | 21.0 | 50 | --- | --- | 380 | <50 | 230 | 130 | <50 |
| 12/11/2012 | 0.0074 | 0.84 | 21.0 | 53 | --- | --- | 130 | 17 | 110 | 173 | <5.0 |

**Table 4. Extracted Vapor Analytical Results[a]**

*SFPP Norwalk Pump Station, Norwalk, California*

| | ASTM D-1946 | | | EPA TO-3 | | SCAQMD 25.1 | EPA TO-15 (VOCs)[b] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Sampled | Methane (%v) | Carbon Dioxide (%v) | Oxygen and Argon (%v) | TPH-g (ppmv) | TVOC (ppmv) | TGNMOC (ppmv) | Benzene (ppbv) | Ethylbenzene (ppbv) | Toluene (ppbv) | Xylenes (ppbv) | MTBE (ppbv) |
| 1/29/2013 | 0.0028 | 0.29 | 22.0 | 1.4 | --- | --- | 8.7 | <1.2 | 9.4 | 9.6 | <1.2 |
| 2/12/2013 | 0.0057 | 0.88 | 21.0 | 60 | --- | --- | 500 | <50 | 440 | 400 | <50 |
| 3/19/2013 | 0.0058 | 0.80 | 21.0 | 77 | --- | --- | 560 | 66 | 490 | 520 | <40 |
| 4/16/2013 | 0.0079 | 0.74 | 21.0 | 53 | --- | --- | 430 | 29 | 240 | 193 | <25 |
| 5/14/2013 | 0.017 | 1.6 | 19 | 280 | --- | --- | 1,700 | 190 | 1,800 | 840 | <12 |
| 6/28/2013 | 0.0068 | <0.010 | 21 | 22 | --- | --- | 190 | <25 | 130 | 131 | <25 |
| SVE system down for repair from July 16, 2013, to September 17, 2013. | | | | | | | | | | | |
| 9/20/2013 | 0.014 | 1 | 21 | 590 | --- | --- | 4,200 | 520 | 3,600 | 2,830 | <40 |
| 10/15/2013 | 0.011 | 0.68 | 21 | 410 | --- | --- | 3,500 | 360 | 2,800 | 1,970 | <20 |
| 11/12/2013 | 0.012 | 0.66 | 21 | 430 | --- | --- | 2,900 | 440 | 2,600 | 1,930 | <15 |
| 12/10/2013 | 0.013 | 0.92 | 21 | 910 | --- | --- | 8,400 | 920 | 7,200 | 5,500 | <50 |
| 1/17/2014 | 0.0077 | 0.57 | 21 | 350 | --- | --- | 6,600 | 6,800 | 8,200 | 23,300 | 3,000 |
| 2/11/2014 | 0.011 | 0.60 | 21 | 640 | --- | --- | 6,600 | 570 | 6,000 | 3,800 | <100 |
| 3/21/2014 | 0.0050 | 0.40 | 21 | 390 | --- | --- | 4,500 | 290 | 4,000 | 1,930 | <50 |
| 4/21/2014 | 0.011 | 0.65 | 21 | 700 | --- | --- | 6,900 | 370 | 6,900 | 3,400 | <40 |
| SVE system down for repair from April 29, 2014 to May 13, 2014. | | | | | | | | | | | |
| 5/27/2014 | 0.011 | 0.56 | 21 | 530 | --- | --- | 6,600 | 570 | 8,900 | 3,820 | <50 |
| 6/13/2014 | 0.0076 | 0.49 | 21 | 780 | --- | --- | 10,000 | 1,200 | 15,000 | 7,100 | <80 |
| SVE system down for repair and permit modification from July 1, 2014 to March 27, 2015. | | | | | | | | | | | |
| 3/31/2015 | 0.090 | 1.3 | 20 | 1,400 | --- | 1,300 | 12,000 | 1,000 | 11,000 | 7,400 | <200 |
| 4/7/2015 | 0.014 | 0.56 | 21 | --- | --- | 710 | 8,200 | 8,200 | 610 | 3,260 | <160 |
| 5/5/2015 | --- | --- | --- | --- | --- | 760 | 6,100 | 1,100 | 9,600 | 7,200 | <140 |
| 6/30/2015 | 0.0065 | 0.37 | 21 | --- | --- | 270 | 3,100 | 380 | 3,800 | 2,820 | <160 |
| 7/14/2015 | 0.0094 | 0.62 | 21 | --- | --- | 650 | 7,000 | 950 | 7,900 | 6,100 | <200 |
| 8/4/2015 | 0.0053 | 0.49 | 21 | --- | --- | 560 | 6,200 | 710 | 7,700 | 4,800 | <0.097 |
| 8/17/2015[c] | --- | --- | --- | --- | --- | 470 | 4,800 | 500 | 5,400 | 3,600 | <0.099 |
| 8/17/2015[c] | --- | --- | --- | --- | --- | 470 | 5,000 | 520 | 5,800 | 3,870 | <0.100 |
| 8/17/2015[c] | --- | --- | --- | --- | --- | 480 | 5,100 | 580 | 6,100 | 4,000 | <0.097 |
| 8/17/2015[c] | --- | --- | --- | --- | --- | 480 | 5,200 | 580 | 6,300 | 4,100 | <0.099 |
| 9/1/2015[c] | --- | --- | --- | --- | --- | 670 | 7,000 | 850 | 8,700 | 6,900 | <0.097 |
| 9/1/2015[c] | --- | --- | --- | --- | --- | 930 | 12,000 | 1,500 | 14,000 | 11,400 | <0.140 |
| 9/1/2015[c] | --- | --- | --- | --- | --- | 890 | 12,000 | 2,300 | 20,000 | 14,300 | <0.140 |
| 10/6/2015 | 0.0067 | 0.43 | 21 | --- | --- | 960 | 14,000 | 3,100 | 25,000 | 15,900 | <200 |
| 11/10/2015 | 0.0028 | 0.30 | 21 | --- | 860 | --- | 9,100 | 1,800 | 15,000 | 9,400 | <97 |
| 12/10/2016 | 0.004 | 0.41 | 21 | --- | 580 | --- | 6,400 | 1,200 | 10,000 | 7,600 | <120 |
| 1/4/2016[c] | 0.0059 | 0.27 | 22 | --- | 750 | --- | 9,600 | 2,400 | 20,000 | 13,500 | <220 |
| 2/4/2016[c] | 0.0038 | 0.58 | 21 | --- | 2,000 | --- | 16,000 | 2,600 | 29,000 | 19,300 | <610 |
| 3/3/2016[c] | 0.004 | 0.64 | 21 | --- | 1,200 | --- | 11,000 | 3,000 | 27,000 | 27,500 | <130 |

Notes:

[a] Influent vapor samples were collected from the manifold conveying soil vapors extracted from the south-central and southeastern areas.

[b] Other detected VOCs are included in the laboratory analytical reports in Appendix A.

[c] Influent vapor samples were collected after dilution before entrance into the SVE combustion chamber.

%v = percent by volume

<0.5 = not detected at or above the laboratory reporting limit shown

ASTM = ASTM International (formerly American Society for Testing and Materials)

EPA = U.S. Environmental Protection Agency

MTBE = methyl tertiary butyl ether

ppbv = parts per billion by volume

ppmv = parts per million by volume

SCAQMD = South Coast Air Quality Management District

TGNMOC = total gaseous non-methane organic carbon

TPH-g = total petroleum hydrocarbons quantified as gasoline (C4-C12)

TVOC = total volatile organic compound

VOC = volatile organic compound

**Table 5. Groundwater Remediation System Operation Summary**

*SFPP Norwalk Pump Station, Norwalk, California*

| System Inspection Date | Groundwater Removed from the South-Central and Southeastern Areas (gallons) | Groundwater Removed from the West Side Barrier Area (gallons) | Total Groundwater Removed (gallons) | Influent TPH-total (TPH-g, TPH-d, TPH-o) Concentration (µg/L) | Estimated Hydrocarbon Mass Removed from the South-Central, Southeastern, and West Side Barrier Areas (pounds)[a] | Product Recovery (gallons) |
|---|---|---|---|---|---|---|
| 1996 Totals | 1,802,103 | 0 | 1,802,103 | -- | 273 | 4,995 |
| 1997 Totals | 7,031,533 | 0 | 7,031,533 | -- | | 2,204 |
| 1998 Totals | 4,064,700 | 0 | 4,064,700 | -- | | 856 |
| 1999 Totals | 3,891,600 | 2,338,129 | 6,229,729 | -- | 385 | 450 |
| 2000 Totals | 2,290,580 | 2,454,971 | 4,745,551 | -- | 295 | 230 |
| 2001 Totals | 1,401,473 | 1,131,700 | 2,533,173 | -- | 229 | 0 |
| 2002 Totals | 1,452,229 | 2,931,167 | 4,383,396 | -- | 110 | 10 |
| 2003 Totals | 1,607,095 | 2,281,956 | 3,889,051 | -- | 65 | 0 |
| 2004 Totals | 1,695,361 | 3,854,470 | 5,549,831 | -- | 229 | 83 |
| 2005 Totals | 1,537,925 | 4,244,674 | 5,782,599 | -- | 273 | 89 |
| 2006 Totals | 1,699,567 | 5,089,615 | 6,789,182 | -- | 684 | 0 |
| 2007 Totals | 3,368,481 | 2,167,724 | 5,536,205 | -- | | 0 |
| 2008 Totals[b] | 4,283,026 | 405,954 | 4,688,980 | -- | 520 | 0 |
| 2009 Totals | 2,309,627 | 0 | 2,309,627 | -- | 105 | 0 |
| 2010 Totals[c] | 3,342,227 | 2,244 | 3,344,471 | -- | 363 | 0 |
| 2011 Totals | 5,530,317 | 0 | 5,530,317 | -- | 585 | 0 |
| 2012 Totals | 7,368,318 | 0 | 7,368,318 | -- | 699 | 0 |
| 2013 Totals | 6,439,776 | 0 | 6,439,776 | -- | 568 | 2 |
| 2014 Totals | 3,410,458 | 0 | 3,410,458 | -- | 2,236 | 2,335 |
| 2015 Totals | 3,410,458 | 0 | 3,410,458 | -- | 5,960 | 2,572 |
| 1/1/2016 | 18,582 | 0 | 18,582 | 164,000 | 25.39 | |
| 1/2/2016 | 14,991 | 0 | 14,991 | 164,000 | 20.48 | |
| 1/3/2016 | 16,066 | 0 | 16,066 | 164,000 | 21.95 | |
| 1/4/2016 | 15,206 | 0 | 15,206 | 164,000 | 20.78 | |
| 1/5/2016 | 15,253 | 0 | 15,253 | 164,000 | 20.84 | |
| 1/6/2016 | 18,620 | 0 | 18,620 | 164,000 | 25.44 | |
| 1/7/2016 | 17,984 | 0 | 17,984 | 164,000 | 24.57 | |
| 1/8/2016 | 16,213 | 0 | 16,213 | 164,000 | 22.15 | |
| 1/9/2016 | 16,023 | 0 | 16,023 | 164,000 | 21.89 | |
| 1/10/2016 | 20,219 | 0 | 20,219 | 164,000 | 27.63 | |
| 1/11/2016 | 16,825 | 0 | 16,825 | 164,000 | 22.99 | |
| 1/12/2016 | 4,345 | 0 | 4,345 | 164,000 | 5.94 | |
| 1/13/2016 | 14,837 | 0 | 14,837 | 164,000 | 20.27 | |
| 1/14/2016 | 15,016 | 0 | 15,016 | 164,000 | 20.52 | |
| 1/15/2016 | 9,297 | 0 | 9,297 | 164,000 | 12.70 | |

**Table 5. Groundwater Remediation System Operation Summary**

*SFPP Norwalk Pump Station, Norwalk, California*

| System Inspection Date | Groundwater Removed from the South-Central and Southeastern Areas (gallons) | Groundwater Removed from the West Side Barrier Area (gallons) | Total Groundwater Removed (gallons) | Influent TPH-total (TPH-g, TPH-d, TPH-o) Concentration (µg/L) | Estimated Hydrocarbon Mass Removed from the South-Central, Southeastern, and West Side Barrier Areas (pounds)[a] | Product Recovery (gallons) |
|---|---|---|---|---|---|---|
| 1/16/2016 | 11,985 | 0 | 11,985 | 164,000 | 16.38 | |
| 1/17/2016 | 13,616 | 0 | 13,616 | 164,000 | 18.60 | |
| 1/18/2016 | 13,094 | 0 | 13,094 | 164,000 | 17.89 | |
| 1/19/2016 | 8,908 | 0 | 8,908 | 164,000 | 12.17 | |
| 1/20/2016 | 9,815 | 0 | 9,815 | 164,000 | 13.41 | |
| 1/21/2016 | 15,225 | 0 | 15,225 | 2,685,000 | 340.57 | |
| 1/22/2016 | 13,114 | 0 | 13,114 | 2,685,000 | 293.35 | |
| 1/23/2016 | 7,708 | 0 | 7,708 | 2,685,000 | 172.42 | |
| 1/24/2016 | 4,910 | 0 | 4,910 | 2,685,000 | 109.83 | |
| 1/25/2016 | 2,922 | 0 | 2,922 | 2,685,000 | 65.36 | |
| 1/26/2016 | 6,522 | 0 | 6,522 | 2,685,000 | 145.89 | |
| 1/27/2016 | 14,783 | 0 | 14,783 | 2,685,000 | 330.68 | |
| 1/28/2016 | 16,572 | 0 | 16,572 | 2,685,000 | 370.70 | |
| 1/29/2016 | 17,306 | 0 | 17,306 | 2,685,000 | 387.12 | |
| 1/30/2016 | 18,881 | 0 | 18,881 | 2,685,000 | 422.35 | |
| 1/31/2016 | 26,677 | 0 | 26,677 | 2,685,000 | 596.74 | |
| 2/1/2016 | 7,918 | 0 | 7,918 | 2,685,000 | 177.12 | |
| 2/2/2016 | 23,397 | 0 | 23,397 | 145,700 | 28.40 | |
| 2/3/2016 | 23,191 | 0 | 23,191 | 145,700 | 28.15 | |
| 2/4/2016 | 22,866 | 0 | 22,866 | 145,700 | 27.76 | |
| 2/5/2016 | 28,901 | 0 | 28,901 | 145,700 | 35.08 | |
| 2/6/2016 | 27,455 | 0 | 27,455 | 145,700 | 33.33 | |
| 2/7/2016 | 17,493 | 0 | 17,493 | 145,700 | 21.23 | |
| 2/8/2016 | 7,624 | 0 | 7,624 | 145,700 | 9.25 | |
| 2/9/2016 | 9,269 | 0 | 9,269 | 145,700 | 11.25 | **194** |
| 2/10/2016 | 23,039 | 0 | 23,039 | 145,700 | 27.97 | |
| 2/11/2016 | 14,279 | 0 | 14,279 | 145,700 | 17.33 | |
| 2/12/2016 | 51 | 0 | 51 | 145,700 | 0.06 | |
| 2/13/2016 | 9 | 0 | 9 | 145,700 | 0.01 | |
| 2/14/2016 | 10 | 0 | 10 | 145,700 | 0.01 | |
| 2/15/2016 | 16 | 0 | 16 | 145,700 | 0.02 | |
| 2/16/2016 | 5 | 0 | 5 | 145,700 | 0.01 | |
| 2/17/2016 | 0 | 0 | 0 | 145,700 | 0.00 | |
| 2/18/2016 | 6 | 0 | 6 | 145,700 | 0.01 | |
| 2/19/2016 | 0 | 0 | 0 | 145,700 | 0.00 | |

**Table 5. Groundwater Remediation System Operation Summary**

*SFPP Norwalk Pump Station, Norwalk, California*

| System Inspection Date | Groundwater Removed from the South-Central and Southeastern Areas (gallons) | Groundwater Removed from the West Side Barrier Area (gallons) | Total Groundwater Removed (gallons) | Influent TPH-total (TPH-g, TPH-d, TPH-o) Concentration (µg/L) | Estimated Hydrocarbon Mass Removed from the South-Central, Southeastern, and West Side Barrier Areas (pounds)[a] | Product Recovery (gallons) |
|---|---|---|---|---|---|---|
| 2/20/2016 | 0 | 0 | 0 | 145,700 | 0.00 | |
| 2/21/2016 | 0 | 0 | 0 | 145,700 | 0.00 | |
| 2/22/2016 | 22 | 0 | 22 | 145,700 | 0.03 | |
| 2/23/2016 | 48 | 0 | 48 | 145,700 | 0.06 | |
| 2/24/2016 | 31 | 0 | 31 | 145,700 | 0.04 | |
| 2/25/2016 | 10 | 0 | 10 | 145,700 | 0.01 | |
| 2/26/2016 | 26 | 0 | 26 | 145,700 | 0.03 | |
| 2/27/2016 | 15 | 0 | 15 | 145,700 | 0.02 | |
| 2/28/2016 | 16 | 0 | 16 | 145,700 | 0.02 | |
| 2/29/2016 | 54 | 0 | 54 | 145,700 | 0.07 | |
| 3/1/2016 | 88 | 0 | 88 | 145,700 | 0.11 | |
| 3/2/2016 | 0 | 0 | 0 | 145,700 | 0.00 | |
| 3/3/2016 | 0 | 0 | 0 | 145,700 | 0.00 | |
| 3/4/2016 | 0 | 0 | 0 | 145,700 | 0.00 | |
| 3/5/2016 | 0 | 0 | 0 | 145,700 | 0.00 | |
| 3/6/2016 | 0 | 0 | 0 | 145,700 | 0.00 | |
| 3/7/2016 | 0 | 0 | 0 | 145,700 | 0.00 | |
| 3/8/2016 | 0 | 0 | 0 | 145,700 | 0.00 | |
| 3/9/2016 | 0 | 0 | 0 | 145,700 | 0.00 | |
| 3/10/2016 | 0 | 0 | 0 | 145,700 | 0.00 | |
| 3/11/2016 | 0 | 0 | 0 | 145,700 | 0.00 | |
| 3/12/2016 | 0 | 0 | 0 | 145,700 | 0.00 | |
| 3/13/2016 | 0 | 0 | 0 | 145,700 | 0.00 | |
| 3/14/2016 | 0 | 0 | 0 | 145,700 | 0.00 | |
| 3/15/2016 | 0 | 0 | 0 | 145,700 | 0.00 | |
| 3/16/2016 | 1,923 | 0 | 1,923 | 145,700 | 2.33 | |
| 3/17/2016 | 4,344 | 0 | 4,344 | 145,700 | 5.27 | |
| 3/18/2016 | 4,279 | 0 | 4,279 | 145,700 | 5.19 | |
| 3/19/2016 | 4,126 | 0 | 4,126 | 145,700 | 5.01 | |
| 3/20/2016 | 3,969 | 0 | 3,969 | 145,700 | 4.82 | |
| 3/21/2016 | 6,456 | 0 | 6,456 | 145,700 | 7.84 | |
| 3/22/2016 | 11,271 | 0 | 11,271 | 145,700 | 13.68 | |
| 3/23/2016 | 10,014 | 0 | 10,014 | 145,700 | 12.16 | |
| 3/24/2016 | 10,306 | 0 | 10,306 | 145,700 | 12.51 | |
| 3/25/2016 | 10,403 | 0 | 10,403 | 145,700 | 12.63 | |

**Table 5. Groundwater Remediation System Operation Summary**

*SFPP Norwalk Pump Station, Norwalk, California*

| System Inspection Date | Groundwater Removed from the South-Central and Southeastern Areas (gallons) | Groundwater Removed from the West Side Barrier Area (gallons) | Total Groundwater Removed (gallons) | Influent TPH-total (TPH-g, TPH-d, TPH-o) Concentration (µg/L) | Estimated Hydrocarbon Mass Removed from the South-Central, Southeastern, and West Side Barrier Areas (pounds)[a] | Product Recovery (gallons) |
|---|---|---|---|---|---|---|
| 3/26/2016 | 10,257 | 0 | 10,257 | 145,700 | 12.45 | |
| 3/27/2016 | 10,114 | 0 | 10,114 | 145,700 | 12.28 | |
| 3/28/2016 | 10,518 | 0 | 10,518 | 145,700 | 12.77 | |
| 3/29/2016 | 10,874 | 0 | 10,874 | 145,700 | 13.20 | |
| 3/30/2016 | 10,842 | 0 | 10,842 | 145,700 | 13.16 | |
| 3/31/2016 | 10,607 | 0 | 10,607 | 145,700 | 12.88 | |
| **First Quarter 2016 Totals** | **767,657** | **0** | **767,657** | **--** | **4,203** | **194** |
| **Cumulative Total** | **69,640,630** | **26,902,604** | **96,543,234** | **--** | **19,104** | **14,020** |

Notes:

[a] Estimated hydrocarbon mass removed (pounds) between 1996 and 2005 is based on concentrations of dissolved BTEX and MTBE in the groundwater influent and volume of groundwater extracted. Estimated hydrocarbon mass removed (pounds) between 2006 and 2011 is based on concentrations of TPH-g and TPH-fp in the groundwater influent and volume of groundwater extracted. Estimated hydrocarbon mass removed (pounds) between 2012 and 2015 is based on concentrations of dissolved TPH-total in the groundwater influent and volume of extracted groundwater.

[b] Groundwater removal in the West Side Barrier area was discontinued in August 2008.

[c] Groundwater extraction from West Side Barrier area wells BW-3 and BW-6 was resumed on May 14, 2010, to evaluate the efficacy of blending water with lower selenium concentrations from these wells with groundwater extracted from the south-central and southeastern areas. Groundwater removal from the West Side Barrier area was discontinued again on June 22, 2010.

-- = not applicable
µg/L = micrograms per liter
BTEX = benzene, toluene, ethylbenzene, and xylenes
MTBE = methyl tertiary butyl ether
TPH-d = total petroleum hydrocarbons quantified as diesel (C13-C22)
TPH-fp = total petroleum hydrocarbons quantified as fuel product (C7-C28)
TPH-g = total petroleum hydrocarbons quantified as gasoline (C4-C12)
TPH-o = total petroleum hydrocarbons quantified as oil (C23-C36)
TPH-total = total petroleum hydrocarbons quantified as gas, diesel, and oil (C4-C36)

**Table 6. Extracted Groundwater Analytical Results**[a]

*SFPP Norwalk Pump Station, Norwalk, California*

| | EPA 8015M | | | | | EPA 8260B Volatile Organic Compounds (VOCs)[b] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Sampled | TPH-g (µg/L) | TPH-d (µg/L) | TPH-o (µg/L) | TPH-total (µg/L) | TPH-fp (µg/L) | Benzene (µg/L) | Ethylbenzene (µg/L) | Toluene (µg/L) | Xylenes (µg/L) | MTBE (µg/L) | TBA (µg/L) | DIPE (µg/L) | ETBE (µg/L) | TAME (µg/L) |
| 3/6/1996 | -- | -- | -- | -- | -- | 2,600 | 790 | 7,200 | 9,100 | --- | -- | -- | -- | -- |
| 7/23/1998 | -- | -- | -- | -- | -- | 750 | <10 | 360 | 300 | --- | -- | -- | -- | -- |
| 8/27/1998 | -- | -- | -- | -- | -- | 1,000 | 71 | 530 | 800 | --- | -- | -- | -- | -- |
| 10/1/1998 | -- | -- | -- | -- | -- | 1,200 | <10 | 1,400 | 1,680 | --- | -- | -- | -- | -- |
| 11/19/1998 | -- | -- | -- | -- | -- | 1,600 | 140 | 2,600 | 2,900 | --- | -- | -- | -- | -- |
| 12/17/1998 | -- | -- | -- | -- | -- | 4,500 | 380 | 4,500 | 3,900 | --- | -- | -- | -- | -- |
| 1/28/1999 | -- | -- | -- | -- | -- | 520 | 79 | 660 | 840 | --- | -- | -- | -- | -- |
| 3/25/1999 | -- | -- | -- | -- | -- | 540 | 160 | 1,800 | 4,100 | --- | -- | -- | -- | -- |
| 4/2/1999 | -- | -- | -- | -- | -- | 620 | 76 | 520 | 1,200 | --- | -- | -- | -- | -- |
| 4/15/1999 | -- | -- | -- | -- | -- | 1,400 | 99 | 800 | 1,480 | --- | -- | -- | -- | -- |
| 5/6/1999 | -- | -- | -- | -- | -- | 1,340 | 180 | 1,240 | 1,730 | --- | -- | -- | -- | -- |
| 6/3/1999 | -- | -- | -- | -- | -- | 3,410 | 343 | 2,240 | 2,770 | --- | -- | -- | -- | -- |
| 8/5/1999 | -- | -- | -- | -- | -- | 3,200 | 780 | 5,400 | 5,200 | --- | -- | -- | -- | -- |
| 9/23/1999 | -- | -- | -- | -- | -- | 2,700 | 130 | 1,200 | 720 | --- | -- | -- | -- | -- |
| 9/30/1999 | -- | -- | -- | -- | -- | 1,300 | 77 | 480 | 560 | --- | -- | -- | -- | -- |
| 10/13/1999 | -- | -- | -- | -- | -- | 1,400 | 100 | 660 | 720 | --- | -- | -- | -- | -- |
| 11/4/1999 | -- | -- | -- | -- | -- | 3,000 | 500 | 5,600 | 4,500 | --- | -- | -- | -- | -- |
| 12/9/1999 | -- | -- | -- | -- | -- | 4,500 | 280 | 1,400 | 1,480 | --- | -- | -- | -- | -- |
| 1/13/2000 | -- | -- | -- | -- | -- | 9,000 | 7,600 | 14,000 | 44,000 | --- | -- | -- | -- | -- |
| 2/11/2000 | -- | -- | -- | -- | -- | 2,300 | <100 | 1,200 | 1,240 | 3,100 | -- | -- | -- | -- |
| 3/10/2000 | -- | -- | -- | -- | -- | 380 | 20 | 110 | 430 | 740 | -- | -- | -- | -- |
| 4/13/2000 | -- | -- | -- | -- | -- | 1,300 | 550 | 450 | 920 | 970 | -- | -- | -- | -- |
| 6/2/2000 | -- | -- | -- | -- | -- | 840 | 56 | 240 | 980 | 920 | -- | -- | -- | -- |
| 6/15/2000 | -- | -- | -- | -- | -- | 1,600 | 82 | 900 | 990 | 2,700 | -- | -- | -- | -- |
| 8/3/2000 | -- | -- | -- | -- | -- | 1,900 | 410 | 3,500 | 4,400 | 2,700 | -- | -- | -- | -- |
| 8/28/2000 | -- | -- | -- | -- | -- | 620 | 33 | 200 | 380 | 1,800 | -- | -- | -- | -- |
| 9/20/2000 | -- | -- | -- | -- | -- | 460 | <20 | 73 | 255 | 1,300 | -- | -- | -- | -- |
| 10/25/2000 | -- | -- | -- | -- | -- | 20 | <20 | <20 | 216 | 6,700 | -- | -- | -- | -- |
| 11/15/2000 | -- | -- | -- | -- | -- | 560 | 24 | 210 | 490 | 3,700 | -- | -- | -- | -- |
| 3/22/2001 | -- | -- | -- | -- | -- | 3,800 | 360 | 3,900 | 3,160 | 5,500 | -- | -- | -- | -- |
| 4/30/2001 | -- | -- | -- | -- | -- | 4,100 | 710 | 5,800 | 5,600 | 8,300 | -- | -- | -- | -- |
| 5/23/2001 | -- | -- | -- | -- | -- | 3,400 | 160 | 1,100 | 1,070 | 3,900 | -- | -- | -- | -- |
| 6/22/2001 | -- | -- | -- | -- | -- | 1,700 | 85 | 680 | 680 | 2,200 | -- | -- | -- | -- |
| 7/16/2001 | -- | -- | -- | -- | -- | 2,300 | 130 | 1,100 | 1,350 | 2,100 | -- | -- | -- | -- |
| 9/5/2001 | -- | -- | -- | -- | -- | 1,500 | 170 | 1,200 | 1,890 | 1,100 | -- | -- | -- | -- |
| 1/23/2002 | -- | -- | -- | -- | -- | <0.5 | <1 | <1 | <2 | 2 | -- | -- | -- | -- |
| 2/28/2002 | -- | -- | -- | -- | -- | <0.5 | <1 | <1 | <2 | 96 | -- | -- | -- | -- |
| 3/25/2002 | -- | -- | -- | -- | -- | <0.5 | <1 | <1 | <2 | 87 | -- | -- | -- | -- |
| 5/1/2002 | -- | -- | -- | -- | -- | 1,900 | 31 | 190 | 480 | 1,100 | -- | -- | -- | -- |
| 5/17/2002 | -- | -- | -- | -- | -- | 1,400 | 50 | 180 | 970 | 1,000 | -- | -- | -- | -- |
| 6/4/2002 | -- | -- | -- | -- | -- | 2,700 | 57 | 280 | 530 | 1,300 | -- | -- | -- | -- |
| 7/18/2002 | -- | -- | -- | -- | -- | 3,800 | 66 | 530 | 1,160 | 330 | -- | -- | -- | -- |
| 8/8/2002 | -- | -- | -- | -- | -- | 4,800 | 49 | 610 | 1,290 | 460 | -- | -- | -- | -- |
| 9/3/2002 | -- | -- | -- | -- | -- | 260 | <5 | 5 | 71 | 600 | -- | -- | -- | -- |
| 10/18/2002 | -- | -- | -- | -- | -- | 1,200 | 70 | 490 | 820 | 570 | -- | -- | -- | -- |
| 11/26/2002 | -- | -- | -- | -- | -- | 1,300 | 68 | 130 | 590 | 860 | -- | -- | -- | -- |
| 12/27/2002 | -- | -- | -- | -- | -- | 1 | <1 | <1 | <2 | 58 | -- | -- | -- | -- |

**Table 6. Extracted Groundwater Analytical Results[a]**

*SFPP Norwalk Pump Station, Norwalk, California*

| | EPA 8015M | | | | | EPA 8260B Volatile Organic Compounds (VOCs)[b] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Sampled | TPH-g (µg/L) | TPH-d (µg/L) | TPH-o (µg/L) | TPH-total (µg/L) | TPH-fp (µg/L) | Benzene (µg/L) | Ethylbenzene (µg/L) | Toluene (µg/L) | Xylenes (µg/L) | MTBE (µg/L) | TBA (µg/L) | DIPE (µg/L) | ETBE (µg/L) | TAME (µg/L) |
| 1/30/2003 | -- | -- | -- | -- | -- | <0.5 | <1 | <1 | <2 | 37 | -- | -- | -- | -- |
| 2/26/2003 | -- | -- | -- | -- | -- | 4 | <1 | <1 | 4 | 140 | -- | -- | -- | -- |
| 3/17/2003 | -- | -- | -- | -- | -- | 2,800 | 23 | 170 | 480 | 570 | -- | -- | -- | -- |
| 4/30/2003 | -- | -- | -- | -- | -- | 3,700 | 350 | 2,200 | 4,600 | 490 | -- | -- | -- | -- |
| 6/13/2003 | -- | -- | -- | -- | -- | 1,200 | 17 | 120 | 510 | 740 | -- | -- | -- | -- |
| 6/19/2003 | -- | -- | -- | -- | -- | 680 | <10 | 35 | 239 | 680 | -- | -- | -- | -- |
| 7/3/2003 | -- | -- | -- | -- | -- | 2,600 | 160 | 610 | 2,290 | 450 | -- | -- | -- | -- |
| 7/25/2003 | -- | -- | -- | -- | -- | 300 | 6 | 3 | 39 | 230 | -- | -- | -- | -- |
| 8/20/2003 | -- | -- | -- | -- | -- | 830 | 19 | 130 | 350 | 290 | -- | -- | -- | -- |
| 9/11/2003 | -- | -- | -- | -- | -- | 270 | <10 | <10 | 46 | 420 | -- | -- | -- | -- |
| 10/16/2003 | -- | -- | -- | -- | -- | 380 | <10 | <10 | 121 | 490 | -- | -- | -- | -- |
| 11/17/2003 | -- | -- | -- | -- | -- | 93 | 6 | 22 | 106 | 200 | -- | -- | -- | -- |
| 12/19/2003 | -- | -- | -- | -- | -- | 300 | 27 | 110 | 1,010 | 62 | -- | -- | -- | -- |
| 1/30/2004 | -- | -- | -- | -- | -- | 700 | 140 | 740 | 1,740 | 22 | -- | -- | -- | -- |
| 2/17/2004 | -- | -- | -- | -- | -- | 300 | 47 | 440 | 1,150 | 19 | -- | -- | -- | -- |
| 3/8/2004 | -- | -- | -- | -- | -- | 52 | <5.0 | 10 | 149 | 23 | -- | -- | -- | -- |
| 3/21/2004 | -- | -- | -- | -- | -- | 420 | 11 | 29 | 318 | 120 | -- | -- | -- | -- |
| 6/28/2004 | -- | -- | -- | -- | -- | 740 | 26 | 46 | 337 | 81 | -- | -- | -- | -- |
| 7/30/2004 | -- | -- | -- | -- | -- | 660 | 18 | 68 | 280 | 87 | -- | -- | -- | -- |
| 8/27/2004 | -- | -- | -- | -- | -- | 1,500 | 47 | 140 | 530 | 77 | -- | -- | -- | -- |
| 9/28/2004 | -- | -- | -- | -- | -- | 400 | 10 | 32 | 252 | 64 | -- | -- | -- | -- |
| 10/15/2004 | -- | -- | -- | -- | -- | 950 | 31 | 130 | 316 | 64 | -- | -- | -- | -- |
| 11/12/2004 | -- | -- | -- | -- | -- | 2,100 | 1,500 | 390 | 15,800 | 3,000 | -- | -- | -- | -- |
| 12/10/2004 | -- | -- | -- | -- | -- | 700 | 320 | 1,100 | 3,900 | 110 | -- | -- | -- | -- |
| 1/28/2005 | -- | -- | -- | -- | -- | 460 | 140 | 520 | 2,260 | 610 | -- | -- | -- | -- |
| 2/25/2005 | -- | -- | -- | -- | -- | 5,700 | 200 | 650 | 1,560 | 1,300 | -- | -- | -- | -- |
| 3/22/2005 | -- | -- | -- | -- | -- | <5 | <10 | <10 | 26 | 1,000 | -- | -- | -- | -- |
| 4/21/2005 | -- | -- | -- | -- | -- | 680 | 8 | 21 | 108 | 420 | -- | -- | -- | -- |
| 5/20/2005 | -- | -- | -- | -- | -- | 6 | <5 | 9 | 50 | <5 | -- | -- | -- | -- |
| 6/28/2005 | -- | -- | -- | -- | -- | 450 | 80 | 690 | 1,030 | 1,600 | -- | -- | -- | -- |
| 7/27/2005 | -- | -- | -- | -- | -- | 2,000 | 170 | 1,700 | 5,000 | 1,200 | -- | -- | -- | -- |
| 8/31/2005 | -- | -- | -- | -- | -- | 660 | 34 | 320 | 670 | 220 | -- | -- | -- | -- |
| 9/28/2005 | -- | -- | -- | -- | -- | 1,800 | 310 | 2,800 | 4,700 | 360 | -- | -- | -- | -- |
| 10/26/2005 | -- | -- | -- | -- | -- | 940 | 330 | 1,800 | 3,600 | 530 | -- | -- | -- | -- |
| 11/30/2005 | -- | -- | -- | -- | -- | 900 | 170 | 900 | 2,790 | 760 | -- | -- | -- | -- |
| 12/20/2005 | -- | -- | -- | -- | -- | 2,500 | 350 | 2,600 | 4,100 | 2,300 | -- | -- | -- | -- |
| 7/11/2007 | -- | -- | -- | -- | -- | 4,800 | 130 | 890 | 1,040 | 690 | -- | -- | -- | -- |
| 8/7/2007 | 14,000 | -- | -- | -- | 11,000 | 5,400 | 140 | 1,100 | 770 | 540 | -- | -- | -- | -- |
| 9/25/2007 | 12,000 | -- | -- | -- | 30,000 | 3,400 | 310 | 1,600 | 2,390 | 540 | -- | -- | -- | -- |
| 10/16/2007 | 8,900 | -- | -- | -- | 8,400 | 3,400 | 94 | 520 | 660 | 390 | -- | -- | -- | -- |
| 11/2/2007 | 44,000 | -- | -- | -- | 6,500 | 3,200 | 130 | 860 | 1,160 | 570 | -- | -- | -- | -- |
| 11/30/2007 | 6,000 | -- | -- | -- | 5,200 | 1,800 | 48 | 170 | 490 | 450 | -- | -- | -- | -- |
| 12/21/2007 | 7,200 | -- | -- | -- | 4,200 | 2,100 | 41 | 170 | 430 | 750 | -- | -- | -- | -- |

**Table 6. Extracted Groundwater Analytical Results**[a]

*SFPP Norwalk Pump Station, Norwalk, California*

| | EPA 8015M | | | | | EPA 8260B Volatile Organic Compounds (VOCs)[b] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Sampled | TPH-g (µg/L) | TPH-d (µg/L) | TPH-o (µg/L) | TPH-total (µg/L) | TPH-fp (µg/L) | Benzene (µg/L) | Ethylbenzene (µg/L) | Toluene (µg/L) | Xylenes (µg/L) | MTBE (µg/L) | TBA (µg/L) | DIPE (µg/L) | ETBE (µg/L) | TAME (µg/L) |
| 1/4/2008 | 4,300 | -- | -- | -- | 7,200 | 3,300 | 49 | 300 | 540 | 620 | -- | -- | -- | -- |
| 1/18/2008 | 11,000 | -- | -- | -- | 2,200 | 3,600 | 140 | 650 | 850 | 620 | -- | -- | -- | -- |
| 2/1/2008 | 8,700 | -- | -- | -- | 5,700 | 3,600 | 100 | 440 | 930 | 560 | -- | -- | -- | -- |
| 3/4/2008 | 7,200 | -- | -- | -- | 4,900 | 3,900 | 120 | 510 | 770 | 620 | -- | -- | -- | -- |
| 4/8/2008 | 8,100 | -- | -- | -- | 10,000 | 2,800 | 96 | 280 | 580 | 640 | -- | -- | -- | -- |
| 5/6/2008 | 5,300 | -- | -- | -- | 2,800 | 2,900 | 76 | 190 | 328 | 430 | -- | -- | -- | -- |
| 6/3/2008 | 8,400 | -- | -- | -- | 6,800 | 3,700 | 110 | 450 | 480 | 320 | -- | -- | -- | -- |
| 7/2/2008 | 9,200 | -- | -- | -- | 4,300[c] | 4,500 | 75 | 620 | 650 | 400 | -- | -- | -- | -- |
| 8/19/2008 | 4,000 | -- | -- | -- | 6,600 | 2,600 | 57 | 76 | 215 | 450 | -- | -- | -- | -- |
| 9/5/2008 | 160 | -- | -- | -- | <500 | <12 | <25 | <25 | <25 | <25 | -- | -- | -- | -- |
| 10/7/2008 | <100 | -- | -- | -- | <500 | 0.36 J | <1.0 | <1.0 | 1.59 | 1.7 | -- | -- | -- | -- |
| 11/4/2008 | 12,000 | -- | -- | -- | 660,000 | 2,500 | 140 | 220 | 760 | 160 | -- | -- | -- | -- |
| 12/4/2008 | 1,300 | -- | -- | -- | 1,500 | 600 | 8.2 | 28 | 73 | 130 | -- | -- | -- | -- |
| 1/6/2009 | 1,500 | -- | -- | -- | 980 | 560 | 23 | 41 | 110 | 320 | -- | -- | -- | -- |
| 3/6/2009 | 2,500 | -- | -- | -- | 1,500 | 1,100 | 33 | 51 | 114 | 65 | -- | -- | -- | -- |
| 4/7/2009 | 3,100 | -- | -- | -- | 6,900 | 1,100 | 36 | 230 | 207 | 210 | -- | -- | -- | -- |
| 5/13/2009 | 690 | -- | -- | -- | 1,500 | 120 | 3.2 | 14 | 60 | 24 | -- | -- | -- | -- |
| 6/12/2009 | 150 | -- | -- | -- | <500 | <0.50 | <1.0 | <1.0 | 0.71 J | 44 | -- | -- | -- | -- |
| 7/10/2009 | 4,500 | -- | -- | -- | 560 | 1,500 | 41 | 68 | 175 | 150 | -- | -- | -- | -- |
| 8/4/2009 | 2,000 | -- | -- | -- | 1,000 | 1,200 | 16 | 18 | 64 | 100 | -- | -- | -- | -- |
| 9/1/2009 | 4,800 | -- | -- | -- | 3,500 | 380 | 45 | 25 | 328 | 5.4 J | -- | -- | -- | -- |
| 10/6/2009 | 3,900 | -- | -- | -- | 4,600 | 3,200 | 21 | 15 | 35 | 82 | -- | -- | -- | -- |
| 10/27/2009 | 1,000 | -- | -- | -- | <500 | 520 | 4 | 15 | 10 | 180 | -- | -- | -- | -- |
| 11/3/2009 | 120 | -- | -- | -- | <500 | 2 | 0.55 J | 0.61 J | 3 | 40 | -- | -- | -- | -- |
| 11/25/2009 | 5,700 | -- | -- | -- | 4,000 | 3,100 | 26 | 13 | 48 | 88 | -- | -- | -- | -- |
| 2/16/2010 | 8,000 | -- | -- | -- | 5,900 | 4,700 | 110 | 1,300 | 800 | 1,800 | -- | -- | -- | -- |
| 3/9/2010 | 7,000 | -- | -- | -- | 5,900 | 6,600 | 110 | 460 | 550 | 410 | -- | -- | -- | -- |
| 4/20/2010 | 10,000 | -- | -- | -- | 11,000 | 6,000 | 44 | 230 | 174 | 130 | -- | -- | -- | -- |
| 5/14/2010 | 8,500 | -- | -- | -- | 2,100 | 3,600 | 67 | 380 | 400 | 210 | -- | -- | -- | -- |
| 6/25/2010 | 4,600 | -- | -- | -- | 2,600 | 2,200 | 61 | 540 | 380 | 170 | -- | -- | -- | -- |
| 7/20/2010 | 21,000 | -- | -- | -- | 21,000 | 3,400 | 370 | 3,000 | 2,550 | 2,300 | -- | -- | -- | -- |
| 8/3/2010 | 3,400 | -- | -- | -- | 1,500 | 1,400 | 17 | 140 | 161 | 390 | -- | -- | -- | -- |
| 8/10/2010 | 5,800 | -- | -- | -- | 3,400 | 2,600 | 40 | 190 | 169 | 140 | -- | -- | -- | -- |
| 9/14/2010 | 9,400 | -- | -- | -- | 10,000 | 4,900 | 170 | 1,100 | 1,340 | 380 | -- | -- | -- | -- |
| 10/12/2010 | 5,700 | -- | -- | -- | 1,000 | 2,200 | 43 | 140 | 138 | 120 | -- | -- | -- | -- |
| 11/16/2010 | 1,100 | -- | -- | -- | 1,600 | 290 | 4 | 15 | 78 | 84 | -- | -- | -- | -- |
| 12/14/2010 | 7,100 | -- | -- | -- | 3,200 | 2,600 | 76 | 200 | 315 | 340 | -- | -- | -- | -- |

**Table 6. Extracted Groundwater Analytical Results**[a]

*SFPP Norwalk Pump Station, Norwalk, California*

| | EPA 8015M | | | | | EPA 8260B Volatile Organic Compounds (VOCs)[b] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Sampled | TPH-g (µg/L) | TPH-d (µg/L) | TPH-o (µg/L) | TPH-total (µg/L) | TPH-fp (µg/L) | Benzene (µg/L) | Ethylbenzene (µg/L) | Toluene (µg/L) | Xylenes (µg/L) | MTBE (µg/L) | TBA (µg/L) | DIPE (µg/L) | ETBE (µg/L) | TAME (µg/L) |
| 1/14/2011 | 7,400 | -- | -- | -- | 3,500 | 3,700 | 56 | 110 | 220 | 280 | -- | -- | -- | -- |
| 2/8/2011 | 5,600 | -- | -- | -- | 3,500 | 2,400 | 43 | 110 | 190 | 420 | -- | -- | -- | -- |
| 3/25/2011 | 3,100 | -- | -- | -- | 1,200 | 1,300 | 51 | 92 | 200 | 300 | -- | -- | -- | -- |
| 4/26/2011 | 1,400 | -- | -- | -- | 1,200 | 610 | 5.8 | 5.7 | 20 | 130 | -- | -- | -- | -- |
| 5/17/2011 | 3,300 | -- | -- | -- | 1,700 | 3,600 | 82 | 180 | 300 | 240 | -- | -- | -- | -- |
| 6/21/2011 | 1,200 | -- | -- | -- | 720 | 860 | 9.6 | 31 | 82 | 190 | 2,200 | 6.6 | <0.07 | <0.1 |
| 7/27/2011 | 14,000 | 10,000 | 44J | -- | --[d] | 2,800 | 150 | 490 | 2,100 | 350 | 2,800 | 27 | <0.07 | <0.1 |
| 8/26/2011 | 7,400 | -- | -- | -- | 57,000 | 1,400 | 120 | 480 | 1,300 | 270 | 1,600 | 16 | <0.07 | <0.1 |
| 9/23/2011 | 6,400 | -- | -- | -- | 2,800 | 2,800 | 83.0 | 160 | 340 | 300 | 1,300 | 22 | <0.07 | <0.1 |
| 10/25/2011 | 6,000 | -- | -- | -- | 2,300 | 3,000 | 52 | 93 | 200 | 200 | 970 | 20 | <0.70 | <1.0 |
| 11/22/2011 | 5,900 | -- | -- | -- | 2,000 | 3,600 | 62 | 140 | 240 | 300 | 2,900 | 26 | <0.07 | <0.1 |
| 12/20/2011 | 780 | -- | -- | -- | 2,000 | 330 | 8 | 14 | 43 | 160 | 1,000 | 18 | <0.07 | <0.1 |
| 1/10/2012 | 5,300 | -- | -- | -- | 1,900 | 3,400 | 36 | 70 | 170 | 200 | 960 | 26 | <0.07 | <0.1 |
| 2/21/2012 | 4,900 | -- | -- | -- | <13 | 3,400 | 19 | 16 | 48 | 120 | 2,200 | 21 | <0.07 | <0.1 |
| 3/13/2012 | 6,100 | -- | -- | -- | 2,100 | 2,900 | 43 | 79 | 180 | 120 | 1,600 | 23 | <0.07 | <0.1 |
| 4/27/2012 | 5,100 | -- | -- | -- | 2,200 | 3,800 | 49 | 61 | 150 | 150 | 500 | 38 | <0.13 | <0.12 |
| 5/22/2012 | 6,800 | -- | -- | -- | 31,000 | 2,800 | 49 | 140 | 262 | 150 | 690 | 30 | <0.13 | <0.12 |
| 6/19/2012 | 5,300 | -- | -- | -- | 36,000 | 3,200 | 45 | 230 | 200 | 220 | 2,800 | 33 | <0.13 | <0.12 |
| 7/20/2012 | 5,600 | 2,400 | 210 | 8,200 | -- | 3,000 | 71 | 72 | 510 | 170 | 2,700 | 26 | <0.13 | <0.12 |
| 8/21/2012 | 3,600 | 1,100 | 140 | 4,900 | -- | 2,400 | 26 | 41 | 80 | 110 | 1,500 | 22 | <0.13 | <0.12 |
| 9/25/2012 | 2,100 | 710 | 71 | 2,800 | -- | 1,700 | 25 | 35 | 86 | 150 | 690 | 17 | <1.0 | <1.0 |
| 10/30/2012 | 2,600 | 700 | 74 | 3,374 | -- | 1,400 | 15 | 13 | 52 | 54 | 1,200 | 14 | <0.061 | <0.054 |
| 11/30/2012 | 860 | 8,200 | 260 | 9,320 | -- | 1,100 | 2.4 | 4.4 | 12 | 23 | 690 | <0.038 | <0.061 | <0.054 |
| 12/27/2012 | 6,200 | 820 | 86 | 7,106 | -- | 2,000 | 39 | 76 | 130 | 120 | 1,300 | 20 | <0.061 | <0.054 |
| 1/15/2013 | 3,400 | 14,000 | 400 | 17,800 | -- | 800 | 12 | 25 | 130 | 43 | 1,200 | 8.7 | <0.061 | <0.054 |
| 2/12/2013 | 9,900 | 3,100 | 150 | 13,150 | -- | 2,100 | 110 | 440 | 820 | 110 | 330 | 22 | <0.061 | <0.054 |
| 3/5/2013 | 3,954 | 970 | 80 | 5,004 | -- | 1,400 | 21 | 23 | 87 | 63 | 1,200 | 15 | <0.061 | <0.054 |
| 3/15/2013 | -- | -- | -- | -- | -- | 1,400 | 25 | 49 | 98 | 74 | 570 | 14 | <0.061 | <0.054 |
| 4/16/2013 | 1,100 | 1,300 | 270 | 2,670 | -- | 370 | 6 | 19 | 56 | 73 | 530 | 17 | <0.061 | <0.054 |
| 5/14/2013 | 4,300 | 830 | 99 | 5,229 | -- | 2,000 | 52 | 98 | 181 | 61 | 270 | 22 | <0.061 | <0.054 |
| 6/28/2013 | 2,900 | 870 | 150 | 3,920 | -- | 1,100 | 18 | 58 | 76 | 92 | 500 | 11 | <0.061 | <0.054 |
| 7/16/2013 | 3,600 | 1,000 | 130 | 4,730 | -- | 870 | 19 | 47 | 140 | 100 | 600 | 14 | <0.061 | <0.054 |
| 8/16/2013 | 3,800 | 5,900 | 530 | 10,230 | -- | 1,400 | 13 | 32 | 85 | 77 | 550 | 27 | <0.061 | <0.054 |
| 9/24/2013 | 5,800 | 12,000 | 550 | 18,350 | -- | 990 | 53 | 400 | 630 | 78 | 440 | 20 | <0.061 | <0.054 |
| 10/15/2013 | 3,300 | 650 | 120 | 4,070 | -- | 1,400 | 11 | 37 | 150 | 43 | 250 | 15 | <0.061 | <0.054 |
| 11/12/2013 | 5,600 | 3,500 | 190 | 9,290 | -- | 570 | 99 | 230 | 660 | 89 | 550 | 20 | <0.061 | <0.054 |
| 12/13/2013 | 12,500 | 14,000 | 400 | 26,900 | -- | 560 | 170 | 690 | 1,500 | 52 | 220 | 17 | <0.061 | <0.054 |

**Table 6. Extracted Groundwater Analytical Results[a]**

*SFPP Norwalk Pump Station, Norwalk, California*

| | EPA 8015M | | | | | EPA 8260B Volatile Organic Compounds (VOCs)[b] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Sampled | TPH-g (µg/L) | TPH-d (µg/L) | TPH-o (µg/L) | TPH-total (µg/L) | TPH-fp (µg/L) | Benzene (µg/L) | Ethylbenzene (µg/L) | Toluene (µg/L) | Xylenes (µg/L) | MTBE (µg/L) | TBA (µg/L) | DIPE (µg/L) | ETBE (µg/L) | TAME (µg/L) |
| 1/17/2014 | 5,900 | 980 | 130 | 7,010 | -- | 4,200 | 13 | 18 | 61 | 89 | 810 | 40 | <0.061 | <0.054 |
| 2/11/2014 | 12,000 | 63,000 | 2,500 | 77,500 | -- | 640 | 130 | 560 | 1,990 | 45 | 290 | 12 | <0.061 | <0.054 |
| 3/21/2014 | 42,000 | 77,000 | 2,000 | 121,000 | -- | 3,700 | 440 | 3,300 | 3,900 | 100 | 360 | 17 | <0.061 | <0.054 |
| 4/21/2014 | 100,000 | 30,000 | 880 | 130,000 | -- | 6,000 | 1,300 | 9,800 | 9,000 | <0.098 | <1.0 | 12 | <0.061 | <0.054 |
| 5/20/2014 | 33,000 | 15,000 | 470 | 48,000 | -- | 1,400 | 570 | 2,700 | 5,400 | 30 | <0.40 | 16 | <0.061 | <0.054 |
| 6/13/2014 | 77,000 | 33,000 | 1,100 | 110,000 | -- | 7,700 | 1,900 | 10,000 | 13,000 | 38 | <0.40 | 12 | <0.061 | <0.054 |
| 7/12/2014 | 28,000 | 82 | <52 | 28,082 | -- | 2,800 | 820 | 3,700 | 6,800 | 34 | <0.40 | 18J | <25 | <25 |
| The GWTS was down between July 29, 2014 and December 1, 2014 to facilitate processing of the modifications to SCAQMD Permit No. F14166 for the GWTS. | | | | | | | | | | | | | | |
| 1/15/2015 | 8,000 | 5,600 | 270 | 13,870 | -- | 2,200 | 22 | 140 | 430 | 21 | 390 | 11 | <0.12 | <0.11 |
| 2/20/2015 | 120,000 | 47,000 | 1,500 | 170,000 | -- | 3,000 | 350 | 1,600 | 3,000 | 43 | <0.80 | 17 | <0.12 | <0.11 |
| 3/3/2015 | 65,000 | 480,000 | 15,000 | 560,000 | -- | 6,600 | 1,700 | 9,300 | 12,000 | 670 | <0.80 | 11 | <0.12 | <0.11 |
| 4/7/2015 | 105,000 | 92,000 | 2,900 | 200,000 | -- | 9,000 | 2,100 | 18,000 | 13,000 | 1,200 | <0.80 | 8.7 | <0.12 | 17 |
| 5/19/2015 | 73,000 | 90,000 | 2,400 | 165,400 | -- | 8,200 | 1,600 | 17,000 | 12,000 | 380 | <0.60 | 25 | <0.078 | <0.078 |
| 6/2/2015 | 78,000 | 89,000 | 3,100 | 170,100 | -- | 3,200 | 530 | 3,700 | 7,100 | 1,100 | <0.60 | 13 | <0.078 | 8.3 |
| 7/30/2015 | 31,000 | 16,000 | 570 | 47,570 | -- | 3,100 | 720 | 5,100 | 6,200 | 820 | <0.60 | 27 | <0.078 | 6.2 |
| 8/6/2015 | 30,000 | 17,000 | 570 | 37,570 | | 2,600 | 500 | 3,100 | 6,200 | 700 | <0.60 | 16 | <0.078 | 6.4 |
| 9/15/2015 | 50,000 | 79,000 | 2,700 | 129,000 | | 3,200 | 1,800 | 6,500 | 14,000 | 820 | <0.60 | 15 | <0.078 | 7.7 |
| 10/8/2016 | 51,000 | 55,000 | 1,800 | 107,800 | -- | 5,700 | 1,400 | 11,000 | 11,000 | 680 | <0.60 | 16 | <0.078 | 6.2 |
| 11/24/2015 | 45,000 | 74,000 | 2,800 | 121,800 | -- | 3,400 | 1,100 | 7,000 | 7,800 | <0.31 | <1.5 | 16 | <0.20 | <0.20 |
| 12/3/2015 | 40,000 | 120,000 | 4,000 | 164,000 | -- | 4,800 | 1,100 | 7,700 | 8,300 | 580 | <1.5 | 19 | <0.20 | 5.9 |
| 1/21/2016 | 88,000 | 2,500,000 | 97,000 | 2,685,000 | -- | 4,200 | 1,700 | 10,000 | 14,000 | 380 | <0.60 | 12 | <0.078 | <0.078 |
| 2/2/2016 | 31,000 | 110,000 | 4,700 | 145,700 | -- | 2,600 | 750 | 4,600 | 9,500 | 430 | <0.60 | 8.6 | <0.078 | <0.078 |

Notes:

[a] Influent samples were collected from the manifold conveying groundwater extracted from the south-central and southeastern areas

[b] Other detected VOCs are included in the laboratory analytical reports in Appendix A

[c] TPH-fp result from extracted groundwater sample collected on July 10, 2008

[d] July 27, 2011, sample and samples after July 20, 2012, were analyzed for TPH-g, TPH-d, and TPH-o

-- = not analyzed

<500 = Not detected at or above the laboratory reporting limit (RL) showr

µg/L = micrograms per liter

DIPE = di-isopropyl ether

ETBE = ethyl tertiary butyl ether

J = Analyte was detected above the laboratory method detection limit and below the laboratory RI

MTBE = methyl tertiary butyl ether

TAME = tertiary amyl methyl ether

TBA = tertiary butyl alcohol

TPH-d = total petroleum hydrocarbons quantified as diesel (C13-C22)

TPH-fp = total petroleum hydrocarbons quantified as fuel product (C7-C28)

TPH-g = total petroleum hydrocarbons quantified as gasoline (C4-C12)

TPH-o = total petroleum hydrocarbons quantified as oil (C23-C36)

TPH-total = total petroleum hydrocarbons quantified as gasoline, diesel, and oil (C4-C36

**Table 7. Biosparge System Operation Summary**

*SFPP Norwalk Pump Station, Norwalk, California*

| System Inspection Date | Cumulative Hours of Operation (hours) | Incremental Hours of Operation (hours) | Incremental Uptime (%) | System Flow[a] (scfm) | BS-01 Sparge Leg Pressure (psi) |
|---|---|---|---|---|---|
| 1/6/2016 | 0 | | | 60 | 10 |
| 2/16/2016 | 899 | 899 | 91.9 | 500 | 13 |
| 2/23/2016 | 1,071 | 172 | 99.1 | 500 | 14 |
| 2/29/2016 | 1,192 | 121 | 85.1 | 500 | 13 |
| 3/1/2016 | 1,214 | 22 | 98.5 | 500 | 13 |
| 3/8/2016 | 1,381 | 167 | 99.9 | 500 | 14 |
| 3/10/2016 | 1,426 | 45 | 98.5 | 500 | 14 |
| 3/22/2016 | 1,432 | 6 | 2.0 | 240 | 7 |
| 3/31/2016 | 1,524 | 92 | 42.5 | 180 | 8 |
| **First Quarter 2016 Totals** | 1,524 | 1,524 | 74.7 | -- | -- |
| **Cumulative Totals** | **1,524** | 1,524 | 74.7 | -- | **--** |

Notes:

[a] Estimated system flow based on header flowmeter

-- = not applicable or not available

scfm = standard cubic feet per minute

psi = pounds per square inch

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| GMW-9 | 8/8/2008 | 74.44 | 28.01 | 27.96 | 0.05 | 46.47 | Envent |
| | 10/16/2008 | 74.44 | 28.36 | 28.35 | 0.01 | 46.09 | Envent |
| | 12/17/2008 | 74.44 | 27.61 | --- | --- | 46.83 | Envent |
| | 1/15/2009 | 74.44 | 28.91 | --- | --- | 45.53 | Envent |
| | 3/27/2009 | 74.44 | 29.04 | --- | --- | 45.40 | Envent |
| | 4/21/2009 | 74.44 | 28.16 | --- | --- | 46.28 | Envent |
| | 7/21/2009 | 74.44 | 28.31 | --- | --- | 46.13 | Envent |
| | 5/24/2010 | 74.44 | 30.47 | --- | --- | 43.97 | Blaine Tech |
| | 5/28/2010 | 74.44 | 30.35 | --- | --- | 44.09 | Blaine Tech |
| | 10/4/2010 | 74.44 | 30.30 | --- | --- | 44.14 | Blaine Tech |
| | 1/10/2011 | 74.44 | 32.02 | --- | --- | 42.42 | Blaine Tech |
| | 4/11/2011 | 74.44 | 25.41 | --- | --- | 49.03 | Blaine Tech |
| | 10/10/2011 | 74.44 | 28.91 | --- | --- | 45.53 | Blaine Tech |
| | 4/16/2012 | 77.16 | 31.15 | --- | --- | 46.01 | Blaine Tech |
| | 10/15/2012 | 77.16 | 31.82 | --- | --- | 45.34 | Blaine Tech |
| | 1/14/2013 | 77.16 | 31.88 | --- | --- | 45.28 | Blaine Tech |
| | 4/8/2013 | 77.16 | 31.83 | --- | --- | 45.33 | Blaine Tech |
| | 10/7/2013 | 77.16 | 35.30 | 31.25 | 4.05 | 45.02 | Blaine Tech |
| | 4/14/2014 | 77.16 | 37.66 | 31.65 | 6.01 | 44.19 | Blaine Tech |
| | 5/5/2014 | 77.16 | 37.81 | 31.76 | 6.05 | 44.07 | Nieto & Sons |
| | 5/12/2014 | 77.16 | 37.39 | 31.83 | 5.56 | 44.11 | Nieto & Sons |
| | 5/20/2014 | 77.16 | 37.70 | 33.85 | 3.85 | 42.46 | Nieto & Sons |
| | 5/27/2014 | 77.16 | 32.41 | 28.84 | 3.57 | 47.53 | Nieto & Sons |
| | 6/4/2014 | 77.16 | 33.20 | --- | --- | 43.96 | Nieto & Sons |
| | 6/10/2014 | 77.16 | 37.51 | 32.77 | 4.74 | 43.35 | Nieto & Sons |
| | 7/3/2014 | 77.16 | 39.26 | 32.59 | 6.67 | 43.10 | Nieto & Sons |
| | 7/8/2014 | 77.16 | 38.59 | 32.45 | 6.14 | 43.36 | Blaine Tech |
| | 7/18/2014 | 77.16 | 37.15 | 32.73 | 4.42 | 43.46 | Blaine Tech |
| | 7/24/2014 | 77.16 | 37.78 | 32.48 | 5.30 | 43.51 | Blaine Tech |
| | 8/1/2014 | 77.16 | 36.72 | 32.30 | 4.42 | 43.89 | Blaine Tech |
| | 8/8/2014 | 77.16 | 36.55 | 32.26 | 4.29 | 43.96 | Blaine Tech |
| | 8/13/2014 | 77.16 | 36.25 | 32.33 | 3.92 | 43.97 | Blaine Tech |
| | 8/19/2014 | 77.16 | 36.04 | 32.38 | 3.66 | 43.97 | Blaine Tech |
| | 8/29/2014 | 77.16 | 36.23 | 32.33 | 3.90 | 43.97 | Blaine Tech |
| | 9/5/2014 | 77.16 | 36.26 | 32.35 | 3.91 | 43.95 | Blaine Tech |
| | 9/11/2014 | 77.16 | 36.27 | 32.33 | 3.94 | 43.96 | Blaine Tech |
| | 9/18/2014 | 77.16 | 36.42 | 32.37 | 4.05 | 43.90 | Blaine Tech |
| | 9/26/2014 | 77.16 | 36.39 | 32.35 | 4.04 | 43.92 | Blaine Tech |
| | 10/1/2014 | 77.16 | 36.11 | 32.42 | 3.69 | 43.93 | Blaine Tech |
| | 10/6/2014 | 77.16 | 35.99 | 32.42 | 3.57 | 43.95 | Blaine Tech |
| | 10/14/2014 | 77.16 | 36.24 | 32.34 | 3.90 | 43.96 | Blaine Tech |
| | 10/23/2014 | 77.16 | 36.32 | 32.35 | 3.97 | 43.94 | Blaine Tech |
| | 10/27/2014 | 77.16 | 36.04 | 32.42 | 3.62 | 43.94 | Blaine Tech |
| | 11/3/2014 | 77.16 | 36.40 | 32.35 | 4.05 | 43.92 | Blaine Tech |
| | 11/10/2014 | 77.16 | 36.32 | 32.41 | 3.91 | 43.89 | Blaine Tech |
| | 11/18/2014 | 77.16 | 36.28 | 32.43 | 3.85 | 43.88 | Blaine Tech |
| | 11/25/2014 | 77.16 | 36.21 | 32.49 | 3.72 | 43.85 | Blaine Tech |
| | 12/3/2014 | 77.16 | 36.18 | 32.43 | 3.75 | 43.91 | Blaine Tech |
| | 12/12/2014 | 77.16 | 36.58 | 32.74 | 3.84 | 43.58 | Blaine Tech |
| | 12/19/2014 | 77.16 | 37.05 | 32.76 | 4.29 | 43.46 | Blaine Tech |
| | 3/6/2015 | 77.16 | 39.40 | 33.13 | 6.27 | 42.65 | Kinder Morgan |
| | 4/20/2015 | 77.16 | 36.98 | 32.99 | 3.99 | 43.29 | Blaine Tech |
| | 10/20/2015 | 77.16 | 34.61 | 34.37 | 0.24 | 42.74 | Kinder Morgan |
| | 3/14/2016 | 77.16 | 36.10 | --- | --- | 41.06 | Blaine Tech |
| GMW-10 | 04/30/2007 | 74.67 | --- | 25.90 | --- | --- | Secor |
| | 11/12/2007 | 74.67 | 25.02 | 25.82 | 0.83 | 50.33 | Secor |
| | 04/14/2008 | 74.67 | 25.38 | 25.44 | 0.06 | 49.34 | Secor |
| | 10/13/2008 | 74.67 | 24.16 | --- | --- | 50.51 | Stantec |
| | 4/20/2009 | 74.67 | 24.46 | --- | --- | 50.21 | Blaine Tech |
| | 10/19/2009 | 74.67 | 27.20 | --- | --- | 47.47 | Blaine Tech |
| | 5/24/2010 | 74.67 | 26.72 | --- | --- | 47.95 | Blaine Tech |
| | 5/28/2010 | 74.67 | 26.70 | --- | --- | 47.97 | Blaine Tech |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 10/4/2010 | 74.67 | 27.15 | --- | --- | 47.52 | Blaine Tech |
| | 4/11/2011 | 74.67 | 25.21 | --- | --- | 49.46 | Blaine Tech |
| | 10/10/2011 | 74.67 | 27.75 | --- | --- | 46.92 | Blaine Tech |
| | 4/27/2012 | 74.67 | 28.47 | --- | --- | 46.20 | Blaine Tech |
| | 10/15/2012 | 74.67 | 29.15 | 29.02 | 0.13 | 45.63 | Blaine Tech |
| | 4/8/2013 | 74.67 | 33.64 | 28.12 | 5.52 | 45.53 | Blaine Tech |
| | 9/26/2013 | N/A | 36.15 | 29.25 | 6.90 | --- | CH2M HILL |
| | 10/7/2013 | N/A | 31.85 | 29.32 | 2.53 | --- | Blaine Tech |
| | 4/14/2014 | 73.35 | 29.43 | 29.01 | 0.42 | 44.26 | Blaine Tech |
| | 8/19/2014 | 73.35 | 29.80 | 29.53 | 0.27 | 43.77 | Blaine Tech |
| | 8/29/2014 | 73.35 | 29.68 | 29.25 | 0.43 | 44.02 | Blaine Tech |
| | 9/26/2014 | 73.35 | 29.98 | 29.23 | 0.75 | 43.98 | Blaine Tech |
| | 10/1/2014 | 73.35 | 29.98 | 29.19 | 0.79 | 44.01 | Blaine Tech |
| | 10/6/2014 | 73.35 | 30.01 | 29.16 | 0.85 | 44.03 | Blaine Tech |
| | 10/14/2014 | 73.35 | 30.01 | 29.18 | 0.83 | 44.02 | Blaine Tech |
| | 10/23/2014 | 73.35 | 30.17 | 29.15 | 1.02 | 44.01 | Blaine Tech |
| | 10/27/2014 | 73.35 | 30.19 | 29.12 | 1.07 | 44.03 | Blaine Tech |
| | 11/3/2014 | 73.35 | 30.25 | 29.13 | 1.12 | 44.01 | Blaine Tech |
| | 11/10/2014 | 73.35 | 29.85 | 29.28 | 0.57 | 43.96 | Blaine Tech |
| | 11/18/2014 | 73.35 | 29.95 | 29.28 | 0.67 | 43.95 | Blaine Tech |
| | 11/25/2014 | 73.35 | 30.00 | 29.27 | 0.73 | 43.94 | Blaine Tech |
| | 12/3/2014 | 73.35 | 30.18 | 29.27 | 0.91 | 43.91 | Blaine Tech |
| | 12/12/2014 | 73.35 | 30.81 | 29.45 | 1.36 | 43.65 | Blaine Tech |
| | 12/19/2014 | 73.35 | 30.51 | 30.35 | 0.16 | 42.97 | Blaine Tech |
| | 4/20/2015 | 73.35 | 34.99 | 28.42 | 6.57 | 43.71 | Blaine Tech |
| | 7/17/2015 | 73.35 | 36.10 | 29.41 | 6.69 | 42.70 | Blaine Tech |
| | 10/20/2015 | 73.35 | 32.96 | 31.02 | 1.94 | 41.97 | Kinder Morgan |
| | 3/16/2016 | 73.35 | 34.47 | 33.42 | 1.05 | 39.74 | Kinder Morgan |
| GMW-22 | 11/12/2007 | 74.17 | 26.45 | 25.91 | 0.54 | 48.16 | Stantec |
| | 8/12/2008 | 74.17 | 26.70 | --- | --- | 47.47 | Envent |
| | 10/31/2008 | 74.17 | 28.25 | 27.04 | 1.21 | 46.91 | Envent |
| | 11/4/2008 | 74.17 | 26.97 | --- | --- | 47.20 | Envent |
| | 12/17/2008 | 74.17 | 26.65 | --- | --- | 47.52 | Envent |
| | 1/15/2009 | 74.17 | 27.18 | --- | --- | 46.99 | Envent |
| | 3/27/2009 | 74.17 | 27.86 | --- | --- | 46.31 | Envent |
| | 4/21/2009 | 74.17 | 27.30 | 27.20 | 0.10 | 46.95 | Envent |
| | 7/21/2009 | 74.17 | 27.70 | --- | --- | 46.47 | Envent |
| | 11/6/2009 | 74.17 | 28.12 | --- | --- | 46.05 | Kinder Morgan |
| | 9/3/2010 | 74.17 | 28.36 | 25.10 | 3.26 | 48.47 | Kinder Morgan |
| | 10/4/2010 | 74.17 | 27.65 | --- | --- | 46.52 | Blaine Tech |
| | 4/11/2011 | 74.17 | 26.45 | --- | --- | 47.72 | Blaine Tech |
| | 10/10/2011 | 74.17 | 29.68 | --- | --- | 44.49 | Blaine Tech |
| | 4/16/2012 | 77.24 | 31.15 | --- | --- | 46.09 | Blaine Tech |
| | 10/15/2012 | 77.24 | 31.05 | --- | --- | 46.19 | Blaine Tech |
| | 4/8/2013 | 77.24 | 31.92 | --- | --- | 45.32 | Blaine Tech |
| | 10/7/2013 | 77.24 | 34.28 | 31.65 | 2.63 | 45.10 | Blaine Tech |
| | 4/14/2014 | 77.24 | 35.59 | 32.30 | 3.29 | 44.33 | Blaine Tech |
| | 5/6/14 | 77.24 | 35.87 | 32.35 | 3.52 | 44.24 | Nieto & Sons |
| | 5/12/14 | 77.24 | 35.76 | 32.28 | 3.48 | 44.32 | Nieto & Sons |
| | 5/20/14 | 77.24 | 37.90 | 32.70 | 5.20 | 43.58 | Nieto & Sons |
| | 5/27/14 | 77.24 | 36.34 | 32.71 | 3.63 | 43.86 | Nieto & Sons |
| | 6/4/14 | 77.24 | 33.36 | --- | --- | 43.88 | Nieto & Sons |
| | 6/10/14 | 77.24 | 36.74 | 32.82 | 3.92 | 43.69 | Nieto & Sons |
| | 7/3/14 | 77.24 | 37.66 | 32.91 | 4.75 | 43.45 | Nieto & Sons |
| | 7/8/14 | 77.24 | 36.70 | 32.79 | 3.91 | 43.73 | Blaine Tech |
| | 7/18/14 | 77.24 | 36.68 | 32.77 | 3.91 | 43.75 | Blaine Tech |
| | 7/24/14 | 77.24 | 36.79 | 32.62 | 4.17 | 43.85 | Blaine Tech |
| | 8/1/2014 | 77.24 | 35.82 | 32.44 | 3.38 | 44.17 | Blaine Tech |
| | 8/8/2014 | 77.24 | 35.72 | 32.44 | 3.28 | 44.19 | Blaine Tech |
| | 8/13/2014 | 77.24 | 35.68 | 32.45 | 3.23 | 44.19 | Blaine Tech |
| | 8/19/2014 | 77.24 | 35.64 | 32.45 | 3.19 | 44.20 | Blaine Tech |
| | 8/29/2014 | 77.24 | 35.65 | 32.44 | 3.21 | 44.21 | Blaine Tech |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 9/5/2014 | 77.24 | 35.73 | 32.46 | 3.27 | 44.18 | Blaine Tech |
| | 9/11/2014 | 77.24 | 35.78 | 32.47 | 3.31 | 44.16 | Blaine Tech |
| | 9/18/2014 | 77.24 | 35.85 | 32.49 | 3.36 | 44.13 | Blaine Tech |
| | 9/26/2014 | 77.24 | 35.85 | 32.46 | 3.39 | 44.15 | Blaine Tech |
| | 10/1/2014 | 77.24 | 35.76 | 32.45 | 3.31 | 44.18 | Blaine Tech |
| | 10/6/2014 | 77.24 | 35.72 | 32.44 | 3.28 | 44.19 | Blaine Tech |
| | 10/14/2014 | 77.24 | 35.75 | 32.42 | 3.33 | 44.20 | Blaine Tech |
| | 10/23/2014 | 77.24 | 35.84 | 32.43 | 3.41 | 44.18 | Blaine Tech |
| | 10/27/2014 | 77.24 | 35.74 | 32.41 | 3.33 | 44.21 | Blaine Tech |
| | 11/3/2014 | 77.24 | 35.89 | 32.45 | 3.44 | 44.15 | Blaine Tech |
| | 11/10/2014 | 77.24 | 35.94 | 32.45 | 3.49 | 44.14 | Blaine Tech |
| | 11/18/2014 | 77.24 | 35.97 | 32.48 | 3.49 | 44.11 | Blaine Tech |
| | 11/25/2014 | 77.24 | 35.97 | 32.51 | 3.46 | 44.09 | Blaine Tech |
| | 12/3/2014 | 77.24 | 35.84 | 32.45 | 3.39 | 44.16 | Blaine Tech |
| | 12/12/2014 | 77.24 | 36.44 | 32.65 | 3.79 | 43.89 | Blaine Tech |
| | 12/19/2014 | 77.24 | 36.80 | 34.71 | 2.09 | 42.14 | Blaine Tech |
| | 4/20/2015 | 77.24 | 36.64 | 32.84 | 3.80 | 43.70 | Blaine Tech |
| | 7/24/2015 | 77.24 | 39.80 | 33.70 | 6.10 | 42.41 | Northstar |
| | 10/20/2015 | 77.24 | 36.10 | 34.92 | 1.18 | 42.10 | Kinder Morgan |
| | 3/16/2016 | 77.24 | 39.73 | 37.61 | 2.12 | 39.24 | Kinder Morgan |
| GMW-24 | 11/12/2007 | 74.04 | 27.50 | 27.46 | 0.04 | 46.57 | Stantec |
| | 8/19/2008 | 74.04 | 29.34 | 28.24 | 1.10 | 45.58 | Envent |
| | 10/17/2008 | 74.04 | 30.88 | 29.90 | 0.98 | 43.94 | Envent |
| | 10/21/2008 | 74.04 | 29.64 | 28.30 | 1.34 | 45.47 | Envent |
| | 12/18/2008 | 74.04 | 29.04 | --- | --- | 45.00 | Envent |
| | 1/15/2009 | 74.04 | 30.56 | 29.80 | 0.76 | 44.09 | Envent |
| | 3/20/2009 | 74.04 | 31.28 | --- | --- | 42.76 | Envent |
| | 3/27/2009 | 74.04 | 30.45 | --- | --- | 43.59 | Envent |
| | 4/21/2009 | 74.04 | 29.91 | --- | --- | 44.13 | Envent |
| | 7/21/2009 | 74.04 | 32.78 | --- | --- | 41.26 | Envent |
| | 2/4/2010 | 74.04 | 29.67 | 29.40 | 0.27 | 44.59 | Kinder Morgan |
| | 6/22/2010 | 74.04 | 29.47 | --- | --- | 44.57 | Blaine Tech |
| | 9/3/2010 | 74.04 | 29.90 | --- | --- | 44.14 | Kinder Morgan |
| | 10/4/2010 | 74.04 | 29.50 | --- | --- | 44.54 | Blaine Tech |
| | 4/11/2011 | 74.04 | 28.21 | --- | --- | 45.83 | Blaine Tech |
| | 10/10/2011 | 74.04 | 28.78 | --- | --- | 45.26 | Blaine Tech |
| | 4/16/2012 | 77.48 | 30.49 | 30.31 | 0.18 | 47.13 | Blaine Tech |
| | 10/15/2012 | 77.48 | 31.34 | --- | --- | 46.14 | Blaine Tech |
| | 6/14/2013 | 77.48 | 33.35 | 32.40 | 0.95 | 44.89 | Blaine Tech |
| | 10/7/2013 | 77.48 | 35.42 | 31.61 | 3.81 | 45.11 | Blaine Tech |
| | 4/14/2014 | 77.48 | 37.74 | 32.01 | 5.73 | 44.32 | Blaine Tech |
| | 5/5/2014 | 77.48 | 37.81 | 32.09 | 5.72 | 44.25 | Nieto & Sons |
| | 5/12/2014 | 77.48 | 37.52 | 32.14 | 5.38 | 44.26 | Nieto & Sons |
| | 5/20/2014 | 77.48 | 37.39 | 32.21 | 5.18 | 44.23 | Nieto & Sons |
| | 5/27/2014 | 77.48 | 37.95 | 32.90 | 5.05 | 43.57 | Nieto & Sons |
| | 6/4/2014 | 77.48 | 37.00 | 32.70 | 4.30 | 43.92 | Nieto & Sons |
| | 6/10/2014 | 77.48 | 37.85 | 32.98 | 4.87 | 43.53 | Nieto & Sons |
| | 7/3/2014 | 77.48 | 39.60 | 33.04 | 6.56 | 43.13 | Nieto & Sons |
| | 7/8/2014 | 77.48 | 38.67 | 32.89 | 5.78 | 43.43 | Blaine Tech |
| | 7/18/2014 | 77.48 | 38.64 | 32.86 | 5.78 | 43.46 | Blaine Tech |
| | 7/24/2014 | 77.48 | 38.27 | 32.82 | 5.45 | 43.57 | Blaine Tech |
| | 8/1/2014 | 77.48 | 37.00 | 32.55 | 4.45 | 44.04 | Blaine Tech |
| | 8/8/2014 | 77.48 | 36.97 | 32.51 | 4.46 | 44.08 | Blaine Tech |
| | 8/13/2014 | 77.48 | 36.82 | 32.54 | 4.28 | 44.08 | Blaine Tech |
| | 8/19/2014 | 77.48 | 36.92 | 32.55 | 4.37 | 44.06 | Blaine Tech |
| | 8/29/2014 | 77.48 | 36.92 | 32.51 | 4.41 | 44.09 | Blaine Tech |
| | 9/5/2014 | 77.48 | 36.97 | 32.55 | 4.42 | 44.05 | Blaine Tech |
| | 9/11/2014 | 77.48 | 37.99 | 32.57 | 5.42 | 43.83 | Blaine Tech |
| | 9/18/2014 | 77.48 | 36.89 | 32.60 | 4.29 | 44.02 | Blaine Tech |
| | 9/26/2014 | 77.48 | 36.86 | 32.58 | 4.28 | 44.04 | Blaine Tech |
| | 10/1/2014 | 77.48 | 36.64 | 32.61 | 4.03 | 44.06 | Blaine Tech |
| | 10/6/2014 | 77.48 | 36.93 | 32.92 | 4.01 | 43.76 | Blaine Tech |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 10/14/2014 | 77.48 | 36.92 | 32.88 | 4.04 | 43.79 | Blaine Tech |
| | 10/23/2014 | 77.48 | 37.00 | 32.90 | 4.10 | 43.76 | Blaine Tech |
| | 10/27/2014 | 77.48 | 36.82 | 32.91 | 3.91 | 43.79 | Blaine Tech |
| | 11/3/2014 | 77.48 | 37.01 | 32.99 | 4.02 | 43.69 | Blaine Tech |
| | 11/10/2014 | 77.48 | 37.33 | 33.95 | 3.38 | 42.85 | Blaine Tech |
| | 11/18/2014 | 77.48 | 36.96 | 33.01 | 3.95 | 43.68 | Blaine Tech |
| | 11/25/2014 | 77.48 | 36.91 | 33.55 | 3.36 | 43.26 | Blaine Tech |
| | 12/3/2014 | 77.48 | 36.87 | 32.99 | 3.88 | 43.71 | Blaine Tech |
| | 12/12/2014 | 77.48 | 37.36 | 33.25 | 4.11 | 43.41 | Blaine Tech |
| | 12/19/2014 | 77.48 | 37.75 | 33.31 | 4.44 | 43.28 | Blaine Tech |
| | 3/10/2015 | 77.48 | 36.25 | --- | --- | 41.23 | Kinder Morgan |
| | 4/20/2015 | 77.48 | 36.29 | 33.82 | 2.47 | 43.09 | Blaine Tech |
| | 7/24/2015 | 77.48 | 39.80 | 33.70 | 6.10 | 42.38 | Blaine Tech |
| | 10/20/2015 | 77.48 | 35.44 | --- | --- | 42.04 | Kinder Morgan |
| | 3/16/2016 | 77.48 | 38.83 | --- | --- | 38.65 | Kinder Morgan |
| GMW-25 | 11/12/2007 | 74.29 | 27.30 | 27.25 | 0.05 | 47.03 | Stantec |
| | 8/12/2008 | 74.29 | 27.81 | --- | --- | 46.48 | Envent |
| | 10/17/2008 | 74.29 | 28.26 | --- | --- | 46.03 | Envent |
| | 12/18/2008 | 74.29 | 29.01 | --- | --- | 45.28 | Envent |
| | 1/15/2009 | 74.29 | 28.62 | --- | --- | 45.67 | Envent |
| | 3/24/2009 | 74.29 | 28.79 | --- | --- | 45.50 | Envent |
| | 4/21/2009 | 74.29 | 28.35 | --- | --- | 45.94 | Envent |
| | 7/21/2009 | 74.29 | 29.80 | --- | --- | 44.49 | Envent |
| | 10/19/2009 | 74.29 | 30.28 | --- | --- | 44.01 | Blaine Tech |
| | 6/22/2010 | 74.29 | 31.64 | --- | --- | 42.65 | Blaine Tech |
| | 10/4/2010 | 74.29 | 29.25 | --- | --- | 45.04 | Blaine Tech |
| | 4/11/2011 | 74.29 | 26.21 | --- | --- | 48.08 | Blaine Tech |
| | 10/10/2011 | 74.29 | 30.02 | --- | --- | 44.27 | Blaine Tech |
| | 4/16/2012 | 78.14 | 30.31 | --- | --- | 47.83 | Blaine Tech |
| | 10/15/2012 | 78.14 | 31.88 | --- | --- | 46.26 | Blaine Tech |
| | 4/8/2013 | 78.14 | 32.11 | --- | --- | 46.03 | Blaine Tech |
| | 10/7/2013 | 78.14 | 33.23 | 33.10 | 0.13 | 45.01 | Blaine Tech |
| | 4/14/2014 | 78.14 | 37.40 | 33.00 | 4.40 | 44.13 | Blaine Tech |
| | 5/5/2014 | 78.14 | 37.51 | 33.06 | 4.45 | 44.06 | Nieto & Sons |
| | 5/12/2014 | 78.14 | 34.97 | 33.73 | 1.24 | 44.12 | Nieto & Sons |
| | 5/20/2014 | 78.14 | 36.75 | 34.30 | 2.45 | 43.28 | Nieto & Sons |
| | 5/27/2014 | 78.14 | 34.64 | 34.44 | 0.20 | 43.65 | Nieto & Sons |
| | 6/4/2014 | 78.14 | 35.00 | --- | --- | 43.14 | Nieto & Sons |
| | 6/10/2014 | 78.14 | 36.67 | 34.18 | 2.49 | 43.39 | Nieto & Sons |
| | 7/3/2014 | 78.14 | 34.21 | --- | --- | 43.93 | Nieto & Sons |
| | 7/24/2014 | 78.14 | 34.29 | --- | --- | 43.85 | Blaine Tech |
| | 8/1/2014 | 78.14 | 35.02 | 33.99 | 1.03 | 43.91 | Blaine Tech |
| | 8/8/2014 | 78.14 | 34.54 | 34.06 | 0.48 | 43.97 | Blaine Tech |
| | 8/14/2014 | 78.14 | 34.48 | 34.06 | 0.42 | 43.98 | Blaine Tech |
| | 8/19/2014 | 78.14 | 34.51 | 34.07 | 0.44 | 43.97 | Blaine Tech |
| | 8/29/2014 | 78.14 | 34.65 | 33.96 | 0.69 | 44.02 | Blaine Tech |
| | 9/18/2014 | 78.14 | 35.21 | 34.01 | 1.20 | 43.85 | Blaine Tech |
| | 9/26/2014 | 78.14 | 34.87 | 34.06 | 0.81 | 43.89 | Blaine Tech |
| | 10/1/2014 | 78.14 | 34.92 | 33.98 | 0.94 | 43.94 | Blaine Tech |
| | 10/6/2014 | 78.14 | 34.93 | 33.99 | 0.94 | 43.93 | Blaine Tech |
| | 10/14/2014 | 78.14 | 35.10 | 33.91 | 1.19 | 43.96 | Blaine Tech |
| | 10/23/2014 | 78.14 | 35.34 | 33.91 | 1.43 | 43.90 | Blaine Tech |
| | 10/27/2014 | 78.14 | 34.78 | 33.99 | 0.79 | 43.97 | Blaine Tech |
| | 11/3/2014 | 78.14 | 34.92 | 33.98 | 0.94 | 43.94 | Blaine Tech |
| | 11/10/2014 | 78.14 | 35.12 | 34.02 | 1.10 | 43.87 | Blaine Tech |
| | 11/18/2014 | 78.14 | 34.90 | 34.11 | 0.79 | 43.85 | Blaine Tech |
| | 11/25/2014 | 78.14 | 35.07 | 34.07 | 1.00 | 43.84 | Blaine Tech |
| | 12/3/2014 | 78.14 | 35.10 | 33.98 | 1.12 | 43.90 | Blaine Tech |
| | 12/12/2014 | 78.14 | 35.22 | 34.30 | 0.92 | 43.63 | Blaine Tech |
| | 12/19/2014 | 78.14 | 35.05 | 34.50 | 0.55 | 43.51 | Blaine Tech |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 4/20/2015 | 78.14 | 35.19 | 34.47 | 0.72 | 43.50 | Blaine Tech |
| | 6/25/2015 | 78.14 | 36.35 | 35.40 | 0.95 | 42.52 | Blaine Tech |
| | 10/20/2015 | 78.14 | 35.40 | 35.38 | 0.02 | 42.76 | Kinder Morgan |
| | 3/16/2016 | 78.14 | 38.99 | --- | --- | 39.15 | Kinder Morgan |
| GMW-36 | 8/28/2007 | 74.53 | 24.31 | --- | --- | 50.22 | Stantec |
| | 11/12/2007 | 74.53 | 24.86 | 24.85 | 0.01 | 49.68 | Stantec |
| | 2/19/2008 | 74.53 | 25.50 | --- | --- | 49.03 | Stantec |
| | 4/14/2008 | 74.53 | 24.61 | --- | --- | 49.92 | Stantec |
| | 8/8/2008 | 74.53 | 26.20 | 26.14 | 0.06 | 48.38 | Envent |
| | 10/16/2008 | 74.53 | 26.11 | 26.09 | 0.02 | 48.44 | Envent |
| | 12/18/2008 | 74.53 | 28.70 | 28.65 | 0.05 | 45.87 | Envent |
| | 1/15/2009 | 74.53 | 27.73 | 27.45 | 0.28 | 47.02 | Envent |
| | 2/20/2009 | 74.53 | 26.39 | 26.35 | 0.04 | 48.17 | Envent |
| | 2/23/2009 | 74.53 | 26.13 | 25.80 | 0.33 | 48.66 | Blaine Tech |
| | 3/24/2009 | 74.53 | 29.83 | --- | --- | 44.70 | Envent |
| | 4/20/2009 | 74.53 | 25.63 | 25.59 | 0.04 | 48.93 | Blaine Tech |
| | 7/17/2009 | 74.53 | 27.40 | --- | --- | 47.13 | Envent |
| | 7/21/2009 | 74.53 | 26.03 | --- | --- | 48.50 | Envent |
| | 7/22/2009 | 74.53 | 25.90 | --- | --- | 48.63 | Blaine Tech |
| | 10/19/2009 | 74.53 | 26.56 | 26.45 | 0.11 | 48.06 | Blaine Tech |
| | 2/4/2010 | 74.53 | 26.93 | 26.80 | 0.13 | 47.70 | Kinder Morgan |
| | 3/15/2010 | 74.53 | 26.80 | --- | --- | 47.73 | Blaine Tech |
| | 4/16/2010 | 74.53 | 26.90 | --- | --- | 47.63 | Blaine Tech |
| | 5/24/2010 | 74.53 | 25.96 | 25.90 | 0.06 | 48.62 | Blaine Tech |
| | 5/28/2010 | 74.53 | 25.94 | 25.88 | 0.06 | 48.64 | Blaine Tech |
| | 6/22/2010 | 74.53 | 25.94 | 25.91 | 0.03 | 48.61 | Blaine Tech |
| | 10/24/2010 | 74.53 | 26.90 | --- | --- | 47.63 | Blaine Tech |
| | 11/23/2010 | 74.53 | 27.35 | 27.10 | 0.25 | 47.38 | Blaine Tech |
| | 12/22/2010 | 74.53 | 28.35 | 26.84 | 1.51 | 47.39 | Blaine Tech |
| | 1/10/2011 | 74.53 | 29.10 | 27.70 | 1.40 | 46.55 | Blaine Tech |
| | 4/12/2011 | 74.53 | 26.98 | 25.05 | 1.93 | 49.09 | Blaine Tech |
| | 10/10/2011 | 74.53 | 25.96 | --- | --- | 48.57 | Blaine Tech |
| | 12/2/2011 | 74.53 | 26.71 | --- | --- | 47.82 | Kinder Morgan |
| | 12/21/2011 | 74.53 | 28.17 | --- | --- | 46.36 | Blaine Tech |
| | 1/9/2012 | 74.53 | 27.26 | --- | --- | 47.27 | Blaine Tech |
| | 2/23/2012 | 74.53 | 27.85 | --- | --- | 46.68 | Blaine Tech |
| | 4/16/2012 | 74.53 | 27.34 | --- | --- | 47.19 | Blaine Tech |
| | 6/15/2012 | 76.66 | 33.27 | --- | --- | 43.39 | Blaine Tech |
| | 7/9/2012 | 76.66 | 33.71 | --- | --- | 42.95 | Blaine Tech |
| | 10/15/2012 | 76.66 | 32.11 | --- | --- | 44.55 | Blaine Tech |
| | 11/29/2012 | 76.66 | 33.93 | 31.68 | 2.25 | 44.53 | Blaine Tech |
| | 12/26/2012 | 76.66 | 34.86 | 30.36 | 4.50 | 45.40 | Blaine Tech |
| | 1/14/2013 | 76.66 | 34.12 | 30.42 | 3.70 | 45.50 | Blaine Tech |
| | 4/10/2013 | 76.66 | 32.42 | 29.75 | 2.67 | 46.38 | Blaine Tech |
| | 10/7/2013 | 76.66 | 34.65 | 30.72 | 3.93 | 45.15 | Blaine Tech |
| | 4/25/2014 | 76.66 | 34.71 | 31.12 | 3.59 | 44.82 | Blaine Tech |
| | 5/20/2014 | 76.66 | 34.95 | 31.50 | 3.45 | 44.47 | Nieto & Sons |
| | 5/27/2014 | 76.66 | 34.53 | 31.29 | 3.24 | 44.72 | Nieto & Sons |
| | 6/4/2014 | 76.66 | 34.93 | 31.50 | 3.43 | 44.47 | Nieto & Sons |
| | 8/13/2014 | 76.66 | 34.86 | 31.27 | 3.59 | 44.67 | Blaine Tech |
| | 8/19/2014 | 76.66 | 34.20 | 31.39 | 2.81 | 44.71 | Blaine Tech |
| | 8/29/2014 | 76.66 | 34.31 | 31.32 | 2.99 | 44.74 | Blaine Tech |
| | 9/5/2014 | 76.66 | 34.35 | 31.37 | 2.98 | 44.69 | Blaine Tech |
| | 9/11/2014 | 76.66 | 35.00 | 31.23 | 3.77 | 44.68 | Blaine Tech |
| | 9/18/2014 | 76.66 | 34.42 | 31.50 | 2.92 | 44.58 | Blaine Tech |
| | 9/26/2014 | 76.66 | 34.15 | 31.48 | 2.67 | 44.65 | Blaine Tech |
| | 10/1/2014 | 76.66 | 33.51 | 31.61 | 1.90 | 44.67 | Blaine Tech |
| | 10/6/2014 | 76.66 | 33.29 | 31.63 | 1.66 | 44.70 | Blaine Tech |
| | 10/14/2014 | 76.66 | 33.48 | 31.55 | 1.93 | 44.72 | Blaine Tech |
| | 10/23/2014 | 76.66 | 33.64 | 31.57 | 2.07 | 44.68 | Blaine Tech |
| | 10/27/2014 | 76.66 | 33.02 | 31.79 | 1.23 | 44.62 | Blaine Tech |
| | 11/3/2014 | 76.66 | 33.75 | 31.57 | 2.18 | 44.65 | Blaine Tech |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 11/18/2014 | 76.66 | 33.17 | 31.75 | 1.42 | 44.63 | Blaine Tech |
| | 11/25/2014 | 76.66 | 33.13 | | 33.13 | 70.03 | Blaine Tech |
| | 12/3/2014 | 76.66 | 32.93 | 31.75 | 1.18 | 44.67 | Blaine Tech |
| | 4/20/2015 | 76.66 | 33.64 | 32.20 | 1.44 | 44.17 | Blaine Tech |
| | 10/21/2015 | 76.66 | 33.55 | 33.16 | 0.39 | 43.42 | Blaine Tech |
| GMW-O-11 | 11/12/2007 | 74.17 | 24.40 | --- | --- | 49.77 | Stantec |
| | 8/15/2008 | 74.17 | 29.30 | --- | --- | 44.87 | Envent |
| | 10/17/2008 | 74.17 | 24.45 | --- | --- | 49.72 | Envent |
| | 12/19/2008 | 74.17 | 24.85 | --- | --- | 49.32 | Envent |
| | 1/15/2009 | 74.17 | 26.87 | 24.38 | 2.49 | 49.29 | Envent |
| | 2/24/2009 | 74.17 | 24.31 | 24.21 | 0.10 | 49.94 | Envent |
| | 3/27/2009 | 74.17 | 31.08 | --- | --- | 43.09 | Envent |
| | 4/21/2009 | 74.17 | 25.36 | 25.34 | 0.02 | 48.83 | Envent |
| | 7/21/2009 | 74.17 | 26.18 | --- | --- | 47.99 | Envent |
| | 11/6/2009 | 74.17 | 26.33 | 26.18 | 0.15 | 47.96 | Kinder Morgan |
| | 10/4/2010 | 74.17 | 30.00 | --- | --- | 44.17 | Blaine Tech |
| | 4/13/2011 | 74.17 | 24.19 | --- | --- | 49.98 | Blaine Tech |
| | 10/10/2011 | 74.17 | 24.38 | --- | --- | 49.79 | Blaine Tech |
| | 10/15/2012 | 74.17 | 28.12 | --- | --- | 46.05 | Blaine Tech |
| | 9/24/2013 | 74.17 | 31.25 | 28.15 | 3.10 | 45.40 | CH2M HILL |
| | 10/7/2013 | 74.17 | 31.19 | 27.69 | 3.50 | 45.78 | Blaine Tech |
| | 4/25/2014 | 74.17 | 28.96 | 28.62 | 0.34 | 45.48 | Blaine Tech |
| | 9/5/2014 | 74.17 | 31.13 | 27.89 | 3.24 | 45.63 | Blaine Tech |
| | 9/11/2014 | 74.17 | 31.12 | 27.85 | 3.27 | 45.67 | Blaine Tech |
| | 9/18/2014 | 74.17 | 31.22 | 27.85 | 3.37 | 45.65 | Blaine Tech |
| | 9/26/2014 | 74.17 | 31.34 | 27.91 | 3.43 | 45.57 | Blaine Tech |
| | 10/1/2014 | 74.17 | 31.19 | 27.84 | 3.35 | 45.66 | Blaine Tech |
| | 10/6/2014 | 74.17 | 32.19 | 27.84 | 4.35 | 45.46 | Blaine Tech |
| | 10/14/2014 | 74.17 | 31.18 | 28.85 | 2.33 | 44.85 | Blaine Tech |
| | 10/23/2014 | 74.17 | 31.34 | 27.85 | 3.49 | 45.62 | Blaine Tech |
| | 10/27/2014 | 74.17 | 31.28 | 28.89 | 2.39 | 44.80 | Blaine Tech |
| | 11/3/2014 | 74.17 | 32.34 | 27.83 | 4.51 | 45.44 | Blaine Tech |
| | 11/10/2014 | 74.17 | 31.46 | 27.97 | 3.49 | 45.50 | Blaine Tech |
| | 11/18/2014 | 74.17 | 31.41 | 27.88 | 3.53 | 45.58 | Blaine Tech |
| | 11/25/2014 | 74.17 | 31.48 | 27.87 | 3.61 | 45.58 | Blaine Tech |
| | 12/3/2014 | 74.17 | 33.34 | 29.95 | 3.39 | 43.54 | Blaine Tech |
| | 12/12/2014 | 74.17 | 33.25 | 29.08 | 4.17 | 44.26 | Blaine Tech |
| | 12/19/2014 | 74.17 | 32.52 | 28.09 | 4.43 | 45.19 | Blaine Tech |
| | 4/22/2015 | 74.17 | 31.54 | 28.10 | 3.44 | 45.38 | Blaine Tech |
| | 10/22/2015 | 74.17 | 33.08 | 29.23 | 3.85 | 44.17 | Kinder Morgan |
| | 3/16/2016 | 74.17 | 33.39 | 33.16 | 0.23 | 40.96 | Kinder Morgan |
| GMW-O-12 | 11/12/2007 | 73.49 | 23.13 | --- | --- | 50.36 | Stantec |
| | 4/14/2008 | 73.49 | 23.36 | --- | --- | 50.13 | Stantec |
| | 10/13/2008 | 73.49 | 24.20 | --- | --- | 49.29 | Stantec |
| | 4/20/2009 | 73.49 | 24.21 | --- | --- | 49.28 | Blaine Tech |
| | 10/19/2009 | 73.49 | 25.08 | --- | --- | 48.41 | Blaine Tech |
| | 5/24/2010 | 73.49 | 24.80 | --- | --- | 48.69 | Blaine Tech |
| | 5/28/2010 | 73.49 | 24.74 | --- | --- | 48.75 | Blaine Tech |
| | 10/4/2010 | 73.49 | 25.31 | 25.20 | 0.11 | 48.27 | Blaine Tech |
| | 1/10/2011 | 73.49 | 26.42 | 26.32 | 0.10 | 47.15 | Blaine Tech |
| | 4/11/2011 | 73.49 | 24.04 | --- | --- | 49.45 | Blaine Tech |
| | 10/10/2011 | 73.49 | 24.68 | --- | --- | 48.81 | Blaine Tech |
| | 1/9/2012 | 73.49 | 25.12 | --- | --- | 48.37 | Blaine Tech |
| | 4/16/2012 | 73.49 | 25.40 | --- | --- | 48.09 | Blaine Tech |
| | 7/9/2012 | 73.49 | 26.96 | --- | --- | 46.53 | Blaine Tech |
| | 10/15/2012 | 73.49 | 25.48 | 25.44 | 0.04 | 48.04 | Blaine Tech |
| | 4/8/2013 | 73.49 | 26.60 | 26.51 | 0.09 | 46.96 | Blaine Tech |
| | 9/24/2013 | 73.49 | 27.90 | 27.74 | 0.16 | 45.72 | CH2M HILL |
| | 10/7/2013 | 73.49 | 27.34 | 27.28 | 0.06 | 46.20 | Blaine Tech |
| | 4/14/2014 | 73.49 | 30.34 | 26.80 | 3.54 | 45.96 | Blaine Tech |
| | 5/6/2014 | 73.49 | 30.93 | 26.74 | 4.19 | 45.89 | Nieto & Sons |
| | 5/12/2014 | 73.49 | 30.81 | 26.82 | 3.99 | 45.85 | Nieto & Sons |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 5/20/2014 | 73.49 | 31.78 | 27.32 | 4.46 | 45.26 | Nieto & Sons |
| | 5/27/2014 | 73.49 | 33.04 | 26.78 | 6.26 | 45.43 | Nieto & Sons |
| | 6/4/2014 | 73.49 | 33.00 | 27.75 | 5.25 | 44.66 | Nieto & Sons |
| | 6/10/2014 | 73.49 | 34.53 | 26.81 | 7.72 | 45.10 | Nieto & Sons |
| | 7/3/2014 | 73.49 | 34.27 | 26.94 | 7.33 | 45.05 | Blaine Tech |
| | 7/8/2014 | 73.49 | 33.87 | 26.87 | 7.00 | 45.19 | Blaine Tech |
| | 7/18/2014 | 73.49 | 33.36 | 27.07 | 6.29 | 45.13 | Blaine Tech |
| | 7/24/2014 | 73.49 | 33.00 | 26.98 | 6.02 | 45.28 | Blaine Tech |
| | 8/1/2014 | 73.49 | 31.80 | 26.83 | 4.97 | 45.64 | Blaine Tech |
| | 8/8/2014 | 73.49 | 31.26 | 26.91 | 4.35 | 45.69 | Blaine Tech |
| | 8/13/2014 | 73.49 | 31.18 | 26.88 | 4.30 | 45.73 | Blaine Tech |
| | 8/19/2014 | 73.49 | 31.01 | 26.86 | 4.15 | 45.78 | Blaine Tech |
| | 8/29/2014 | 73.49 | 31.03 | 26.89 | 4.14 | 45.75 | Blaine Tech |
| | 9/5/2014 | 73.49 | 31.19 | 26.88 | 4.31 | 45.73 | Blaine Tech |
| | 9/18/2014 | 73.49 | 31.30 | 26.82 | 4.48 | 45.75 | Blaine Tech |
| | 9/26/2014 | 73.49 | 31.33 | 26.89 | 4.44 | 45.69 | Blaine Tech |
| | 10/1/2014 | 73.49 | 31.21 | 26.85 | 4.36 | 45.75 | Blaine Tech |
| | 10/6/2014 | 73.49 | 31.20 | 29.84 | 1.36 | 43.37 | Blaine Tech |
| | 10/14/2014 | 73.49 | 31.14 | 26.86 | 4.28 | 45.75 | Blaine Tech |
| | 10/23/2014 | 73.49 | 31.30 | 26.85 | 4.45 | 45.73 | Blaine Tech |
| | 10/27/2014 | 73.49 | 31.28 | 26.90 | 4.38 | 45.69 | Blaine Tech |
| | 11/3/2014 | 73.49 | 32.30 | 26.84 | 5.46 | 45.53 | Blaine Tech |
| | 11/10/2014 | 73.49 | 31.45 | 26.91 | 4.54 | 45.65 | Blaine Tech |
| | 11/18/2014 | 73.49 | 32.34 | 26.90 | 5.44 | 45.47 | Blaine Tech |
| | 11/25/2014 | 73.49 | 31.57 | 27.87 | 3.70 | 44.86 | Blaine Tech |
| | 12/3/2014 | 73.49 | 33.87 | 28.81 | 5.06 | 43.64 | Blaine Tech |
| | 12/19/2014 | 73.49 | 32.78 | 26.97 | 5.81 | 45.33 | Blaine Tech |
| | 4/22/2015 | 73.49 | 33.35 | 26.91 | 6.44 | 45.26 | Blaine Tech |
| | 5/21/2015 | 73.49 | 34.31 | 27.35 | 6.96 | 44.71 | Northstar |
| | 5/29/2015 | 73.49 | 34.15 | 27.24 | 6.91 | 44.83 | Northstar |
| | 6/2/2015 | 73.49 | 34.00 | 27.27 | 6.73 | 44.84 | Northstar |
| | 6/5/2015 | 73.49 | 34.00 | 27.50 | 6.50 | 44.66 | Northstar |
| | 6/12/2015 | 73.49 | 33.96 | 27.35 | 6.61 | 44.78 | Northstar |
| | 6/19/2015 | 73.49 | 33.98 | 27.58 | 6.40 | 44.60 | Northstar |
| | 6/26/2015 | 73.49 | 33.97 | 28.15 | 5.82 | 44.15 | Northstar |
| | 7/2/2015 | 73.49 | 33.83 | 28.20 | 5.63 | 44.14 | Northstar |
| | 7/7/2015 | 73.49 | 33.60 | 27.93 | 5.67 | 44.40 | Northstar |
| | 7/17/2015 | 73.49 | 33.57 | 27.85 | 5.72 | 44.47 | Northstar |
| | 7/24/2015 | 73.49 | 33.15 | 28.25 | 4.90 | 44.24 | Northstar |
| | 7/29/2015 | 73.49 | 33.02 | 28.10 | 4.92 | 44.38 | Northstar |
| | 8/11/2015 | 73.49 | 33.00 | 28.90 | 4.10 | 43.75 | Northstar |
| | 8/18/2015 | 73.49 | 32.65 | 28.23 | 4.42 | 44.35 | Northstar |
| | 8/28/2015 | 73.49 | 32.41 | 28.17 | 4.24 | 44.45 | Kinder Morgan |
| | 9/1/2015 | 73.49 | 33.18 | 28.65 | 4.53 | 43.91 | Kinder Morgan |
| | 9/25/2015 | 73.49 | 34.69 | 28.03 | 6.66 | 44.09 | Kinder Morgan |
| | 10/16/2015 | 73.49 | 34.63 | 27.83 | 6.80 | 44.27 | Kinder Morgan |
| | 10/19/2015 | 73.49 | 34.65 | 27.82 | 6.83 | 44.27 | Blaine Tech |
| | 10/30/2015 | 73.49 | 39.38 | 28.11 | 11.27 | 43.07 | Kinder Morgan |
| | 3/14/2016 | 73.49 | 32.40 | 31.60 | 0.80 | 41.73 | Blaine Tech |
| GMW-O-15 | 11/12/2007 | 74.23 | 23.95 | 23.85 | 0.10 | 50.36 | Stantec |
| | 4/14/2008 | 74.23 | 23.64 | --- | --- | 50.59 | Stantec |
| | 8/8/2008 | 74.23 | 24.60 | --- | --- | 49.63 | Envent |
| | 8/11/2008 | 74.23 | 24.40 | 24.34 | 0.06 | 49.88 | Stantec |
| | 10/16/2008 | 74.23 | 24.53 | --- | --- | 49.70 | Envent |
| | 12/18/2008 | 74.23 | 24.86 | --- | --- | 49.37 | Envent |
| | 1/2/2009 | 74.23 | 24.82 | --- | --- | 49.41 | Envent |
| | 1/15/2009 | 74.23 | 26.01 | --- | --- | 48.22 | Envent |
| | 2/20/2009 | 74.23 | 24.80 | --- | --- | 49.43 | Envent |
| | 2/23/2009 | 74.23 | 24.76 | 24.74 | 0.02 | 49.49 | Blaine Tech |
| | 3/24/2009 | 74.23 | 25.55 | --- | --- | 48.68 | Envent |
| | 4/20/2009 | 74.23 | 24.66 | 24.61 | 0.05 | 49.61 | Blaine Tech |
| | 7/17/2009 | 74.23 | 25.01 | --- | --- | 49.22 | Envent |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 7/22/2009 | 74.23 | 24.99 | 24.94 | 0.05 | 49.28 | Blaine Tech |
| | 10/19/2009 | 74.23 | 25.55 | 25.43 | 0.12 | 48.78 | Blaine Tech |
| | 2/4/2010 | 74.23 | 25.50 | 25.48 | 0.02 | 48.75 | Kinder Morgan |
| | 4/16/2010 | 74.23 | 23.10 | --- | --- | 51.13 | Blaine Tech |
| | 5/24/2010 | 74.23 | 25.67 | --- | --- | 48.56 | Blaine Tech |
| | 5/28/2010 | 74.23 | 25.35 | --- | --- | 48.88 | Blaine Tech |
| | 6/22/2010 | 74.23 | 25.81 | --- | --- | 48.42 | Blaine Tech |
| | 10/4/2010 | 74.23 | 25.85 | 25.80 | 0.05 | 48.42 | Blaine Tech |
| | 11/23/2010 | 74.23 | 53.17 | --- | --- | 21.06 | Blaine Tech |
| | 12/22/2010 | 74.23 | 26.31 | --- | --- | 47.92 | Blaine Tech |
| | 1/10/2011 | 74.23 | 25.97 | --- | --- | 48.26 | Blaine Tech |
| | 4/12/2011 | 74.23 | 22.55 | 22.53 | 0.02 | 51.70 | Blaine Tech |
| | 10/10/2011 | 74.23 | 23.79 | 23.22 | 0.57 | 50.90 | Blaine Tech |
| | 12/2/2011 | 74.23 | 23.92 | 23.86 | 0.06 | 50.36 | Kinder Morgan |
| | 12/21/2011 | 74.23 | 31.13 | --- | --- | 43.10 | Blaine Tech |
| | 1/9/2012 | 74.23 | 27.67 | --- | --- | 46.56 | Blaine Tech |
| | 2/23/2012 | 74.23 | 31.18 | --- | --- | 43.05 | Blaine Tech |
| | 3/28/2012 | 74.23 | 30.30 | --- | --- | 43.93 | Blaine Tech |
| | 4/16/2012 | 74.23 | 26.56 | 26.51 | 0.05 | 47.71 | Blaine Tech |
| | 5/25/2012 | 74.23 | 26.64 | --- | --- | 47.59 | Blaine Tech |
| | 6/15/2012 | 74.23 | 26.93 | --- | --- | 47.30 | Blaine Tech |
| | 7/9/2012 | 74.23 | 25.47 | --- | --- | 48.76 | Blaine Tech |
| | 9/26/2012 | 74.23 | 30.64 | --- | --- | 43.59 | Blaine Tech |
| | 10/15/2012 | 74.23 | 31.82 | --- | --- | 42.41 | Blaine Tech |
| | 12/26/2012 | 74.23 | 27.41 | --- | --- | 46.82 | Blaine Tech |
| | 1/14/2013 | 74.23 | 27.62 | --- | --- | 46.61 | Blaine Tech |
| | 4/26/2013 | 74.23 | 27.90 | --- | --- | 46.33 | Kinder Morgan |
| | 10/7/2013 | 74.23 | 29.03 | 28.26 | 0.77 | 45.82 | Blaine Tech |
| | 4/18/2014 | 74.23 | 28.40 | 28.08 | 0.32 | 46.09 | Blaine Tech |
| | 8/14/2014 | 74.23 | 32.59 | 28.26 | 4.33 | 45.10 | Blaine Tech |
| | 8/19/2014 | 74.23 | 32.34 | 28.23 | 4.11 | 45.18 | Blaine Tech |
| | 8/29/2014 | 74.23 | 31.84 | 28.25 | 3.59 | 45.26 | Blaine Tech |
| | 9/5/2014 | 74.23 | 31.91 | 28.29 | 3.62 | 45.22 | Blaine Tech |
| | 9/11/2014 | 74.23 | 32.16 | 28.79 | 3.37 | 44.77 | Blaine Tech |
| | 9/18/2014 | 74.23 | 32.50 | 28.23 | 4.27 | 45.15 | Blaine Tech |
| | 9/26/2014 | 74.23 | 32.20 | 28.27 | 3.93 | 45.17 | Blaine Tech |
| | 10/1/2014 | 74.23 | 31.93 | 28.28 | 3.65 | 45.22 | Blaine Tech |
| | 10/6/2014 | 74.23 | 31.91 | 28.27 | 3.64 | 45.23 | Blaine Tech |
| | 10/14/2014 | 74.23 | 31.85 | 28.29 | 3.56 | 45.23 | Blaine Tech |
| | 10/23/2014 | 74.23 | 32.10 | 28.30 | 3.80 | 45.17 | Blaine Tech |
| | 10/27/2014 | 74.23 | 30.26 | no product | 0.00 | 43.97 | Blaine Tech |
| | 11/18/2014 | 74.23 | 31.86 | 28.39 | 3.47 | 45.15 | Blaine Tech |
| | 11/25/2014 | 74.23 | 32.36 | 28.35 | 4.01 | 45.08 | Blaine Tech |
| | 12/3/2014 | 74.23 | 31.73 | 28.36 | 3.37 | 45.20 | Blaine Tech |
| | 12/12/2014 | 74.23 | 32.61 | 28.54 | 4.07 | 44.88 | Blaine Tech |
| | 12/19/2014 | 74.23 | 32.62 | 28.37 | 4.25 | 45.01 | Blaine Tech |
| | 4/20/2015 | 74.23 | 31.93 | 28.82 | 3.11 | 44.79 | Blaine Tech |
| | 10/19/2015 | 74.23 | 31.91 | 28.89 | 3.02 | 44.74 | Blaine Tech |
| GMW-O-18 | 04/30/2007 | 74.36 | 24.21 | --- | --- | 50.15 | Secor |
| | 11/12/2007 | 74.36 | 22.46 | --- | --- | 51.90 | Secor |
| | 04/14/2008 | 74.36 | 24.50 | --- | --- | 49.86 | Secor |
| | 10/13/2008 | 74.36 | 25.46 | --- | --- | 48.90 | Stantec |
| | 4/20/2009 | 74.36 | 25.59 | --- | --- | 48.77 | Blaine Tech |
| | 10/19/2009 | 74.36 | 26.31 | --- | --- | 48.05 | Blaine Tech |
| | 3/15/2010 | 74.36 | 26.54 | --- | --- | 47.82 | Blaine Tech |
| | 4/16/2010 | 74.36 | 24.25 | --- | --- | 50.11 | Blaine Tech |
| | 5/24/2010 | 74.36 | 26.26 | --- | --- | 48.10 | Blaine Tech |
| | 5/28/2010 | 74.36 | 26.03 | --- | --- | 48.33 | Blaine Tech |
| | 10/4/2010 | 74.36 | 29.95 | --- | --- | 44.41 | Blaine Tech |
| | 4/12/2011 | 74.36 | 22.88 | --- | --- | 51.48 | Blaine Tech |
| | 10/10/2011 | 74.36 | 23.68 | --- | --- | 50.68 | Blaine Tech |
| | 12/2/2011 | 74.36 | 24.22 | --- | --- | 50.14 | Blaine Tech |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 12/21/2011 | 74.36 | 27.14 | --- | --- | 47.22 | Blaine Tech |
| | 2/23/2012 | 74.36 | 31.18 | --- | --- | 43.18 | Blaine Tech |
| | 4/16/2012 | 74.36 | 27.10 | --- | --- | 47.26 | Blaine Tech |
| | 5/25/2012 | 74.36 | 27.31 | --- | --- | 47.05 | Blaine Tech |
| | 6/15/2012 | 74.36 | 35.13 | --- | --- | 39.23 | Blaine Tech |
| | 7/9/2012 | 74.36 | 29.51 | --- | --- | 44.85 | Blaine Tech |
| | 9/26/2012 | 74.36 | 30.83 | --- | --- | 43.53 | Blaine Tech |
| | 10/15/2012 | 74.36 | 29.73 | --- | --- | 44.63 | Blaine Tech |
| | 12/26/2012 | 74.36 | 28.87 | --- | --- | 45.49 | Blaine Tech |
| | 1/14/2013 | 74.36 | 28.92 | --- | --- | 45.44 | Blaine Tech |
| | 4/10/2013 | 74.36 | 28.10 | --- | --- | 46.26 | Blaine Tech |
| | 10/7/2013 | 74.36 | 26.67 | --- | --- | 47.69 | Blaine Tech |
| | 4/18/2014 | 74.36 | 29.43 | 29.37 | 0.06 | 44.98 | Blaine Tech |
| | 8/14/2014 | 74.36 | 29.87 | 29.45 | 0.42 | 44.83 | Blaine Tech |
| | 8/19/2014 | 74.36 | 29.97 | 29.58 | 0.39 | 44.70 | Blaine Tech |
| | 8/29/2014 | 74.36 | 29.77 | 29.34 | 0.43 | 44.93 | Blaine Tech |
| | 9/11/2014 | 74.36 | 29.96 | 29.61 | 0.35 | 44.68 | Blaine Tech |
| | 9/18/2014 | 74.36 | 29.95 | 29.56 | 0.39 | 44.72 | Blaine Tech |
| | 9/26/2014 | 74.36 | 29.97 | 29.55 | 0.42 | 44.73 | Blaine Tech |
| | 10/1/2014 | 74.36 | 29.90 | 29.52 | 0.38 | 44.76 | Blaine Tech |
| | 10/6/2014 | 74.36 | 29.94 | 29.56 | 0.38 | 44.72 | Blaine Tech |
| | 10/14/2014 | 74.36 | 29.94 | 29.58 | 0.36 | 44.71 | Blaine Tech |
| | 10/23/2014 | 74.36 | 30.00 | 29.62 | 0.38 | 44.66 | Blaine Tech |
| | 10/27/2014 | 74.36 | 29.95 | 29.52 | 0.43 | 44.75 | Blaine Tech |
| | 4/20/2015 | 74.36 | 28.53 | --- | --- | 45.83 | Blaine Tech |
| | 10/19/2015 | 74.36 | 30.90 | --- | --- | 43.46 | Blaine Tech |
| GMW-O-20 | 8/15/2008 | 73.32 | 25.90 | --- | --- | 47.42 | Envent |
| | 10/17/2008 | 73.32 | 25.82 | --- | --- | 47.50 | Envent |
| | 12/19/2008 | 73.32 | 27.15 | --- | --- | 46.17 | Envent |
| | 1/15/2009 | 73.32 | 26.53 | 26.09 | 0.44 | 47.15 | Envent |
| | 2/24/2009 | 73.32 | 27.85 | --- | --- | 45.47 | Envent |
| | 3/20/2009 | 73.32 | 28.81 | --- | --- | 44.51 | Envent |
| | 3/27/2009 | 73.32 | 27.84 | --- | --- | 45.48 | Envent |
| | 4/21/2009 | 73.32 | 28.70 | --- | --- | 44.62 | Envent |
| | 7/21/2009 | 73.32 | 24.10 | --- | --- | 49.22 | Envent |
| | 11/9/2009 | 73.32 | 25.60 | 25.40 | 0.20 | 47.88 | Kinder Morgan |
| | 6/22/2010 | 73.32 | 24.76 | 24.66 | 0.10 | 48.64 | Blaine Tech |
| | 10/4/2010 | 73.32 | 31.20 | 31.10 | 0.10 | 42.20 | Blaine Tech |
| | 1/10/2011 | 73.32 | 26.62 | 26.48 | 0.14 | 46.81 | Blaine Tech |
| | 4/11/2011 | 73.32 | 23.82 | --- | --- | 49.50 | Blaine Tech |
| | 10/10/2011 | 73.32 | 24.05 | --- | --- | 49.27 | Blaine Tech |
| | 1/9/2012 | 73.32 | 24.68 | --- | --- | 48.64 | Blaine Tech |
| | 4/16/2012 | 73.32 | 26.18 | --- | --- | 47.14 | Blaine Tech |
| | 7/9/2012 | 73.32 | 32.92 | --- | --- | 40.40 | Blaine Tech |
| | 10/15/2012 | 73.32 | 32.97 | 32.95 | 0.02 | 40.37 | Blaine Tech |
| | 1/14/2013 | 73.32 | 32.98 | 32.93 | 0.05 | 40.38 | Blaine Tech |
| | 4/8/2013 | 73.32 | 29.63 | 26.46 | 3.17 | 46.27 | Blaine Tech |
| | 9/24/2013 | 73.32 | 31.10 | 27.20 | 3.90 | 45.40 | CH2M HILL |
| | 10/7/2013 | 73.32 | 32.09 | 27.06 | 5.03 | 45.33 | Blaine Tech |
| | 4/25/2014 | 73.32 | 28.48 | 28.40 | 0.08 | 44.91 | Blaine Tech |
| | 9/18/2014 | 73.32 | 30.71 | 27.72 | 2.99 | 45.05 | Blaine Tech |
| | 9/26/2014 | 73.32 | 30.87 | 27.75 | 3.12 | 44.99 | Blaine Tech |
| | 10/1/2014 | 73.32 | 30.52 | 27.65 | 2.87 | 45.14 | Blaine Tech |
| | 10/6/2014 | 73.32 | 30.50 | 27.66 | 2.84 | 45.13 | Blaine Tech |
| | 10/14/2014 | 73.32 | 30.63 | 27.62 | 3.01 | 45.14 | Blaine Tech |
| | 10/23/2014 | 73.32 | 30.80 | 27.70 | 3.10 | 45.05 | Blaine Tech |
| | 10/27/2014 | 73.32 | 30.70 | 27.76 | 2.94 | 45.02 | Blaine Tech |
| | 11/3/2014 | 73.32 | 30.81 | 27.62 | 3.19 | 45.11 | Blaine Tech |
| | 11/10/2014 | 73.32 | 30.94 | 27.75 | 3.19 | 44.98 | Blaine Tech |
| | 11/18/2014 | 73.32 | 30.91 | 27.65 | 3.26 | 45.07 | Blaine Tech |
| | 11/25/2014 | 73.32 | 30.95 | 27.65 | 3.30 | 45.06 | Blaine Tech |
| | 12/3/2014 | 73.32 | 32.56 | 27.83 | 4.73 | 44.61 | Blaine Tech |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 12/19/2014 | 73.32 | 31.72 | 27.93 | 3.79 | 44.69 | Blaine Tech |
| | 4/22/2015 | 73.32 | 32.25 | 27.98 | 4.27 | 44.55 | Blaine Tech |
| | 10/22/2015 | 73.32 | 31.36 | 29.38 | 1.98 | 43.57 | Kinder Morgan |
| | 3/16/2016 | 73.32 | 32.54 | --- | --- | 40.78 | Kinder Morgan |
| GMW-O-21 | 12/28/2007 | 71.43 | 27.67 | --- | --- | 43.76 | Geomatrix |
| | 10/17/2008 | 71.43 | 26.00 | --- | --- | 45.43 | Envent |
| | 12/19/2008 | 71.43 | 24.82 | --- | --- | 46.61 | Envent |
| | 3/27/2009 | 71.43 | 26.41 | --- | --- | 45.02 | Envent |
| | 7/21/2009 | 71.43 | 24.88 | --- | --- | 46.55 | Envent |
| | 11/9/2009 | 71.43 | 25.02 | --- | --- | 46.41 | Kinder Morgan |
| | 10/4/2010 | 71.43 | 25.40 | --- | --- | 46.03 | Blaine Tech |
| | 4/13/2011 | 71.43 | 23.72 | --- | --- | 47.71 | Blaine Tech |
| | 10/10/2011 | 71.43 | 24.65 | --- | --- | 46.78 | Blaine Tech |
| | 10/15/2012 | 71.43 | 32.50 | --- | --- | 38.93 | Blaine Tech |
| | 9/25/2013 | 71.43 | 29.25 | --- | --- | 42.18 | CH2M HILL |
| | 4/14/2014 | 71.43 | 28.65 | 28.61 | 0.04 | 42.81 | Blaine Tech |
| | 9/5/2014 | 71.43 | 29.61 | 28.78 | 0.83 | 42.48 | Blaine Tech |
| | 9/26/2014 | 71.43 | 29.85 | 28.77 | 1.08 | 42.44 | Blaine Tech |
| | 10/1/2014 | 71.43 | 29.79 | 28.64 | 1.15 | 42.56 | Blaine Tech |
| | 10/6/2014 | 71.43 | 29.40 | 28.72 | 0.68 | 42.57 | Blaine Tech |
| | 10/27/2014 | 71.43 | 29.75 | 28.93 | 0.82 | 42.34 | Blaine Tech |
| | 11/10/2014 | 71.43 | 29.98 | 28.95 | 1.03 | 42.27 | Blaine Tech |
| | 11/18/2014 | 71.43 | 30.05 | 28.92 | 1.13 | 42.28 | Blaine Tech |
| | 11/25/2014 | 71.43 | 29.73 | 28.85 | 0.88 | 42.40 | Blaine Tech |
| | 12/12/2014 | 71.43 | 30.61 | 29.02 | 1.59 | 42.09 | Blaine Tech |
| | 12/19/2014 | 71.43 | 30.62 | 29.04 | 1.58 | 42.07 | Blaine Tech |
| | 4/20/2015 | 71.43 | 30.15 | 28.99 | 1.16 | 42.21 | Blaine Tech |
| | 6/10/2015 | 71.43 | 31.00 | 30.70 | 0.30 | 40.67 | Blaine Tech |
| | 7/2/2015 | 71.43 | 32.30 | 29.88 | 2.42 | 41.07 | Northstar |
| | 7/7/2015 | 71.43 | 30.65 | 30.06 | 0.59 | 41.25 | Northstar |
| | 7/17/2015 | 71.43 | 30.40 | 30.10 | 0.30 | 41.27 | Northstar |
| | 7/29/2015 | 71.43 | 30.40 | 30.10 | 0.30 | 41.27 | Northstar |
| | 8/11/2015 | 71.43 | 31.00 | 30.70 | 0.30 | 40.67 | Northstar |
| | 10/19/2015 | 71.43 | 31.43 | 31.20 | 0.23 | 40.18 | Blaine Tech |
| | 3/14/2016 | 71.43 | 33.20 | 33.17 | 0.03 | 38.25 | Blaine Tech |
| GMW-O-23 | 8/14/2007 | 73.63 | 23.33 | --- | --- | 50.30 | Geomatrix |
| | 8/21/2007 | 73.63 | 23.31 | --- | --- | 50.32 | Geomatrix |
| | 8/28/2007 | 73.63 | 23.00 | --- | --- | 50.63 | Stantec |
| | 9/11/2007 | 73.63 | 23.42 | --- | --- | 50.21 | Geomatrix |
| | 10/5/2007 | 73.63 | 27.79 | --- | --- | 45.84 | Geomatrix |
| | 11/2/2007 | 73.63 | 25.15 | --- | --- | 48.48 | Geomatrix |
| | 11/13/2007 | 73.63 | 23.90 | --- | --- | 49.73 | Stantec |
| | 12/28/2007 | 73.63 | 24.91 | --- | --- | 48.72 | Geomatrix |
| | 8/15/2008 | 73.63 | 26.28 | --- | --- | 47.35 | Envent |
| | 10/17/2008 | 73.63 | 27.16 | --- | --- | 46.47 | Envent |
| | 12/19/2008 | 73.63 | 27.60 | --- | --- | 46.03 | Envent |
| | 1/15/2009 | 73.63 | 27.54 | --- | --- | 46.09 | Envent |
| | 2/24/2009 | 73.63 | 26.19 | --- | --- | 47.44 | Envent |
| | 3/27/2009 | 73.63 | 23.74 | --- | --- | 49.89 | Envent |
| | 4/21/2009 | 73.63 | 27.30 | --- | --- | 46.33 | Envent |
| | 11/9/2009 | 73.63 | 27.50 | --- | --- | 46.13 | Kinder Morgan |
| | 6/22/2010 | 73.63 | 32.10 | --- | --- | 41.53 | Blaine Tech |
| | 10/4/2010 | 73.63 | 25.92 | --- | --- | 47.71 | Blaine Tech |
| | 1/10/2011 | 73.63 | 27.45 | --- | --- | 46.18 | Blaine Tech |
| | 4/11/2011 | 73.63 | 25.03 | --- | --- | 48.60 | Blaine Tech |
| | 10/10/2011 | 73.63 | 25.25 | --- | --- | 48.38 | Blaine Tech |
| | 1/9/2012 | 73.63 | 25.91 | --- | --- | 47.72 | Blaine Tech |
| | 4/16/2012 | 73.63 | 27.38 | --- | --- | 46.25 | Blaine Tech |
| | 7/9/2012 | 73.63 | 27.41 | --- | --- | 46.22 | Blaine Tech |
| | 10/15/2012 | 73.63 | 26.48 | --- | --- | 47.15 | Blaine Tech |
| | 1/14/2013 | 73.63 | 29.35 | --- | --- | 44.28 | Blaine Tech |
| | 4/8/2013 | 73.63 | 29.81 | 27.74 | 2.07 | 45.48 | Blaine Tech |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 9/23/2013 | 73.63 | 29.90 | --- | --- | 43.73 | CH2M HILL |
| | 10/7/2013 | 73.63 | 32.86 | 28.30 | 4.56 | 44.42 | Blaine Tech |
| | 4/25/2014 | 73.63 | 29.81 | 29.66 | 0.15 | 43.94 | Blaine Tech |
| | 9/5/2014 | 73.63 | 32.57 | 28.76 | 3.81 | 44.11 | Blaine Tech |
| | 9/11/2014 | 73.63 | 32.94 | 28.63 | 4.31 | 44.14 | Blaine Tech |
| | 9/18/2014 | 73.63 | 32.80 | 28.65 | 4.15 | 44.15 | Blaine Tech |
| | 9/26/2014 | 73.63 | 32.87 | 28.70 | 4.17 | 44.10 | Blaine Tech |
| | 10/1/2014 | 73.63 | 32.56 | 28.75 | 3.81 | 44.12 | Blaine Tech |
| | 10/6/2014 | 73.63 | 32.50 | 28.73 | 3.77 | 44.15 | Blaine Tech |
| | 10/14/2014 | 73.63 | 32.75 | 28.20 | 4.55 | 44.52 | Blaine Tech |
| | 10/23/2014 | 73.63 | 32.80 | 28.69 | 4.11 | 44.12 | Blaine Tech |
| | 10/27/2014 | 73.63 | 32.51 | 28.80 | 3.71 | 44.09 | Blaine Tech |
| | 11/3/2014 | 73.63 | 32.82 | 29.68 | 3.14 | 43.32 | Blaine Tech |
| | 11/10/2014 | 73.63 | 32.80 | 28.78 | 4.02 | 44.05 | Blaine Tech |
| | 11/18/2014 | 73.63 | 32.78 | 29.78 | 3.00 | 43.25 | Blaine Tech |
| | 11/25/2014 | 73.63 | 32.64 | 28.78 | 3.86 | 44.08 | Blaine Tech |
| | 12/3/2014 | 73.63 | 33.25 | 28.94 | 4.31 | 43.83 | Blaine Tech |
| | 12/12/2014 | 73.63 | 32.58 | 29.33 | 3.25 | 43.65 | Blaine Tech |
| | 12/19/2014 | 73.63 | 32.71 | 29.37 | 3.34 | 43.59 | Blaine Tech |
| | 3/17/2015 | 73.63 | 30.40 | 30.00 | 0.40 | 43.55 | Kinder Morgan |
| | 4/22/2015 | 73.63 | 33.08 | 30.36 | 2.72 | 42.73 | Blaine Tech |
| | 10/22/2015 | 73.63 | 32.82 | 30.46 | 2.36 | 42.70 | Kinder Morgan |
| | 3/16/2016 | 73.63 | 34.43 | --- | --- | 39.20 | Kinder Morgan |
| GMW-SF-9 | 4/21/2009 | 73.00 | 24.19 | --- | --- | 48.81 | Envent |
| | 5/24/2010 | 73.00 | 28.31 | --- | --- | 44.69 | Blaine Tech |
| | 5/28/2010 | 73.00 | 28.37 | --- | --- | 44.63 | Blaine Tech |
| | 10/4/2010 | 73.00 | 25.28 | --- | --- | 47.72 | Blaine Tech |
| | 4/11/2011 | 73.00 | 23.90 | --- | --- | 49.10 | Blaine Tech |
| | 10/10/2011 | 73.00 | 24.70 | --- | --- | 48.30 | Blaine Tech |
| | 4/16/2012 | 73.05 | 26.99 | --- | --- | 46.06 | Blaine Tech |
| | 10/15/2012 | 73.05 | 34.21 | --- | --- | 38.84 | Blaine Tech |
| | 4/10/2013 | 73.05 | 27.37 | --- | --- | 45.68 | Blaine Tech |
| | 8/14/2014 | 73.05 | 29.35 | 28.37 | 0.98 | 44.48 | Blaine Tech |
| | 8/19/2014 | 73.05 | 28.46 | 28.44 | 0.02 | 44.61 | Blaine Tech |
| | 8/29/2014 | 73.05 | 29.32 | 28.31 | 1.01 | 44.54 | Blaine Tech |
| | 9/5/2014 | 73.05 | 29.33 | 28.29 | 1.04 | 44.55 | Blaine Tech |
| | 9/11/2014 | 73.05 | 29.49 | 28.47 | 1.02 | 44.38 | Blaine Tech |
| | 9/18/2014 | 73.05 | 28.95 | 28.91 | 0.04 | 44.13 | Blaine Tech |
| | 9/26/2014 | 73.05 | 28.93 | 28.59 | 0.34 | 44.39 | Blaine Tech |
| | 4/20/2015 | 73.05 | 29.01 | --- | --- | 44.04 | Blaine Tech |
| | 10/21/2015 | 73.05 | 26.69 | --- | --- | 46.36 | Blaine Tech |
| GMW-SF-10 | 4/21/2009 | 75.77 | 27.10 | --- | --- | 48.67 | Envent |
| | 10/4/2010 | 75.77 | 28.03 | --- | --- | 47.74 | Blaine Tech |
| | 4/11/2011 | 75.77 | 26.80 | --- | --- | 48.97 | Blaine Tech |
| | 10/10/2011 | 75.77 | 27.60 | --- | --- | 48.17 | Blaine Tech |
| | 4/16/2012 | 75.77 | 28.81 | --- | --- | 46.96 | Blaine Tech |
| | 10/15/2012 | 75.77 | 29.88 | --- | --- | 45.89 | Blaine Tech |
| GWR-3 | 11/12/2007 | 74.93 | 27.90 | --- | --- | 47.03 | Stantec |
| | 10/17/2008 | 74.93 | 29.88 | --- | --- | 45.05 | Envent |
| | 12/17/2008 | 74.93 | 19.71 | --- | --- | 55.22 | Envent |
| | 1/15/2009 | 74.93 | 29.27 | 29.26 | 0.26 | 45.88 | Envent |
| | 3/27/2009 | 74.93 | 27.18 | --- | --- | 47.75 | Envent |
| | 4/21/2009 | 74.93 | 29.97 | --- | --- | 44.96 | Envent |
| | 7/21/2009 | 74.93 | 28.77 | --- | --- | 46.16 | Envent |
| | 10/4/2010 | 74.93 | 30.67 | --- | --- | 44.26 | Blaine Tech |
| | 4/11/2011 | 74.93 | 29.94 | --- | --- | 44.99 | Blaine Tech |
| | 10/10/2011 | 74.93 | 29.22 | --- | --- | 45.71 | Blaine Tech |
| | 4/16/2012 | 77.60 | 29.56 | --- | --- | 48.04 | Blaine Tech |
| | 10/15/2012 | 77.60 | 31.21 | --- | --- | 46.39 | Blaine Tech |
| | 4/8/2013 | 77.60 | 29.21 | 29.18 | 0.03 | 48.41 | Blaine Tech |
| | 10/7/2013 | 77.60 | 36.20 | 31.67 | 4.53 | 45.16 | Blaine Tech |
| | 4/14/2014 | 77.6 | 38.80 | 32.23 | 6.57 | 44.25 | Blaine Tech |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 5/5/2014 | 77.6 | 38.81 | 32.31 | 6.50 | 44.19 | Nieto & Sons |
| | 5/12/2014 | 77.6 | 36.34 | 32.77 | 3.57 | 44.22 | Nieto & Sons |
| | 5/27/2014 | 77.6 | 36.11 | 33.20 | 2.91 | 43.91 | Nieto & Sons |
| | 6/4/2014 | 77.6 | 34.57 | 31.61 | 2.96 | 45.49 | Nieto & Sons |
| | 8/8/2014 | 77.6 | 37.92 | 33.38 | 4.54 | 43.45 | Blaine Tech |
| | 8/13/2014 | 77.6 | 35.38 | 33.18 | 2.20 | 44.05 | Blaine Tech |
| | 8/19/2014 | 77.6 | 35.28 | 33.25 | 2.03 | 44.00 | Blaine Tech |
| | 8/29/2014 | 77.6 | 35.72 | 33.12 | 2.60 | 44.04 | Blaine Tech |
| | 9/5/2014 | 77.6 | 35.68 | 33.19 | 2.49 | 43.99 | Blaine Tech |
| | 9/11/2014 | 77.6 | 36.05 | 33.04 | 3.01 | 44.05 | Blaine Tech |
| | 9/18/2014 | 77.6 | 35.34 | 33.27 | 2.07 | 43.98 | Blaine Tech |
| | 9/26/2014 | 77.6 | 35.25 | 33.24 | 2.01 | 44.02 | Blaine Tech |
| | 10/1/2014 | 77.6 | 36.44 | 34.01 | 2.43 | 43.18 | Blaine Tech |
| | 10/6/2014 | 77.6 | 34.71 | 33.33 | 1.38 | 44.04 | Blaine Tech |
| | 10/14/2014 | 77.6 | 35.15 | 33.20 | 1.95 | 44.07 | Blaine Tech |
| | 10/23/2014 | 77.6 | 35.36 | 33.20 | 2.16 | 44.03 | Blaine Tech |
| | 10/27/2014 | 77.6 | 34.68 | 33.49 | 1.19 | 43.91 | Blaine Tech |
| | 11/3/2014 | 77.6 | 35.43 | 33.18 | 2.25 | 44.04 | Blaine Tech |
| | 11/10/2014 | 77.6 | 35.02 | 33.32 | 1.70 | 43.99 | Blaine Tech |
| | 11/18/2014 | 77.6 | 35.05 | 33.34 | 1.71 | 43.97 | Blaine Tech |
| | 11/25/2014 | 77.6 | 35.04 | 33.36 | 1.68 | 43.95 | Blaine Tech |
| | 12/3/2014 | 77.6 | 34.95 | 33.34 | 1.61 | 43.99 | Blaine Tech |
| | 12/12/2014 | 77.6 | 35.11 | 33.64 | 1.47 | 43.71 | Blaine Tech |
| | 12/19/2014 | 77.6 | 35.55 | 33.67 | 1.88 | 43.61 | Blaine Tech |
| | 4/20/2015 | 77.6 | 37.25 | 33.34 | 3.91 | 43.60 | Blaine Tech |
| | 7/24/2015 | 77.6 | 41.30 | 33.95 | 7.35 | 42.40 | Northstar |
| | 8/12/2015 | 77.6 | 37.03 | 34.42 | 2.61 | 42.74 | Northstar |
| | 10/20/2015 | 77.6 | 35.98 | 34.65 | 1.33 | 42.72 | Blaine Tech |
| | 3/16/2016 | 77.6 | 38.60 | --- | --- | 39.00 | Kinder Morgan |
| MW-18 (MID) | 04/30/2007 | 75.67 | 29.77 | --- | --- | 45.90 | Secor |
| | 11/12/2007 | 75.67 | 30.23 | --- | --- | 45.44 | Secor |
| | 04/14/2008 | 75.67 | 30.45 | --- | --- | 45.22 | Secor |
| | 10/13/2008 | 75.67 | 31.15 | --- | --- | 44.52 | Stantec |
| | 4/20/2009 | 75.67 | 31.49 | --- | --- | 44.18 | Blaine Tech |
| | 10/19/2009 | 75.67 | 32.62 | --- | --- | 43.05 | Blaine Tech |
| | 5/24/2010 | 75.67 | 32.26 | --- | --- | 43.41 | Blaine Tech |
| | 5/28/2010 | 75.67 | 32.17 | --- | --- | 43.50 | Blaine Tech |
| | 10/4/2010 | 75.67 | 32.30 | --- | --- | 43.37 | Blaine Tech |
| | 4/11/2011 | 75.67 | 31.28 | --- | --- | 44.39 | Blaine Tech |
| | 10/10/2011 | 75.67 | 31.51 | --- | --- | 44.16 | Blaine Tech |
| | 4/16/2012 | 75.67 | 31.75 | --- | --- | 43.92 | Blaine Tech |
| | 10/15/2012 | 75.67 | 33.41 | --- | --- | 42.26 | Blaine Tech |
| | 4/8/2013 | 75.67 | 30.68 | --- | --- | 44.99 | Blaine Tech |
| | 10/7/2013 | 75.67 | 35.33 | --- | --- | 40.34 | Blaine Tech |
| | 4/14/2014 | 75.67 | 35.40 | --- | --- | 40.27 | Blaine Tech |
| | 10/27/2014 | 75.67 | 35.81 | --- | --- | 39.86 | Blaine Tech |
| | 4/20/2015 | 75.67 | 36.29 | --- | --- | 39.38 | Blaine Tech |
| | 10/19/2015 | 75.67 | 36.99 | --- | --- | 38.68 | Blaine Tech |
| | 3/14/2016 | 75.67 | 40.70 | --- | --- | 34.97 | Blaine Tech |
| MW-O-1 | 8/14/2007 | 75.48 | 25.31 | 23.78 | 1.53 | 51.39 | Geomatrix |
| | 8/21/2007 | 75.48 | 23.84 | 23.58 | 0.26 | 51.85 | Geomatrix |
| | 8/28/2007 | 75.48 | 23.07 | 23.06 | 0.01 | 52.42 | Stantec |
| | 9/11/2007 | 75.48 | 23.86 | 23.48 | 0.38 | 51.92 | Geomatrix |
| | 10/5/2007 | 75.48 | 24.67 | --- | --- | 50.81 | Geomatrix |
| | 11/2/2007 | 75.48 | 24.25 | --- | --- | 51.23 | Geomatrix |
| | 11/12/2007 | 75.48 | 24.27 | 24.25 | 0.02 | 51.23 | Stantec |
| | 12/28/2007 | 75.48 | 25.54 | 25.51 | 0.03 | 49.96 | Geomatrix |
| | 8/19/2008 | 75.48 | 25.18 | 25.13 | 0.05 | 50.34 | Envent |
| | 10/17/2008 | 75.48 | 25.30 | --- | --- | 50.18 | Envent |
| | 12/19/2008 | 75.48 | 26.31 | --- | --- | 49.17 | Envent |
| | 1/15/2009 | 75.48 | 25.84 | --- | --- | 49.64 | Envent |
| | 4/21/2009 | 75.48 | 25.41 | --- | --- | 50.07 | Envent |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 10/19/2009 | 75.48 | 26.30 | --- | --- | 49.18 | Blaine Tech |
| | 10/4/2010 | 75.48 | 26.90 | --- | --- | 48.58 | Blaine Tech |
| | 4/11/2011 | 75.48 | 25.59 | --- | --- | 49.89 | Blaine Tech |
| | 10/10/2011 | 75.48 | 26.52 | --- | --- | 48.96 | Blaine Tech |
| | 4/16/2012 | 75.48 | 27.25 | --- | --- | 48.23 | Blaine Tech |
| | 10/15/2012 | 75.48 | 28.94 | --- | --- | 46.54 | Blaine Tech |
| | 4/8/2013 | 75.48 | 28.81 | --- | --- | 46.67 | Blaine Tech |
| | 10/7/2013 | 75.48 | 29.21 | --- | --- | 46.27 | Blaine Tech |
| | 4/14/2014 | 75.48 | 29.82 | --- | --- | 45.66 | Blaine Tech |
| | 10/27/2014 | 75.48 | 29.92 | --- | --- | 45.56 | Blaine Tech |
| | 4/20/2015 | 75.48 | 30.39 | --- | --- | 45.09 | Blaine Tech |
| | 10/27/2015 | 75.48 | 27.67 | --- | --- | 47.81 | Blaine Tech |
| | 3/14/2016 | 75.48 | DRY | --- | --- | --- | Blaine Tech |
| MW-O-2 | 11/12/2007 | 71.90 | 23.10 | --- | --- | 48.80 | Stantec |
| | 10/17/2008 | 71.90 | 24.85 | --- | --- | 47.05 | Envent |
| | 12/19/2008 | 71.90 | 25.51 | --- | --- | 46.39 | Envent |
| | 3/27/2009 | 71.90 | 25.22 | --- | --- | 46.68 | Envent |
| | 7/21/2009 | 71.90 | 23.63 | --- | --- | 48.27 | Envent |
| | 11/9/2009 | 71.90 | 25.39 | --- | --- | 46.51 | Kinder Morgan |
| | 10/4/2010 | 71.90 | 26.05 | --- | --- | 45.85 | Blaine Tech |
| | 4/13/2011 | 71.90 | 23.31 | --- | --- | 48.59 | Blaine Tech |
| | 10/10/2011 | 71.90 | 27.53 | --- | --- | 44.37 | Blaine Tech |
| | 1/9/2012 | 71.90 | 28.13 | --- | --- | 43.77 | Blaine Tech |
| | 7/9/2012 | 71.90 | 26.53 | --- | --- | 45.37 | Blaine Tech |
| | 10/15/2012 | 71.90 | 26.89 | --- | --- | 45.01 | Blaine Tech |
| | 1/14/2013 | 71.90 | 26.93 | --- | --- | 44.97 | Blaine Tech |
| | 6/6/2013 | 71.90 | 28.99 | --- | --- | 42.91 | Blaine Tech |
| | 10/7/2013 | 71.9 | 29.06 | --- | --- | 42.84 | Blaine Tech |
| | 4/14/2014 | 71.9 | 29.36 | --- | --- | 42.54 | Blaine Tech |
| | 10/27/2014 | 71.9 | 29.81 | --- | --- | 42.09 | Blaine Tech |
| | 4/20/2015 | 71.9 | 30.94 | 29.34 | 1.60 | 42.24 | Blaine Tech |
| | 5/21/2015 | 71.9 | 32.50 | 27.31 | 5.19 | 43.55 | Northstar |
| | 5/29/2015 | 71.9 | 31.52 | 30.20 | 1.32 | 41.44 | Northstar |
| | 6/5/2015 | 71.9 | 31.45 | 30.57 | 0.88 | 41.15 | Northstar |
| | 6/12/2015 | 71.9 | 31.05 | 30.60 | 0.45 | 41.21 | Northstar |
| | 6/19/2015 | 71.9 | 31.10 | 30.90 | 0.20 | 40.96 | Northstar |
| | 6/26/2015 | 71.9 | 31.66 | 31.37 | 0.29 | 40.47 | Northstar |
| | 10/19/2015 | 71.9 | 32.39 | 30.53 | 1.86 | 41.00 | Blaine Tech |
| | 3/14/2016 | 71.9 | 35.49 | 34.86 | 0.63 | 36.91 | Blaine Tech |
| MW-SF-1 | 8/28/2007 | 78.93 | 27.94 | --- | --- | 50.99 | Stantec |
| | 11/12/2007 | 78.93 | 28.76 | --- | --- | 50.17 | Stantec |
| | 2/19/2008 | 78.93 | 29.50 | --- | --- | 49.43 | Stantec |
| | 4/14/2008 | 78.93 | 29.16 | --- | --- | 49.77 | Stantec |
| | 8/11/2008 | 78.93 | 29.75 | --- | --- | 49.18 | Stantec |
| | 10/13/2008 | 78.93 | 29.86 | --- | --- | 49.07 | Stantec |
| | 2/23/2009 | 78.93 | 30.00 | --- | --- | 48.93 | Blaine Tech |
| | 4/20/2009 | 78.93 | 29.97 | --- | --- | 48.96 | Blaine Tech |
| | 7/22/2009 | 78.93 | 30.98 | --- | --- | 47.95 | Blaine Tech |
| | 10/19/2009 | 78.93 | 31.11 | --- | --- | 47.82 | Blaine Tech |
| | 3/15/2010 | 78.93 | 31.74 | --- | --- | 47.19 | Blaine Tech |
| | 5/24/2010 | 78.93 | 30.79 | --- | --- | 48.14 | Blaine Tech |
| | 5/28/2010 | 78.93 | 30.57 | --- | --- | 48.36 | Blaine Tech |
| | 6/22/2010 | 78.93 | 30.84 | --- | --- | 48.09 | Blaine Tech |
| | 7/12/2010 | 78.93 | 30.51 | --- | --- | 48.42 | Blaine Tech |
| | 10/4/2010 | 78.93 | 30.88 | --- | --- | 48.05 | Blaine Tech |
| | 1/10/2011 | 78.93 | 32.51 | --- | --- | 46.42 | Blaine Tech |
| | 4/11/2011 | 78.93 | 29.87 | --- | --- | 49.06 | Blaine Tech |
| | 7/11/2011 | 78.93 | 29.84 | --- | --- | 49.09 | Blaine Tech |
| | 10/10/2011 | 78.93 | 29.60 | --- | --- | 49.33 | Blaine Tech |
| | 1/9/2012 | 78.93 | 31.25 | --- | --- | 47.68 | Blaine Tech |
| | 4/16/2012 | 78.93 | 32.59 | --- | --- | 46.34 | Blaine Tech |
| | 7/9/2012 | 78.93 | 31.24 | --- | --- | 47.69 | Blaine Tech |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 10/15/2012 | 78.93 | 32.23 | --- | --- | 46.70 | Blaine Tech |
| | 1/14/2013 | 78.93 | 33.88 | --- | --- | 45.05 | Blaine Tech |
| | 4/8/2013 | 78.93 | 33.38 | --- | --- | 45.55 | Blaine Tech |
| | 10/7/2013 | 78.93 | 37.14 | 31.72 | 5.42 | 46.13 | Blaine Tech |
| | 4/14/2014 | 78.93 | 37.40 | 32.69 | 4.71 | 45.30 | Blaine Tech |
| | 5/6/2014 | 78.93 | 39.99 | 32.82 | 7.17 | 44.68 | Nieto & Sons |
| | 5/12/2014 | 78.93 | 37.31 | 33.55 | 3.76 | 44.63 | Nieto & Sons |
| | 5/20/2014 | 78.93 | 37.10 | 34.60 | 2.50 | 43.83 | Nieto & Sons |
| | 5/27/2014 | 78.93 | 36.62 | 34.30 | 2.32 | 44.17 | Nieto & Sons |
| | 6/4/2014 | 78.93 | 35.98 | 35.27 | 0.71 | 43.52 | Nieto & Sons |
| | 6/10/2014 | 78.93 | 36.91 | 34.48 | 2.43 | 43.96 | Nieto & Sons |
| | 7/3/2014 | 78.93 | 36.72 | 34.71 | 2.01 | 43.82 | Nieto & Sons |
| | 7/8/2014 | 78.93 | 36.60 | 34.45 | 2.15 | 44.05 | Blaine Tech |
| | 7/18/2014 | 78.93 | 35.18 | 34.77 | 0.41 | 44.08 | Blaine Tech |
| | 7/24/2014 | 78.93 | 35.30 | 34.62 | 0.68 | 44.17 | Blaine Tech |
| | 8/1/2014 | 78.93 | 34.74 | 34.44 | 0.30 | 44.43 | Blaine Tech |
| | 8/14/2014 | 78.93 | 34.75 | 34.41 | 0.34 | 44.45 | Blaine Tech |
| | 8/19/2014 | 78.93 | 34.66 | 34.37 | 0.29 | 44.50 | Blaine Tech |
| | 8/29/2014 | 78.93 | 35.65 | 35.38 | 0.27 | 43.50 | Blaine Tech |
| | 9/18/2014 | 78.93 | 34.85 | 34.49 | 0.36 | 44.37 | Blaine Tech |
| | 9/26/2014 | 78.93 | 34.78 | 34.45 | 0.33 | 44.41 | Blaine Tech |
| | 10/1/2014 | 78.93 | 34.77 | 34.41 | 0.36 | 44.45 | Blaine Tech |
| | 10/6/2014 | 78.93 | 34.78 | 34.42 | 0.36 | 44.44 | Blaine Tech |
| | 10/14/2014 | 78.93 | 34.65 | 34.41 | 0.24 | 44.47 | Blaine Tech |
| | 10/23/2014 | 78.93 | 34.84 | 34.45 | 0.39 | 44.40 | Blaine Tech |
| | 10/27/2014 | 78.93 | 34.80 | 34.43 | 0.37 | 44.43 | Blaine Tech |
| | 11/10/2014 | 78.93 | 34.91 | 34.51 | 0.40 | 44.34 | Blaine Tech |
| | 11/18/2014 | 78.93 | 34.80 | 34.43 | 0.37 | 44.43 | Blaine Tech |
| | 11/25/2014 | 78.93 | 34.53 | 34.51 | 0.02 | 44.42 | Blaine Tech |
| | 12/12/2014 | 78.93 | 35.18 | 34.78 | 0.40 | 44.07 | Blaine Tech |
| | 12/19/2014 | 78.93 | 35.34 | 34.88 | 0.46 | 43.96 | Blaine Tech |
| | 12/19/2014 | 78.93 | 35.34 | 34.88 | 0.46 | 43.96 | Blaine Tech |
| | 4/20/2015 | 78.93 | 34.89 | 34.48 | 0.41 | 44.37 | Blaine Tech |
| | 5/19/2015 | 78.93 | 38.45 | 34.55 | 3.90 | 43.60 | Northstar |
| | 5/29/2015 | 78.93 | 36.36 | 35.22 | 1.14 | 43.48 | Northstar |
| | 6/5/2015 | 78.93 | 36.50 | 35.43 | 1.07 | 43.29 | Northstar |
| | 6/12/2015 | 78.93 | 35.80 | 35.41 | 0.39 | 43.44 | Northstar |
| | 6/19/2015 | 78.93 | 36.02 | 35.42 | 0.60 | 43.39 | Northstar |
| | 6/26/2015 | 78.93 | 36.60 | 36.45 | 0.15 | 42.45 | Northstar |
| | 10/19/2015 | 78.93 | 36.35 | 35.53 | 0.82 | 43.24 | Blaine Tech |
| | 11/17/2015 | 78.93 | 35.65 | --- | --- | 43.28 | Kinder Morgan |
| | 3/14/2016 | 78.93 | 40.40 | --- | --- | 38.53 | Blaine Tech |
| MW-SF-2 | 11/12/2007 | 78.53 | 29.18 | 28.71 | 0.47 | 49.73 | Stantec |
| | 8/12/2008 | 78.53 | 31.11 | --- | --- | 47.42 | Envent |
| | 10/17/2008 | 78.53 | 31.55 | 31.50 | 0.05 | 47.02 | Envent |
| | 12/18/2008 | 78.53 | 32.75 | 32.55 | 0.20 | 45.94 | Envent |
| | 1/15/2009 | 78.53 | 30.84 | 30.57 | 0.27 | 47.91 | Envent |
| | 3/24/2009 | 78.53 | 28.85 | --- | --- | 49.68 | Envent |
| | 4/21/2009 | 78.53 | 29.98 | --- | --- | 48.55 | Envent |
| | 7/21/2009 | 78.53 | 29.85 | --- | --- | 48.68 | Envent |
| | 12/9/2009 | 78.53 | 31.45 | --- | --- | 47.08 | Kinder Morgan |
| | 10/4/2010 | 78.53 | 30.96 | 30.75 | 0.21 | 47.74 | Blaine Tech |
| | 1/10/2011 | 78.53 | 32.62 | 32.50 | 0.12 | 46.01 | Blaine Tech |
| | 4/11/2011 | 78.53 | 29.83 | --- | --- | 48.70 | Blaine Tech |
| | 10/10/2011 | 78.53 | 29.82 | --- | --- | 48.71 | Blaine Tech |
| | 1/9/2012 | 78.53 | 30.52 | --- | --- | 48.01 | Blaine Tech |
| | 4/16/2012 | 78.53 | 31.28 | --- | --- | 47.25 | Blaine Tech |
| | 7/9/2012 | 78.53 | 33.18 | --- | --- | 45.35 | Blaine Tech |
| | 10/15/2012 | 78.53 | 32.11 | --- | --- | 46.42 | Blaine Tech |
| | 1/14/2013 | 78.53 | 33.59 | --- | --- | 44.94 | Blaine Tech |
| | 4/8/2013 | 78.53 | 33.32 | --- | --- | 45.21 | Blaine Tech |
| | 10/7/2013 | 78.53 | 34.58 | 33.08 | 1.50 | 45.15 | Blaine Tech |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 4/14/2014 | 78.53 | 37.50 | 33.27 | 4.23 | 44.41 | Blaine Tech |
| | 5/6/2014 | 78.53 | 37.71 | 33.24 | 4.47 | 44.40 | Nieto & Sons |
| | 5/12/2014 | 78.53 | 37.53 | 33.34 | 4.19 | 44.35 | Nieto & Sons |
| | 5/20/2014 | 78.53 | 37.62 | 33.51 | 4.11 | 44.20 | Nieto & Sons |
| | 5/27/2014 | 78.53 | 38.24 | 33.77 | 4.47 | 43.87 | Nieto & Sons |
| | 6/4/2014 | 78.53 | 34.63 | --- | --- | 43.90 | Nieto & Sons |
| | 6/10/2014 | 78.53 | 38.49 | 34.00 | 4.49 | 43.63 | Nieto & Sons |
| | 8/8/2014 | 78.53 | 36.23 | 33.82 | 2.41 | 44.23 | Blaine Tech |
| | 8/13/2014 | 78.53 | 36.75 | 33.59 | 3.16 | 44.31 | Blaine Tech |
| | 8/19/2014 | 78.53 | 36.90 | 33.60 | 3.30 | 44.27 | Blaine Tech |
| | 8/29/2014 | 78.53 | 37.11 | 33.53 | 3.58 | 44.28 | Blaine Tech |
| | 9/5/2014 | 78.53 | 37.09 | 33.51 | 3.58 | 44.30 | Blaine Tech |
| | 9/11/2014 | 78.53 | 37.12 | 33.51 | 3.61 | 44.30 | Blaine Tech |
| | 9/18/2014 | 78.53 | 36.89 | 33.60 | 3.29 | 44.27 | Blaine Tech |
| | 9/26/2014 | 78.53 | 37.28 | 33.54 | 3.74 | 44.24 | Blaine Tech |
| | 10/1/2014 | 78.53 | 37.18 | 33.56 | 3.62 | 44.25 | Blaine Tech |
| | 10/6/2014 | 78.53 | 37.16 | 33.59 | 3.57 | 44.23 | Blaine Tech |
| | 10/14/2014 | 78.53 | 37.15 | 33.64 | 3.51 | 44.19 | Blaine Tech |
| | 10/23/2014 | 78.53 | 37.24 | 33.61 | 3.63 | 44.19 | Blaine Tech |
| | 10/27/2014 | 78.53 | 37.04 | 33.54 | 3.50 | 44.29 | Blaine Tech |
| | 11/3/2014 | 78.53 | 37.14 | 33.55 | 3.59 | 44.26 | Blaine Tech |
| | 11/10/2014 | 78.53 | 37.33 | 33.56 | 3.77 | 44.22 | Blaine Tech |
| | 11/18/2014 | 78.53 | 37.21 | 33.64 | 3.57 | 44.18 | Blaine Tech |
| | 11/25/2014 | 78.53 | 37.40 | 33.69 | 3.71 | 44.10 | Blaine Tech |
| | 12/3/2014 | 78.53 | 37.16 | 33.60 | 3.56 | 44.22 | Blaine Tech |
| | 12/12/2014 | 78.53 | 38.05 | 33.91 | 4.14 | 43.79 | Blaine Tech |
| | 12/19/2014 | 78.53 | 38.40 | 33.95 | 4.45 | 43.69 | Blaine Tech |
| | 4/20/2015 | 78.53 | 36.15 | 34.73 | 1.42 | 43.52 | Blaine Tech |
| | 6/25/2015 | 78.53 | 38.95 | 35.57 | 3.38 | 42.28 | Blaine Tech |
| | 10/21/2015 | 78.53 | 36.32 | 36.13 | 0.19 | 42.36 | Kinder Morgan |
| | 3/16/2016 | 78.53 | 39.27 | --- | --- | 39.26 | Kinder Morgan |
| MW-SF-3 | 11/12/2007 | 78.12 | 29.34 | 28.28 | 1.06 | 49.63 | Stantec |
| | 8/12/2008 | 78.12 | 30.30 | 29.05 | 1.25 | 48.82 | Envent |
| | 10/17/2008 | 78.12 | 29.45 | --- | --- | 48.67 | Envent |
| | 12/18/2008 | 78.12 | 31.08 | 30.82 | 0.26 | 47.25 | Envent |
| | 1/15/2009 | 78.12 | 29.96 | 29.94 | 0.02 | 48.18 | Envent |
| | 3/20/2009 | 78.12 | 31.10 | --- | --- | 47.02 | Envent |
| | 3/24/2009 | 78.12 | 27.82 | --- | --- | 50.30 | Envent |
| | 4/21/2009 | 78.12 | 29.51 | 29.50 | 0.01 | 48.62 | Envent |
| | 7/21/2009 | 78.12 | 30.07 | --- | --- | 48.05 | Envent |
| | 11/6/2009 | 78.12 | 30.37 | 30.35 | 0.02 | 47.77 | Kinder Morgan |
| | 12/9/2009 | 78.12 | 30.53 | --- | --- | 47.59 | Kinder Morgan |
| | 9/3/2010 | 78.12 | 30.97 | 30.42 | 0.55 | 47.59 | Kinder Morgan |
| | 10/4/2010 | 78.12 | 30.88 | 30.30 | 0.58 | 47.70 | Blaine Tech |
| | 4/12/2011 | 78.12 | 29.44 | --- | --- | 48.68 | Blaine Tech |
| | 10/10/2011 | 78.12 | 30.75 | --- | --- | 47.37 | Blaine Tech |
| | 10/15/2012 | 78.12 | 32.47 | --- | --- | 45.65 | Blaine Tech |
| | 5/24/2013 | 78.12 | 33.35 | 32.51 | 0.84 | 45.44 | Blaine Tech |
| | 9/25/2013 | 78.12 | 34.40 | --- | --- | 43.72 | CH2M HILL |
| | 11/14/2013 | 78.12 | 33.26 | --- | --- | 44.86 | CH2M HILL |
| | 4/18/2014 | 78.12 | 33.72 | 33.62 | 0.10 | 44.48 | Blaine Tech |
| | 8/8/2014 | 78.12 | 34.07 | 33.71 | 0.36 | 44.34 | Blaine Tech |
| | 10/14/2014 | 78.12 | 34.55 | 33.92 | 0.63 | 44.07 | Blaine Tech |
| | 10/23/2014 | 78.12 | 34.57 | 33.94 | 0.63 | 44.05 | Blaine Tech |
| | 10/27/2014 | 78.12 | 34.49 | 33.85 | 0.64 | 44.14 | Blaine Tech |
| | 11/10/2014 | 78.12 | 34.65 | 33.94 | 0.71 | 44.04 | Blaine Tech |
| | 11/18/2014 | 78.12 | 34.62 | 33.88 | 0.74 | 44.09 | Blaine Tech |
| | 11/25/2014 | 78.12 | 34.22 | 33.94 | 0.28 | 44.12 | Blaine Tech |
| | 12/12/2014 | 78.12 | 34.89 | 34.38 | 0.51 | 43.64 | Blaine Tech |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 12/19/2014 | 78.12 | 35.04 | 34.43 | 0.61 | 43.57 | Blaine Tech |
| | 4/20/2015 | 78.12 | 34.52 | --- | --- | 43.60 | Blaine Tech |
| | 10/21/2015 | 78.12 | 35.18 | --- | --- | 42.94 | Kinder Morgan |
| | 3/14/2016 | 78.12 | 39.43 | 39.40 | 0.03 | 38.71 | Blaine Tech |
| MW-SF-4 | 8/14/2007 | 79.38 | 30.34 | 28.38 | 1.96 | 50.60 | Geomatrix |
| | 8/28/2007 | 79.38 | 29.95 | 28.30 | 1.65 | 50.74 | Stantec |
| | 9/11/2007 | 79.38 | 29.98 | 28.43 | 1.55 | 50.63 | Geomatrix |
| | 10/5/2007 | 79.38 | 30.68 | 28.85 | 1.83 | 50.15 | Geomatrix |
| | 10/12/2007 | 79.38 | 30.27 | 29.96 | 0.31 | 49.36 | Geomatrix |
| | 10/19/2007 | 79.38 | 30.28 | --- | --- | 49.10 | Geomatrix |
| | 10/26/2007 | 79.38 | 30.52 | --- | --- | 48.86 | Geomatrix |
| | 11/2/2007 | 79.38 | 30.68 | --- | --- | 48.70 | Geomatrix |
| | 11/12/2007 | 79.38 | 29.70 | 29.69 | 0.01 | 49.69 | Stantec |
| | 12/21/2007 | 79.38 | 30.69 | --- | --- | 48.69 | Geomatrix |
| | 2/19/2008 | 79.38 | 30.22 | --- | --- | 49.16 | Stantec |
| | 3/21/2008 | 79.38 | 30.07 | --- | --- | 49.31 | Envent |
| | 4/14/2008 | 79.38 | 29.95 | --- | --- | 49.43 | Stantec |
| | 8/8/2008 | 79.38 | 30.51 | --- | --- | 48.87 | Envent |
| | 8/11/2008 | 79.38 | 30.57 | --- | --- | 48.81 | Stantec |
| | 10/16/2008 | 79.38 | 30.77 | --- | --- | 48.61 | Envent |
| | 1/15/2009 | 79.38 | 31.14 | --- | --- | 48.24 | Envent |
| | 2/20/2009 | 79.38 | 30.84 | --- | --- | 48.54 | Envent |
| | 2/23/2009 | 79.38 | 30.96 | --- | --- | 48.42 | Blaine Tech |
| | 4/20/2009 | 79.38 | 30.02 | 29.94 | 0.08 | 49.42 | Blaine Tech |
| | 4/28/2009 | 79.38 | 30.78 | --- | --- | 48.60 | Envent |
| | 7/17/2009 | 79.38 | 31.85 | --- | --- | 47.53 | Envent |
| | 7/22/2009 | 79.38 | 31.65 | 31.61 | 0.04 | 47.76 | Blaine Tech |
| | 10/19/2009 | 79.38 | 31.93 | 31.90 | 0.03 | 47.47 | Blaine Tech |
| | 3/15/2010 | 79.38 | 31.95 | 31.91 | 0.04 | 47.46 | Blaine Tech |
| | 5/24/2010 | 79.38 | 31.60 | --- | --- | 47.78 | Blaine Tech |
| | 5/28/2010 | 79.38 | 26.40 | --- | --- | 52.98 | Blaine Tech |
| | 6/22/2010 | 79.38 | 31.63 | --- | --- | 47.75 | Blaine Tech |
| | 7/12/2010 | 79.38 | 31.37 | --- | --- | 48.01 | Blaine Tech |
| | 10/4/2010 | 79.38 | 31.81 | --- | --- | 47.57 | Blaine Tech |
| | 1/10/2011 | 79.38 | 32.99 | --- | --- | 46.39 | Blaine Tech |
| | 4/11/2011 | 79.38 | 30.85 | --- | --- | 48.53 | Blaine Tech |
| | 7/11/2011 | 79.38 | 30.35 | --- | --- | 49.03 | Blaine Tech |
| | 1/9/2012 | 79.38 | 32.07 | --- | --- | 47.31 | Blaine Tech |
| | 4/16/2012 | 79.38 | 33.35 | --- | --- | 46.03 | Blaine Tech |
| | 7/9/2012 | 79.38 | 32.11 | --- | --- | 47.27 | Blaine Tech |
| | 10/15/2012 | 79.38 | 34.04 | --- | --- | 45.34 | Blaine Tech |
| | 1/14/2013 | 79.38 | 34.52 | --- | --- | 44.86 | Blaine Tech |
| | 4/8/2013 | 79.38 | Dry | --- | --- | --- | Blaine Tech |
| | 10/7/2013 | 79.38 | Dry | --- | --- | --- | Blaine Tech |
| | 4/25/2014 | 79.38 | 40.03 | 34.23 | 5.80 | 43.96 | Blaine Tech |
| | 5/6/2014 | 79.38 | 39.78 | 33.91 | 5.87 | 44.27 | Nieto & Sons |
| | 5/12/2014 | 79.38 | 37.02 | 34.64 | 2.38 | 44.25 | Nieto & Sons |
| | 5/20/2014 | 79.38 | 36.60 | 35.60 | 1.00 | 43.58 | Nieto & Sons |
| | 5/27/2014 | 79.38 | 36.12 | 35.45 | 0.67 | 43.79 | Nieto & Sons |
| | 6/4/2014 | 79.38 | 36.54 | 35.91 | 0.63 | 43.34 | Nieto & Sons |
| | 6/10/2014 | 79.38 | 37.02 | 35.38 | 1.64 | 43.66 | Nieto & Sons |
| | 7/3/2014 | 79.38 | 36.98 | 35.63 | 1.35 | 43.47 | Nieto & Sons |
| | 7/8/2014 | 79.38 | 36.78 | 35.34 | 1.44 | 43.74 | Blaine Tech |
| | 7/18/2014 | 79.38 | 35.88 | 35.55 | 0.33 | 43.76 | Blaine Tech |
| | 7/24/2014 | 79.38 | 35.98 | 35.42 | 0.56 | 43.85 | Blaine Tech |
| | 8/1/2014 | 79.38 | 35.57 | 35.30 | 0.27 | 44.02 | Blaine Tech |
| | 8/14/2014 | 79.38 | 35.42 | 35.23 | 0.19 | 44.11 | Blaine Tech |
| | 8/19/2014 | 79.38 | 35.36 | 35.21 | 0.15 | 44.14 | Blaine Tech |
| | 8/29/2014 | 79.38 | 35.32 | 35.20 | 0.12 | 44.16 | Blaine Tech |
| | 9/18/2014 | 79.38 | 35.55 | 35.30 | 0.25 | 44.03 | Blaine Tech |
| | 9/26/2014 | 79.38 | 35.56 | 35.30 | 0.26 | 44.03 | Blaine Tech |
| | 10/1/2014 | 79.38 | 35.56 | 35.24 | 0.32 | 44.07 | Blaine Tech |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 10/6/2014 | 79.38 | 35.48 | 35.22 | 0.26 | 44.11 | Blaine Tech |
| | 10/14/2014 | 79.38 | 35.33 | 35.20 | 0.13 | 44.15 | Blaine Tech |
| | 10/23/2014 | 79.38 | 35.51 | 35.22 | 0.29 | 44.10 | Blaine Tech |
| | 10/27/2014 | 79.38 | 35.54 | 35.25 | 0.29 | 44.07 | Blaine Tech |
| | 11/18/2014 | 79.38 | 35.56 | 35.25 | 0.31 | 44.07 | Blaine Tech |
| | 11/25/2014 | 79.38 | 35.66 | 35.32 | 0.34 | 43.99 | Blaine Tech |
| | 12/12/2014 | 79.38 | 35.81 | 35.58 | 0.23 | 43.75 | Blaine Tech |
| | 12/19/2014 | 79.38 | 35.75 | 35.62 | 0.13 | 43.73 | Blaine Tech |
| | 4/20/2015 | 79.38 | 37.78 | 35.29 | 2.49 | 43.58 | Blaine Tech |
| | 5/19/2015 | 79.38 | 39.22 | 35.28 | 3.94 | 43.29 | Northstar |
| | 5/29/2015 | 79.38 | 37.10 | 35.80 | 1.30 | 43.31 | Northstar |
| | 6/5/2015 | 79.38 | 36.85 | 36.15 | 0.70 | 43.09 | Northstar |
| | 6/12/2015 | 79.38 | 36.55 | 36.15 | 0.40 | 43.15 | Northstar |
| | 6/19/2015 | 79.38 | 36.68 | 36.42 | 0.26 | 42.91 | Northstar |
| | 6/26/2015 | 79.38 | 37.23 | 36.96 | 0.27 | 42.36 | Northstar |
| | 10/19/2015 | 79.38 | 38.12 | 36.25 | 1.87 | 42.75 | Blaine Tech |
| | 11/17/2015 | 79.38 | 37.83 | 35.98 | 1.85 | 43.02 | Kinder Morgan |
| | 3/14/2016 | 79.38 | 40.80 | --- | --- | 38.58 | Kinder Morgan |
| MW-SF-5 | 8/21/2007 | 79.74 | 28.36 | --- | --- | 51.38 | Geomatrix |
| | 8/28/2007 | 79.74 | 28.84 | --- | --- | 50.90 | Stantec |
| | 10/5/2007 | 79.74 | 29.50 | --- | --- | 50.24 | Geomatrix |
| | 11/2/2007 | 79.74 | 31.50 | --- | --- | 48.24 | Geomatrix |
| | 11/12/2007 | 79.74 | 29.93 | --- | --- | 49.81 | Stantec |
| | 12/21/2007 | 79.74 | 31.00 | --- | --- | 48.74 | Geomatrix |
| | 4/14/2008 | 79.74 | 30.20 | --- | --- | 49.54 | Stantec |
| | 8/11/2008 | 79.74 | 30.85 | --- | --- | 48.89 | Stantec |
| | 10/13/2008 | 79.74 | 30.93 | --- | --- | 48.81 | Stantec |
| | 4/20/2009 | 79.74 | 30.99 | --- | --- | 48.75 | Blaine Tech |
| | 5/24/2010 | 79.74 | 31.55 | --- | --- | 48.19 | Blaine Tech |
| | 5/28/2010 | 79.74 | 31.44 | --- | --- | 48.30 | Blaine Tech |
| | 6/22/2010 | 79.74 | 31.57 | --- | --- | 48.17 | Blaine Tech |
| | 10/4/2010 | 79.74 | 31.39 | --- | --- | 48.35 | Blaine Tech |
| | 1/10/2011 | 79.74 | 33.80 | --- | --- | 45.94 | Blaine Tech |
| | 4/11/2011 | 79.74 | 31.03 | --- | --- | 48.71 | Blaine Tech |
| | 10/10/2011 | 79.74 | 31.28 | --- | --- | 48.46 | Blaine Tech |
| | 1/9/2012 | 79.74 | 32.12 | --- | --- | 47.62 | Blaine Tech |
| | 4/16/2012 | 79.74 | 33.30 | --- | --- | 46.44 | Blaine Tech |
| | 7/9/2012 | 79.74 | 34.45 | --- | --- | 45.29 | Blaine Tech |
| | 10/15/2012 | 79.74 | 33.28 | --- | --- | 46.46 | Blaine Tech |
| | 1/14/2013 | 79.74 | 33.37 | --- | --- | 46.37 | Blaine Tech |
| | 4/8/2013 | 79.74 | 34.28 | --- | --- | 45.46 | Blaine Tech |
| | 10/7/2013 | 79.74 | 34.58 | --- | --- | 45.16 | Blaine Tech |
| | 4/14/2014 | 79.74 | 35.33 | --- | --- | 44.41 | Blaine Tech |
| | 10/27/2014 | 79.74 | 35.48 | --- | --- | 44.26 | Blaine Tech |
| | 4/20/2015 | 79.74 | 36.05 | --- | --- | 43.69 | Blaine Tech |
| | 10/19/2015 | 79.74 | 36.82 | --- | --- | 42.92 | Blaine Tech |
| | 3/14/2016 | 79.74 | DRY | --- | --- | --- | Blaine Tech |
| MW-SF-6 | 11/12/2007 | 76.80 | 27.14 | --- | --- | 49.66 | Stantec |
| | 8/12/2008 | 76.80 | 29.82 | --- | --- | 46.98 | Envent |
| | 10/17/2008 | 76.80 | 29.75 | --- | --- | 47.05 | Envent |
| | 12/18/2008 | 76.80 | 30.73 | --- | --- | 46.07 | Envent |
| | 1/15/2009 | 76.80 | 31.35 | --- | --- | 45.45 | Envent |
| | 3/24/2009 | 76.80 | 30.50 | --- | --- | 46.30 | Envent |
| | 4/21/2009 | 76.80 | 28.45 | --- | --- | 48.35 | Envent |
| | 7/21/2009 | 76.80 | 27.22 | --- | --- | 49.58 | Envent |
| | 11/6/2009 | 76.80 | 29.10 | --- | --- | 47.70 | Kinder Morgan |
| | 12/9/2009 | 76.80 | 31.35 | --- | --- | 45.45 | Kinder Morgan |
| | 10/4/2010 | 76.80 | 29.09 | --- | --- | 47.71 | Blaine Tech |
| | 1/10/2011 | 76.80 | 30.87 | --- | --- | 45.93 | Blaine Tech |
| | 4/11/2011 | 76.80 | 28.16 | --- | --- | 48.64 | Blaine Tech |
| | 10/10/2011 | 76.80 | 28.21 | --- | --- | 48.59 | Blaine Tech |
| | 1/9/2012 | 76.80 | 29.03 | --- | --- | 47.77 | Blaine Tech |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 4/16/2012 | 76.80 | 29.66 | --- | --- | 47.14 | Blaine Tech |
| | 7/9/2012 | 76.80 | 31.46 | --- | --- | 45.34 | Blaine Tech |
| | 10/15/2012 | 76.80 | 31.44 | --- | --- | 45.36 | Blaine Tech |
| | 1/14/2013 | 76.80 | 31.53 | --- | --- | 45.27 | Blaine Tech |
| | 4/8/2013 | 76.80 | 30.21 | 28.81 | 1.40 | 47.71 | Blaine Tech |
| | 11/14/2013 | 76.8 | 31.90 | --- | --- | 44.90 | Blaine Tech |
| | 4/18/2014 | 76.8 | 33.30 | 32.15 | 1.15 | 44.42 | Blaine Tech |
| | 8/8/2014 | 76.8 | 34.50 | 33.31 | 1.19 | 43.25 | Blaine Tech |
| | 8/13/2014 | 76.8 | 32.95 | 32.54 | 0.41 | 44.18 | Blaine Tech |
| | 8/19/2014 | 76.8 | 32.87 | 32.62 | 0.25 | 44.13 | Blaine Tech |
| | 8/29/2014 | 76.8 | 32.79 | 32.56 | 0.23 | 44.19 | Blaine Tech |
| | 9/5/2014 | 76.8 | 32.81 | 32.59 | 0.22 | 44.17 | Blaine Tech |
| | 9/18/2014 | 76.8 | 32.95 | 32.65 | 0.30 | 44.09 | Blaine Tech |
| | 9/26/2014 | 76.8 | 32.94 | 32.61 | 0.33 | 44.12 | Blaine Tech |
| | 10/1/2014 | 76.8 | 32.91 | 32.60 | 0.31 | 44.14 | Blaine Tech |
| | 10/6/2014 | 76.8 | 32.90 | 32.61 | 0.29 | 44.13 | Blaine Tech |
| | 10/14/2014 | 76.8 | 33.72 | 33.60 | 0.12 | 43.18 | Blaine Tech |
| | 10/23/2014 | 76.8 | 34.57 | 33.94 | 0.63 | 42.73 | Blaine Tech |
| | 10/27/2014 | 76.8 | 32.92 | 32.58 | 0.34 | 44.15 | Blaine Tech |
| | 11/18/2014 | 76.8 | 32.99 | 32.62 | 0.37 | 44.11 | Blaine Tech |
| | 11/25/2014 | 76.8 | 32.66 | 32.58 | 0.08 | 44.20 | Blaine Tech |
| | 12/12/2014 | 76.8 | 33.45 | 33.07 | 0.38 | 43.65 | Blaine Tech |
| | 12/19/2014 | 76.8 | 33.60 | 33.15 | 0.45 | 43.56 | Blaine Tech |
| | 4/20/2015 | 76.8 | 33.23 | 33.11 | 0.12 | 43.67 | Blaine Tech |
| | 10/21/2015 | 76.8 | 34.28 | --- | --- | 42.52 | Kinder Morgan |
| | 3/14/2016 | 76.8 | 38.10 | 38.08 | 0.02 | 38.72 | Blaine Tech |
| MW-SF-9 | 8/14/2007 | 74.10 | 28.73 | 28.61 | 0.12 | 45.47 | Geomatrix |
| | 8/28/2007 | 74.10 | 20.55 | --- | --- | 53.55 | Stantec |
| | 8/21/2007 | 74.10 | 26.55 | --- | --- | 47.55 | Geomatrix |
| | 9/11/2007 | 74.10 | 19.40 | --- | --- | 54.70 | Geomatrix |
| | 10/5/2007 | 74.10 | 26.84 | --- | --- | 47.26 | Geomatrix |
| | 11/2/2007 | 74.10 | 22.76 | --- | --- | 51.34 | Geomatrix |
| | 11/12/2007 | 74.10 | 22.96 | --- | --- | 51.14 | Stantec |
| | 12/21/2007 | 74.10 | 24.05 | --- | --- | 50.05 | Geomatrix |
| | 4/14/2008 | 74.10 | 24.23 | --- | --- | 49.87 | Stantec |
| | 10/13/2008 | 74.10 | 24.83 | --- | --- | 49.27 | Stantec |
| | 4/20/2009 | 74.10 | 25.27 | --- | --- | 48.83 | Blaine Tech |
| | 10/19/2009 | 74.10 | 26.45 | --- | --- | 47.65 | Blaine Tech |
| | 5/24/2010 | 74.10 | 25.80 | --- | --- | 48.30 | Blaine Tech |
| | 5/28/2010 | 74.10 | 25.66 | --- | --- | 48.44 | Blaine Tech |
| | 6/22/2010 | 74.10 | 25.84 | --- | --- | 48.26 | Blaine Tech |
| | 10/4/2010 | 74.10 | 26.10 | --- | --- | 48.00 | Blaine Tech |
| | 1/10/2011 | 74.10 | 27.41 | --- | --- | 46.69 | Blaine Tech |
| | 4/11/2011 | 74.10 | 24.16 | --- | --- | 49.94 | Blaine Tech |
| | 10/10/2011 | 74.10 | 25.02 | --- | --- | 49.08 | Blaine Tech |
| | 1/9/2012 | 74.10 | 25.98 | --- | --- | 48.12 | Blaine Tech |
| | 4/16/2012 | 74.10 | 25.92 | --- | --- | 48.18 | Blaine Tech |
| | 7/9/2012 | 74.10 | 26.44 | --- | --- | 47.66 | Blaine Tech |
| | 4/8/2013 | 74.10 | 28.53 | --- | --- | 45.57 | Blaine Tech |
| | 10/7/2013 | 74.1 | 28.95 | --- | --- | 45.15 | Blaine Tech |
| | 4/25/2014 | 74.1 | 34.75 | 27.95 | 6.80 | 44.89 | Blaine Tech |
| | 5/5/2014 | 74.1 | 37.81 | 31.76 | 6.05 | 41.22 | Nieto & Sons |
| | 5/12/2014 | 74.1 | 32.32 | 29.11 | 3.21 | 44.40 | Nieto & Sons |
| | 5/20/2014 | 74.1 | 30.75 | 29.95 | 0.80 | 44.00 | Nieto & Sons |
| | 5/27/2014 | 74.1 | 38.08 | 32.32 | 5.76 | 40.71 | Nieto & Sons |
| | 6/4/2014 | 74.1 | 32.19 | 28.61 | 3.58 | 44.83 | Nieto & Sons |
| | 6/10/2014 | 74.1 | 36.27 | 28.85 | 7.42 | 43.88 | Nieto & Sons |
| | 7/3/2014 | 74.1 | 39.26 | 32.59 | 6.67 | 40.28 | Nieto & Sons |
| | 7/8/2014 | 74.1 | 36.40 | 28.60 | 7.80 | 44.06 | Blaine Tech |
| | 7/18/2014 | 74.1 | 31.04 | 29.66 | 1.38 | 44.18 | Blaine Tech |
| | 7/24/2014 | 74.1 | 31.15 | 29.85 | 1.30 | 44.01 | Blaine Tech |
| | 8/1/2014 | 74.1 | 30.25 | 29.85 | 0.40 | 44.18 | Blaine Tech |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 8/14/2014 | 74.1 | 30.13 | 29.82 | 0.31 | 44.22 | Blaine Tech |
| | 8/19/2014 | 74.1 | 30.08 | 29.85 | 0.23 | 44.21 | Blaine Tech |
| | 8/29/2014 | 74.1 | 30.10 | 29.81 | 0.29 | 44.24 | Blaine Tech |
| | 9/5/2014 | 74.1 | 30.13 | 29.84 | 0.29 | 44.21 | Blaine Tech |
| | 9/11/2014 | 74.1 | 29.49 | 28.47 | 1.02 | 45.44 | Blaine Tech |
| | 9/18/2014 | 74.1 | 30.29 | 29.90 | 0.39 | 44.13 | Blaine Tech |
| | 9/26/2014 | 74.1 | 30.25 | 29.84 | 0.41 | 44.18 | Blaine Tech |
| | 10/1/2014 | 74.1 | 30.24 | 29.84 | 0.40 | 44.19 | Blaine Tech |
| | 10/6/2014 | 74.1 | 30.24 | 29.83 | 0.41 | 44.19 | Blaine Tech |
| | 10/14/2014 | 74.1 | 30.12 | 29.81 | 0.31 | 44.23 | Blaine Tech |
| | 10/23/2014 | 74.1 | 30.27 | 29.85 | 0.42 | 44.17 | Blaine Tech |
| | 10/27/2014 | 74.1 | 30.29 | 29.89 | 0.40 | 44.14 | Blaine Tech |
| | 11/18/2014 | 74.1 | 30.35 | 29.86 | 0.49 | 44.15 | Blaine Tech |
| | 11/25/2014 | 74.1 | 30.42 | 29.91 | 0.51 | 44.10 | Blaine Tech |
| | 12/12/2014 | 74.1 | 30.65 | 30.10 | 0.55 | 43.90 | Blaine Tech |
| | 12/19/2014 | 74.1 | 30.80 | 30.13 | 0.67 | 43.85 | Blaine Tech |
| | 4/20/2015 | 74.1 | 36.69 | 27.67 | 9.02 | 44.76 | Blaine Tech |
| | 5/19/2015 | 74.1 | 35.68 | 26.83 | 8.85 | 45.63 | Blaine Tech |
| | 5/21/2015 | 74.1 | 32.50 | 27.31 | 5.19 | 45.83 | Northstar |
| | 5/29/2015 | 74.1 | 32.95 | 30.10 | 2.85 | 43.47 | Northstar |
| | 6/2/2015 | 74.1 | 31.67 | 30.45 | 1.22 | 43.42 | Northstar |
| | 6/5/2015 | 74.1 | 31.85 | 30.60 | 1.25 | 43.27 | Northstar |
| | 6/12/2015 | 74.1 | 31.28 | 30.75 | 0.53 | 43.25 | Northstar |
| | 6/19/2015 | 74.1 | 31.30 | 31.00 | 0.30 | 43.04 | Northstar |
| | 6/26/2015 | 74.1 | 31.20 | 29.50 | 1.70 | 44.29 | Northstar |
| | 8/11/2015 | 74.1 | 36.90 | 29.90 | 7.00 | 42.91 | Northstar |
| | 8/18/2015 | 74.1 | 35.19 | 30.25 | 4.94 | 42.94 | Northstar |
| | 8/28/2015 | 74.1 | 31.60 | 30.75 | 0.85 | 43.19 | Kinder Morgan |
| | 9/1/2015 | 74.1 | 31.78 | 30.90 | 0.88 | 43.04 | Kinder Morgan |
| | 9/1/2015 | 74.1 | 32.01 | 31.27 | 0.74 | 42.69 | Kinder Morgan |
| | 10/16/2015 | 74.1 | 31.60 | 31.09 | 0.51 | 42.92 | Blaine Tech |
| | 10/19/2015 | 74.1 | 31.44 | 31.04 | 0.40 | 42.99 | Kinder Morgan |
| | 10/30/2015 | 74.1 | 32.60 | 32.06 | 0.54 | 41.94 | Kinder Morgan |
| | 11/17/2015 | 74.1 | 31.71 | 31.68 | 0.03 | 42.41 | Kinder Morgan |
| | 3/14/2016 | 74.1 | 34.14 | --- | --- | 39.96 | Blaine Tech |
| MW-SF-10 | 10/17/2008 | 76.53 | 27.49 | --- | --- | 49.04 | Envent |
| | 10/19/2009 | 76.53 | 28.61 | --- | --- | 47.92 | Blaine Tech |
| | 10/4/2010 | 76.53 | 28.50 | 28.36 | 0.14 | 48.14 | Blaine Tech |
| | 4/11/2011 | 76.53 | 27.41 | 27.37 | 0.04 | 49.15 | Blaine Tech |
| | 10/10/2011 | 76.53 | 27.60 | --- | --- | 48.93 | Blaine Tech |
| | 4/16/2012 | 76.53 | 28.81 | --- | --- | 47.72 | Blaine Tech |
| | 10/15/2012 | 76.53 | 29.27 | --- | --- | 47.26 | Blaine Tech |
| | 4/8/2013 | 76.53 | Dry | --- | --- | --- | Blaine Tech |
| | 10/7/2013 | 76.53 | Dry | --- | --- | --- | Blaine Tech |
| | 4/14/2014 | 76.53 | Dry | --- | --- | --- | Blaine Tech |
| | 10/27/2014 | 76.53 | Dry | --- | --- | --- | Blaine Tech |
| | 4/20/2015 | 76.53 | Dry | --- | --- | --- | Blaine Tech |
| | 10/19/2015 | 76.53 | Dry | --- | --- | --- | Blaine Tech |
| | 3/14/2016 | 76.53 | Dry | --- | --- | --- | Blaine Tech |
| MW-SF-11 | 8/14/2007 | 78.56 | 28.58 | 28.30 | 0.28 | 50.20 | Geomatrix |
| | 8/21/2007 | 78.56 | 28.76 | 28.63 | 0.13 | 49.90 | Geomatrix |
| | 8/28/2007 | 78.56 | 28.22 | --- | --- | 50.34 | Stantec |
| | 9/11/2007 | 78.56 | 26.90 | --- | --- | 51.66 | Geomatrix |
| | 10/5/2007 | 78.56 | 28.43 | --- | --- | 50.13 | Geomatrix |
| | 11/2/2007 | 78.56 | 29.48 | 29.38 | 0.10 | 49.16 | Geomatrix |
| | 11/12/2007 | 78.56 | 29.03 | --- | --- | 49.53 | Stantec |
| | 8/15/2008 | 78.56 | 30.13 | --- | --- | 48.43 | Envent |
| | 10/17/2008 | 78.56 | 30.50 | --- | --- | 48.06 | Envent |
| | 12/18/2008 | 78.56 | 29.92 | --- | --- | 48.64 | Envent |
| | 1/15/2009 | 78.56 | 30.32 | --- | --- | 48.24 | Envent |
| | 3/24/2009 | 78.56 | 31.05 | --- | --- | 47.51 | Envent |
| | 4/21/2009 | 78.56 | 30.03 | --- | --- | 48.53 | Envent |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 7/21/2009 | 78.56 | 30.89 | --- | --- | 47.67 | Envent |
| | 11/9/2009 | 78.56 | 31.00 | --- | --- | 47.56 | Kinder Morgan |
| | 9/3/2010 | 78.56 | 31.22 | --- | --- | 47.34 | Kinder Morgan |
| | 10/4/2010 | 78.56 | 30.94 | --- | --- | 47.62 | Blaine Tech |
| | 4/12/2011 | 78.56 | 30.82 | --- | --- | 47.74 | Blaine Tech |
| | 10/10/2011 | 78.56 | 30.10 | --- | --- | 48.46 | Blaine Tech |
| | 10/15/2012 | 78.56 | 33.28 | --- | --- | 45.28 | Blaine Tech |
| | 4/8/2013 | 78.56 | 33.11 | --- | --- | 45.45 | Blaine Tech |
| | 10/7/2013 | 78.56 | 33.91 | --- | --- | 44.65 | Blaine Tech |
| | 4/14/2014 | 78.56 | 35.20 | 34.95 | 0.25 | 43.56 | Blaine Tech |
| | 5/5/2014 | 78.56 | 36.52 | 33.71 | 2.81 | 44.29 | Nieto & Sons |
| | 5/12/2014 | 78.56 | 35.45 | 33.87 | 1.58 | 44.37 | Nieto & Sons |
| | 5/27/2014 | 78.56 | 35.38 | 34.65 | 0.73 | 43.76 | Nieto & Sons |
| | 6/4/2014 | 78.56 | 35.40 | 35.32 | 0.08 | 43.22 | Nieto & Sons |
| | 8/8/2014 | 78.56 | 36.22 | 33.11 | 3.11 | 44.83 | Blaine Tech |
| | 8/13/2014 | 78.56 | 36.22 | 33.47 | 2.75 | 44.54 | Blaine Tech |
| | 8/19/2014 | 78.56 | 36.46 | 33.94 | 2.52 | 44.12 | Blaine Tech |
| | 8/29/2014 | 78.56 | 36.68 | 33.83 | 2.85 | 44.16 | Blaine Tech |
| | 9/5/2014 | 78.56 | 36.62 | 33.80 | 2.82 | 44.20 | Blaine Tech |
| | 9/11/2014 | 78.56 | 37.15 | 33.78 | 3.37 | 44.11 | Blaine Tech |
| | 9/18/2014 | 78.56 | 36.79 | 33.93 | 2.86 | 44.06 | Blaine Tech |
| | 9/26/2014 | 78.56 | 36.89 | 33.88 | 3.01 | 44.08 | Blaine Tech |
| | 10/1/2014 | 78.56 | 34.95 | 33.32 | 1.63 | 44.91 | Blaine Tech |
| | 10/6/2014 | 78.56 | 36.36 | 33.95 | 2.41 | 44.13 | Blaine Tech |
| | 10/14/2014 | 78.56 | 36.67 | 33.86 | 2.81 | 44.14 | Blaine Tech |
| | 10/23/2014 | 78.56 | 36.86 | 33.86 | 3.00 | 44.10 | Blaine Tech |
| | 10/27/2014 | 78.56 | 36.20 | 33.99 | 2.21 | 44.13 | Blaine Tech |
| | 11/3/2014 | 78.56 | 36.91 | 33.84 | 3.07 | 44.11 | Blaine Tech |
| | 11/18/2014 | 78.56 | 36.78 | 33.95 | 2.83 | 44.04 | Blaine Tech |
| | 11/25/2014 | 78.56 | 36.65 | 34.03 | 2.62 | 44.01 | Blaine Tech |
| | 12/3/2014 | 78.56 | 36.71 | 33.94 | 2.77 | 44.07 | Blaine Tech |
| | 12/12/2014 | 78.56 | 37.29 | 34.08 | 3.21 | 43.84 | Blaine Tech |
| | 12/19/2014 | 78.56 | 38.03 | 34.04 | 3.99 | 43.72 | Blaine Tech |
| | 3/17/2015 | 78.56 | 35.94 | 35.50 | 0.44 | 42.97 | Kinder Morgan |
| | 4/20/2015 | 78.56 | 38.89 | 34.86 | 4.03 | 42.89 | Kinder Morgan |
| | 10/20/2015 | 78.56 | 37.42 | 35.38 | 2.04 | 42.77 | Kinder Morgan |
| | 3/16/2016 | 78.56 | 39.56 | --- | --- | 39.00 | Kinder Morgan |
| MW-SF-12 | 8/14/2007 | 78.07 | 27.76 | --- | --- | 50.31 | Geomatrix |
| | 8/21/2007 | 78.07 | 27.43 | --- | --- | 50.64 | Geomatrix |
| | 8/28/2007 | 78.07 | 27.58 | --- | --- | 50.49 | Stantec |
| | 9/11/2007 | 78.07 | 27.73 | --- | --- | 50.34 | Geomatrix |
| | 10/5/2007 | 78.07 | 28.06 | --- | --- | 50.01 | Geomatrix |
| | 11/2/2007 | 78.07 | 29.59 | --- | --- | 48.48 | Geomatrix |
| | 11/12/2007 | 78.07 | 28.33 | --- | --- | 49.74 | Stantec |
| | 8/12/2008 | 78.07 | 30.02 | --- | --- | 48.05 | Envent |
| | 10/17/2008 | 78.07 | 30.42 | --- | --- | 47.65 | Envent |
| | 12/18/2008 | 78.07 | 31.55 | --- | --- | 46.52 | Envent |
| | 1/15/2009 | 78.07 | 30.11 | --- | --- | 47.96 | Envent |
| | 3/24/2009 | 78.07 | 29.41 | --- | --- | 48.66 | Envent |
| | 4/21/2009 | 78.07 | 29.52 | --- | --- | 48.55 | Envent |
| | 7/21/2009 | 78.07 | 28.58 | --- | --- | 49.49 | Envent |
| | 11/4/2009 | 78.07 | 30.36 | --- | --- | 47.71 | Kinder Morgan |
| | 2/4/2010 | 78.07 | 29.20 | --- | --- | 48.87 | Kinder Morgan |
| | 10/4/2010 | 78.07 | 30.70 | --- | --- | 47.37 | Blaine Tech |
| | 4/11/2011 | 78.07 | 29.47 | --- | --- | 48.60 | Blaine Tech |
| | 10/10/2011 | 78.07 | 26.60 | --- | --- | 51.47 | Blaine Tech |
| | 4/16/2012 | 78.07 | 31.40 | --- | --- | 46.67 | Blaine Tech |
| | 10/15/2012 | 78.07 | 32.12 | --- | --- | 45.95 | Blaine Tech |
| | 4/14/2014 | 78.07 | 38.04 | 32.67 | 5.37 | 44.33 | Blaine Tech |
| | 5/20/2014 | 78.07 | 37.80 | 32.90 | 4.90 | 44.19 | Nieto & Sons |
| | 5/27/2014 | 78.07 | 33.27 | --- | --- | 44.80 | Nieto & Sons |
| | 6/4/2014 | 78.07 | 32.78 | --- | --- | 45.29 | Nieto & Sons |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 6/10/2014 | 78.07 | 33.76 | --- | --- | 44.31 | Nieto & Sons |
| | 7/3/2014 | 78.07 | --- | 33.58 | --- | --- | Nieto & Sons |
| | 7/24/2014 | 78.07 | --- | 33.35 | 3.97 | --- | Blaine Tech |
| | 8/1/2014 | 78.07 | 37.20 | 33.17 | 4.03 | 44.09 | Blaine Tech |
| | 9/5/2014 | 78.07 | 38.52 | 32.93 | 5.59 | 44.02 | Blaine Tech |
| | 9/11/2014 | 78.07 | 38.56 | 32.98 | 5.58 | 43.97 | Blaine Tech |
| | 9/18/2014 | 78.07 | 38.25 | 33.09 | 5.16 | 43.95 | Blaine Tech |
| | 9/26/2014 | 78.07 | 38.03 | 33.03 | 5.00 | 44.04 | Blaine Tech |
| | 10/1/2014 | 78.07 | 37.82 | 33.08 | 4.74 | 44.04 | Blaine Tech |
| | 10/6/2014 | 78.07 | 37.63 | 33.07 | 4.56 | 44.09 | Blaine Tech |
| | 10/14/2014 | 78.07 | 37.56 | 33.13 | 4.43 | 44.05 | Blaine Tech |
| | 10/23/2014 | 78.07 | 37.56 | 33.06 | 4.50 | 44.11 | Blaine Tech |
| | 10/27/2014 | 78.07 | 37.40 | 33.08 | 4.32 | 44.13 | Blaine Tech |
| | 11/3/2014 | 78.07 | 37.48 | 33.09 | 4.39 | 44.10 | Blaine Tech |
| | 11/18/2014 | 78.07 | 37.44 | 33.15 | 4.29 | 44.06 | Blaine Tech |
| | 11/25/2014 | 78.07 | 37.35 | 33.21 | 4.14 | 44.03 | Blaine Tech |
| | 12/3/2014 | 78.07 | 37.31 | 33.12 | 4.19 | 44.11 | Blaine Tech |
| | 12/12/2014 | 78.07 | 37.92 | 33.45 | 4.47 | 43.73 | Blaine Tech |
| | 12/19/2014 | 78.07 | 38.25 | 33.50 | 4.75 | 43.62 | Blaine Tech |
| | 3/17/2015 | 78.07 | 36.42 | 34.05 | 2.37 | 43.55 | Kinder Morgan |
| | 4/20/2015 | 78.07 | 36.42 | 34.05 | 2.37 | 43.55 | Blaine Tech |
| | 10/20/2015 | 78.07 | 36.78 | 34.84 | 1.94 | 42.84 | Kinder Morgan |
| | 3/16/2016 | 78.07 | 39.03 | --- | --- | 39.04 | Kinder Morgan |
| MW-SF-13 | 8/14/2007 | 73.40 | 22.98 | --- | --- | 50.42 | Geomatrix |
| | 8/21/2007 | 73.40 | 23.11 | --- | --- | 50.29 | Geomatrix |
| | 8/28/2007 | 73.40 | 22.85 | --- | --- | 50.55 | Stantec |
| | 9/11/2007 | 73.40 | 23.10 | --- | --- | 50.30 | Geomatrix |
| | 10/5/2007 | 73.40 | 28.11 | --- | --- | 45.29 | Geomatrix |
| | 11/2/2007 | 73.40 | 25.43 | 25.41 | 0.02 | 47.99 | Geomatrix |
| | 11/12/2007 | 73.40 | 23.70 | --- | --- | 49.70 | Stantec |
| | 12/21/2007 | 73.40 | 24.45 | 24.42 | 0.03 | 48.97 | Geomatrix |
| | 8/15/2008 | 73.40 | 27.38 | 24.11 | 3.27 | 48.47 | Envent |
| | 10/17/2008 | 73.40 | 27.28 | 24.33 | 2.95 | 48.33 | Envent |
| | 10/21/2008 | 73.40 | 27.14 | 24.26 | 2.88 | 48.42 | Envent |
| | 9/3/2010 | 73.40 | 27.40 | 25.71 | 1.69 | 47.27 | Kinder Morgan |
| | 12/17/2008 | 73.40 | 26.21 | 24.70 | 1.51 | 48.32 | Envent |
| | 1/15/2009 | 73.40 | 26.90 | 24.80 | 2.10 | 48.08 | Envent |
| | 3/27/2009 | 73.40 | 26.46 | 25.49 | 0.97 | 47.67 | Envent |
| | 4/21/2009 | 73.40 | 24.86 | 24.78 | 0.08 | 48.60 | Envent |
| | 7/21/2009 | 73.40 | 25.72 | 25.48 | 0.24 | 47.86 | Envent |
| | 11/6/2009 | 73.40 | 25.72 | --- | --- | 47.68 | Kinder Morgan |
| | 2/4/2010 | 73.40 | 25.43 | 25.30 | 0.13 | 48.07 | Kinder Morgan |
| | 10/4/2010 | 73.40 | 26.95 | 25.92 | 1.03 | 47.22 | Blaine Tech |
| | 4/12/2011 | 73.40 | 24.79 | 24.78 | 0.01 | 48.62 | Blaine Tech |
| | 10/10/2011 | 73.40 | 26.00 | --- | --- | 47.40 | Blaine Tech |
| | 4/16/2012 | 73.40 | 27.19 | --- | --- | 46.21 | Blaine Tech |
| | 10/15/2012 | 73.40 | 27.01 | --- | --- | 46.39 | Blaine Tech |
| | 4/8/2013 | 73.40 | 27.90 | --- | --- | 45.50 | Blaine Tech |
| | 11/14/2013 | 73.4 | 29.95 | 28.25 | 1.70 | 44.73 | Blaine Tech |
| | 4/14/2014 | 73.4 | 31.36 | 28.47 | 2.89 | 44.21 | Blaine Tech |
| | 5/5/2014 | 73.4 | 31.62 | 28.49 | 3.13 | 44.13 | Nieto & Sons |
| | 5/12/2014 | 73.4 | 30.02 | 28.88 | 1.14 | 44.24 | Nieto & Sons |
| | 5/20/2014 | 73.4 | 31.10 | 29.77 | 1.33 | 43.30 | Nieto & Sons |
| | 5/27/2014 | 73.4 | 30.17 | 29.48 | 0.69 | 43.75 | Nieto & Sons |
| | 6/4/2014 | 73.4 | 30.22 | --- | --- | 43.18 | Nieto & Sons |
| | 6/10/2014 | 73.4 | 30.20 | 29.76 | 0.44 | 43.53 | Nieto & Sons |
| | 7/3/2014 | 73.4 | 30.49 | 29.88 | 0.61 | 43.37 | Nieto & Sons |
| | 7/24/2014 | 73.4 | 30.50 | 29.54 | 0.96 | 43.62 | Blaine Tech |
| | 8/1/2014 | 73.4 | 29.82 | 29.25 | 0.57 | 44.01 | Blaine Tech |
| | 8/8/2014 | 73.4 | 34.07 | 33.71 | 0.36 | 39.60 | Blaine Tech |
| | 8/14/2014 | 73.4 | 29.96 | 29.13 | 0.83 | 44.06 | Blaine Tech |
| | 8/19/2014 | 73.4 | 29.91 | 29.15 | 0.76 | 44.06 | Blaine Tech |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 8/29/2014 | 73.4 | 30.15 | 29.02 | 1.13 | 44.10 | Blaine Tech |
| | 9/5/2014 | 73.4 | 30.19 | 29.08 | 1.11 | 44.04 | Blaine Tech |
| | 9/11/2014 | 73.4 | 30.66 | 28.91 | 1.75 | 44.05 | Blaine Tech |
| | 9/18/2014 | 73.4 | 30.41 | 29.15 | 1.26 | 43.94 | Blaine Tech |
| | 9/26/2014 | 73.4 | 30.18 | 29.14 | 1.04 | 44.00 | Blaine Tech |
| | 10/1/2014 | 73.4 | 30.38 | 29.05 | 1.33 | 44.02 | Blaine Tech |
| | 10/6/2014 | 73.4 | 30.10 | 29.12 | 0.98 | 44.04 | Blaine Tech |
| | 10/13/2014 | 73.4 | 30.28 | 29.07 | 1.21 | 44.03 | Blaine Tech |
| | 10/23/2014 | 73.4 | 30.72 | 28.95 | 1.77 | 44.01 | Blaine Tech |
| | 10/27/2014 | 73.4 | 30.21 | 29.06 | 1.15 | 44.05 | Blaine Tech |
| | 11/3/2014 | 73.4 | 30.62 | 28.93 | 1.69 | 44.05 | Blaine Tech |
| | 11/18/2014 | 73.4 | 30.54 | 29.11 | 1.43 | 43.93 | Blaine Tech |
| | 11/25/2014 | 73.4 | 29.48 | 29.14 | 0.34 | 44.18 | Blaine Tech |
| | 12/3/2014 | 73.4 | 31.02 | 28.93 | 2.09 | 43.95 | Blaine Tech |
| | 12/12/2014 | 73.4 | 31.05 | 29.40 | 1.65 | 43.59 | Blaine Tech |
| | 12/19/2014 | 73.4 | 31.11 | 29.40 | 1.71 | 43.57 | Blaine Tech |
| | 4/20/2015 | 73.4 | 32.44 | 29.04 | 3.40 | 43.51 | Blaine Tech |
| | 10/19/2015 | 73.4 | 35.16 | 29.31 | 5.85 | 42.63 | Blaine Tech |
| | 3/14/2016 | 73.4 | 34.72 | --- | --- | 38.68 | Blaine Tech |
| MW-SF-14 | 8/14/2007 | 78.16 | 27.68 | --- | --- | 50.48 | Geomatrix |
| | 8/21/2007 | 78.16 | 27.60 | --- | --- | 50.56 | Geomatrix |
| | 8/28/2007 | 78.16 | 27.53 | --- | --- | 50.63 | Stantec |
| | 9/11/2007 | 78.16 | 27.66 | --- | --- | 50.50 | Geomatrix |
| | 10/5/2007 | 78.16 | 27.75 | --- | --- | 50.41 | Geomatrix |
| | 11/2/2007 | 78.16 | 29.83 | --- | --- | 48.33 | Geomatrix |
| | 8/15/2008 | 78.16 | 29.77 | 29.24 | 0.53 | 48.81 | Envent |
| | 10/17/2008 | 78.16 | 29.52 | 29.50 | 0.02 | 48.66 | Envent |
| | 12/18/2008 | 78.16 | 30.62 | --- | --- | 47.54 | Envent |
| | 1/15/2009 | 78.16 | 30.08 | --- | --- | 48.08 | Envent |
| | 3/24/2009 | 78.16 | 29.73 | --- | --- | 48.43 | Envent |
| | 4/21/2009 | 78.16 | 29.61 | --- | --- | 48.55 | Envent |
| | 7/21/2009 | 78.16 | 29.20 | --- | --- | 48.96 | Envent |
| | 11/6/2009 | 78.16 | 30.48 | --- | --- | 47.68 | Kinder Morgan |
| | 12/9/2009 | 78.16 | 30.68 | --- | --- | 47.48 | Kinder Morgan |
| | 6/22/2010 | 78.16 | 26.17 | --- | --- | 51.99 | Blaine Tech |
| | 10/4/2010 | 78.16 | 30.54 | --- | --- | 47.62 | Blaine Tech |
| | 4/12/2011 | 78.16 | 29.55 | --- | --- | 48.61 | Blaine Tech |
| | 10/10/2011 | 78.16 | 29.84 | --- | --- | 48.32 | Blaine Tech |
| | 10/15/2012 | 78.16 | 30.02 | --- | --- | 48.14 | Blaine Tech |
| | 4/8/2013 | 78.16 | 32.75 | --- | --- | 45.41 | Blaine Tech |
| | 9/26/2013 | 78.16 | 34.50 | 34.25 | 0.25 | 43.86 | CH2M HILL |
| | 11/14/2013 | 78.16 | 33.57 | 33.19 | 0.38 | 44.89 | Blaine Tech |
| | 4/14/2014 | 78.16 | 34.81 | 33.56 | 1.25 | 44.35 | Blaine Tech |
| | 8/8/2014 | 78.16 | 34.24 | 33.98 | 0.26 | 44.13 | Blaine Tech |
| | 10/14/2014 | 78.16 | 34.36 | 33.80 | 0.56 | 44.25 | Blaine Tech |
| | 10/23/2014 | 78.16 | 34.49 | 34.43 | 0.06 | 43.72 | Blaine Tech |
| | 10/27/2014 | 78.16 | 34.40 | 33.97 | 0.43 | 44.10 | Blaine Tech |
| | 11/18/2014 | 78.16 | 34.27 | 34.07 | 0.20 | 44.05 | Blaine Tech |
| | 4/20/2015 | 78.16 | 34.48 | --- | --- | 43.68 | Blaine Tech |
| | 10/21/2015 | 78.16 | 35.25 | --- | --- | 42.91 | Blaine Tech |
| | 3/14/2016 | 78.16 | 36.21 | --- | --- | 41.95 | Blaine Tech |
| MW-SF-15 | 8/14/2007 | 78.27 | 27.78 | 27.75 | 0.03 | 50.51 | Geomatrix |
| | 8/21/2007 | 78.27 | 27.69 | 27.65 | 0.04 | 50.61 | Geomatrix |
| | 8/28/2007 | 78.27 | 27.65 | 27.61 | 0.04 | 50.65 | Stantec |
| | 9/11/2007 | 78.27 | 27.62 | --- | --- | 50.65 | Geomatrix |
| | 10/5/2007 | 78.27 | 28.15 | --- | --- | 50.12 | Geomatrix |
| | 11/2/2007 | 78.27 | 30.45 | 30.20 | 0.25 | 48.02 | Geomatrix |
| | 11/12/2007 | 78.27 | 28.75 | --- | --- | 49.52 | Stantec |
| | 8/15/2008 | 78.27 | 30.12 | 29.35 | 0.77 | 48.77 | Envent |
| | 10/17/2008 | 78.27 | 30.80 | 29.44 | 1.36 | 48.56 | Envent |
| | 10/21/2008 | 78.27 | 30.80 | 29.31 | 1.49 | 48.66 | Envent |
| | 12/18/2008 | 78.27 | 32.11 | 30.56 | 1.55 | 47.40 | Envent |

**Table 8. Groundwater and Product Measurements and Elevations for Total Fluids, Groundwater, and Soil Vapor Extraction Wells**

*SFPP Norwalk Pump Station, Norwalk, California*

| Well ID | Date Gauged | Top of Well Casing Elevation (feet msl) | Measured Depth to Groundwater (feet btoc) | Measured Depth to Product (feet btoc) | Apparent Product Thickness (feet) | Corrected Groundwater Elevation (feet msl) | Gauged By |
|---|---|---|---|---|---|---|---|
| | 1/15/2009 | 78.27 | 31.75 | 29.70 | 2.05 | 48.16 | Envent |
| | 3/24/2009 | 78.27 | 30.32 | 29.93 | 0.39 | 48.26 | Envent |
| | 4/21/2009 | 78.27 | 29.96 | 29.60 | 0.36 | 48.60 | Envent |
| | 7/21/2009 | 78.27 | 30.45 | --- | --- | 47.82 | Envent |
| | 11/4/2009 | 78.27 | 31.10 | 30.45 | 0.36 | 47.46 | Kinder Morgan |
| | 12/9/2009 | 78.27 | 30.87 | --- | --- | 47.40 | Kinder Morgan |
| | 10/4/2010 | 78.27 | 30.66 | 30.65 | 0.01 | 47.62 | Blaine Tech |
| | 4/12/2011 | 78.27 | 30.50 | 29.40 | 1.10 | 48.65 | Blaine Tech |
| | 10/10/2011 | 78.27 | 29.60 | --- | --- | 48.67 | Blaine Tech |
| | 12/2/2011 | 78.27 | 31.40 | 30.05 | 1.35 | 47.95 | Blaine Tech |
| | 4/16/2012 | 78.27 | 32.48 | 32.39 | 0.09 | 45.86 | Blaine Tech |
| | 10/15/2012 | 78.27 | 33.15 | --- | --- | 45.12 | Blaine Tech |
| | 4/8/2013 | 78.27 | 33.90 | --- | --- | 44.37 | Blaine Tech |
| | 11/14/2013 | 78.27 | 33.41 | 33.38 | 0.03 | 44.88 | Blaine Tech |
| | 4/18/2014 | 78.27 | 33.85 | --- | --- | 44.42 | Blaine Tech |
| | 8/8/2014 | 78.27 | 34.87 | 33.96 | 0.91 | 44.13 | Blaine Tech |
| | 8/13/2014 | 78.27 | 34.89 | 33.95 | 0.94 | 44.13 | Blaine Tech |
| | 8/19/2014 | 78.27 | 34.90 | 33.94 | 0.96 | 44.14 | Blaine Tech |
| | 8/29/2014 | 78.27 | 35.65 | 35.38 | 0.27 | 42.84 | Blaine Tech |
| | 10/27/2014 | 78.27 | 34.25 | --- | --- | 44.02 | Blaine Tech |
| | 4/20/2015 | 78.27 | 36.63 | 34.12 | 2.51 | 43.65 | Blaine Tech |
| | 10/19/2015 | 78.27 | 37.90 | 34.87 | 3.03 | 42.79 | Blaine Tech |
| | 11/17/2015 | 78.27 | 37.71 | 35.36 | 2.35 | 42.44 | Kinder Morgan |
| | 3/14/2016 | 78.27 | 39.70 | --- | --- | 38.57 | Blaine Tech |
| MW-SF-16 | 8/14/2007 | 78.21 | 27.68 | --- | --- | 50.53 | Geomatrix |
| | 8/21/2007 | 78.21 | 27.33 | --- | --- | 50.88 | Geomatrix |
| | 8/28/2007 | 78.21 | 27.51 | --- | --- | 50.70 | Stantec |
| | 9/11/2007 | 78.21 | 27.59 | --- | --- | 50.62 | Geomatrix |
| | 10/5/2007 | 78.21 | 28.10 | --- | --- | 50.11 | Geomatrix |
| | 11/2/2007 | 78.21 | 29.81 | --- | --- | 48.40 | Geomatrix |
| | 11/12/2007 | 78.21 | 28.40 | --- | --- | 49.81 | Stantec |
| | 8/15/2008 | 78.21 | 29.36 | --- | --- | 48.85 | Envent |
| | 10/17/2008 | 78.21 | 29.51 | --- | --- | 48.70 | Envent |
| | 12/18/2008 | 78.21 | 30.94 | --- | --- | 47.27 | Envent |
| | 1/15/2009 | 78.21 | 30.01 | 30.00 | 0.01 | 48.21 | Envent |
| | 3/24/2009 | 78.21 | 29.82 | --- | --- | 48.39 | Envent |
| | 4/21/2009 | 78.21 | 29.60 | --- | --- | 48.61 | Envent |
| | 7/21/2009 | 78.21 | 30.36 | --- | --- | 47.85 | Envent |
| | 11/4/2009 | 78.21 | 30.58 | --- | --- | 47.63 | Kinder Morgan |
| | 2/4/2010 | 78.21 | 30.36 | --- | --- | 47.85 | Kinder Morgan |
| | 9/3/2010 | 78.21 | 30.25 | --- | --- | 47.96 | Kinder Morgan |
| | 10/4/2010 | 78.21 | 30.49 | --- | --- | 47.72 | Blaine Tech |
| | 4/12/2011 | 78.21 | 29.52 | --- | --- | 48.69 | Blaine Tech |
| | 10/10/2011 | 78.21 | 29.85 | --- | --- | 48.36 | Blaine Tech |
| | 10/15/2012 | 78.21 | 32.47 | --- | --- | 45.74 | Blaine Tech |
| | 4/8/2013 | 78.21 | 32.97 | 32.73 | 0.24 | 45.43 | Blaine Tech |
| | 11/14/2013 | 78.21 | 33.80 | 33.21 | 0.59 | 44.88 | Blaine Tech |
| | 4/18/2014 | 78.21 | 34.20 | 33.65 | 0.55 | 44.45 | Blaine Tech |
| | 8/8/2014 | 78.21 | 34.06 | 34.05 | 0.01 | 44.16 | Blaine Tech |
| | 10/27/2014 | 78.21 | 34.25 | --- | --- | 43.96 | Blaine Tech |
| | 4/20/2015 | 78.21 | 34.52 | --- | --- | 43.69 | Blaine Tech |
| | 6/8/2015 | 78.21 | 35.17 | 35.00 | 0.17 | 43.18 | Blaine Tech |
| | 10/21/2015 | 78.21 | 34.56 | --- | --- | 43.65 | Kinder Morgan |
| | 3/14/2016 | 78.21 | 39.60 | --- | --- | 38.61 | Blaine Tech |

Notes:

Corrected groundwater elevations are based on specific gravity data collected during baildown testing, or a default value of 0.8 was used for wells not tested.

--- = not detected or not applicable

feet btoc = feet below top of casing

feet msl = feet above mean sea level based on National Geodetic Vertical Datum of 1929

# Figures

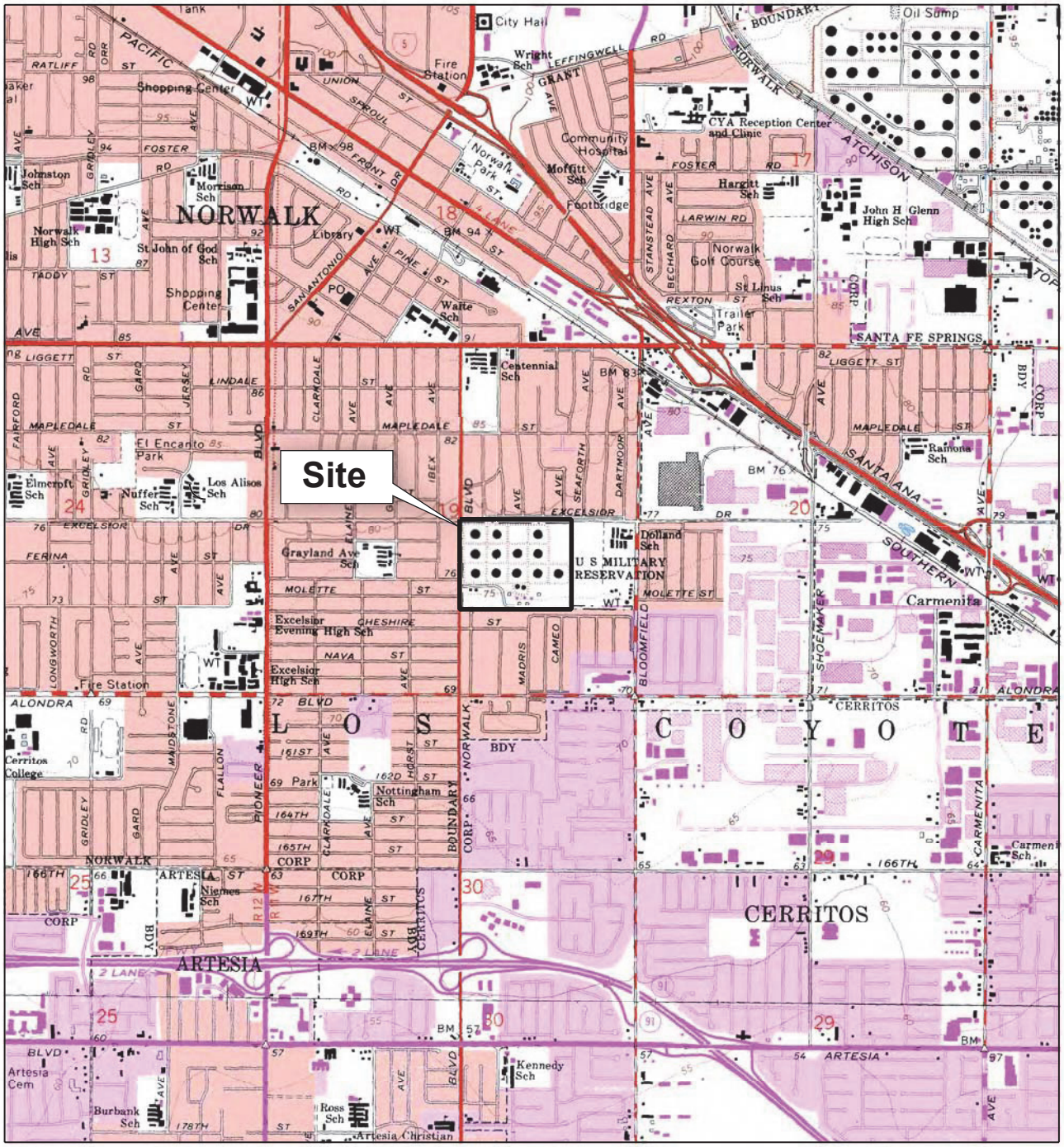
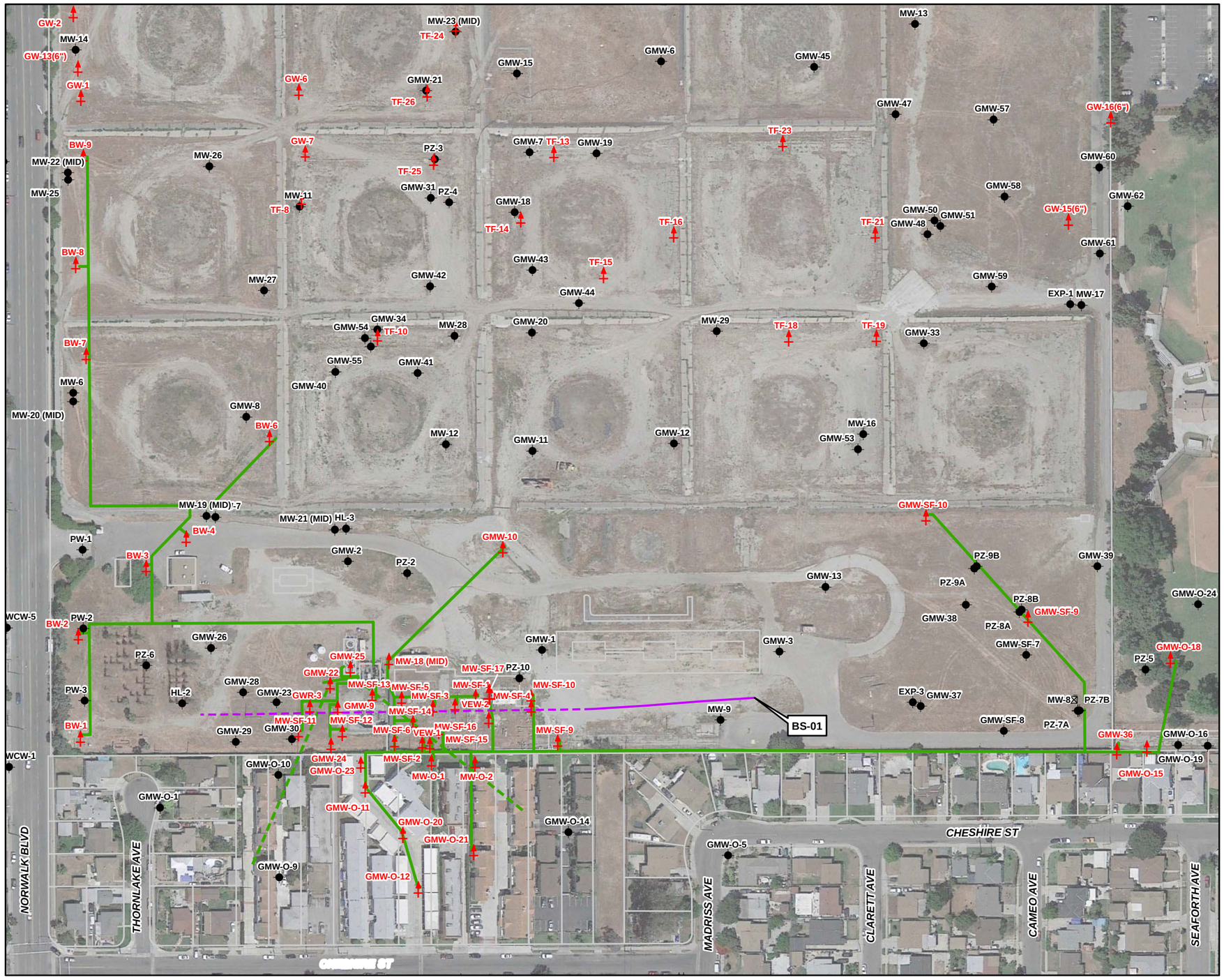



**Figure 1**
**Site Location Map**
*SFPP Norwalk Pump Station*
*Norwalk, California*

BASEMAP MODIFIED FROM U.S.G.S. 7.5 MINUTE QUADRANGLE MAP
LOS ALAMITOS 1964, CALIFORNIA. PHOTO-REVISED 1981.
WHITTIER 1965, CALIFORNIA. PHOTO-REVISED 1981.




## Legend

- Existing Groundwater Monitoring Well
- Existing Remediation Well
- Horizontal Biosparge Well (dashed line depicts approximate lateral extent of well screen)
- KMEP Remediation Piping Layout (above ground and below ground)
- Horizontal Vapor Extraction Well Piping

Imagery Source:
Google Earth April 17, 2013.

N

0 75 150 300
Feet

**Figure 2**
**Remediation System Layout**
*SFPP Norwalk Pump Station*
*Norwalk, California*

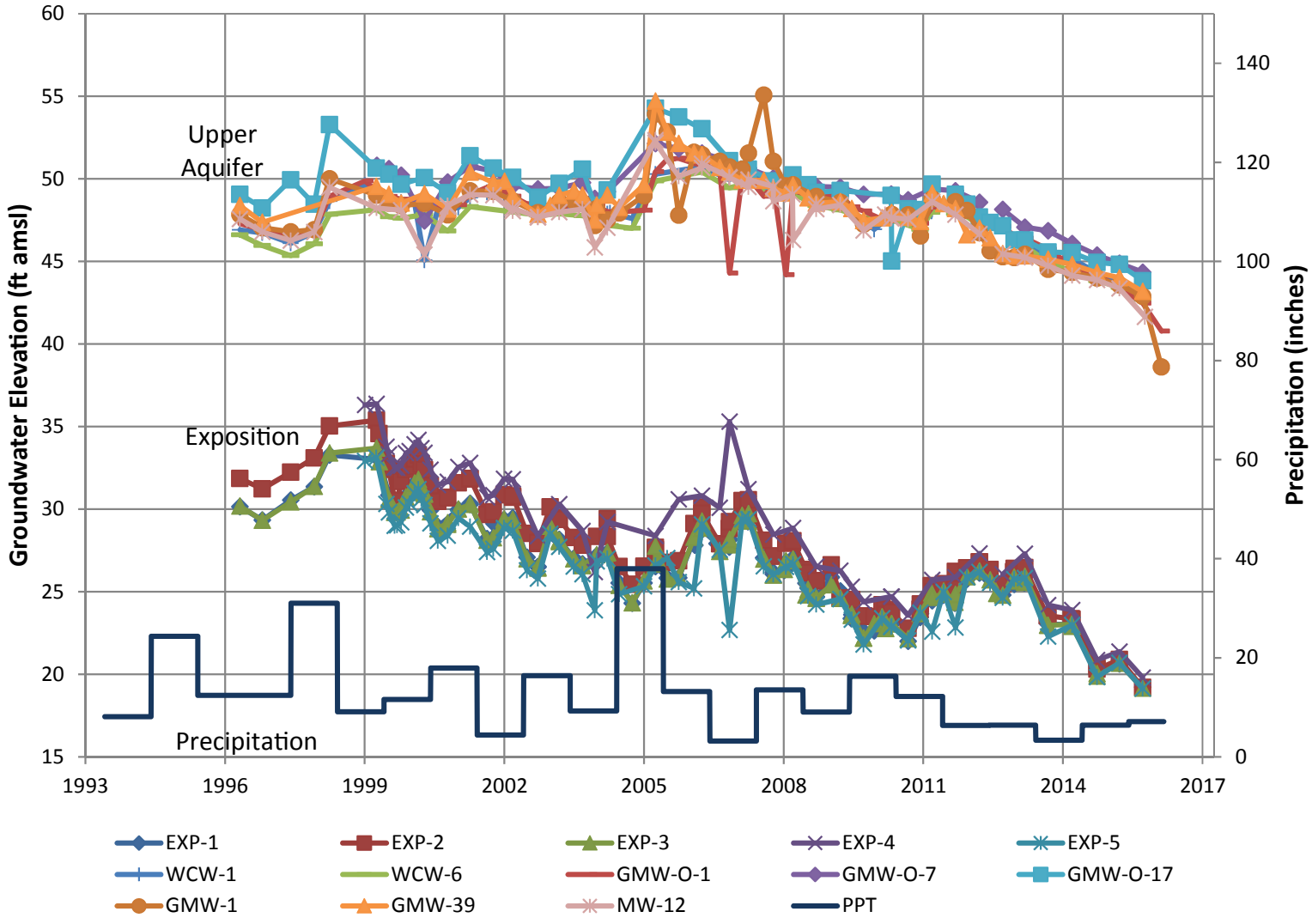



**Figure 3**
**Hydrographs for Select Groundwater Monitoring Wells**
*SFPP Norwalk Pump Station*
*Norwalk, California*

# Appendix A
# Laboratory Analytical Reports

AirTECHNOLOGY
Laboratories, Inc.

January 13, 2016

ADE-1461
EPA Methods TO3, TO14A, TO15 SIM & SCAN
ASTM D1946

LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175
TX Cert T104704450-14-6
EPA Methods TO14A, TO15
UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

CH2M HILL
ATTN: Daniel Jablonski
5742 Costello Ave.
Van Nuys, CA 91401

## LABORATORY TEST RESULTS

Project Reference: SFPP - Norwalk Site
Lab Number: H010504-01

Enclosed are results for sample(s) received 1/05/16 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the NELAC Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Dan Jablonski, Vidal Cortes and Steve Defibaugh on 1/12/16.

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Note: The cover letter is an integral part of this analytical report.

H010504-01/04

**Air Technology Laboratories, Inc.**
18501 Gale Ave # 130
City of Industry, CA 91748
Tel: (626) 964-4032
**Joann De La Ossa (JDeLaOssa@airtechlabs.com)**

# CHAIN OF CUSTODY RECORD

DATE: 1/4/16

PAGE: 1 OF 1

LABORATORY CLIENT: **CH2M HILL: Attn - Dan Jablonski**
ADDRESS: **6 Hutton Centre Dr, Suite 700**
CITY: **Santa Ana, CA 92707**
TEL: **714-429-2020** FAX: E-MAIL: Daniel.Jablonski@CH2M.com

CLIENT PROJECT NAME / NUMBER: **SFPP - Norwalk Site**
PROJECT CONTACT: **James Dye**
SAMPLER(S): (SIGNATURE)
P.O. NO.:
QUOTE NO.:
LAB USE ONLY:

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ■ 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___/___/___

SPECIAL INSTRUCTIONS
**Report: Jablonski, Daniel/LAC - Daniel.Jablonski@CH2M.com,**
**Cortes, Vidal/SCO - Vidal.Cortes@CH2M.com**
**CC: KMEP Steve Defibaugh - Steve_Defibaugh@kindermorgan.com**
**"J" flags required/Use lowest possible detection limit - all methods.**

REQUESTED ANALYSIS

| LAB USE ONLY | SAMPLE ID | LOCATION/ DESCRIPTION | SAMPLING DATE | SAMPLING TIME | INITIAL PRESSURE ("Hg) | FINAL PRESSURE ("Hg) | MAT-RIX | NO. OF CONT. | TO-15 (VOCs Target Analytes) | TO-3 (TPH-g, TPH-d, TPH as hexane) | ASTM-D 1946 (O2/Argon, CO2, CH4, N2) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | VINF- 01-04 | Influent Vapor (from header) | 1/4/16 | 1246 | -29 | -7 | Air | 1 | X | X | X | Batch Certified 1-L SUMMA |
| 02 | VPOST- 01-04 | Post-Dilution | 1/4/16 | 1238 | -30 | -5 | Air | 1 | X | X | | Individually Certified 1-L SUMMA |
| 03 | VEFF- 01-04 | Outlet (stack) | 1/4/16 | 1228 | -30 | -6 | Air | 1 | X | X | | Individually Certified 1-L SUMMA |
| 04 | VEFF- 01-04 -D | Outlet (stack) Duplicate | 1/4/16 | 1233 | -30 | -6 | Air | 1 | X | X | | TAL includes historical VOCs |
| | | | | | | | | | | | | and remaining ATLI List per |
| | | | | | | | | | | | | subcontract. |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) FED EX | Date: 1/4/16 | Time: 1/4/16 |
| Relinquished by: (Signature) FED EX | Received by: (Signature) | Date: 1/5/16 | Time: 1106 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

Revised: 03/30/2015

Client: CH2M Hill
Attn: Dan Jablonski
Project Name: SFPP - Norwalk Site
Project No.: NA
Date Received: 01/05/16
Matrix: Air
Reporting Units: ppmv

**EPA Method TO15**

| Lab No.: | H010504-01 | | | H010504-02 | | | H010504-03 | | | H010504-04 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client Sample I.D.: | VINF-01-04 | | | VPOST-01-04 | | | VEFF-01-04 | | | VEFF-01-04-D | | |
| Date/Time Sampled: | 1/4/16 12:46 | | | 1/4/16 12:38 | | | 1/4/16 12:28 | | | 1/4/16 12:33 | | |
| Date/Time Analyzed: | 1/8/16 17:04 | | | 1/8/16 17:43 | | | 1/8/16 18:23 | | | 1/8/16 19:01 | | |
| QC Batch No.: | 160108MS2A1 | | | 160108MS2A1 | | | 160108MS2A1 | | | 160108MS2A1 | | |
| Analyst Initials: | DT | | | DT | | | DT | | | DT | | |
| Dilution Factor: | 110 | | | 220 | | | 2.0 | | | 2.1 | | |
| ANALYTE | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv |
| Dichlorodifluoromethane (12) | ND | 0.11 | 0.017 | ND | 0.22 | 0.033 | ND | 0.0020 | 0.00031 | ND | 0.0021 | 0.00032 |
| Chloromethane | ND | 0.22 | 0.024 | ND | 0.43 | 0.047 | ND | 0.0040 | 0.00044 | ND | 0.0042 | 0.00046 |
| 1,2-Cl-1,1,2,2-F ethane (114) | ND | 0.11 | 0.022 | ND | 0.22 | 0.043 | ND | 0.0020 | 0.00041 | ND | 0.0021 | 0.00042 |
| Vinyl Chloride | ND | 0.11 | 0.018 | ND | 0.22 | 0.035 | ND | 0.0020 | 0.00033 | ND | 0.0021 | 0.00034 |
| Bromomethane | 0.054 J | 0.11 | 0.033 | ND | 0.22 | 0.063 | 0.00087 J | 0.0020 | 0.00059 | 0.00084 J | 0.0021 | 0.00062 |
| Chloroethane | ND | 0.11 | 0.093 | ND | 0.22 | 0.18 | ND | 0.0020 | 0.0017 | ND | 0.0021 | 0.0018 |
| Trichlorofluoromethane (11) | ND | 0.11 | 0.024 | ND | 0.22 | 0.046 | ND | 0.0020 | 0.00044 | ND | 0.0021 | 0.00045 |
| 1,1-Dichloroethene | ND | 0.11 | 0.025 | ND | 0.22 | 0.049 | ND | 0.0020 | 0.00046 | ND | 0.0021 | 0.00048 |
| Carbon Disulfide | ND | 0.56 | 0.027 | ND | 1.1 | 0.052 | 0.0093 J | 0.010 | 0.00048 | 0.099 | 0.011 | 0.00050 |
| 1,1,2-Cl 1,2,2-F ethane (113) | ND | 0.11 | 0.030 | ND | 0.22 | 0.058 | ND | 0.0020 | 0.00054 | ND | 0.0021 | 0.00057 |
| Acetone | ND | 0.56 | 0.032 | ND | 1.1 | 0.062 | 0.027 | 0.010 | 0.00058 | 0.022 | 0.011 | 0.00061 |
| Methylene Chloride | ND | 0.11 | 0.032 | ND | 0.22 | 0.061 | ND | 0.0020 | 0.00058 | ND | 0.0021 | 0.00060 |
| t-1,2-Dichloroethene | ND | 0.11 | 0.033 | ND | 0.22 | 0.064 | ND | 0.0020 | 0.00060 | ND | 0.0021 | 0.00063 |
| 1,1-Dichloroethane | ND | 0.11 | 0.015 | ND | 0.22 | 0.029 | ND | 0.0020 | 0.00028 | ND | 0.0021 | 0.00029 |
| c-1,2-Dichloroethene | ND | 0.11 | 0.021 | ND | 0.22 | 0.042 | ND | 0.0020 | 0.00039 | ND | 0.0021 | 0.00041 |
| 2-Butanone | ND | 0.11 | 0.069 | 0.38 | 0.22 | 0.13 | 0.049 | 0.0020 | 0.0012 | 0.020 | 0.0021 | 0.0013 |
| t-Butyl Methyl Ether (MTBE) | ND | 0.11 | 0.025 | ND | 0.22 | 0.048 | ND | 0.0020 | 0.00045 | ND | 0.0021 | 0.00047 |
| Chloroform | ND | 0.11 | 0.016 | ND | 0.22 | 0.030 | ND | 0.0020 | 0.00028 | ND | 0.0021 | 0.00029 |
| 1,1,1-Trichloroethane | ND | 0.11 | 0.011 | ND | 0.22 | 0.022 | ND | 0.0020 | 0.00020 | ND | 0.0021 | 0.00021 |
| Carbon Tetrachloride | ND | 0.11 | 0.019 | ND | 0.22 | 0.037 | ND | 0.0020 | 0.00035 | ND | 0.0021 | 0.00037 |
| Benzene | 4.4 | 0.11 | 0.011 | 9.6 | 0.22 | 0.021 | 0.0015 J | 0.0020 | 0.00019 | 0.0014 J | 0.0021 | 0.00020 |
| 1,2-Dichloroethane | ND | 0.11 | 0.0083 | ND | 0.22 | 0.016 | ND | 0.0020 | 0.00015 | ND | 0.0021 | 0.00016 |
| Trichloroethene | ND | 0.11 | 0.016 | ND | 0.22 | 0.030 | ND | 0.0020 | 0.00029 | ND | 0.0021 | 0.00030 |
| 1,2-Dichloropropane | ND | 0.11 | 0.020 | ND | 0.22 | 0.039 | ND | 0.0020 | 0.00037 | ND | 0.0021 | 0.00038 |
| Bromodichloromethane | ND | 0.11 | 0.0067 | ND | 0.22 | 0.013 | ND | 0.0020 | 0.00012 | ND | 0.0021 | 0.00013 |
| c-1,3-Dichloropropene | ND | 0.11 | 0.013 | ND | 0.22 | 0.026 | ND | 0.0020 | 0.00024 | ND | 0.0021 | 0.00025 |
| 4-Methyl-2-Pentanone | ND | 0.11 | 0.0075 | ND | 0.22 | 0.014 | ND | 0.0020 | 0.00014 | ND | 0.0021 | 0.00014 |
| Toluene | 10 | 0.11 | 0.0088 | 20 | 0.22 | 0.017 | 0.010 | 0.0020 | 0.00016 | 0.0058 | 0.0021 | 0.00017 |
| t-1,3-Dichloropropene | ND | 0.11 | 0.011 | ND | 0.22 | 0.022 | ND | 0.0020 | 0.00021 | ND | 0.0021 | 0.00022 |
| 1,1,2-Trichloroethane | ND | 0.11 | 0.018 | ND | 0.22 | 0.035 | ND | 0.0020 | 0.00033 | ND | 0.0021 | 0.00034 |
| 1,3-Dichloropropane | ND | 0.11 | 0.0055 | ND | 0.22 | 0.011 | ND | 0.0020 | 0.00010 | ND | 0.0021 | 0.00010 |
| Tetrachloroethene | 0.014 J | 0.11 | 0.013 | ND | 0.22 | 0.026 | ND | 0.0020 | 0.00024 | ND | 0.0021 | 0.00025 |
| 2-Hexanone | ND | 0.11 | 0.023 | ND | 0.22 | 0.044 | ND | 0.0020 | 0.00042 | ND | 0.0021 | 0.00043 |
| Dibromochloromethane | ND | 0.11 | 0.020 | ND | 0.22 | 0.039 | ND | 0.0020 | 0.00037 | ND | 0.0021 | 0.00038 |
| 1,2-Dibromoethane | ND | 0.11 | 0.010 | ND | 0.22 | 0.020 | ND | 0.0020 | 0.00018 | ND | 0.0021 | 0.00019 |
| Chlorobenzene | ND | 0.11 | 0.0086 | ND | 0.22 | 0.017 | ND | 0.0020 | 0.00016 | ND | 0.0021 | 0.00016 |
| Ethylbenzene | 1.7 | 0.11 | 0.0064 | 2.4 | 0.22 | 0.012 | 0.0040 | 0.0020 | 0.00012 | 0.0030 | 0.0021 | 0.00012 |
| p,&m-Xylene | 6.4 | 0.11 | 0.013 | 10 | 0.22 | 0.024 | 0.022 | 0.0020 | 0.00023 | 0.015 | 0.0021 | 0.00024 |
| o-Xylene | 2.0 | 0.11 | 0.013 | 3.5 | 0.22 | 0.026 | 0.0065 | 0.0020 | 0.00025 | 0.0056 | 0.0021 | 0.00026 |



AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: CH2M Hill
Attn: Dan Jablonski
Project Name: SFPP - Norwalk Site
Project No.: NA
Date Received: 01/05/16
Matrix: Air
Reporting Units: ppmv

**EPA Method TO15**

| Lab No.: | H010504-01 | | | H010504-02 | | | H010504-03 | | | H010504-04 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client Sample I.D.: | VINF-01-04 | | | VPOST-01-04 | | | VEFF-01-04 | | | VEFF-01-04-D | | |
| Date/Time Sampled: | 1/4/16 12:46 | | | 1/4/16 12:38 | | | 1/4/16 12:28 | | | 1/4/16 12:33 | | |
| Date/Time Analyzed: | 1/8/16 17:04 | | | 1/8/16 17:43 | | | 1/8/16 18:23 | | | 1/8/16 19:01 | | |
| QC Batch No.: | 160108MS2A1 | | | 160108MS2A1 | | | 160108MS2A1 | | | 160108MS2A1 | | |
| Analyst Initials: | DT | | | DT | | | DT | | | DT | | |
| Dilution Factor: | 110 | | | 220 | | | 2.0 | | | 2.1 | | |
| ANALYTE | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv |
| Styrene | 0.16 | 0.11 | 0.014 | 0.18 J | 0.22 | 0.028 | 0.00065 J | 0.0020 | 0.00026 | 0.00051 J | 0.0021 | 0.00027 |
| Bromoform | ND | 0.11 | 0.0062 | ND | 0.22 | 0.012 | ND | 0.0020 | 0.00011 | ND | 0.0021 | 0.00012 |
| Isopropyl benzene | 0.10 J | 0.11 | 0.012 | 0.100 J | 0.22 | 0.022 | ND | 0.0020 | 0.00021 | ND | 0.0021 | 0.00022 |
| 1,1,2,2-Tetrachloroethane | ND | 0.22 | 0.0068 | ND | 0.43 | 0.013 | ND | 0.0040 | 0.00012 | ND | 0.0042 | 0.00013 |
| Benzyl Chloride | ND | 0.11 | 0.020 | ND | 0.22 | 0.040 | ND | 0.0020 | 0.00037 | ND | 0.0021 | 0.00039 |
| 1,2,3-Trichloropropane | ND | 0.11 | 0.030 | ND | 0.22 | 0.058 | ND | 0.0020 | 0.00054 | ND | 0.0021 | 0.00057 |
| n-Propyl Benzene | 0.14 | 0.11 | 0.0065 | 0.22 | 0.22 | 0.013 | 0.00083 J | 0.0020 | 0.00012 | 0.00063 J | 0.0021 | 0.00012 |
| 4-Ethyl Toluene | 0.84 | 0.11 | 0.0070 | 1.5 | 0.22 | 0.014 | 0.0050 | 0.0020 | 0.00013 | 0.0043 | 0.0021 | 0.00013 |
| 1,3,5-Trimethylbenzene | 0.29 | 0.22 | 0.019 | 0.57 | 0.43 | 0.037 | 0.0016 J | 0.0040 | 0.00035 | 0.0014 J | 0.0042 | 0.00036 |
| 4-Chlorotoluene | ND | 0.11 | 0.013 | ND | 0.22 | 0.026 | ND | 0.0020 | 0.00024 | ND | 0.0021 | 0.00025 |
| tert-Butylbenzene | 0.051 J | 0.11 | 0.010 | ND | 0.22 | 0.019 | 0.00042 J | 0.0020 | 0.00018 | ND | 0.0021 | 0.00019 |
| 1,2,4-Trimethylbenzene | 0.50 | 0.22 | 0.013 | 1.0 | 0.43 | 0.024 | 0.0044 | 0.0040 | 0.00023 | 0.0045 | 0.0042 | 0.00024 |
| sec-Butylbenzene | ND | 0.11 | 0.011 | ND | 0.22 | 0.021 | ND | 0.0020 | 0.00020 | ND | 0.0021 | 0.00020 |
| p-Isopropyltoluene | 0.033 J | 0.11 | 0.014 | ND | 0.22 | 0.028 | 0.00068 J | 0.0020 | 0.00026 | 0.0016 J | 0.0021 | 0.00027 |
| 1,3-Dichlorobenzene | ND | 0.11 | 0.013 | ND | 0.22 | 0.026 | ND | 0.0020 | 0.00025 | ND | 0.0021 | 0.00026 |
| 1,4-Dichlorobenzene | ND | 0.11 | 0.016 | ND | 0.22 | 0.031 | ND | 0.0020 | 0.00030 | ND | 0.0021 | 0.00031 |
| n-Butylbenzene | 0.016 J | 0.11 | 0.0081 | 0.036 J | 0.22 | 0.016 | 0.00028 J | 0.0020 | 0.00015 | 0.00030 J | 0.0021 | 0.00015 |
| 1,2-Dichlorobenzene | ND | 0.11 | 0.014 | ND | 0.22 | 0.027 | ND | 0.0020 | 0.00025 | ND | 0.0021 | 0.00026 |
| 1,2,4-Trichlorobenzene | ND | 0.22 | 0.018 | ND | 0.43 | 0.036 | ND | 0.0040 | 0.00033 | ND | 0.0042 | 0.00035 |
| Hexachlorobutadiene | ND | 0.11 | 0.0065 | ND | 0.22 | 0.013 | ND | 0.0020 | 0.00012 | ND | 0.0021 | 0.00012 |
| t-Butanol | ND | 0.56 | 0.021 | ND | 1.1 | 0.041 | ND | 0.010 | 0.00039 | ND | 0.011 | 0.00040 |
| n-Hexane | 14 | 0.56 | 0.015 | 30 | 1.1 | 0.029 | 0.0016 J | 0.010 | 0.00027 | 0.00046 J | 0.011 | 0.00028 |
| Isopropyl ether | ND | 0.56 | 0.012 | ND | 1.1 | 0.024 | ND | 0.010 | 0.00022 | ND | 0.011 | 0.00023 |
| t-Butyl ethyl ether | ND | 0.56 | 0.022 | ND | 1.1 | 0.043 | ND | 0.010 | 0.00040 | ND | 0.011 | 0.00042 |
| 2,2-Dichloropropane | ND | 0.56 | 0.011 | ND | 1.1 | 0.020 | ND | 0.010 | 0.00019 | ND | 0.011 | 0.00020 |
| t-Amyl methyl ether | ND | 0.56 | 0.0078 | ND | 1.1 | 0.015 | ND | 0.010 | 0.00014 | ND | 0.011 | 0.00015 |
| 1,4-Dioxane | ND | 0.56 | 0.019 | ND | 1.1 | 0.038 | ND | 0.010 | 0.00035 | ND | 0.011 | 0.00037 |
| Naphthalene | 0.078 J | 0.56 | 0.043 | ND | 1.1 | 0.083 | 0.0022 J | 0.010 | 0.00078 | 0.0036 J | 0.011 | 0.00081 |
| 1,2,3-Trichlorobenzene (TIC) | ND | -- | -- | ND | -- | -- | ND | -- | -- | ND | -- | -- |
| | | | | | | | | | | | | |

MDL = Method Detection Limit
ND= Not Detected (below MDL)
RL = Reporting Limit
J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: _____ Date 1/12/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: CH2M Hill
Attn: Dan Jablonski
Project Name: SFPP - Norwalk Site
Project No.: NA
Date Received: 01/05/16
Matrix: Air
Reporting Units: ppmv

**EPA Method TO15**

| Lab No.: | METHOD BLANK |
|---|---|
| Client Sample I.D.: | - |
| Date/Time Sampled: | - |
| Date/Time Analyzed: | 1/8/16 7:03 |
| QC Batch No.: | 160108MS2A1 |
| Analyst Initials: | DT |
| Dilution Factor: | 0.20 |

| ANALYTE | Result ppmv | RL ppmv | MDL ppmv |
|---|---|---|---|
| Dichlorodifluoromethane (12) | ND | 0.00020 | 0.000031 |
| Chloromethane | ND | 0.00040 | 0.000044 |
| 1,2-Cl-1,1,2,2-F ethane (114) | ND | 0.00020 | 0.000040 |
| Vinyl Chloride | ND | 0.00020 | 0.000032 |
| Bromomethane | ND | 0.00020 | 0.000059 |
| Chloroethane | ND | 0.00020 | 0.00017 |
| Trichlorofluoromethane (11) | ND | 0.00020 | 0.000043 |
| 1,1-Dichloroethene | ND | 0.00020 | 0.000045 |
| Carbon Disulfide | ND | 0.0010 | 0.000048 |
| 1,1,2-Cl 1,2,2-F ethane (113) | ND | 0.00020 | 0.000054 |
| Acetone | ND | 0.0010 | 0.000058 |
| Methylene Chloride | ND | 0.00020 | 0.000057 |
| t-1,2-Dichloroethene | ND | 0.00020 | 0.000060 |
| 1,1-Dichloroethane | ND | 0.00020 | 0.000027 |
| c-1,2-Dichloroethene | ND | 0.00020 | 0.000039 |
| 2-Butanone | ND | 0.00020 | 0.00012 |
| t-Butyl Methyl Ether (MTBE) | ND | 0.00020 | 0.000045 |
| Chloroform | ND | 0.00020 | 0.000028 |
| 1,1,1-Trichloroethane | ND | 0.00020 | 0.000020 |
| Carbon Tetrachloride | ND | 0.00020 | 0.000035 |
| Benzene | ND | 0.00020 | 0.000019 |
| 1,2-Dichloroethane | ND | 0.00020 | 0.000015 |
| Trichloroethene | ND | 0.00020 | 0.000028 |
| 1,2-Dichloropropane | ND | 0.00020 | 0.000036 |
| Bromodichloromethane | ND | 0.00020 | 0.000012 |
| c-1,3-Dichloropropene | ND | 0.00020 | 0.000024 |
| 4-Methyl-2-Pentanone | ND | 0.00020 | 0.000013 |
| Toluene | ND | 0.00020 | 0.000016 |
| t-1,3-Dichloropropene | ND | 0.00020 | 0.000021 |
| 1,1,2-Trichloroethane | ND | 0.00020 | 0.000032 |
| 1,3-Dichloropropane | ND | 0.00020 | 0.0000099 |
| Tetrachloroethene | ND | 0.00020 | 0.000024 |
| 2-Hexanone | ND | 0.00020 | 0.00041 |
| Dibromochloromethane | ND | 0.00020 | 0.000036 |
| 1,2-Dibromoethane | ND | 0.00020 | 0.000018 |
| Chlorobenzene | ND | 0.00020 | 0.000016 |
| Ethylbenzene | ND | 0.00020 | 0.000011 |
| p,&m-Xylene | ND | 0.00020 | 0.000023 |
| o-Xylene | ND | 0.00020 | 0.000024 |


18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: CH2M Hill
Attn: Dan Jablonski
Project Name: SFPP - Norwalk Site
Project No.: NA
Date Received: 01/05/16
Matrix: Air
Reporting Units: ppmv

**EPA Method TO15**

| Lab No.: | METHOD BLANK |
|---|---|
| Client Sample I.D.: | - |
| Date/Time Sampled: | - |
| Date/Time Analyzed: | 1/8/16 7:03 |
| QC Batch No.: | 160108MS2A1 |
| Analyst Initials: | DT |
| Dilution Factor: | 0.20 |

| ANALYTE | Result ppmv | RL ppmv | MDL ppmv |
|---|---|---|---|
| Styrene | ND | 0.00020 | 0.000026 |
| Bromoform | ND | 0.00020 | 0.000011 |
| Isopropyl benzene | ND | 0.00020 | 0.000021 |
| 1,1,2,2-Tetrachloroethane | ND | 0.00040 | 0.000012 |
| Benzyl Chloride | ND | 0.00020 | 0.000037 |
| 1,2,3-Trichloropropane | ND | 0.00020 | 0.000054 |
| n-Propyl Benzene | ND | 0.00020 | 0.000012 |
| 4-Ethyl Toluene | ND | 0.00020 | 0.000013 |
| 1,3,5-Trimethylbenzene | ND | 0.00040 | 0.000035 |
| 4-Chlorotoluene | ND | 0.00020 | 0.000024 |
| tert-Butylbenzene | ND | 0.00020 | 0.000018 |
| 1,2,4-Trimethylbenzene | ND | 0.00040 | 0.000023 |
| sec-Butylbenzene | ND | 0.00020 | 0.000019 |
| p-Isopropyltoluene | ND | 0.00020 | 0.000026 |
| 1,3-Dichlorobenzene | ND | 0.00020 | 0.000024 |
| 1,4-Dichlorobenzene | ND | 0.00020 | 0.000029 |
| n-Butylbenzene | ND | 0.00020 | 0.000015 |
| 1,2-Dichlorobenzene | ND | 0.00020 | 0.000025 |
| 1,2,4-Trichlorobenzene | ND | 0.00040 | 0.000033 |
| Hexachlorobutadiene | ND | 0.00020 | 0.000012 |
| t-Butanol | ND | 0.0010 | 0.000038 |
| n-Hexane | 0.00059 J | 0.0010 | 0.000027 |
| Isopropyl ether | ND | 0.0010 | 0.000022 |
| t-Butyl ethyl ether | ND | 0.0010 | 0.000040 |
| 2,2-Dichloropropane | ND | 0.0010 | 0.000019 |
| t-Amyl methyl ether | ND | 0.0010 | 0.000014 |
| 1,4-Dioxane | ND | 0.0010 | 0.000035 |
| Naphthalene | ND | 0.0010 | 0.000077 |
| 1,2,3-Trichlorobenzene (TIC) | ND | -- | -- |
| | | | |

MDL = Method Detection Limit
ND= Not Detected (below MDL)
RL = Reporting Limit
J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: _____ Date 1/12/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report


18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

## LCS/LCSD Recovery and RPD Summary Report

**QC Batch #: 160108MS2A1**

**Matrix: Air**

**EPA Method TO-14/TO-15**

| Lab No: | Method Blank | | LCS | | LCSD | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Date/Time Analyzed: | 1/8/16 7:03 | | 1/8/16 3:52 | | 1/8/16 4:30 | | | | | | |
| Data File ID: | 08JAN010.D | | 08JAN005.D | | 08JAN006.D | | | | | | |
| Analyst Initials: | DT | | DT | | DT | | | | | | |
| Dilution Factor: | 0.2 | | 1.0 | | 1.0 | | | Limits | | | |
| ANALYTE | Result ppbv | Spike Amount | Result ppbv | % Rec | Result ppbv | % Rec | RPD | Low %Rec | High %Rec | Max. RPD | Pass/ Fail |
| 1,1-Dichloroethene | 0.0 | 10.0 | 8.9 | 89 | 8.7 | 87 | 1.9 | 70 | 130 | 30 | Pass |
| Methylene Chloride | 0.0 | 10.0 | 9.3 | 93 | 8.9 | 89 | 4.3 | 70 | 130 | 30 | Pass |
| Trichloroethene | 0.0 | 10.0 | 7.5 | 75 | 8.1 | 81 | 8.7 | 70 | 130 | 30 | Pass |
| Toluene | 0.0 | 10.0 | 8.9 | 89 | 8.6 | 86 | 2.9 | 70 | 130 | 30 | Pass |
| 1,1,2,2-Tetrachloroethane | 0.0 | 10.0 | 9.6 | 96 | 9.7 | 97 | 0.6 | 70 | 130 | 30 | Pass |
| | | | | | | | | | | | |

RPD = Relative Percent Difference

Reviewed/Approved By: _____ Date: 1/12/16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

Client: CH2M Hill
Attn: Dan Jablonski
Project Name: SFPP - Norwalk Site
Project No.: NA
Date Received: 01/05/16
Matrix: Air
Reporting Units: ppmv

**EPA METHOD TO3**

| Lab No.: | H010504-01 | | | H010504-02 | | | H010504-03 | | | H010504-04 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client Sample I.D.: | VINF-01-04 | | | VPOST-01-04 | | | VEFF-01-04 | | | VEFF-01-04-D | | |
| Date/Time Sampled: | 1/4/16 12:46 | | | 1/4/16 12:38 | | | 1/4/16 12:28 | | | 1/4/16 12:33 | | |
| Date/Time Analyzed: | 1/7/16 11:45 | | | 1/7/16 12:08 | | | 1/7/16 11:00 | | | 1/7/16 11:22 | | |
| QC Batch No.: | 160107GC11A1 | | | 160107GC11A1 | | | 160107GC11A1 | | | 160107GC11A1 | | |
| Analyst Initials: | AS | | | AS | | | AS | | | AS | | |
| Dilution Factor: | 11 | | | 22 | | | 2.0 | | | 2.1 | | |
| ANALYTE | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv |
| TVOC as Hexane | 330 | 11 | 1.9 | 750 | 22 | 3.8 | ND | 2.0 | 0.36 | ND | 2.1 | 0.37 |
| | | | | | | | | | | | | |

MDL = Method Detection Limit
ND= Not Detected (below MDL)
RL = Reporting Limit
J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: _____ Date 1-12-16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report


18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

QC Batch No: 160107GC11A1
Matrix: Air
Reporting Units: ppmv

## EPA METHOD TO3
## LABORATORY CONTROL SAMPLE SUMMARY

| Lab No.: | METHOD BLANK | | | LCS | | LCSD | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Analyzed: | 1/7/16 9:29 | | | 1/7/16 8:44 | | 1/7/16 9:06 | | | | | |
| Analyst Initials: | AS | | | AS | | AS | | | | | |
| Dilution Factor: | 1.0 | | | 1.0 | | 1.0 | | | | | |
| ANALYTE | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | % Rec. | Result ppmv | % Rec. | RPD % | Low %Rec | High %Rec | Max. RPD |
| TVOC as Hexane | ND | 1.0 | 0.18 | 4.46 | 89 | 4.42 | 88 | 0.9 | 70 | 130 | 25 |
| | | | | | | | | | | | |

MDL = Method Detection Limit
ND= Not Detected (below MDL)
RL = Reporting Limit
J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: _____ Date 1-12-16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report


18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

**Client:** CH2M Hill
**Attn:** Dan Jablonski
**Project Name:** SFPP - Norwalk Site
**Project No.:** NA
**Date Received:** 01/05/16
**Matrix:** Air
**Reporting Units:** % v/v

## ASTM D1946

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Lab No.:** | **H010504-01** | | | | | | | |
| **Client Sample I.D.:** | **VINF-01-04** | | | | | | | |
| **Date/Time Sampled:** | **1/4/16 12:46** | | | | | | | |
| **Date/Time Analyzed:** | **1/5/16 12:15** | | | | | | | |
| **QC Batch No.:** | **160105GC8A1** | | | | | | | |
| **Analyst Initials:** | **AS** | | | | | | | |
| **Dilution Factor:** | **2.2** | | | | | | | |
| **ANALYTE** | **Result % v/v** | **RL % v/v** | | | | | | |
| Carbon Dioxide | 0.27 | 0.022 | | | | | | |
| Oxygen/Argon | 22 | 1.1 | | | | | | |
| Nitrogen | 78 | 2.2 | | | | | | |
| Methane | 0.0059 | 0.0022 | | | | | | |
| | | | | | | | | |

**Results normalized including non-methane hydrocarbons**
**ND = Not Detected (below RL)**
**RL = Reporting Limit**

**Reviewed/Approved By:** _____ **Date** 1-12-16

**Mark Johnson**
**Operations Manager**

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

QC Batch No.: 160105GC8A1
Matrix: Air
Units: % v/v

## QC for ASTM D1946

| Lab No.: | Method Blank | | LCS | | LCSD | | | |
|---|---|---|---|---|---|---|---|---|
| Date/Time Analyzed: | 1/5/16 10:08 | | 1/5/16 9:25 | | 1/5/16 9:39 | | | |
| Analyst Initials: | AS | | AS | | AS | | | |
| Datafile: | 05jan006 | | 05jan003 | | 05jan004 | | | |
| Dilution Factor: | 1.0 | | 1.0 | | 1.0 | | | |
| ANALYTE | Results | RL | % Rec. | Criteria | % Rec. | Criteria | %RPD | Criteria |
| Carbon Dioxide | ND | 0.010 | 98 | 70-130% | 98 | 70-130% | 0.8 | <30 |
| Oxygen/Argon | ND | 0.50 | 100 | 70-130% | 101 | 70-130% | 0.6 | <30 |
| Nitrogen | ND | 1.0 | 100 | 70-130% | 101 | 70-130% | 0.8 | <30 |
| Methane | ND | 0.0010 | 95 | 70-130% | 94 | 70-130% | 1.4 | <30 |
| | | | | | | | | |

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ Date: 1-12-16

Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

Air TECHNOLOGY Laboratories, Inc.

February 17, 2016

ADE-1461
EPA Methods TO3, TO14A, TO15 SIM & SCAN
ASTM D1946

LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175

TX Cert T104704450-14-6
EPA Methods TO14A, TO15

UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

CH2M HILL
ATTN: Daniel Jablonski
5742 Costello Ave.
Van Nuys, CA 91401

# LABORATORY TEST RESULTS

Project Reference: SFPP - Norwalk Site
Lab Number: H020503-01/04

Enclosed are results for sample(s) received 2/05/16 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the NELAC Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Dan Jablonski, Vidal Cortes and Steve Defibaugh on 2/16/16.

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Note: The cover letter is an integral part of this analytical report.

**Air Technology Laboratories, Inc.**
18501 Gale Ave # 130
City of Industry, CA 91748
Tel: (626) 964-4032
**Joann De La Ossa (JDeLaOssa@airtechlabs.com)**

H020503 -01/04

# CHAIN OF CUSTODY RECORD

DATE: 2/4/16
PAGE: 1 OF 1

LABORATORY CLIENT: **CH2M HILL: Attn - Dan Jablonski**
ADDRESS: **6 Hutton Centre Dr, Suite 700**
CITY: **Santa Ana, CA 92707**
TEL: **714-429-2020** FAX: E-MAIL: Daniel.Jablonski@CH2M.com

CLIENT PROJECT NAME / NUMBER: **SFPP - Norwalk Site**
PROJECT CONTACT: **James Dye**
SAMPLER(S): (SIGNATURE)
P.O. NO.:
QUOTE NO.:
LAB USE ONLY:

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ■ 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___/___/___

SPECIAL INSTRUCTIONS
**Report: Jablonski, Daniel/LAC - Daniel.Jablonski@CH2M.com,**
**Cortes, Vidal/SCO - Vidal.Cortes@CH2M.com**
**CC: KMEP Steve Defibaugh - Steve_Defibaugh@kindermorgan.com**
**"J" flags required/Use lowest possible detection limit - all methods.**

**REQUESTED ANALYSIS**

| LAB USE ONLY | SAMPLE ID | LOCATION/ DESCRIPTION | SAMPLING DATE | SAMPLING TIME | INITIAL PRESSURE ("Hg) | FINAL PRESSURE ("Hg) | MAT-RIX | NO. OF CONT. | TO-3 (TPH-g, TPH-d, TPH as hexane) | TO-15 (VOCs Target Analytes) | ASTM-D 1946 (O2/Argon, CO2, CH4, N2) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -01 | VEFF-02-04 | Outlet (stack) | 2/4/16 | 1250 | -30 | -5 | Air | 1 | X | X | | Individually Certified 1-L SUMMA |
| -02 | VEFF-02-04-D | Outlet (stack) Dup | 2/4/16 | 1257 | -30 | -5 | Air | 1 | X | X | | Individually Certified 1-L SUMMA |
| -03 | VPOST-02-04 | Post-Dilution | 2/4/16 | 1305 | -30 | -5 | Air | 1 | X | X | | Individually Certified 1-L SUMMA |
| -04 | VINF-02-04 | Influent Vapor (header) | 2/4/16 | 1312 | -30 | -5 | Air | 1 | X | X | X | Batch Certified 1-L SUMMA |
| | | | | | | | | | | | | TAL includes historical VOCs |
| | | | | | | | | | | | | and remaining ATLI List per |
| | | | | | | | | | | | | subcontract. |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) FED EX | Date: 2/4/16 | Time: 1500 |
| Relinquished by: (Signature) FED EX | Received by: (Signature) | Date: 2/5/16 | Time: 1145 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

Revised: 06/29/2015

Client: CH2M HILL
Attn: Dan Jablonski
Project Name: SFPP- Norwalk Site
Project No.: NA
Date Received: 02/05/16
Matrix: Air
Reporting Units: ppmv

**EPA Method TO15**

| Lab No.: | H020503-01 | | | H020503-02 | | | H020503-03 | | | H020503-04 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client Sample I.D.: | VEFF-02-04 | | | VEFF-02-04-D | | | VPOST-02-04 | | | VINF-02-04 | | |
| Date/Time Sampled: | 2/4/16 12:50 | | | 2/4/16 12:57 | | | 2/4/16 13:05 | | | 2/4/16 13:12 | | |
| Date/Time Analyzed: | 2/14/16 14:00 | | | 2/13/16 19:41 | | | 2/13/16 20:20 | | | 2/13/16 20:59 | | |
| QC Batch No.: | 160214MS2A1 | | | 160213MS2A1 | | | 160213MS2A1 | | | 160213MS2A1 | | |
| Analyst Initials: | DT | | | DT | | | DT | | | DT | | |
| Dilution Factor: | 8.1 | | | 2.0 | | | 610 | | | 420 | | |
| ANALYTE | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv |
| Dichlorodifluoromethane (12) | ND | 0.0081 | 0.0012 | ND | 0.0020 | 0.00031 | ND | 0.61 | 0.093 | ND | 0.42 | 0.065 |
| Chloromethane | ND | 0.016 | 0.0018 | 0.0012 J | 0.0040 | 0.00044 | ND | 1.2 | 0.13 | ND | 0.84 | 0.093 |
| 1,2-Cl-1,1,2,2-F ethane (114) | ND | 0.0081 | 0.0016 | ND | 0.0020 | 0.00041 | ND | 0.61 | 0.12 | ND | 0.42 | 0.085 |
| Vinyl Chloride | ND | 0.0081 | 0.0013 | ND | 0.0020 | 0.00033 | ND | 0.61 | 0.098 | ND | 0.42 | 0.068 |
| Bromomethane | ND | 0.0081 | 0.0024 | ND | 0.0020 | 0.00059 | ND | 0.61 | 0.18 | ND | 0.42 | 0.12 |
| Chloroethane | ND | 0.0081 | 0.0068 | ND | 0.0020 | 0.0017 | ND | 0.61 | 0.51 | ND | 0.42 | 0.35 |
| Trichlorofluoromethane (11) | ND | 0.0081 | 0.0017 | ND | 0.0020 | 0.00044 | ND | 0.61 | 0.13 | ND | 0.42 | 0.091 |
| 1,1-Dichloroethene | ND | 0.0081 | 0.0018 | ND | 0.0020 | 0.00046 | ND | 0.61 | 0.14 | ND | 0.42 | 0.096 |
| Carbon Disulfide | 0.034 J | 0.040 | 0.0019 | 0.046 | 0.010 | 0.00048 | ND | 3.0 | 0.15 | ND | 2.1 | 0.10 |
| 1,1,2-Cl 1,2,2-F ethane (113) | ND | 0.0081 | 0.0022 | ND | 0.0020 | 0.00054 | ND | 0.61 | 0.16 | ND | 0.42 | 0.11 |
| Acetone | 0.044 | 0.040 | 0.0023 | 0.026 | 0.010 | 0.00058 | 1.2 J | 3.0 | 0.17 | ND | 2.1 | 0.12 |
| Methylene Chloride | ND | 0.0081 | 0.0023 | ND | 0.0020 | 0.00058 | ND | 0.61 | 0.17 | ND | 0.42 | 0.12 |
| t-1,2-Dichloroethene | ND | 0.0081 | 0.0024 | ND | 0.0020 | 0.00060 | ND | 0.61 | 0.18 | ND | 0.42 | 0.13 |
| 1,1-Dichloroethane | ND | 0.0081 | 0.0011 | ND | 0.0020 | 0.00028 | ND | 0.61 | 0.083 | ND | 0.42 | 0.057 |
| c-1,2-Dichloroethene | ND | 0.0081 | 0.0016 | ND | 0.0020 | 0.00039 | ND | 0.61 | 0.12 | ND | 0.42 | 0.081 |
| 2-Butanone | 0.025 | 0.0081 | 0.0050 | 0.015 | 0.0020 | 0.0012 | 0.47 J | 0.61 | 0.37 | ND | 0.42 | 0.26 |
| t-Butyl Methyl Ether (MTBE) | 0.81 | 0.0081 | 0.0018 | 0.13 | 0.0020 | 0.00045 | ND | 0.61 | 0.14 | ND | 0.42 | 0.094 |
| Chloroform | ND | 0.0081 | 0.0011 | ND | 0.0020 | 0.00028 | ND | 0.61 | 0.085 | ND | 0.42 | 0.059 |
| 1,1,1-Trichloroethane | ND | 0.0081 | 0.00081 | ND | 0.0020 | 0.00020 | ND | 0.61 | 0.061 | ND | 0.42 | 0.042 |
| Carbon Tetrachloride | ND | 0.0081 | 0.0014 | ND | 0.0020 | 0.00035 | ND | 0.61 | 0.11 | ND | 0.42 | 0.073 |
| Benzene | 0.079 | 0.0081 | 0.00078 | 0.016 | 0.0020 | 0.00019 | 16 | 0.61 | 0.058 | 12 | 0.42 | 0.040 |
| 1,2-Dichloroethane | ND | 0.0081 | 0.00060 | ND | 0.0020 | 0.00015 | ND | 0.61 | 0.045 | ND | 0.42 | 0.031 |
| Trichloroethene | ND | 0.0081 | 0.0011 | 0.00073 J | 0.0020 | 0.00029 | ND | 0.61 | 0.086 | 0.096 J | 0.42 | 0.060 |
| 1,2-Dichloropropane | ND | 0.0081 | 0.0015 | ND | 0.0020 | 0.00037 | ND | 0.61 | 0.11 | ND | 0.42 | 0.076 |
| Bromodichloromethane | ND | 0.0081 | 0.00049 | ND | 0.0020 | 0.00012 | ND | 0.61 | 0.036 | ND | 0.42 | 0.025 |
| c-1,3-Dichloropropene | ND | 0.0081 | 0.00097 | ND | 0.0020 | 0.00024 | ND | 0.61 | 0.073 | ND | 0.42 | 0.050 |
| 4-Methyl-2-Pentanone | ND | 0.0081 | 0.00054 | ND | 0.0020 | 0.00014 | ND | 0.61 | 0.041 | ND | 0.42 | 0.028 |
| Toluene | 0.61 | 0.0081 | 0.00064 | 0.18 | 0.0020 | 0.00016 | 29 | 0.61 | 0.048 | 21 | 0.42 | 0.033 |
| t-1,3-Dichloropropene | ND | 0.0081 | 0.00083 | ND | 0.0020 | 0.00021 | ND | 0.61 | 0.063 | ND | 0.42 | 0.043 |
| 1,1,2-Trichloroethane | ND | 0.0081 | 0.0013 | ND | 0.0020 | 0.00033 | ND | 0.61 | 0.098 | ND | 0.42 | 0.068 |
| 1,3-Dichloropropane | ND | 0.0081 | 0.00040 | ND | 0.0020 | 0.00010 | ND | 0.61 | 0.030 | ND | 0.42 | 0.021 |
| Tetrachloroethene | ND | 0.0081 | 0.00097 | ND | 0.0020 | 0.00024 | ND | 0.61 | 0.073 | ND | 0.42 | 0.051 |
| 2-Hexanone | 0.012 | 0.0081 | 0.0017 | 0.0054 | 0.0020 | 0.00042 | ND | 0.61 | 0.12 | ND | 0.42 | 0.087 |
| Dibromochloromethane | ND | 0.0081 | 0.0015 | ND | 0.0020 | 0.00037 | ND | 0.61 | 0.11 | ND | 0.42 | 0.077 |
| 1,2-Dibromoethane | ND | 0.0081 | 0.00074 | ND | 0.0020 | 0.00018 | ND | 0.61 | 0.055 | ND | 0.42 | 0.038 |
| Chlorobenzene | 0.0046 J | 0.0081 | 0.00063 | 0.0013 J | 0.0020 | 0.00016 | ND | 0.61 | 0.047 | ND | 0.42 | 0.033 |
| Ethylbenzene | 0.20 | 0.0081 | 0.00046 | 0.064 | 0.0020 | 0.00012 | 2.6 | 0.61 | 0.035 | 1.9 | 0.42 | 0.024 |
| p,&m-Xylene | 1.5 | 0.0081 | 0.00091 | 0.51 | 0.0020 | 0.00023 | 14 | 0.61 | 0.069 | 11 | 0.42 | 0.048 |
| o-Xylene | 0.73 | 0.0081 | 0.00098 | 0.25 | 0.0020 | 0.00025 | 5.3 | 0.61 | 0.074 | 4.2 | 0.42 | 0.051 |


18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: CH2M HILL
Attn: Dan Jablonski
Project Name: SFPP- Norwalk Site
Project No.: NA
Date Received: 02/05/16
Matrix: Air
Reporting Units: ppmv

**EPA Method TO15**

| Lab No.: | H020503-01 | | | H020503-02 | | | H020503-03 | | | H020503-04 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client Sample I.D.: | VEFF-02-04 | | | VEFF-02-04-D | | | VPOST-02-04 | | | VINF-02-04 | | |
| Date/Time Sampled: | 2/4/16 12:50 | | | 2/4/16 12:57 | | | 2/4/16 13:05 | | | 2/4/16 13:12 | | |
| Date/Time Analyzed: | 2/14/16 14:00 | | | 2/13/16 19:41 | | | 2/13/16 20:20 | | | 2/13/16 20:59 | | |
| QC Batch No.: | 160214MS2A1 | | | 160213MS2A1 | | | 160213MS2A1 | | | 160213MS2A1 | | |
| Analyst Initials: | DT | | | DT | | | DT | | | DT | | |
| Dilution Factor: | 8.1 | | | 2.0 | | | 610 | | | 420 | | |
| ANALYTE | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv |
| Styrene | 0.025 | 0.0081 | 0.0010 | 0.0092 | 0.0020 | 0.00026 | 0.28 J | 0.61 | 0.078 | 0.17 J | 0.42 | 0.054 |
| Bromoform | ND | 0.0081 | 0.00045 | ND | 0.0020 | 0.00011 | ND | 0.61 | 0.034 | ND | 0.42 | 0.023 |
| Isopropyl benzene | 0.019 | 0.0081 | 0.00084 | 0.0066 | 0.0020 | 0.00021 | 0.15 J | 0.61 | 0.063 | 0.11 J | 0.42 | 0.044 |
| 1,1,2,2-Tetrachloroethane | ND | 0.016 | 0.00049 | ND | 0.0040 | 0.00012 | ND | 1.2 | 0.037 | ND | 0.84 | 0.026 |
| Benzyl Chloride | ND | 0.0081 | 0.0015 | ND | 0.0020 | 0.00037 | ND | 0.61 | 0.11 | ND | 0.42 | 0.077 |
| 1,2,3-Trichloropropane | ND | 0.0081 | 0.0022 | ND | 0.0020 | 0.00054 | ND | 0.61 | 0.16 | ND | 0.42 | 0.11 |
| n-Propyl Benzene | 0.059 | 0.0081 | 0.00047 | 0.024 | 0.0020 | 0.00012 | 0.28 J | 0.61 | 0.035 | 0.20 J | 0.42 | 0.024 |
| 4-Ethyl Toluene | 0.71 | 0.0081 | 0.00051 | 0.30 | 0.0020 | 0.00013 | 2.2 | 0.61 | 0.038 | 1.7 | 0.42 | 0.027 |
| 1,3,5-Trimethylbenzene | 0.34 | 0.016 | 0.0014 | 0.14 | 0.0040 | 0.00035 | 0.99 J | 1.2 | 0.10 | 0.78 J | 0.84 | 0.073 |
| 4-Chlorotoluene | ND | 0.0081 | 0.00096 | ND | 0.0020 | 0.00024 | ND | 0.61 | 0.072 | ND | 0.42 | 0.050 |
| tert-Butylbenzene | ND | 0.0081 | 0.00073 | ND | 0.0020 | 0.00018 | ND | 0.61 | 0.055 | ND | 0.42 | 0.038 |
| 1,2,4-Trimethylbenzene | 0.69 | 0.016 | 0.00092 | 0.33 | 0.0040 | 0.00023 | 1.8 | 1.2 | 0.069 | 1.3 | 0.84 | 0.048 |
| sec-Butylbenzene | 0.0091 | 0.0081 | 0.00078 | 0.0041 | 0.0020 | 0.00020 | ND | 0.61 | 0.059 | ND | 0.42 | 0.041 |
| p-Isopropyltoluene | 0.0070 J | 0.0081 | 0.0011 | 0.0055 | 0.0020 | 0.00026 | ND | 0.61 | 0.079 | ND | 0.42 | 0.055 |
| 1,3-Dichlorobenzene | ND | 0.0081 | 0.00098 | ND | 0.0020 | 0.00025 | ND | 0.61 | 0.074 | ND | 0.42 | 0.051 |
| 1,4-Dichlorobenzene | ND | 0.0081 | 0.0012 | ND | 0.0020 | 0.00030 | ND | 0.61 | 0.089 | ND | 0.42 | 0.061 |
| n-Butylbenzene | ND | 0.0081 | 0.00059 | ND | 0.0020 | 0.00015 | 0.086 J | 0.61 | 0.044 | ND | 0.42 | 0.031 |
| 1,2-Dichlorobenzene | ND | 0.0081 | 0.0010 | ND | 0.0020 | 0.00025 | ND | 0.61 | 0.075 | ND | 0.42 | 0.052 |
| 1,2,4-Trichlorobenzene | ND | 0.016 | 0.0013 | ND | 0.0040 | 0.00033 | ND | 1.2 | 0.10 | ND | 0.84 | 0.070 |
| Hexachlorobutadiene | ND | 0.0081 | 0.00047 | ND | 0.0020 | 0.00012 | ND | 0.61 | 0.036 | ND | 0.42 | 0.025 |
| t-Butanol | 0.13 | 0.040 | 0.0016 | 0.060 | 0.010 | 0.00039 | ND | 3.0 | 0.12 | ND | 2.1 | 0.081 |
| n-Hexane | 0.38 | 0.040 | 0.0011 | 0.057 | 0.010 | 0.00027 | 59 | 3.0 | 0.082 | 43 | 2.1 | 0.057 |
| Isopropyl ether | ND | 0.040 | 0.00090 | ND | 0.010 | 0.00022 | ND | 3.0 | 0.067 | ND | 2.1 | 0.047 |
| t-Butyl ethyl ether | ND | 0.040 | 0.0016 | ND | 0.010 | 0.00040 | ND | 3.0 | 0.12 | ND | 2.1 | 0.084 |
| 2,2-Dichloropropane | ND | 0.040 | 0.00077 | ND | 0.010 | 0.00019 | ND | 3.0 | 0.058 | ND | 2.1 | 0.040 |
| t-Amyl methyl ether | 0.028 J | 0.040 | 0.00057 | 0.0064 J | 0.010 | 0.00014 | ND | 3.0 | 0.043 | ND | 2.1 | 0.030 |
| 1,4-Dioxane | ND | 0.040 | 0.0014 | ND | 0.010 | 0.00035 | ND | 3.0 | 0.11 | ND | 2.1 | 0.074 |
| Naphthalene | 0.0065 J | 0.040 | 0.0031 | 0.049 | 0.010 | 0.00078 | ND | 3.0 | 0.23 | ND | 2.1 | 0.16 |
| 1,2,3-Trichlorobenzene (TIC) | ND | -- | -- | ND | -- | -- | ND | -- | -- | ND | -- | -- |
| | | | | | | | | | | | | |

MDL = Method Detection Limit
ND= Not Detected (below MDL)
RL = Reporting Limit
J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: _____ Date 2/16/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report


18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: CH2M HILL
Attn: Dan Jablonski
Project Name: SFPP- Norwalk Site
Project No.: NA
Date Received: 02/05/16
Matrix: Air
Reporting Units: ppmv

**EPA Method TO15**

| Lab No.: | METHOD BLANK | | | METHOD BLANK | | |
|---|---|---|---|---|---|---|
| Client Sample I.D.: | - | | | - | | |
| Date/Time Sampled: | - | | | - | | |
| Date/Time Analyzed: | 2/13/16 5:45 | | | 2/14/16 10:16 | | |
| QC Batch No.: | 160213MS2A1 | | | 160214MS2A1 | | |
| Analyst Initials: | DT | | | DT | | |
| Dilution Factor: | 0.20 | | | 0.20 | | |

| ANALYTE | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv |
|---|---|---|---|---|---|---|
| Dichlorodifluoromethane (12) | ND | 0.00020 | 0.000031 | ND | 0.00020 | 0.000031 |
| Chloromethane | ND | 0.00040 | 0.000044 | ND | 0.00040 | 0.000044 |
| 1,2-Cl-1,1,2,2-F ethane (114) | ND | 0.00020 | 0.000040 | ND | 0.00020 | 0.000040 |
| Vinyl Chloride | ND | 0.00020 | 0.000032 | ND | 0.00020 | 0.000032 |
| Bromomethane | ND | 0.00020 | 0.000059 | ND | 0.00020 | 0.000059 |
| Chloroethane | ND | 0.00020 | 0.00017 | ND | 0.00020 | 0.00017 |
| Trichlorofluoromethane (11) | ND | 0.00020 | 0.000043 | ND | 0.00020 | 0.000043 |
| 1,1-Dichloroethene | ND | 0.00020 | 0.000045 | ND | 0.00020 | 0.000045 |
| Carbon Disulfide | ND | 0.0010 | 0.000048 | **0.00034 J** | 0.0010 | 0.000048 |
| 1,1,2-Cl 1,2,2-F ethane (113) | ND | 0.00020 | 0.000054 | ND | 0.00020 | 0.000054 |
| Acetone | **0.000075 J** | 0.0010 | 0.000058 | **0.00011 J** | 0.0010 | 0.000058 |
| Methylene Chloride | ND | 0.00020 | 0.000057 | ND | 0.00020 | 0.000057 |
| t-1,2-Dichloroethene | ND | 0.00020 | 0.000060 | ND | 0.00020 | 0.000060 |
| 1,1-Dichloroethane | ND | 0.00020 | 0.000027 | ND | 0.00020 | 0.000027 |
| c-1,2-Dichloroethene | ND | 0.00020 | 0.000039 | ND | 0.00020 | 0.000039 |
| 2-Butanone | ND | 0.00020 | 0.00012 | ND | 0.00020 | 0.00012 |
| t-Butyl Methyl Ether (MTBE) | ND | 0.00020 | 0.000045 | ND | 0.00020 | 0.000045 |
| Chloroform | ND | 0.00020 | 0.000028 | ND | 0.00020 | 0.000028 |
| 1,1,1-Trichloroethane | ND | 0.00020 | 0.000020 | ND | 0.00020 | 0.000020 |
| Carbon Tetrachloride | ND | 0.00020 | 0.000035 | ND | 0.00020 | 0.000035 |
| Benzene | ND | 0.00020 | 0.000019 | **0.000029 J** | 0.00020 | 0.000019 |
| 1,2-Dichloroethane | ND | 0.00020 | 0.000015 | ND | 0.00020 | 0.000015 |
| Trichloroethene | ND | 0.00020 | 0.000028 | ND | 0.00020 | 0.000028 |
| 1,2-Dichloropropane | ND | 0.00020 | 0.000036 | ND | 0.00020 | 0.000036 |
| Bromodichloromethane | ND | 0.00020 | 0.000012 | ND | 0.00020 | 0.000012 |
| c-1,3-Dichloropropene | ND | 0.00020 | 0.000024 | ND | 0.00020 | 0.000024 |
| 4-Methyl-2-Pentanone | ND | 0.00020 | 0.000013 | ND | 0.00020 | 0.000013 |
| Toluene | ND | 0.00020 | 0.000016 | **0.000037 J** | 0.00020 | 0.000016 |
| t-1,3-Dichloropropene | ND | 0.00020 | 0.000021 | ND | 0.00020 | 0.000021 |
| 1,1,2-Trichloroethane | ND | 0.00020 | 0.000032 | ND | 0.00020 | 0.000032 |
| 1,3-Dichloropropane | ND | 0.00020 | 0.0000099 | ND | 0.00020 | 0.0000099 |
| Tetrachloroethene | ND | 0.00020 | 0.000024 | ND | 0.00020 | 0.000024 |
| 2-Hexanone | ND | 0.00020 | 0.000041 | ND | 0.00020 | 0.000041 |
| Dibromochloromethane | ND | 0.00020 | 0.000036 | ND | 0.00020 | 0.000036 |
| 1,2-Dibromoethane | ND | 0.00020 | 0.000018 | ND | 0.00020 | 0.000018 |
| Chlorobenzene | ND | 0.00020 | 0.000016 | ND | 0.00020 | 0.000016 |
| Ethylbenzene | ND | 0.00020 | 0.000011 | ND | 0.00020 | 0.000011 |
| p,&m-Xylene | ND | 0.00020 | 0.000023 | **0.000030 J** | 0.00020 | 0.000023 |
| o-Xylene | ND | 0.00020 | 0.000024 | ND | 0.00020 | 0.000024 |


18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: CH2M HILL
Attn: Dan Jablonski
Project Name: SFPP- Norwalk Site
Project No.: NA
Date Received: 02/05/16
Matrix: Air
Reporting Units: ppmv

**EPA Method TO15**

| Lab No.: | METHOD BLANK | | | METHOD BLANK | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client Sample I.D.: | - | | | - | | | | | | | | |
| Date/Time Sampled: | - | | | - | | | | | | | | |
| Date/Time Analyzed: | 2/13/16 5:45 | | | 2/14/16 10:16 | | | | | | | | |
| QC Batch No.: | 160213MS2A1 | | | 160214MS2A1 | | | | | | | | |
| Analyst Initials: | DT | | | DT | | | | | | | | |
| Dilution Factor: | 0.20 | | | 0.20 | | | | | | | | |
| ANALYTE | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | | | | | | |
| Styrene | ND | 0.00020 | 0.000026 | ND | 0.00020 | 0.000026 | | | | | | |
| Bromoform | ND | 0.00020 | 0.000011 | ND | 0.00020 | 0.000011 | | | | | | |
| Isopropyl benzene | ND | 0.00020 | 0.000021 | ND | 0.00020 | 0.000021 | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.00040 | 0.000012 | ND | 0.00040 | 0.000012 | | | | | | |
| Benzyl Chloride | ND | 0.00020 | 0.000037 | ND | 0.00020 | 0.000037 | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.00020 | 0.000054 | ND | 0.00020 | 0.000054 | | | | | | |
| n-Propyl Benzene | ND | 0.00020 | 0.000012 | ND | 0.00020 | 0.000012 | | | | | | |
| 4-Ethyl Toluene | ND | 0.00020 | 0.000013 | ND | 0.00020 | 0.000013 | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.00040 | 0.000035 | ND | 0.00040 | 0.000035 | | | | | | |
| 4-Chlorotoluene | ND | 0.00020 | 0.000024 | ND | 0.00020 | 0.000024 | | | | | | |
| tert-Butylbenzene | ND | 0.00020 | 0.000018 | ND | 0.00020 | 0.000018 | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.00040 | 0.000023 | ND | 0.00040 | 0.000023 | | | | | | |
| sec-Butylbenzene | ND | 0.00020 | 0.000019 | ND | 0.00020 | 0.000019 | | | | | | |
| p-Isopropyltoluene | ND | 0.00020 | 0.000026 | ND | 0.00020 | 0.000026 | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.00020 | 0.000024 | ND | 0.00020 | 0.000024 | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.00020 | 0.000029 | ND | 0.00020 | 0.000029 | | | | | | |
| n-Butylbenzene | ND | 0.00020 | 0.000015 | ND | 0.00020 | 0.000015 | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.00020 | 0.000025 | ND | 0.00020 | 0.000025 | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.00040 | 0.000033 | ND | 0.00040 | 0.000033 | | | | | | |
| Hexachlorobutadiene | ND | 0.00020 | 0.000012 | ND | 0.00020 | 0.000012 | | | | | | |
| t-Butanol | ND | 0.0010 | 0.000038 | ND | 0.0010 | 0.000038 | | | | | | |
| n-Hexane | ND | 0.0010 | 0.000027 | ND | 0.0010 | 0.000027 | | | | | | |
| Isopropyl ether | ND | 0.0010 | 0.000022 | ND | 0.0010 | 0.000022 | | | | | | |
| t-Butyl ethyl ether | ND | 0.0010 | 0.000040 | ND | 0.0010 | 0.000040 | | | | | | |
| 2,2-Dichloropropane | ND | 0.0010 | 0.000019 | ND | 0.0010 | 0.000019 | | | | | | |
| t-Amyl methyl ether | ND | 0.0010 | 0.000014 | ND | 0.0010 | 0.000014 | | | | | | |
| 1,4-Dioxane | ND | 0.0010 | 0.000035 | ND | 0.0010 | 0.000035 | | | | | | |
| Naphthalene | ND | 0.0010 | 0.000077 | ND | 0.0010 | 0.000077 | | | | | | |
| 1,2,3-Trichlorobenzene (TIC) | ND | -- | -- | ND | -- | -- | | | | | | |
| | | | | | | | | | | | | |

MDL = Method Detection Limit
ND= Not Detected (below MDL)
RL = Reporting Limit
J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: _____ Date 2/16/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

## LCS/LCSD Recovery and RPD Summary Report

**QC Batch #: 160213MS2A1**

**Matrix: Air**

**EPA Method TO-14/TO-15**

| Lab No: | Method Blank | | LCS | | LCSD | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Date/Time Analyzed: | 2/13/16 5:45 | | 2/13/16 3:10 | | 2/13/16 3:49 | | | | | | |
| Data File ID: | 13FEB009.D | | 13FEB005.D | | 13FEB006.D | | | | | | |
| Analyst Initials: | DT | | DT | | DT | | | | | | |
| Dilution Factor: | 0.2 | | 1.0 | | 1.0 | | | Limits | | | |
| ANALYTE | Result ppbv | Spike Amount | Result ppbv | % Rec | Result ppbv | % Rec | RPD | Low %Rec | High %Rec | Max. RPD | Pass/ Fail |
| 1,1-Dichloroethene | 0.0 | 10.0 | 9.5 | **95** | 9.4 | 94 | 1.1 | 70 | 130 | 30 | Pass |
| Methylene Chloride | 0.0 | 10.0 | 10.2 | **102** | 10.0 | **100** | 2.0 | 70 | 130 | 30 | Pass |
| Trichloroethene | 0.0 | 10.0 | 9.1 | **91** | 9.0 | 90 | 1.4 | 70 | 130 | 30 | Pass |
| Toluene | 0.0 | 10.0 | 9.4 | **94** | 9.3 | 93 | 1.2 | 70 | 130 | 30 | Pass |
| 1,1,2,2-Tetrachloroethane | 0.0 | 10.0 | 12.3 | **123** | 12.2 | **122** | 0.6 | 70 | 130 | 30 | Pass |
| | | | | | | | | | | | |

RPD = Relative Percent Difference

Reviewed/Approved By: _____ Date: 2/16/16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

## LCS/LCSD Recovery and RPD Summary Report

**QC Batch #: 160214MS2A1**

**Matrix: Air**

**EPA Method TO-14/TO-15**

| Lab No: | Method Blank | | LCS | | LCSD | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Date/Time Analyzed: | 2/14/16 10:16 | | 2/14/16 2:46 | | 2/14/16 3:24 | | | | | | |
| Data File ID: | 14FEB008.D | | 14FEB004.D | | 14FEB005.D | | | | | | |
| Analyst Initials: | DT | | DT | | DT | | | | | | |
| Dilution Factor: | 0.2 | | 1.0 | | 1.0 | | | Limits | | | |
| ANALYTE | Result ppbv | Spike Amount | Result ppbv | % Rec | Result ppbv | % Rec | RPD | Low %Rec | High %Rec | Max. RPD | Pass/ Fail |
| 1,1-Dichloroethene | 0.0 | 10.0 | 9.6 | 96 | 9.8 | 98 | 2.0 | 70 | 130 | 30 | Pass |
| Methylene Chloride | 0.0 | 10.0 | 10.1 | 101 | 10.2 | 102 | 1.0 | 70 | 130 | 30 | Pass |
| Trichloroethene | 0.0 | 10.0 | 9.4 | 94 | 9.3 | 93 | 1.4 | 70 | 130 | 30 | Pass |
| Toluene | 0.0 | 10.0 | 9.7 | 97 | 9.5 | 95 | 1.8 | 70 | 130 | 30 | Pass |
| 1,1,2,2-Tetrachloroethane | 0.0 | 10.0 | 12.2 | 122 | 12.5 | 125 | 2.1 | 70 | 130 | 30 | Pass |
| | | | | | | | | | | | |

RPD = Relative Percent Difference

Reviewed/Approved By: _____ Date: 2/16/16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

Client: CH2M HILL
Attn: Dan Jablonski
Project Name: SFPP- Norwalk Site
Project No.: NA
Date Received: 02/05/16
Matrix: Air
Reporting Units: ppmv

**EPA METHOD TO3**

| Lab No.: | H020503-01 | | | H020503-02 | | | H020503-03 | | | H020503-04 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client Sample I.D.: | VEFF-02-04 | | | VEFF-02-04-D | | | VPOST-02-04 | | | VINF-02-04 | | |
| Date/Time Sampled: | 2/4/16 12:50 | | | 2/4/16 12:57 | | | 2/4/16 13:05 | | | 2/4/16 13:12 | | |
| Date/Time Analyzed: | 2/9/16 11:43 | | | 2/9/16 12:06 | | | 2/9/16 13:38 | | | 2/9/16 14:49 | | |
| QC Batch No.: | 160208GC11A2 | | | 160208GC11A2 | | | 160208GC11A2 | | | 160208GC11A2 | | |
| Analyst Initials: | AS | | | AS | | | AS | | | AS | | |
| Dilution Factor: | 2.0 | | | 2.0 | | | 20 | | | 42 | | |
| ANALYTE | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv |
| TVOC as Hexane | 49 | 2.0 | 0.36 | 11 | 2.0 | 0.36 | 2,000 | 20 | 3.6 | 1,500 | 42 | 7.4 |
| | | | | | | | | | | | | |

MDL = Method Detection Limit
ND= Not Detected (below MDL)
RL = Reporting Limit
J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: _____ Date 2/10/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

QC Batch No: 160208GC11A2
Matrix: Air
Reporting Units: ppmv

## EPA METHOD TO3
## LABORATORY CONTROL SAMPLE SUMMARY

| Lab No.: | METHOD BLANK | | | LCS | | LCSD | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Analyzed: | 2/9/16 9:11 | | | 2/8/16 19:54 | | 2/8/16 20:11 | | | | | |
| Analyst Initials: | AS | | | AS | | AS | | | | | |
| Dilution Factor: | 1.0 | | | 1.0 | | 1.0 | | | | | |
| ANALYTE | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | % Rec. | Result ppmv | % Rec. | RPD % | Low %Rec | High %Rec | Max. RPD |
| TVOC as Hexane | ND | 1.0 | 0.18 | 5.70 | 114 | 5.86 | 117 | 2.8 | 70 | 130 | 25 |
| | | | | | | | | | | | |

MDL = Method Detection Limit
ND= Not Detected (below MDL)
RL = Reporting Limit
J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: _____ Date 2/10/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

**Client:** CH2M HILL
**Attn:** Dan Jablonski
**Project Name:** SFPP- Norwalk Site
**Project No.:** NA
**Date Received:** 02/05/16
**Matrix:** Air
**Reporting Units:** % v/v

## ASTM D1946

| Lab No.: | H020503-04 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Client Sample I.D.: | VINF-02-04 | | | | | | | |
| Date/Time Sampled: | 2/4/16 13:12 | | | | | | | |
| Date/Time Analyzed: | 2/9/16 15:08 | | | | | | | |
| QC Batch No.: | 160209GC8A1 | | | | | | | |
| Analyst Initials: | AS | | | | | | | |
| Dilution Factor: | 2.1 | | | | | | | |
| **ANALYTE** | **Result % v/v** | **RL % v/v** | | | | | | |
| Carbon Dioxide | 0.58 | 0.021 | | | | | | |
| Oxygen/Argon | 21 | 1.1 | | | | | | |
| Nitrogen | 78 | 2.1 | | | | | | |
| Methane | 0.0038 | 0.0021 | | | | | | |
| | | | | | | | | |

Results normalized including non-methane hydrocarbons
ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 2/16/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report


18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

QC Batch No.: 160209GC8A1
Matrix: Air
Units: % v/v

## QC for ASTM D1946

| Lab No.: | Method Blank | | LCS | | LCSD | | | |
|---|---|---|---|---|---|---|---|---|
| Date/Time Analyzed: | 2/9/16 14:39 | | 2/9/16 13:54 | | 2/9/16 14:09 | | | |
| Analyst Initials: | AS | | AS | | AS | | | |
| Datafile: | 09feb006 | | 09feb003 | | 09feb004 | | | |
| Dilution Factor: | 1.0 | | 1.0 | | 1.0 | | | |
| ANALYTE | Results | RL | % Rec. | Criteria | % Rec. | Criteria | %RPD | Criteria |
| Carbon Dioxide | ND | 0.010 | 96 | 70-130% | 96 | 70-130% | 0.9 | <30 |
| Oxygen/Argon | ND | 0.50 | 104 | 70-130% | 105 | 70-130% | 0.2 | <30 |
| Nitrogen | ND | 1.0 | 104 | 70-130% | 104 | 70-130% | 0.2 | <30 |
| Methane | ND | 0.0010 | 92 | 70-130% | 92 | 70-130% | 0.5 | <30 |
| | | | | | | | | |

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ Date: 2/10/16

Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

AirTECHNOLOGY
Laboratories, Inc.

March 14, 2016

ADE-1461
EPA Methods TO3, TO14A, TO15 SIM & SCAN
ASTM D1946

LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175
TX Cert T104704450-14-6
EPA Methods TO14A, TO15
UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

CH2M HILL
ATTN: Daniel Jablonski
5742 Costello Ave.
Van Nuys, CA 91401

## LABORATORY TEST RESULTS

Project Reference: SFPP - Norwalk Site
Lab Number: H030404-01/04

Enclosed are results for sample(s) received 3/04/16 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the NELAC Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Dan Jablonski, Vidal Cortes and Steve Defibaugh on 3/09/16.

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Note: The cover letter is an integral part of this analytical report.

**Air Technology Laboratories, Inc.**
18501 Gale Ave # 130
City of Industry, CA 91748
Tel: (626) 964-4032
**Joann De La Ossa (JDeLaOssa@airtechlabs.com)**

H030404-01/04

# CHAIN OF CUSTODY RECORD

DATE: 3/3/2016
PAGE: 1 OF 1

LABORATORY CLIENT: **CH2M HILL: Attn - Dan Jablonski**
ADDRESS: **6 Hutton Centre Dr, Suite 700**
CITY: **Santa Ana, CA 92707**
TEL: **714-429-2020** FAX: E-MAIL: Daniel.Jablonski@CH2M.com

CLIENT PROJECT NAME / NUMBER: **SFPP - Norwalk Site**
PROJECT CONTACT: **James Dye**
SAMPLER(S): (SIGNATURE)
P.O. NO.:
QUOTE NO.:
LAB USE ONLY:

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ■ 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___/___/___

SPECIAL INSTRUCTIONS
**Report: Jablonski, Daniel/LAC - Daniel.Jablonski@CH2M.com,**
**Cortes, Vidal/SCO - Vidal.Cortes@CH2M.com**
**CC: KMEP Steve Defibaugh - Steve_Defibaugh@kindermorgan.com**
**"J" flags required/Use lowest possible detection limit - all methods.**

REQUESTED ANALYSIS

| LAB USE ONLY | SAMPLE ID | LOCATION/ DESCRIPTION | SAMPLING DATE | SAMPLING TIME | INITIAL PRESSURE ("Hg) | FINAL PRESSURE ("Hg) | MAT-RIX | NO. OF CONT. | TO-3 (TPH-g, TPH-d, TPH as hexane) | TO-15 (VOCs Target Analytes) | ASTM-D 1946 (O2/Argon, CO2, CH4, N2) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | VEFF-03-03 | Outlet (stack) | 3/3/16 | 1305 | -29 | -5 | Air | 1 | X | X | | Individually Certified 1-L SUMMA |
| 02 | VEFF-03-03-D | Outlet (stack) Dup | 3/3/16 | 1310 | -30 | -5 | Air | 1 | X | X | | Individually Certified 1-L SUMMA |
| 03 | VPOST-03-03 | Post-Dilution | 3/5/16 | 1317 | -30 | -5 | Air | 1 | X | X | | Individually Certified 1-L SUMMA |
| 04 | VINF-03-03 | Influent Vapor (header) | 3/3/16 | 1323 | -30 | -5 | Air | 1 | X | X | X | Batch Certified 1-L SUMMA |
| | | | | | | | | | | | | **TAL includes historical VOCs** |
| | | | | | | | | | | | | **and remaining ATLI List per** |
| | | | | | | | | | | | | **subcontract.** |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) FED EX | Date: 3/3/16 | Time: 1530 |
| Relinquished by: (Signature) FED EX | Received by: (Signature) | Date: 3/4/16 | Time: 1115 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

Revised: 06/29/2015

Client: CH2M Hill
Attn: Daniel Jablonski
Project Name: SFPP - Norwalk Site
Project No.: NA
Date Received: 03/04/16
Matrix: Air
Reporting Units: ppmv

**EPA Method TO15**

| Lab No.: | H030404-01 | | | H030404-02 | | | H030404-03 | | | H030404-04 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client Sample I.D.: | VEFF-03-03 | | | VEFF-03-03-D | | | VPOST-03-03 | | | VINF-03-03 | | |
| Date/Time Sampled: | 3/3/16 13:05 | | | 3/3/16 13:10 | | | 3/3/16 13:17 | | | 3/3/16 13:23 | | |
| Date/Time Analyzed: | 3/9/16 0:52 | | | 3/9/16 9:18 | | | 3/9/16 2:07 | | | 3/9/16 2:44 | | |
| QC Batch No.: | 160308MS2A1 | | | 160308MS2A1 | | | 160308MS2A1 | | | 160308MS2A1 | | |
| Analyst Initials: | DT | | | DT | | | DT | | | DT | | |
| Dilution Factor: | 2.0 | | | 2.9 | | | 130 | | | 110 | | |
| ANALYTE | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv |
| Dichlorodifluoromethane (12) | ND | 0.0020 | 0.00031 | ND | 0.0029 | 0.00044 | ND | 0.13 | 0.020 | ND | 0.11 | 0.017 |
| Chloromethane | ND | 0.0040 | 0.00044 | ND | 0.0058 | 0.00064 | ND | 0.26 | 0.029 | ND | 0.22 | 0.024 |
| 1,2-Cl-1,1,2,2-F ethane (114) | ND | 0.0020 | 0.00041 | ND | 0.0029 | 0.00058 | ND | 0.13 | 0.026 | ND | 0.11 | 0.022 |
| Vinyl Chloride | ND | 0.0020 | 0.00033 | ND | 0.0029 | 0.00047 | ND | 0.13 | 0.021 | ND | 0.11 | 0.018 |
| Bromomethane | 0.00073 J | 0.0020 | 0.00059 | ND | 0.0029 | 0.00085 | ND | 0.13 | 0.039 | ND | 0.11 | 0.033 |
| Chloroethane | ND | 0.0020 | 0.0017 | ND | 0.0029 | 0.0024 | ND | 0.13 | 0.11 | ND | 0.11 | 0.093 |
| Trichlorofluoromethane (11) | ND | 0.0020 | 0.00044 | ND | 0.0029 | 0.00062 | ND | 0.13 | 0.028 | ND | 0.11 | 0.024 |
| 1,1-Dichloroethene | ND | 0.0020 | 0.00046 | ND | 0.0029 | 0.00066 | ND | 0.13 | 0.030 | ND | 0.11 | 0.025 |
| Carbon Disulfide | 0.040 | 0.010 | 0.00048 | 0.014 | 0.014 | 0.00069 | ND | 0.66 | 0.032 | ND | 0.56 | 0.027 |
| 1,1,2-Cl 1,2,2-F ethane (113) | ND | 0.0020 | 0.00054 | ND | 0.0029 | 0.00078 | ND | 0.13 | 0.035 | ND | 0.11 | 0.030 |
| Acetone | 0.010 | 0.010 | 0.00058 | 0.020 | 0.014 | 0.00083 | 0.60 J | 0.66 | 0.038 | ND | 0.56 | 0.032 |
| Methylene Chloride | ND | 0.0020 | 0.00058 | ND | 0.0029 | 0.00082 | ND | 0.13 | 0.037 | ND | 0.11 | 0.032 |
| t-1,2-Dichloroethene | ND | 0.0020 | 0.00060 | ND | 0.0029 | 0.00086 | ND | 0.13 | 0.039 | ND | 0.11 | 0.033 |
| 1,1-Dichloroethane | ND | 0.0020 | 0.00028 | 0.00049 J | 0.0029 | 0.00039 | ND | 0.13 | 0.018 | ND | 0.11 | 0.015 |
| c-1,2-Dichloroethene | ND | 0.0020 | 0.00039 | ND | 0.0029 | 0.00056 | ND | 0.13 | 0.025 | ND | 0.11 | 0.021 |
| 2-Butanone | 0.0063 | 0.0020 | 0.0012 | 0.021 | 0.0029 | 0.0018 | 0.30 | 0.13 | 0.081 | ND | 0.11 | 0.069 |
| t-Butyl Methyl Ether (MTBE) | 0.077 | 0.0020 | 0.00045 | 0.61 | 0.0029 | 0.00065 | ND | 0.13 | 0.029 | ND | 0.11 | 0.025 |
| Chloroform | ND | 0.0020 | 0.00028 | ND | 0.0029 | 0.00040 | ND | 0.13 | 0.018 | ND | 0.11 | 0.016 |
| 1,1,1-Trichloroethane | ND | 0.0020 | 0.00020 | ND | 0.0029 | 0.00029 | ND | 0.13 | 0.013 | ND | 0.11 | 0.011 |
| Carbon Tetrachloride | ND | 0.0020 | 0.00035 | ND | 0.0029 | 0.00050 | ND | 0.13 | 0.023 | ND | 0.11 | 0.019 |
| Benzene | 0.028 | 0.0020 | 0.00019 | 0.092 | 0.0029 | 0.00028 | 11 | 0.13 | 0.013 | 8.3 | 0.11 | 0.011 |
| 1,2-Dichloroethane | ND | 0.0020 | 0.00015 | ND | 0.0029 | 0.00021 | 0.048 J | 0.13 | 0.0098 | ND | 0.11 | 0.0083 |
| Trichloroethene | 0.0029 | 0.0020 | 0.00029 | 0.0055 | 0.0029 | 0.00041 | 0.22 | 0.13 | 0.019 | 0.11 | 0.11 | 0.016 |
| 1,2-Dichloropropane | ND | 0.0020 | 0.00037 | ND | 0.0029 | 0.00052 | ND | 0.13 | 0.024 | ND | 0.11 | 0.020 |
| Bromodichloromethane | ND | 0.0020 | 0.00012 | ND | 0.0029 | 0.00017 | ND | 0.13 | 0.0079 | ND | 0.11 | 0.0067 |
| c-1,3-Dichloropropene | ND | 0.0020 | 0.00024 | ND | 0.0029 | 0.00035 | ND | 0.13 | 0.016 | ND | 0.11 | 0.013 |
| 4-Methyl-2-Pentanone | ND | 0.0020 | 0.00014 | ND | 0.0029 | 0.00019 | ND | 0.13 | 0.0089 | ND | 0.11 | 0.0075 |
| Toluene | 0.083 | 0.0020 | 0.00016 | 0.21 | 0.0029 | 0.00023 | 27 | 0.13 | 0.010 | 21 | 0.11 | 0.0088 |
| t-1,3-Dichloropropene | ND | 0.0020 | 0.00021 | ND | 0.0029 | 0.00030 | ND | 0.13 | 0.014 | ND | 0.11 | 0.011 |
| 1,1,2-Trichloroethane | ND | 0.0020 | 0.00033 | ND | 0.0029 | 0.00047 | ND | 0.13 | 0.021 | ND | 0.11 | 0.018 |
| 1,3-Dichloropropane | ND | 0.0020 | 0.00010 | ND | 0.0029 | 0.00014 | ND | 0.13 | 0.0065 | ND | 0.11 | 0.0055 |
| Tetrachloroethene | ND | 0.0020 | 0.00024 | ND | 0.0029 | 0.00035 | ND | 0.13 | 0.016 | ND | 0.11 | 0.013 |
| 2-Hexanone | 0.0032 | 0.0020 | 0.00042 | 0.015 | 0.0029 | 0.00059 | ND | 0.13 | 0.027 | ND | 0.11 | 0.023 |
| Dibromochloromethane | ND | 0.0020 | 0.00037 | ND | 0.0029 | 0.00053 | ND | 0.13 | 0.024 | ND | 0.11 | 0.020 |
| 1,2-Dibromoethane | ND | 0.0020 | 0.00018 | ND | 0.0029 | 0.00026 | ND | 0.13 | 0.012 | ND | 0.11 | 0.010 |
| Chlorobenzene | ND | 0.0020 | 0.00016 | 0.0020 J | 0.0029 | 0.00022 | ND | 0.13 | 0.010 | ND | 0.11 | 0.0087 |
| Ethylbenzene | 0.018 | 0.0020 | 0.00012 | 0.062 | 0.0029 | 0.00017 | 3.0 | 0.13 | 0.0076 | 2.3 | 0.11 | 0.0064 |
| p,&m-Xylene | 0.17 | 0.0020 | 0.00023 | 0.58 | 0.0029 | 0.00033 | 19 | 0.13 | 0.015 | 14 | 0.11 | 0.013 |
| o-Xylene | 0.085 | 0.0020 | 0.00025 | 0.31 | 0.0029 | 0.00035 | 8.5 | 0.13 | 0.016 | 6.3 | 0.11 | 0.013 |


18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: CH2M Hill
Attn: Daniel Jablonski
Project Name: SFPP - Norwalk Site
Project No.: NA
Date Received: 03/04/16
Matrix: Air
Reporting Units: ppmv

**EPA Method TO15**

| Lab No.: | H030404-01 | | | H030404-02 | | | H030404-03 | | | H030404-04 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client Sample I.D.: | VEFF-03-03 | | | VEFF-03-03-D | | | VPOST-03-03 | | | VINF-03-03 | | |
| Date/Time Sampled: | 3/3/16 13:05 | | | 3/3/16 13:10 | | | 3/3/16 13:17 | | | 3/3/16 13:23 | | |
| Date/Time Analyzed: | 3/9/16 0:52 | | | 3/9/16 9:18 | | | 3/9/16 2:07 | | | 3/9/16 2:44 | | |
| QC Batch No.: | 160308MS2A1 | | | 160308MS2A1 | | | 160308MS2A1 | | | 160308MS2A1 | | |
| Analyst Initials: | DT | | | DT | | | DT | | | DT | | |
| Dilution Factor: | 2.0 | | | 2.9 | | | 130 | | | 110 | | |
| ANALYTE | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv |
| Styrene | 0.0032 | 0.0020 | 0.00026 | 0.011 | 0.0029 | 0.00037 | 0.30 | 0.13 | 0.017 | 0.22 | 0.11 | 0.014 |
| Bromoform | ND | 0.0020 | 0.00011 | ND | 0.0029 | 0.00016 | ND | 0.13 | 0.0073 | ND | 0.11 | 0.0062 |
| Isopropyl benzene | 0.0016 J | 0.0020 | 0.00021 | 0.0078 | 0.0029 | 0.00030 | 0.19 | 0.13 | 0.014 | 0.15 | 0.11 | 0.012 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0040 | 0.00012 | ND | 0.0058 | 0.00018 | ND | 0.26 | 0.0080 | ND | 0.22 | 0.0068 |
| Benzyl Chloride | ND | 0.0020 | 0.00037 | ND | 0.0029 | 0.00053 | ND | 0.13 | 0.024 | ND | 0.11 | 0.020 |
| 1,2,3-Trichloropropane | ND | 0.0020 | 0.00054 | ND | 0.0029 | 0.00078 | ND | 0.13 | 0.035 | ND | 0.11 | 0.030 |
| n-Propyl Benzene | 0.0075 | 0.0020 | 0.00012 | 0.033 | 0.0029 | 0.00017 | 0.35 | 0.13 | 0.0076 | 0.32 | 0.11 | 0.0065 |
| 4-Ethyl Toluene | 0.15 | 0.0020 | 0.00013 | 0.67 | 0.0029 | 0.00018 | 3.5 | 0.13 | 0.0083 | 2.8 | 0.11 | 0.0070 |
| 1,3,5-Trimethylbenzene | 0.078 | 0.0040 | 0.00035 | 0.35 | 0.0058 | 0.00050 | 1.7 | 0.26 | 0.023 | 1.4 | 0.22 | 0.019 |
| 4-Chlorotoluene | ND | 0.0020 | 0.00024 | ND | 0.0029 | 0.00034 | ND | 0.13 | 0.016 | ND | 0.11 | 0.013 |
| tert-Butylbenzene | ND | 0.0020 | 0.00018 | ND | 0.0029 | 0.00026 | ND | 0.13 | 0.012 | ND | 0.11 | 0.010 |
| 1,2,4-Trimethylbenzene | 0.24 | 0.0040 | 0.00023 | 0.57 d | 0.058 | 0.0033 | 2.6 | 0.26 | 0.015 | 2.1 | 0.22 | 0.013 |
| sec-Butylbenzene | 0.0023 | 0.0020 | 0.00020 | 0.0095 | 0.0029 | 0.00028 | 0.049 J | 0.13 | 0.013 | 0.046 J | 0.11 | 0.011 |
| p-Isopropyltoluene | 0.0028 | 0.0020 | 0.00026 | 0.012 | 0.0029 | 0.00038 | 0.038 J | 0.13 | 0.017 | 0.11 | 0.11 | 0.015 |
| 1,3-Dichlorobenzene | ND | 0.0020 | 0.00025 | ND | 0.0029 | 0.00035 | ND | 0.13 | 0.016 | ND | 0.11 | 0.013 |
| 1,4-Dichlorobenzene | ND | 0.0020 | 0.00030 | ND | 0.0029 | 0.00042 | ND | 0.13 | 0.019 | 0.030 J | 0.11 | 0.016 |
| n-Butylbenzene | ND | 0.0020 | 0.00015 | ND | 0.0029 | 0.00021 | ND | 0.13 | 0.0096 | ND | 0.11 | 0.0081 |
| 1,2-Dichlorobenzene | ND | 0.0020 | 0.00025 | ND | 0.0029 | 0.00036 | ND | 0.13 | 0.016 | ND | 0.11 | 0.014 |
| 1,2,4-Trichlorobenzene | ND | 0.0040 | 0.00033 | ND | 0.0058 | 0.00048 | ND | 0.26 | 0.022 | ND | 0.22 | 0.018 |
| Hexachlorobutadiene | ND | 0.0020 | 0.00012 | ND | 0.0029 | 0.00017 | ND | 0.13 | 0.0077 | ND | 0.11 | 0.0065 |
| t-Butanol | 0.075 | 0.010 | 0.00039 | 0.31 | 0.014 | 0.00055 | 0.084 J | 0.66 | 0.025 | 0.068 J | 0.56 | 0.021 |
| n-Hexane | 0.13 | 0.010 | 0.00027 | 0.55 | 0.014 | 0.00039 | 42 d | 0.94 | 0.026 | 32 d | 0.80 | 0.021 |
| Isopropyl ether | ND | 0.010 | 0.00022 | ND | 0.014 | 0.00032 | ND | 0.66 | 0.015 | ND | 0.56 | 0.012 |
| t-Butyl ethyl ether | ND | 0.010 | 0.00040 | ND | 0.014 | 0.00058 | ND | 0.66 | 0.026 | ND | 0.56 | 0.022 |
| 2,2-Dichloropropane | ND | 0.010 | 0.00019 | ND | 0.014 | 0.00027 | ND | 0.66 | 0.012 | ND | 0.56 | 0.011 |
| t-Amyl methyl ether | 0.0033 J | 0.010 | 0.00014 | 0.031 | 0.014 | 0.00020 | ND | 0.66 | 0.0093 | ND | 0.56 | 0.0078 |
| 1,4-Dioxane | ND | 0.010 | 0.00035 | ND | 0.014 | 0.00050 | ND | 0.66 | 0.023 | ND | 0.56 | 0.019 |
| Naphthalene | 0.045 | 0.010 | 0.00078 | 0.16 | 0.014 | 0.0011 | ND | 0.66 | 0.050 | ND | 0.56 | 0.043 |
| 1,2,3-Trichlorobenzene (TIC) | ND | -- | -- | ND | -- | -- | ND | -- | -- | ND | -- | -- |
| | | | | | | | | | | | | |

MDL = Method Detection Limit
ND= Not Detected (below MDL)
RL = Reporting Limit
J = Trace amount. Analyte concentration between RL and MDL.
d = Analyte reported from secondary dilution.

Reviewed/Approved By: _____ Date 3/9/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report


18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: CH2M Hill
Attn: Daniel Jablonski
Project Name: SFPP - Norwalk Site
Project No.: NA
Date Received: 03/04/16
Matrix: Air
Reporting Units: ppmv

**EPA Method TO15**

| Lab No.: | METHOD BLANK | | |
|---|---|---|---|
| Client Sample I.D.: | - | | |
| Date/Time Sampled: | - | | |
| Date/Time Analyzed: | 3/8/16 18:41 | | |
| QC Batch No.: | 160308MS2A1 | | |
| Analyst Initials: | DT | | |
| Dilution Factor: | 0.20 | | |

| ANALYTE | Result ppmv | RL ppmv | MDL ppmv |
|---|---|---|---|
| Dichlorodifluoromethane (12) | ND | 0.00020 | 0.000031 |
| Chloromethane | ND | 0.00040 | 0.000044 |
| 1,2-Cl-1,1,2,2-F ethane (114) | ND | 0.00020 | 0.000040 |
| Vinyl Chloride | ND | 0.00020 | 0.000032 |
| Bromomethane | 0.00015 J | 0.00020 | 0.000059 |
| Chloroethane | ND | 0.00020 | 0.00017 |
| Trichlorofluoromethane (11) | ND | 0.00020 | 0.000043 |
| 1,1-Dichloroethene | ND | 0.00020 | 0.000045 |
| Carbon Disulfide | ND | 0.0010 | 0.000048 |
| 1,1,2-Cl 1,2,2-F ethane (113) | ND | 0.00020 | 0.000054 |
| Acetone | 0.000070 J | 0.0010 | 0.000058 |
| Methylene Chloride | ND | 0.00020 | 0.000057 |
| t-1,2-Dichloroethene | ND | 0.00020 | 0.000060 |
| 1,1-Dichloroethane | ND | 0.00020 | 0.000027 |
| c-1,2-Dichloroethene | ND | 0.00020 | 0.000039 |
| 2-Butanone | ND | 0.00020 | 0.00012 |
| t-Butyl Methyl Ether (MTBE) | ND | 0.00020 | 0.000045 |
| Chloroform | ND | 0.00020 | 0.000028 |
| 1,1,1-Trichloroethane | ND | 0.00020 | 0.000020 |
| Carbon Tetrachloride | ND | 0.00020 | 0.000035 |
| Benzene | ND | 0.00020 | 0.000019 |
| 1,2-Dichloroethane | ND | 0.00020 | 0.000015 |
| Trichloroethene | ND | 0.00020 | 0.000028 |
| 1,2-Dichloropropane | ND | 0.00020 | 0.000036 |
| Bromodichloromethane | ND | 0.00020 | 0.000012 |
| c-1,3-Dichloropropene | ND | 0.00020 | 0.000024 |
| 4-Methyl-2-Pentanone | ND | 0.00020 | 0.000013 |
| Toluene | ND | 0.00020 | 0.000016 |
| t-1,3-Dichloropropene | ND | 0.00020 | 0.000021 |
| 1,1,2-Trichloroethane | ND | 0.00020 | 0.000032 |
| 1,3-Dichloropropane | ND | 0.00020 | 0.0000099 |
| Tetrachloroethene | ND | 0.00020 | 0.000024 |
| 2-Hexanone | ND | 0.00020 | 0.000041 |
| Dibromochloromethane | ND | 0.00020 | 0.000036 |
| 1,2-Dibromoethane | ND | 0.00020 | 0.000018 |
| Chlorobenzene | ND | 0.00020 | 0.000016 |
| Ethylbenzene | ND | 0.00020 | 0.000011 |
| p,&m-Xylene | ND | 0.00020 | 0.000023 |
| o-Xylene | ND | 0.00020 | 0.000024 |


18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

Client: CH2M Hill
Attn: Daniel Jablonski
Project Name: SFPP - Norwalk Site
Project No.: NA
Date Received: 03/04/16
Matrix: Air
Reporting Units: ppmv

**EPA Method TO15**

| Lab No.: | METHOD BLANK | | |
|---|---|---|---|
| Client Sample I.D.: | - | | |
| Date/Time Sampled: | - | | |
| Date/Time Analyzed: | 3/8/16 18:41 | | |
| QC Batch No.: | 160308MS2A1 | | |
| Analyst Initials: | DT | | |
| Dilution Factor: | 0.20 | | |
| ANALYTE | Result ppmv | RL ppmv | MDL ppmv |
| Styrene | ND | 0.00020 | 0.000026 |
| Bromoform | ND | 0.00020 | 0.000011 |
| Isopropyl benzene | ND | 0.00020 | 0.000021 |
| 1,1,2,2-Tetrachloroethane | ND | 0.00040 | 0.000012 |
| Benzyl Chloride | ND | 0.00020 | 0.000037 |
| 1,2,3-Trichloropropane | ND | 0.00020 | 0.000054 |
| n-Propyl Benzene | ND | 0.00020 | 0.000012 |
| 4-Ethyl Toluene | ND | 0.00020 | 0.000013 |
| 1,3,5-Trimethylbenzene | ND | 0.00040 | 0.000035 |
| 4-Chlorotoluene | ND | 0.00020 | 0.000024 |
| tert-Butylbenzene | ND | 0.00020 | 0.000018 |
| 1,2,4-Trimethylbenzene | ND | 0.00040 | 0.000023 |
| sec-Butylbenzene | ND | 0.00020 | 0.000019 |
| p-Isopropyltoluene | 0.000031 J | 0.00020 | 0.000026 |
| 1,3-Dichlorobenzene | ND | 0.00020 | 0.000024 |
| 1,4-Dichlorobenzene | ND | 0.00020 | 0.000029 |
| n-Butylbenzene | ND | 0.00020 | 0.000015 |
| 1,2-Dichlorobenzene | ND | 0.00020 | 0.000025 |
| 1,2,4-Trichlorobenzene | ND | 0.00040 | 0.000033 |
| Hexachlorobutadiene | ND | 0.00020 | 0.000012 |
| t-Butanol | ND | 0.0010 | 0.000038 |
| n-Hexane | ND | 0.0010 | 0.000027 |
| Isopropyl ether | ND | 0.0010 | 0.000022 |
| t-Butyl ethyl ether | ND | 0.0010 | 0.000040 |
| 2,2-Dichloropropane | ND | 0.0010 | 0.000019 |
| t-Amyl methyl ether | ND | 0.0010 | 0.000014 |
| 1,4-Dioxane | ND | 0.0010 | 0.000035 |
| Naphthalene | ND | 0.0010 | 0.000077 |
| 1,2,3-Trichlorobenzene (TIC) | ND | – | – |

MDL = Method Detection Limit
ND= Not Detected (below MDL)
RL = Reporting Limit
J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: _____ Date 3/9/16
Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report


18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

## LCS/LCSD Recovery and RPD Summary Report

**QC Batch #: 160308MS2A1**

**Matrix: Air**

**EPA Method TO-14/TO-15**

| Lab No: | Method Blank | | LCS | | LCSD | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Date/Time Analyzed: | 3/8/16 18:41 | | 3/8/16 16:03 | | 3/8/16 16:42 | | | | | | |
| Data File ID: | 08MAR017.D | | 08MAR013.D | | 08MAR014.D | | | | | | |
| Analyst Initials: | DT | | DT | | DT | | | | | | |
| Dilution Factor: | 0.2 | | 1.0 | | 1.0 | | | Limits | | | |
| ANALYTE | Result ppbv | Spike Amount | Result ppbv | % Rec | Result ppbv | % Rec | RPD | Low %Rec | High %Rec | Max. RPD | Pass/ Fail |
| 1,1-Dichloroethene | 0.0 | 10.0 | 10.8 | 108 | 11.2 | 112 | 3.3 | 70 | 130 | 30 | Pass |
| Methylene Chloride | 0.0 | 10.0 | 10.9 | 109 | 11.0 | 110 | 0.9 | 70 | 130 | 30 | Pass |
| Trichloroethene | 0.0 | 10.0 | 11.2 | 112 | 11.3 | 113 | 1.5 | 70 | 130 | 30 | Pass |
| Toluene | 0.0 | 10.0 | 10.9 | 109 | 10.9 | 109 | 0.8 | 70 | 130 | 30 | Pass |
| 1,1,2,2-Tetrachloroethane | 0.0 | 10.0 | 12.3 | 123 | 12.0 | 120 | 2.0 | 70 | 130 | 30 | Pass |
| | | | | | | | | | | | |

RPD = Relative Percent Difference

Reviewed/Approved By: _____ Date: 3/9/16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

Client: CH2M Hill
Attn: Daniel Jablonski
Project Name: SFPP - Norwalk Site
Project No.: NA
Date Received: 03/04/16
Matrix: Air
Reporting Units: ppmv

**EPA METHOD TO3**

| Lab No.: | H030404-01 | | | H030404-02 | | | H030404-03 | | | H030404-04 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client Sample I.D.: | VEFF-03-03 | | | VEFF-03-03-D | | | VPOST-03-03 | | | VINF-03-03 | | |
| Date/Time Sampled: | 3/3/16 13:05 | | | 3/3/16 13:10 | | | 3/3/16 13:17 | | | 3/3/16 13:23 | | |
| Date/Time Analyzed: | 3/7/16 10:08 | | | 3/7/16 10:31 | | | 3/7/16 13:47 | | | 3/7/16 14:33 | | |
| QC Batch No.: | 160307GC11A1 | | | 160307GC11A1 | | | 160307GC11A1 | | | 160307GC11A1 | | |
| Analyst Initials: | AS | | | AS | | | AS | | | AS | | |
| Dilution Factor: | 2.0 | | | 2.0 | | | 20 | | | 20 | | |
| ANALYTE | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | RL ppmv | MDL ppmv |
| TVOC as Hexane | 10 | 2.0 | 0.36 | 38 | 2.0 | 0.36 | 1,200 | 20 | 3.6 | 950 | 20 | 3.6 |
| | | | | | | | | | | | | |

MDL = Method Detection Limit
ND= Not Detected (below MDL)
RL = Reporting Limit
J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: _____ Date 3-4-16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report


18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

QC Batch No: 160307GC11A1
Matrix: Air
Reporting Units: ppmv

## EPA METHOD TO3
## LABORATORY CONTROL SAMPLE SUMMARY

| Lab No.: | METHOD BLANK | | | LCS | | LCSD | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Analyzed: | 3/7/16 9:45 | | | 3/7/16 8:45 | | 3/7/16 9:07 | | | | | |
| Analyst Initials: | AS | | | AS | | AS | | | | | |
| Dilution Factor: | 1.0 | | | 1.0 | | 1.0 | | | | | |
| ANALYTE | Result ppmv | RL ppmv | MDL ppmv | Result ppmv | % Rec. | Result ppmv | % Rec. | RPD % | Low %Rec | High %Rec | Max. RPD |
| TVOC as Hexane | ND | 1.0 | 0.18 | 4.57 | 91 | 4.58 | 92 | 0.2 | 70 | 130 | 25 |
| | | | | | | | | | | | |

MDL = Method Detection Limit
ND= Not Detected (below MDL)
RL = Reporting Limit
J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: _____ Date 3-9-16

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report


18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

**Client:** CH2M Hill
**Attn:** Daniel Jablonski
**Project Name:** SFPP - Norwalk Site
**Project No.:** NA
**Date Received:** 03/04/16
**Matrix:** Air
**Reporting Units:** % v/v

## ASTM D1946

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Lab No.:** | **H030404-04** | | | | | | | |
| **Client Sample I.D.:** | **VINF-03-03** | | | | | | | |
| **Date/Time Sampled:** | **3/3/16 13:23** | | | | | | | |
| **Date/Time Analyzed:** | **3/4/16 14:16** | | | | | | | |
| **QC Batch No.:** | **160304GC8A1** | | | | | | | |
| **Analyst Initials:** | **AS** | | | | | | | |
| **Dilution Factor:** | **2.0** | | | | | | | |
| **ANALYTE** | **Result % v/v** | **RL % v/v** | | | | | | |
| Carbon Dioxide | 0.64 | 0.020 | | | | | | |
| Oxygen/Argon | 21 | 1.0 | | | | | | |
| Nitrogen | 78 | 2.0 | | | | | | |
| Methane | 0.0040 | 0.0020 | | | | | | |
| | | | | | | | | |

**Results normalized including non-methane hydrocarbons**
**ND = Not Detected (below RL)**
**RL = Reporting Limit**

**Reviewed/Approved By:** _____ **Date** 3-9-16

**Mark Johnson**
**Operations Manager**

The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

**QC Batch No.:** 160304GC8A1
**Matrix:** Air
**Units:** % v/v

## QC for ASTM D1946

| Lab No.: | Method Blank | | LCS | | LCSD | | | |
|---|---|---|---|---|---|---|---|---|
| Date/Time Analyzed: | 3/4/16 10:17 | | 3/4/16 9:33 | | 3/4/16 9:48 | | | |
| Analyst Initials: | AS | | AS | | AS | | | |
| Datafile: | 04mar009 | | 04mar006 | | 04mar007 | | | |
| Dilution Factor: | 1.0 | | 1.0 | | 1.0 | | | |
| ANALYTE | Results | RL | % Rec. | Criteria | % Rec. | Criteria | %RPD | Criteria |
| Carbon Dioxide | ND | 0.010 | 95 | 70-130% | 96 | 70-130% | 1.4 | <30 |
| Oxygen/Argon | ND | 0.50 | 102 | 70-130% | 103 | 70-130% | 1.2 | <30 |
| Nitrogen | ND | 1.0 | 101 | 70-130% | 102 | 70-130% | 1.0 | <30 |
| Methane | ND | 0.0010 | 108 | 70-130% | 108 | 70-130% | 0.2 | <30 |
| | | | | | | | | |

ND = Not Detected (Below RL)

Reviewed/Approved By: _____ Date: 3-9-16

Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

February 03, 2016

Dan Jablonski
CH2MHill
1000 Wilshire Blvd.
Los Angeles, CA 90017

TEL:
FAX:

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N018486

RE: SFPP - Norwalk Site

Attention: Dan Jablonski

Enclosed are the results for sample(s) received on January 22, 2016 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Glen Gesmundo
QA Manager

**CLIENT:** CH2MHill
**Project:** SFPP - Norwalk Site
**Lab Order:** N018486

# CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Analytical Comments for EPA 8015B DRO/ORO:

The analysis of the sample required a dilution such that the surrogate recovery calculation does not provide useful information. The associated blank spike recovery was acceptable.

Analytical Comments for EPA 8015B GRO:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.



ASSET LABORATORIES
CALIFORNIA
11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F: 562.219.7436
NEVADA
3151 W. Post Rd., Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691

## ASSET Laboratories

**Date:** *03-Feb-16*

**CLIENT:** CH2MHill
**Project:** SFPP - Norwalk Site
**Lab Order:** N018486
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N018486-001A | INF-01-21 | Wastewater | 1/21/2016 1:40:00 PM | 1/22/2016 | 2/3/2016 |
| N018486-001B | INF-01-21 | Wastewater | 1/21/2016 1:40:00 PM | 1/22/2016 | 2/3/2016 |



ASSET LABORATORIES
CALIFORNIA
11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F: 562.219.7436
NEVADA
3151 W. Post Rd., Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691

**CLIENT:** CH2MHill
**Lab Order:** N018486
**Project:** SFPP - Norwalk Site
**Lab ID:** N018486-001

**Client Sample ID:** INF-01-21
**Collection Date:** 1/21/2016 1:40:00 PM
**Matrix:** WASTEWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **MS5_160122A** QC Batch: **P16VW018** PrepDate: Analyst: **QBM**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.13 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 1,1,1-Trichloroethane | ND | 0.14 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 1,1,2,2-Tetrachloroethane | ND | 0.062 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 1,1,2-Trichloroethane | ND | 0.12 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 1,1-Dichloroethane | ND | 0.044 | 1.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 1,1-Dichloroethene | ND | 0.17 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 1,1-Dichloropropene | ND | 0.088 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 1,2,3-Trichlorobenzene | ND | 0.11 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 1,2,3-Trichloropropane | ND | 0.12 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 1,2,4-Trichlorobenzene | ND | 0.12 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 1,2,4-Trimethylbenzene | 3700 | 4.2 | 100 | | ug/L | 100 | 1/22/2016 04:19 PM |
| 1,2-Dibromo-3-chloropropane | ND | 0.094 | 4.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 1,2-Dibromoethane | ND | 0.11 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 1,2-Dichlorobenzene | ND | 0.080 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 1,2-Dichloroethane | ND | 0.13 | 1.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 1,2-Dichloropropane | ND | 0.12 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 1,3,5-Trimethylbenzene | 950 | 0.15 | 10 | | ug/L | 10 | 1/22/2016 04:44 PM |
| 1,3-Dichlorobenzene | ND | 0.11 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 1,3-Dichloropropane | ND | 0.080 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 1,4-Dichlorobenzene | ND | 0.060 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 2,2-Dichloropropane | ND | 0.052 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 2-Butanone | ND | 0.97 | 20 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 2-Chlorotoluene | ND | 0.080 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 4-Chlorotoluene | ND | 0.072 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 4-Isopropyltoluene | 15 | 0.044 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| 4-Methyl-2-pentanone | ND | 0.34 | 20 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Acetone | ND | 2.1 | 20 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Benzene | 4200 | 3.6 | 100 | | ug/L | 100 | 1/22/2016 04:19 PM |
| Bromobenzene | ND | 0.086 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Bromochloromethane | ND | 0.44 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Bromodichloromethane | ND | 0.062 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Bromoform | ND | 0.65 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Bromomethane | ND | 0.65 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Carbon disulfide | 0.78 | 0.050 | 2.0 | J | ug/L | 2 | 1/22/2016 05:10 PM |
| Carbon tetrachloride | ND | 0.11 | 1.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Chlorobenzene | ND | 0.072 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified | DO | Surrogate Diluted Out |

**CLIENT:** CH2MHill
**Lab Order:** N018486
**Project:** SFPP - Norwalk Site
**Lab ID:** N018486-001

**Client Sample ID:** INF-01-21
**Collection Date:** 1/21/2016 1:40:00 PM
**Matrix:** WASTEWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **MS5_160122A** QC Batch: **P16VW018** PrepDate: Analyst: **QBM**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Chloroethane | ND | 0.20 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Chloroform | ND | 0.072 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Chloromethane | ND | 0.23 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| cis-1,2-Dichloroethene | ND | 0.10 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| cis-1,3-Dichloropropene | ND | 0.088 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Di-isopropyl ether | 12 | 0.034 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Dibromochloromethane | ND | 0.14 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Dibromomethane | ND | 0.34 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Dichlorodifluoromethane | ND | 0.14 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Ethyl tert-butyl ether | ND | 0.078 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Ethylbenzene | 1700 | 3.6 | 100 | | ug/L | 100 | 1/22/2016 04:19 PM |
| Freon-113 | ND | 0.15 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Hexachlorobutadiene | ND | 0.21 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Isopropylbenzene | 84 | 0.068 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| m,p-Xylene | 9700 | 2.4 | 100 | | ug/L | 100 | 1/22/2016 04:19 PM |
| Methylene chloride | ND | 0.56 | 4.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| MTBE | 380 | 0.62 | 10 | | ug/L | 10 | 1/22/2016 04:44 PM |
| n-Butylbenzene | 47 | 0.062 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| n-Propylbenzene | 340 | 0.18 | 10 | | ug/L | 10 | 1/22/2016 04:44 PM |
| Naphthalene | 830 | 0.48 | 10 | | ug/L | 10 | 1/22/2016 04:44 PM |
| o-Xylene | 4300 | 4.2 | 100 | | ug/L | 100 | 1/22/2016 04:19 PM |
| sec-Butylbenzene | 23 | 0.050 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Styrene | ND | 0.070 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Tert-amyl methyl ether | ND | 0.078 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Tert-Butanol | ND | 0.60 | 10 | | ug/L | 2 | 1/22/2016 05:10 PM |
| tert-Butylbenzene | ND | 0.060 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Tetrachloroethene | ND | 0.33 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Toluene | 10000 | 8.4 | 400 | | ug/L | 200 | 1/22/2016 06:27 PM |
| trans-1,2-Dichloroethene | ND | 0.14 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| trans-1,3-Dichloropropene | ND | 0.078 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Trichloroethene | ND | 0.25 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Trichlorofluoromethane | ND | 0.062 | 2.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Vinyl chloride | ND | 0.19 | 1.0 | | ug/L | 2 | 1/22/2016 05:10 PM |
| Xylenes, Total | 14000 | 150 | 200 | | ug/L | 100 | 1/22/2016 04:19 PM |
| Surr: 1,2-Dichloroethane-d4 | 102 | 0 | 72-119 | | %REC | 2 | 1/22/2016 05:10 PM |
| Surr: 1,2-Dichloroethane-d4 | 97.2 | 0 | 72-119 | | %REC | 200 | 1/22/2016 06:27 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified | DO | Surrogate Diluted Out |

**CLIENT:** CH2MHill
**Lab Order:** N018486
**Project:** SFPP - Norwalk Site
**Lab ID:** N018486-001

**Client Sample ID:** INF-01-21
**Collection Date:** 1/21/2016 1:40:00 PM
**Matrix:** WASTEWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | | | |
| | | | **EPA 8260B** | | | | |
| RunID: **MS5_160122A** | QC Batch: **P16VW018** | | | PrepDate: | | | Analyst: **QBM** |
| Surr: 1,2-Dichloroethane-d4 | 100 | 0 | 72-119 | | %REC | 100 | 1/22/2016 04:19 PM |
| Surr: 1,2-Dichloroethane-d4 | 98.6 | 0 | 72-119 | | %REC | 10 | 1/22/2016 04:44 PM |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 76-119 | | %REC | 2 | 1/22/2016 05:10 PM |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 76-119 | | %REC | 100 | 1/22/2016 04:19 PM |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 76-119 | | %REC | 10 | 1/22/2016 04:44 PM |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 76-119 | | %REC | 200 | 1/22/2016 06:27 PM |
| Surr: Dibromofluoromethane | 97.6 | 0 | 85-115 | | %REC | 200 | 1/22/2016 06:27 PM |
| Surr: Dibromofluoromethane | 93.2 | 0 | 85-115 | | %REC | 2 | 1/22/2016 05:10 PM |
| Surr: Dibromofluoromethane | 98.7 | 0 | 85-115 | | %REC | 100 | 1/22/2016 04:19 PM |
| Surr: Dibromofluoromethane | 96.5 | 0 | 85-115 | | %REC | 10 | 1/22/2016 04:44 PM |
| Surr: Toluene-d8 | 103 | 0 | 81-120 | | %REC | 100 | 1/22/2016 04:19 PM |
| Surr: Toluene-d8 | 102 | 0 | 81-120 | | %REC | 200 | 1/22/2016 06:27 PM |
| Surr: Toluene-d8 | 103 | 0 | 81-120 | | %REC | 2 | 1/22/2016 05:10 PM |
| Surr: Toluene-d8 | 102 | 0 | 81-120 | | %REC | 10 | 1/22/2016 04:44 PM |
| **TPH EXTRACTABLE BY GC/FID** | | | | | | | |
| | **EPA 3510C** | | **EPA 8015B** | | | | |
| RunID: **GC3_160126A** | QC Batch: **55980** | | | PrepDate: | **1/27/2016** | | Analyst: **MDM** |
| TPH-Diesel (C13-C22) | 2500000 | 16000 | 26000 | | ug/L | 1000 | 1/29/2016 01:47 AM |
| TPH-Oil (C23-C36) | 97000 | 1400 | 2600 | | ug/L | 100 | 1/27/2016 07:28 PM |
| Surr: Octacosane | 0 | 0 | 26-152 | SDO | %REC | 1000 | 1/29/2016 01:47 AM |
| Surr: Octacosane | 0 | 0 | 26-152 | SDO | %REC | 100 | 1/27/2016 07:28 PM |
| Surr: p-Terphenyl | 0 | 0 | 57-132 | SDO | %REC | 1000 | 1/29/2016 01:47 AM |
| Surr: p-Terphenyl | 0 | 0 | 57-132 | SDO | %REC | 100 | 1/27/2016 07:28 PM |
| **GASOLINE RANGE ORGANICS BY GC/FID** | | | | | | | |
| | | | **EPA 8015B** | | | | |
| RunID: **GC4_160125A** | QC Batch: **E16VW006** | | | PrepDate: | | | Analyst: **QBM** |
| TPH-Gasoline (C4-C12) | 88000 | 320 | 1000 | | ug/L | 20 | 1/25/2016 01:42 PM |
| Surr: Chlorobenzene - d5 | 83.7 | 0 | 74-138 | | %REC | 20 | 1/25/2016 01:42 PM |
| **TOTAL TPH** | | | | | | | |
| | | | **EPA 8015B** | | | | |
| RunID: **GC3_160126A** | QC Batch: **R105502** | | | PrepDate: | | | Analyst: **MDM** |
| Total TPH | 2685000 | 16 | 50 | | ug/L | 1 | 1/29/2016 01:47 AM |

**Qualifiers:**

| | |
|---|---|
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| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |
| E | Value above quantitation range |
| J | Analyte detected below quantitation limits |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |

**CLIENT:** CH2MHill
**Work Order:** N018486
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015_W_FP_SFPP**

Sample ID: **MB-55980** SampType: **MBLK** TestCode: **8015_W_FP_** Units: **ug/L** Prep Date: **1/27/2016** RunNo: **105502**
Client ID: **PBW** Batch ID: **55980** TestNo: **EPA 8015B** **EPA 3510C** Analysis Date: **1/27/2016** SeqNo: **2210672**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Diesel (C13-C22) | ND | 25 | | | | | | | | | |
| Surr: Octacosane | 60.993 | | 80.00 | | 76.2 | 26 | 152 | | | | |
| Surr: p-Terphenyl | 66.647 | | 80.00 | | 83.3 | 57 | 132 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** CH2MHill
**Work Order:** N018486
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015_W_SFPPTOT**

Sample ID: **MB-R105502** SampType: **MBLK** TestCode: **8015_W_SFP** Units: **ug/L** Prep Date: RunNo: **105502**
Client ID: **PBW** Batch ID: **R105502** TestNo: **EPA 8015B** Analysis Date: **1/26/2016** SeqNo: **2210665**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total TPH | ND | 50 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** CH2MHill
**Work Order:** N018486
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015GAS_WSFPP**

Sample ID: **E160125LCS** SampType: **LCS** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **105471**
Client ID: **LCSW** Batch ID: **E16VW006** TestNo: **EPA 8015B** Analysis Date: **1/25/2016** SeqNo: **2209557**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Gasoline (C4-C12) | 942.000 | 50 | 1000 | 0 | 94.2 | 67 | 136 | | | | |
| Surr: Chlorobenzene - d5 | 50933.000 | | 50000 | | 102 | 74 | 138 | | | | |

Sample ID: **E160125MB1** SampType: **MBLK** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **105471**
Client ID: **PBW** Batch ID: **E16VW006** TestNo: **EPA 8015B** Analysis Date: **1/25/2016** SeqNo: **2209558**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Gasoline (C4-C12) | 29.000 | 50 | | | | | | | | | |
| Surr: Chlorobenzene - d5 | 50160.000 | | 50000 | | 100 | 74 | 138 | | | | |

Sample ID: **N018486-001AMS** SampType: **MS** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **105471**
Client ID: **ZZZZZZ** Batch ID: **E16VW006** TestNo: **EPA 8015B** Analysis Date: **1/25/2016** SeqNo: **2209560**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Gasoline (C4-C12) | 99900.000 | 1000 | 20000 | 87580 | 61.6 | 67 | 136 | | | | S |
| Surr: Chlorobenzene - d5 | 850180.000 | | 1000000 | | 85.0 | 74 | 138 | | | | |

Sample ID: **N018486-001AMSD** SampType: **MSD** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **105471**
Client ID: **ZZZZZZ** Batch ID: **E16VW006** TestNo: **EPA 8015B** Analysis Date: **1/25/2016** SeqNo: **2209561**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Gasoline (C4-C12) | 90200.000 | 1000 | 20000 | 87580 | 13.1 | 67 | 136 | 99900 | 10.2 | 30 | S |
| Surr: Chlorobenzene - d5 | 841960.000 | | 1000000 | | 84.2 | 74 | 138 | | 0 | 0 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** CH2MHill
**Work Order:** N018486
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160122LCS** SampType: **LCS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105398**
Client ID: **LCSW** Batch ID: **P16VW018** TestNo: **EPA 8260B** Analysis Date: **1/22/2016** SeqNo: **2210527**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.460 | 1.0 | 20.00 | 0 | 97.3 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 21.340 | 1.0 | 20.00 | 0 | 107 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 21.430 | 1.0 | 20.00 | 0 | 107 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 20.340 | 1.0 | 20.00 | 0 | 102 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 19.040 | 0.50 | 20.00 | 0 | 95.2 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 19.270 | 1.0 | 20.00 | 0 | 96.4 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 21.010 | 1.0 | 20.00 | 0 | 105 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 21.900 | 1.0 | 20.00 | 0 | 110 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 21.250 | 1.0 | 20.00 | 0 | 106 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 21.510 | 1.0 | 20.00 | 0 | 108 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 22.450 | 1.0 | 20.00 | 0 | 112 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 18.980 | 2.0 | 20.00 | 0 | 94.9 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 19.830 | 1.0 | 20.00 | 0 | 99.2 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 21.460 | 1.0 | 20.00 | 0 | 107 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 20.610 | 0.50 | 20.00 | 0 | 103 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.110 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 22.570 | 1.0 | 20.00 | 0 | 113 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 21.140 | 1.0 | 20.00 | 0 | 106 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.170 | 1.0 | 20.00 | 0 | 106 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 20.840 | 1.0 | 20.00 | 0 | 104 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 23.400 | 1.0 | 20.00 | 0 | 117 | 69 | 137 | | | | |
| 2-Butanone | 215.460 | 10 | 200.0 | 0 | 108 | 49 | 136 | | | | |
| 2-Chlorotoluene | 21.540 | 1.0 | 20.00 | 0 | 108 | 73 | 126 | | | | |
| 4-Chlorotoluene | 22.000 | 1.0 | 20.00 | 0 | 110 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 22.850 | 1.0 | 20.00 | 0 | 114 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 217.480 | 10 | 200.0 | 0 | 109 | 58 | 134 | | | | |
| Acetone | 265.150 | 10 | 200.0 | 0 | 133 | 40 | 135 | | | | |
| Benzene | 20.700 | 1.0 | 20.00 | 0 | 104 | 81 | 122 | | | | |
| Bromobenzene | 21.590 | 1.0 | 20.00 | 0 | 108 | 76 | 124 | | | | |
| Bromochloromethane | 20.580 | 1.0 | 20.00 | 0 | 103 | 65 | 129 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** CH2MHill
**Work Order:** N018486
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160122LCS** SampType: **LCS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105398**
Client ID: **LCSW** Batch ID: **P16VW018** TestNo: **EPA 8260B** Analysis Date: **1/22/2016** SeqNo: **2210527**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromodichloromethane | 21.270 | 1.0 | 20.00 | 0 | 106 | 76 | 121 | | | | |
| Bromoform | 19.210 | 1.0 | 20.00 | 0 | 96.0 | 69 | 128 | | | | |
| Bromomethane | 19.280 | 1.0 | 20.00 | 0 | 96.4 | 53 | 141 | | | | |
| Carbon disulfide | 19.280 | 1.0 | 20.00 | 0 | 96.4 | 75 | 125 | | | | |
| Carbon tetrachloride | 19.310 | 0.50 | 20.00 | 0 | 96.6 | 66 | 138 | | | | |
| Chlorobenzene | 20.820 | 1.0 | 20.00 | 0 | 104 | 81 | 122 | | | | |
| Chloroethane | 20.340 | 1.0 | 20.00 | 0 | 102 | 58 | 133 | | | | |
| Chloroform | 18.840 | 1.0 | 20.00 | 0 | 94.2 | 69 | 128 | | | | |
| Chloromethane | 19.160 | 1.0 | 20.00 | 0 | 95.8 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 20.080 | 1.0 | 20.00 | 0 | 100 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 19.480 | 1.0 | 20.00 | 0 | 97.4 | 69 | 131 | | | | |
| Di-isopropyl ether | 20.210 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | | |
| Dibromochloromethane | 19.550 | 1.0 | 20.00 | 0 | 97.8 | 66 | 133 | | | | |
| Dibromomethane | 21.480 | 1.0 | 20.00 | 0 | 107 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 20.580 | 1.0 | 20.00 | 0 | 103 | 53 | 153 | | | | |
| Ethyl tert-butyl ether | 19.710 | 1.0 | 20.00 | 0 | 98.6 | 70 | 130 | | | | |
| Ethylbenzene | 20.750 | 1.0 | 20.00 | 0 | 104 | 73 | 127 | | | | |
| Freon-113 | 19.560 | 1.0 | 20.00 | 0 | 97.8 | 75 | 125 | | | | |
| Hexachlorobutadiene | 21.870 | 1.0 | 20.00 | 0 | 109 | 67 | 131 | | | | |
| Isopropylbenzene | 22.110 | 1.0 | 20.00 | 0 | 111 | 75 | 127 | | | | |
| m,p-Xylene | 42.970 | 1.0 | 40.00 | 0 | 107 | 76 | 128 | | | | |
| Methylene chloride | 20.240 | 2.0 | 20.00 | 0 | 101 | 63 | 137 | | | | |
| MTBE | 21.510 | 1.0 | 20.00 | 0 | 108 | 65 | 123 | | | | |
| n-Butylbenzene | 22.040 | 1.0 | 20.00 | 0 | 110 | 69 | 137 | | | | |
| n-Propylbenzene | 22.040 | 1.0 | 20.00 | 0 | 110 | 72 | 129 | | | | |
| Naphthalene | 19.970 | 1.0 | 20.00 | 0 | 99.8 | 54 | 138 | | | | |
| o-Xylene | 21.740 | 1.0 | 20.00 | 0 | 109 | 80 | 121 | | | | |
| sec-Butylbenzene | 21.940 | 1.0 | 20.00 | 0 | 110 | 72 | 127 | | | | |
| Styrene | 22.010 | 1.0 | 20.00 | 0 | 110 | 65 | 134 | | | | |
| Tert-amyl methyl ether | 20.270 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** CH2MHill
**Work Order:** N018486
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160122LCS** SampType: **LCS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105398**
Client ID: **LCSW** Batch ID: **P16VW018** TestNo: **EPA 8260B** Analysis Date: **1/22/2016** SeqNo: **2210527**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tert-Butanol | 89.990 | 5.0 | 100.0 | 0 | 90.0 | 70 | 130 | | | | |
| tert-Butylbenzene | 21.680 | 1.0 | 20.00 | 0 | 108 | 70 | 129 | | | | |
| Tetrachloroethene | 20.490 | 1.0 | 20.00 | 0 | 102 | 66 | 128 | | | | |
| Toluene | 20.790 | 2.0 | 20.00 | 0 | 104 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 19.250 | 1.0 | 20.00 | 0 | 96.2 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 19.120 | 1.0 | 20.00 | 0 | 95.6 | 59 | 135 | | | | |
| Trichloroethene | 20.320 | 1.0 | 20.00 | 0 | 102 | 70 | 127 | | | | |
| Trichlorofluoromethane | 20.900 | 1.0 | 20.00 | 0 | 104 | 57 | 129 | | | | |
| Vinyl chloride | 19.820 | 0.50 | 20.00 | 0 | 99.1 | 50 | 134 | | | | |
| Xylenes, Total | 64.710 | 2.0 | 60.00 | 0 | 108 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 24.320 | | 25.00 | | 97.3 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 25.890 | | 25.00 | | 104 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 23.610 | | 25.00 | | 94.4 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 25.570 | | 25.00 | | 102 | 81 | 120 | | | | |

Sample ID: **P160122LCSD** SampType: **LCSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105398**
Client ID: **LCSS02** Batch ID: **P16VW018** TestNo: **EPA 8260B** Analysis Date: **1/22/2016** SeqNo: **2210528**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.660 | 1.0 | 20.00 | 0 | 98.3 | 81 | 129 | 19.46 | 1.02 | 20 | |
| 1,1,1-Trichloroethane | 21.650 | 1.0 | 20.00 | 0 | 108 | 67 | 132 | 21.34 | 1.44 | 20 | |
| 1,1,2,2-Tetrachloroethane | 21.400 | 1.0 | 20.00 | 0 | 107 | 63 | 128 | 21.43 | 0.140 | 20 | |
| 1,1,2-Trichloroethane | 20.400 | 1.0 | 20.00 | 0 | 102 | 75 | 125 | 20.34 | 0.295 | 20 | |
| 1,1-Dichloroethane | 18.590 | 0.50 | 20.00 | 0 | 93.0 | 69 | 133 | 19.04 | 2.39 | 20 | |
| 1,1-Dichloroethene | 19.050 | 1.0 | 20.00 | 0 | 95.2 | 68 | 130 | 19.27 | 1.15 | 20 | |
| 1,1-Dichloropropene | 20.680 | 1.0 | 20.00 | 0 | 103 | 73 | 132 | 21.01 | 1.58 | 20 | |
| 1,2,3-Trichlorobenzene | 21.470 | 1.0 | 20.00 | 0 | 107 | 67 | 137 | 21.90 | 1.98 | 20 | |
| 1,2,3-Trichloropropane | 20.410 | 1.0 | 20.00 | 0 | 102 | 73 | 124 | 21.25 | 4.03 | 20 | |
| 1,2,4-Trichlorobenzene | 21.460 | 1.0 | 20.00 | 0 | 107 | 66 | 134 | 21.51 | 0.233 | 20 | |
| 1,2,4-Trimethylbenzene | 22.200 | 1.0 | 20.00 | 0 | 111 | 74 | 132 | 22.45 | 1.12 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** CH2MHill
**Work Order:** N018486
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160122LCSD** SampType: **LCSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105398**
Client ID: **LCSS02** Batch ID: **P16VW018** TestNo: **EPA 8260B** Analysis Date: **1/22/2016** SeqNo: **2210528**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromo-3-chloropropane | 19.360 | 2.0 | 20.00 | 0 | 96.8 | 50 | 132 | 18.98 | 1.98 | 20 | |
| 1,2-Dibromoethane | 19.920 | 1.0 | 20.00 | 0 | 99.6 | 80 | 121 | 19.83 | 0.453 | 20 | |
| 1,2-Dichlorobenzene | 20.870 | 1.0 | 20.00 | 0 | 104 | 71 | 122 | 21.46 | 2.79 | 20 | |
| 1,2-Dichloroethane | 20.540 | 0.50 | 20.00 | 0 | 103 | 69 | 132 | 20.61 | 0.340 | 20 | |
| 1,2-Dichloropropane | 20.210 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | 20.11 | 0.496 | 20 | |
| 1,3,5-Trimethylbenzene | 21.630 | 1.0 | 20.00 | 0 | 108 | 74 | 131 | 22.57 | 4.25 | 20 | |
| 1,3-Dichlorobenzene | 20.600 | 1.0 | 20.00 | 0 | 103 | 75 | 124 | 21.14 | 2.59 | 20 | |
| 1,3-Dichloropropane | 21.250 | 1.0 | 20.00 | 0 | 106 | 73 | 126 | 21.17 | 0.377 | 20 | |
| 1,4-Dichlorobenzene | 20.130 | 1.0 | 20.00 | 0 | 101 | 74 | 123 | 20.84 | 3.47 | 20 | |
| 2,2-Dichloropropane | 22.920 | 1.0 | 20.00 | 0 | 115 | 69 | 137 | 23.40 | 2.07 | 20 | |
| 2-Butanone | 212.550 | 10 | 200.0 | 0 | 106 | 49 | 136 | 215.5 | 1.36 | 20 | |
| 2-Chlorotoluene | 20.930 | 1.0 | 20.00 | 0 | 105 | 73 | 126 | 21.54 | 2.87 | 20 | |
| 4-Chlorotoluene | 21.330 | 1.0 | 20.00 | 0 | 107 | 74 | 128 | 22.00 | 3.09 | 20 | |
| 4-Isopropyltoluene | 22.230 | 1.0 | 20.00 | 0 | 111 | 73 | 130 | 22.85 | 2.75 | 20 | |
| 4-Methyl-2-pentanone | 216.080 | 10 | 200.0 | 0 | 108 | 58 | 134 | 217.5 | 0.646 | 20 | |
| Acetone | 260.860 | 10 | 200.0 | 0 | 130 | 40 | 135 | 265.2 | 1.63 | 20 | |
| Benzene | 20.440 | 1.0 | 20.00 | 0 | 102 | 81 | 122 | 20.70 | 1.26 | 20 | |
| Bromobenzene | 20.610 | 1.0 | 20.00 | 0 | 103 | 76 | 124 | 21.59 | 4.64 | 20 | |
| Bromochloromethane | 20.480 | 1.0 | 20.00 | 0 | 102 | 65 | 129 | 20.58 | 0.487 | 20 | |
| Bromodichloromethane | 21.140 | 1.0 | 20.00 | 0 | 106 | 76 | 121 | 21.27 | 0.613 | 20 | |
| Bromoform | 19.600 | 1.0 | 20.00 | 0 | 98.0 | 69 | 128 | 19.21 | 2.01 | 20 | |
| Bromomethane | 18.420 | 1.0 | 20.00 | 0 | 92.1 | 53 | 141 | 19.28 | 4.56 | 20 | |
| Carbon disulfide | 19.190 | 1.0 | 20.00 | 0 | 96.0 | 75 | 125 | 19.28 | 0.468 | 20 | |
| Carbon tetrachloride | 19.120 | 0.50 | 20.00 | 0 | 95.6 | 66 | 138 | 19.31 | 0.989 | 20 | |
| Chlorobenzene | 20.540 | 1.0 | 20.00 | 0 | 103 | 81 | 122 | 20.82 | 1.35 | 20 | |
| Chloroethane | 20.100 | 1.0 | 20.00 | 0 | 101 | 58 | 133 | 20.34 | 1.19 | 20 | |
| Chloroform | 18.830 | 1.0 | 20.00 | 0 | 94.2 | 69 | 128 | 18.84 | 0.0531 | 20 | |
| Chloromethane | 19.140 | 1.0 | 20.00 | 0 | 95.7 | 56 | 131 | 19.16 | 0.104 | 20 | |
| cis-1,2-Dichloroethene | 19.840 | 1.0 | 20.00 | 0 | 99.2 | 72 | 126 | 20.08 | 1.20 | 20 | |
| cis-1,3-Dichloropropene | 19.640 | 1.0 | 20.00 | 0 | 98.2 | 69 | 131 | 19.48 | 0.818 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** CH2MHill
**Work Order:** N018486
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160122LCSD** SampType: **LCSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105398**
Client ID: **LCSS02** Batch ID: **P16VW018** TestNo: **EPA 8260B** Analysis Date: **1/22/2016** SeqNo: **2210528**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Di-isopropyl ether | 20.220 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | 20.21 | 0.0495 | 20 | |
| Dibromochloromethane | 19.830 | 1.0 | 20.00 | 0 | 99.2 | 66 | 133 | 19.55 | 1.42 | 20 | |
| Dibromomethane | 21.090 | 1.0 | 20.00 | 0 | 105 | 76 | 125 | 21.48 | 1.83 | 20 | |
| Dichlorodifluoromethane | 20.290 | 1.0 | 20.00 | 0 | 101 | 53 | 153 | 20.58 | 1.42 | 20 | |
| Ethyl tert-butyl ether | 20.370 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | 19.71 | 3.29 | 20 | |
| Ethylbenzene | 20.380 | 1.0 | 20.00 | 0 | 102 | 73 | 127 | 20.75 | 1.80 | 20 | |
| Freon-113 | 19.610 | 1.0 | 20.00 | 0 | 98.0 | 75 | 125 | 19.56 | 0.255 | 20 | |
| Hexachlorobutadiene | 21.260 | 1.0 | 20.00 | 0 | 106 | 67 | 131 | 21.87 | 2.83 | 20 | |
| Isopropylbenzene | 21.350 | 1.0 | 20.00 | 0 | 107 | 75 | 127 | 22.11 | 3.50 | 20 | |
| m,p-Xylene | 42.190 | 1.0 | 40.00 | 0 | 105 | 76 | 128 | 42.97 | 1.83 | 20 | |
| Methylene chloride | 20.750 | 2.0 | 20.00 | 0 | 104 | 63 | 137 | 20.24 | 2.49 | 20 | |
| MTBE | 21.870 | 1.0 | 20.00 | 0 | 109 | 65 | 123 | 21.51 | 1.66 | 20 | |
| n-Butylbenzene | 21.280 | 1.0 | 20.00 | 0 | 106 | 69 | 137 | 22.04 | 3.51 | 20 | |
| n-Propylbenzene | 21.160 | 1.0 | 20.00 | 0 | 106 | 72 | 129 | 22.04 | 4.07 | 20 | |
| Naphthalene | 19.610 | 1.0 | 20.00 | 0 | 98.0 | 54 | 138 | 19.97 | 1.82 | 20 | |
| o-Xylene | 21.590 | 1.0 | 20.00 | 0 | 108 | 80 | 121 | 21.74 | 0.692 | 20 | |
| sec-Butylbenzene | 21.230 | 1.0 | 20.00 | 0 | 106 | 72 | 127 | 21.94 | 3.29 | 20 | |
| Styrene | 21.700 | 1.0 | 20.00 | 0 | 108 | 65 | 134 | 22.01 | 1.42 | 20 | |
| Tert-amyl methyl ether | 20.830 | 1.0 | 20.00 | 0 | 104 | 70 | 130 | 20.27 | 2.73 | 20 | |
| Tert-Butanol | 98.510 | 5.0 | 100.0 | 0 | 98.5 | 70 | 130 | 89.99 | 9.04 | 20 | |
| tert-Butylbenzene | 21.270 | 1.0 | 20.00 | 0 | 106 | 70 | 129 | 21.68 | 1.91 | 20 | |
| Tetrachloroethene | 20.760 | 1.0 | 20.00 | 0 | 104 | 66 | 128 | 20.49 | 1.31 | 20 | |
| Toluene | 20.300 | 2.0 | 20.00 | 0 | 102 | 77 | 122 | 20.79 | 2.39 | 20 | |
| trans-1,2-Dichloroethene | 19.530 | 1.0 | 20.00 | 0 | 97.6 | 63 | 137 | 19.25 | 1.44 | 20 | |
| trans-1,3-Dichloropropene | 18.910 | 1.0 | 20.00 | 0 | 94.6 | 59 | 135 | 19.12 | 1.10 | 20 | |
| Trichloroethene | 20.130 | 1.0 | 20.00 | 0 | 101 | 70 | 127 | 20.32 | 0.939 | 20 | |
| Trichlorofluoromethane | 20.820 | 1.0 | 20.00 | 0 | 104 | 57 | 129 | 20.90 | 0.384 | 20 | |
| Vinyl chloride | 19.460 | 0.50 | 20.00 | 0 | 97.3 | 50 | 134 | 19.82 | 1.83 | 20 | |
| Xylenes, Total | 63.780 | 2.0 | 60.00 | 0 | 106 | 75 | 125 | 64.71 | 1.45 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 23.990 | | 25.00 | | 96.0 | 72 | 119 | | 0 | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** CH2MHill
**Work Order:** N018486
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160122LCSD** SampType: **LCSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105398**
Client ID: **LCSS02** Batch ID: **P16VW018** TestNo: **EPA 8260B** Analysis Date: **1/22/2016** SeqNo: **2210528**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 4-Bromofluorobenzene | 25.590 | | 25.00 | | 102 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 23.890 | | 25.00 | | 95.6 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 25.560 | | 25.00 | | 102 | 81 | 120 | | 0 | | |

Sample ID: **P160122MB3** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105398**
Client ID: **PBW** Batch ID: **P16VW018** TestNo: **EPA 8260B** Analysis Date: **1/22/2016** SeqNo: **2210529**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 0.50 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | | |
| 1,2-Dibromoethane | ND | 1.0 | | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.50 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,3,5-Trimethylbenzene | 0.020 | 1.0 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 2,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** CH2MHill
**Work Order:** N018486
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160122MB3** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105398**
Client ID: **PBW** Batch ID: **P16VW018** TestNo: **EPA 8260B** Analysis Date: **1/22/2016** SeqNo: **2210529**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | | |
| Benzene | ND | 1.0 | | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | | |
| Bromochloromethane | ND | 1.0 | | | | | | | | | |
| Bromodichloromethane | ND | 1.0 | | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | | |
| Bromomethane | ND | 1.0 | | | | | | | | | |
| Carbon disulfide | ND | 1.0 | | | | | | | | | |
| Carbon tetrachloride | ND | 0.50 | | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | | |
| Chloroethane | ND | 1.0 | | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | | |
| Chloromethane | ND | 1.0 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | | |
| Di-isopropyl ether | ND | 1.0 | | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | | |
| Ethyl tert-butyl ether | ND | 1.0 | | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | | |
| Freon-113 | ND | 1.0 | | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | | |
| m,p-Xylene | 0.030 | 1.0 | | | | | | | | | |
| Methylene chloride | 0.550 | 2.0 | | | | | | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** CH2MHill
**Work Order:** N018486
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160122MB3** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105398**
Client ID: **PBW** Batch ID: **P16VW018** TestNo: **EPA 8260B** Analysis Date: **1/22/2016** SeqNo: **2210529**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MTBE | ND | 1.0 | | | | | | | | | |
| n-Butylbenzene | ND | 1.0 | | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | | |
| Naphthalene | ND | 1.0 | | | | | | | | | |
| o-Xylene | ND | 1.0 | | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | | |
| Tert-amyl methyl ether | ND | 1.0 | | | | | | | | | |
| Tert-Butanol | ND | 5.0 | | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Tetrachloroethene | ND | 1.0 | | | | | | | | | |
| Toluene | ND | 2.0 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | | |
| Trichloroethene | ND | 1.0 | | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | | |
| Vinyl chloride | ND | 0.50 | | | | | | | | | |
| Xylenes, Total | ND | 2.0 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 24.460 | | 25.00 | | 97.8 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 24.880 | | 25.00 | | 99.5 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 24.750 | | 25.00 | | 99.0 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 25.090 | | 25.00 | | 100 | 81 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**Advanced Technology Laboratories**
3151 W. Post Road
Las Vegas, NV 89118
Tel: 702-307-2659 Fax: 702-307-2691
**Marion Cartin (marion@atl-labs.com)**

# CHAIN OF CUSTODY RECORD

DATE: 1/21/16

PAGE: 1 OF 1

T: 1.8°C IR # 2

| | |
|---|---|
| LABORATORY CLIENT: **Kinder Morgan Energy Partners, Attn: Steve Defibaugh** | CLIENT PROJECT NAME / NUMBER: **SFPP - Norwalk Site** |
| ADDRESS: **1100 Town & Country Road** | PROJECT CONTACT: **James Dye** |
| CITY: **Orange, CA 92868** | SAMPLER(S): (SIGNATURE) |
| TEL: **714-560-4802** FAX: **714-560-4601** E-MAIL: james_dye@kindermorgan.com | P.O. NO.: / QUOTE NO.: / LAB USE ONLY |

TURNAROUND TIME

☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ■ 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)

☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___/___/___

SPECIAL INSTRUCTIONS

**Report to D. Jablonski/CH2M HILL, cc: KMEP**
**Direct Bill KMEP/SFPP - Steve Defibaugh-ref. AFE# 81195**
**"J" flags required/Use lowest possible detection limit - all methods.**

**REQUESTED ANALYSIS**

| LAB USE ONLY | SAMPLE ID | LOCATION/ DESCRIPTION | SAMPLING DATE | SAMPLING TIME | MATRIX | NO. OF CONT. | TPH - g, TPH-d, and TPH-oil (8015M) | Full VOC+ Oxygenates List (8260B) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | INF- 01-21 | Influent | 1/21/16 | 1340 | WW | 8 | X | X | N018486-1 |
| | | | | | | | | | |
| | | | | | | | | | |
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| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 1-21-16 | Time: 15:30 |
| Relinquished by: (Signature) 1-21-16 15:47 | Received by: (Signature) | Date: 1/22/16 | Time: 9:05 am |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

Revised: 07/19/2012

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 1/22/2016 Workorder: N018486

Rep sample Temp (Deg C): 1.8 IR Gun ID: 2

Temp Blank: ☑ Yes ☐ No

Carrier name: Golden State Overnight

Last 4 digits of Tracking No.: 1901 Packing Material Used: Bubble Wrap

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☑ | No ☐ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | NA ☐ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☐ | No ☐ | NA ☑ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☐ | No ☐ | NA ☑ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments:

Checklist Completed By: MBC MBC 1/24/2016

Reviewed By: 01/25/16

# ASSET Laboratories

## WORK ORDER Summary

*22-Jan-16*

**WorkOrder:** N018486

**Client ID:** CH2HI03

**Project:** SFPP - Norwalk Site **QC Level:** RTNE **Date Received:** 1/22/2016

**Comments:** Report to D. Jablonski/CH2M HILL, cc:KMEP

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N018486-001A | INF-01-21 | 1/21/2016 1:40:00 PM | 1/29/2016 | Wastewater | EPA 8015B | GASOLINE RANGE ORGANICS BY GC/FID | ☐ | ☐ | ☐ | VW |
| | | | 1/29/2016 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | VW |
| N018486-001B | | | 1/29/2016 | | EPA 3510C | SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS | ☐ | ☐ | ☐ | WW |
| | | | 1/29/2016 | | EPA 8015B | TPH EXTRACTABLE BY GC/FID | ☐ | ☐ | ☐ | WW |
| | | | 1/29/2016 | | EPA 8015B | Total TPH | ☐ | ☐ | ☐ | WW |
| N018486-002A | FOLDER | | 1/29/2016 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

GSO
GOLDEN STATE OVERNIGHT

800-322-5555 www.gso.com

**Ship From**
ASSET LABORATORIES
MOLKY BRAR
11060 ARTESIA BLVD., STE. C
CERRITOS, CA 90703

**Ship To**
**ATL INC**
**MARLON CARTIN**
**3151 W. POST RD.,**
**LAS VEGAS, NV 89118**

**COD:** $0.00
**Weight:** 0 lb(s)
**Reference:**

**Delivery Instructions:**
HOLD FOR PICK UP
**Signature Type:** REQUIRED

**Tracking #: 530661901** **CPS**

**LVS** **A**
**LAS VEGAS**

**C89102A**

47368423

Print Date: 1/21/2016 4:53 PM

Package 1 of 2

**LABEL INSTRUCTIONS:**

**Do not copy or reprint this label for additional shipments - each package must have a unique barcode.**

Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer. Securely attach this label to your package, do not cover the barcode.

1.80 e

February 15, 2016

Dan Jablonski
CH2MHill
1000 Wilshire Blvd.
Los Angeles, CA 90017

TEL:
FAX:

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N018641

RE: SFPP - Norwalk Site

Attention: Dan Jablonski

Enclosed are the results for sample(s) received on February 03, 2016 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Glen Gesmundo
QA Manager

**CLIENT:** CH2MHill
**Project:** SFPP - Norwalk Site
**Lab Order:** N018641

# CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Sample was received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Sample was analyzed within method holding time.

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.



ASSET LABORATORIES
CALIFORNIA
11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F: 562.219.7436
NEVADA
3151 W. Post Rd., Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691

## ASSET Laboratories

**Date:** *15-Feb-16*

**CLIENT:** CH2MHill
**Project:** SFPP - Norwalk Site
**Lab Order:** N018641
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N018641-001A | INF-02-02 | Wastewater | 2/2/2016 2:00:00 PM | 2/3/2016 | 2/15/2016 |
| N018641-001B | INF-02-02 | Wastewater | 2/2/2016 2:00:00 PM | 2/3/2016 | 2/15/2016 |



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NEVADA
3151 W. Post Rd., Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691

**CLIENT:** CH2MHill
**Lab Order:** N018641
**Project:** SFPP - Norwalk Site
**Lab ID:** N018641-001

**Client Sample ID:** INF-02-02
**Collection Date:** 2/2/2016 2:00:00 PM
**Matrix:** WASTEWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **MS5_160203A** QC Batch: **P16VW024** PrepDate: Analyst: **QBM**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.13 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 1,1,1-Trichloroethane | ND | 0.14 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 1,1,2,2-Tetrachloroethane | ND | 0.062 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 1,1,2-Trichloroethane | ND | 0.12 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 1,1-Dichloroethane | ND | 0.044 | 1.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 1,1-Dichloroethene | ND | 0.17 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 1,1-Dichloropropene | ND | 0.088 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 1,2,3-Trichlorobenzene | ND | 0.11 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 1,2,3-Trichloropropane | ND | 0.12 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 1,2,4-Trichlorobenzene | ND | 0.12 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 1,2,4-Trimethylbenzene | 2500 | 4.2 | 100 | | ug/L | 100 | 2/5/2016 04:13 PM |
| 1,2-Dibromo-3-chloropropane | ND | 0.094 | 4.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 1,2-Dibromoethane | ND | 0.11 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 1,2-Dichlorobenzene | ND | 0.080 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 1,2-Dichloroethane | ND | 0.13 | 1.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 1,2-Dichloropropane | ND | 0.12 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 1,3,5-Trimethylbenzene | 570 | 0.15 | 10 | | ug/L | 10 | 2/3/2016 09:34 PM |
| 1,3-Dichlorobenzene | ND | 0.11 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 1,3-Dichloropropane | ND | 0.080 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 1,4-Dichlorobenzene | ND | 0.060 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 2,2-Dichloropropane | ND | 0.052 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 2-Butanone | ND | 0.97 | 20 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 2-Chlorotoluene | ND | 0.080 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 4-Chlorotoluene | ND | 0.072 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 4-Isopropyltoluene | 9.4 | 0.044 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| 4-Methyl-2-pentanone | ND | 0.34 | 20 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Acetone | 40 | 2.1 | 20 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Benzene | 2600 | 3.6 | 100 | | ug/L | 100 | 2/5/2016 04:13 PM |
| Bromobenzene | ND | 0.086 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Bromochloromethane | ND | 0.44 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Bromodichloromethane | ND | 0.062 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Bromoform | ND | 0.65 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Bromomethane | ND | 0.65 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Carbon disulfide | 0.32 | 0.050 | 2.0 | J | ug/L | 2 | 2/3/2016 09:08 PM |
| Carbon tetrachloride | ND | 0.11 | 1.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Chlorobenzene | ND | 0.072 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified | DO | Surrogate Diluted Out |

**CLIENT:** CH2MHill
**Lab Order:** N018641
**Project:** SFPP - Norwalk Site
**Lab ID:** N018641-001

**Client Sample ID:** INF-02-02
**Collection Date:** 2/2/2016 2:00:00 PM
**Matrix:** WASTEWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **MS5_160203A** QC Batch: **P16VW024** PrepDate: Analyst: **QBM**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Chloroethane | ND | 0.20 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Chloroform | ND | 0.072 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Chloromethane | ND | 0.23 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| cis-1,2-Dichloroethene | ND | 0.10 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| cis-1,3-Dichloropropene | ND | 0.088 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Di-isopropyl ether | 8.6 | 0.034 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Dibromochloromethane | ND | 0.14 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Dibromomethane | ND | 0.34 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Dichlorodifluoromethane | ND | 0.14 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Ethyl tert-butyl ether | ND | 0.078 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Ethylbenzene | 750 | 0.36 | 10 | | ug/L | 10 | 2/3/2016 09:34 PM |
| Freon-113 | ND | 0.15 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Hexachlorobutadiene | ND | 0.21 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Isopropylbenzene | 50 | 0.068 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| m,p-Xylene | 6600 | 2.4 | 100 | | ug/L | 100 | 2/5/2016 04:13 PM |
| Methylene chloride | ND | 0.56 | 4.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| MTBE | 430 | 0.62 | 10 | | ug/L | 10 | 2/3/2016 09:34 PM |
| n-Butylbenzene | 27 | 0.062 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| n-Propylbenzene | 170 | 0.036 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Naphthalene | 590 | 0.48 | 10 | | ug/L | 10 | 2/3/2016 09:34 PM |
| o-Xylene | 2900 | 4.2 | 100 | | ug/L | 100 | 2/5/2016 04:13 PM |
| sec-Butylbenzene | 13 | 0.050 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Styrene | ND | 0.070 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Tert-amyl methyl ether | ND | 0.078 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Tert-Butanol | ND | 0.60 | 10 | | ug/L | 2 | 2/3/2016 09:08 PM |
| tert-Butylbenzene | ND | 0.060 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Tetrachloroethene | ND | 0.33 | 2.0 | | ug/L | 2 | 2/5/2016 04:38 PM |
| Toluene | 4600 | 4.2 | 200 | | ug/L | 100 | 2/5/2016 04:13 PM |
| trans-1,2-Dichloroethene | ND | 0.14 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| trans-1,3-Dichloropropene | ND | 0.078 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Trichloroethene | ND | 0.25 | 2.0 | | ug/L | 2 | 2/5/2016 04:38 PM |
| Trichlorofluoromethane | ND | 0.062 | 2.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Vinyl chloride | ND | 0.19 | 1.0 | | ug/L | 2 | 2/3/2016 09:08 PM |
| Xylenes, Total | 9500 | 150 | 200 | | ug/L | 100 | 2/5/2016 04:13 PM |
| Surr: 1,2-Dichloroethane-d4 | 91.2 | 0 | 72-119 | | %REC | 10 | 2/3/2016 09:34 PM |
| Surr: 1,2-Dichloroethane-d4 | 97.3 | 0 | 72-119 | | %REC | 2 | 2/3/2016 09:08 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified | DO | Surrogate Diluted Out |

**CLIENT:** CH2MHill
**Lab Order:** N018641
**Project:** SFPP - Norwalk Site
**Lab ID:** N018641-001

**Client Sample ID:** INF-02-02
**Collection Date:** 2/2/2016 2:00:00 PM
**Matrix:** WASTEWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | | | |
| | | | **EPA 8260B** | | | | |
| RunID: **MS5_160203A** | QC Batch: **P16VW024** | | | PrepDate: | | | Analyst: **QBM** |
| Surr: 1,2-Dichloroethane-d4 | 96.5 | 0 | 72-119 | | %REC | 100 | 2/5/2016 04:13 PM |
| Surr: 1,2-Dichloroethane-d4 | 94.9 | 0 | 72-119 | | %REC | 2 | 2/5/2016 04:38 PM |
| Surr: 4-Bromofluorobenzene | 107 | 0 | 76-119 | | %REC | 2 | 2/5/2016 04:38 PM |
| Surr: 4-Bromofluorobenzene | 107 | 0 | 76-119 | | %REC | 100 | 2/5/2016 04:13 PM |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 76-119 | | %REC | 10 | 2/3/2016 09:34 PM |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 76-119 | | %REC | 2 | 2/3/2016 09:08 PM |
| Surr: Dibromofluoromethane | 87.1 | 0 | 85-115 | | %REC | 2 | 2/5/2016 04:38 PM |
| Surr: Dibromofluoromethane | 89.4 | 0 | 85-115 | | %REC | 10 | 2/3/2016 09:34 PM |
| Surr: Dibromofluoromethane | 91.0 | 0 | 85-115 | | %REC | 2 | 2/3/2016 09:08 PM |
| Surr: Dibromofluoromethane | 93.5 | 0 | 85-115 | | %REC | 100 | 2/5/2016 04:13 PM |
| Surr: Toluene-d8 | 104 | 0 | 81-120 | | %REC | 2 | 2/3/2016 09:08 PM |
| Surr: Toluene-d8 | 103 | 0 | 81-120 | | %REC | 100 | 2/5/2016 04:13 PM |
| Surr: Toluene-d8 | 102 | 0 | 81-120 | | %REC | 10 | 2/3/2016 09:34 PM |
| Surr: Toluene-d8 | 103 | 0 | 81-120 | | %REC | 2 | 2/5/2016 04:38 PM |
| **TPH EXTRACTABLE BY GC/FID** | | | | | | | |
| | **EPA 3510C** | | **EPA 8015B** | | | | |
| RunID: **GC3_160205A** | QC Batch: **56111** | | | PrepDate: | **2/4/2016** | | Analyst: **MDM** |
| TPH-Diesel (C13-C22) | 110000 | 1600 | 2600 | | ug/L | 100 | 2/6/2016 01:05 PM |
| TPH-Oil (C23-C36) | 4700 | 14 | 26 | | ug/L | 1 | 2/5/2016 09:15 PM |
| Surr: Octacosane | 97.4 | 0 | 26-152 | | %REC | 1 | 2/5/2016 09:15 PM |
| Surr: p-Terphenyl | 119 | 0 | 57-132 | | %REC | 1 | 2/5/2016 09:15 PM |
| **GASOLINE RANGE ORGANICS BY GC/FID** | | | | | | | |
| | | | **EPA 8015B** | | | | |
| RunID: **GC4_160208B** | QC Batch: **E16VW012** | | | PrepDate: | | | Analyst: **QBM** |
| TPH-Gasoline (C4-C12) | 31000 | 160 | 500 | | ug/L | 10 | 2/8/2016 05:14 PM |
| Surr: Chlorobenzene - d5 | 82.3 | 0 | 74-138 | | %REC | 10 | 2/8/2016 05:14 PM |
| **TOTAL TPH** | | | | | | | |
| | | | **EPA 8015B** | | | | |
| RunID: **GC3_160205A** | QC Batch: **R105707** | | | PrepDate: | | | Analyst: **MDM** |
| Total TPH | 145700 | 16 | 50 | | ug/L | 1 | 2/5/2016 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified | DO | Surrogate Diluted Out |

**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015_W_FP_SFPP**

Sample ID: **MB-56111** SampType: **MBLK** TestCode: **8015_W_FP_** Units: **ug/L** Prep Date: **2/4/2016** RunNo: **105707**
Client ID: **PBW** Batch ID: **56111** TestNo: **EPA 8015B** **EPA 3510C** Analysis Date: **2/5/2016** SeqNo: **2221678**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Diesel (C13-C22) | ND | 25 | | | | | | | | | |
| TPH-Oil (C23-C36) | ND | 25 | | | | | | | | | |
| Surr: Octacosane | 69.806 | | 80.00 | | 87.3 | 26 | 152 | | | | |
| Surr: p-Terphenyl | 73.785 | | 80.00 | | 92.2 | 57 | 132 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |
| S | Spike/Surrogate outside of limits due to matrix interference | DO | Surrogate Diluted Out | | Calculations are based on raw values |

**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015_W_SFPPTOT**

Sample ID: **MB-R105707** SampType: **MBLK** TestCode: **8015_W_SFP** Units: **ug/L** Prep Date: RunNo: **105707**
Client ID: **PBW** Batch ID: **R105707** TestNo: **EPA 8015B** Analysis Date: **2/5/2016** SeqNo: **2231833**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total TPH | ND | 50 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |
| S | Spike/Surrogate outside of limits due to matrix interference | DO | Surrogate Diluted Out | | Calculations are based on raw values |

**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015GAS_WSFPP**

Sample ID: **E160208LCS2** SampType: **LCS** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **105748**
Client ID: **LCSW** Batch ID: **E16VW012** TestNo: **EPA 8015B** Analysis Date: **2/8/2016** SeqNo: **2225105**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Gasoline (C4-C12) | 894.000 | 50 | 1000 | 0 | 89.4 | 67 | 136 | | | | |
| Surr: Chlorobenzene - d5 | 50555.000 | | 50000 | | 101 | 74 | 138 | | | | |

Sample ID: **E160208MB2** SampType: **MBLK** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **105748**
Client ID: **PBW** Batch ID: **E16VW012** TestNo: **EPA 8015B** Analysis Date: **2/8/2016** SeqNo: **2225106**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Gasoline (C4-C12) | 36.000 | 50 | | | | | | | | | J |
| Surr: Chlorobenzene - d5 | 56680.000 | | 50000 | | 113 | 74 | 138 | | | | |

Sample ID: **N018642-001BMS** SampType: **MS** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **105748**
Client ID: **ZZZZZZ** Batch ID: **E16VW012** TestNo: **EPA 8015B** Analysis Date: **2/8/2016** SeqNo: **2225110**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Gasoline (C4-C12) | 892.000 | 50 | 1000 | 30.00 | 86.2 | 67 | 136 | | | | |
| Surr: Chlorobenzene - d5 | 50243.000 | | 50000 | | 100 | 74 | 138 | | | | |

Sample ID: **N018642-001BMSD** SampType: **MSD** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **105748**
Client ID: **ZZZZZZ** Batch ID: **E16VW012** TestNo: **EPA 8015B** Analysis Date: **2/8/2016** SeqNo: **2225111**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Gasoline (C4-C12) | 826.000 | 50 | 1000 | 30.00 | 79.6 | 67 | 136 | 892.0 | 7.68 | 30 | |
| Surr: Chlorobenzene - d5 | 48040.000 | | 50000 | | 96.1 | 74 | 138 | | 0 | 0 | |

Sample ID: **E160212LCS2** SampType: **LCS** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **105852**
Client ID: **LCSW** Batch ID: **E16VW012** TestNo: **EPA 8015B** Analysis Date: **2/12/2016** SeqNo: **2231085**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Gasoline (C4-C12) | 833.000 | 50 | 1000 | 0 | 83.3 | 67 | 136 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015GAS_WSFPP**

| Sample ID: **E160212LCS2** | SampType: **LCS** | TestCode: **8015GAS_WS** | Units: **ug/L** | Prep Date: | RunNo: **105852** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **E16VW012** | TestNo: **EPA 8015B** | | Analysis Date: **2/12/2016** | SeqNo: **2231085** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Surr: Chlorobenzene - d5 | 46161.000 | | 50000 | | 92.3 | 74 | 138 | | | | |

| Sample ID: **E160212MB2** | SampType: **MBLK** | TestCode: **8015GAS_WS** | Units: **ug/L** | Prep Date: | RunNo: **105852** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **E16VW012** | TestNo: **EPA 8015B** | | Analysis Date: **2/12/2016** | SeqNo: **2231086** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Gasoline (C4-C12) | 32.000 | 50 | | | | | | | | | J |
| Surr: Chlorobenzene - d5 | 53319.000 | | 50000 | | 107 | 74 | 138 | | | | |

| Sample ID: **N018735-003AMS** | SampType: **MS** | TestCode: **8015GAS_WS** | Units: **ug/L** | Prep Date: | RunNo: **105852** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **E16VW012** | TestNo: **EPA 8015B** | | Analysis Date: **2/12/2016** | SeqNo: **2231091** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Gasoline (C4-C12) | 837.000 | 50 | 1000 | 37.00 | 80.0 | 67 | 136 | | | | |
| Surr: Chlorobenzene - d5 | 48392.000 | | 50000 | | 96.8 | 74 | 138 | | | | |

| Sample ID: **N018735-003AMSD** | SampType: **MSD** | TestCode: **8015GAS_WS** | Units: **ug/L** | Prep Date: | RunNo: **105852** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **E16VW012** | TestNo: **EPA 8015B** | | Analysis Date: **2/12/2016** | SeqNo: **2231092** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Gasoline (C4-C12) | 858.000 | 50 | 1000 | 37.00 | 82.1 | 67 | 136 | 837.0 | 2.48 | 30 | |
| Surr: Chlorobenzene - d5 | 50478.000 | | 50000 | | 101 | 74 | 138 | | 0 | 0 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
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| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |
| S | Spike/Surrogate outside of limits due to matrix interference | DO | Surrogate Diluted Out | | Calculations are based on raw values |

**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160203LCS** SampType: **LCS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105653**
Client ID: **LCSW** Batch ID: **P16VW024** TestNo: **EPA 8260B** Analysis Date: **2/3/2016** SeqNo: **2217801**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.850 | 1.0 | 20.00 | 0 | 99.2 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 21.870 | 1.0 | 20.00 | 0 | 109 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.000 | 1.0 | 20.00 | 0 | 100 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 20.910 | 1.0 | 20.00 | 0 | 105 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 21.140 | 0.50 | 20.00 | 0 | 106 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 17.890 | 1.0 | 20.00 | 0 | 89.4 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 21.040 | 1.0 | 20.00 | 0 | 105 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 20.810 | 1.0 | 20.00 | 0 | 104 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 19.860 | 1.0 | 20.00 | 0 | 99.3 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 21.190 | 1.0 | 20.00 | 0 | 106 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 21.120 | 1.0 | 20.00 | 0 | 106 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 18.470 | 2.0 | 20.00 | 0 | 92.4 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 22.120 | 1.0 | 20.00 | 0 | 111 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 20.780 | 1.0 | 20.00 | 0 | 104 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 20.420 | 0.50 | 20.00 | 0 | 102 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.980 | 1.0 | 20.00 | 0 | 105 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 21.640 | 1.0 | 20.00 | 0 | 108 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 20.470 | 1.0 | 20.00 | 0 | 102 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.100 | 1.0 | 20.00 | 0 | 106 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 19.690 | 1.0 | 20.00 | 0 | 98.4 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 24.070 | 1.0 | 20.00 | 0 | 120 | 69 | 137 | | | | |
| 2-Butanone | 237.680 | 10 | 200.0 | 0 | 119 | 49 | 136 | | | | |
| 2-Chlorotoluene | 20.490 | 1.0 | 20.00 | 0 | 102 | 73 | 126 | | | | |
| 4-Chlorotoluene | 21.200 | 1.0 | 20.00 | 0 | 106 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 21.690 | 1.0 | 20.00 | 0 | 108 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 206.650 | 10 | 200.0 | 0 | 103 | 58 | 134 | | | | |
| Acetone | 306.440 | 10 | 200.0 | 0 | 153 | 40 | 135 | | | | S |
| Benzene | 20.930 | 1.0 | 20.00 | 0 | 105 | 81 | 122 | | | | |
| Bromobenzene | 20.050 | 1.0 | 20.00 | 0 | 100 | 76 | 124 | | | | |
| Bromochloromethane | 21.560 | 1.0 | 20.00 | 0 | 108 | 65 | 129 | | | | |

**Qualifiers:**

| | | | | | |
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**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160203LCS** SampType: **LCS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105653**
Client ID: **LCSW** Batch ID: **P16VW024** TestNo: **EPA 8260B** Analysis Date: **2/3/2016** SeqNo: **2217801**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromodichloromethane | 21.590 | 1.0 | 20.00 | 0 | 108 | 76 | 121 | | | | |
| Bromoform | 19.230 | 1.0 | 20.00 | 0 | 96.2 | 69 | 128 | | | | |
| Bromomethane | 18.130 | 1.0 | 20.00 | 0 | 90.7 | 53 | 141 | | | | |
| Carbon disulfide | 17.510 | 1.0 | 20.00 | 0 | 87.6 | 75 | 125 | | | | |
| Carbon tetrachloride | 22.090 | 0.50 | 20.00 | 0 | 110 | 66 | 138 | | | | |
| Chlorobenzene | 20.410 | 1.0 | 20.00 | 0 | 102 | 81 | 122 | | | | |
| Chloroethane | 19.100 | 1.0 | 20.00 | 0 | 95.5 | 58 | 133 | | | | |
| Chloroform | 21.170 | 1.0 | 20.00 | 0 | 106 | 69 | 128 | | | | |
| Chloromethane | 21.290 | 1.0 | 20.00 | 0 | 106 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 20.750 | 1.0 | 20.00 | 0 | 104 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 22.350 | 1.0 | 20.00 | 0 | 112 | 69 | 131 | | | | |
| Di-isopropyl ether | 21.690 | 1.0 | 20.00 | 0 | 108 | 70 | 130 | | | | |
| Dibromochloromethane | 22.830 | 1.0 | 20.00 | 0 | 114 | 66 | 133 | | | | |
| Dibromomethane | 21.420 | 1.0 | 20.00 | 0 | 107 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 20.440 | 1.0 | 20.00 | 0 | 102 | 53 | 153 | | | | |
| Ethyl tert-butyl ether | 21.980 | 1.0 | 20.00 | 0 | 110 | 70 | 130 | | | | |
| Ethylbenzene | 20.330 | 1.0 | 20.00 | 0 | 102 | 73 | 127 | | | | |
| Freon-113 | 18.380 | 1.0 | 20.00 | 0 | 91.9 | 75 | 125 | | | | |
| Hexachlorobutadiene | 20.360 | 1.0 | 20.00 | 0 | 102 | 67 | 131 | | | | |
| Isopropylbenzene | 20.800 | 1.0 | 20.00 | 0 | 104 | 75 | 127 | | | | |
| m,p-Xylene | 42.150 | 1.0 | 40.00 | 0 | 105 | 76 | 128 | | | | |
| Methylene chloride | 19.970 | 2.0 | 20.00 | 0 | 99.8 | 63 | 137 | | | | |
| MTBE | 20.990 | 1.0 | 20.00 | 0 | 105 | 65 | 123 | | | | |
| n-Butylbenzene | 21.550 | 1.0 | 20.00 | 0 | 108 | 69 | 137 | | | | |
| n-Propylbenzene | 21.200 | 1.0 | 20.00 | 0 | 106 | 72 | 129 | | | | |
| Naphthalene | 18.090 | 1.0 | 20.00 | 0 | 90.4 | 54 | 138 | | | | |
| o-Xylene | 21.430 | 1.0 | 20.00 | 0 | 107 | 80 | 121 | | | | |
| sec-Butylbenzene | 21.210 | 1.0 | 20.00 | 0 | 106 | 72 | 127 | | | | |
| Styrene | 22.110 | 1.0 | 20.00 | 0 | 111 | 65 | 134 | | | | |
| Tert-amyl methyl ether | 21.140 | 1.0 | 20.00 | 0 | 106 | 70 | 130 | | | | |

**Qualifiers:**

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|---|---|---|---|---|---|
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**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160203LCS** SampType: **LCS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105653**
Client ID: **LCSW** Batch ID: **P16VW024** TestNo: **EPA 8260B** Analysis Date: **2/3/2016** SeqNo: **2217801**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tert-Butanol | 103.120 | 5.0 | 100.0 | 0 | 103 | 70 | 130 | | | | |
| tert-Butylbenzene | 21.210 | 1.0 | 20.00 | 0 | 106 | 70 | 129 | | | | |
| Tetrachloroethene | 20.600 | 1.0 | 20.00 | 0 | 103 | 66 | 128 | | | | |
| Toluene | 21.140 | 2.0 | 20.00 | 0 | 106 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 21.310 | 1.0 | 20.00 | 0 | 107 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 19.650 | 1.0 | 20.00 | 0 | 98.2 | 59 | 135 | | | | |
| Trichloroethene | 20.360 | 1.0 | 20.00 | 0 | 102 | 70 | 127 | | | | |
| Trichlorofluoromethane | 19.200 | 1.0 | 20.00 | 0 | 96.0 | 57 | 129 | | | | |
| Vinyl chloride | 21.090 | 0.50 | 20.00 | 0 | 105 | 50 | 134 | | | | |
| Xylenes, Total | 63.580 | 2.0 | 60.00 | 0 | 106 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 26.510 | | 25.00 | | 106 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 26.800 | | 25.00 | | 107 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.470 | | 25.00 | | 106 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 26.390 | | 25.00 | | 106 | 81 | 120 | | | | |

Sample ID: **P160203LCSD** SampType: **LCSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105653**
Client ID: **LCSS02** Batch ID: **P16VW024** TestNo: **EPA 8260B** Analysis Date: **2/3/2016** SeqNo: **2217802**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20.380 | 1.0 | 20.00 | 0 | 102 | 81 | 129 | 19.85 | 2.63 | 20 | |
| 1,1,1-Trichloroethane | 22.500 | 1.0 | 20.00 | 0 | 112 | 67 | 132 | 21.87 | 2.84 | 20 | |
| 1,1,2,2-Tetrachloroethane | 20.480 | 1.0 | 20.00 | 0 | 102 | 63 | 128 | 20.00 | 2.37 | 20 | |
| 1,1,2-Trichloroethane | 21.090 | 1.0 | 20.00 | 0 | 105 | 75 | 125 | 20.91 | 0.857 | 20 | |
| 1,1-Dichloroethane | 21.460 | 0.50 | 20.00 | 0 | 107 | 69 | 133 | 21.14 | 1.50 | 20 | |
| 1,1-Dichloroethene | 18.890 | 1.0 | 20.00 | 0 | 94.4 | 68 | 130 | 17.89 | 5.44 | 20 | |
| 1,1-Dichloropropene | 21.200 | 1.0 | 20.00 | 0 | 106 | 73 | 132 | 21.04 | 0.758 | 20 | |
| 1,2,3-Trichlorobenzene | 21.050 | 1.0 | 20.00 | 0 | 105 | 67 | 137 | 20.81 | 1.15 | 20 | |
| 1,2,3-Trichloropropane | 20.220 | 1.0 | 20.00 | 0 | 101 | 73 | 124 | 19.86 | 1.80 | 20 | |
| 1,2,4-Trichlorobenzene | 20.950 | 1.0 | 20.00 | 0 | 105 | 66 | 134 | 21.19 | 1.14 | 20 | |
| 1,2,4-Trimethylbenzene | 21.420 | 1.0 | 20.00 | 0 | 107 | 74 | 132 | 21.12 | 1.41 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
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**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160203LCSD** SampType: **LCSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105653**
Client ID: **LCSS02** Batch ID: **P16VW024** TestNo: **EPA 8260B** Analysis Date: **2/3/2016** SeqNo: **2217802**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromo-3-chloropropane | 19.310 | 2.0 | 20.00 | 0 | 96.6 | 50 | 132 | 18.47 | 4.45 | 20 | |
| 1,2-Dibromoethane | 23.190 | 1.0 | 20.00 | 0 | 116 | 80 | 121 | 22.12 | 4.72 | 20 | |
| 1,2-Dichlorobenzene | 20.840 | 1.0 | 20.00 | 0 | 104 | 71 | 122 | 20.78 | 0.288 | 20 | |
| 1,2-Dichloroethane | 21.390 | 0.50 | 20.00 | 0 | 107 | 69 | 132 | 20.42 | 4.64 | 20 | |
| 1,2-Dichloropropane | 21.430 | 1.0 | 20.00 | 0 | 107 | 75 | 125 | 20.98 | 2.12 | 20 | |
| 1,3,5-Trimethylbenzene | 21.810 | 1.0 | 20.00 | 0 | 109 | 74 | 131 | 21.64 | 0.783 | 20 | |
| 1,3-Dichlorobenzene | 20.650 | 1.0 | 20.00 | 0 | 103 | 75 | 124 | 20.47 | 0.875 | 20 | |
| 1,3-Dichloropropane | 21.520 | 1.0 | 20.00 | 0 | 108 | 73 | 126 | 21.10 | 1.97 | 20 | |
| 1,4-Dichlorobenzene | 20.020 | 1.0 | 20.00 | 0 | 100 | 74 | 123 | 19.69 | 1.66 | 20 | |
| 2,2-Dichloropropane | 24.650 | 1.0 | 20.00 | 0 | 123 | 69 | 137 | 24.07 | 2.38 | 20 | |
| 2-Butanone | 224.210 | 10 | 200.0 | 0 | 112 | 49 | 136 | 237.7 | 5.83 | 20 | |
| 2-Chlorotoluene | 20.850 | 1.0 | 20.00 | 0 | 104 | 73 | 126 | 20.49 | 1.74 | 20 | |
| 4-Chlorotoluene | 21.350 | 1.0 | 20.00 | 0 | 107 | 74 | 128 | 21.20 | 0.705 | 20 | |
| 4-Isopropyltoluene | 21.780 | 1.0 | 20.00 | 0 | 109 | 73 | 130 | 21.69 | 0.414 | 20 | |
| 4-Methyl-2-pentanone | 217.080 | 10 | 200.0 | 0 | 109 | 58 | 134 | 206.6 | 4.92 | 20 | |
| Acetone | 277.530 | 10 | 200.0 | 0 | 139 | 40 | 135 | 306.4 | 9.90 | 20 | S |
| Benzene | 21.310 | 1.0 | 20.00 | 0 | 107 | 81 | 122 | 20.93 | 1.80 | 20 | |
| Bromobenzene | 20.230 | 1.0 | 20.00 | 0 | 101 | 76 | 124 | 20.05 | 0.894 | 20 | |
| Bromochloromethane | 21.760 | 1.0 | 20.00 | 0 | 109 | 65 | 129 | 21.56 | 0.923 | 20 | |
| Bromodichloromethane | 22.260 | 1.0 | 20.00 | 0 | 111 | 76 | 121 | 21.59 | 3.06 | 20 | |
| Bromoform | 20.000 | 1.0 | 20.00 | 0 | 100 | 69 | 128 | 19.23 | 3.93 | 20 | |
| Bromomethane | 18.310 | 1.0 | 20.00 | 0 | 91.6 | 53 | 141 | 18.13 | 0.988 | 20 | |
| Carbon disulfide | 18.780 | 1.0 | 20.00 | 0 | 93.9 | 75 | 125 | 17.51 | 7.00 | 20 | |
| Carbon tetrachloride | 22.630 | 0.50 | 20.00 | 0 | 113 | 66 | 138 | 22.09 | 2.42 | 20 | |
| Chlorobenzene | 20.720 | 1.0 | 20.00 | 0 | 104 | 81 | 122 | 20.41 | 1.51 | 20 | |
| Chloroethane | 18.960 | 1.0 | 20.00 | 0 | 94.8 | 58 | 133 | 19.10 | 0.736 | 20 | |
| Chloroform | 21.220 | 1.0 | 20.00 | 0 | 106 | 69 | 128 | 21.17 | 0.236 | 20 | |
| Chloromethane | 21.620 | 1.0 | 20.00 | 0 | 108 | 56 | 131 | 21.29 | 1.54 | 20 | |
| cis-1,2-Dichloroethene | 21.610 | 1.0 | 20.00 | 0 | 108 | 72 | 126 | 20.75 | 4.06 | 20 | |
| cis-1,3-Dichloropropene | 22.750 | 1.0 | 20.00 | 0 | 114 | 69 | 131 | 22.35 | 1.77 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |
| S | Spike/Surrogate outside of limits due to matrix interference | DO | Surrogate Diluted Out | | Calculations are based on raw values |

**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160203LCSD** SampType: **LCSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105653**
Client ID: **LCSS02** Batch ID: **P16VW024** TestNo: **EPA 8260B** Analysis Date: **2/3/2016** SeqNo: **2217802**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Di-isopropyl ether | 22.450 | 1.0 | 20.00 | 0 | 112 | 70 | 130 | 21.69 | 3.44 | 20 | |
| Dibromochloromethane | 23.100 | 1.0 | 20.00 | 0 | 116 | 66 | 133 | 22.83 | 1.18 | 20 | |
| Dibromomethane | 22.270 | 1.0 | 20.00 | 0 | 111 | 76 | 125 | 21.42 | 3.89 | 20 | |
| Dichlorodifluoromethane | 21.160 | 1.0 | 20.00 | 0 | 106 | 53 | 153 | 20.44 | 3.46 | 20 | |
| Ethyl tert-butyl ether | 22.800 | 1.0 | 20.00 | 0 | 114 | 70 | 130 | 21.98 | 3.66 | 20 | |
| Ethylbenzene | 20.600 | 1.0 | 20.00 | 0 | 103 | 73 | 127 | 20.33 | 1.32 | 20 | |
| Freon-113 | 19.200 | 1.0 | 20.00 | 0 | 96.0 | 75 | 125 | 18.38 | 4.36 | 20 | |
| Hexachlorobutadiene | 20.480 | 1.0 | 20.00 | 0 | 102 | 67 | 131 | 20.36 | 0.588 | 20 | |
| Isopropylbenzene | 21.140 | 1.0 | 20.00 | 0 | 106 | 75 | 127 | 20.80 | 1.62 | 20 | |
| m,p-Xylene | 42.830 | 1.0 | 40.00 | 0 | 107 | 76 | 128 | 42.15 | 1.60 | 20 | |
| Methylene chloride | 20.690 | 2.0 | 20.00 | 0 | 103 | 63 | 137 | 19.97 | 3.54 | 20 | |
| MTBE | 21.840 | 1.0 | 20.00 | 0 | 109 | 65 | 123 | 20.99 | 3.97 | 20 | |
| n-Butylbenzene | 21.680 | 1.0 | 20.00 | 0 | 108 | 69 | 137 | 21.55 | 0.601 | 20 | |
| n-Propylbenzene | 21.420 | 1.0 | 20.00 | 0 | 107 | 72 | 129 | 21.20 | 1.03 | 20 | |
| Naphthalene | 18.710 | 1.0 | 20.00 | 0 | 93.6 | 54 | 138 | 18.09 | 3.37 | 20 | |
| o-Xylene | 21.540 | 1.0 | 20.00 | 0 | 108 | 80 | 121 | 21.43 | 0.512 | 20 | |
| sec-Butylbenzene | 21.380 | 1.0 | 20.00 | 0 | 107 | 72 | 127 | 21.21 | 0.798 | 20 | |
| Styrene | 22.410 | 1.0 | 20.00 | 0 | 112 | 65 | 134 | 22.11 | 1.35 | 20 | |
| Tert-amyl methyl ether | 21.910 | 1.0 | 20.00 | 0 | 110 | 70 | 130 | 21.14 | 3.58 | 20 | |
| Tert-Butanol | 116.680 | 5.0 | 100.0 | 0 | 117 | 70 | 130 | 103.1 | 12.3 | 20 | |
| tert-Butylbenzene | 21.250 | 1.0 | 20.00 | 0 | 106 | 70 | 129 | 21.21 | 0.188 | 20 | |
| Tetrachloroethene | 21.120 | 1.0 | 20.00 | 0 | 106 | 66 | 128 | 20.60 | 2.49 | 20 | |
| Toluene | 21.170 | 2.0 | 20.00 | 0 | 106 | 77 | 122 | 21.14 | 0.142 | 20 | |
| trans-1,2-Dichloroethene | 21.810 | 1.0 | 20.00 | 0 | 109 | 63 | 137 | 21.31 | 2.32 | 20 | |
| trans-1,3-Dichloropropene | 20.550 | 1.0 | 20.00 | 0 | 103 | 59 | 135 | 19.65 | 4.48 | 20 | |
| Trichloroethene | 20.570 | 1.0 | 20.00 | 0 | 103 | 70 | 127 | 20.36 | 1.03 | 20 | |
| Trichlorofluoromethane | 19.540 | 1.0 | 20.00 | 0 | 97.7 | 57 | 129 | 19.20 | 1.76 | 20 | |
| Vinyl chloride | 21.300 | 0.50 | 20.00 | 0 | 106 | 50 | 134 | 21.09 | 0.991 | 20 | |
| Xylenes, Total | 64.370 | 2.0 | 60.00 | 0 | 107 | 75 | 125 | 63.58 | 1.23 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 27.020 | | 25.00 | | 108 | 72 | 119 | | 0 | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
Calculations are based on raw values

**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160203LCSD** SampType: **LCSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105653**
Client ID: **LCSS02** Batch ID: **P16VW024** TestNo: **EPA 8260B** Analysis Date: **2/3/2016** SeqNo: **2217802**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 4-Bromofluorobenzene | 27.100 | | 25.00 | | 108 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 26.770 | | 25.00 | | 107 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 26.430 | | 25.00 | | 106 | 81 | 120 | | 0 | | |

Sample ID: **P160203MB3** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105653**
Client ID: **PBW** Batch ID: **P16VW024** TestNo: **EPA 8260B** Analysis Date: **2/3/2016** SeqNo: **2217803**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 0.50 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | | |
| 1,2-Dibromoethane | ND | 1.0 | | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.50 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,3,5-Trimethylbenzene | 0.020 | 1.0 | | | | | | | | | J |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 2,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |
| S | Spike/Surrogate outside of limits due to matrix interference | DO | Surrogate Diluted Out | | Calculations are based on raw values |

**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160203MB3** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105653**
Client ID: **PBW** Batch ID: **P16VW024** TestNo: **EPA 8260B** Analysis Date: **2/3/2016** SeqNo: **2217803**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | | |
| Benzene | ND | 1.0 | | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | | |
| Bromochloromethane | ND | 1.0 | | | | | | | | | |
| Bromodichloromethane | ND | 1.0 | | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | | |
| Bromomethane | ND | 1.0 | | | | | | | | | |
| Carbon disulfide | ND | 1.0 | | | | | | | | | |
| Carbon tetrachloride | ND | 0.50 | | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | | |
| Chloroethane | ND | 1.0 | | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | | |
| Chloromethane | ND | 1.0 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | | |
| Di-isopropyl ether | ND | 1.0 | | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | | |
| Ethyl tert-butyl ether | ND | 1.0 | | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | | |
| Freon-113 | ND | 1.0 | | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | | |
| m,p-Xylene | 0.030 | 1.0 | | | | | | | | | J |
| Methylene chloride | 0.770 | 2.0 | | | | | | | | | J |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |
| S | Spike/Surrogate outside of limits due to matrix interference | DO | Surrogate Diluted Out | | Calculations are based on raw values |

**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160203MB3** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105653**
Client ID: **PBW** Batch ID: **P16VW024** TestNo: **EPA 8260B** Analysis Date: **2/3/2016** SeqNo: **2217803**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MTBE | ND | 1.0 | | | | | | | | | |
| n-Butylbenzene | ND | 1.0 | | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | | |
| Naphthalene | ND | 1.0 | | | | | | | | | |
| o-Xylene | ND | 1.0 | | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | | |
| Tert-amyl methyl ether | ND | 1.0 | | | | | | | | | |
| Tert-Butanol | ND | 5.0 | | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Tetrachloroethene | ND | 1.0 | | | | | | | | | |
| Toluene | ND | 2.0 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | | |
| Trichloroethene | ND | 1.0 | | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | | |
| Vinyl chloride | ND | 0.50 | | | | | | | | | |
| Xylenes, Total | ND | 2.0 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 27.940 | | 25.00 | | 112 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 25.700 | | 25.00 | | 103 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 27.680 | | 25.00 | | 111 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 25.680 | | 25.00 | | 103 | 81 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |
| S | Spike/Surrogate outside of limits due to matrix interference | DO | Surrogate Diluted Out | | Calculations are based on raw values |

**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160205LCS** SampType: **LCS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105708**
Client ID: **LCSW** Batch ID: **P16VW027** TestNo: **EPA 8260B** Analysis Date: **2/5/2016** SeqNo: **2221683**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 21.010 | 1.0 | 20.00 | 0 | 105 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 20.470 | 1.0 | 20.00 | 0 | 102 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 21.880 | 1.0 | 20.00 | 0 | 109 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 21.380 | 1.0 | 20.00 | 0 | 107 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 19.030 | 0.50 | 20.00 | 0 | 95.2 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 16.490 | 1.0 | 20.00 | 0 | 82.5 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 21.200 | 1.0 | 20.00 | 0 | 106 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 21.530 | 1.0 | 20.00 | 0 | 108 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 22.040 | 1.0 | 20.00 | 0 | 110 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 21.650 | 1.0 | 20.00 | 0 | 108 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 22.290 | 1.0 | 20.00 | 0 | 111 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 20.330 | 2.0 | 20.00 | 0 | 102 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 23.460 | 1.0 | 20.00 | 0 | 117 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 21.240 | 1.0 | 20.00 | 0 | 106 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 21.200 | 0.50 | 20.00 | 0 | 106 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 21.670 | 1.0 | 20.00 | 0 | 108 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 22.500 | 1.0 | 20.00 | 0 | 112 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 21.130 | 1.0 | 20.00 | 0 | 106 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.960 | 1.0 | 20.00 | 0 | 110 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 20.670 | 1.0 | 20.00 | 0 | 103 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 23.610 | 1.0 | 20.00 | 0 | 118 | 69 | 137 | | | | |
| 2-Butanone | 197.940 | 10 | 200.0 | 0 | 99.0 | 49 | 136 | | | | |
| 2-Chlorotoluene | 21.630 | 1.0 | 20.00 | 0 | 108 | 73 | 126 | | | | |
| 4-Chlorotoluene | 22.150 | 1.0 | 20.00 | 0 | 111 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 22.530 | 1.0 | 20.00 | 0 | 113 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 223.770 | 10 | 200.0 | 0 | 112 | 58 | 134 | | | | |
| Acetone | 229.030 | 10 | 200.0 | 0 | 115 | 40 | 135 | | | | |
| Benzene | 21.430 | 1.0 | 20.00 | 0 | 107 | 81 | 122 | | | | |
| Bromobenzene | 20.700 | 1.0 | 20.00 | 0 | 104 | 76 | 124 | | | | |
| Bromochloromethane | 18.820 | 1.0 | 20.00 | 0 | 94.1 | 65 | 129 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |
| S | Spike/Surrogate outside of limits due to matrix interference | DO | Surrogate Diluted Out | | Calculations are based on raw values |

**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160205LCS** SampType: **LCS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105708**
Client ID: **LCSW** Batch ID: **P16VW027** TestNo: **EPA 8260B** Analysis Date: **2/5/2016** SeqNo: **2221683**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromodichloromethane | 22.560 | 1.0 | 20.00 | 0 | 113 | 76 | 121 | | | | |
| Bromoform | 20.620 | 1.0 | 20.00 | 0 | 103 | 69 | 128 | | | | |
| Bromomethane | 13.060 | 1.0 | 20.00 | 0 | 65.3 | 53 | 141 | | | | |
| Carbon disulfide | 16.040 | 1.0 | 20.00 | 0 | 80.2 | 75 | 125 | | | | |
| Carbon tetrachloride | 23.110 | 0.50 | 20.00 | 0 | 116 | 66 | 138 | | | | |
| Chlorobenzene | 21.140 | 1.0 | 20.00 | 0 | 106 | 81 | 122 | | | | |
| Chloroethane | 14.840 | 1.0 | 20.00 | 0 | 74.2 | 58 | 133 | | | | |
| Chloroform | 19.340 | 1.0 | 20.00 | 0 | 96.7 | 69 | 128 | | | | |
| Chloromethane | 21.930 | 1.0 | 20.00 | 0 | 110 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 19.530 | 1.0 | 20.00 | 0 | 97.6 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 22.930 | 1.0 | 20.00 | 0 | 115 | 69 | 131 | | | | |
| Di-isopropyl ether | 20.500 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | | |
| Dibromochloromethane | 23.280 | 1.0 | 20.00 | 0 | 116 | 66 | 133 | | | | |
| Dibromomethane | 21.890 | 1.0 | 20.00 | 0 | 109 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 18.370 | 1.0 | 20.00 | 0 | 91.9 | 53 | 153 | | | | |
| Ethyl tert-butyl ether | 21.990 | 1.0 | 20.00 | 0 | 110 | 70 | 130 | | | | |
| Ethylbenzene | 20.920 | 1.0 | 20.00 | 0 | 105 | 73 | 127 | | | | |
| Freon-113 | 16.530 | 1.0 | 20.00 | 0 | 82.6 | 75 | 125 | | | | |
| Hexachlorobutadiene | 20.700 | 1.0 | 20.00 | 0 | 104 | 67 | 131 | | | | |
| Isopropylbenzene | 21.920 | 1.0 | 20.00 | 0 | 110 | 75 | 127 | | | | |
| m,p-Xylene | 43.420 | 1.0 | 40.00 | 0 | 109 | 76 | 128 | | | | |
| Methylene chloride | 18.410 | 2.0 | 20.00 | 0 | 92.0 | 63 | 137 | | | | |
| MTBE | 20.260 | 1.0 | 20.00 | 0 | 101 | 65 | 123 | | | | |
| n-Butylbenzene | 22.440 | 1.0 | 20.00 | 0 | 112 | 69 | 137 | | | | |
| n-Propylbenzene | 22.100 | 1.0 | 20.00 | 0 | 110 | 72 | 129 | | | | |
| Naphthalene | 19.520 | 1.0 | 20.00 | 0 | 97.6 | 54 | 138 | | | | |
| o-Xylene | 21.970 | 1.0 | 20.00 | 0 | 110 | 80 | 121 | | | | |
| sec-Butylbenzene | 22.050 | 1.0 | 20.00 | 0 | 110 | 72 | 127 | | | | |
| Styrene | 22.890 | 1.0 | 20.00 | 0 | 114 | 65 | 134 | | | | |
| Tert-amyl methyl ether | 23.390 | 1.0 | 20.00 | 0 | 117 | 70 | 130 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |
| S | Spike/Surrogate outside of limits due to matrix interference | DO | Surrogate Diluted Out | | Calculations are based on raw values |

**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160205LCS** SampType: **LCS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105708**
Client ID: **LCSW** Batch ID: **P16VW027** TestNo: **EPA 8260B** Analysis Date: **2/5/2016** SeqNo: **2221683**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tert-Butanol | 116.980 | 5.0 | 100.0 | 0 | 117 | 70 | 130 | | | | |
| tert-Butylbenzene | 21.850 | 1.0 | 20.00 | 0 | 109 | 70 | 129 | | | | |
| Tetrachloroethene | 20.660 | 1.0 | 20.00 | 0 | 103 | 66 | 128 | | | | |
| Toluene | 21.240 | 2.0 | 20.00 | 0 | 106 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 19.490 | 1.0 | 20.00 | 0 | 97.5 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 20.980 | 1.0 | 20.00 | 0 | 105 | 59 | 135 | | | | |
| Trichloroethene | 20.650 | 1.0 | 20.00 | 0 | 103 | 70 | 127 | | | | |
| Trichlorofluoromethane | 16.260 | 1.0 | 20.00 | 0 | 81.3 | 57 | 129 | | | | |
| Vinyl chloride | 19.070 | 0.50 | 20.00 | 0 | 95.4 | 50 | 134 | | | | |
| Xylenes, Total | 65.390 | 2.0 | 60.00 | 0 | 109 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 23.130 | | 25.00 | | 92.5 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 25.950 | | 25.00 | | 104 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 22.540 | | 25.00 | | 90.2 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 25.450 | | 25.00 | | 102 | 81 | 120 | | | | |

Sample ID: **P160205LCSD** SampType: **LCSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105708**
Client ID: **LCSS02** Batch ID: **P16VW027** TestNo: **EPA 8260B** Analysis Date: **2/5/2016** SeqNo: **2221684**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 21.300 | 1.0 | 20.00 | 0 | 106 | 81 | 129 | 21.01 | 1.37 | 20 | |
| 1,1,1-Trichloroethane | 20.560 | 1.0 | 20.00 | 0 | 103 | 67 | 132 | 20.47 | 0.439 | 20 | |
| 1,1,2,2-Tetrachloroethane | 22.030 | 1.0 | 20.00 | 0 | 110 | 63 | 128 | 21.88 | 0.683 | 20 | |
| 1,1,2-Trichloroethane | 21.540 | 1.0 | 20.00 | 0 | 108 | 75 | 125 | 21.38 | 0.746 | 20 | |
| 1,1-Dichloroethane | 18.920 | 0.50 | 20.00 | 0 | 94.6 | 69 | 133 | 19.03 | 0.580 | 20 | |
| 1,1-Dichloroethene | 15.870 | 1.0 | 20.00 | 0 | 79.4 | 68 | 130 | 16.49 | 3.83 | 20 | |
| 1,1-Dichloropropene | 20.980 | 1.0 | 20.00 | 0 | 105 | 73 | 132 | 21.20 | 1.04 | 20 | |
| 1,2,3-Trichlorobenzene | 22.460 | 1.0 | 20.00 | 0 | 112 | 67 | 137 | 21.53 | 4.23 | 20 | |
| 1,2,3-Trichloropropane | 21.810 | 1.0 | 20.00 | 0 | 109 | 73 | 124 | 22.04 | 1.05 | 20 | |
| 1,2,4-Trichlorobenzene | 21.820 | 1.0 | 20.00 | 0 | 109 | 66 | 134 | 21.65 | 0.782 | 20 | |
| 1,2,4-Trimethylbenzene | 21.950 | 1.0 | 20.00 | 0 | 110 | 74 | 132 | 22.29 | 1.54 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160205LCSD** SampType: **LCSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105708**
Client ID: **LCSS02** Batch ID: **P16VW027** TestNo: **EPA 8260B** Analysis Date: **2/5/2016** SeqNo: **2221684**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromo-3-chloropropane | 21.630 | 2.0 | 20.00 | 0 | 108 | 50 | 132 | 20.33 | 6.20 | 20 | |
| 1,2-Dibromoethane | 23.440 | 1.0 | 20.00 | 0 | 117 | 80 | 121 | 23.46 | 0.0853 | 20 | |
| 1,2-Dichlorobenzene | 21.600 | 1.0 | 20.00 | 0 | 108 | 71 | 122 | 21.24 | 1.68 | 20 | |
| 1,2-Dichloroethane | 21.130 | 0.50 | 20.00 | 0 | 106 | 69 | 132 | 21.20 | 0.331 | 20 | |
| 1,2-Dichloropropane | 21.740 | 1.0 | 20.00 | 0 | 109 | 75 | 125 | 21.67 | 0.323 | 20 | |
| 1,3,5-Trimethylbenzene | 22.390 | 1.0 | 20.00 | 0 | 112 | 74 | 131 | 22.50 | 0.490 | 20 | |
| 1,3-Dichlorobenzene | 21.230 | 1.0 | 20.00 | 0 | 106 | 75 | 124 | 21.13 | 0.472 | 20 | |
| 1,3-Dichloropropane | 22.130 | 1.0 | 20.00 | 0 | 111 | 73 | 126 | 21.96 | 0.771 | 20 | |
| 1,4-Dichlorobenzene | 20.680 | 1.0 | 20.00 | 0 | 103 | 74 | 123 | 20.67 | 0.0484 | 20 | |
| 2,2-Dichloropropane | 23.240 | 1.0 | 20.00 | 0 | 116 | 69 | 137 | 23.61 | 1.58 | 20 | |
| 2-Butanone | 185.550 | 10 | 200.0 | 0 | 92.8 | 49 | 136 | 197.9 | 6.46 | 20 | |
| 2-Chlorotoluene | 21.770 | 1.0 | 20.00 | 0 | 109 | 73 | 126 | 21.63 | 0.645 | 20 | |
| 4-Chlorotoluene | 22.120 | 1.0 | 20.00 | 0 | 111 | 74 | 128 | 22.15 | 0.136 | 20 | |
| 4-Isopropyltoluene | 22.430 | 1.0 | 20.00 | 0 | 112 | 73 | 130 | 22.53 | 0.445 | 20 | |
| 4-Methyl-2-pentanone | 228.800 | 10 | 200.0 | 0 | 114 | 58 | 134 | 223.8 | 2.22 | 20 | |
| Acetone | 197.320 | 10 | 200.0 | 0 | 98.7 | 40 | 135 | 229.0 | 14.9 | 20 | |
| Benzene | 21.410 | 1.0 | 20.00 | 0 | 107 | 81 | 122 | 21.43 | 0.0934 | 20 | |
| Bromobenzene | 20.810 | 1.0 | 20.00 | 0 | 104 | 76 | 124 | 20.70 | 0.530 | 20 | |
| Bromochloromethane | 19.270 | 1.0 | 20.00 | 0 | 96.4 | 65 | 129 | 18.82 | 2.36 | 20 | |
| Bromodichloromethane | 22.170 | 1.0 | 20.00 | 0 | 111 | 76 | 121 | 22.56 | 1.74 | 20 | |
| Bromoform | 21.020 | 1.0 | 20.00 | 0 | 105 | 69 | 128 | 20.62 | 1.92 | 20 | |
| Bromomethane | 13.640 | 1.0 | 20.00 | 0 | 68.2 | 53 | 141 | 13.06 | 4.34 | 20 | |
| Carbon disulfide | 15.210 | 1.0 | 20.00 | 0 | 76.1 | 75 | 125 | 16.04 | 5.31 | 20 | |
| Carbon tetrachloride | 23.120 | 0.50 | 20.00 | 0 | 116 | 66 | 138 | 23.11 | 0.0433 | 20 | |
| Chlorobenzene | 21.330 | 1.0 | 20.00 | 0 | 107 | 81 | 122 | 21.14 | 0.895 | 20 | |
| Chloroethane | 15.000 | 1.0 | 20.00 | 0 | 75.0 | 58 | 133 | 14.84 | 1.07 | 20 | |
| Chloroform | 19.590 | 1.0 | 20.00 | 0 | 98.0 | 69 | 128 | 19.34 | 1.28 | 20 | |
| Chloromethane | 21.730 | 1.0 | 20.00 | 0 | 109 | 56 | 131 | 21.93 | 0.916 | 20 | |
| cis-1,2-Dichloroethene | 19.290 | 1.0 | 20.00 | 0 | 96.5 | 72 | 126 | 19.53 | 1.24 | 20 | |
| cis-1,3-Dichloropropene | 23.870 | 1.0 | 20.00 | 0 | 119 | 69 | 131 | 22.93 | 4.02 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160205LCSD** SampType: **LCSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105708**
Client ID: **LCSS02** Batch ID: **P16VW027** TestNo: **EPA 8260B** Analysis Date: **2/5/2016** SeqNo: **2221684**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Di-isopropyl ether | 20.560 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | 20.50 | 0.292 | 20 | |
| Dibromochloromethane | 23.730 | 1.0 | 20.00 | 0 | 119 | 66 | 133 | 23.28 | 1.91 | 20 | |
| Dibromomethane | 22.220 | 1.0 | 20.00 | 0 | 111 | 76 | 125 | 21.89 | 1.50 | 20 | |
| Dichlorodifluoromethane | 18.360 | 1.0 | 20.00 | 0 | 91.8 | 53 | 153 | 18.37 | 0.0545 | 20 | |
| Ethyl tert-butyl ether | 22.530 | 1.0 | 20.00 | 0 | 113 | 70 | 130 | 21.99 | 2.43 | 20 | |
| Ethylbenzene | 21.000 | 1.0 | 20.00 | 0 | 105 | 73 | 127 | 20.92 | 0.382 | 20 | |
| Freon-113 | 15.770 | 1.0 | 20.00 | 0 | 78.8 | 75 | 125 | 16.53 | 4.71 | 20 | |
| Hexachlorobutadiene | 20.880 | 1.0 | 20.00 | 0 | 104 | 67 | 131 | 20.70 | 0.866 | 20 | |
| Isopropylbenzene | 21.930 | 1.0 | 20.00 | 0 | 110 | 75 | 127 | 21.92 | 0.0456 | 20 | |
| m,p-Xylene | 43.920 | 1.0 | 40.00 | 0 | 110 | 76 | 128 | 43.42 | 1.14 | 20 | |
| Methylene chloride | 18.830 | 2.0 | 20.00 | 0 | 94.2 | 63 | 137 | 18.41 | 2.26 | 20 | |
| MTBE | 20.320 | 1.0 | 20.00 | 0 | 102 | 65 | 123 | 20.26 | 0.296 | 20 | |
| n-Butylbenzene | 22.250 | 1.0 | 20.00 | 0 | 111 | 69 | 137 | 22.44 | 0.850 | 20 | |
| n-Propylbenzene | 22.240 | 1.0 | 20.00 | 0 | 111 | 72 | 129 | 22.10 | 0.631 | 20 | |
| Naphthalene | 20.120 | 1.0 | 20.00 | 0 | 101 | 54 | 138 | 19.52 | 3.03 | 20 | |
| o-Xylene | 22.280 | 1.0 | 20.00 | 0 | 111 | 80 | 121 | 21.97 | 1.40 | 20 | |
| sec-Butylbenzene | 22.070 | 1.0 | 20.00 | 0 | 110 | 72 | 127 | 22.05 | 0.0907 | 20 | |
| Styrene | 22.770 | 1.0 | 20.00 | 0 | 114 | 65 | 134 | 22.89 | 0.526 | 20 | |
| Tert-amyl methyl ether | 23.400 | 1.0 | 20.00 | 0 | 117 | 70 | 130 | 23.39 | 0.0427 | 20 | |
| Tert-Butanol | 121.650 | 5.0 | 100.0 | 0 | 122 | 70 | 130 | 117.0 | 3.91 | 20 | |
| tert-Butylbenzene | 21.860 | 1.0 | 20.00 | 0 | 109 | 70 | 129 | 21.85 | 0.0458 | 20 | |
| Tetrachloroethene | 21.050 | 1.0 | 20.00 | 0 | 105 | 66 | 128 | 20.66 | 1.87 | 20 | |
| Toluene | 20.940 | 2.0 | 20.00 | 0 | 105 | 77 | 122 | 21.24 | 1.42 | 20 | |
| trans-1,2-Dichloroethene | 19.520 | 1.0 | 20.00 | 0 | 97.6 | 63 | 137 | 19.49 | 0.154 | 20 | |
| trans-1,3-Dichloropropene | 20.930 | 1.0 | 20.00 | 0 | 105 | 59 | 135 | 20.98 | 0.239 | 20 | |
| Trichloroethene | 20.780 | 1.0 | 20.00 | 0 | 104 | 70 | 127 | 20.65 | 0.628 | 20 | |
| Trichlorofluoromethane | 16.840 | 1.0 | 20.00 | 0 | 84.2 | 57 | 129 | 16.26 | 3.50 | 20 | |
| Vinyl chloride | 19.030 | 0.50 | 20.00 | 0 | 95.2 | 50 | 134 | 19.07 | 0.210 | 20 | |
| Xylenes, Total | 66.200 | 2.0 | 60.00 | 0 | 110 | 75 | 125 | 65.39 | 1.23 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 23.620 | | 25.00 | | 94.5 | 72 | 119 | | 0 | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
Calculations are based on raw values

**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160205LCSD** SampType: **LCSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105708**
Client ID: **LCSS02** Batch ID: **P16VW027** TestNo: **EPA 8260B** Analysis Date: **2/5/2016** SeqNo: **2221684**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 4-Bromofluorobenzene | 26.600 | | 25.00 | | 106 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 22.810 | | 25.00 | | 91.2 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 25.630 | | 25.00 | | 103 | 81 | 120 | | 0 | | |

Sample ID: **P160205MB3** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105708**
Client ID: **PBW** Batch ID: **P16VW027** TestNo: **EPA 8260B** Analysis Date: **2/5/2016** SeqNo: **2221685**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 0.50 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | | |
| 1,2-Dibromoethane | ND | 1.0 | | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.50 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 2,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |
| S | Spike/Surrogate outside of limits due to matrix interference | DO | Surrogate Diluted Out | | Calculations are based on raw values |

**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160205MB3** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105708**
Client ID: **PBW** Batch ID: **P16VW027** TestNo: **EPA 8260B** Analysis Date: **2/5/2016** SeqNo: **2221685**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | | |
| Benzene | ND | 1.0 | | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | | |
| Bromochloromethane | ND | 1.0 | | | | | | | | | |
| Bromodichloromethane | ND | 1.0 | | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | | |
| Bromomethane | ND | 1.0 | | | | | | | | | |
| Carbon disulfide | ND | 1.0 | | | | | | | | | |
| Carbon tetrachloride | ND | 0.50 | | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | | |
| Chloroethane | ND | 1.0 | | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | | |
| Chloromethane | ND | 1.0 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | | |
| Di-isopropyl ether | ND | 1.0 | | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | | |
| Ethyl tert-butyl ether | ND | 1.0 | | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | | |
| Freon-113 | ND | 1.0 | | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | | |
| m,p-Xylene | 0.030 | 1.0 | | | | | | | | | J |
| Methylene chloride | 0.390 | 2.0 | | | | | | | | | J |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |
| S | Spike/Surrogate outside of limits due to matrix interference | DO | Surrogate Diluted Out | | Calculations are based on raw values |

**CLIENT:** CH2MHill
**Work Order:** N018641
**Project:** SFPP - Norwalk Site

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_SFPP**

Sample ID: **P160205MB3** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **105708**
Client ID: **PBW** Batch ID: **P16VW027** TestNo: **EPA 8260B** Analysis Date: **2/5/2016** SeqNo: **2221685**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MTBE | ND | 1.0 | | | | | | | | | |
| n-Butylbenzene | 0.050 | 1.0 | | | | | | | | | J |
| n-Propylbenzene | ND | 1.0 | | | | | | | | | |
| Naphthalene | ND | 1.0 | | | | | | | | | |
| o-Xylene | ND | 1.0 | | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | | |
| Tert-amyl methyl ether | ND | 1.0 | | | | | | | | | |
| Tert-Butanol | ND | 5.0 | | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Tetrachloroethene | ND | 1.0 | | | | | | | | | |
| Toluene | ND | 2.0 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | | |
| Trichloroethene | ND | 1.0 | | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | | |
| Vinyl chloride | ND | 0.50 | | | | | | | | | |
| Xylenes, Total | ND | 2.0 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 24.370 | | 25.00 | | 97.5 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 25.370 | | 25.00 | | 101 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 23.940 | | 25.00 | | 95.8 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 25.660 | | 25.00 | | 103 | 81 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |
| S | Spike/Surrogate outside of limits due to matrix interference | DO | Surrogate Diluted Out | | Calculations are based on raw values |

Advanced Technology Laboratories
3151 W. Post Road
Las Vegas, NV 89118
Tel: 702-307-2659 Fax: 702-307-2691
Marlon Cartin (marlon@atl-labs.com)

# CHAIN OF CUSTODY RECORD

DATE: 2/2/16

PAGE: 1 OF 1

T: 0.9°C IR#2

LABORATORY CLIENT: Kinder Morgan Energy Partners, Attn: Steve Defibaugh
ADDRESS: 1100 Town & Country Road
CITY: Orange, CA 92868
TEL: 714-560-4802 FAX: 714-560-4601 E-MAIL: james_dye@kindermorgan.com

CLIENT PROJECT NAME / NUMBER: SFPP - Norwalk Site
PROJECT CONTACT: James Dye
SAMPLER(S): (SIGNATURE)
P.O. NO.:
QUOTE NO.:
LAB USE ONLY

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ■ 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY): ☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___/___/___

SPECIAL INSTRUCTIONS
Report to D. Jablonski/CH2M HILL, cc: KMEP
Direct Bill KMEP/SFPP - Steve Defibaugh-ref. AFE# 81195
"J" flags required/Use lowest possible detection limit - all methods.

REQUESTED ANALYSIS

| LAB USE ONLY | SAMPLE ID | LOCATION/ DESCRIPTION | SAMPLING DATE | SAMPLING TIME | MAT-RIX | NO. OF CONT. | TPH - g, TPH-d, and TPH-oil (8015M) | Full VOC+ Oxygenates List (8260B) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | INF-02-02 | Influent | 2/2/16 | 1400 | WW | 8 | X | X | 1018641-1 |
| | | | | | | | | | |
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| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 2-2-16 | Time: 16:30 |
| Relinquished by: (Signature) 2-2-16 15:05 | Received by: (Signature) | Date: 2/3/16 | Time: 8:25 am |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

Revised: 07/19/2012

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 2/3/2016 | Workorder: | N018641 |
| Rep sample Temp (Deg C): | 0.9 | IR Gun ID: | 2 |

Temp Blank: ☑ Yes ☐ No

Carrier name: Golden State Overnight

Last 4 digits of Tracking No.: 7954 Packing Material Used: Bubble Wrap

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☑ | No ☐ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | NA ☐ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☐ | No ☐ | NA ☑ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☐ | No ☐ | NA ☑ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments:

Checklist Completed By: MBC MBC 2/3/2016

Reviewed By: 02/05/16

# ASSET Laboratories

## WORK ORDER Summary

*03-Feb-16*

**WorkOrder:** N018641

**Client ID:** CH2HI03

**Project:** SFPP - Norwalk Site **QC Level:** RTNE **Date Received:** 2/3/2016

**Comments:** Report to D. Jablonski/CH2M HILL, cc:KMEP

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N018641-001A | INF-02-02 | 2/2/2016 2:00:00 PM | 2/10/2016 | Wastewater | EPA 8015B | GASOLINE RANGE ORGANICS BY GC/FID | ☐ | ☐ | ☐ | VW |
| | | | 2/10/2016 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | VW |
| N018641-001B | | | 2/10/2016 | | EPA 3510C | SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS | ☐ | ☐ | ☐ | WW |
| | | | 2/10/2016 | | EPA 8015B | TPH EXTRACTABLE BY GC/FID | ☐ | ☐ | ☐ | WW |
| | | | 2/10/2016 | | EPA 8015B | Total TPH | ☐ | ☐ | ☐ | WW |
| N018641-002A | FOLDER | | 2/10/2016 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

GSO
GOLDEN STATE OVERNIGHT

800-322-5555 www.gso.com

**Ship From**
ASSET LABORATORIES
MOLKY BRAR
11060 ARTESIA BLVD., STE. C
CERRITOS, CA 90703

**Ship To**
**ATL INC**
**MARLON CARTIN**
**3151 W. POST RD.,**
**LAS VEGAS, NV 89118**

**COD:** $0.00
**Weight:** 0 lb(s)
**Reference:**

**Delivery Instructions:**
HOLD FOR PICK UP
**Signature Type:** REQUIRED

**Tracking #: 530787954** **CPS**

**LVS** **A**
**LAS VEGAS**

**C89102A**

47809109

Print Date: 2/2/2016 5:32 PM

Package 1 of 2

**LABEL INSTRUCTIONS:**

**Do not copy or reprint this label for additional shipments - each package must have a unique barcode.**

Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer. Securely attach this label to your package, do not cover the barcode.

0.9°C
JR# 2