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*Report*

# Second Quarter 2015 Remediation Progress Report SFPP Norwalk Pump Station Norwalk, California

Prepared for  
**Kinder Morgan Energy Partners, L.P.**

1100 Town and Country Road  
Orange, California 92868

July 15, 2015

**CH2MHILL®**

1000 Wilshire Boulevard  
21st Floor  
Los Angeles, California 90017

# Signature Page

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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 HILL licensed professional.



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William Breedlove  
CH2M HILL California Professional Chemical Engineer, No. 5142

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July 15, 2015

Date

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# Acronyms and Abbreviations

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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
EPA	U.S. Environmental Protection Agency
FBBR	fluidized bed bioreactor
GWE	groundwater extraction
GWTS	groundwater treatment system
KMEP	Kinder Morgan Energy Partners, L.P.
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
ppmv	parts per million by volume
RBCA	Risk-Based Corrective Action
RWQCB	California Regional Water Quality Control Board, Los Angeles Region
SCAQMD	South Coast Air Quality Management District
SFPP	SFPP, L.P.
SVE	soil vapor extraction
TBA	tertiary butyl alcohol
TFE	total fluids extraction
TPH	total petroleum hydrocarbons
TPH-g	total petroleum hydrocarbons quantified as gasoline
TPH-d	total petroleum hydrocarbons quantified as diesel
TPH-o	total petroleum hydrocarbons quantified as oil
TPH-total	total petroleum hydrocarbons quantified as gasoline, diesel, and oil
VGAC	vapor-phase granular activated carbon
VOC	volatile organic compound
WSB	West Side Barrier

## SECTION 1

# Introduction

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CH2M HILL has prepared this report on behalf of SFPP, L.P. (SFPP), an operating partnership of Kinder Morgan Energy Partners, L.P. (KMEP), 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 second quarter 2015 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 *Conceptual Site Model and Proposed Alternate Interim Remedy for Soil, Groundwater, and LNAPL* (CH2M HILL, 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 April through June 2015 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 April through June 2015 and the progress achieved through those activities are summarized in the following sections.

## SECTION 2

# Remediation Systems

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SFPP currently operates remediation systems consisting of soil vapor extraction (SVE), total fluids extraction (TFE) of free product and/or groundwater using a top-loading pump, 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.

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 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 handles 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, if any, 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 (FBBRs) 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).

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 second quarter 2015. The remediation system layout is presented in Figure 2.

## SECTION 3

# Operations and Maintenance

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During the second quarter 2015 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, and the SVE and groundwater treatment systems (collectively referred to as remediation systems).
- Removed, inspected, and made repairs to the TFE pumps and associated discharge lines.
- Performed cleanout of the OWS, sump, equalization tank, and transfer tank.
- Replaced the broken sump pump with a new sump pump.
- Performed carbon changeout of the LGAC vessels.
- Performed carbon changeout of the vapor-phase granular activated carbon (VGAC) vessels used to treat off-gas from the product tank and OWS.

The remediation systems operated during the second quarter 2015 with the following exceptions:

- The SVE and the GWTS systems were turned off on April 13, 2015, in preparation for the first semiannual groundwater monitoring event. The systems were restarted on April 22, 2015, once the groundwater gauging was completed.
- The GWTS system was turned off on May 1, 2015, for a carbon changeout of PV-2 for the lead LGAC system. The system was restarted on the same day.
- The GWTS system was turned off on May 7, 2015, to clean out the OWS, sump, equalization tank, and transfer tank. The system was restarted on the same day.
- The GWTS system was turned off on May 1, 2015, due to a broken sump pump. The pump was replaced and the system was restarted on the same day.
- The GWTS system was turned off between May 14 and May 15, 2015, due to faulty transfer tank level switches. The switches were repaired and the system was restarted on May 15, 2015.
- The GWTS system was turned off on May 22, 2015, to vacuum and haul off the product accumulated in the product tank. The system was restarted on the same day.
- The SVE system was turned off on May 22, 2015, for repair of the knock-out pot demister. The SVE was restarted on June 30, 2015, after the knock-out pot demister was replaced.

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 second quarter 2015, the SVE system was operational 52 percent of the time and the GWTS operated 94 percent of the time. Table 2 presents the SVE system operations summary. Extracted vapor photoionization detector (PID) measurements at the end of the second quarter 2015 are summarized in Table 3. Extracted vapor analytical results for the second quarter 2015 are summarized in Table 4. The groundwater remediation system operation activities for the second quarter 2015 are summarized in Table 5. The extracted groundwater analytical results for the second quarter 2015 are summarized in Table 6. Historical (post-2007) gauging results of select TFE and SVE wells are provided in Table 7. 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 second quarter 2015 when the systems were in operation. During the second quarter 2015, influent vapor samples were collected on April 7, May 5, and June 30, 2015. Influent water samples were collected on April 7, May 19, and June 2, 2015, 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
- Total gaseous non-methane organic compounds using SCAQMD Method 25.1
- VOCs using U.S. Environmental Protection Agency (EPA) Method TO-15

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.

The effluent water sampling results were in compliance with the NPDES permit for the second quarter 2015 and will be provided under separate cover in the NPDES effluent monitoring report.



## SECTION 4

# Summary of Remediation Progress

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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 21,547 pounds during the second quarter 2015, for a cumulative mass removal of 3,222,220 pounds since SVE implementation in September 1995 (Table 2). The cumulative mass removed by SVE does not include the mass removed by naturally occurring *in situ* biodegradation.

A total of 1,001,354 gallons of groundwater was extracted during the second quarter 2015 (Table 5). No water was extracted from the WSB area during the second quarter 2015. Approximately 94.3 million gallons of groundwater has been extracted from the south-central, southeastern, and WSB areas since GWTS operations first began in 1996.

Groundwater extraction 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. Detected concentrations of MTBE and 1,2-DCA in wells west of the site have been below the site-specific Risk-Based Corrective Action (RBCA) goals (Geomatrix Consultants, Inc., 1999) since August 2005. The lower (more conservative) RBCA goals for MTBE and 1,2-DCA are 40 micrograms per liter ( $\mu\text{g/L}$ ) and 70  $\mu\text{g/L}$ , respectively. 1,2-DCA, MTBE, and TBA concentrations in the western area continue to be monitored; other wells in the WSB system will be restarted if necessary.

The amount of free product that accumulated in the product holding tank of the GWTS was estimated to be 813 gallons during the second quarter 2015. A total of 107 gallons of product were manually bailed from a select group of wells that do not have TFE pumps (GMW-30, GMW-O-12, MW-O-2, MW-SF-1, MW-SF-4, and MW-SF-9), during the second quarter 2015. Since 1995, a total of 12,306 gallons of product has been removed by TFE, vacuum truck, or manual bailing operations. Beginning in March 2015, some online TFE wells were gauged and pump inlets were reset to maximize product removal. These activities will continue into the third quarter 2015 until all pumps are reset.

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 xylenes (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 TPH-g and TPH quantified as fuel product (TPH-fp) concentrations, and total volume of extracted groundwater. Mass removal estimates between 2012 and 2015 are based on groundwater influent TPH-total (TPH-g, TPH-d, and TPH-o) concentrations and total volume of extracted groundwater. Since GWE first began in 1996, hydrocarbon mass removed by the GWTS is estimated to be 11,993 pounds. During the second quarter 2015, the mass removal of hydrocarbons was estimated to be 1,731 pounds, which is approximately 400 pounds more than the first quarter 2015 totals, and significantly more than previous quarters. The increase in mass removal during the first and second quarters is attributed to the higher TPH-total concentrations in the groundwater influent. The maximum TPH-total concentrations in the first and second quarters of 2015 were 560,000 and 200,000  $\mu\text{g/L}$ , respectively (Table 6). The higher concentrations of TPH-total are attributed to the free product that is emulsified in the groundwater influent during TFE operations. As discussed in Section 5, the measurable free product thickness in some TFE wells has increased recently because of continued declining water levels across the site due to drought conditions.

## System Evaluation and Optimization

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Vapor-phase VOC concentrations are measured in individual wells using a PID (calibrated as 100 parts per million by volume [ppmv] hexane) to optimize operation of the SVE treatment system. The first quarter 2015 PID readings from March 31, 2015, are shown in Table 3. PID readings were not collected in the second quarter 2015 partly due to SVE system downtime. Individual well readings will be recorded on a monthly basis during the third quarter 2015 to continue optimization of the SVE treatment system. The operational status of the SVE wells at the end of the second quarter 2015 is shown in Table 1. PID readings recorded on March 31, 2015, indicated VOC concentrations were close to, or higher than, 100 ppmv in the majority of the SVE wells; therefore, the SVE system will be operated until influent VOC concentrations reach low asymptotic levels.

The first semiannual 2015 groundwater monitoring event in the WSB region occurred during the second 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. The WSB system will be restarted if necessary. The second semiannual 2015 groundwater monitoring event is scheduled for the fourth quarter 2015.

As shown in Table 7, measurable free product was observed in 24 remediation wells during the first semiannual 2015 groundwater monitoring event (second quarter 2015). The product thicknesses for these wells ranged from 0.12 foot in MW-SF-6 to 9.02 feet in MW-SF-9. It is believed that increased product thicknesses observed during the second quarter 2015 are indicative of declining water levels across the site (Figure 3). The current low water levels have allowed residual product to drain from pore spaces within the smear zone and collect in certain wells, or increase in thickness in wells with measureable product already present. The water table elevation is related to annual rainfall and the cumulative rainfall over time. As shown in Figure 3, since the 2005/2006 El Niño, groundwater elevations in the uppermost aquifer have declined approximately 5 feet to the current low water levels across the site. Continued TFE extraction will remove the product that has accumulated due to these low water levels.

The TFE system currently consists of 14 wells operated for product recovery and hydraulic control in the south-central part of the site, and 4 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 product recovery.

## SECTION 6

# Planned Third Quarter 2015 Activities

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During the third quarter 2015, SFPP plans to continue to focus remedial efforts on the south-central and southeastern areas. The following maintenance activities are planned to be completed during the third quarter 2015:

- Continue weekly maintenance and monitoring of the south-central and southeastern SVE and TFE/GWE treatment systems.
- 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.
- Continue planning and design of a new OWS installation to allow more efficient removal of free product from the influent stream.
- Continue installation of biosparge ancillary equipment including electrical. The new Southern California Edison (SCE) power drop in the south-central area was installed during the second quarter 2015.
- Conduct 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 HILL, 2013b).

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 third quarter 2015 will be described in the Third Quarter 2015 Remediation Progress Report, to be submitted by October 15, 2015.

Field activities are currently underway to install the horizontal biosparge system as described in the pilot test work plan (CH2M HILL, 2013b) and the response to RWQCB comments on the work plan (CH2M HILL, 2014). The RWQCB approved the pilot test work plan in a letter dated February 26, 2014 (RWQCB, 2014). The purpose of the biosparge system is to enhance mass removal of free-phase and dissolved-phase hydrocarbon constituents beneath the south-central area of the site. Pilot testing of the system is planned to be conducted for a period of approximately 1 year in order to evaluate the feasibility of system expansion. The horizontal biosparge well was installed in August 2014; the installation of the aboveground portion of the system (air compressor, piping, and electrical) is planned to be completed in the early part of the third quarter 2015. Monthly progress reports on the pilot testing activities will be submitted to RWQCB once testing begins and until completion of the pilot test, as requested in RWQCB's letter (RWQCB, 2014).

## SECTION 7

# References

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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.

California Regional Water Quality Control Board, Los Angeles Region (RWQCB). 2014. Letter to Mr. Stephen Defibaugh, Kinder Morgan Energy Partners; Approval of Horizontal Biosparge Pilot Test Work Plan, Defense Fuel Support Point Norwalk, 15306 Norwalk Boulevard, Norwalk, California. February 26.

CH2M HILL. 2013a. *Conceptual Site Model and Proposed Alternate Interim Remedy for Soil, Groundwater, and LNAPL*. September 3.

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

CH2M HILL. 2014. *Response to Comments – Horizontal Biosparge System Construction and Pilot Test Work Plan, SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California*. November 18.

Geomatrix Consultants, Inc. 1999. *Risk-Based Corrective Action, Western 1,2-DCA and MTBE Plumes*. February.

## Tables

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**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 Second Quarter 2015	
						SVE	TFE/GWE
South-Central	MW-SF-1	6/18/1990	78.93	25 - 40	SVE	ON	OFF
	MW-SF-2	6/18/1990	78.53	25 - 40	SVE; TFE	ON	ON
	MW-SF-3	6/18/1990	78.12	25 - 40	SVE; TFE	ON	ON
	MW-SF-4	6/19/1990	79.38	25 - 40	SVE	ON	OFF
	MW-SF-5	9/19/1990	79.74	23 - 38	SVE	ON	OFF
	MW-SF-6	9/19/1990	76.80	25 - 40	SVE; TFE	ON	ON
	MW-SF-9	6/15/1995	74.10	--	SVE	ON	OFF
	MW-SF-10	9/23/2003	76.53	10 - 30	SVE	ON	OFF
	MW-SF-11	6/19/2007	78.56	20 - 40	SVE; TFE	ON	ON
	MW-SF-12	6/18/2007	78.07	20 - 40	SVE; TFE	ON	ON
	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	ON
	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	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	ON
	GMW-25	1/10/1992	78.14	20 - 50	SVE; TFE	ON	ON
	GWR-3	1/10/1992	77.60	20 - 50	SVE; TFE	ON	OFF
	VEW-1	09/19/90	--	5 - 25	SVE	ON	OFF
	VEW-2	09/19/90	--	5 - 25	SVE	ON	OFF
	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	ON
	GMW-O-12	5/21/1992	73.49	20 - 50	SVE	ON	OFF
	GMW-O-20	6/15/1995	73.32	--	SVE; TFE	ON	ON
	GMW-O-21	10/1/1997	71.43	26 - 46	TFE	--	ON
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	OFF	
HW-1	09/06/92	--	--	SVE	--	OFF	
HW-2	09/06/92	--	--	SVE	ON	OFF	
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	--	ON
	GMW-SF-10	4/2/2003	75.77	37 - 46	TFE	--	OFF
West Side Barrier	BW-2	5/20/1996	73.57	27 - 47	GWE	NA	OFF
	BW-3	5/17/1996	74.16	31 - 50	GWE	NA	OFF
	BW-4	5/20/1996	74.61	28 - 47	GWE	NA	OFF
	BW-5	5/23/1996	73.59	27 - 46	GWE	NA	OFF
	BW-6	5/22/1996	73.48	28 - 47	GWE	NA	OFF
	BW-7	5/22/1996	74.65	27 - 46	GWE	NA	OFF
	BW-8	5/21/1996	75.08	27 - 46	GWE	NA	OFF
BW-9	5/21/1996	76.19	27 - 46	GWE	NA	OFF	

Notes:

NA = not applicable

-- = information not available

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

feet bgs = feet below ground surface

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 (inches H <sub>2</sub> O)	Mass Removed (pounds) <sup>1</sup>
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 <sup>3</sup>	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
3/27/15	94,119	36	1,890	1,803	40	1,644
3/30/15	94,123	4	--	1,800	38	169
3/31/15	94,144	22	2,464	1,861	40	1,105
<b>First Quarter 2015 Totals</b>	94,144	--	--	--	--	2,918
4/7/15	94,315	170	1,776	1,817	40	5,748
4/10/15	94,384	70	--	--	40	2,937
4/13/15	94,457	73	1,819	1,768	40	2,449
4/17/15	94,457	0	--	--	--	0
4/22/15	94,457	0	--	--	--	0
4/24/15	94,504	47	2,275	2,112	30	1,970
4/28/15	94,600	97	168	1,762	30	331
5/1/15	94,671	71	--	1,664	25	242
5/5/15	94,744	74	427	1,916	30	641
5/7/15	94,791	47	--	1,725	30	407
5/12/15	94,910	119	528	1,652	30	1,283
5/15/15	94,984	74	--	1,649	40	796
5/19/15	95,077	93	620	1,623	40	1,106
5/22/15	95,147	70	--	1,630	40	0
5/26/15	95,147	0	--	--	--	0
5/29/15	95,147	0	--	--	--	0
6/2/15	95,147	0	--	--	--	0
6/5/15	95,147	0	--	--	--	0
6/9/15	95,147	0	--	--	--	0
6/12/15	95,147	0	--	--	--	0
6/15/15	95,147	0	--	--	--	0
6/16/15	95,147	0	--	--	--	0
6/23/15	95,153	5	1,188	1,338	35	118
6/30/15	95,286	133	2,066	1,832	30	3,517
<b>Second Quarter 2015 Totals</b>	95,286	--	--	--	--	21,547
<b>Cumulative Totals</b>	<b>95,286</b>	--	--	--	--	<b>3,222,220</b>

**Notes**

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

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

ppmv = parts per million by volume

PID = photoionization detector

FID = flame ionization detector

scfm = standard cubic feet per minute

inches H<sub>2</sub>O = inches of water

-- = not applicable or not available

**TABLE 3**

Remediation Well Vapor Concentrations  
 SFPP Norwalk Pump Station, Norwalk, California

Remediation Area	Remediation Well ID	Remediation Well Function	3/31/2015 (ppmv as Hexane) <sup>1</sup>
South-Central	MW-SF-1	SVE	1,062
	MW-SF-2	SVE; TFE	104
	MW-SF-3	SVE; TFE	1,448
	MW-SF-4	SVE	410
	MW-SF-5	SVE	96
	MW-SF-6	SVE; TFE	2,640
	MW-SF-9	SVE	532
	MW-SF-10	SVE	134
	MW-SF-11	SVE; TFE	210
	MW-SF-12	SVE; TFE	3,254
	MW-SF-13	SVE; TFE	634
	MW-SF-14	SVE; TFE	876
	MW-SF-15	SVE; TFE	1,124
	MW-SF-16	SVE; TFE	314
	GMW-9	SVE; TFE	1,940
	GMW-10	SVE	1,344
	GMW-22	SVE; TFE	1,940
	GMW-24	SVE; TFE	630
	GMW-25	SVE; GWE	630
	GWR-3	SVE; GWE	3,670
	VEW-1	SVE	Water in Line
	VEW-2	SVE	574
	MW-O-1	SVE; TFE	Water in Line
	MW-O-2	SVE; TFE	1,314
	GMW-O-11	SVE; TFE	2,800
	GMW-O-12	SVE	>5,000
GMW-O-20	SVE; TFE	>5,000	
GMW-O-23	SVE; TFE	>5,000	
MW-18 (MID)	SVE	650	
HW-1	SVE	1,330	
HW-2	SVE	>5,000	
Southeastern	GMW-36	SVE; TFE	1,310
	GMW-O-15	SVE; TFE	1,310
	GMW-O-18	SVE; TFE	1,310

Notes

1. Vapor readings measured in the field with an Eagle 2 photoionization detector (PID) calibrated using 100 ppmv of hexane.

SVE = soil vapor extraction  
 TFE = total fluids extraction  
 GWE = groundwater extraction  
 ppmv = parts per million by volume



**TABLE 4**

Extracted Vapor Analytical Results<sup>1</sup>  
 SFPP Norwalk Pump Station, Norwalk, California

Date Sampled	ASTM D-1946			EPA TO-3	SCAQMD 25.1	EPA TO-15 (VOCs) <sup>2</sup>				
	Methane (%v)	Carbon Dioxide (%v)	Oxygen and Argon (%v)	TPH-g (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 <sup>3</sup>	<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<sup>1</sup>  
 SFPP Norwalk Pump Station, Norwalk, California

Date Sampled	ASTM D-1946			EPA TO-3	SCAQMD 25.1	EPA TO-15 (VOCs) <sup>2</sup>				
	Methane (%v)	Carbon Dioxide (%v)	Oxygen and Argon (%v)	TPH-g (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

Notes

- Influent vapor samples were collected from the manifold conveying soil vapors extracted from the south-central and southeastern areas.
- Other detected VOCs are included in the laboratory analytical reports in Appendix A.

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

EPA = U.S. Environmental Protection Agency

VOC = volatile organic compound

%v = percent by volume

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

ppmv = parts per million by volume

ppbv = parts per billion by volume

MTBE = methyl tertiary butyl ether

TGNMOC = total gaseous non-methane organic carbon

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

**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) <sup>1</sup>	Product Recovery (gallons)
1996 Totals	1,802,103	0	1,802,103	--		4,995
1997 Totals	7,031,533	0	7,031,533	--	273	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 <sup>2</sup>	4,283,026	405,954	4,688,980	--	520	0
2009 Totals	2,309,627	0	2,309,627	--	105	0
2010 Totals <sup>3</sup>	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
<b>First Quarter 2015 Totals</b>	<b>936,119</b>	<b>0</b>	<b>936,119</b>	<b>--</b>	<b>1,321</b>	<b>66</b>
4/1/2015	4,957	0	4,957	560,000	23.13	
4/2/2015	12,261	0	12,261	560,000	57.20	
4/3/2015	11,958	0	11,958	560,000	55.79	
4/4/2015	11,934	0	11,934	560,000	55.68	
4/5/2015	12,161	0	12,161	560,000	56.74	
4/6/2015	12,183	0	12,183	560,000	56.84	
4/7/2015	11,621	0	11,621	200,000	19.36	
4/8/2015	12,053	0	12,053	200,000	20.08	
4/9/2015	15,447	0	15,447	200,000	25.74	
4/10/2015	14,531	0	14,531	200,000	24.21	
4/11/2015	15,151	0	15,151	200,000	25.24	
4/12/2015	15,870	0	15,870	200,000	26.44	
4/13/2015	15,240	0	15,240	200,000	25.39	
4/14/2015	9,612	0	9,612	200,000	16.02	
4/15/2015	0	0	0	200,000	0.00	
4/16/2015	0	0	0	200,000	0.00	
4/17/2015	4	0	4	200,000	0.01	
4/18/2015	2	0	2	200,000	0.00	
4/19/2015	6	0	6	200,000	0.01	
4/20/2015	5	0	5	200,000	0.01	
4/21/2015	15	0	15	200,000	0.02	
4/22/2015	43	0	43	200,000	0.07	
4/23/2015	6,605	0	6,605	200,000	11.01	
4/24/2015	14,670	0	14,670	200,000	24.44	454
4/25/2015	13,734	0	13,734	200,000	22.88	
4/26/2015	12,820	0	12,820	200,000	21.36	
4/27/2015	12,774	0	12,774	200,000	21.28	
4/28/2015	12,721	0	12,721	200,000	21.20	
4/29/2015	12,721	0	12,721	200,000	21.20	
4/30/2015	12,721	0	12,721	200,000	21.20	
5/1/2015	15,855	0	15,855	200,000	26.42	
5/2/2015	12,762	0	12,762	200,000	21.26	
5/3/2015	12,629	0	12,629	200,000	21.04	
5/4/2015	12,693	0	12,693	200,000	21.15	
5/5/2015	12,475	0	12,475	200,000	20.79	
5/6/2015	12,934	0	12,934	200,000	21.55	
5/7/2015	15,213	0	15,213	200,000	25.35	
5/8/2015	14,666	0	14,666	200,000	24.44	
5/9/2015	14,387	0	14,387	200,000	23.97	
5/10/2015	14,583	0	14,583	200,000	24.30	
5/11/2015	14,565	0	14,565	200,000	24.27	
5/12/2015	15,012	0	15,012	200,000	25.01	
5/13/2015	6,923	0	6,923	200,000	11.54	
5/14/2015	5,915	0	5,915	200,000	9.86	
5/15/2015	0	0	0	200,000	0.00	
5/16/2015	6,020	0	6,020	200,000	10.03	
5/17/2015	11,405	0	11,405	200,000	19.00	
5/18/2015	9,554	0	9,554	200,000	15.92	
5/19/2015	6,290	0	6,290	165,400	8.67	20
5/20/2015	9,715	0	9,715	165,400	13.39	

**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) <sup>1</sup>	Product Recovery (gallons)
5/21/2015	11,156	0	11,156	165,400	15.37	18
5/22/2015	10,751	0	10,751	165,400	14.81	359
5/23/2015	9,773	0	9,773	165,400	13.47	
5/24/2015	8,601	0	8,601	165,400	11.85	
5/25/2015	8,503	0	8,503	165,400	11.72	
5/26/2015	8,335	0	8,335	165,400	11.49	
5/27/2015	8,017	0	8,017	165,400	11.05	
5/28/2015	7,814	0	7,814	165,400	10.77	
5/29/2015	7,864	0	7,864	165,400	10.84	16
5/30/2015	7,581	0	7,581	165,400	10.45	
5/31/2015	7,695	0	7,695	165,400	10.60	
6/1/2015	7,638	0	7,638	165,400	10.52	
6/2/2015	7,641	0	7,641	170,100	10.83	8
6/3/2015	7,967	0	7,967	170,100	11.29	
6/4/2015	7,854	0	7,854	170,100	11.13	14
6/5/2015	9,216	0	9,216	170,100	13.06	
6/6/2015	11,291	0	11,291	170,100	16.00	
6/7/2015	8,542	0	8,542	170,100	12.11	
6/8/2015	8,537	0	8,537	170,100	12.10	
6/9/2015	9,920	0	9,920	170,100	14.06	
6/10/2015	10,608	0	10,608	170,100	15.03	
6/11/2015	12,232	0	12,232	170,100	17.33	
6/12/2015	12,208	0	12,208	170,100	17.30	12
6/13/2015	11,952	0	11,952	170,100	16.94	
6/14/2015	12,036	0	12,036	170,100	17.06	
6/15/2015	11,935	0	11,935	170,100	16.91	
6/16/2015	11,747	0	11,747	170,100	16.65	
6/17/2015	10,637	0	10,637	170,100	15.07	
6/18/2015	16,194	0	16,194	170,100	22.95	
6/19/2015	16,581	0	16,581	170,100	23.50	10
6/20/2015	16,496	0	16,496	170,100	23.38	
6/21/2015	16,352	0	16,352	170,100	23.17	
6/22/2015	16,156	0	16,156	170,100	22.90	
6/23/2015	16,129	0	16,129	170,100	22.86	
6/24/2015	18,827	0	18,827	170,100	26.68	
6/25/2015	21,621	0	21,621	170,100	30.64	
6/26/2015	23,039	0	23,039	170,100	32.65	11
6/27/2015	27,841	0	27,841	170,100	39.45	
6/28/2015	10,696	0	10,696	170,100	15.16	
6/29/2015	27,653	0	27,653	170,100	39.19	
6/30/2015	8,302	0	8,302	170,100	11.76	
<b>Second Quarter 2015 Totals</b>	<b>1,001,354</b>	<b>0</b>	<b>1,001,354</b>	<b>--</b>	<b>1,731</b>	<b>920</b>
<b>Cumulative Total</b>	<b>67,399,988</b>	<b>26,902,604</b>	<b>94,302,592</b>	<b>--</b>	<b>11,993</b>	<b>12,306</b>

Notes

- 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.
- Groundwater removal in the West Side Barrier area was discontinued in August 2008.
- 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.

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

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

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

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

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

µg/L = micrograms per liter

-- = not applicable

**TABLE 6**

Extracted Groundwater Analytical Results<sup>1</sup>  
 SFPP Norwalk Pump Station, Norwalk, California

Date Sampled	EPA 8015M					EPA 8260B Volatile Organic Compounds (VOCs) <sup>2</sup>								
	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<sup>1</sup>  
 SFPP Norwalk Pump Station, Norwalk, California

Date Sampled	EPA 8015M					EPA 8260B Volatile Organic Compounds (VOCs) <sup>2</sup>								
	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<sup>1</sup>  
 SFPP Norwalk Pump Station, Norwalk, California

Date Sampled	EPA 8015M					EPA 8260B Volatile Organic Compounds (VOCs) <sup>2</sup>								
	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 <sup>3</sup>	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<sup>1</sup>  
 SFPP Norwalk Pump Station, Norwalk, California

Date Sampled	EPA 8015M					EPA 8260B Volatile Organic Compounds (VOCs) <sup>2</sup>								
	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	--	-- <sup>4</sup>	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<sup>1</sup>  
 SFPP Norwalk Pump Station, Norwalk, California

Date Sampled	EPA 8015M					EPA 8260B Volatile Organic Compounds (VOCs) <sup>2</sup>								
	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

Notes

- Influent samples were collected from the manifold conveying groundwater extracted from the south-central and southeastern areas
- Other detected VOCs are included in the laboratory analytical reports in Appendix A.
- TPH-fp result from influent extracted groundwater sample collected on July 10, 2008.
- July 27, 2011, sample and samples after July 20, 2012, were analyzed for TPH-g, TPH-d, and TPH-o.

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

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

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

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

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

MTBE = methyl tertiary butyl ether

µg/L = micrograms per liter

-- = not analyzed

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

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

TBA = tertiary butyl alcohol

DIPE = di-isopropyl ether

ETBE = ethyl tertiary butyl ether

TAME = tertiary amyl methyl ether

**TABLE 7**

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	37.7	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	33.2	---	---	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	5.3	43.51	Blaine Tech
	8/1/2014	77.16	36.72	32.3	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	3.9	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	3.9	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	36.4	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	39.4	33.13	6.27	42.65	KMEP	
4/20/2015	77.16	36.98	32.99	3.99	43.29	Blaine Tech	

**TABLE 7**

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-10	04/30/2007	74.67	---	25.9	---	---	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	27.2	---	---	47.47	Blaine Tech
	5/24/2010	74.67	26.72	---	---	47.95	Blaine Tech
	5/28/2010	74.67	26.7	---	---	47.97	Blaine Tech
	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	6.9	---	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	29.8	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	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	

**TABLE 7**

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-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	32.3	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	37.9	32.7	5.2	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	36.7	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
	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	36.8	34.71	2.09	42.14	Blaine Tech	
4/20/2015	73.35	34.99	28.42	6.57	43.71	Blaine Tech	

**TABLE 7**

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-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	32.9	5.05	43.57	Nieto & Sons
	6/4/2014	77.48	37	32.7	4.3	43.92	Nieto & Sons
	6/10/2014	77.48	37.85	32.98	4.87	43.53	Nieto & Sons
	7/3/2014	77.48	39.6	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	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	32.6	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
10/14/2014	77.48	36.92	32.88	4.04	43.79	Blaine Tech	
10/23/2014	77.48	37	32.9	4.1	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	KMEP	
4/20/2015	77.48	36.29	33.82	2.47	43.17	Blaine Tech	

**TABLE 7**

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-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	37.4	33	4.4	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	34.3	2.45	43.28	Nieto & Sons
	5/27/2014	78.14	34.64	34.44	0.2	43.65	Nieto & Sons
	6/4/2014	78.14	35	---	---	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	1.2	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	35.1	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	1.1	43.87	Blaine Tech	
11/18/2014	78.14	34.9	34.11	0.79	43.85	Blaine Tech	
11/25/2014	78.14	35.07	34.07	1	43.84	Blaine Tech	
12/3/2014	78.14	35.1	33.98	1.12	43.90	Blaine Tech	
12/12/2014	78.14	35.22	34.3	0.92	43.63	Blaine Tech	
12/19/2014	78.14	35.05	34.5	0.55	43.51	Blaine Tech	
4/20/2015	78.14	35.19	34.47	0.72	43.50	Blaine Tech	

**TABLE 7**

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-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	31.5	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	31.5	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	34.2	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	31.23	3.77	44.68	Blaine Tech	
9/18/2014	76.66	34.42	31.5	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	1.9	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	
11/18/2014	76.66	33.17	31.75	1.42	44.63	Blaine Tech	
11/25/2014	76.66	33.13	31.86	1.27	44.55	Blaine Tech	
12/3/2014	76.66	32.93	31.75	1.18	44.67	Blaine Tech	
4/20/2015	76.66	33.64	32.2	1.44	44.17	Blaine Tech	

**TABLE 7**

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-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	3.5	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	28.1	3.44	45.38	Blaine Tech	



**TABLE 7**

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-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	26.8	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
	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	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	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	26.98	6.02	45.28	Blaine Tech
	8/1/2014	73.49	31.8	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	4.3	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	31.3	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	31.2	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	31.3	26.85	4.45	45.73	Blaine Tech	
10/27/2014	73.49	31.28	26.9	4.38	45.69	Blaine Tech	
11/3/2014	73.49	32.3	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	26.9	5.44	45.47	Blaine Tech	
11/25/2014	73.49	31.57	27.87	3.7	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	6.5	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	6.4	44.60	Northstar	
6/26/2015	73.49	33.97	28.15	5.82	44.15	Northstar	

**TABLE 7**

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-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
	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	28.4	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	32.5	28.23	4.27	45.15	Blaine Tech	
9/26/2014	74.23	32.2	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	32.1	28.3	3.8	45.17	Blaine Tech	
10/27/2014	74.23	30.26	no product	0	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	

**TABLE 7**

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-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	24.5	---	---	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
	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	28.1	---	---	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	29.9	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	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	

**TABLE 7**

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-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	28.4	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	30.5	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	30.8	27.7	3.1	45.05	Blaine Tech
	10/27/2014	73.32	30.7	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	3.3	45.06	Blaine Tech	
12/3/2014	73.32	32.56	27.83	4.73	44.61	Blaine Tech	
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	
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	29.4	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	

**TABLE 7**

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-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
	9/23/2013	73.63	29.90	---	---	43.73	CH2M HILL
	10/7/2013	73.63	32.86	28.3	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	32.8	28.65	4.15	44.15	Blaine Tech
	9/26/2014	73.63	32.87	28.7	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	32.5	28.73	3.77	44.15	Blaine Tech
	10/14/2014	73.63	32.75	28.2	4.55	44.52	Blaine Tech
	10/23/2014	73.63	32.8	28.69	4.11	44.12	Blaine Tech
	10/27/2014	73.63	32.51	28.8	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	32.8	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	KMEP	
4/22/2015	73.63	33.08	30.36	2.72	42.73	Blaine Tech	

**TABLE 7**

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-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	
MW-SF-10	4/21/2009	75.77	27.1	---	---	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
	4/8/2013	75.77	Dry	---	---	---	Blaine Tech
	8/14/2014	75.77	31.50	---	---	44.27	Blaine Tech
	10/1/2014	75.77	28.83	28.53	0.3	47.18	Blaine Tech
	10/6/2014	75.77	28.53	28.49	0.04	47.27	Blaine Tech
	10/27/2014	75.77	Dry	---	---	---	Blaine Tech
4/20/2015	76.53	Dry	---	---	---	Blaine Tech	

**TABLE 7**

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
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	36.2	31.67	4.53	45.16	Blaine Tech
	4/14/2014	77.6	38.8	32.23	6.57	44.25	Blaine Tech
	5/5/2014	77.6	38.81	32.31	6.5	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	33.2	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	2.2	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	2.6	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	33.2	1.95	44.07	Blaine Tech
	10/23/2014	77.6	35.36	33.2	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	1.7	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	
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	35.4	---	---	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	

**TABLE 7**

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
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
	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	
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	1.6	42.24	Blaine Tech	



**TABLE 7**

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
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
	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	37.4	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	37.1	34.6	2.5	43.83	Nieto & Sons
	5/27/2014	78.93	36.62	34.3	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	36.6	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	35.3	34.62	0.68	44.17	Blaine Tech
	8/1/2014	78.93	34.74	34.44	0.3	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	34.8	34.43	0.37	44.43	Blaine Tech
	11/10/2014	78.93	34.91	34.51	0.4	44.34	Blaine Tech
	11/18/2014	78.93	34.8	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	0.4	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	3.9	43.60	Northstar
	5/29/2015	78.93	36.36	35.22	1.14	43.48	Northstar
	6/5/2015	78.93	36.5	35.43	1.07	43.29	Northstar
	6/12/2015	78.93	35.8	35.41	0.39	43.44	Northstar
	6/19/2015	78.93	36.02	35.42	0.6	43.39	Northstar
	6/26/2015	78.93	36.6	36.45	0.15	42.45	Northstar

**TABLE 7**

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
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	1.5	45.15	Blaine Tech
	4/14/2014	78.53	37.5	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	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	36.9	33.6	3.3	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	33.6	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	3.5	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	37.4	33.69	3.71	44.10	Blaine Tech	
12/3/2014	78.53	37.16	33.6	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	38.4	33.95	4.45	43.69	Blaine Tech	
4/20/2015	78.53	36.15	34.73	1.42	43.52	Blaine Tech	

**TABLE 7**

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
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	0.1	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	
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	
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	

**TABLE 7**

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	
MW-SF-4 (continued)	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	5.8	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	36.6	35.6	1	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	35.3	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	35.2	0.12	44.16	Blaine Tech	
	9/18/2014	79.38	35.55	35.3	0.25	44.03	Blaine Tech	
	9/26/2014	79.38	35.56	35.3	0.26	44.03	Blaine Tech	
	10/1/2014	79.38	35.56	35.24	0.32	44.07	Blaine Tech	
	10/6/2014	79.38	35.48	35.22	0.26	44.11	Blaine Tech	
	10/14/2014	79.38	35.33	35.2	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	37.1	35.8	1.3	43.31	Northstar	
	6/5/2015	79.38	36.85	36.15	0.7	43.09	Northstar	
6/12/2015	79.38	36.55	36.15	0.4	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		

**TABLE 7**

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
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	

**TABLE 7**

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
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
	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	31.9	---	---	44.90	Blaine Tech
	4/18/2014	76.8	33.3	32.15	1.15	44.42	Blaine Tech
	8/8/2014	76.8	34.5	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	0.3	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	32.6	0.31	44.14	Blaine Tech
	10/6/2014	76.8	32.9	32.61	0.29	44.13	Blaine Tech
	10/14/2014	76.8	33.72	33.6	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	33.6	33.15	0.45	43.56	Blaine Tech	
4/20/2015	76.8	33.23	33.11	0.12	43.67	Blaine Tech	

**TABLE 7**

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
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	6.8	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	0.8	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	36.4	28.6	7.8	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	1.3	44.01	Blaine Tech
	8/1/2014	74.1	30.25	29.85	0.4	44.18	Blaine Tech
	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	30.1	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	29.9	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	0.4	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	0.4	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	30.1	0.55	43.90	Blaine Tech
	12/19/2014	74.1	30.8	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	32.5	27.31	5.19	45.83	Blaine Tech
	5/29/2015	74.1	32.95	30.1	2.85	43.47	Blaine Tech
	6/2/2015	74.1	31.67	30.45	1.22	43.42	Blaine Tech
	6/5/2015	74.1	31.85	30.6	1.25	43.27	Blaine Tech
	6/12/2015	74.1	31.28	30.75	0.53	43.25	Blaine Tech
	6/19/2015	74.1	31.3	31	0.3	43.04	Blaine Tech
	6/26/2015	74.1	31.2	29.5	1.7	44.29	Blaine Tech

**TABLE 7**

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
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	28.5	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	27.6	---	---	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	
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
	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	35.2	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	35.4	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	44.10	Blaine Tech
	10/27/2014	78.56	36.2	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	KMEP	
4/20/2015	78.56	38.89	34.86	4.03	42.89	KMEP	



**TABLE 7**

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
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	37.8	32.9	4.9	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
	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	37.2	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	37.4	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	33.5	4.75	43.62	Blaine Tech
	3/17/2015	78.07	36.42	34.05	2.37	43.55	KMEP
	4/20/2015	78.07	36.42	34.05	2.37	43.55	Blaine Tech

**TABLE 7**

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
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	1.7	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	31.1	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	30.2	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	30.5	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
	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	30.1	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	29.4	1.65	43.59	Blaine Tech
	12/19/2014	73.4	31.11	29.4	1.71	43.57	Blaine Tech
	4/20/2015	73.4	32.44	29.04	3.4	43.51	Blaine Tech

**TABLE 7**

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
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	33.8	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	34.4	33.97	0.43	44.10	Blaine Tech	
11/18/2014	78.16	34.27	34.07	0.2	44.05	Blaine Tech	
4/20/2015	78.16	34.48	---	---	43.68	Blaine Tech	

**TABLE 7**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
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
	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	1.1	48.65	Blaine Tech
	10/10/2011	78.27	29.60	---	---	48.67	Blaine Tech
	12/2/2011	78.27	31.40	30.05	1.4	47.95	Blaine Tech
	4/16/2012	78.27	32.48	32.39	0.1	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	34.9	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

**TABLE 7**

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
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	33.8	33.21	0.59	44.88	Blaine Tech	
4/18/2014	78.21	34.2	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	

## Notes:

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

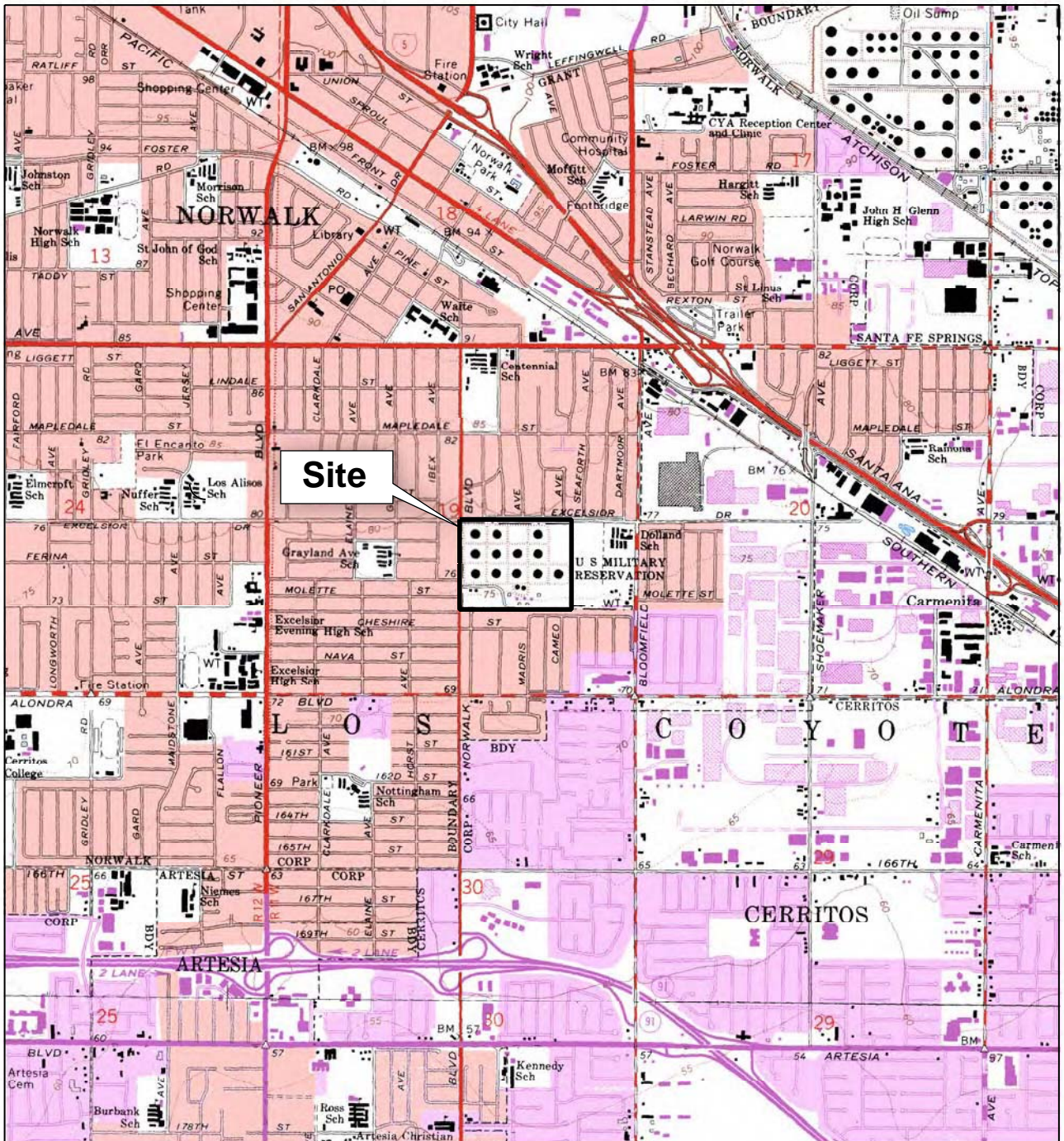
feet btoc = feet below top of casing

--- = not detected or not applicable

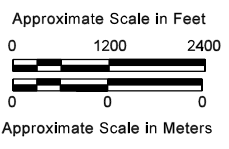
Corrected groundwater elevations are based on specific gravity data collected during baildown testing, or a default value of 0.8 was used for wells not tested.

## Figures

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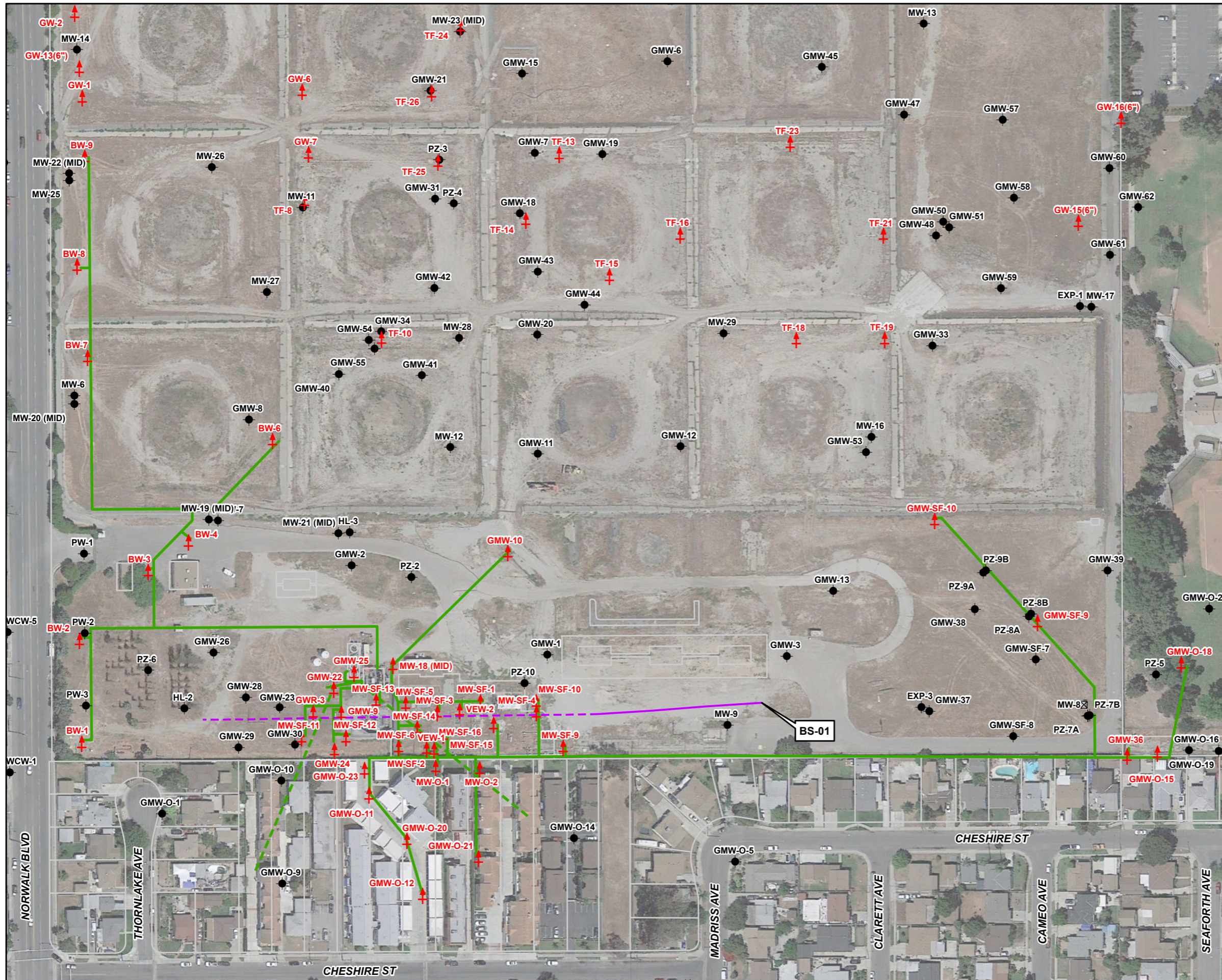


Site



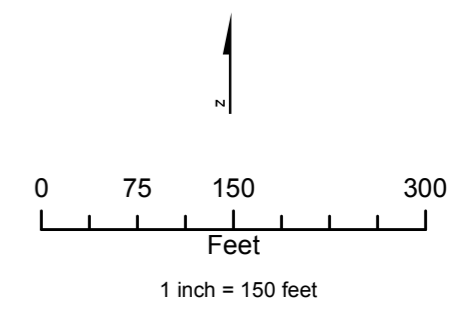
BASEMAP MODIFIED FROM U.S.G.S. 7.5 MINUTE QUADRANGLE MAP  
 LOS ALAMITOS 1964, CALIFORNIA, PHOTO-REVISED 1981.  
 WHITTIER 1965, CALIFORNIA, PHOTO-REVISED 1981.

<p><b>SITE LOCATION MAP</b></p> <p>SFPP Norwalk Pump Station          Norwalk, California</p>		
By: Andy Vollmar	Date: July 21, 2010	Project No: 407609
<p><b>CH2MHILL</b></p>		<p>Figure 1</p>



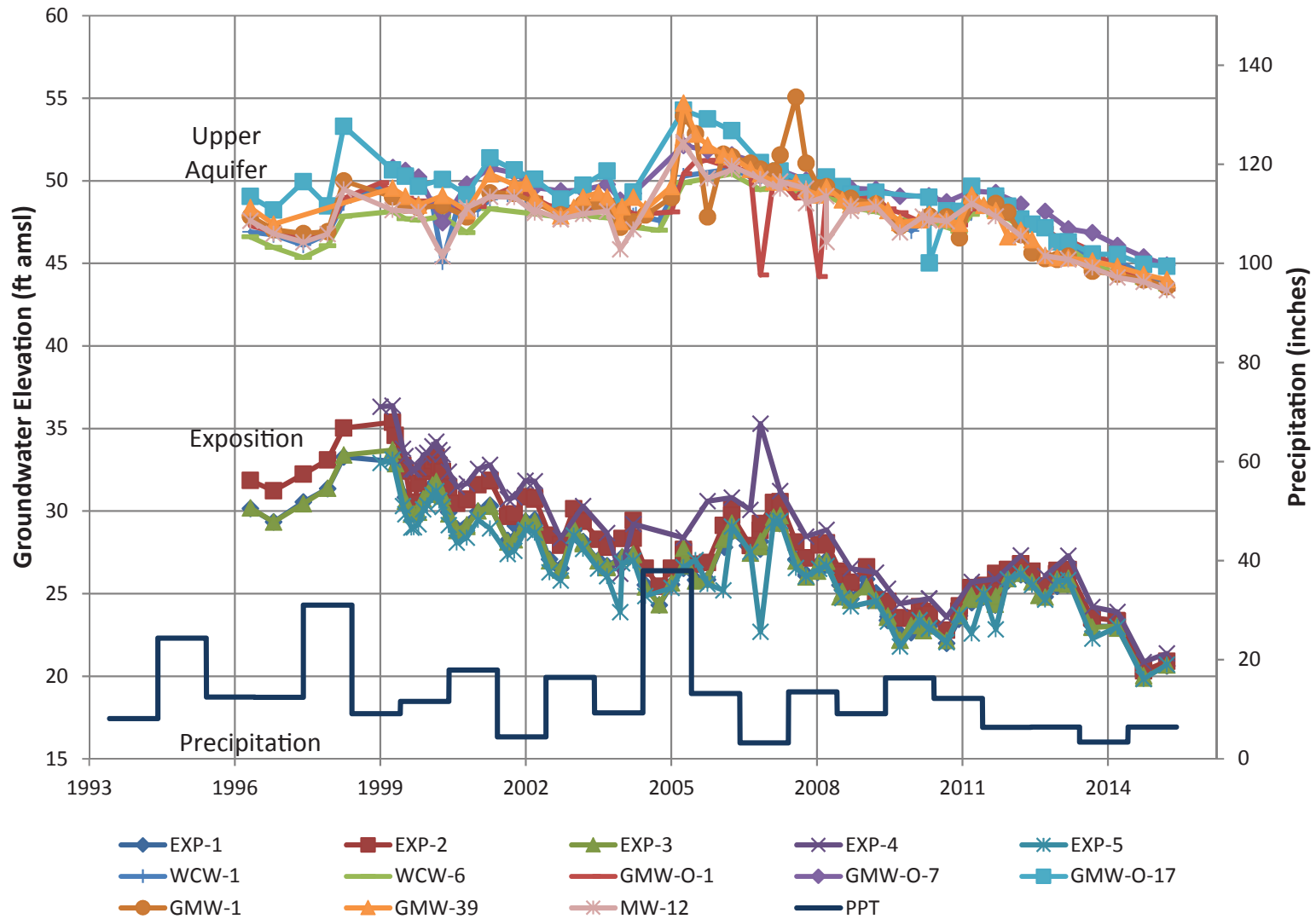
- Legend**
- Existing Groundwater Monitoring Well
  - ⊕ Existing Remediation Well
  - Horizontal Biosparge Well  
(dashed line depicts approximate lateral extent of well screen)
  - KMEP Remediation Piping Layout  
(above ground and below ground)
  - Horizontal Vapor Extraction Well Piping

Imagery Source:  
Google Earth April 17, 2013.



**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

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April 27, 2015

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



ADE-1461  
EPA Methods TO-3,  
TO14A, TO15 SIM & Scan,  
ASTM D1946



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

TX Cert T104704450-09-TX  
EPA Methods TO14A, TO15

UT Cert CA0133332014-1  
EPA Methods TO3, TO14A, TO15, RSK-175

### LABORATORY TEST RESULTS

Project Reference: SFPP - Norwalk Site  
Lab Number: G040903-01/03

Enclosed are results for sample(s) received 4/09/15 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 Daniel Jablonski, Vidal Cortes and Steve Defibaugh, Kinder Morgan, on 4/22/15.

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



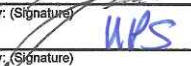
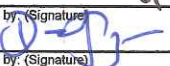

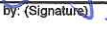
Note: The cover letter is an integral part of this analytical report.

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

**CHAIN OF CUSTODY RECORD**

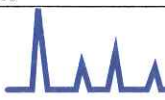
DATE: 4/7/15  
 PAGE: 1 OF 1

G040903-01/03

LABORATORY CLIENT: <b>CH2M HILL: Attn - Dan Jablonski</b>					CLIENT PROJECT NAME / NUMBER: <b>SFPP - Norwalk Site</b>					P.O. NO.:						
ADDRESS: <b>6 Hutton Centre Dr, Suite 700</b>					PROJECT CONTACT: <b>James Dye</b>					QUOTE NO.:						
CITY: <b>Santa Ana, CA 92707</b>					SAMPLER(S) (SIGNATURE):					LAB USE ONLY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>						
TEL: <b>714-429-2020</b>		FAX:		E-MAIL: <a href="mailto:Daniel.Jablonski@CH2M.com">Daniel.Jablonski@CH2M.com</a>		<b>REQUESTED ANALYSIS</b>										
TURNAROUND TIME <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input checked="" type="checkbox"/> 10 DAYS																
SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY) <input type="checkbox"/> RWQCB REPORTING <input type="checkbox"/> ARCHIVE SAMPLES UNTIL <u>  </u> / <u>  </u> / <u>  </u>																
SPECIAL INSTRUCTIONS <b>Report: Jablonski, Daniel/LAC - Daniel.Jablonski@CH2M.com,</b> <b>Cortes, Vidal/SCO - Vidal.Cortes@CH2M.com</b> <b>CC: KMEP Steve Defibaugh - Steve_Defibaugh@kindermorgan.com</b> <b>"J" flags required/Use lowest possible detection limit - all methods.</b>																
LAB USE ONLY	SAMPLE ID	LOCATION/ DESCRIPTION	SAMPLING				MAT-RIX	NO. OF CONT.	TO-15 (VOCs Target Analytes)				Comments			
			DATE	TIME	INITIAL PRESSURE ("Hg)	FINAL PRESSURE ("Hg)			TO-3 (TPH-g)	TGM/MOC as Hexane (EPA 25.1)	ASTM-D 1946 (O2/Argon, CO2, CH4, N2)					
<u>01</u>	<u>VINF- 04-07</u>	Influent Vapor (from header)	<u>4/7/15</u>	<u>1502</u>	<u>-30</u>	<u>-6</u>	Air	1	X	X	X	X				Batch Certified 1-L SUMMA
<u>02</u>	<u>VPOST- 04-07</u>	Post-Dilution	<u>4/7/15</u>	<u>1456</u>	<u>-30</u>	<u>-6</u>	Air	1	X	X	X					Individually Certified 1-L SUMMA
<u>03</u>	<u>VEFF- 04-07</u>	Outlet (stack)	<u>4/7/15</u>	<u>1452</u>	<u>-30</u>	<u>-6</u>	Air	1	X	X	X					Individually Certified 1-L SUMMA
																TAL includes TO-15 standard analytes per subcontract.
																<i>*T03 cancelled 4/13/15 per V. Cortes</i>
Relinquished by: (Signature) 					Received by: (Signature) 					Date: <u>4/8/15</u>		Time: <u>1315</u>				
Relinquished by: (Signature) 					Received by: (Signature) 					Date: <u>4/9/15</u>		Time: <u>1020</u>				
Relinquished by: (Signature) 					Received by: (Signature) 					Date:		Time:				

Client: CH2M HILL  
 Attn: Daniel Jablonski  
 Project Name: SFPP - Norwalk Site  
 Project No.: NA  
 Date Received: 04/09/15  
 Matrix: Air  
 Reporting Units: ppmv

EPA Method TO15												
Lab No.:	G040903-01			G040903-02			G040903-03					
Client Sample I.D.:	VINP-04-07			VPOST-04-07			VEFF-04-07					
Date/Time Sampled:	4/7/15 15:02			4/7/15 14:56			4/7/15 14:52					
Date/Time Analyzed:	4/15/15 12:16			4/15/15 11:26			4/15/15 10:34					
QC Batch No.:	150415MS2A1			150415MS2A1			150415MS2A1					
Analyst Initials:	DT			DT			DT					
Dilution Factor:	160			160			2.0					
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv			
Dichlorodifluoromethane (12)	ND	0.16	0.021	ND	0.16	0.022	ND	0.0020	0.00027			
Chloromethane	ND	0.32	0.029	ND	0.32	0.029	ND	0.0040	0.00037			
1,2-CI-1,1,2,2-F ethane (114)	ND	0.16	0.0070	ND	0.16	0.0071	ND	0.0020	0.000089			
Vinyl Chloride	ND	0.16	0.021	ND	0.16	0.021	ND	0.0020	0.00026			
Bromomethane	0.061	J 0.16	0.050	ND	0.16	0.051	ND	0.0020	0.00064			
Chloroethane	ND	0.16	0.13	ND	0.16	0.14	ND	0.0020	0.0017			
Trichlorofluoromethane (11)	ND	0.16	0.020	ND	0.16	0.020	ND	0.0020	0.00025			
1,1-Dichloroethene	ND	0.16	0.028	ND	0.16	0.028	ND	0.0020	0.00035			
Carbon Disulfide	0.10	J 0.79	0.028	0.16	J 0.81	0.029	0.0058	J 0.010	0.00036			
1,1,2-CI 1,2,2-F ethane (113)	ND	0.16	0.027	ND	0.16	0.028	ND	0.0020	0.00035			
Acetone	ND	0.79	0.084	ND	0.81	0.086	0.014	0.010	0.0011			
Methylene Chloride	ND	0.16	0.029	ND	0.16	0.029	ND	0.0020	0.00037			
t-1,2-Dichloroethene	ND	0.16	0.035	ND	0.16	0.036	ND	0.0020	0.00045			
1,1-Dichloroethane	0.030	J 0.16	0.024	ND	0.16	0.024	ND	0.0020	0.00031			
c-1,2-Dichloroethene	ND	0.16	0.030	ND	0.16	0.030	ND	0.0020	0.00038			
2-Butanone	ND	0.16	0.039	ND	0.16	0.040	0.016	0.0020	0.00050			
t-Butyl Methyl Ether (MTBE)	ND	0.16	0.020	ND	0.16	0.020	ND	0.0020	0.00025			
Chloroform	ND	0.16	0.021	ND	0.16	0.021	ND	0.0020	0.00026			
1,1,1-Trichloroethane	ND	0.16	0.021	ND	0.16	0.021	ND	0.0020	0.00026			
Carbon Tetrachloride	ND	0.16	0.016	ND	0.16	0.016	ND	0.0020	0.00020			
Benzene	8.2	0.16	0.0073	11	0.16	0.0074	0.0028	0.0020	0.000093			
1,2-Dichloroethane	ND	0.16	0.018	ND	0.16	0.018	ND	0.0020	0.00022			
Trichloroethene	ND	0.16	0.017	ND	0.16	0.017	ND	0.0020	0.00021			
1,2-Dichloropropane	ND	0.16	0.013	ND	0.16	0.013	ND	0.0020	0.00016			
Bromodichloromethane	ND	0.16	0.011	ND	0.16	0.011	ND	0.0020	0.00014			
c-1,3-Dichloropropene	ND	0.16	0.020	ND	0.16	0.020	ND	0.0020	0.00025			
4-Methyl-2-Pentanone	ND	0.16	0.021	ND	0.16	0.021	ND	0.0020	0.00027			
Toluene	8.2	0.16	0.012	8.1	0.16	0.012	0.022	0.0020	0.00015			
t-1,3-Dichloropropene	ND	0.16	0.017	ND	0.16	0.018	ND	0.0020	0.00022			
1,1,2-Trichloroethane	ND	0.16	0.019	ND	0.16	0.019	ND	0.0020	0.00024			
1,3-Dichloropropane	ND	0.16	0.0079	ND	0.16	0.0080	ND	0.0020	0.00010			
Tetrachloroethene	ND	0.16	0.017	ND	0.16	0.017	ND	0.0020	0.00022			
2-Hexanone	ND	0.16	0.050	ND	0.16	0.052	ND	0.0020	0.00064			
Dibromochloromethane	ND	0.16	0.011	ND	0.16	0.011	ND	0.0020	0.00013			
1,2-Dibromoethane	ND	0.16	0.015	ND	0.16	0.015	ND	0.0020	0.00019			
Chlorobenzene	ND	0.16	0.015	ND	0.16	0.016	ND	0.0020	0.00019			
Ethylbenzene	0.61	0.16	0.014	0.42	0.16	0.015	0.0035	0.0020	0.00018			
p,&m-Xylene	2.5	0.16	0.028	1.5	0.16	0.029	0.022	0.0020	0.00036			
o-Xylene	0.76	0.16	0.024	0.46	0.16	0.024	0.0091	0.0020	0.00031			




Client: CH2M HILL  
 Attn: Daniel Jablonski  
 Project Name: SFPP - Norwalk Site  
 Project No.: NA  
 Date Received: 04/09/15  
 Matrix: Air  
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	G040903-01			G040903-02			G040903-03		
Client Sample I.D.:	VINP-04-07			VPOST-04-07			VEFF-04-07		
Date/Time Sampled:	4/7/15 15:02			4/7/15 14:56			4/7/15 14:52		
Date/Time Analyzed:	4/15/15 12:16			4/15/15 11:26			4/15/15 10:34		
QC Batch No.:	150415MS2A1			150415MS2A1			150415MS2A1		
Analyst Initials:	DT			DT			DT		
Dilution Factor:	160			160			2.0		
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv
Styrene	0.043 J	0.16	0.021	ND	0.16	0.021	0.00083 J	0.0020	0.00026
Bromoform	ND	0.16	0.017	ND	0.16	0.018	ND	0.0020	0.00022
Isopropyl benzene	ND	0.16	0.017	ND	0.16	0.017	0.0012 J	0.0020	0.00022
1,1,2,2-Tetrachloroethane	ND	0.32	0.011	ND	0.32	0.011	ND	0.0040	0.00014
Benzyl Chloride	ND	0.16	0.015	ND	0.16	0.016	ND	0.0020	0.00020
1,2,3-Trichloropropane	ND	0.16	0.019	ND	0.16	0.019	ND	0.0020	0.00024
n-Propyl Benzene	ND	0.16	0.012	ND	0.16	0.013	0.0023	0.0020	0.00016
4-Ethyl Toluene	0.13 J	0.16	0.014	0.061 J	0.16	0.014	0.015	0.0020	0.00017
1,3,5-Trimethylbenzene	0.037 J	0.32	0.016	0.019 J	0.32	0.016	0.0057	0.0040	0.00021
4-Chlorotoluene	ND	0.16	0.017	ND	0.16	0.017	ND	0.0020	0.00021
tert-Butylbenzene	ND	0.16	0.013	ND	0.16	0.013	0.0016 J	0.0020	0.00016
1,2,4-Trimethylbenzene	0.054 J	0.32	0.022	0.039 J	0.32	0.022	0.016	0.0040	0.00028
sec-Butylbenzene	ND	0.16	0.017	ND	0.16	0.018	ND	0.0020	0.00022
p-Isopropyltoluene	ND	0.16	0.016	ND	0.16	0.016	ND	0.0020	0.00020
1,3-Dichlorobenzene	ND	0.16	0.016	ND	0.16	0.016	ND	0.0020	0.00020
1,4-Dichlorobenzene	ND	0.16	0.013	ND	0.16	0.013	ND	0.0020	0.00016
n-Butylbenzene	ND	0.16	0.017	ND	0.16	0.017	0.0020	0.0020	0.00022
1,2-Dichlorobenzene	ND	0.16	0.018	ND	0.16	0.019	ND	0.0020	0.00023
1,2,4-Trichlorobenzene	ND	0.32	0.046	ND	0.32	0.047	ND	0.0040	0.00059
Hexachlorobutadiene	ND	0.16	0.022	ND	0.16	0.022	ND	0.0020	0.00028
t-Butanol	ND	0.79	0.049	ND	0.81	0.050	ND	0.010	0.00062
n-Hexane	26	0.79	0.032	35	0.81	0.033	0.0055 J	0.010	0.00041
Isopropyl ether	ND	0.79	0.024	ND	0.81	0.025	ND	0.010	0.00031
t-Butyl ethyl ether	ND	0.79	0.033	ND	0.81	0.034	ND	0.010	0.00042
2,2-Dichloropropane	ND	0.79	0.027	0.56 J	0.81	0.028	ND	0.010	0.00035
t-Amyl methyl ether	ND	0.79	0.016	ND	0.81	0.016	ND	0.010	0.00020
1,4-Dioxane	ND	0.79	0.024	ND	0.81	0.024	ND	0.010	0.00030
Naphthalene	ND	0.79	0.038	ND	0.81	0.039	ND	0.010	0.00048
1,2,3-Trichlorobenzene (TIC)	ND	--		ND	--		ND	--	

ND = Not Detected (below RL)  
 RL = Reporting Limit

Reviewed/Approved By:   
 Mark Johnson  
 Operations Manager

Date 4-27-15

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: 04/09/15  
 Matrix: Air  
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	METHOD BLANK														
Client Sample I.D.:	-														
Date/Time Sampled:	-														
Date/Time Analyzed:	4/15/15 5:25														
QC Batch No.:	150415MS2A1														
Analyst Initials:	DT														
Dilution Factor:	0.20														
ANALYTE	Result ppmv	RL ppmv	MDL ppmv												
Dichlorodifluoromethane (12)	ND	0.00020	0.000027												
Chloromethane	ND	0.00040	0.000036												
1,2-CI-1,1,2,2-F ethane (114)	ND	0.00020	0.0000088												
Vinyl Chloride	ND	0.00020	0.000026												
Bromomethane	0.000068 J	0.00020	0.000063												
Chloroethane	ND	0.00020	0.00017												
Trichlorofluoromethane (11)	ND	0.00020	0.000025												
1,1-Dichloroethene	ND	0.00020	0.000035												
Carbon Disulfide	ND	0.0010	0.000035												
1,1,2-CI 1,2,2-F ethane (113)	ND	0.00020	0.000034												
Acetone	ND	0.0010	0.00011												
Methylene Chloride	ND	0.00020	0.000036												
t-1,2-Dichloroethene	ND	0.00020	0.000044												
1,1-Dichloroethane	ND	0.00020	0.000030												
c-1,2-Dichloroethene	ND	0.00020	0.000037												
2-Butanone	ND	0.00020	0.000050												
t-Butyl Methyl Ether (MTBE)	ND	0.00020	0.000025												
Chloroform	ND	0.00020	0.000026												
1,1,1-Trichloroethane	ND	0.00020	0.000026												
Carbon Tetrachloride	ND	0.00020	0.000020												
Benzene	0.000028 J	0.00020	0.0000092												
1,2-Dichloroethane	ND	0.00020	0.000022												
Trichloroethene	ND	0.00020	0.000021												
1,2-Dichloropropane	ND	0.00020	0.000016												
Bromodichloromethane	ND	0.00020	0.000014												
c-1,3-Dichloropropene	ND	0.00020	0.000025												
4-Methyl-2-Pentanone	ND	0.00020	0.000027												
Toluene	ND	0.00020	0.000015												
t-1,3-Dichloropropene	ND	0.00020	0.000022												
1,1,2-Trichloroethane	ND	0.00020	0.000024												
1,3-Dichloropropane	ND	0.00020	0.0000099												
Tetrachloroethene	ND	0.00020	0.000021												
2-Hexanone	ND	0.00020	0.000064												
Dibromochloromethane	ND	0.00020	0.000013												
1,2-Dibromoethane	ND	0.00020	0.000019												
Chlorobenzene	ND	0.00020	0.000019												
Ethylbenzene	ND	0.00020	0.000018												
p,&m-Xylene	ND	0.00020	0.000035												
o-Xylene	ND	0.00020	0.000030												
Styrene	ND	0.00020	0.000026												
Bromoform	ND	0.00020	0.000022												



Client: CH2M HILL  
 Attn: Daniel Jablonski  
 Project Name: SFPP - Norwalk Site  
 Project No.: NA  
 Date Received: 04/09/15  
 Matrix: Air  
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	METHOD BLANK			
Client Sample I.D.:	-			
Date/Time Sampled:	-			
Date/Time Analyzed:	4/15/15 5:25			
QC Batch No.:	150415MS2A1			
Analyst Initials:	DT			
Dilution Factor:	0.20			

ANALYTE	Result ppmv	RL ppmv	MDL ppmv											
Isopropyl benzene	ND	0.00020	0.000021											
1,1,2,2-Tetrachloroethane	ND	0.00040	0.000014											
Benzyl Chloride	ND	0.00020	0.000019											
1,2,3-Trichloropropane	ND	0.00020	0.000024											
n-Propyl Benzene	ND	0.00020	0.000016											
4-Ethyl Toluene	ND	0.00020	0.000017											
1,3,5-Trimethylbenzene	ND	0.00040	0.000020											
4-Chlorotoluene	ND	0.00020	0.000021											
tert-Butylbenzene	ND	0.00020	0.000016											
1,2,4-Trimethylbenzene	ND	0.00040	0.000027											
sec-Butylbenzene	ND	0.00020	0.000022											
p-Isopropyltoluene	0.000059 J	0.00020	0.000020											
1,3-Dichlorobenzene	ND	0.00020	0.000020											
1,4-Dichlorobenzene	ND	0.00020	0.000016											
n-Butylbenzene	ND	0.00020	0.000021											
1,2-Dichlorobenzene	ND	0.00020	0.000023											
1,2,4-Trichlorobenzene	ND	0.00040	0.000058											
Hexachlorobutadiene	ND	0.00020	0.000028											
t-Butanol	ND	0.0010	0.000062											
n-Hexane	ND	0.0010	0.000041											
Isopropyl ether	ND	0.0010	0.000031											
t-Butyl ethyl ether	ND	0.0010	0.000042											
2,2-Dichloropropane	ND	0.0010	0.000035											
t-Amyl methyl ether	ND	0.0010	0.000020											
1,4-Dioxane	ND	0.0010	0.000030											
Naphthalene	ND	0.0010	0.000048											
1,2,3-Trichlorobenzene (TIC)	ND	--												

ND = Not Detected (below RL)  
 RL = Reporting Limit

Reviewed/Approved By:   
 Mark Johnson  
 Operations Manager

Date: 4-27-15

The cover letter is an integral part of this analytical report



QC Batch #: 150415MS2A1

Matrix: Air

EPA Method TO-14/TO-15											
Lab No:	Method Blank		LCS		LCSD						
Date/Time Analyzed:	4/15/15 5:25		4/15/15 3:54		4/15/15 4:37						
Data File ID:	15APR007.D		15APR005.D		15APR006.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	10.2	102	9.8	98	4.5	70	130	30	Pass
Methylene Chloride	0.0	10.0	10.5	105	9.8	98	6.6	70	130	30	Pass
Trichloroethene	0.0	10.0	10.4	104	10.3	103	0.9	70	130	30	Pass
Toluene	0.0	10.0	9.6	96	9.4	94	1.5	70	130	30	Pass
1,1,2,2-Tetrachloroethane	0.0	10.0	9.9	99	9.7	97	2.0	70	130	30	Pass

RPD = Relative Percent Difference

Reviewed/Approved By: \_\_\_\_\_



Mark Johnson  
Operations Manager

Date: \_\_\_\_\_

4-22-15

The cover letter is an integral part of this analytical report




Client: CH2M HILL  
 Attn: Daniel Jablonski

Client's Project: SFPP - Norwalk Site; NA  
 Date Received: 4/9/2015  
 Matrix: Air

TGNMOC by SCAQMD 25.1

Lab No.:	G040903-01			G040903-02			G040903-03			
Client Sample I.D.:	VINP-04-07			VPOST-04-07			VEFF-04-07			
Date/ Time Sampled:	4/7/2015 15:02			4/7/2015 14:56			4/7/2015 14:52			
Date/ Time Analyzed:	4/15/2015 18:18			4/15/2015 19:02			4/15/2015 19:46			
Analyst Initials:	AS			AS			AS			
Data Files:	15apr027/028			15apr030/031			15apr033/034			
QC Batch:	150415GC8A1			150415GC8A1			150415GC8A1			
Dilution Factor:	2.0			2.0			2.0			
ANALYTE	Units	Results	RL	MDL	Results	RL	MDL	Results	RL	MDL
TGNMOC as Hexane	ppmv	710	3.3	1.0	990	3.4	1.0	4.4	3.4	1.0
Methane	ppmv	150	20	2.3	210	20	2.3	3.4 J	20	2.3

ND = Not detected above method detection limit (MDL)  
 PQL = Practical Quantitation Limit.  
 TGNMOC = Total Gaseous Non-Methane Organic Carbon.  
 J = Trace amount. Analyte concentration between MDL and RL.  
 RL = Reporting Limit.

Reviewed/Approved By:   
 Mark J. Johnson  
 Operations Manager

Date: 4-22-15

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



QC Batch No.: 150415GC8A1  
 Matrix: Air  
 Units: ppmv

QC for TGNMOC by SCAQMD 25.1

Lab No.:	Method Blank			LCS		LCSD			
Date Analyzed:	4/15/2015 17:05			4/15/2015 13:13		4/15/2015 13:27			
Analyst Initials:	AS			AS		AS			
Datafile:	15apr022			15apr006		15apr007			
Dilution Factor:	1.0			1.0		1.0			
ANALYTE	Results	RL	MDL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
TGNMOC as Hexane	ND	1.7	0.51	115	70-130%	116	70-130%	0.5	<30
Methane	ND	10	1.1	128	70-130%	127	70-130%	0.6	<30

ND = Not Detected (Below MDL)

RL = Reporting Limit

MDL = Method Detection Limit

J = Trace amount below the RL and equal to or above the MDL

Reviewed/Approved By: Mark J. Johnson  
 Mark J. Johnson  
 Operations Manager

Date: 4-22-15

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: 04/09/15  
 Matrix: Air  
 Reporting Units: % v/v

**ASTM D1946**

Lab No.:	G040903-01			
Client Sample I.D.:	VINF-04-07			
Date/Time Sampled:	4/7/15 15:02			
Date/Time Analyzed:	4/15/15 18:18			
QC Batch No.:	150415GC8A1			
Analyst Initials:	AS			
Dilution Factor:	2.0			

ANALYTE	Result % v/v	RL % v/v	MDL % v/v						
Carbon Dioxide	0.56	0.020	0.00084						
Oxygen/Argon	21	0.99	0.073						
Nitrogen	78	2.0	0.29						
Methane	0.014	0.0020	0.000091						

Results normalized including non-methane hydrocarbons  
 MDL = Method Detection Limit  
 ND= Not Detected (below MDL)  
 RL = Reporting Limit  
 J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By:   
 Mark Johnson  
 Operations Manager

Date 4-22-15

The cover letter is an integral part of this analytical report

QC Batch No.: 150415GC8A1

Matrix: Air

Units: % v/v

QC for ASTM D1946

Lab No.:	Method Blank			LCS		LCSD			
Date/Time Analyzed:	4/15/15 17:05			4/15/15 13:13		4/15/15 13:27			
Analyst Initials:	AS			AS		AS			
Datafile:	15apr022			15apr006		15apr007			
Dilution Factor:	1.0			1.0		1.0			
ANALYTE	Results	RL	MDL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Carbon Dioxide	ND	0.010	0.00042	94	70-130%	94	70-130%	0.0	<30
Oxygen/Argon	0.087 J	0.50	0.037	98	70-130%	98	70-130%	0.0	<30
Nitrogen	0.24 J	1.0	0.14	99	70-130%	99	70-130%	0.1	<30
Methane	ND	0.0010	0.000050	128	70-130%	127	70-130%	0.6	<30

ND = Not Detected (Below RL)

J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By:



Mark J. Johnson  
Operations Manager

Date:

4-22-15

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





May 28, 2015

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



ADE-1461  
EPA Methods TO-3,  
TO14A, TO15 SIM & Scan,  
ASTM D1946



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

TX Cert T104704450-09-TX  
EPA Methods TO14A, TO15

UT Cert CA0133332014-1  
EPA Methods TO3, TO14A, TO15, RSK-175

### LABORATORY TEST RESULTS

Project Reference: SFPP - Norwalk Site  
Lab Number: G050704-01/03

Enclosed are results for sample(s) received 5/07/15 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 Daniel Jablonski, Vidal Cortes and Steve Defibaugh, Kinder Morgan, on 5/27/15.

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,

A handwritten signature in blue ink, appearing to read "Mark Johnson", with a stylized flourish at the end.

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)

6050704-0103

CHAIN OF CUSTODY RECORD

DATE: 5/5/15  
 PAGE: 1 OF 1

LABORATORY CLIENT: <b>CH2M HILL: Attn - Dan Jablonski</b>				CLIENT PROJECT NAME / NUMBER: <b>SFPP - Norwalk Site</b>				P.O. NO.:													
ADDRESS: <b>6 Hutton Centre Dr, Suite 700</b>				PROJECT CONTACT: <b>James Dye</b>				QUOTE NO.:													
CITY: <b>Santa Ana, CA 92707</b>				SAMPLER(S): (SIGNATURE) 				LAB USE ONLY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>													
TEL: <b>714-429-2020</b>		FAX:		E-MAIL: <a href="mailto:Daniel.Jablonski@CH2M.com">Daniel.Jablonski@CH2M.com</a>																	
TURNAROUND TIME <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input checked="" type="checkbox"/> 10 DAYS				REQUESTED ANALYSIS																	
SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY) <input type="checkbox"/> RWQCB REPORTING <input type="checkbox"/> ARCHIVE SAMPLES UNTIL / /																					
SPECIAL INSTRUCTIONS <b>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.</b>				TO-15 (VOCs Target Analytes) TO-3 (TPH-gal per Vidal Co-183) TGNMOC as Hexane (EPA 26.1) ASTM-D 1946 (O2/Argon, CO2, CH4, N2)																	
LAB USE ONLY	SAMPLE ID	LOCATION/ DESCRIPTION	SAMPLING				MAT-RIX	NO. OF CONT.	TO-15 (VOCs Target Analytes)	TO-3 (TPH-gal per Vidal Co-183)	TGNMOC as Hexane (EPA 26.1)	ASTM-D 1946 (O2/Argon, CO2, CH4, N2)									Comments
			DATE	TIME	INITIAL PRESSURE ("Hg)	FINAL PRESSURE ("Hg)															
	VINF-	Influent Vapor (from header)					Air	1	X	X	X	X									Batch Certified 1-L SUMMA
	VPOST- 05-05	Post-Dilution	5/5/15	1419	-29.5	-5	Air	1	X	X	X										Individually Certified 1-L SUMMA
	VEFF- 05-05	Outlet (stack)	5/5/15	1430	-27.5	-5	Air	1	X	X	X										Individually Certified 1-L SUMMA
	VFF- 05-05D		5/5/15	1430	-29.5	-5	AIR	1	X	X	X										
																					TAL includes TO-15 standard analytes per subcontract.
Relinquished by: (Signature) 				Received by: (Signature) <b>FED EX</b>				Date: 5/6/15		Time: 1530											
Relinquished by: (Signature) <b>MRS</b>				Received by: (Signature) 				Date: 5/7/15		Time: 1055											
Relinquished by: (Signature)				Received by: (Signature)				Date:		Time:											

91  
02  
59

Client: CH2M HILL  
 Attn: Daniel Jablonski  
 Project Name: SFPP - Norwalk Site  
 Project No.: NA  
 Date Received: 05/07/15  
 Matrix: Air  
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	G050704-01			G050704-02			G050704-03		
Client Sample I.D.:	VPOST-05-05			VEFF-05-05			VEFF-05-05D		
Date/Time Sampled:	5/5/15 14:19			5/5/15 14:30			5/5/15 14:30		
Date/Time Analyzed:	5/16/15 19:25			5/17/15 18:15			5/16/15 20:43		
QC Batch No.:	150516MS2A1			150517MS2A1			150516MS2A1		
Analyst Initials:	VM			VM			VM		
Dilution Factor:	140			4.0			1.9		
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv
Dichlorodifluoromethane (12)	ND	0.14	0.021	ND	0.0040	0.00061	ND	0.0019	0.00030
Chloromethane	ND	0.27	0.030	ND	0.0079	0.00087	ND	0.0039	0.00043
1,2-CI-1,1,2,2-F ethane (114)	ND	0.14	0.027	ND	0.0040	0.00080	ND	0.0019	0.00039
Vinyl Chloride	ND	0.14	0.022	ND	0.0040	0.00064	ND	0.0019	0.00032
Bromomethane	ND	0.14	0.040	ND	0.0040	0.0012	ND	0.0019	0.00057
Chloroethane	ND	0.14	0.11	ND	0.0040	0.0033	ND	0.0019	0.0016
Trichlorofluoromethane (11)	ND	0.14	0.029	ND	0.0040	0.00085	ND	0.0019	0.00042
1,1-Dichloroethene	ND	0.14	0.031	ND	0.0040	0.00090	ND	0.0019	0.00044
Carbon Disulfide	ND	0.68	0.033	0.52	0.020	0.00095	0.0068 J	0.0097	0.00047
1,1,2-CI 1,2,2-F ethane (113)	ND	0.14	0.037	ND	0.0040	0.0011	ND	0.0019	0.00052
Acetone	0.94	0.68	0.039	0.063	0.020	0.0011	0.011	0.0097	0.00056
Methylene Chloride	ND	0.14	0.039	ND	0.0040	0.0011	ND	0.0019	0.00055
t-1,2-Dichloroethene	ND	0.14	0.041	ND	0.0040	0.0012	ND	0.0019	0.00058
1,1-Dichloroethane	ND	0.14	0.019	ND	0.0040	0.00054	ND	0.0019	0.00026
c-1,2-Dichloroethene	ND	0.14	0.026	ND	0.0040	0.00077	ND	0.0019	0.00038
2-Butanone	0.51	0.14	0.084	0.066	0.0040	0.0024	0.013	0.0019	0.0012
t-Butyl Methyl Ether (MTBE)	ND	0.14	0.031	0.11	0.0040	0.00089	0.024	0.0019	0.00043
Chloroform	ND	0.14	0.019	ND	0.0040	0.00055	ND	0.0019	0.00027
1,1,1-Trichloroethane	ND	0.14	0.014	ND	0.0040	0.00040	ND	0.0019	0.00019
Carbon Tetrachloride	ND	0.14	0.024	ND	0.0040	0.00069	ND	0.0019	0.00034
Benzene	6.1	0.34	0.013	0.037	0.0099	0.00038	0.0075	0.0049	0.00019
1,2-Dichloroethane	ND	0.14	0.010	ND	0.0040	0.00029	ND	0.0019	0.00014
Trichloroethene	ND	0.14	0.019	ND	0.0040	0.00056	ND	0.0019	0.00027
1,2-Dichloropropane	ND	0.14	0.025	ND	0.0040	0.00072	ND	0.0019	0.00035
Bromodichloromethane	ND	0.14	0.0082	0.0015 J	0.0040	0.00024	ND	0.0019	0.00012
c-1,3-Dichloropropene	ND	0.14	0.016	ND	0.0040	0.00047	ND	0.0019	0.00023
4-Methyl-2-Pentanone	ND	0.14	0.0092	ND	0.0040	0.00027	ND	0.0019	0.00013
Toluene	9.6	0.14	0.011	0.092	0.0040	0.00032	0.013	0.0019	0.00015
t-1,3-Dichloropropene	ND	0.14	0.014	ND	0.0040	0.00041	ND	0.0019	0.00020
1,1,2-Trichloroethane	ND	0.14	0.022	ND	0.0040	0.00064	ND	0.0019	0.00031
1,3-Dichloropropane	ND	0.14	0.0068	ND	0.0040	0.00020	ND	0.0019	0.000097
Tetrachloroethene	ND	0.14	0.016	ND	0.0040	0.00048	ND	0.0019	0.00023
2-Hexanone	ND	0.14	0.028	0.0053	0.0040	0.00082	0.0042	0.0019	0.00040
Dibromochloromethane	ND	0.14	0.025	ND	0.0040	0.00072	ND	0.0019	0.00035
1,2-Dibromoethane	ND	0.14	0.012	ND	0.0040	0.00036	ND	0.0019	0.00018
Chlorobenzene	ND	0.14	0.011	ND	0.0040	0.00031	ND	0.0019	0.00015
Ethylbenzene	1.1	0.14	0.0079	0.011	0.0040	0.00023	0.0030	0.0019	0.00011
p,&m-Xylene	5.5	0.14	0.015	0.069	0.0040	0.00045	0.018	0.0019	0.00022
o-Xylene	1.7	0.14	0.017	0.028	0.0040	0.00048	0.0071	0.0019	0.00024





Client: CH2M HILL  
 Attn: Daniel Jablonski  
 Project Name: SFPP - Norwalk Site  
 Project No.: NA  
 Date Received: 05/07/15  
 Matrix: Air  
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	G050704-01			G050704-02			G050704-03		
Client Sample I.D.:	VPOST-05-05			VEFF-05-05			VEFF-05-05D		
Date/Time Sampled:	5/5/15 14:19			5/5/15 14:30			5/5/15 14:30		
Date/Time Analyzed:	5/16/15 19:25			5/17/15 18:15			5/16/15 20:43		
QC Batch No.:	150516MS2A1			150517MS2A1			150516MS2A1		
Analyst Initials:	VM			VM			VM		
Dilution Factor:	140			4.0			1.9		
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv
Styrene	0.071 J	0.14	0.018	0.0016 J	0.0040	0.00051	0.00073 J	0.0019	0.00025
Bromoform	ND	0.14	0.0076	ND	0.0040	0.00022	ND	0.0019	0.00011
Isopropyl benzene	0.62	0.14	0.014	0.0022 J	0.0040	0.00041	0.00035 J	0.0019	0.00020
1,1,2,2-Tetrachloroethane	ND	0.27	0.0084	ND	0.0079	0.00024	ND	0.0039	0.00012
Benzyl Chloride	ND	0.14	0.025	ND	0.0040	0.00073	ND	0.0019	0.00036
1,2,3-Trichloropropane	ND	0.14	0.037	ND	0.0040	0.0011	ND	0.0019	0.00052
n-Propyl Benzene	0.098 J	0.14	0.0079	0.0022 J	0.0040	0.00023	0.0019	0.0019	0.00011
4-Ethyl Toluene	0.72	0.14	0.0086	0.014	0.0040	0.00025	0.011	0.0019	0.00012
1,3,5-Trimethylbenzene	0.28	0.27	0.024	0.0057 J	0.0079	0.00068	0.0051	0.0039	0.00034
4-Chlorotoluene	ND	0.14	0.016	ND	0.0040	0.00047	ND	0.0019	0.00023
tert-Butylbenzene	0.065 J	0.14	0.012	0.0019 J	0.0040	0.00036	0.0020	0.0019	0.00018
1,2,4-Trimethylbenzene	0.50	0.27	0.016	0.014	0.0079	0.00045	0.015	0.0039	0.00022
sec-Butylbenzene	ND	0.14	0.013	ND	0.0040	0.00038	0.00035 J	0.0019	0.00019
p-Isopropyltoluene	ND	0.14	0.018	0.0087	0.0040	0.00052	0.00047 J	0.0019	0.00025
1,3-Dichlorobenzene	ND	0.14	0.017	ND	0.0040	0.00048	0.00030 J	0.0019	0.00024
1,4-Dichlorobenzene	ND	0.14	0.020	0.00061 J	0.0040	0.00058	0.00032 J	0.0019	0.00028
n-Butylbenzene	0.024 J	0.14	0.0100	ND	0.0040	0.00029	0.0022	0.0019	0.00014
1,2-Dichlorobenzene	ND	0.14	0.017	ND	0.0040	0.00049	0.00041 J	0.0019	0.00024
1,2,4-Trichlorobenzene	ND	0.27	0.023	ND	0.0079	0.00066	0.0015 J	0.0039	0.00032
Hexachlorobutadiene	ND	0.14	0.0080	ND	0.0040	0.00023	0.00092 J	0.0019	0.00011
t-Butanol	ND	0.68	0.026	0.012 J	0.020	0.00076	0.0046 J	0.0097	0.00037
n-Hexane	29	0.68	0.018	0.17	0.020	0.00053	0.032	0.0097	0.00026
Isopropyl ether	ND	0.68	0.015	ND	0.020	0.00044	ND	0.0097	0.00022
t-Butyl ethyl ether	ND	0.68	0.027	ND	0.020	0.00079	ND	0.0097	0.00039
2,2-Dichloropropane	ND	0.68	0.013	ND	0.020	0.00038	ND	0.0097	0.00018
t-Amyl methyl ether	ND	0.68	0.0096	ND	0.020	0.00028	ND	0.0097	0.00014
1,4-Dioxane	ND	0.68	0.024	ND	0.020	0.00069	ND	0.0097	0.00034
Naphthalene	ND	0.68	0.053	ND	0.020	0.0015	0.0015 J	0.0097	0.00075
1,2,3-Trichlorobenzene (TIC)	ND	--	--	ND	--	--	ND	--	--

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

Reviewed/Approved By: Mark Johnson  
 Operations Manager

Date 5/21/15

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: 05/07/15  
 Matrix: Air  
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	METHOD BLANK			METHOD BLANK								
Client Sample I.D.:	-			-								
Date/Time Sampled:	-			-								
Date/Time Analyzed:	5/16/15 11:19			5/17/15 16:12								
QC Batch No.:	150516MS2A1			150517MS2A1								
Analyst Initials:	VM			VM								
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-CI-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	ND	0.0010	0.000048						
1,1,2-CI 1,2,2-F ethane (113)	ND	0.00020	0.000054	ND	0.00020	0.000054						
Acetone	0.000094 J	0.0010	0.000058	ND	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	0.00017 J	0.00050	0.000019	0.00019 J	0.00050	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	0.000049 J	0.00020	0.000016	0.000038 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	0.000099	ND	0.00020	0.000099						
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	ND	0.00020	0.000023						
o-Xylene	ND	0.00020	0.000024	ND	0.00020	0.000024						



Client: CH2M HILL  
 Attn: Daniel Jablonski  
 Project Name: SFPP - Norwalk Site  
 Project No.: NA  
 Date Received: 05/07/15  
 Matrix: Air  
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	METHOD BLANK			METHOD BLANK									
Client Sample I.D.:	-			-									
Date/Time Sampled:	-			-									
Date/Time Analyzed:	5/16/15 11:19			5/17/15 16:12									
QC Batch No.:	150516MS2A1			150517MS2A1									
Analyst Initials:	VM			VM									
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	--	--							

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

Reviewed/Approved By: Mark Johnson  
 Operations Manager

Date: 5/22/15

The cover letter is an integral part of this analytical report



QC Batch #: 150516MS2A1

Matrix: Air

EPA Method TO-14/TO-15

Lab No:	Method Blank	LCS		LCSD		Limits					
Date/Time Analyzed:	5/16/15 11:19	5/16/15 8:40		5/16/15 9:18							
Data File ID:	16MAY009.D	16MAY005.D		16MAY006.D							
Analyst Initials:	DT	DT		DT							
Dilution Factor:	0.2	1.0		1.0							
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	10.6	106	10.8	108	1.7	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	11.6	116	11.6	116	0.4	70	130	30	Pass
Toluene	0.0	10.0	9.6	96	9.6	96	0.0	70	130	30	Pass
1,1,2,2-Tetrachloroethane	0.0	10.0	8.3	83	8.1	81	2.2	70	130	30	Pass

RPD = Relative Percent Difference

Reviewed/Approved By: \_\_\_\_\_

*Mark Johnson*  
Mark Johnson  
Operations Manager

Date: \_\_\_\_\_

*5/22/15*

The cover letter is an integral part of this analytical report





Client: CH2M HILL  
Attn: Daniel Jablonski

Client's Project: SFPP - Norwalk Site; NA  
Date Received: 5/7/2015  
Matrix: Air

TGNMOC by SCAQMD 25.1

Lab No.:		G050704-01			G050704-02			G050704-03					
Client Sample I.D.:		VPOST-05-05			VEFF-05-05			VEFF-05-05D					
Date/ Time Sampled:		5/5/2015 14:19			5/5/2015 14:30			5/5/2015 14:30					
Date/ Time Analyzed:		5/22/2015 15:51			5/21/2015 20:18			5/21/2015 21:17					
Analyst Initials:		AS			AS			AS					
Data Files:		21may077/078			21may045/046			21may049/050					
QC Batch:		150521GC8A2			150521GC8A2			150521GC8A2					
Dilution Factor:		2.1			2.0			1.9					
ANALYTE	Units	Results	RL	MDL	Results	RL	MDL	Results	RL	MDL			
TGNMOC as Hexane	ppmv C	760	3.5	1.1	17	3.3	1.0	9.5	3.2	0.99			
Methane	ppmv	130	21	2.4	45	20	2.3	30	19	2.2			

ND = Not detected above method detection limit (MDL)  
PQL = Practical Quantitation Limit.  
TGNMOC = Total Gaseous Non-Methane Organic Carbon.  
J = Trace amount. Analyte concentration between MDL and RL.  
RL = Reporting Limit.

Reviewed/Approved By: \_\_\_\_\_  
*MJ*  
Mark J. Johnson  
Operations Manager

Date: 5/27/15

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




QC Batch No.: 150521GC8A2  
 Matrix: Air  
 Units: ppmv

QC for TGNMOC by SCAQMD 25.1

Lab No.:	Method Blank			LCS		LCSD			
Date Analyzed:	5/21/2015 19:49			5/21/2015 19:05		5/21/2015 19:20			
Analyst Initials:	AS			AS		AS			
Datafile:	21may043			21may040		21may041			
Dilution Factor:	1.0			1.0		1.0			
ANALYTE	Results	RL	MDL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
TGNMOC as Hexane	ND	1.7	0.5	118	70-130%	118	70-130%	0.3	<30
Methane	3.0 J	10	1.1	108	70-130%	108	70-130%	0.6	<30

ND = Not Detected (Below MDL)  
 RL = Reporting Limit  
 MDL = Method Detection Limit  
 J = Trace amount below the RL and equal to or above the MDL

Reviewed/Approved By:  Date: 5/27/15  
 Mark J. Johnson  
 Operations Manager

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

July 9, 2015

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



**ADE-1461**  
EPA Methods TO-3,  
TO14A, TO15 SIM & Scan,  
ASTM D1946



**LA Cert 04140**  
EPA Methods TO3, TO14A, TO15, 25C/3C,  
RSK-175  
**TX Cert T104704450-09-TX**  
EPA Methods TO14A, TO15  
**UT Cert CA0133332014-1**  
EPA Methods TO3, TO14A, TO15, RSK-175

LABORATORY TEST RESULTS

Project Reference: SFPP - Norwalk Site  
Lab Number: G070113-01/03

Enclosed are results for sample(s) received 7/1/15 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).

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,

A handwritten signature in blue ink that appears to read "Mark Johnson".

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)

G070113-01/03

CHAIN OF CUSTODY RECORD

DATE: 6/30/15  
 PAGE: 1 OF 1

LABORATORY CLIENT: <b>CH2M HILL: Attn - Dan Jablonski</b>									CLIENT PROJECT NAME / NUMBER: <b>SFP - Norwalk Site</b>					P.O. NO.:									
ADDRESS: <b>6 Hutton Centre Dr, Suite 700</b>									PROJECT CONTACT: <b>James Dye</b>					QUOTE NO.:									
CITY: <b>Santa Ana, CA 92707</b>									SAMPLER(S): (SIGNATURE) <i>[Signature]</i>					LAB USE ONLY <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>									
TEL: <b>714-429-2020</b>			FAX:			E-MAIL: <b>Daniel.Jablonski@CH2M.com</b>			<b>REQUESTED ANALYSIS</b>														
TURNAROUND TIME <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48HR <input type="checkbox"/> 72 HR <input checked="" type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY) <input type="checkbox"/> RWQCB REPORTING <input type="checkbox"/> ARCHIVE SAMPLES UNTIL ____/____/____																							
SPECIAL INSTRUCTIONS <b>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.</b>									<b>TO-15 (VOCs Target Analytes)</b> <b>TO-3 (TPH-g)</b> <b>TGM/IOC as Hexane (EPA 25.1)</b> <b>ASTM-D 1946 (O2/Argon, CO2, CH4, N2)</b>					<b>Comments</b>									
LAB USE ONLY	SAMPLE ID	LOCATION/ DESCRIPTION	SAMPLING				MAT-RIX	NO. OF CONT.															
			DATE	TIME	INITIAL PRESSURE ("Hg)	FINAL PRESSURE ("Hg)																	
<b>01</b>	<del>VINF</del>	Influent Vapor (from header)					Air	1								X	X	X					Batch Certified 1-L SUMMA
<b>02</b>	VPOST-06-30	Post-Dilution	6/20/15	1417	-29	-5	Air	1								X	X	X					Individually Certified 1-L SUMMA
<b>03</b>	VEFF-06-30	Outlet (stack)	6/30/15	1410	-29	-5	Air	1	X	X						Individually Certified 1-L SUMMA							
	VEFF-06-30-S	Split Outlet (stack)	6/30/15	1405	-28	-5	Air	1	X	X						Individually Certified 1-L SUMMA							
														TAL includes historical VOCs and remaining ATLI List per subcontract.									
Relinquished by: (Signature) <i>[Signature]</i>						Received by: (Signature) <b>FED EX</b>						Date: <b>6/30/15</b>		Time: <b>1530</b>									
Relinquished by: (Signature) <b>FED EX</b>						Received by: (Signature) <i>[Signature]</i>						Date: <b>7/1/15</b>		Time: <b>1056</b>									
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: 07/01/15  
 Matrix: Air  
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	G070113-01			G070113-02			G070113-03					
Client Sample I.D.:	VPOST-06-30			VEFF-06-30			VEFF-06-30-S					
Date/Time Sampled:	6/30/15 14:17			6/30/15 14:10			6/30/15 14:05					
Date/Time Analyzed:	7/7/15 15:04			7/7/15 20:40			7/7/15 16:26					
QC Batch No.:	150707MS2A1			150707MS2A1			150707MS2A1					
Analyst Initials:	DT			DT			DT					
Dilution Factor:	71			2.1			2.1					
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv			
Dichlorodifluoromethane (12)	ND	0.071	0.011	0.00034 J	0.0021	0.00032	0.00033 J	0.0021	0.00032			
Chloromethane	ND	0.14	0.016	ND	0.0042	0.00046	ND	0.0042	0.00046			
1,2-CI-1,1,2,2-F ethane (114)	ND	0.071	0.014	ND	0.0021	0.00042	ND	0.0021	0.00042			
Vinyl Chloride	ND	0.071	0.011	ND	0.0021	0.00034	ND	0.0021	0.00034			
Bromomethane	0.023 J	0.071	0.021	ND	0.0021	0.00062	ND	0.0021	0.00062			
Chloroethane	ND	0.071	0.059	ND	0.0021	0.0018	ND	0.0021	0.0018			
Trichlorofluoromethane (11)	ND	0.071	0.015	ND	0.0021	0.00045	ND	0.0021	0.00045			
1,1-Dichloroethene	ND	0.071	0.016	ND	0.0021	0.00048	ND	0.0021	0.00048			
Carbon Disulfide	ND	0.35	0.017	0.14	0.011	0.00050	0.028	0.011	0.00050			
1,1,2-CI 1,2,2-F ethane (113)	ND	0.071	0.019	ND	0.0021	0.00057	ND	0.0021	0.00057			
Acetone	0.080 J	0.35	0.020	0.031	0.011	0.00061	0.036	0.011	0.00061			
Methylene Chloride	ND	0.071	0.020	ND	0.0021	0.00060	ND	0.0021	0.00060			
t-1,2-Dichloroethene	ND	0.071	0.021	ND	0.0021	0.00063	ND	0.0021	0.00063			
1,1-Dichloroethane	0.010 J	0.071	0.0096	ND	0.0021	0.00029	ND	0.0021	0.00029			
c-1,2-Dichloroethene	ND	0.071	0.014	ND	0.0021	0.00041	ND	0.0021	0.00041			
2-Butanone	ND	0.071	0.044	0.014	0.0021	0.0013	0.041	0.0021	0.0013			
t-Butyl Methyl Ether (MTBE)	ND	0.071	0.016	0.10	0.0021	0.00047	0.21	0.0021	0.00047			
Chloroform	ND	0.071	0.0099	ND	0.0021	0.00029	ND	0.0021	0.00029			
1,1,1-Trichloroethane	ND	0.071	0.0071	ND	0.0021	0.00021	ND	0.0021	0.00021			
Carbon Tetrachloride	ND	0.071	0.012	ND	0.0021	0.00037	ND	0.0021	0.00037			
Benzene	3.1	0.18	0.0068	0.023	0.0053	0.00020	0.048	0.0053	0.00020			
1,2-Dichloroethane	ND	0.071	0.0053	ND	0.0021	0.00016	ND	0.0021	0.00016			
Trichloroethene	0.015 J	0.071	0.010	ND	0.0021	0.00030	ND	0.0021	0.00030			
1,2-Dichloropropane	ND	0.071	0.013	ND	0.0021	0.00038	ND	0.0021	0.00038			
Bromodichloromethane	ND	0.071	0.0043	0.0013 J	0.0021	0.00013	0.0031	0.0021	0.00013			
c-1,3-Dichloropropene	ND	0.071	0.0085	ND	0.0021	0.00025	ND	0.0021	0.00025			
4-Methyl-2-Pentanone	ND	0.071	0.0048	ND	0.0021	0.00014	ND	0.0021	0.00014			
Toluene	3.8	0.071	0.0056	0.031	0.0021	0.00017	0.062	0.0021	0.00017			
t-1,3-Dichloropropene	ND	0.071	0.0073	ND	0.0021	0.00022	ND	0.0021	0.00022			
1,1,2-Trichloroethane	ND	0.071	0.011	ND	0.0021	0.00034	ND	0.0021	0.00034			
1,3-Dichloropropane	ND	0.071	0.0035	ND	0.0021	0.00010	ND	0.0021	0.00010			
Tetrachloroethene	ND	0.071	0.0085	ND	0.0021	0.00025	ND	0.0021	0.00025			
2-Hexanone	ND	0.071	0.015	ND	0.0021	0.00043	ND	0.0021	0.00043			
Dibromochloromethane	ND	0.071	0.013	ND	0.0021	0.00038	ND	0.0021	0.00038			
1,2-Dibromoethane	ND	0.071	0.0064	ND	0.0021	0.00019	ND	0.0021	0.00019			
Chlorobenzene	ND	0.071	0.0055	ND	0.0021	0.00016	ND	0.0021	0.00016			
Ethylbenzene	0.38	0.071	0.0041	0.0035	0.0021	0.00012	0.0079	0.0021	0.00012			
p,&m-Xylene	2.1	0.071	0.0080	0.019	0.0021	0.00024	0.043	0.0021	0.00024			
o-Xylene	0.72	0.071	0.0086	0.0078	0.0021	0.00026	0.019	0.0021	0.00026			



Client: CH2M Hill  
 Attn: Daniel Jablonski  
 Project Name: SFPP - Norwalk Site  
 Project No.: NA  
 Date Received: 07/01/15  
 Matrix: Air  
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	G070113-01			G070113-02			G070113-03		
Client Sample I.D.:	VPOST-06-30			VEFF-06-30			VEFF-06-30-S		
Date/Time Sampled:	6/30/15 14:17			6/30/15 14:10			6/30/15 14:05		
Date/Time Analyzed:	7/7/15 15:04			7/7/15 20:40			7/7/15 16:26		
QC Batch No.:	150707MS2A1			150707MS2A1			150707MS2A1		
Analyst Initials:	DT			DT			DT		
Dilution Factor:	71			2.1			2.1		
ANALYTE	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv	Result ppmv	RL ppmv	MDL ppmv
Styrene	0.029 J	0.071	0.0091	0.00055 J	0.0021	0.00027	0.0011 J	0.0021	0.00027
Bromoform	ND	0.071	0.0039	ND	0.0021	0.00012	ND	0.0021	0.00012
Isopropyl benzene	0.031 J	0.071	0.0074	ND	0.0021	0.00022	0.00096 J	0.0021	0.00022
1,1,2,2-Tetrachloroethane	ND	0.14	0.0043	ND	0.0042	0.00013	ND	0.0042	0.00013
Benzyl Chloride	ND	0.071	0.013	ND	0.0021	0.00039	ND	0.0021	0.00039
1,2,3-Trichloropropane	ND	0.071	0.019	ND	0.0021	0.00057	ND	0.0021	0.00057
n-Propyl Benzene	0.038 J	0.071	0.0041	0.00066 J	0.0021	0.00012	0.0017 J	0.0021	0.00012
4-Ethyl Toluene	0.34	0.071	0.0045	0.0047	0.0021	0.00013	0.013	0.0021	0.00013
1,3,5-Trimethylbenzene	0.14	0.14	0.012	0.0021 J	0.0042	0.00036	0.0064	0.0042	0.00036
4-Chlorotoluene	ND	0.071	0.0084	ND	0.0021	0.00025	ND	0.0021	0.00025
tert-Butylbenzene	0.031 J	0.071	0.0064	0.00066 J	0.0021	0.00019	0.0019 J	0.0021	0.00019
1,2,4-Trimethylbenzene	0.26	0.14	0.0080	0.0053	0.0042	0.00024	0.015	0.0042	0.00024
sec-Butylbenzene	ND	0.071	0.0068	ND	0.0021	0.00020	0.00032 J	0.0021	0.00020
p-Isopropyltoluene	0.0097 J	0.071	0.0092	0.00063 J	0.0021	0.00027	0.00045 J	0.0021	0.00027
1,3-Dichlorobenzene	ND	0.071	0.0086	ND	0.0021	0.00026	ND	0.0021	0.00026
1,4-Dichlorobenzene	ND	0.071	0.010	ND	0.0021	0.00031	ND	0.0021	0.00031
n-Butylbenzene	ND	0.071	0.0052	ND	0.0021	0.00015	ND	0.0021	0.00015
1,2-Dichlorobenzene	ND	0.071	0.0088	ND	0.0021	0.00026	ND	0.0021	0.00026
1,2,4-Trichlorobenzene	ND	0.14	0.012	ND	0.0042	0.00035	ND	0.0042	0.00035
Hexachlorobutadiene	ND	0.071	0.0042	ND	0.0021	0.00012	ND	0.0021	0.00012
t-Butanol	ND	0.35	0.014	0.0020 J	0.011	0.00040	ND	0.011	0.00040
n-Hexane	11	0.35	0.0095	0.16	0.011	0.00028	0.36	0.011	0.00028
Isopropyl ether	ND	0.35	0.0079	ND	0.011	0.00023	ND	0.011	0.00023
t-Butyl ethyl ether	ND	0.35	0.014	ND	0.011	0.00042	ND	0.011	0.00042
2,2-Dichloropropane	ND	0.35	0.0067	ND	0.011	0.00020	ND	0.011	0.00020
t-Amyl methyl ether	ND	0.35	0.0050	ND	0.011	0.00015	ND	0.011	0.00015
1,4-Dioxane	ND	0.35	0.012	ND	0.011	0.00037	ND	0.011	0.00037
Naphthalene	ND	0.35	0.027	0.0012 J	0.011	0.00081	0.0025 J	0.011	0.00081
1,2,3-Trichlorobenzene (TIC)	ND	--	--	ND	--	--	ND	--	--

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

Reviewed/Approved By: Mark Johnson  
 Mark Johnson  
 Operations Manager

Date: 7/9/15

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: 07/01/15  
 Matrix: Air  
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	METHOD BLANK																	
Client Sample I.D.:	-																	
Date/Time Sampled:	-																	
Date/Time Analyzed:	7/7/15 12:09																	
QC Batch No.:	150707MS2A1																	
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-CI-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-CI 1,2,2-F ethane (113)	ND	0.00020	0.000054															
Acetone	0.00011 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	0.000049 J	0.00050	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	0.000031 J	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															



Client: CH2M Hill  
 Attn: Daniel Jablonski  
 Project Name: SFPP - Norwalk Site  
 Project No.: NA  
 Date Received: 07/01/15  
 Matrix: Air  
 Reporting Units: ppmv

EPA Method TO15

Lab No.:	METHOD BLANK													
Client Sample I.D.:	-													
Date/Time Sampled:	-													
Date/Time Analyzed:	7/7/15 12:09													
QC Batch No.:	150707MS2A1													
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	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	--	--											

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

Reviewed/Approved By: Mark Johnson  
 Mark Johnson  
 Operations Manager

Date: 7/9/15

The cover letter is an integral part of this analytical report



QC Batch #: 150707MS2A1

Matrix: Air

EPA Method TO-14/TO-15											
Lab No:	Method Blank		LCS		LCSD						
Date/Time Analyzed:	7/7/15 12:09		7/7/15 8:40	7/7/15 9:21							
Data File ID:	07JUL008.D		07JUL004.D	07JUL005.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	9.7	97	10.0	100	2.6	70	130	30	Pass
Methylene Chloride	0.0	10.0	10.2	102	10.3	103	0.4	70	130	30	Pass
Trichloroethene	0.0	10.0	10.3	103	10.9	109	5.0	70	130	30	Pass
Toluene	0.0	10.0	9.7	97	10.0	100	2.6	70	130	30	Pass
1,1,2,2-Tetrachloroethane	0.0	10.0	8.6	86	8.9	89	2.7	70	130	30	Pass

RPD = Relative Percent Difference

Reviewed/Approved By: Mark Johnson  
 Mark Johnson  
 Operations Manager

Date: 7/9/15

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

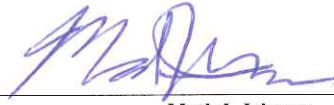
Client: CH2M Hill  
 Attn: Daniel Jablonski

Client's Project: SFPP - Norwalk Site; NA  
 Date Received: 7/1/2015  
 Matrix: Air

TGNMOC by SCAQMD 25.1

Lab No.:	G070113-01	G070113-02			G070113-03								
Client Sample I.D.:	VPOST-06-30	VEFF-06-30			VEFF-06-30-S								
Date/ Time Sampled:	6/30/2015 14:17	6/30/2015 14:10			6/30/2015 14:05								
Date/ Time Analyzed:	7/7/2015 14:19	7/7/2015 13:36			7/7/2015 12:28								
Analyst Initials:	AS	AS			AS								
Data Files:	07jul024/025	07jul021/022			07jul017/018								
QC Batch:	150707GC8A1	150707GC8A1			150707GC8A1								
Dilution Factor:	2.0	2.1			2.1								
ANALYTE	Units	Results	RL	MDL	Results	RL	MDL	Results	RL	MDL			
TGNMOC as Hexane	ppmv C	270	3.4	1.0	4.7	3.5	1.1	11	3.5	1.1			
Methane	ppmv	66	20	2.3	8.7 J	21	2.4	19 J	21	2.4			

ND = Not detected above method detection limit (MDL)  
 PQL = Practical Quantitation Limit.  
 TGNMOC = Total Gaseous Non-Methane Organic Carbon.  
 J = Trace amount. Analyte concentration between MDL and RL.  
 RL = Reporting Limit.

Reviewed/Approved By:   
 Mark J. Johnson  
 Operations Manager

Date: 7-9-15


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

QC Batch No.: 150707GC8A1  
 Matrix: Air  
 Units: ppmv

QC for TGNMOC by SCAQMD 25.1

Lab No.:	Method Blank	LCS	LCSD						
Date Analyzed:	7/7/2015 11:14	7/7/2015 10:30	7/7/2015 10:45						
Analyst Initials:	AS	AS	AS						
Datafile:	07jul012	07jul009	07jul010						
Dilution Factor:	1.0	1.0	1.0						
ANALYTE	Results	RL	MDL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
TGNMOC as Hexane	ND	1.7	0.51	102	70-130%	101	70-130%	0.5	<30
Methane	ND	10	1.1	98	70-130%	98	70-130%	0.1	<30

ND = Not Detected (Below MDL)  
 RL = Reporting Limit  
 MDL = Method Detection Limit  
 J = Trace amount below the RL and equal to or above the MDL

Reviewed/Approved By:   
 Mark J. Johnson  
 Operations Manager

Date: 7-9-15

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:** 07/01/15  
**Matrix:** Air  
**Reporting Units:** % v/v

**ASTM D1946**

<b>Lab No.:</b>	<b>G070113-01</b>			
<b>Client Sample I.D.:</b>	<b>VPOST-06-30</b>			
<b>Date/Time Sampled:</b>	<b>6/30/15 14:17</b>			
<b>Date/Time Analyzed:</b>	<b>7/7/15 14:19</b>			
<b>QC Batch No.:</b>	<b>150707GC8A1</b>			
<b>Analyst Initials:</b>	<b>AS</b>			
<b>Dilution Factor:</b>	<b>2.0</b>			

<b>ANALYTE</b>	<b>Result % v/v</b>	<b>RL % v/v</b>	<b>MDL % v/v</b>						
Carbon Dioxide	0.37	0.020	0.00086						
Oxygen/Argon	21	1.0	0.074						
Nitrogen	78	2.0	0.29						
Methane	0.0065	0.0020	0.000092						

Results normalized including non-methane hydrocarbons  
**MDL = Method Detection Limit**  
**ND= Not Detected (below MDL)**  
**RL = Reporting Limit**  
**J = Trace amount. Analyte concentration between RL and MDL.**

Reviewed/Approved By:   
 Mark Johnson  
 Operations Manager

Date 7-9-15

The cover letter is an integral part of this analytical report



QC Batch No.: 150707GC8A1

Matrix: Air

Units: % v/v

**QC for ASTM D1946**

Lab No.:	Method Blank				LCS		LCSD			
Date/Time Analyzed:	7/7/15 11:14				7/7/15 10:30		7/7/15 10:45			
Analyst Initials:	AS				AS		AS			
Datafile:	07jul012				07jul009		07jul010			
Dilution Factor:	1.0				1.0		1.0			
ANALYTE	Results	RL	MDL	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria	
Carbon Dioxide	ND	0.010	0.00042	99	70-130%	99	70-130%	0.8	<30	
Oxygen/Argon	ND	0.50	0.037	102	70-130%	101	70-130%	1.2	<30	
Nitrogen	ND	1.0	0.14	103	70-130%	101	70-130%	1.1	<30	
Methane	ND	0.0010	0.000046	98	70-130%	98	70-130%	0.1	<30	

PQL = Practical Quantitation Limit

ND = Not Detected (Below MDL)

RL = PQL X Dilution Factor

J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By: \_\_\_\_\_



**Mark J. Johnson**  
Operations Manager

Date: \_\_\_\_\_

7-9-15

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



April 15, 2015

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

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

TEL:  
FAX:

Workorder No.: N015231

RE: SFPP - Norwalk Site

Attention: Dan Jablonski

Enclosed are the results for sample(s) received on April 08, 2015 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,

*Nancy Libucaw for*

Glen Gesmundo  
QA Manager

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**CLIENT:** CH2MHill  
**Project:** SFPP - Norwalk Site  
**Lab Order:** N015231

**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 8260B:**

Dilution was necessary due to high concentration of some analytes.

Laboratory Control Sample (LCS) recovery biased high for Acetone and Chloroethane on batch P15VW066. Sample result was non-detect (ND) for these analytes therefore reanalysis of the sample was not necessary.

RPD for Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD) is outside criteria for Acetone on batch P15VW066. Sample result was non-detect (ND) for this analyte therefore reanalysis of the sample was not necessary.

RPD for Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD) is outside criteria for 2-Butanone. Analyte recovery on both met acceptance criteria.



**CLIENT:** CH2MHill  
**Project:** SFPP - Norwalk Site  
**Lab Order:** N015231  
**Contract No:**

**Work Order Sample Summary**

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N015231-001A	INF-04-07	Wastewater	4/7/2015 3:30:00 PM	4/7/2015	4/15/2015
N015231-001B	INF-04-07	Wastewater	4/7/2015 3:30:00 PM	4/7/2015	4/15/2015



**ASSET Laboratories**

**ANALYTICAL RESULTS**

Print Date: 15-Apr-15

**CLIENT:** CH2MHill  
**Lab Order:** N015231  
**Project:** SFPP - Norwalk Site  
**Lab ID:** N015231-001

**Client Sample ID:** INF-04-07  
**Collection Date:** 4/7/2015 3:30:00 PM  
**Matrix:** WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID: MS5_150408A	QC Batch: P15VW062	PrepDate	Analyst: QBM			
1,1,1,2-Tetrachloroethane	ND	0.14	2.0	ug/L	2	4/8/2015 02:16 PM
1,1,1-Trichloroethane	ND	0.14	2.0	ug/L	2	4/8/2015 02:16 PM
1,1,2,2-Tetrachloroethane	ND	0.20	2.0	ug/L	2	4/8/2015 02:16 PM
1,1,2-Trichloroethane	ND	0.084	2.0	ug/L	2	4/8/2015 02:16 PM
1,1-Dichloroethane	ND	0.11	1.0	ug/L	2	4/8/2015 02:16 PM
1,1-Dichloroethene	ND	0.33	2.0	ug/L	2	4/8/2015 02:16 PM
1,1-Dichloropropene	ND	0.15	2.0	ug/L	2	4/8/2015 02:16 PM
1,2,3-Trichlorobenzene	ND	0.15	2.0	ug/L	2	4/8/2015 02:16 PM
1,2,3-Trichloropropane	ND	0.14	2.0	ug/L	2	4/8/2015 02:16 PM
1,2,4-Trichlorobenzene	ND	0.21	2.0	ug/L	2	4/8/2015 02:16 PM
1,2,4-Trimethylbenzene	2000	3.6	100	ug/L	100	4/8/2015 01:26 PM
1,2-Dibromo-3-chloropropane	ND	0.47	4.0	ug/L	2	4/8/2015 02:16 PM
1,2-Dibromoethane	ND	0.072	2.0	ug/L	2	4/8/2015 02:16 PM
1,2-Dichlorobenzene	0.36	0.096	2.0	J ug/L	2	4/8/2015 02:16 PM
1,2-Dichloroethane	ND	0.088	1.0	ug/L	2	4/8/2015 02:16 PM
1,2-Dichloropropane	ND	0.19	2.0	ug/L	2	4/8/2015 02:16 PM
1,3,5-Trimethylbenzene	500	0.54	10	ug/L	10	4/8/2015 01:51 PM
1,3-Dichlorobenzene	ND	0.12	2.0	ug/L	2	4/8/2015 02:16 PM
1,3-Dichloropropane	ND	0.15	2.0	ug/L	2	4/8/2015 02:16 PM
1,4-Dichlorobenzene	ND	0.16	2.0	ug/L	2	4/8/2015 02:16 PM
2,2-Dichloropropane	ND	0.12	2.0	ug/L	2	4/8/2015 02:16 PM
2-Butanone	ND	1.4	20	ug/L	2	4/8/2015 02:16 PM
2-Chlorotoluene	ND	0.11	2.0	ug/L	2	4/8/2015 02:16 PM
4-Chlorotoluene	1.9	0.078	2.0	J ug/L	2	4/8/2015 02:16 PM
4-Isopropyltoluene	6.7	0.088	2.0	ug/L	2	4/8/2015 02:16 PM
4-Methyl-2-pentanone	ND	1.2	20	ug/L	2	4/8/2015 02:16 PM
Acetone	ND	5.3	50	ug/L	5	4/14/2015 05:40 PM
Benzene	9000	4.8	100	ug/L	100	4/8/2015 01:26 PM
Bromobenzene	ND	0.11	2.0	ug/L	2	4/8/2015 02:16 PM
Bromochloromethane	ND	0.098	2.0	ug/L	2	4/8/2015 02:16 PM
Bromodichloromethane	ND	0.096	2.0	ug/L	2	4/8/2015 02:16 PM
Bromoform	ND	0.12	2.0	ug/L	2	4/8/2015 02:16 PM
Bromomethane	ND	0.15	2.0	ug/L	2	4/8/2015 02:16 PM
Carbon disulfide	0.76	0.080	2.0	J ug/L	2	4/8/2015 02:16 PM
Carbon tetrachloride	ND	0.11	1.0	ug/L	2	4/8/2015 02:16 PM
Chlorobenzene	ND	0.056	2.0	ug/L	2	4/8/2015 02:16 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



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**ANALYTICAL RESULTS**

Print Date: 15-Apr-15

**CLIENT:** CH2MHill  
**Lab Order:** N015231  
**Project:** SFPP - Norwalk Site  
**Lab ID:** N015231-001

**Client Sample ID:** INF-04-07  
**Collection Date:** 4/7/2015 3:30:00 PM  
**Matrix:** WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID: MS5_150408A	QC Batch: P15VW062	PrepDate	Analyst: QBM			
Chloroethane	ND	0.20	2.0	ug/L	2	4/8/2015 02:16 PM
Chloroform	ND	0.096	2.0	ug/L	2	4/8/2015 02:16 PM
Chloromethane	ND	0.086	2.0	ug/L	2	4/8/2015 02:16 PM
cis-1,2-Dichloroethene	ND	0.11	2.0	ug/L	2	4/8/2015 02:16 PM
cis-1,3-Dichloropropene	ND	0.086	2.0	ug/L	2	4/8/2015 02:16 PM
Di-isopropyl ether	8.7	0.068	2.0	ug/L	2	4/8/2015 02:16 PM
Dibromochloromethane	ND	0.11	2.0	ug/L	2	4/8/2015 02:16 PM
Dibromomethane	ND	0.22	2.0	ug/L	2	4/8/2015 02:16 PM
Dichlorodifluoromethane	ND	0.11	2.0	ug/L	2	4/8/2015 02:16 PM
Ethyl tert-butyl ether	ND	0.12	2.0	ug/L	2	4/8/2015 02:16 PM
Ethylbenzene	2100	3.6	100	ug/L	100	4/8/2015 01:26 PM
Freon-113	ND	0.31	2.0	ug/L	2	4/8/2015 02:16 PM
Hexachlorobutadiene	ND	0.14	2.0	ug/L	2	4/8/2015 02:16 PM
Isopropylbenzene	70	0.082	2.0	ug/L	2	4/8/2015 02:16 PM
m,p-Xylene	9100	14	100	ug/L	100	4/8/2015 01:26 PM
Methylene chloride	ND	0.56	4.0	ug/L	2	4/8/2015 02:16 PM
MTBE	1200	9.8	100	ug/L	100	4/8/2015 01:26 PM
n-Butylbenzene	19	0.15	2.0	ug/L	2	4/8/2015 02:16 PM
n-Propylbenzene	220	0.49	10	ug/L	10	4/8/2015 01:51 PM
Naphthalene	670	0.62	10	ug/L	10	4/8/2015 01:51 PM
o-Xylene	3700	4.2	100	ug/L	100	4/8/2015 01:26 PM
sec-Butylbenzene	11	0.072	2.0	ug/L	2	4/8/2015 02:16 PM
Styrene	ND	0.080	2.0	ug/L	2	4/8/2015 02:16 PM
Tert-amyl methyl ether	17	0.11	2.0	ug/L	2	4/8/2015 02:16 PM
Tert-Butanol	ND	0.80	10	ug/L	2	4/8/2015 02:16 PM
tert-Butylbenzene	0.42	0.080	2.0	J ug/L	2	4/8/2015 02:16 PM
Tetrachloroethene	ND	0.23	2.0	ug/L	2	4/8/2015 02:16 PM
Toluene	18000	5.0	400	ug/L	200	4/8/2015 03:30 PM
trans-1,2-Dichloroethene	ND	0.15	2.0	ug/L	2	4/8/2015 02:16 PM
trans-1,3-Dichloropropene	ND	0.10	2.0	ug/L	2	4/8/2015 02:16 PM
Trichloroethene	ND	0.15	2.0	ug/L	2	4/8/2015 02:16 PM
Trichlorofluoromethane	ND	0.068	2.0	ug/L	2	4/8/2015 02:16 PM
Vinyl chloride	ND	0.088	1.0	ug/L	2	4/8/2015 02:16 PM
Xylenes, Total	13000	150	200	ug/L	100	4/8/2015 01:26 PM
Surr: 1,2-Dichloroethane-d4	93.4	0	72-119	%REC	200	4/8/2015 03:30 PM
Surr: 1,2-Dichloroethane-d4	107	0	72-119	%REC	5	4/14/2015 05:40 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



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**ASSET Laboratories**

**ANALYTICAL RESULTS**

Print Date: 15-Apr-15

**CLIENT:** CH2MHill  
**Lab Order:** N015231  
**Project:** SFPP - Norwalk Site  
**Lab ID:** N015231-001

**Client Sample ID:** INF-04-07  
**Collection Date:** 4/7/2015 3:30:00 PM  
**Matrix:** WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID: MS5_150408A	QC Batch: P15VW062	PrepDate	Analyst: QBM
Surr: 1,2-Dichloroethane-d4	95.1 0	72-119 %REC	100 4/8/2015 01:26 PM
Surr: 1,2-Dichloroethane-d4	110 0	72-119 %REC	2 4/8/2015 02:16 PM
Surr: 1,2-Dichloroethane-d4	101 0	72-119 %REC	10 4/8/2015 01:51 PM
Surr: 4-Bromofluorobenzene	101 0	76-119 %REC	2 4/8/2015 02:16 PM
Surr: 4-Bromofluorobenzene	104 0	76-119 %REC	100 4/8/2015 01:26 PM
Surr: 4-Bromofluorobenzene	102 0	76-119 %REC	200 4/8/2015 03:30 PM
Surr: 4-Bromofluorobenzene	106 0	76-119 %REC	10 4/8/2015 01:51 PM
Surr: 4-Bromofluorobenzene	101 0	76-119 %REC	5 4/14/2015 05:40 PM
Surr: Dibromofluoromethane	94.0 0	85-115 %REC	100 4/8/2015 01:26 PM
Surr: Dibromofluoromethane	103 0	85-115 %REC	5 4/14/2015 05:40 PM
Surr: Dibromofluoromethane	93.3 0	85-115 %REC	200 4/8/2015 03:30 PM
Surr: Dibromofluoromethane	96.6 0	85-115 %REC	2 4/8/2015 02:16 PM
Surr: Dibromofluoromethane	94.5 0	85-115 %REC	10 4/8/2015 01:51 PM
Surr: Toluene-d8	106 0	81-120 %REC	5 4/14/2015 05:40 PM
Surr: Toluene-d8	97.8 0	81-120 %REC	100 4/8/2015 01:26 PM
Surr: Toluene-d8	99.8 0	81-120 %REC	10 4/8/2015 01:51 PM
Surr: Toluene-d8	98.7 0	81-120 %REC	200 4/8/2015 03:30 PM
Surr: Toluene-d8	102 0	81-120 %REC	2 4/8/2015 02:16 PM

**TPH EXTRACTABLE BY GC/FID**

**EPA 3510C**

**EPA 8015B**

RunID: GC1_150410A	QC Batch: 50162	PrepDate	4/9/2015	Analyst: MDM
TPH-Diesel (C13-C22)	92000 1600	2600 ug/L	100	4/10/2015 04:18 PM
TPH-Oil (C23-C36)	2900 14	26 ug/L	1	4/10/2015 02:12 PM
Surr: Octacosane	118 0	26-152 %REC	1	4/10/2015 02:12 PM
Surr: p-Terphenyl	123 0	57-132 %REC	1	4/10/2015 02:12 PM

**GASOLINE RANGE ORGANICS BY GC/FID**

**EPA 8015B**

RunID: GC4_150408A	QC Batch: E15VW025	PrepDate	Analyst: QBM
TPH-Gasoline (C4-C12)	105000 320	1000 ug/L	20 4/8/2015 11:30 AM
Surr: Chlorobenzene - d5	85.0 0	74-138 %REC	20 4/8/2015 11:30 AM

**TOTAL TPH**

**EPA 8015B**

RunID: GC1_150410A	QC Batch: R99869	PrepDate	Analyst: MDM
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**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



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**ANALYTICAL RESULTS**

Print Date: 15-Apr-15

**CLIENT:** CH2MHill  
**Lab Order:** N015231  
**Project:** SFPP - Norwalk Site  
**Lab ID:** N015231-001

**Client Sample ID:** INF-04-07  
**Collection Date:** 4/7/2015 3:30:00 PM  
**Matrix:** WASTEWATER

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**TOTAL TPH**

**EPA 8015B**

RunID: <b>GC1_150410A</b>	QC Batch: <b>R99869</b>			PrepDate			Analyst: <b>MDM</b>
Total TPH	200000	22	50	ug/L		1	4/10/2015

---

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



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**CLIENT:** CH2MHill  
**Work Order:** N015231  
**Project:** SFPP - Norwalk Site

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 8015\_W\_FP\_SFPP**

Sample ID <b>MB-50162</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_W_FP_</b>	Units: <b>ug/L</b>	Prep Date: <b>4/9/2015</b>	RunNo: <b>99869</b>						
Client ID: <b>PBW</b>	Batch ID: <b>50162</b>	TestNo: <b>EPA 8015B EPA 3510C</b>		Analysis Date: <b>4/10/2015</b>	SeqNo: <b>1977610</b>						
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	84.816		80.00		106	26	152				
Surr: p-Terphenyl	74.562		80.00		93.2	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               |



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**CLIENT:** CH2MHill  
**Work Order:** N015231  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015\_W\_SFPPTOT**

Sample ID <b>MB-R99869</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_W_SFP</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>99869</b>						
Client ID: <b>PBW</b>	Batch ID: <b>R99869</b>	TestNo: <b>EPA 8015B</b>		Analysis Date: <b>4/10/2015</b>	SeqNo: <b>1977606</b>						
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                 |



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**CLIENT:** CH2MHill  
**Work Order:** N015231  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015GAS\_WSFPP**

Sample ID <b>E150408LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8015GAS_W</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>99825</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>E15VW025</b>	TestNo: <b>EPA 8015B</b>	Analysis Date: <b>4/8/2015</b>	SeqNo: <b>1973981</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	845.000	50	1000	0	84.5	67	136				
Surr: Chlorobenzene - d5	41969.000		50000		83.9	74	138				

Sample ID <b>E150408MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8015GAS_W</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>99825</b>						
Client ID: <b>PBW</b>	Batch ID: <b>E15VW025</b>	TestNo: <b>EPA 8015B</b>	Analysis Date: <b>4/8/2015</b>	SeqNo: <b>1973982</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	ND	50									
Surr: Chlorobenzene - d5	45969.000		50000		91.9	74	138				

Sample ID <b>N015230-001JMS</b>	SampType: <b>MS</b>	TestCode: <b>8015GAS_W</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>99825</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E15VW025</b>	TestNo: <b>EPA 8015B</b>	Analysis Date: <b>4/8/2015</b>	SeqNo: <b>1973985</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	990.000	50	1000	0	99.0	67	136				
Surr: Chlorobenzene - d5	52310.000		50000		105	74	138				

Sample ID <b>N015230-001JMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015GAS_W</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>99825</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E15VW025</b>	TestNo: <b>EPA 8015B</b>	Analysis Date: <b>4/8/2015</b>	SeqNo: <b>1973986</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	985.000	50	1000	0	98.5	67	136	990.0	0.506	30	
Surr: Chlorobenzene - d5	55137.000		50000		110	74	138		0	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                 |



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**CLIENT:** CH2MHill  
**Work Order:** N015231  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	P150408LCS	SampType: LCS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 99832					
Client ID:	LCSW	Batch ID:	P15VW062	TestNo:	EPA 8260B	Analysis Date:	4/8/2015	SeqNo:	1974552		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	21.090	1.0	20.00	0	105	81	129				
1,1,1-Trichloroethane	20.340	1.0	20.00	0	102	67	132				
1,1,2,2-Tetrachloroethane	20.470	1.0	20.00	0	102	63	128				
1,1,2-Trichloroethane	20.750	1.0	20.00	0	104	75	125				
1,1-Dichloroethane	19.550	0.50	20.00	0	97.8	69	133				
1,1-Dichloroethene	20.030	1.0	20.00	0	100	68	130				
1,1-Dichloropropene	20.500	1.0	20.00	0	103	73	132				
1,2,3-Trichlorobenzene	20.050	1.0	20.00	0	100	67	137				
1,2,3-Trichloropropane	20.220	1.0	20.00	0	101	73	124				
1,2,4-Trichlorobenzene	19.530	1.0	20.00	0	97.6	66	134				
1,2,4-Trimethylbenzene	20.570	1.0	20.00	0	103	74	132				
1,2-Dibromo-3-chloropropane	22.140	2.0	20.00	0	111	50	132				
1,2-Dibromoethane	21.090	1.0	20.00	0	105	80	121				
1,2-Dichlorobenzene	19.540	1.0	20.00	0	97.7	71	122				
1,2-Dichloroethane	20.850	0.50	20.00	0	104	69	132				
1,2-Dichloropropane	20.430	1.0	20.00	0	102	75	125				
1,3,5-Trimethylbenzene	20.170	1.0	20.00	0	101	74	131				
1,3-Dichlorobenzene	19.530	1.0	20.00	0	97.6	75	124				
1,3-Dichloropropane	20.650	1.0	20.00	0	103	73	126				
1,4-Dichlorobenzene	19.700	1.0	20.00	0	98.5	74	123				
2,2-Dichloropropane	20.540	1.0	20.00	0	103	69	137				
2-Butanone	265.540	10	200.0	0	133	49	136				
2-Chlorotoluene	19.640	1.0	20.00	0	98.2	73	126				
4-Chlorotoluene	20.020	1.0	20.00	0	100	74	128				
4-Isopropyltoluene	20.070	1.0	20.00	0	100	73	130				
4-Methyl-2-pentanone	236.770	10	200.0	0	118	58	134				
Benzene	20.430	1.0	20.00	0	102	81	122				
Bromobenzene	19.160	1.0	20.00	0	95.8	76	124				
Bromochloromethane	19.540	1.0	20.00	0	97.7	65	129				
Bromodichloromethane	20.310	1.0	20.00	0	102	76	121				

**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                 |



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 11060 Artesia Blvd., Ste C, Cerritos, CA 90703  
 P: 562.219.7435 F: 562.219.7436

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

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**CLIENT:** CH2MHill  
**Work Order:** N015231  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID <b>P150408LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8260_WP_SF</b> Units: <b>ug/L</b>				Prep Date:			RunNo: <b>99832</b>		
Client ID: <b>LCSW</b>	Batch ID: <b>P15VW062</b>	TestNo: <b>EPA 8260B</b>				Analysis Date: <b>4/8/2015</b>			SeqNo: <b>1974552</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform	22.130	1.0	20.00	0	111	69	128				
Bromomethane	12.100	1.0	20.00	0	60.5	53	141				
Carbon disulfide	20.090	1.0	20.00	0	100	75	125				
Carbon tetrachloride	21.440	0.50	20.00	0	107	66	138				
Chlorobenzene	19.810	1.0	20.00	0	99.0	81	122				
Chloroethane	19.050	1.0	20.00	0	95.2	58	133				
Chloroform	19.390	1.0	20.00	0	97.0	69	128				
Chloromethane	15.660	1.0	20.00	0	78.3	56	131				
cis-1,2-Dichloroethene	19.050	1.0	20.00	0	95.2	72	126				
cis-1,3-Dichloropropene	20.890	1.0	20.00	0	104	69	131				
Di-isopropyl ether	20.680	1.0	20.00	0	103	70	130				
Dibromochloromethane	21.130	1.0	20.00	0	106	66	133				
Dibromomethane	21.380	1.0	20.00	0	107	76	125				
Dichlorodifluoromethane	19.050	1.0	20.00	0	95.2	53	153				
Ethyl tert-butyl ether	21.720	1.0	20.00	0	109	70	130				
Ethylbenzene	20.150	1.0	20.00	0	101	73	127				
Freon-113	19.700	1.0	20.00	0	98.5	75	125				
Hexachlorobutadiene	19.420	1.0	20.00	0	97.1	67	131				
Isopropylbenzene	19.930	1.0	20.00	0	99.7	75	127				
m,p-Xylene	40.980	1.0	40.00	0	102	76	128				
Methylene chloride	21.620	2.0	20.00	0	108	63	137				
MTBE	20.110	1.0	20.00	0	101	65	123				
n-Butylbenzene	20.030	1.0	20.00	0	100	69	137				
n-Propylbenzene	20.100	1.0	20.00	0	101	72	129				
Naphthalene	21.150	1.0	20.00	0	106	54	138				
o-Xylene	20.310	1.0	20.00	0	102	80	121				
sec-Butylbenzene	20.140	1.0	20.00	0	101	72	127				
Styrene	20.330	1.0	20.00	0	102	65	134				
Tert-amyl methyl ether	21.300	1.0	20.00	0	106	70	130				
Tert-Butanol	116.710	5.0	100.0	0	117	70	130				

**Qualifiers:**

- |  |  |  |
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 P: 562.219.7435 F: 562.219.7436

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**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	SampType	TestCode	Units	Prep Date	RunNo						
<b>P150408LCS</b>	<b>LCS</b>	<b>8260_WP_SF</b>	<b>ug/L</b>		<b>99832</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>P15VW062</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/8/2015</b>	SeqNo: <b>1974552</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
tert-Butylbenzene	19.830	1.0	20.00	0	99.2	70	129				
Tetrachloroethene	20.360	1.0	20.00	0	102	66	128				
Toluene	20.600	2.0	20.00	0	103	77	122				
trans-1,2-Dichloroethene	19.660	1.0	20.00	0	98.3	63	137				
trans-1,3-Dichloropropene	20.790	1.0	20.00	0	104	59	135				
Trichloroethene	19.960	1.0	20.00	0	99.8	70	127				
Trichlorofluoromethane	21.480	1.0	20.00	0	107	57	129				
Vinyl chloride	21.310	0.50	20.00	0	107	50	134				
Xylenes, Total	61.290	2.0	60.00	0	102	75	125				
Surr: 1,2-Dichloroethane-d4	25.090		25.00		100	72	119				
Surr: 4-Bromofluorobenzene	26.120		25.00		104	76	119				
Surr: Dibromofluoromethane	23.300		25.00		93.2	85	115				
Surr: Toluene-d8	24.890		25.00		99.6	81	120				

Sample ID	SampType	TestCode	Units	Prep Date	RunNo						
<b>N015230-001BMS</b>	<b>MS</b>	<b>8260_WP_SF</b>	<b>ug/L</b>		<b>99832</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>P15VW062</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/8/2015</b>	SeqNo: <b>1974553</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.480	1.0	20.00	0	102	81	129				
1,1,1-Trichloroethane	19.770	1.0	20.00	0	98.8	67	132				
1,1,2,2-Tetrachloroethane	20.090	1.0	20.00	0	100	63	128				
1,1,2-Trichloroethane	20.210	1.0	20.00	0	101	75	125				
1,1-Dichloroethane	19.460	0.50	20.00	0	97.3	69	133				
1,1-Dichloroethene	19.870	1.0	20.00	0	99.4	68	130				
1,1-Dichloropropene	19.810	1.0	20.00	0	99.0	73	132				
1,2,3-Trichlorobenzene	19.480	1.0	20.00	0	97.4	67	137				
1,2,3-Trichloropropane	20.480	1.0	20.00	0	102	73	124				
1,2,4-Trichlorobenzene	19.200	1.0	20.00	0	96.0	66	134				
1,2,4-Trimethylbenzene	20.560	1.0	20.00	0	103	74	132				
1,2-Dibromo-3-chloropropane	23.030	2.0	20.00	0	115	50	132				

**Qualifiers:**

- |  |  |  |
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 P: 562.219.7435 F: 562.219.7436

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**Work Order:** N015231  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	N015230-001BMS	SampType: MS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 99832					
Client ID:	ZZZZZZ	Batch ID: P15VW062	TestNo: EPA 8260B		Analysis Date: 4/8/2015	SeqNo: 1974553					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane	20.640	1.0	20.00	0	103	80	121				
1,2-Dichlorobenzene	19.720	1.0	20.00	0	98.6	71	122				
1,2-Dichloroethane	20.720	0.50	20.00	0	104	69	132				
1,2-Dichloropropane	20.550	1.0	20.00	0	103	75	125				
1,3,5-Trimethylbenzene	19.960	1.0	20.00	0	99.8	74	131				
1,3-Dichlorobenzene	19.230	1.0	20.00	0	96.2	75	124				
1,3-Dichloropropane	21.110	1.0	20.00	0	106	73	126				
1,4-Dichlorobenzene	19.340	1.0	20.00	0	96.7	74	123				
2,2-Dichloropropane	20.760	1.0	20.00	0	104	69	137				
2-Butanone	160.430	10	200.0	0	80.2	49	136				
2-Chlorotoluene	19.690	1.0	20.00	0	98.4	73	126				
4-Chlorotoluene	19.990	1.0	20.00	0	100	74	128				
4-Isopropyltoluene	19.370	1.0	20.00	0	96.9	73	130				
4-Methyl-2-pentanone	233.040	10	200.0	0	117	58	134				
Benzene	20.080	1.0	20.00	0	100	81	122				
Bromobenzene	18.920	1.0	20.00	0	94.6	76	124				
Bromochloromethane	20.260	1.0	20.00	0	101	65	129				
Bromodichloromethane	19.490	1.0	20.00	0	97.5	76	121				
Bromoform	21.880	1.0	20.00	0	109	69	128				
Bromomethane	12.430	1.0	20.00	0.2500	60.9	53	141				
Carbon disulfide	19.710	1.0	20.00	0	98.6	75	125				
Carbon tetrachloride	19.320	0.50	20.00	0	96.6	66	138				
Chlorobenzene	19.750	1.0	20.00	0	98.8	81	122				
Chloroethane	20.210	1.0	20.00	0	101	58	133				
Chloroform	19.000	1.0	20.00	0	95.0	69	128				
Chloromethane	15.100	1.0	20.00	0.3000	74.0	56	131				
cis-1,2-Dichloroethene	18.880	1.0	20.00	0	94.4	72	126				
cis-1,3-Dichloropropene	21.490	1.0	20.00	0	107	69	131				
Di-isopropyl ether	20.790	1.0	20.00	0	104	70	130				
Dibromochloromethane	20.570	1.0	20.00	0	103	66	133				

**Qualifiers:**

- |  |  |  |
|--|--|--|
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 P: 562.219.7435 F: 562.219.7436

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**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	N015230-001BMS	SampType: MS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 99832					
Client ID:	ZZZZZZ	Batch ID:	P15VW062	TestNo:	EPA 8260B	Analysis Date:	4/8/2015	SeqNo:	1974553		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dibromomethane	21.620	1.0	20.00	0	108	76	125				
Dichlorodifluoromethane	16.930	1.0	20.00	0	84.6	53	153				
Ethyl tert-butyl ether	21.120	1.0	20.00	0	106	70	130				
Ethylbenzene	19.740	1.0	20.00	0	98.7	73	127				
Freon-113	17.990	1.0	20.00	0	90.0	75	125				
Hexachlorobutadiene	17.810	1.0	20.00	0	89.0	67	131				
Isopropylbenzene	19.400	1.0	20.00	0	97.0	75	127				
m,p-Xylene	40.460	1.0	40.00	0	101	76	128				
Methylene chloride	19.400	2.0	20.00	0	97.0	63	137				
MTBE	20.230	1.0	20.00	0	101	65	123				
n-Butylbenzene	19.310	1.0	20.00	0	96.6	69	137				
n-Propylbenzene	20.030	1.0	20.00	0	100	72	129				
Naphthalene	20.680	1.0	20.00	0	103	54	138				
o-Xylene	20.640	1.0	20.00	0	103	80	121				
sec-Butylbenzene	19.210	1.0	20.00	0	96.0	72	127				
Styrene	19.960	1.0	20.00	0	99.8	65	134				
Tert-amyl methyl ether	20.760	1.0	20.00	0	104	70	130				
Tert-Butanol	116.240	5.0	100.0	0	116	70	130				
tert-Butylbenzene	19.260	1.0	20.00	0	96.3	70	129				
Tetrachloroethene	20.170	1.0	20.00	0	101	66	128				
Toluene	20.130	2.0	20.00	0	101	77	122				
trans-1,2-Dichloroethene	19.520	1.0	20.00	0	97.6	63	137				
trans-1,3-Dichloropropene	21.070	1.0	20.00	0	105	59	135				
Trichloroethene	19.710	1.0	20.00	0	98.6	70	127				
Trichlorofluoromethane	19.830	1.0	20.00	0	99.2	57	129				
Vinyl chloride	20.720	0.50	20.00	0	104	50	134				
Xylenes, Total	61.100	2.0	60.00	0	102	75	125				
Surr: 1,2-Dichloroethane-d4	25.370		25.00		101	72	119				
Surr: 4-Bromofluorobenzene	25.840		25.00		103	76	119				
Surr: Dibromofluoromethane	23.940		25.00		95.8	85	115				

**Qualifiers:**

- |  |  |  |
|--|--|--|
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CALIFORNIA  
 11060 Artesia Blvd., Ste C, Cerritos, CA 90703  
 P: 562.219.7435 F: 562.219.7436

NEVADA  
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 P: 702.307.2659 F: 702.307.2691

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**CLIENT:** CH2MHill  
**Work Order:** N015231  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID <b>N015230-001BMS</b>	SampType: <b>MS</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>99832</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>P15VW062</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>4/8/2015</b>	SeqNo: <b>1974553</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Toluene-d8	25.170		25.00		101	81	120				

Sample ID <b>N015230-001BMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>99832</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>P15VW062</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>4/8/2015</b>	SeqNo: <b>1974554</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.630	1.0	20.00	0	103	81	129	20.48	0.730	20	
1,1,1-Trichloroethane	20.080	1.0	20.00	0	100	67	132	19.77	1.56	20	
1,1,2,2-Tetrachloroethane	19.880	1.0	20.00	0	99.4	63	128	20.09	1.05	20	
1,1,2-Trichloroethane	20.590	1.0	20.00	0	103	75	125	20.21	1.86	20	
1,1-Dichloroethane	20.130	0.50	20.00	0	101	69	133	19.46	3.38	20	
1,1-Dichloroethene	20.040	1.0	20.00	0	100	68	130	19.87	0.852	20	
1,1-Dichloropropene	19.920	1.0	20.00	0	99.6	73	132	19.81	0.554	20	
1,2,3-Trichlorobenzene	20.150	1.0	20.00	0	101	67	137	19.48	3.38	20	
1,2,3-Trichloropropane	20.710	1.0	20.00	0	104	73	124	20.48	1.12	20	
1,2,4-Trichlorobenzene	19.340	1.0	20.00	0	96.7	66	134	19.20	0.727	20	
1,2,4-Trimethylbenzene	20.500	1.0	20.00	0	103	74	132	20.56	0.292	20	
1,2-Dibromo-3-chloropropane	22.680	2.0	20.00	0	113	50	132	23.03	1.53	20	
1,2-Dibromoethane	20.840	1.0	20.00	0	104	80	121	20.64	0.964	20	
1,2-Dichlorobenzene	20.070	1.0	20.00	0	100	71	122	19.72	1.76	20	
1,2-Dichloroethane	21.330	0.50	20.00	0	107	69	132	20.72	2.90	20	
1,2-Dichloropropane	21.170	1.0	20.00	0	106	75	125	20.55	2.97	20	
1,3,5-Trimethylbenzene	19.980	1.0	20.00	0	99.9	74	131	19.96	0.100	20	
1,3-Dichlorobenzene	19.430	1.0	20.00	0	97.2	75	124	19.23	1.03	20	
1,3-Dichloropropane	21.090	1.0	20.00	0	105	73	126	21.11	0.0948	20	
1,4-Dichlorobenzene	19.530	1.0	20.00	0	97.6	74	123	19.34	0.978	20	
2,2-Dichloropropane	20.710	1.0	20.00	0	104	69	137	20.76	0.241	20	
2-Butanone	161.090	10	200.0	0	80.5	49	136	160.4	0.411	20	
2-Chlorotoluene	19.870	1.0	20.00	0	99.4	73	126	19.69	0.910	20	
4-Chlorotoluene	20.280	1.0	20.00	0	101	74	128	19.99	1.44	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                 |



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 P: 702.307.2659 F: 702.307.2691

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**CLIENT:** CH2MHill  
**Work Order:** N015231  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	N015230-001BMSD	SampType: MSD	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 99832					
Client ID:	ZZZZZZ	Batch ID:	P15VW062	TestNo:	EPA 8260B	Analysis Date:	4/8/2015	SeqNo:	1974554		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Isopropyltoluene	19.480	1.0	20.00	0	97.4	73	130	19.37	0.566	20	
4-Methyl-2-pentanone	235.160	10	200.0	0	118	58	134	233.0	0.906	20	
Benzene	20.500	1.0	20.00	0	103	81	122	20.08	2.07	20	
Bromobenzene	19.080	1.0	20.00	0	95.4	76	124	18.92	0.842	20	
Bromochloromethane	20.850	1.0	20.00	0	104	65	129	20.26	2.87	20	
Bromodichloromethane	20.250	1.0	20.00	0	101	76	121	19.49	3.82	20	
Bromoform	21.240	1.0	20.00	0	106	69	128	21.88	2.97	20	
Bromomethane	13.510	1.0	20.00	0.2500	66.3	53	141	12.43	8.33	20	
Carbon disulfide	20.170	1.0	20.00	0	101	75	125	19.71	2.31	20	
Carbon tetrachloride	19.570	0.50	20.00	0	97.9	66	138	19.32	1.29	20	
Chlorobenzene	20.000	1.0	20.00	0	100	81	122	19.75	1.26	20	
Chloroethane	20.240	1.0	20.00	0	101	58	133	20.21	0.148	20	
Chloroform	19.390	1.0	20.00	0	97.0	69	128	19.00	2.03	20	
Chloromethane	16.500	1.0	20.00	0.3000	81.0	56	131	15.10	8.86	20	
cis-1,2-Dichloroethene	19.470	1.0	20.00	0	97.4	72	126	18.88	3.08	20	
cis-1,3-Dichloropropene	21.550	1.0	20.00	0	108	69	131	21.49	0.279	20	
Di-isopropyl ether	21.370	1.0	20.00	0	107	70	130	20.79	2.75	20	
Dibromochloromethane	20.170	1.0	20.00	0	101	66	133	20.57	1.96	20	
Dibromomethane	21.940	1.0	20.00	0	110	76	125	21.62	1.47	20	
Dichlorodifluoromethane	17.920	1.0	20.00	0	89.6	53	153	16.93	5.68	20	
Ethyl tert-butyl ether	21.140	1.0	20.00	0	106	70	130	21.12	0.0947	20	
Ethylbenzene	20.010	1.0	20.00	0	100	73	127	19.74	1.36	20	
Freon-113	18.460	1.0	20.00	0	92.3	75	125	17.99	2.58	20	
Hexachlorobutadiene	18.080	1.0	20.00	0	90.4	67	131	17.81	1.50	20	
Isopropylbenzene	19.370	1.0	20.00	0	96.9	75	127	19.40	0.155	20	
m,p-Xylene	40.510	1.0	40.00	0	101	76	128	40.46	0.124	20	
Methylene chloride	20.520	2.0	20.00	0	103	63	137	19.40	5.61	20	
MTBE	20.600	1.0	20.00	0	103	65	123	20.23	1.81	20	
n-Butylbenzene	19.600	1.0	20.00	0	98.0	69	137	19.31	1.49	20	
n-Propylbenzene	20.030	1.0	20.00	0	100	72	129	20.03	0	20	

**Qualifiers:**

- |  |  |  |
|--|--|--|
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| J Analyte detected below quantitation limits                   | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits               |
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 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

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**CLIENT:** CH2MHill  
**Work Order:** N015231  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
<b>N015230-001BMSD</b>	<b>MSD</b>	<b>8260_WP_SF</b>	<b>ug/L</b>		<b>99832</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>P15VW062</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/8/2015</b>	SeqNo: <b>1974554</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	20.360	1.0	20.00	0	102	54	138	20.68	1.56	20	
o-Xylene	20.170	1.0	20.00	0	101	80	121	20.64	2.30	20	
sec-Butylbenzene	19.250	1.0	20.00	0	96.2	72	127	19.21	0.208	20	
Styrene	19.550	1.0	20.00	0	97.8	65	134	19.96	2.08	20	
Tert-amyl methyl ether	21.100	1.0	20.00	0	106	70	130	20.76	1.62	20	
Tert-Butanol	121.210	5.0	100.0	0	121	70	130	116.2	4.19	20	
tert-Butylbenzene	19.290	1.0	20.00	0	96.5	70	129	19.26	0.156	20	
Tetrachloroethene	19.720	1.0	20.00	0	98.6	66	128	20.17	2.26	20	
Toluene	20.640	2.0	20.00	0	103	77	122	20.13	2.50	20	
trans-1,2-Dichloroethene	19.950	1.0	20.00	0	99.8	63	137	19.52	2.18	20	
trans-1,3-Dichloropropene	21.400	1.0	20.00	0	107	59	135	21.07	1.55	20	
Trichloroethene	19.780	1.0	20.00	0	98.9	70	127	19.71	0.355	20	
Trichlorofluoromethane	20.290	1.0	20.00	0	101	57	129	19.83	2.29	20	
Vinyl chloride	21.570	0.50	20.00	0	108	50	134	20.72	4.02	20	
Xylenes, Total	60.680	2.0	60.00	0	101	75	125	61.10	0.690	20	
Surr: 1,2-Dichloroethane-d4	25.700		25.00		103	72	119		0		
Surr: 4-Bromofluorobenzene	26.870		25.00		107	76	119		0		
Surr: Dibromofluoromethane	24.220		25.00		96.9	85	115		0		
Surr: Toluene-d8	25.090		25.00		100	81	120		0		

Sample ID	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
<b>P150408MB3</b>	<b>MBLK</b>	<b>8260_WP_SF</b>	<b>ug/L</b>		<b>99832</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P15VW062</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/8/2015</b>	SeqNo: <b>1974557</b>						
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									

**Qualifiers:**

- |  |  |  |
|--|--|--|
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 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

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**CLIENT:** CH2MHill  
**Work Order:** N015231  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID: <b>P150408MB3</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>99832</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P15VW062</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/8/2015</b>	SeqNo: <b>1974557</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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									
2-Chlorotoluene	ND	1.0									
4-Chlorotoluene	ND	1.0									
4-Isopropyltoluene	ND	1.0									
4-Methyl-2-pentanone	ND	10									
Benzene	ND	1.0									
Bromobenzene	ND	1.0									
Bromochloromethane	ND	1.0									
Bromodichloromethane	ND	1.0									
Bromoform	ND	1.0									
Bromomethane	0.290	1.0									J
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									

**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                 |



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 P: 702.307.2659 F: 702.307.2691

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**CLIENT:** CH2MHill  
**Work Order:** N015231  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	SampType	TestCode	Units	Prep Date:	RunNo:						
<b>P150408MB3</b>	<b>MBLK</b>	<b>8260_WP_SF</b>	<b>ug/L</b>		<b>99832</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P15VW062</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/8/2015</b>	SeqNo: <b>1974557</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	ND	1.0									
Chloromethane	0.280	1.0									J
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	ND	1.0									
Methylene chloride	ND	2.0									
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									

**Qualifiers:**

- |  |  |  |
|--|--|--|
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 P: 562.219.7435 F: 562.219.7436

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

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**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID: <b>P150408MB3</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>99832</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P15VW062</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/8/2015</b>	SeqNo: <b>1974557</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Trichlorofluoromethane	ND	1.0									
Vinyl chloride	ND	0.50									
Xylenes, Total	ND	2.0									
Surr: 1,2-Dichloroethane-d4	24.100		25.00		96.4	72	119				
Surr: 4-Bromofluorobenzene	25.280		25.00		101	76	119				
Surr: Dibromofluoromethane	24.570		25.00		98.3	85	115				
Surr: Toluene-d8	24.550		25.00		98.2	81	120				

**Qualifiers:**

- |  |  |  |
|--|--|--|
| B Analyte detected in the associated Method Blank              | E Value above quantitation range       | H Holding times for preparation or analysis exceeded |
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 11060 Artesia Blvd., Ste C, Cerritos, CA 90703  
 P: 562.219.7435 F: 562.219.7436

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 P: 702.307.2659 F: 702.307.2691

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**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	P150414LCS	SampType: LCS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 99924					
Client ID:	LCSW	Batch ID:	P15VW066	TestNo:	EPA 8260B	Analysis Date:	4/14/2015	SeqNo:	1979017		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	21.430	1.0	20.00	0	107	81	129				
1,1,1-Trichloroethane	21.710	1.0	20.00	0	109	67	132				
1,1,2,2-Tetrachloroethane	21.160	1.0	20.00	0	106	63	128				
1,1,2-Trichloroethane	21.080	1.0	20.00	0	105	75	125				
1,1-Dichloroethane	22.850	0.50	20.00	0	114	69	133				
1,1-Dichloroethene	21.710	1.0	20.00	0	109	68	130				
1,1-Dichloropropene	21.620	1.0	20.00	0	108	73	132				
1,2,3-Trichlorobenzene	20.730	1.0	20.00	0	104	67	137				
1,2,3-Trichloropropane	20.540	1.0	20.00	0	103	73	124				
1,2,4-Trichlorobenzene	20.930	1.0	20.00	0	105	66	134				
1,2,4-Trimethylbenzene	22.130	1.0	20.00	0	111	74	132				
1,2-Dibromo-3-chloropropane	19.520	2.0	20.00	0	97.6	50	132				
1,2-Dibromoethane	20.450	1.0	20.00	0	102	80	121				
1,2-Dichlorobenzene	20.850	1.0	20.00	0	104	71	122				
1,2-Dichloroethane	21.220	0.50	20.00	0	106	69	132				
1,2-Dichloropropane	22.290	1.0	20.00	0	111	75	125				
1,3,5-Trimethylbenzene	22.600	1.0	20.00	0	113	74	131				
1,3-Dichlorobenzene	21.360	1.0	20.00	0	107	75	124				
1,3-Dichloropropane	20.870	1.0	20.00	0	104	73	126				
1,4-Dichlorobenzene	20.880	1.0	20.00	0	104	74	123				
2,2-Dichloropropane	22.780	1.0	20.00	0	114	69	137				
2-Butanone	203.080	10	200.0	0	102	49	136				
2-Chlorotoluene	22.110	1.0	20.00	0	111	73	126				
4-Chlorotoluene	22.050	1.0	20.00	0	110	74	128				
4-Isopropyltoluene	22.420	1.0	20.00	0	112	73	130				
4-Methyl-2-pentanone	206.330	10	200.0	0	103	58	134				
Acetone	311.310	10	200.0	0	156	40	135				S
Benzene	21.250	1.0	20.00	0	106	81	122				
Bromobenzene	20.840	1.0	20.00	0	104	76	124				
Bromochloromethane	21.750	1.0	20.00	0	109	65	129				

**Qualifiers:**

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|--|--|--|
| 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                 |



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 11060 Artesia Blvd., Ste C, Cerritos, CA 90703  
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 P: 702.307.2659 F: 702.307.2691

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**CLIENT:** CH2MHill  
**Work Order:** N015231  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	SampType	TestCode	Units	Prep Date	RunNo						
<b>P150414LCS</b>	<b>LCS</b>	<b>8260_WP_SF</b>	<b>ug/L</b>		<b>99924</b>						
Client ID	Batch ID	TestNo		Analysis Date	SeqNo						
<b>LCSW</b>	<b>P15VW066</b>	<b>EPA 8260B</b>		<b>4/14/2015</b>	<b>1979017</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromodichloromethane	22.160	1.0	20.00	0	111	76	121				
Bromoform	23.070	1.0	20.00	0	115	69	128				
Bromomethane	25.760	1.0	20.00	0	129	53	141				
Carbon disulfide	22.560	1.0	20.00	0	113	75	125				
Carbon tetrachloride	19.580	0.50	20.00	0	97.9	66	138				
Chlorobenzene	20.880	1.0	20.00	0	104	81	122				
Chloroethane	28.940	1.0	20.00	0	145	58	133				S
Chloroform	20.990	1.0	20.00	0	105	69	128				
Chloromethane	20.000	1.0	20.00	0	100	56	131				
cis-1,2-Dichloroethene	21.050	1.0	20.00	0	105	72	126				
cis-1,3-Dichloropropene	21.560	1.0	20.00	0	108	69	131				
Di-isopropyl ether	22.960	1.0	20.00	0	115	70	130				
Dibromochloromethane	21.820	1.0	20.00	0	109	66	133				
Dibromomethane	21.130	1.0	20.00	0	106	76	125				
Dichlorodifluoromethane	25.110	1.0	20.00	0	126	53	153				
Ethyl tert-butyl ether	22.190	1.0	20.00	0	111	70	130				
Ethylbenzene	20.940	1.0	20.00	0	105	73	127				
Freon-113	23.430	1.0	20.00	0	117	75	125				
Hexachlorobutadiene	20.920	1.0	20.00	0	105	67	131				
Isopropylbenzene	21.980	1.0	20.00	0	110	75	127				
m,p-Xylene	43.490	1.0	40.00	0	109	76	128				
Methylene chloride	21.570	2.0	20.00	0	108	63	137				
MTBE	20.070	1.0	20.00	0	100	65	123				
n-Butylbenzene	22.790	1.0	20.00	0	114	69	137				
n-Propylbenzene	22.840	1.0	20.00	0	114	72	129				
Naphthalene	20.960	1.0	20.00	0	105	54	138				
o-Xylene	21.630	1.0	20.00	0	108	80	121				
sec-Butylbenzene	22.600	1.0	20.00	0	113	72	127				
Styrene	21.520	1.0	20.00	0	108	65	134				
Tert-amyl methyl ether	20.810	1.0	20.00	0	104	70	130				

**Qualifiers:**

- |  |  |  |
|--|--|--|
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 11060 Artesia Blvd., Ste C, Cerritos, CA 90703  
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 3151 W. Post Rd., Las Vegas, NV 89118  
 P: 702.307.2659 F: 702.307.2691

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**CLIENT:** CH2MHill  
**Work Order:** N015231  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	SampType	TestCode	Units	Prep Date	RunNo						
<b>P150414LCS</b>	<b>LCS</b>	<b>8260_WP_SF</b>	<b>ug/L</b>		<b>99924</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>P15VW066</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/14/2015</b>	SeqNo: <b>1979017</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tert-Butanol	88.380	5.0	100.0	0	88.4	70	130				
tert-Butylbenzene	22.140	1.0	20.00	0	111	70	129				
Tetrachloroethene	20.920	1.0	20.00	0	105	66	128				
Toluene	20.780	2.0	20.00	0	104	77	122				
trans-1,2-Dichloroethene	20.740	1.0	20.00	0	104	63	137				
trans-1,3-Dichloropropene	21.610	1.0	20.00	0	108	59	135				
Trichloroethene	20.330	1.0	20.00	0	102	70	127				
Trichlorofluoromethane	25.160	1.0	20.00	0	126	57	129				
Vinyl chloride	22.900	0.50	20.00	0	114	50	134				
Xylenes, Total	65.120	2.0	60.00	0	109	75	125				
Surr: 1,2-Dichloroethane-d4	26.320		25.00		105	72	119				
Surr: 4-Bromofluorobenzene	26.240		25.00		105	76	119				
Surr: Dibromofluoromethane	26.240		25.00		105	85	115				
Surr: Toluene-d8	25.950		25.00		104	81	120				

Sample ID	SampType	TestCode	Units	Prep Date	RunNo						
<b>P150414LCSD</b>	<b>LCSD</b>	<b>8260_WP_SF</b>	<b>ug/L</b>		<b>99924</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>P15VW066</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/14/2015</b>	SeqNo: <b>1979018</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.270	1.0	20.00	0	101	81	129	21.43	5.56	20	
1,1,1-Trichloroethane	20.450	1.0	20.00	0	102	67	132	21.71	5.98	20	
1,1,2,2-Tetrachloroethane	20.520	1.0	20.00	0	103	63	128	21.16	3.07	20	
1,1,2-Trichloroethane	20.010	1.0	20.00	0	100	75	125	21.08	5.21	20	
1,1-Dichloroethane	21.630	0.50	20.00	0	108	69	133	22.85	5.49	20	
1,1-Dichloroethene	21.190	1.0	20.00	0	106	68	130	21.71	2.42	20	
1,1-Dichloropropene	20.880	1.0	20.00	0	104	73	132	21.62	3.48	20	
1,2,3-Trichlorobenzene	20.110	1.0	20.00	0	101	67	137	20.73	3.04	20	
1,2,3-Trichloropropane	19.580	1.0	20.00	0	97.9	73	124	20.54	4.79	20	
1,2,4-Trichlorobenzene	19.930	1.0	20.00	0	99.7	66	134	20.93	4.89	20	
1,2,4-Trimethylbenzene	21.000	1.0	20.00	0	105	74	132	22.13	5.24	20	

**Qualifiers:**

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|--|--|--|
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 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

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**CLIENT:** CH2MHill  
**Work Order:** N015231  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	SampType	TestCode	Units	Prep Date	RunNo						
<b>P150414LCSD</b>	<b>LCSD</b>	<b>8260_WP_SF</b>	<b>ug/L</b>		<b>99924</b>						
Client ID	Batch ID	TestNo				Analysis Date	SeqNo				
<b>LCSS02</b>	<b>P15VW066</b>	<b>EPA 8260B</b>				<b>4/14/2015</b>	<b>1979018</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	18.560	2.0	20.00	0	92.8	50	132	19.52	5.04	20	
1,2-Dibromoethane	19.450	1.0	20.00	0	97.3	80	121	20.45	5.01	20	
1,2-Dichlorobenzene	20.050	1.0	20.00	0	100	71	122	20.85	3.91	20	
1,2-Dichloroethane	19.950	0.50	20.00	0	99.8	69	132	21.22	6.17	20	
1,2-Dichloropropane	21.610	1.0	20.00	0	108	75	125	22.29	3.10	20	
1,3,5-Trimethylbenzene	20.940	1.0	20.00	0	105	74	131	22.60	7.63	20	
1,3-Dichlorobenzene	20.230	1.0	20.00	0	101	75	124	21.36	5.43	20	
1,3-Dichloropropane	19.900	1.0	20.00	0	99.5	73	126	20.87	4.76	20	
1,4-Dichlorobenzene	19.650	1.0	20.00	0	98.2	74	123	20.88	6.07	20	
2,2-Dichloropropane	21.760	1.0	20.00	0	109	69	137	22.78	4.58	20	
2-Butanone	147.870	10	200.0	0	73.9	49	136	203.1	31.5	20	R
2-Chlorotoluene	20.880	1.0	20.00	0	104	73	126	22.11	5.72	20	
4-Chlorotoluene	20.820	1.0	20.00	0	104	74	128	22.05	5.74	20	
4-Isopropyltoluene	20.770	1.0	20.00	0	104	73	130	22.42	7.64	20	
4-Methyl-2-pentanone	202.480	10	200.0	0	101	58	134	206.3	1.88	20	
Acetone	184.250	10	200.0	0	92.1	40	135	311.3	51.3	20	R
Benzene	20.100	1.0	20.00	0	101	81	122	21.25	5.56	20	
Bromobenzene	19.670	1.0	20.00	0	98.4	76	124	20.84	5.78	20	
Bromochloromethane	20.310	1.0	20.00	0	102	65	129	21.75	6.85	20	
Bromodichloromethane	21.010	1.0	20.00	0	105	76	121	22.16	5.33	20	
Bromoform	22.000	1.0	20.00	0	110	69	128	23.07	4.75	20	
Bromomethane	23.730	1.0	20.00	0	119	53	141	25.76	8.20	20	
Carbon disulfide	22.130	1.0	20.00	0	111	75	125	22.56	1.92	20	
Carbon tetrachloride	19.640	0.50	20.00	0	98.2	66	138	19.58	0.306	20	
Chlorobenzene	19.820	1.0	20.00	0	99.1	81	122	20.88	5.21	20	
Chloroethane	26.140	1.0	20.00	0	131	58	133	28.94	10.2	20	
Chloroform	20.860	1.0	20.00	0	104	69	128	20.99	0.621	20	
Chloromethane	19.610	1.0	20.00	0	98.0	56	131	20.00	1.97	20	
cis-1,2-Dichloroethene	20.780	1.0	20.00	0	104	72	126	21.05	1.29	20	
cis-1,3-Dichloropropene	21.100	1.0	20.00	0	106	69	131	21.56	2.16	20	

**Qualifiers:**

- |  |  |  |
|--|--|--|
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 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

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**CLIENT:** CH2MHill  
**Work Order:** N015231  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	SampType	TestCode	Units: ug/L			Prep Date:				RunNo: 99924	
Client ID	Batch ID	TestNo				Analysis Date: 4/14/2015				SeqNo: 1979018	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Di-isopropyl ether	21.860	1.0	20.00	0	109	70	130	22.96	4.91	20	
Dibromochloromethane	20.970	1.0	20.00	0	105	66	133	21.82	3.97	20	
Dibromomethane	20.690	1.0	20.00	0	103	76	125	21.13	2.10	20	
Dichlorodifluoromethane	24.020	1.0	20.00	0	120	53	153	25.11	4.44	20	
Ethyl tert-butyl ether	21.030	1.0	20.00	0	105	70	130	22.19	5.37	20	
Ethylbenzene	19.790	1.0	20.00	0	99.0	73	127	20.94	5.65	20	
Freon-113	21.590	1.0	20.00	0	108	75	125	23.43	8.17	20	
Hexachlorobutadiene	19.430	1.0	20.00	0	97.2	67	131	20.92	7.39	20	
Isopropylbenzene	20.440	1.0	20.00	0	102	75	127	21.98	7.26	20	
m,p-Xylene	40.750	1.0	40.00	0	102	76	128	43.49	6.51	20	
Methylene chloride	20.750	2.0	20.00	0	104	63	137	21.57	3.88	20	
MTBE	19.730	1.0	20.00	0	98.6	65	123	20.07	1.71	20	
n-Butylbenzene	21.670	1.0	20.00	0	108	69	137	22.79	5.04	20	
n-Propylbenzene	20.990	1.0	20.00	0	105	72	129	22.84	8.44	20	
Naphthalene	20.440	1.0	20.00	0	102	54	138	20.96	2.51	20	
o-Xylene	20.220	1.0	20.00	0	101	80	121	21.63	6.74	20	
sec-Butylbenzene	20.980	1.0	20.00	0	105	72	127	22.60	7.43	20	
Styrene	20.430	1.0	20.00	0	102	65	134	21.52	5.20	20	
Tert-amyl methyl ether	19.930	1.0	20.00	0	99.7	70	130	20.81	4.32	20	
Tert-Butanol	89.240	5.0	100.0	0	89.2	70	130	88.38	0.968	20	
tert-Butylbenzene	20.800	1.0	20.00	0	104	70	129	22.14	6.24	20	
Tetrachloroethene	20.070	1.0	20.00	0	100	66	128	20.92	4.15	20	
Toluene	19.810	2.0	20.00	0	99.0	77	122	20.78	4.78	20	
trans-1,2-Dichloroethene	20.410	1.0	20.00	0	102	63	137	20.74	1.60	20	
trans-1,3-Dichloropropene	20.740	1.0	20.00	0	104	59	135	21.61	4.11	20	
Trichloroethene	19.480	1.0	20.00	0	97.4	70	127	20.33	4.27	20	
Trichlorofluoromethane	24.590	1.0	20.00	0	123	57	129	25.16	2.29	20	
Vinyl chloride	22.510	0.50	20.00	0	113	50	134	22.90	1.72	20	
Xylenes, Total	60.970	2.0	60.00	0	102	75	125	65.12	6.58	20	
Surr: 1,2-Dichloroethane-d4	26.040		25.00		104	72	119		0		

**Qualifiers:**

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|--|--|--|
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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                 |



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 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

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**CLIENT:** CH2MHill  
**Work Order:** N015231  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID <b>P150414LCSD</b>	SampType: <b>LCSD</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>99924</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>P15VW066</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>4/14/2015</b>	SeqNo: <b>1979018</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	26.320		25.00		105	76	119		0		
Surr: Dibromofluoromethane	26.560		25.00		106	85	115		0		
Surr: Toluene-d8	26.120		25.00		104	81	120		0		

Sample ID <b>P150414MB3</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>99924</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P15VW066</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>4/14/2015</b>	SeqNo: <b>1979021</b>							
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:**

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|--|--|--|
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| J Analyte detected below quantitation limits                   | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits               |
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 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

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## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	SampType	TestCode	Units	Prep Date	RunNo						
<b>P150414MB3</b>	<b>MLK</b>	<b>8260_WP_SF</b>	<b>ug/L</b>		<b>99924</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P15VW066</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/14/2015</b>	SeqNo: <b>1979021</b>						
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	0.050	1.0									J
Chloromethane	0.110	1.0									J
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	ND	1.0									
Methylene chloride	ND	2.0									

**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                 |



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

"Serving Clients with Passion and Professionalism"

**CLIENT:** CH2MHill  
**Work Order:** N015231  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID: <b>P150414MB3</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>99924</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P15VW066</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/14/2015</b>	SeqNo: <b>1979021</b>						
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	26.740		25.00		107	72	119				
Surr: 4-Bromofluorobenzene	26.020		25.00		104	76	119				
Surr: Dibromofluoromethane	26.770		25.00		107	85	115				
Surr: Toluene-d8	25.860		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                 |



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 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

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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: 4-7-15  
 PAGE: 1 OF 1

LABORATORY CLIENT: <b>Kinder Morgan Energy Partners, Attn: Steve Defibaugh</b>					CLIENT PROJECT NAME / NUMBER: <b>SFPP - Norwalk Site</b>					P.O. NO.:									
ADDRESS: <b>1100 Town &amp; Country Road</b>					PROJECT CONTACT: <b>James Dye</b>					QUOTE NO.:									
CITY: <b>Orange, CA 92868</b>					SAMPLER(S): (SIGNATURE)					LAB USE ONLY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>									
TEL: <b>714-560-4802</b>		FAX: <b>714-560-4601</b>		E-MAIL: james.dye@kindermorgan.com															
TURNAROUND TIME <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48HR <input type="checkbox"/> 72 HR <input checked="" type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS					<b>REQUESTED ANALYSIS</b>														
SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY) <input type="checkbox"/> RWQCB REPORTING <input type="checkbox"/> ARCHIVE SAMPLES UNTIL ____ / ____ / ____																			
SPECIAL INSTRUCTIONS <b>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.</b>																			
LAB USE ONLY	SAMPLE ID	LOCATION/ DESCRIPTION	SAMPLING		MAT- RIX	NO. OF CONT.	TPH - g, TPH-d, and TPH-oil (8015M)	Full VOC+ Oxygenates List (8260B)											Comments
			DATE	TIME															
	INF-04-07	Influent	4/7/15	15:30	WW	8	X	X											NO15231-1
Relinquished by: (Signature)					Received by: (Signature)					Date:		Time:							
<i>[Signature]</i>					<i>[Signature]</i>					4-7-15		3:35PM							
Relinquished by: (Signature)					Received by: (Signature)					Date:		Time:							
<i>[Signature]</i>					<i>[Signature]</i>					4/7/15		4:05							
Relinquished by: (Signature)					Received by: (Signature)					Date:		Time:							
<i>[Signature]</i>					<i>[Signature]</i>														

2-100  
 1K42



# 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: 4/8/2015 Workorder: N015231  
 Rep sample Temp (Deg C): 2.1 IR Gun ID: 2  
 Temp Blank:  Yes  No  
 Carrier name: Golden State Overnight  
 Last 4 digits of Tracking No.: 1627 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 <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/>            |
| 2. Custody seals intact, signed, dated on shipping container/cooler?                    | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles?  | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 5. Sampler's name present in COC?   | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 6. Chain of custody signed when relinquished and received?                              | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 7. Chain of custody agrees with sample labels?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 8. Samples in proper container/bottle?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 9. Sample containers intact?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 10. Sufficient sample volume for indicated test?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 11. All samples received within holding time?   | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 12. Temperature of rep sample or Temp Blank within acceptable limit?                    | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/>                     |
| 13. Water - VOA vials have zero headspace?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/>                     |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>          |
| 15. Did the bottle labels indicate correct preservatives used?                          | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/>                     |
| 16. Were there Non-Conformance issues at login?<br>Was Client notified?                 | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>          |
|   | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>          |

Comments:

Checklist Completed By: HG  4/15/2015

Reviewed By:  4/15/2015



800-322-5555 www.gso.com

**Ship From**

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

Tracking #: 527501627

**CPS**



**Ship To**

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

**LVS**  
**LAS VEGAS**

**A**

**COD:** \$0.00

**Weight:** 0 lb(s)

**Reference:**

**N89103A**

**Delivery Instructions:**

HOLD FOR PICK UP

**Signature Type:** REQUIRED



36221755

Print Date: 4/7/2015 4:30 PM

**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.

May 27, 2015

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

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

TEL:

FAX:

Workorder No.: N015732

RE: SFPP - Norwalk Site

Attention: Dan Jablonski

Enclosed are the results for sample(s) received on May 20, 2015 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

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



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---

**CLIENT:** CH2Mhill  
**Project:** SFPP - Norwalk Site  
**Lab Order:** N015732

**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.



**CLIENT:** CH2MHill  
**Project:** SFPP - Norwalk Site  
**Lab Order:** N015732  
**Contract No:**

**Work Order Sample Summary**

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N015732-001A	INF-05-19	Wastewater	5/19/2015 2:30:00 PM	5/20/2015	5/27/2015
N015732-001B	INF-05-19	Wastewater	5/19/2015 2:30:00 PM	5/20/2015	5/27/2015



**ASSET Laboratories**

**ANALYTICAL RESULTS**

Print Date: 27-May-15

**CLIENT:** CH2Mhill  
**Lab Order:** N015732  
**Project:** SFPP - Norwalk Site  
**Lab ID:** N015732-001

**Client Sample ID:** INF-05-19  
**Collection Date:** 5/19/2015 2:30:00 PM  
**Matrix:** WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID: MS5_150520B	QC Batch: P15VW081	PrepDate:	Analyst: QBM			
1,1,1,2-Tetrachloroethane	ND	0.13	2.0	ug/L	2	5/21/2015 12:37 AM
1,1,1-Trichloroethane	ND	0.14	2.0	ug/L	2	5/21/2015 12:37 AM
1,1,2,2-Tetrachloroethane	ND	0.062	2.0	ug/L	2	5/21/2015 12:37 AM
1,1,2-Trichloroethane	ND	0.12	2.0	ug/L	2	5/21/2015 12:37 AM
1,1-Dichloroethane	ND	0.044	1.0	ug/L	2	5/21/2015 12:37 AM
1,1-Dichloroethene	ND	0.17	2.0	ug/L	2	5/21/2015 12:37 AM
1,1-Dichloropropene	ND	0.088	2.0	ug/L	2	5/21/2015 12:37 AM
1,2,3-Trichlorobenzene	ND	0.11	2.0	ug/L	2	5/21/2015 12:37 AM
1,2,3-Trichloropropane	ND	0.12	2.0	ug/L	2	5/21/2015 12:37 AM
1,2,4-Trichlorobenzene	ND	0.12	2.0	ug/L	2	5/21/2015 12:37 AM
1,2,4-Trimethylbenzene	1900	4.2	100	ug/L	100	5/20/2015 11:48 PM
1,2-Dibromo-3-chloropropane	ND	0.094	4.0	ug/L	2	5/21/2015 12:37 AM
1,2-Dibromoethane	ND	0.11	2.0	ug/L	2	5/21/2015 12:37 AM
1,2-Dichlorobenzene	ND	0.080	2.0	ug/L	2	5/21/2015 12:37 AM
1,2-Dichloroethane	ND	0.13	1.0	ug/L	2	5/21/2015 12:37 AM
1,2-Dichloropropane	ND	0.12	2.0	ug/L	2	5/21/2015 12:37 AM
1,3,5-Trimethylbenzene	480	0.15	10	ug/L	10	5/21/2015 12:12 AM
1,3-Dichlorobenzene	ND	0.11	2.0	ug/L	2	5/21/2015 12:37 AM
1,3-Dichloropropane	ND	0.080	2.0	ug/L	2	5/21/2015 12:37 AM
1,4-Dichlorobenzene	ND	0.060	2.0	ug/L	2	5/21/2015 12:37 AM
2,2-Dichloropropane	ND	0.052	2.0	ug/L	2	5/21/2015 12:37 AM
2-Butanone	ND	0.97	20	ug/L	2	5/21/2015 12:37 AM
2-Chlorotoluene	ND	0.080	2.0	ug/L	2	5/21/2015 12:37 AM
4-Chlorotoluene	ND	0.072	2.0	ug/L	2	5/21/2015 12:37 AM
4-Isopropyltoluene	5.8	0.044	2.0	ug/L	2	5/21/2015 12:37 AM
4-Methyl-2-pentanone	ND	0.34	20	ug/L	2	5/21/2015 12:37 AM
Acetone	98	2.1	20	ug/L	2	5/21/2015 12:37 AM
Benzene	8200	3.6	100	ug/L	100	5/20/2015 11:48 PM
Bromobenzene	ND	0.086	2.0	ug/L	2	5/21/2015 12:37 AM
Bromochloromethane	ND	0.44	2.0	ug/L	2	5/21/2015 12:37 AM
Bromodichloromethane	ND	0.062	2.0	ug/L	2	5/21/2015 12:37 AM
Bromoform	ND	0.65	2.0	ug/L	2	5/21/2015 12:37 AM
Bromomethane	ND	0.65	2.0	ug/L	2	5/21/2015 12:37 AM
Carbon disulfide	1.2	0.050	2.0	J ug/L	2	5/21/2015 12:37 AM
Carbon tetrachloride	ND	0.11	1.0	ug/L	2	5/21/2015 12:37 AM
Chlorobenzene	ND	0.072	2.0	ug/L	2	5/21/2015 12:37 AM

**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



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**ANALYTICAL RESULTS**

Print Date: 27-May-15

**CLIENT:** CH2MHill  
**Lab Order:** N015732  
**Project:** SFPP - Norwalk Site  
**Lab ID:** N015732-001

**Client Sample ID:** INF-05-19  
**Collection Date:** 5/19/2015 2:30:00 PM  
**Matrix:** WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID: MS5_150520B	QC Batch: P15VW081	PrepDate:	Analyst: QBM			
Chloroethane	ND	0.20	2.0	ug/L	2	5/21/2015 12:37 AM
Chloroform	ND	0.072	2.0	ug/L	2	5/21/2015 12:37 AM
Chloromethane	ND	0.23	2.0	ug/L	2	5/21/2015 12:37 AM
cis-1,2-Dichloroethene	ND	0.10	2.0	ug/L	2	5/21/2015 12:37 AM
cis-1,3-Dichloropropene	ND	0.088	2.0	ug/L	2	5/21/2015 12:37 AM
Di-isopropyl ether	25	0.034	2.0	ug/L	2	5/21/2015 12:37 AM
Dibromochloromethane	ND	0.14	2.0	ug/L	2	5/21/2015 12:37 AM
Dibromomethane	ND	0.34	2.0	ug/L	2	5/21/2015 12:37 AM
Dichlorodifluoromethane	ND	0.14	2.0	ug/L	2	5/21/2015 12:37 AM
Ethyl tert-butyl ether	ND	0.078	2.0	ug/L	2	5/21/2015 12:37 AM
Ethylbenzene	1600	3.6	100	ug/L	100	5/20/2015 11:48 PM
Freon-113	ND	0.15	2.0	ug/L	2	5/21/2015 12:37 AM
Hexachlorobutadiene	ND	0.21	2.0	ug/L	2	5/21/2015 12:37 AM
Isopropylbenzene	63	0.068	2.0	ug/L	2	5/21/2015 12:37 AM
m,p-Xylene	8100	2.4	100	ug/L	100	5/20/2015 11:48 PM
Methylene chloride	ND	0.56	4.0	ug/L	2	5/21/2015 12:37 AM
MTBE	380	0.62	10	ug/L	10	5/21/2015 12:12 AM
n-Butylbenzene	18	0.062	2.0	ug/L	2	5/21/2015 12:37 AM
n-Propylbenzene	170	0.036	2.0	ug/L	2	5/21/2015 12:37 AM
Naphthalene	680	0.48	10	ug/L	10	5/21/2015 12:12 AM
o-Xylene	3400	4.2	100	ug/L	100	5/20/2015 11:48 PM
sec-Butylbenzene	11	0.050	2.0	ug/L	2	5/21/2015 12:37 AM
Styrene	ND	0.070	2.0	ug/L	2	5/21/2015 12:37 AM
Tert-amyl methyl ether	ND	0.078	2.0	ug/L	2	5/21/2015 12:37 AM
Tert-Butanol	ND	0.60	10	ug/L	2	5/21/2015 12:37 AM
tert-Butylbenzene	0.44	0.060	2.0	J ug/L	2	5/21/2015 12:37 AM
Tetrachloroethene	ND	0.33	2.0	ug/L	2	5/21/2015 12:37 AM
Toluene	17000	8.4	400	ug/L	200	5/22/2015 10:06 PM
trans-1,2-Dichloroethene	ND	0.14	2.0	ug/L	2	5/21/2015 12:37 AM
trans-1,3-Dichloropropene	ND	0.078	2.0	ug/L	2	5/21/2015 12:37 AM
Trichloroethene	ND	0.25	2.0	ug/L	2	5/21/2015 12:37 AM
Trichlorofluoromethane	ND	0.062	2.0	ug/L	2	5/21/2015 12:37 AM
Vinyl chloride	ND	0.19	1.0	ug/L	2	5/21/2015 12:37 AM
Xylenes, Total	12000	150	200	ug/L	100	5/20/2015 11:48 PM
Surr: 1,2-Dichloroethane-d4	101	0	72-119	%REC	100	5/20/2015 11:48 PM
Surr: 1,2-Dichloroethane-d4	103	0	72-119	%REC	2	5/21/2015 12:37 AM

**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



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**ASSET Laboratories**

**ANALYTICAL RESULTS**

Print Date: 27-May-15

**CLIENT:** CH2Mhill  
**Lab Order:** N015732  
**Project:** SFPP - Norwalk Site  
**Lab ID:** N015732-001

**Client Sample ID:** INF-05-19  
**Collection Date:** 5/19/2015 2:30:00 PM  
**Matrix:** WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID: MS5_150520B	QC Batch: P15VW081	PrepDate:	Analyst: QBM
Surr: 1,2-Dichloroethane-d4	103 0	72-119 %REC	10 5/21/2015 12:12 AM
Surr: 1,2-Dichloroethane-d4	107 0	72-119 %REC	200 5/22/2015 10:06 PM
Surr: 4-Bromofluorobenzene	99.9 0	76-119 %REC	100 5/20/2015 11:48 PM
Surr: 4-Bromofluorobenzene	98.8 0	76-119 %REC	10 5/21/2015 12:12 AM
Surr: 4-Bromofluorobenzene	100 0	76-119 %REC	200 5/22/2015 10:06 PM
Surr: 4-Bromofluorobenzene	98.0 0	76-119 %REC	2 5/21/2015 12:37 AM
Surr: Dibromofluoromethane	99.4 0	85-115 %REC	2 5/21/2015 12:37 AM
Surr: Dibromofluoromethane	99.8 0	85-115 %REC	100 5/20/2015 11:48 PM
Surr: Dibromofluoromethane	102 0	85-115 %REC	10 5/21/2015 12:12 AM
Surr: Dibromofluoromethane	103 0	85-115 %REC	200 5/22/2015 10:06 PM
Surr: Toluene-d8	101 0	81-120 %REC	100 5/20/2015 11:48 PM
Surr: Toluene-d8	102 0	81-120 %REC	2 5/21/2015 12:37 AM
Surr: Toluene-d8	101 0	81-120 %REC	10 5/21/2015 12:12 AM
Surr: Toluene-d8	101 0	81-120 %REC	200 5/22/2015 10:06 PM

**TPH EXTRACTABLE BY GC/FID**

**EPA 3510C**

**EPA 8015B**

RunID: GC1_150522A	QC Batch: 50491	PrepDate: 5/21/2015	Analyst: MDM
TPH-Diesel (C13-C22)	90000 1600	2600 ug/L	100 5/22/2015 08:42 PM
TPH-Oil (C23-C36)	2400 14	26 ug/L	1 5/22/2015 07:51 PM
Surr: Octacosane	120 0	26-152 %REC	1 5/22/2015 07:51 PM
Surr: p-Terphenyl	100 0	57-132 %REC	1 5/22/2015 07:51 PM

**GASOLINE RANGE ORGANICS BY GC/FID**

**EPA 8015B**

RunID: GC4_150520A	QC Batch: E15VW034	PrepDate:	Analyst: QBM
TPH-Gasoline (C4-C12)	73000 160	500 ug/L	10 5/20/2015 05:32 PM
Surr: Chlorobenzene - d5	80.4 0	74-138 %REC	10 5/20/2015 05:32 PM

**TOTAL TPH**

**EPA 3510C**

**EPA 8015B**

RunID: GC1_150522A	QC Batch: 50491	PrepDate: 5/21/2015	Analyst: MDM
Total TPH	165400 16	50 ug/L	1 5/22/2015 07:51 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



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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

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**CLIENT:** CH2MHill  
**Work Order:** N015732  
**Project:** SFPP - Norwalk Site

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 8015\_W\_FP\_SFPP**

Sample ID: <b>MB-50491</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_W_FP_</b>	Units: <b>ug/L</b>	Prep Date: <b>5/21/2015</b>	RunNo: <b>100522</b>						
Client ID: <b>PBW</b>	Batch ID: <b>50491</b>	TestNo: <b>EPA 8015B EPA 3510C</b>		Analysis Date: <b>5/22/2015</b>	SeqNo: <b>2008022</b>						
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	81.347		80.00		102	26	152				
Surr: p-Terphenyl	69.625		80.00		87.0	57	132				

**Qualifiers:**

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



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

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**CLIENT:** CH2MHill  
**Work Order:** N015732  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015\_W\_SFPPTOT**

Sample ID: <b>MB-50491</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_W_SFP</b>	Units: <b>ug/L</b>	Prep Date: <b>5/21/2015</b>	RunNo: <b>100522</b>						
Client ID: <b>PBW</b>	Batch ID: <b>50491</b>	TestNo: <b>EPA 8015B EPA 3510C</b>		Analysis Date: <b>5/22/2015</b>	SeqNo: <b>2008030</b>						
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                 |



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

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**CLIENT:** CH2MHill  
**Work Order:** N015732  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015GAS\_WSFPF**

Sample ID: <b>E150520MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8015GAS_WS</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100466</b>						
Client ID: <b>PBW</b>	Batch ID: <b>E15VW034</b>	TestNo: <b>EPA 8015B</b>		Analysis Date: <b>5/20/2015</b>	SeqNo: <b>2004705</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	ND	50									
Surr: Chlorobenzene - d5	54131.000		50000		108	74	138				

Sample ID: <b>E150520LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8015GAS_WS</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100466</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>E15VW034</b>	TestNo: <b>EPA 8015B</b>		Analysis Date: <b>5/20/2015</b>	SeqNo: <b>2004706</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	990.000	50	1000	0	99.0	67	136				
Surr: Chlorobenzene - d5	53514.000		50000		107	74	138				

Sample ID: <b>N015730-003AMS</b>	SampType: <b>MS</b>	TestCode: <b>8015GAS_WS</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100466</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E15VW034</b>	TestNo: <b>EPA 8015B</b>		Analysis Date: <b>5/20/2015</b>	SeqNo: <b>2004712</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	958.000	50	1000	0	95.8	67	136				
Surr: Chlorobenzene - d5	50692.000		50000		101	74	138				

Sample ID: <b>N015730-003AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015GAS_WS</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100466</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E15VW034</b>	TestNo: <b>EPA 8015B</b>		Analysis Date: <b>5/20/2015</b>	SeqNo: <b>2004713</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	984.000	50	1000	0	98.4	67	136	958.0	2.68	30	
Surr: Chlorobenzene - d5	53822.000		50000		108	74	138		0	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                 |



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 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

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**CLIENT:** CH2MHill  
**Work Order:** N015732  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID: <b>P150520LCS2</b>	SampType: <b>LCS</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100477</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>P15VW081</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>5/20/2015</b>	SeqNo: <b>2005601</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	19.900	1.0	20.00	0	99.5	81	129				
1,1,1-Trichloroethane	19.240	1.0	20.00	0	96.2	67	132				
1,1,2,2-Tetrachloroethane	19.480	1.0	20.00	0	97.4	63	128				
1,1,2-Trichloroethane	18.990	1.0	20.00	0	95.0	75	125				
1,1-Dichloroethane	20.720	0.50	20.00	0	104	69	133				
1,1-Dichloroethene	18.900	1.0	20.00	0	94.5	68	130				
1,1-Dichloropropene	19.650	1.0	20.00	0	98.2	73	132				
1,2,3-Trichlorobenzene	20.520	1.0	20.00	0	103	67	137				
1,2,3-Trichloropropane	18.910	1.0	20.00	0	94.6	73	124				
1,2,4-Trichlorobenzene	20.700	1.0	20.00	0	104	66	134				
1,2,4-Trimethylbenzene	20.370	1.0	20.00	0	102	74	132				
1,2-Dibromo-3-chloropropane	20.890	2.0	20.00	0	104	50	132				
1,2-Dibromoethane	20.060	1.0	20.00	0	100	80	121				
1,2-Dichlorobenzene	20.080	1.0	20.00	0	100	71	122				
1,2-Dichloroethane	19.390	0.50	20.00	0	97.0	69	132				
1,2-Dichloropropane	19.800	1.0	20.00	0	99.0	75	125				
1,3,5-Trimethylbenzene	20.070	1.0	20.00	0	100	74	131				
1,3-Dichlorobenzene	20.070	1.0	20.00	0	100	75	124				
1,3-Dichloropropane	19.010	1.0	20.00	0	95.1	73	126				
1,4-Dichlorobenzene	20.180	1.0	20.00	0	101	74	123				
2,2-Dichloropropane	20.220	1.0	20.00	0	101	69	137				
2-Butanone	182.520	10	200.0	0	91.3	49	136				
2-Chlorotoluene	19.830	1.0	20.00	0	99.2	73	126				
4-Chlorotoluene	19.800	1.0	20.00	0	99.0	74	128				
4-Isopropyltoluene	20.480	1.0	20.00	0	102	73	130				
4-Methyl-2-pentanone	192.660	10	200.0	0	96.3	58	134				
Acetone	179.050	10	200.0	0	89.5	40	135				
Benzene	19.500	1.0	20.00	0	97.5	81	122				
Bromobenzene	19.890	1.0	20.00	0	99.4	76	124				
Bromochloromethane	19.770	1.0	20.00	0	98.8	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                 |



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 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

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**CLIENT:** CH2MHill  
**Work Order:** N015732  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID: <b>P150520LCS2</b>	SampType: <b>LCS</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100477</b>
Client ID: <b>LCSW</b>	Batch ID: <b>P15VW081</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>5/20/2015</b>	SeqNo: <b>2005601</b>	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromodichloromethane	20.220	1.0	20.00	0	101	76	121				
Bromoform	18.040	1.0	20.00	0	90.2	69	128				
Bromomethane	17.720	1.0	20.00	0	88.6	53	141				
Carbon disulfide	19.460	1.0	20.00	0	97.3	75	125				
Carbon tetrachloride	18.410	0.50	20.00	0	92.0	66	138				
Chlorobenzene	19.960	1.0	20.00	0	99.8	81	122				
Chloroethane	19.040	1.0	20.00	0	95.2	58	133				
Chloroform	19.300	1.0	20.00	0	96.5	69	128				
Chloromethane	19.750	1.0	20.00	0	98.8	56	131				
cis-1,2-Dichloroethene	19.490	1.0	20.00	0	97.5	72	126				
cis-1,3-Dichloropropene	20.200	1.0	20.00	0	101	69	131				
Di-isopropyl ether	19.530	1.0	20.00	0	97.6	70	130				
Dibromochloromethane	20.050	1.0	20.00	0	100	66	133				
Dibromomethane	20.490	1.0	20.00	0	102	76	125				
Dichlorodifluoromethane	20.290	1.0	20.00	0	101	53	153				
Ethyl tert-butyl ether	19.270	1.0	20.00	0	96.4	70	130				
Ethylbenzene	19.520	1.0	20.00	0	97.6	73	127				
Freon-113	19.030	1.0	20.00	0	95.2	75	125				
Hexachlorobutadiene	19.850	1.0	20.00	0	99.2	67	131				
Isopropylbenzene	19.840	1.0	20.00	0	99.2	75	127				
m,p-Xylene	39.810	1.0	40.00	0	99.5	76	128				
Methylene chloride	19.770	2.0	20.00	0	98.8	63	137				
MTBE	18.930	1.0	20.00	0	94.6	65	123				
n-Butylbenzene	20.570	1.0	20.00	0	103	69	137				
n-Propylbenzene	20.180	1.0	20.00	0	101	72	129				
Naphthalene	21.490	1.0	20.00	0	107	54	138				
o-Xylene	19.830	1.0	20.00	0	99.2	80	121				
sec-Butylbenzene	19.990	1.0	20.00	0	100	72	127				
Styrene	20.140	1.0	20.00	0	101	65	134				
Tert-amyl methyl ether	19.370	1.0	20.00	0	96.9	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                 |



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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

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**CLIENT:** CH2MHill  
**Work Order:** N015732  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID: <b>P150520LCS2</b>	SampType: <b>LCS</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100477</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>P15VW081</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>5/20/2015</b>	SeqNo: <b>2005601</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tert-Butanol	92.590	5.0	100.0	0	92.6	70	130				
tert-Butylbenzene	20.100	1.0	20.00	0	101	70	129				
Tetrachloroethene	20.310	1.0	20.00	0	102	66	128				
Toluene	19.930	2.0	20.00	0	99.7	77	122				
trans-1,2-Dichloroethene	19.710	1.0	20.00	0	98.6	63	137				
trans-1,3-Dichloropropene	20.250	1.0	20.00	0	101	59	135				
Trichloroethene	20.290	1.0	20.00	0	101	70	127				
Trichlorofluoromethane	21.030	1.0	20.00	0	105	57	129				
Vinyl chloride	19.890	0.50	20.00	0	99.4	50	134				
Xylenes, Total	59.640	2.0	60.00	0	99.4	75	125				
Surr: 1,2-Dichloroethane-d4	24.440		25.00		97.8	72	119				
Surr: 4-Bromofluorobenzene	25.550		25.00		102	76	119				
Surr: Dibromofluoromethane	24.940		25.00		99.8	85	115				
Surr: Toluene-d8	25.580		25.00		102	81	120				

Sample ID: <b>N015745-001DMS</b>	SampType: <b>MS</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100477</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>P15VW081</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>5/20/2015</b>	SeqNo: <b>2005602</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.810	1.0	20.00	0	104	81	129				
1,1,1-Trichloroethane	19.420	1.0	20.00	0	97.1	67	132				
1,1,2,2-Tetrachloroethane	18.970	1.0	20.00	0	94.8	63	128				
1,1,2-Trichloroethane	19.460	1.0	20.00	0	97.3	75	125				
1,1-Dichloroethane	20.890	0.50	20.00	0	104	69	133				
1,1-Dichloroethene	19.100	1.0	20.00	0	95.5	68	130				
1,1-Dichloropropene	20.240	1.0	20.00	0	101	73	132				
1,2,3-Trichlorobenzene	20.070	1.0	20.00	0	100	67	137				
1,2,3-Trichloropropane	18.990	1.0	20.00	0	95.0	73	124				
1,2,4-Trichlorobenzene	20.550	1.0	20.00	0	103	66	134				
1,2,4-Trimethylbenzene	20.300	1.0	20.00	0	102	74	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                 |



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 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

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**Work Order:** N015732  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID: <b>N015745-001DMS</b>	SampType: <b>MS</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100477</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>P15VW081</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>5/20/2015</b>	SeqNo: <b>2005602</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	20.760	2.0	20.00	0	104	50	132				
1,2-Dibromoethane	20.290	1.0	20.00	0	101	80	121				
1,2-Dichlorobenzene	20.080	1.0	20.00	0	100	71	122				
1,2-Dichloroethane	19.560	0.50	20.00	0	97.8	69	132				
1,2-Dichloropropane	20.150	1.0	20.00	0	101	75	125				
1,3,5-Trimethylbenzene	20.010	1.0	20.00	0	100	74	131				
1,3-Dichlorobenzene	20.350	1.0	20.00	0	102	75	124				
1,3-Dichloropropane	19.490	1.0	20.00	0	97.5	73	126				
1,4-Dichlorobenzene	20.250	1.0	20.00	0	101	74	123				
2,2-Dichloropropane	21.190	1.0	20.00	0	106	69	137				
2-Butanone	173.520	10	200.0	0	86.8	49	136				
2-Chlorotoluene	19.750	1.0	20.00	0	98.8	73	126				
4-Chlorotoluene	19.940	1.0	20.00	0	99.7	74	128				
4-Isopropyltoluene	20.380	1.0	20.00	0	102	73	130				
4-Methyl-2-pentanone	195.860	10	200.0	0	97.9	58	134				
Acetone	158.260	10	200.0	5.740	76.3	40	135				
Benzene	19.880	1.0	20.00	0	99.4	81	122				
Bromobenzene	19.850	1.0	20.00	0	99.2	76	124				
Bromochloromethane	19.960	1.0	20.00	0	99.8	65	129				
Bromodichloromethane	20.940	1.0	20.00	0	105	76	121				
Bromoform	18.760	1.0	20.00	0	93.8	69	128				
Bromomethane	19.350	1.0	20.00	0	96.8	53	141				
Carbon disulfide	20.130	1.0	20.00	0	101	75	125				
Carbon tetrachloride	19.470	0.50	20.00	0	97.4	66	138				
Chlorobenzene	20.130	1.0	20.00	0	101	81	122				
Chloroethane	20.310	1.0	20.00	0	102	58	133				
Chloroform	24.690	1.0	20.00	5.120	97.9	69	128				
Chloromethane	20.000	1.0	20.00	0	100	56	131				
cis-1,2-Dichloroethene	19.790	1.0	20.00	0	99.0	72	126				
cis-1,3-Dichloropropene	20.990	1.0	20.00	0	105	69	131				

**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                 |



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 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

"Serving Clients with Passion and Professionalism"

**CLIENT:** CH2MHill  
**Work Order:** N015732  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID: <b>N015745-001DMS</b>	SampType: <b>MS</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100477</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>P15VW081</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>5/20/2015</b>	SeqNo: <b>2005602</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Di-isopropyl ether	19.870	1.0	20.00	0	99.4	70	130				
Dibromochloromethane	20.810	1.0	20.00	0	104	66	133				
Dibromomethane	20.910	1.0	20.00	0	105	76	125				
Dichlorodifluoromethane	20.580	1.0	20.00	0	103	53	153				
Ethyl tert-butyl ether	19.540	1.0	20.00	0	97.7	70	130				
Ethylbenzene	19.730	1.0	20.00	0	98.6	73	127				
Freon-113	19.780	1.0	20.00	0	98.9	75	125				
Hexachlorobutadiene	21.400	1.0	20.00	0	107	67	131				
Isopropylbenzene	20.030	1.0	20.00	0	100	75	127				
m,p-Xylene	39.990	1.0	40.00	0	100	76	128				
Methylene chloride	19.300	2.0	20.00	0	96.5	63	137				
MTBE	19.120	1.0	20.00	0	95.6	65	123				
n-Butylbenzene	20.410	1.0	20.00	0	102	69	137				
n-Propylbenzene	20.050	1.0	20.00	0	100	72	129				
Naphthalene	21.590	1.0	20.00	0.3200	106	54	138				
o-Xylene	20.110	1.0	20.00	0	101	80	121				
sec-Butylbenzene	19.660	1.0	20.00	0	98.3	72	127				
Styrene	20.170	1.0	20.00	0	101	65	134				
Tert-amyl methyl ether	19.770	1.0	20.00	0	98.8	70	130				
Tert-Butanol	91.850	5.0	100.0	0	91.8	70	130				
tert-Butylbenzene	20.020	1.0	20.00	0	100	70	129				
Tetrachloroethene	20.070	1.0	20.00	0	100	66	128				
Toluene	20.420	2.0	20.00	0	102	77	122				
trans-1,2-Dichloroethene	20.120	1.0	20.00	0	101	63	137				
trans-1,3-Dichloropropene	20.680	1.0	20.00	0	103	59	135				
Trichloroethene	20.680	1.0	20.00	0	103	70	127				
Trichlorofluoromethane	21.240	1.0	20.00	0	106	57	129				
Vinyl chloride	20.200	0.50	20.00	0	101	50	134				
Xylenes, Total	60.100	2.0	60.00	0	100	75	125				
Surr: 1,2-Dichloroethane-d4	24.400		25.00		97.6	72	119				

**Qualifiers:**

- |  |  |  |
|--|--|--|
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 P: 562.219.7435 F: 562.219.7436

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 3151 W. Post Rd., Las Vegas, NV 89118  
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**CLIENT:** CH2MHill  
**Work Order:** N015732  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID: <b>N015745-001DMS</b>	SampType: <b>MS</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100477</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>P15VW081</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>5/20/2015</b>	SeqNo: <b>2005602</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	25.520		25.00		102	76	119				
Surr: Dibromofluoromethane	24.950		25.00		99.8	85	115				
Surr: Toluene-d8	25.580		25.00		102	81	120				

Sample ID: <b>N015745-001DMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100477</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>P15VW081</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>5/20/2015</b>	SeqNo: <b>2005603</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	21.480	1.0	20.00	0	107	81	129	20.81	3.17	20	
1,1,1-Trichloroethane	19.610	1.0	20.00	0	98.0	67	132	19.42	0.974	20	
1,1,2,2-Tetrachloroethane	19.850	1.0	20.00	0	99.2	63	128	18.97	4.53	20	
1,1,2-Trichloroethane	19.640	1.0	20.00	0	98.2	75	125	19.46	0.921	20	
1,1-Dichloroethane	20.850	0.50	20.00	0	104	69	133	20.89	0.192	20	
1,1-Dichloroethene	19.340	1.0	20.00	0	96.7	68	130	19.10	1.25	20	
1,1-Dichloropropene	20.150	1.0	20.00	0	101	73	132	20.24	0.446	20	
1,2,3-Trichlorobenzene	21.330	1.0	20.00	0	107	67	137	20.07	6.09	20	
1,2,3-Trichloropropane	19.690	1.0	20.00	0	98.4	73	124	18.99	3.62	20	
1,2,4-Trichlorobenzene	21.530	1.0	20.00	0	108	66	134	20.55	4.66	20	
1,2,4-Trimethylbenzene	21.110	1.0	20.00	0	106	74	132	20.30	3.91	20	
1,2-Dibromo-3-chloropropane	21.530	2.0	20.00	0	108	50	132	20.76	3.64	20	
1,2-Dibromoethane	20.320	1.0	20.00	0	102	80	121	20.29	0.148	20	
1,2-Dichlorobenzene	20.840	1.0	20.00	0	104	71	122	20.08	3.71	20	
1,2-Dichloroethane	19.580	0.50	20.00	0	97.9	69	132	19.56	0.102	20	
1,2-Dichloropropane	20.240	1.0	20.00	0	101	75	125	20.15	0.446	20	
1,3,5-Trimethylbenzene	20.900	1.0	20.00	0	104	74	131	20.01	4.35	20	
1,3-Dichlorobenzene	20.810	1.0	20.00	0	104	75	124	20.35	2.24	20	
1,3-Dichloropropane	19.950	1.0	20.00	0	99.8	73	126	19.49	2.33	20	
1,4-Dichlorobenzene	20.530	1.0	20.00	0	103	74	123	20.25	1.37	20	
2,2-Dichloropropane	21.030	1.0	20.00	0	105	69	137	21.19	0.758	20	
2-Butanone	180.860	10	200.0	0	90.4	49	136	173.5	4.14	20	

**Qualifiers:**

- |  |  |  |
|--|--|--|
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 3151 W. Post Rd., Las Vegas, NV 89118  
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**CLIENT:** CH2MHill  
**Work Order:** N015732  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID: <b>N015745-001DMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100477</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>P15VW081</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>5/20/2015</b>	SeqNo: <b>2005603</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Chlorotoluene	20.570	1.0	20.00	0	103	73	126	19.75	4.07	20	
4-Chlorotoluene	20.660	1.0	20.00	0	103	74	128	19.94	3.55	20	
4-Isopropyltoluene	21.140	1.0	20.00	0	106	73	130	20.38	3.66	20	
4-Methyl-2-pentanone	202.750	10	200.0	0	101	58	134	195.9	3.46	20	
Acetone	165.060	10	200.0	5.740	79.7	40	135	158.3	4.21	20	
Benzene	19.920	1.0	20.00	0	99.6	81	122	19.88	0.201	20	
Bromobenzene	20.650	1.0	20.00	0	103	76	124	19.85	3.95	20	
Bromochloromethane	19.410	1.0	20.00	0	97.0	65	129	19.96	2.79	20	
Bromodichloromethane	20.900	1.0	20.00	0	104	76	121	20.94	0.191	20	
Bromoform	19.060	1.0	20.00	0	95.3	69	128	18.76	1.59	20	
Bromomethane	19.420	1.0	20.00	0	97.1	53	141	19.35	0.361	20	
Carbon disulfide	20.150	1.0	20.00	0	101	75	125	20.13	0.0993	20	
Carbon tetrachloride	20.170	0.50	20.00	0	101	66	138	19.47	3.53	20	
Chlorobenzene	20.740	1.0	20.00	0	104	81	122	20.13	2.99	20	
Chloroethane	17.550	1.0	20.00	0	87.8	58	133	20.31	14.6	20	
Chloroform	25.850	1.0	20.00	5.120	104	69	128	24.69	4.59	20	
Chloromethane	20.110	1.0	20.00	0	101	56	131	20.00	0.548	20	
cis-1,2-Dichloroethene	20.030	1.0	20.00	0	100	72	126	19.79	1.21	20	
cis-1,3-Dichloropropene	20.850	1.0	20.00	0	104	69	131	20.99	0.669	20	
Di-isopropyl ether	19.740	1.0	20.00	0	98.7	70	130	19.87	0.656	20	
Dibromochloromethane	21.500	1.0	20.00	0	108	66	133	20.81	3.26	20	
Dibromomethane	21.060	1.0	20.00	0	105	76	125	20.91	0.715	20	
Dichlorodifluoromethane	20.790	1.0	20.00	0	104	53	153	20.58	1.02	20	
Ethyl tert-butyl ether	19.730	1.0	20.00	0	98.6	70	130	19.54	0.968	20	
Ethylbenzene	20.200	1.0	20.00	0	101	73	127	19.73	2.35	20	
Freon-113	20.290	1.0	20.00	0	101	75	125	19.78	2.55	20	
Hexachlorobutadiene	21.130	1.0	20.00	0	106	67	131	21.40	1.27	20	
Isopropylbenzene	20.700	1.0	20.00	0	104	75	127	20.03	3.29	20	
m,p-Xylene	41.030	1.0	40.00	0	103	76	128	39.99	2.57	20	
Methylene chloride	19.660	2.0	20.00	0	98.3	63	137	19.30	1.85	20	

**Qualifiers:**

- |  |  |  |
|--|--|--|
| B Analyte detected in the associated Method Blank              | E Value above quantitation range       | H Holding times for preparation or analysis exceeded |
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 3151 W. Post Rd., Las Vegas, NV 89118  
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**CLIENT:** CH2MHill  
**Work Order:** N015732  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID: <b>N015745-001DMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100477</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>P15VW081</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>5/20/2015</b>	SeqNo: <b>2005603</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
MTBE	19.620	1.0	20.00	0	98.1	65	123	19.12	2.58	20	
n-Butylbenzene	20.990	1.0	20.00	0	105	69	137	20.41	2.80	20	
n-Propylbenzene	20.900	1.0	20.00	0	104	72	129	20.05	4.15	20	
Naphthalene	22.410	1.0	20.00	0.3200	110	54	138	21.59	3.73	20	
o-Xylene	20.500	1.0	20.00	0	103	80	121	20.11	1.92	20	
sec-Butylbenzene	20.590	1.0	20.00	0	103	72	127	19.66	4.62	20	
Styrene	20.680	1.0	20.00	0	103	65	134	20.17	2.50	20	
Tert-amyl methyl ether	19.840	1.0	20.00	0	99.2	70	130	19.77	0.353	20	
Tert-Butanol	94.400	5.0	100.0	0	94.4	70	130	91.85	2.74	20	
tert-Butylbenzene	20.710	1.0	20.00	0	104	70	129	20.02	3.39	20	
Tetrachloroethene	20.250	1.0	20.00	0	101	66	128	20.07	0.893	20	
Toluene	20.580	2.0	20.00	0	103	77	122	20.42	0.780	20	
trans-1,2-Dichloroethene	20.130	1.0	20.00	0	101	63	137	20.12	0.0497	20	
trans-1,3-Dichloropropene	20.820	1.0	20.00	0	104	59	135	20.68	0.675	20	
Trichloroethene	20.450	1.0	20.00	0	102	70	127	20.68	1.12	20	
Trichlorofluoromethane	21.740	1.0	20.00	0	109	57	129	21.24	2.33	20	
Vinyl chloride	20.100	0.50	20.00	0	101	50	134	20.20	0.496	20	
Xylenes, Total	61.530	2.0	60.00	0	103	75	125	60.10	2.35	20	
Surr: 1,2-Dichloroethane-d4	24.550		25.00		98.2	72	119		0		
Surr: 4-Bromofluorobenzene	25.940		25.00		104	76	119		0		
Surr: Dibromofluoromethane	25.000		25.00		100	85	115		0		
Surr: Toluene-d8	25.780		25.00		103	81	120		0		

Sample ID: <b>P150520MB6</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100477</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P15VW081</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>5/20/2015</b>	SeqNo: <b>2005604</b>						
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									

**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                 |



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 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

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**CLIENT:** CH2MHill  
**Work Order:** N015732  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID: <b>P150520MB6</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100477</b>
Client ID: <b>PBW</b>	Batch ID: <b>P15VW081</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>5/20/2015</b>	SeqNo: <b>2005604</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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									
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									

**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                 |



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 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

"Serving Clients with Passion and Professionalism"

**CLIENT:** CH2MHill  
**Work Order:** N015732  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID: <b>P150520MB6</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100477</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P15VW081</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>5/20/2015</b>	SeqNo: <b>2005604</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	0.030	1.0									J
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	0.060	1.0									J
Chloromethane	0.180	1.0									J
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	ND	2.0									
MTBE	ND	1.0									
n-Butylbenzene	ND	1.0									
n-Propylbenzene	0.020	1.0									J
Naphthalene	0.210	1.0									J
o-Xylene	ND	1.0									
sec-Butylbenzene	ND	1.0									
Styrene	0.040	1.0									J
Tert-amyl methyl ether	ND	1.0									
Tert-Butanol	ND	5.0									
tert-Butylbenzene	ND	1.0									
Tetrachloroethene	ND	1.0									

**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                 |



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"Serving Clients with Passion and Professionalism"

**CLIENT:** CH2MHill  
**Work Order:** N015732  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID: <b>P150520MB6</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100477</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P15VW081</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>5/20/2015</b>	SeqNo: <b>2005604</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	24.850		25.00		99.4	72	119				
Surr: 4-Bromofluorobenzene	24.790		25.00		99.2	76	119				
Surr: Dibromofluoromethane	25.220		25.00		101	85	115				
Surr: Toluene-d8	25.460		25.00		102	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                 |



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**CLIENT:** CH2MHill  
**Work Order:** N015732  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID: <b>P150522LCS2</b>		SampType: <b>LCS</b>		TestCode: <b>8260_WP_SF</b>		Units: <b>ug/L</b>		Prep Date:		RunNo: <b>100527</b>	
Client ID: <b>LCSW</b>		Batch ID: <b>P15VW082</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>5/22/2015</b>				SeqNo: <b>2008270</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	20.930	2.0	20.00	0	105	77	122				
Surr: 1,2-Dichloroethane-d4	26.390		25.00		106	72	119				
Surr: 4-Bromofluorobenzene	25.650		25.00		103	76	119				
Surr: Dibromofluoromethane	25.510		25.00		102	85	115				
Surr: Toluene-d8	25.790		25.00		103	81	120				

Sample ID: <b>N015750-003AMS</b>		SampType: <b>MS</b>		TestCode: <b>8260_WP_SF</b>		Units: <b>ug/L</b>		Prep Date:		RunNo: <b>100527</b>	
Client ID: <b>ZZZZZ</b>		Batch ID: <b>P15VW082</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>5/22/2015</b>				SeqNo: <b>2008271</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	20.670	2.0	20.00	0	103	77	122				
Surr: 1,2-Dichloroethane-d4	26.670		25.00		107	72	119				
Surr: 4-Bromofluorobenzene	25.210		25.00		101	76	119				
Surr: Dibromofluoromethane	26.280		25.00		105	85	115				
Surr: Toluene-d8	25.420		25.00		102	81	120				

Sample ID: <b>N015750-003AMSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_WP_SF</b>		Units: <b>ug/L</b>		Prep Date:		RunNo: <b>100527</b>	
Client ID: <b>ZZZZZ</b>		Batch ID: <b>P15VW082</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>5/22/2015</b>				SeqNo: <b>2008272</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	21.070	2.0	20.00	0	105	77	122	20.67	1.92	20	
Surr: 1,2-Dichloroethane-d4	25.990		25.00		104	72	119		0		
Surr: 4-Bromofluorobenzene	24.500		25.00		98.0	76	119		0		
Surr: Dibromofluoromethane	25.480		25.00		102	85	115		0		
Surr: Toluene-d8	25.090		25.00		100	81	120		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                 |



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"Serving Clients with Passion and Professionalism"

**CLIENT:** CH2MHill  
**Work Order:** N015732  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID: <b>P150522MB6</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100527</b>
Client ID: <b>PBW</b>	Batch ID: <b>P15VW082</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>5/22/2015</b>	SeqNo: <b>2008275</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	ND	2.0									
Surr: 1,2-Dichloroethane-d4	26.410		25.00		106	72	119				
Surr: 4-Bromofluorobenzene	24.820		25.00		99.3	76	119				
Surr: Dibromofluoromethane	26.050		25.00		104	85	115				
Surr: Toluene-d8	25.360		25.00		101	81	120				

**Qualifiers:**

- |  |  |  |
|--|--|--|
| B Analyte detected in the associated Method Blank              | E Value above quantitation range       | H Holding times for preparation or analysis exceeded |
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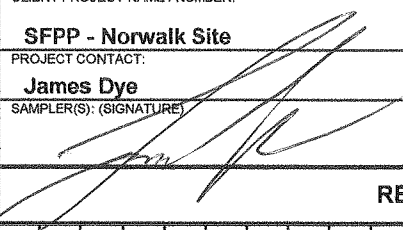
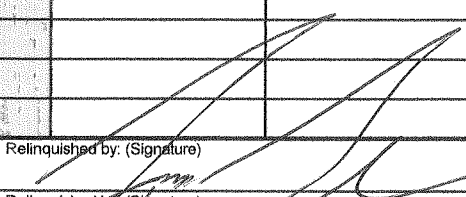
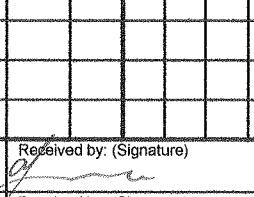

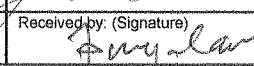

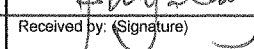
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Advanced Technology Laboratories  
 3151 W. Post Road  
 Las Vegas, NV 89118  
 Tel: 702-307-2659 Fax: 702-307-2691  
 Marlon Cartin [marlon@atl-labs.com]

CHAIN OF CUSTODY RECORD

DATE: 05/19/15  
 PAGE: 1 OF 1

LABORATORY CLIENT: <b>Kinder Morgan Energy Partners, Attn: Steve Defibaugh</b>						CLIENT PROJECT NAME/NUMBER: <b>SFPP - Norwalk Site</b>						P.O. NO.:																																					
ADDRESS: <b>1100 Town &amp; Country Road</b>						PROJECT CONTACT: <b>James Dye</b>						QUOTE NO.:																																					
CITY: <b>Orange, CA 92868</b>						SAMPLER(S): (SIGNATURE) 						LAB USE ONLY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>																																					
TEL: <b>714-560-4802</b>		FAX: <b>714-560-4601</b>		E-MAIL: <b>james_dye@kindermorgan.com</b>																																													
TURNAROUND TIME <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48HR <input type="checkbox"/> 72 HR <input checked="" type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS						<table border="1"> <thead> <tr> <th colspan="12">REQUESTED ANALYSIS</th> </tr> <tr> <th>TPH - g (8015M)</th> <th>TPH-fp (8015M)</th> <th>VOCs, Full List (8260B)</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>						REQUESTED ANALYSIS												TPH - g (8015M)	TPH-fp (8015M)	VOCs, Full List (8260B)										X	X	X											
REQUESTED ANALYSIS																																																	
TPH - g (8015M)	TPH-fp (8015M)	VOCs, Full List (8260B)																																															
X	X	X																																															
SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY) <input type="checkbox"/> RWQCB REPORTING <input type="checkbox"/> ARCHIVE SAMPLES UNTIL ___/___/___																																																	
SPECIAL INSTRUCTIONS <b>Report to D. Jablonski/CH2M HILL, cc: KMEP</b> <b>Direct Bill KMEP/SFPP - Steve Defibaugh-ref. AFE# 81195</b> <b>"J" flags required/Use lowest possible detection limit - all methods.</b>																																																	
LAB USE ONLY	SAMPLE ID	LOCATION/ DESCRIPTION	SAMPLING		MAT- RIX	NO. OF CONT.	TPH - g (8015M)	TPH-fp (8015M)	VOCs, Full List (8260B)													Comments																											
			DATE	TIME																																													
	INF- 05-19	Influent	5/19/15	1430	WW	8	X	X	X													N015732-1																											
																						Monthly																											
Relinquished by: (Signature) 						Received by: (Signature) 						Date: 5-19-15		Time: 4:00 PM																																			
Relinquished by: (Signature) 						Received by: (Signature) 						Date: 5/20/15		Time: 04:00																																			
Relinquished by: (Signature) 						Received by: (Signature) 						Date:		Time:																																			

1.900  
1R42

# 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: 5/20/2015 Workorder: N015732  
 Rep sample Temp (Deg C): 1.9 IR Gun ID: 2  
 Temp Blank:  Yes  No  
 Carrier name: Golden State Overnight  
 Last 4 digits of Tracking No.: 2717 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 <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                | Not Present <input type="checkbox"/>   |
| 2. Custody seals intact, signed, dated on shipping container/cooler?                    | Yes <input type="checkbox"/>                                 | No <input type="checkbox"/>                                | Not Present <input checked="" type="checkbox"/>                                  |
| 3. Custody seals intact on sample bottles?  | Yes <input type="checkbox"/>                                 | No <input type="checkbox"/>                                | Not Present <input checked="" type="checkbox"/>                                  |
| 4. Chain of custody present?  | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                |  |
| 5. Sampler's name present in COC?   | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                |  |
| 6. Chain of custody signed when relinquished and received?                              | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                |  |
| 7. Chain of custody agrees with sample labels?  | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                |  |
| 8. Samples in proper container/bottle?  | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                |  |
| 9. Sample containers intact?  | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                |  |
| 10. Sufficient sample volume for indicated test?  | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                |  |
| 11. All samples received within holding time?   | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                |  |
| 12. Temperature of rep sample or Temp Blank within acceptable limit?                    | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                | NA <input type="checkbox"/>  |
| 13. Water - VOA vials have zero headspace?  | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                | NA <input type="checkbox"/>  |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input type="checkbox"/>                                 | No <input type="checkbox"/>                                | NA <input checked="" type="checkbox"/>   |
| 15. Did the bottle labels indicate correct preservatives used?                          | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                | NA <input type="checkbox"/>  |
| 16. Were there Non-Conformance issues at login?<br>Was Client notified?                 | Yes <input type="checkbox"/><br>Yes <input type="checkbox"/> | No <input type="checkbox"/><br>No <input type="checkbox"/> | NA <input checked="" type="checkbox"/><br>NA <input checked="" type="checkbox"/> |

Comments:

Checklist Completed By: HG  5/21/2015

Reviewed By:  05/26/15

# ASSET Laboratories

## WORK ORDER Summary

20-May-15

**WorkOrder:** N015732

**Client ID:** CH2HI03

**Project:** SFPP - Norwalk Site

**QC Level:** RTNE

**Date Received:** 5/20/2015

**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
N015732-001A	INF-05-19	5/19/2015 2:30:00 PM	5/28/2015	Wastewater	EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VW
			5/28/2015		EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VW
N015732-001B			5/28/2015		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			5/28/2015		EPA 8015B	TPH EXTRACTABLE BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			5/28/2015		EPA 8015B	Total TPH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N015732-002A	FOLDER		5/28/2015		Folder	Folder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LAB



800-322-5555 www.gso.com

**Ship From**

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

Tracking #: 527982717

CPS



**Ship To**

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

**LVS**  
**LAS VEGAS**

**A**

**COD:** \$0.00

**Weight:** 0 lb(s)

**Reference:**

**C89102A**

**Delivery Instructions:**

HOLD FOR PICK UP

**Signature Type:** REQUIRED



37930243

Print Date: 5/19/2015 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.

*1.9°C IR#2*

June 10, 2015

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

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

TEL:  
FAX:

Workorder No.: N015883

RE: SFPP - Norwalk Site

Attention: Dan Jablonski

Enclosed are the results for sample(s) received on June 03, 2015 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,

*Nancy Libunco* for

Glen Gesmundo  
QA Manager

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



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[www.assetlaboratories.com](http://www.assetlaboratories.com)

---

**CLIENT:** CH2MHill  
**Project:** SFPP - Norwalk Site  
**Lab Order:** N015883

---

**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 8260B:**

Dilution was necessary due to high concentration of some target analytes.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) on QC samples N015882-001GMS and N015882-001GMSD are outside recovery criteria for Tert-Butanol possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.



**CLIENT:** CH2MHill  
**Project:** SFPP - Norwalk Site  
**Lab Order:** N015883  
**Contract No:**

**Work Order Sample Summary**

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N015883-001A	INF-06-02	Wastewater	6/2/2015 11:15:00 AM	6/3/2015	6/10/2015
N015883-001B	INF-06-02	Wastewater	6/2/2015 11:15:00 AM	6/3/2015	6/10/2015



**ASSET Laboratories**

**ANALYTICAL RESULTS**

Print Date: 10-Jun-15

**CLIENT:** CH2MHill  
**Lab Order:** N015883  
**Project:** SFPP - Norwalk Site  
**Lab ID:** N015883-001

**Client Sample ID:** INF-06-02  
**Collection Date:** 6/2/2015 11:15:00 AM  
**Matrix:** WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID: MS5_150604B	QC Batch: P15VW089	PrepDate	Analyst: QBM			
1,1,1,2-Tetrachloroethane	ND	0.13	2.0	ug/L	2	6/5/2015 09:28 AM
1,1,1-Trichloroethane	ND	0.14	2.0	ug/L	2	6/5/2015 09:28 AM
1,1,2,2-Tetrachloroethane	ND	0.062	2.0	ug/L	2	6/5/2015 09:28 AM
1,1,2-Trichloroethane	ND	0.12	2.0	ug/L	2	6/5/2015 09:28 AM
1,1-Dichloroethane	ND	0.044	1.0	ug/L	2	6/5/2015 09:28 AM
1,1-Dichloroethene	ND	0.17	2.0	ug/L	2	6/5/2015 09:28 AM
1,1-Dichloropropene	ND	0.088	2.0	ug/L	2	6/5/2015 09:28 AM
1,2,3-Trichlorobenzene	ND	0.11	2.0	ug/L	2	6/5/2015 09:28 AM
1,2,3-Trichloropropane	ND	0.12	2.0	ug/L	2	6/5/2015 09:28 AM
1,2,4-Trichlorobenzene	ND	0.12	2.0	ug/L	2	6/5/2015 09:28 AM
1,2,4-Trimethylbenzene	1400	4.2	100	ug/L	100	6/5/2015 08:38 AM
1,2-Dibromo-3-chloropropane	ND	0.094	4.0	ug/L	2	6/5/2015 09:28 AM
1,2-Dibromoethane	ND	0.11	2.0	ug/L	2	6/5/2015 09:28 AM
1,2-Dichlorobenzene	ND	0.080	2.0	ug/L	2	6/5/2015 09:28 AM
1,2-Dichloroethane	ND	0.13	1.0	ug/L	2	6/5/2015 09:28 AM
1,2-Dichloropropane	ND	0.12	2.0	ug/L	2	6/5/2015 09:28 AM
1,3,5-Trimethylbenzene	400	0.15	10	ug/L	10	6/5/2015 09:03 AM
1,3-Dichlorobenzene	ND	0.11	2.0	ug/L	2	6/5/2015 09:28 AM
1,3-Dichloropropane	ND	0.080	2.0	ug/L	2	6/5/2015 09:28 AM
1,4-Dichlorobenzene	ND	0.060	2.0	ug/L	2	6/5/2015 09:28 AM
2,2-Dichloropropane	ND	0.052	2.0	ug/L	2	6/5/2015 09:28 AM
2-Butanone	ND	0.97	20	ug/L	2	6/5/2015 09:28 AM
2-Chlorotoluene	ND	0.080	2.0	ug/L	2	6/5/2015 09:28 AM
4-Chlorotoluene	ND	0.072	2.0	ug/L	2	6/5/2015 09:28 AM
4-Isopropyltoluene	6.4	0.044	2.0	ug/L	2	6/5/2015 09:28 AM
4-Methyl-2-pentanone	ND	0.34	20	ug/L	2	6/5/2015 09:28 AM
Acetone	140	2.1	20	ug/L	2	6/5/2015 09:28 AM
Benzene	3200	3.6	100	ug/L	100	6/5/2015 08:38 AM
Bromobenzene	ND	0.086	2.0	ug/L	2	6/5/2015 09:28 AM
Bromochloromethane	ND	0.44	2.0	ug/L	2	6/5/2015 09:28 AM
Bromodichloromethane	ND	0.062	2.0	ug/L	2	6/5/2015 09:28 AM
Bromoform	ND	0.65	2.0	ug/L	2	6/5/2015 09:28 AM
Bromomethane	ND	0.65	2.0	ug/L	2	6/5/2015 09:28 AM
Carbon disulfide	0.42	0.050	2.0	J ug/L	2	6/5/2015 09:28 AM
Carbon tetrachloride	ND	0.11	1.0	ug/L	2	6/5/2015 09:28 AM
Chlorobenzene	ND	0.072	2.0	ug/L	2	6/5/2015 09:28 AM

**Qualifiers:** B Analyte detected in the associated Method Blank  
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



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**ASSET Laboratories**

**ANALYTICAL RESULTS**

Print Date: 10-Jun-15

**CLIENT:** CH2MHill  
**Lab Order:** N015883  
**Project:** SFPP - Norwalk Site  
**Lab ID:** N015883-001

**Client Sample ID:** INF-06-02  
**Collection Date:** 6/2/2015 11:15:00 AM  
**Matrix:** WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID: MS5_150604B	QC Batch: P15VW089	PrepDate	Analyst: QBM			
Chloroethane	ND	0.20	2.0	ug/L	2	6/5/2015 09:28 AM
Chloroform	ND	0.072	2.0	ug/L	2	6/5/2015 09:28 AM
Chloromethane	ND	0.23	2.0	ug/L	2	6/5/2015 09:28 AM
cis-1,2-Dichloroethene	ND	0.10	2.0	ug/L	2	6/5/2015 09:28 AM
cis-1,3-Dichloropropene	ND	0.088	2.0	ug/L	2	6/5/2015 09:28 AM
Di-isopropyl ether	13	0.034	2.0	ug/L	2	6/5/2015 09:28 AM
Dibromochloromethane	ND	0.14	2.0	ug/L	2	6/5/2015 09:28 AM
Dibromomethane	ND	0.34	2.0	ug/L	2	6/5/2015 09:28 AM
Dichlorodifluoromethane	ND	0.14	2.0	ug/L	2	6/5/2015 09:28 AM
Ethyl tert-butyl ether	ND	0.078	2.0	ug/L	2	6/5/2015 09:28 AM
Ethylbenzene	530	0.36	10	ug/L	10	6/5/2015 09:03 AM
Freon-113	ND	0.15	2.0	ug/L	2	6/5/2015 09:28 AM
Hexachlorobutadiene	ND	0.21	2.0	ug/L	2	6/5/2015 09:28 AM
Isopropylbenzene	39	0.068	2.0	ug/L	2	6/5/2015 09:28 AM
m,p-Xylene	5100	2.4	100	ug/L	100	6/5/2015 08:38 AM
Methylene chloride	ND	0.56	4.0	ug/L	2	6/5/2015 09:28 AM
MTBE	1100	6.2	100	ug/L	100	6/5/2015 08:38 AM
n-Butylbenzene	19	0.062	2.0	ug/L	2	6/5/2015 09:28 AM
n-Propylbenzene	100	0.036	2.0	ug/L	2	6/5/2015 09:28 AM
Naphthalene	570	0.48	10	ug/L	10	6/5/2015 09:03 AM
o-Xylene	1900	4.2	100	ug/L	100	6/5/2015 08:38 AM
sec-Butylbenzene	12	0.050	2.0	ug/L	2	6/5/2015 09:28 AM
Styrene	ND	0.070	2.0	ug/L	2	6/5/2015 09:28 AM
Tert-amyl methyl ether	8.3	0.078	2.0	ug/L	2	6/5/2015 09:28 AM
Tert-Butanol	ND	0.60	10	ug/L	2	6/5/2015 09:28 AM
tert-Butylbenzene	0.40	0.060	2.0	J ug/L	2	6/5/2015 09:28 AM
Tetrachloroethene	ND	0.33	2.0	ug/L	2	6/5/2015 09:28 AM
Toluene	3700	4.2	200	ug/L	100	6/5/2015 08:38 AM
trans-1,2-Dichloroethene	ND	0.14	2.0	ug/L	2	6/5/2015 09:28 AM
trans-1,3-Dichloropropene	ND	0.078	2.0	ug/L	2	6/5/2015 09:28 AM
Trichloroethene	ND	0.25	2.0	ug/L	2	6/5/2015 09:28 AM
Trichlorofluoromethane	ND	0.062	2.0	ug/L	2	6/5/2015 09:28 AM
Vinyl chloride	ND	0.19	1.0	ug/L	2	6/5/2015 09:28 AM
Xylenes, Total	7100	150	200	ug/L	100	6/5/2015 08:38 AM
Surr: 1,2-Dichloroethane-d4	111	0	72-119	%REC	100	6/5/2015 08:38 AM
Surr: 1,2-Dichloroethane-d4	110	0	72-119	%REC	2	6/5/2015 09:28 AM

**Qualifiers:** B Analyte detected in the associated Method Blank  
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



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**ANALYTICAL RESULTS**

Print Date: 10-Jun-15

**CLIENT:** CH2MHill  
**Lab Order:** N015883  
**Project:** SFPP - Norwalk Site  
**Lab ID:** N015883-001

**Client Sample ID:** INF-06-02  
**Collection Date:** 6/2/2015 11:15:00 AM  
**Matrix:** WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID:	MS5_150604B	QC Batch:	P15VW089	PrepDate:	Analyst:	QBM	
Surr:	1,2-Dichloroethane-d4	111	0	72-119	%REC	10	6/5/2015 09:03 AM
Surr:	4-Bromofluorobenzene	102	0	76-119	%REC	100	6/5/2015 08:38 AM
Surr:	4-Bromofluorobenzene	98.4	0	76-119	%REC	10	6/5/2015 09:03 AM
Surr:	4-Bromofluorobenzene	101	0	76-119	%REC	2	6/5/2015 09:28 AM
Surr:	Dibromofluoromethane	109	0	85-115	%REC	10	6/5/2015 09:03 AM
Surr:	Dibromofluoromethane	110	0	85-115	%REC	2	6/5/2015 09:28 AM
Surr:	Dibromofluoromethane	110	0	85-115	%REC	100	6/5/2015 08:38 AM
Surr:	Toluene-d8	103	0	81-120	%REC	100	6/5/2015 08:38 AM
Surr:	Toluene-d8	105	0	81-120	%REC	10	6/5/2015 09:03 AM
Surr:	Toluene-d8	104	0	81-120	%REC	2	6/5/2015 09:28 AM

**TPH EXTRACTABLE BY GC/FID**

**EPA 3510C**

**EPA 8015B**

RunID:	GC3_150610A	QC Batch:	50626	PrepDate:	6/9/2015	Analyst:	JAA
TPH-Diesel (C13-C22)	89000	1600	2600	ug/L	100	6/10/2015 01:54 PM	
TPH-Oil (C23-C36)	3100	140	260	ug/L	10	6/10/2015 01:09 AM	
Surr: Octacosane	92.3	0	26-152	%REC	10	6/10/2015 01:09 AM	
Surr: p-Terphenyl	123	0	57-132	%REC	10	6/10/2015 01:09 AM	

**GASOLINE RANGE ORGANICS BY GC/FID**

**EPA 8015B**

RunID:	GC4_150609A	QC Batch:	E15VW038	PrepDate:	Analyst:	QBM
TPH-Gasoline (C4-C12)	78000	160	500	ug/L	10	6/9/2015 12:23 PM
Surr: Chlorobenzene - d5	101	0	74-138	%REC	10	6/9/2015 12:23 PM

**TOTAL TPH**

**EPA 8015B**

RunID:	GC3_150609B	QC Batch:	R100721	PrepDate:	Analyst:	JAA
Total TPH	170100	16	50	ug/L	1	6/10/2015

**Qualifiers:** B Analyte detected in the associated Method Blank  
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



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**CLIENT:** CH2MHill  
**Work Order:** N015883  
**Project:** SFPP - Norwalk Site

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 8015\_W\_FP\_SFPP**

Sample ID <b>MB-50626</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_W_FP_</b>	Units: <b>ug/L</b>	Prep Date: <b>6/9/2015</b>	RunNo: <b>100721</b>						
Client ID: <b>PBW</b>	Batch ID: <b>50626</b>	TestNo: <b>EPA 8015B EPA 3510C</b>		Analysis Date: <b>6/10/2015</b>	SeqNo: <b>2018855</b>						
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	67.964		80.00		85.0	26	152				
Surr: p-Terphenyl	70.672		80.00		88.3	57	132				

**Qualifiers:**

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

Calculations are based on raw values



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**CLIENT:** CH2MHill  
**Work Order:** N015883  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015\_W\_SFPPTOT**

Sample ID <b>MB-R100721</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_W_SFP</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100721</b>						
Client ID: <b>PBW</b>	Batch ID: <b>R100721</b>	TestNo: <b>EPA 8015B</b>		Analysis Date: <b>6/10/2015</b>	SeqNo: <b>2018861</b>						
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                 |



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**CLIENT:** CH2MHill  
**Work Order:** N015883  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015GAS\_WSFPP**

Sample ID <b>E150609LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8015GAS_W</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100717</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>E15VW038</b>	TestNo: <b>EPA 8015B</b>	Analysis Date: <b>6/9/2015</b>	SeqNo: <b>2018749</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	923.000	50	1000	0	92.3	67	136				
Surr: Chlorobenzene - d5	51690.000		50000		103	74	138				

Sample ID <b>E150609MB1</b>	SampType: <b>MBLK</b>	TestCode: <b>8015GAS_W</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100717</b>						
Client ID: <b>PBW</b>	Batch ID: <b>E15VW038</b>	TestNo: <b>EPA 8015B</b>	Analysis Date: <b>6/9/2015</b>	SeqNo: <b>2018750</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	ND	50									
Surr: Chlorobenzene - d5	53758.000		50000		108	74	138				

Sample ID <b>N015882-001BMS</b>	SampType: <b>MS</b>	TestCode: <b>8015GAS_W</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100717</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E15VW038</b>	TestNo: <b>EPA 8015B</b>	Analysis Date: <b>6/9/2015</b>	SeqNo: <b>2018754</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	879.000	50	1000	0	87.9	67	136				
Surr: Chlorobenzene - d5	50948.000		50000		102	74	138				

Sample ID <b>N015882-001BMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015GAS_W</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100717</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>E15VW038</b>	TestNo: <b>EPA 8015B</b>	Analysis Date: <b>6/9/2015</b>	SeqNo: <b>2018755</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	838.000	50	1000	0	83.8	67	136	879.0	4.78	30	
Surr: Chlorobenzene - d5	47996.000		50000		96.0	74	138		0	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                 |



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**CLIENT:** CH2MHill  
**Work Order:** N015883  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	SampType	TestCode	Units	Prep Date	RunNo						
<b>P150604LCS2</b>	<b>LCS</b>	<b>8260_WP_SF</b>	<b>ug/L</b>		<b>100682</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>P15VW089</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/5/2015</b>	SeqNo: <b>2016301</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	21.240	1.0	20.00	0	106	81	129				
1,1,1-Trichloroethane	21.210	1.0	20.00	0	106	67	132				
1,1,2,2-Tetrachloroethane	21.250	1.0	20.00	0	106	63	128				
1,1,2-Trichloroethane	21.170	1.0	20.00	0	106	75	125				
1,1-Dichloroethane	20.510	0.50	20.00	0	103	69	133				
1,1-Dichloroethene	20.770	1.0	20.00	0	104	68	130				
1,1-Dichloropropene	20.650	1.0	20.00	0	103	73	132				
1,2,3-Trichlorobenzene	21.300	1.0	20.00	0	106	67	137				
1,2,3-Trichloropropane	21.310	1.0	20.00	0	107	73	124				
1,2,4-Trichlorobenzene	20.990	1.0	20.00	0	105	66	134				
1,2,4-Trimethylbenzene	20.730	1.0	20.00	0	104	74	132				
1,2-Dibromo-3-chloropropane	22.760	2.0	20.00	0	114	50	132				
1,2-Dibromoethane	21.710	1.0	20.00	0	109	80	121				
1,2-Dichlorobenzene	20.820	1.0	20.00	0	104	71	122				
1,2-Dichloroethane	20.980	0.50	20.00	0	105	69	132				
1,2-Dichloropropane	20.950	1.0	20.00	0	105	75	125				
1,3,5-Trimethylbenzene	20.840	1.0	20.00	0	104	74	131				
1,3-Dichlorobenzene	20.790	1.0	20.00	0	104	75	124				
1,3-Dichloropropane	21.070	1.0	20.00	0	105	73	126				
1,4-Dichlorobenzene	20.750	1.0	20.00	0	104	74	123				
2,2-Dichloropropane	17.420	1.0	20.00	0	87.1	69	137				
2-Butanone	231.230	10	200.0	0	116	49	136				
2-Chlorotoluene	20.710	1.0	20.00	0	104	73	126				
4-Chlorotoluene	20.770	1.0	20.00	0	104	74	128				
4-Isopropyltoluene	21.040	1.0	20.00	0	105	73	130				
4-Methyl-2-pentanone	234.780	10	200.0	0	117	58	134				
Acetone	253.050	10	200.0	0	127	40	135				
Benzene	20.740	1.0	20.00	0	104	81	122				
Bromobenzene	20.710	1.0	20.00	0	104	76	124				
Bromochloromethane	20.840	1.0	20.00	0	104	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                 |



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**CLIENT:** CH2MHill  
**Work Order:** N015883  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	SampType	TestCode	Units	Prep Date	RunNo						
<b>P150604LCS2</b>	<b>LCS</b>	<b>8260_WP_SF</b>	<b>ug/L</b>		<b>100682</b>						
<b>Client ID: LCSW</b>	<b>Batch ID: P15VW089</b>	<b>TestNo: EPA 8260B</b>		<b>Analysis Date: 6/5/2015</b>	<b>SeqNo: 2016301</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromodichloromethane	21.410	1.0	20.00	0	107	76	121				
Bromoform	22.740	1.0	20.00	0	114	69	128				
Bromomethane	21.150	1.0	20.00	0	106	53	141				
Carbon disulfide	21.160	1.0	20.00	0	106	75	125				
Carbon tetrachloride	20.160	0.50	20.00	0	101	66	138				
Chlorobenzene	21.010	1.0	20.00	0	105	81	122				
Chloroethane	21.280	1.0	20.00	0	106	58	133				
Chloroform	20.690	1.0	20.00	0	103	69	128				
Chloromethane	19.950	1.0	20.00	0	99.8	56	131				
cis-1,2-Dichloroethene	21.340	1.0	20.00	0	107	72	126				
cis-1,3-Dichloropropene	20.470	1.0	20.00	0	102	69	131				
Di-isopropyl ether	21.560	1.0	20.00	0	108	70	130				
Dibromochloromethane	22.240	1.0	20.00	0	111	66	133				
Dibromomethane	20.970	1.0	20.00	0	105	76	125				
Dichlorodifluoromethane	20.940	1.0	20.00	0	105	53	153				
Ethyl tert-butyl ether	21.440	1.0	20.00	0	107	70	130				
Ethylbenzene	20.390	1.0	20.00	0	102	73	127				
Freon-113	20.310	1.0	20.00	0	102	75	125				
Hexachlorobutadiene	20.330	1.0	20.00	0	102	67	131				
Isopropylbenzene	20.820	1.0	20.00	0	104	75	127				
m,p-Xylene	41.790	1.0	40.00	0	104	76	128				
Methylene chloride	16.520	2.0	20.00	0	82.6	63	137				
MTBE	21.120	1.0	20.00	0	106	65	123				
n-Butylbenzene	20.730	1.0	20.00	0	104	69	137				
n-Propylbenzene	20.960	1.0	20.00	0	105	72	129				
Naphthalene	22.880	1.0	20.00	0	114	54	138				
o-Xylene	20.680	1.0	20.00	0	103	80	121				
sec-Butylbenzene	20.880	1.0	20.00	0	104	72	127				
Styrene	21.790	1.0	20.00	0	109	65	134				
Tert-amyl methyl ether	20.930	1.0	20.00	0	105	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                 |



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**CLIENT:** CH2MHill  
**Work Order:** N015883  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
<b>P150604LCS2</b>	<b>LCS</b>	<b>8260_WP_SF</b>	<b>ug/L</b>		<b>100682</b>						
Client ID:	Batch ID:	TestNo:			SeqNo:						
<b>LCSW</b>	<b>P15VW089</b>	<b>EPA 8260B</b>			<b>2016301</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tert-Butanol	124.880	5.0	100.0	0	125	70	130				
tert-Butylbenzene	20.850	1.0	20.00	0	104	70	129				
Tetrachloroethene	21.090	1.0	20.00	0	105	66	128				
Toluene	20.980	2.0	20.00	0	105	77	122				
trans-1,2-Dichloroethene	20.900	1.0	20.00	0	104	63	137				
trans-1,3-Dichloropropene	20.910	1.0	20.00	0	105	59	135				
Trichloroethene	21.210	1.0	20.00	0	106	70	127				
Trichlorofluoromethane	21.150	1.0	20.00	0	106	57	129				
Vinyl chloride	21.800	0.50	20.00	0	109	50	134				
Xylenes, Total	62.470	2.0	60.00	0	104	75	125				
Surr: 1,2-Dichloroethane-d4	25.870		25.00		103	72	119				
Surr: 4-Bromofluorobenzene	25.460		25.00		102	76	119				
Surr: Dibromofluoromethane	25.800		25.00		103	85	115				
Surr: Toluene-d8	25.700		25.00		103	81	120				

Sample ID	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
<b>N015882-001GMS</b>	<b>MS</b>	<b>8260_WP_SF</b>	<b>ug/L</b>		<b>100682</b>						
Client ID:	Batch ID:	TestNo:			SeqNo:						
<b>ZZZZZ</b>	<b>P15VW089</b>	<b>EPA 8260B</b>			<b>2016302</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.750	1.0	20.00	0	104	81	129				
1,1,1-Trichloroethane	20.830	1.0	20.00	0	104	67	132				
1,1,2,2-Tetrachloroethane	23.010	1.0	20.00	0	115	63	128				
1,1,2-Trichloroethane	21.820	1.0	20.00	0	109	75	125				
1,1-Dichloroethane	20.230	0.50	20.00	0	101	69	133				
1,1-Dichloroethene	20.620	1.0	20.00	0	103	68	130				
1,1-Dichloropropene	20.310	1.0	20.00	0	102	73	132				
1,2,3-Trichlorobenzene	21.350	1.0	20.00	0.2400	106	67	137				
1,2,3-Trichloropropane	21.970	1.0	20.00	0	110	73	124				
1,2,4-Trichlorobenzene	20.710	1.0	20.00	0.1700	103	66	134				
1,2,4-Trimethylbenzene	20.520	1.0	20.00	0.05000	102	74	132				

**Qualifiers:**

- |  |  |  |
|--|--|--|
| B Analyte detected in the associated Method Blank              | E Value above quantitation range       | H Holding times for preparation or analysis exceeded |
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| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out               | Calculations are based on raw values                 |



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**CLIENT:** CH2MHill  
**Work Order:** N015883  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	N015882-001GMS	SampType: MS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 100682					
Client ID:	ZZZZZZ	Batch ID:	P15VW089	TestNo:	EPA 8260B	Analysis Date:	6/5/2015	SeqNo:	2016302		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	23.800	2.0	20.00	0	119	50	132				
1,2-Dibromoethane	22.110	1.0	20.00	0	111	80	121				
1,2-Dichlorobenzene	20.770	1.0	20.00	0.05000	104	71	122				
1,2-Dichloroethane	21.270	0.50	20.00	0	106	69	132				
1,2-Dichloropropane	21.500	1.0	20.00	0	108	75	125				
1,3,5-Trimethylbenzene	20.660	1.0	20.00	0.04000	103	74	131				
1,3-Dichlorobenzene	20.830	1.0	20.00	0.07000	104	75	124				
1,3-Dichloropropane	21.250	1.0	20.00	0	106	73	126				
1,4-Dichlorobenzene	20.470	1.0	20.00	0	102	74	123				
2,2-Dichloropropane	16.920	1.0	20.00	0	84.6	69	137				
2-Butanone	196.460	10	200.0	0	98.2	49	136				
2-Chlorotoluene	20.490	1.0	20.00	0	102	73	126				
4-Chlorotoluene	20.800	1.0	20.00	0.05000	104	74	128				
4-Isopropyltoluene	20.280	1.0	20.00	0.05000	101	73	130				
4-Methyl-2-pentanone	246.420	10	200.0	0	123	58	134				
Acetone	162.040	10	200.0	0	81.0	40	135				
Benzene	20.770	1.0	20.00	0	104	81	122				
Bromobenzene	20.840	1.0	20.00	0	104	76	124				
Bromochloromethane	21.620	1.0	20.00	0	108	65	129				
Bromodichloromethane	21.640	1.0	20.00	0	108	76	121				
Bromoform	23.160	1.0	20.00	0	116	69	128				
Bromomethane	21.270	1.0	20.00	0	106	53	141				
Carbon disulfide	20.630	1.0	20.00	0	103	75	125				
Carbon tetrachloride	19.870	0.50	20.00	0	99.4	66	138				
Chlorobenzene	20.940	1.0	20.00	0	105	81	122				
Chloroethane	20.270	1.0	20.00	0	101	58	133				
Chloroform	20.540	1.0	20.00	0	103	69	128				
Chloromethane	20.200	1.0	20.00	0	101	56	131				
cis-1,2-Dichloroethene	21.950	1.0	20.00	0	110	72	126				
cis-1,3-Dichloropropene	21.050	1.0	20.00	0	105	69	131				

**Qualifiers:**

- |  |  |  |
|--|--|--|
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**CLIENT:** CH2MHill  
**Work Order:** N015883  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	SampType	TestCode	Units	Prep Date	RunNo						
<b>N015882-001GMS</b>	<b>MS</b>	<b>8260_WP_SF</b>	<b>ug/L</b>		<b>100682</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>P15VW089</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/5/2015</b>	SeqNo: <b>2016302</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Di-isopropyl ether	22.000	1.0	20.00	0	110	70	130				
Dibromochloromethane	22.240	1.0	20.00	0	111	66	133				
Dibromomethane	21.180	1.0	20.00	0	106	76	125				
Dichlorodifluoromethane	18.820	1.0	20.00	0	94.1	53	153				
Ethyl tert-butyl ether	21.860	1.0	20.00	0	109	70	130				
Ethylbenzene	20.120	1.0	20.00	0	101	73	127				
Freon-113	18.930	1.0	20.00	0	94.6	75	125				
Hexachlorobutadiene	18.970	1.0	20.00	0	94.8	67	131				
Isopropylbenzene	20.660	1.0	20.00	0	103	75	127				
m,p-Xylene	41.410	1.0	40.00	0.07000	103	76	128				
Methylene chloride	20.480	2.0	20.00	0	102	63	137				
MTBE	21.500	1.0	20.00	0	108	65	123				
n-Butylbenzene	19.850	1.0	20.00	0.09000	98.8	69	137				
n-Propylbenzene	20.540	1.0	20.00	0.04000	103	72	129				
Naphthalene	23.390	1.0	20.00	0.2700	116	54	138				
o-Xylene	20.810	1.0	20.00	0	104	80	121				
sec-Butylbenzene	20.390	1.0	20.00	0.05000	102	72	127				
Styrene	20.300	1.0	20.00	0	102	65	134				
Tert-amyl methyl ether	21.020	1.0	20.00	0	105	70	130				
Tert-Butanol	135.820	5.0	100.0	0	136	70	130				S
tert-Butylbenzene	20.490	1.0	20.00	0	102	70	129				
Tetrachloroethene	20.380	1.0	20.00	0	102	66	128				
Toluene	21.110	2.0	20.00	0	106	77	122				
trans-1,2-Dichloroethene	21.070	1.0	20.00	0	105	63	137				
trans-1,3-Dichloropropene	20.800	1.0	20.00	0	104	59	135				
Trichloroethene	20.550	1.0	20.00	0	103	70	127				
Trichlorofluoromethane	20.500	1.0	20.00	0	103	57	129				
Vinyl chloride	21.690	0.50	20.00	0	108	50	134				
Xylenes, Total	62.220	2.0	60.00	0	104	75	125				
Surr: 1,2-Dichloroethane-d4	25.760		25.00		103	72	119				

**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                 |



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**CLIENT:** CH2MHill  
**Work Order:** N015883  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID <b>N015882-001GMS</b>	SampType: <b>MS</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100682</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>P15VW089</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>6/5/2015</b>	SeqNo: <b>2016302</b>							
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				
Surr: Dibromofluoromethane	25.430		25.00		102	85	115				
Surr: Toluene-d8	26.010		25.00		104	81	120				

Sample ID <b>N015882-001GMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100682</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>P15VW089</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>6/5/2015</b>	SeqNo: <b>2016303</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.300	1.0	20.00	0	102	81	129	20.75	2.19	20	
1,1,1-Trichloroethane	20.210	1.0	20.00	0	101	67	132	20.83	3.02	20	
1,1,2,2-Tetrachloroethane	21.950	1.0	20.00	0	110	63	128	23.01	4.72	20	
1,1,2-Trichloroethane	20.850	1.0	20.00	0	104	75	125	21.82	4.55	20	
1,1-Dichloroethane	19.990	0.50	20.00	0	100	69	133	20.23	1.19	20	
1,1-Dichloroethene	20.090	1.0	20.00	0	100	68	130	20.62	2.60	20	
1,1-Dichloropropene	20.230	1.0	20.00	0	101	73	132	20.31	0.395	20	
1,2,3-Trichlorobenzene	21.050	1.0	20.00	0.2400	104	67	137	21.35	1.42	20	
1,2,3-Trichloropropane	21.250	1.0	20.00	0	106	73	124	21.97	3.33	20	
1,2,4-Trichlorobenzene	20.460	1.0	20.00	0.1700	101	66	134	20.71	1.21	20	
1,2,4-Trimethylbenzene	20.100	1.0	20.00	0.05000	100	74	132	20.52	2.07	20	
1,2-Dibromo-3-chloropropane	23.420	2.0	20.00	0	117	50	132	23.80	1.61	20	
1,2-Dibromoethane	21.570	1.0	20.00	0	108	80	121	22.11	2.47	20	
1,2-Dichlorobenzene	20.680	1.0	20.00	0.05000	103	71	122	20.77	0.434	20	
1,2-Dichloroethane	21.040	0.50	20.00	0	105	69	132	21.27	1.09	20	
1,2-Dichloropropane	20.990	1.0	20.00	0	105	75	125	21.50	2.40	20	
1,3,5-Trimethylbenzene	20.320	1.0	20.00	0.04000	101	74	131	20.66	1.66	20	
1,3-Dichlorobenzene	20.350	1.0	20.00	0.07000	101	75	124	20.83	2.33	20	
1,3-Dichloropropane	20.900	1.0	20.00	0	104	73	126	21.25	1.66	20	
1,4-Dichlorobenzene	20.000	1.0	20.00	0	100	74	123	20.47	2.32	20	
2,2-Dichloropropane	16.080	1.0	20.00	0	80.4	69	137	16.92	5.09	20	
2-Butanone	192.350	10	200.0	0	96.2	49	136	196.5	2.11	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                 |



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**CLIENT:** CH2MHill  
**Work Order:** N015883  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	SampType: MSD	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 100682						
Client ID: ZZZZZZ	Batch ID: P15VW089	TestNo: EPA 8260B	Analysis Date: 6/5/2015	SeqNo: 2016303							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Chlorotoluene	20.250	1.0	20.00	0	101	73	126	20.49	1.18	20	
4-Chlorotoluene	20.330	1.0	20.00	0.05000	101	74	128	20.80	2.29	20	
4-Isopropyltoluene	19.890	1.0	20.00	0.05000	99.2	73	130	20.28	1.94	20	
4-Methyl-2-pentanone	238.950	10	200.0	0	119	58	134	246.4	3.08	20	
Acetone	152.770	10	200.0	0	76.4	40	135	162.0	5.89	20	
Benzene	20.340	1.0	20.00	0	102	81	122	20.77	2.09	20	
Bromobenzene	20.510	1.0	20.00	0	103	76	124	20.84	1.60	20	
Bromochloromethane	21.180	1.0	20.00	0	106	65	129	21.62	2.06	20	
Bromodichloromethane	21.060	1.0	20.00	0	105	76	121	21.64	2.72	20	
Bromoform	22.610	1.0	20.00	0	113	69	128	23.16	2.40	20	
Bromomethane	20.680	1.0	20.00	0	103	53	141	21.27	2.81	20	
Carbon disulfide	20.630	1.0	20.00	0	103	75	125	20.63	0	20	
Carbon tetrachloride	19.010	0.50	20.00	0	95.1	66	138	19.87	4.42	20	
Chlorobenzene	20.380	1.0	20.00	0	102	81	122	20.94	2.71	20	
Chloroethane	19.810	1.0	20.00	0	99.0	58	133	20.27	2.30	20	
Chloroform	20.260	1.0	20.00	0	101	69	128	20.54	1.37	20	
Chloromethane	19.980	1.0	20.00	0	99.9	56	131	20.20	1.10	20	
cis-1,2-Dichloroethene	21.110	1.0	20.00	0	106	72	126	21.95	3.90	20	
cis-1,3-Dichloropropene	20.360	1.0	20.00	0	102	69	131	21.05	3.33	20	
Di-isopropyl ether	21.510	1.0	20.00	0	108	70	130	22.00	2.25	20	
Dibromochloromethane	21.000	1.0	20.00	0	105	66	133	22.24	5.74	20	
Dibromomethane	20.660	1.0	20.00	0	103	76	125	21.18	2.49	20	
Dichlorodifluoromethane	18.530	1.0	20.00	0	92.6	53	153	18.82	1.55	20	
Ethyl tert-butyl ether	21.160	1.0	20.00	0	106	70	130	21.86	3.25	20	
Ethylbenzene	19.560	1.0	20.00	0	97.8	73	127	20.12	2.82	20	
Freon-113	18.430	1.0	20.00	0	92.2	75	125	18.93	2.68	20	
Hexachlorobutadiene	19.390	1.0	20.00	0	97.0	67	131	18.97	2.19	20	
Isopropylbenzene	20.010	1.0	20.00	0	100	75	127	20.66	3.20	20	
m,p-Xylene	40.600	1.0	40.00	0.07000	101	76	128	41.41	1.98	20	
Methylene chloride	18.130	2.0	20.00	0	90.7	63	137	20.48	12.2	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                 |



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[www.assetlaboratories.com](http://www.assetlaboratories.com)

**CLIENT:** CH2MHill  
**Work Order:** N015883  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
<b>N015882-001GMSD</b>	<b>MSD</b>	<b>8260_WP_SF</b>	<b>ug/L</b>		<b>100682</b>						
Client ID:	Batch ID:	TestNo:	Analysis Date:	SeqNo:							
<b>ZZZZZZ</b>	<b>P15VW089</b>	<b>EPA 8260B</b>	<b>6/5/2015</b>	<b>2016303</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
MTBE	21.170	1.0	20.00	0	106	65	123	21.50	1.55	20	
n-Butylbenzene	19.550	1.0	20.00	0.09000	97.3	69	137	19.85	1.52	20	
n-Propylbenzene	20.100	1.0	20.00	0.04000	100	72	129	20.54	2.17	20	
Naphthalene	22.540	1.0	20.00	0.2700	111	54	138	23.39	3.70	20	
o-Xylene	20.110	1.0	20.00	0	101	80	121	20.81	3.42	20	
sec-Butylbenzene	19.860	1.0	20.00	0.05000	99.0	72	127	20.39	2.63	20	
Styrene	19.570	1.0	20.00	0	97.9	65	134	20.30	3.66	20	
Tert-amyl methyl ether	20.620	1.0	20.00	0	103	70	130	21.02	1.92	20	
Tert-Butanol	134.330	5.0	100.0	0	134	70	130	135.8	1.10	20	S
tert-Butylbenzene	20.170	1.0	20.00	0	101	70	129	20.49	1.57	20	
Tetrachloroethene	20.030	1.0	20.00	0	100	66	128	20.38	1.73	20	
Toluene	20.620	2.0	20.00	0	103	77	122	21.11	2.35	20	
trans-1,2-Dichloroethene	20.530	1.0	20.00	0	103	63	137	21.07	2.60	20	
trans-1,3-Dichloropropene	20.460	1.0	20.00	0	102	59	135	20.80	1.65	20	
Trichloroethene	20.240	1.0	20.00	0	101	70	127	20.55	1.52	20	
Trichlorofluoromethane	20.090	1.0	20.00	0	100	57	129	20.50	2.02	20	
Vinyl chloride	21.390	0.50	20.00	0	107	50	134	21.69	1.39	20	
Xylenes, Total	60.710	2.0	60.00	0	101	75	125	62.22	2.46	20	
Surr: 1,2-Dichloroethane-d4	26.230		25.00		105	72	119		0		
Surr: 4-Bromofluorobenzene	25.420		25.00		102	76	119		0		
Surr: Dibromofluoromethane	25.520		25.00		102	85	115		0		
Surr: Toluene-d8	25.630		25.00		103	81	120		0		

Sample ID	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
<b>P150604MB6</b>	<b>MBLK</b>	<b>8260_WP_SF</b>	<b>ug/L</b>		<b>100682</b>						
Client ID:	Batch ID:	TestNo:	Analysis Date:	SeqNo:							
<b>PBW</b>	<b>P15VW089</b>	<b>EPA 8260B</b>	<b>6/5/2015</b>	<b>2016304</b>							
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									

**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                 |



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**CLIENT:** CH2MHill  
**Work Order:** N015883  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID: <b>P150604MB6</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100682</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P15VW089</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/5/2015</b>	SeqNo: <b>2016304</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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	0.300	1.0									J
1,2,3-Trichloropropane	ND	1.0									
1,2,4-Trichlorobenzene	0.280	1.0									J
1,2,4-Trimethylbenzene	0.050	1.0									J
1,2-Dibromo-3-chloropropane	0.130	2.0									J
1,2-Dibromoethane	ND	1.0									
1,2-Dichlorobenzene	0.080	1.0									J
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	1.0									
1,3,5-Trimethylbenzene	0.050	1.0									J
1,3-Dichlorobenzene	0.090	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2,2-Dichloropropane	ND	1.0									
2-Butanone	ND	10									
2-Chlorotoluene	0.050	1.0									J
4-Chlorotoluene	0.060	1.0									J
4-Isopropyltoluene	0.060	1.0									J
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									

**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                 |



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**CLIENT:** CH2MHill  
**Work Order:** N015883  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID	SampType	TestCode	Units	Prep Date	RunNo						
<b>P150604MB6</b>	<b>MBLK</b>	<b>8260_WP_SF</b>	<b>ug/L</b>		<b>100682</b>						
<b>Client ID: PBW</b>	<b>Batch ID: P15VW089</b>	<b>TestNo: EPA 8260B</b>		<b>Analysis Date: 6/5/2015</b>	<b>SeqNo: 2016304</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	0.060	1.0									J
Chloromethane	0.140	1.0									J
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	0.160	1.0									J
Isopropylbenzene	ND	1.0									
m,p-Xylene	0.070	1.0									J
Methylene chloride	ND	2.0									
MTBE	ND	1.0									
n-Butylbenzene	0.120	1.0									J
n-Propylbenzene	0.060	1.0									J
Naphthalene	0.370	1.0									J
o-Xylene	ND	1.0									
sec-Butylbenzene	0.060	1.0									J
Styrene	0.040	1.0									J
Tert-amyl methyl ether	ND	1.0									
Tert-Butanol	ND	5.0									
tert-Butylbenzene	0.030	1.0									J
Tetrachloroethene	ND	1.0									

**Qualifiers:**

- |  |  |  |
|--|--|--|
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**CLIENT:** CH2MHill  
**Work Order:** N015883  
**Project:** SFPP - Norwalk Site

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_SFPP**

Sample ID: <b>P150604MB6</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_SF</b>	Units: <b>ug/L</b>	Prep Date:	RunNo: <b>100682</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P15VW089</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>6/5/2015</b>	SeqNo: <b>2016304</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	26.590		25.00		106	72	119				
Surr: 4-Bromofluorobenzene	24.660		25.00		98.6	76	119				
Surr: Dibromofluoromethane	26.360		25.00		105	85	115				
Surr: Toluene-d8	25.230		25.00		101	81	120				

**Qualifiers:**

- |  |  |  |
|--|--|--|
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| J Analyte detected below quantitation limits                   | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits               |
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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: 6/2/15  
 PAGE: 1 OF 1

LABORATORY CLIENT: <b>Kinder Morgan Energy Partners, Attn: Steve Defibaugh</b> <small>ADDRESS:</small> <b>1100 Town &amp; Country Road</b> <small>CITY:</small> <b>Orange, CA 92868</b> <small>TEL:</small> <b>714-560-4802</b> <small>FAX:</small> <b>714-560-4601</b> <small>E-MAIL:</small> <b>James.dye@kindermorgan.com</b>		CLIENT PROJECT NAME / NUMBER: <b>SFPP - Norwalk Site</b> <small>PROJECT CONTACT:</small> <b>James Dye</b> <small>SAMPLER(S): (SIGNATURE)</small>		P.O. NO.: QUOTE NO.: <small>LAB USE ONLY</small> <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>							
<small>TURNAROUND TIME</small> <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48HR <input type="checkbox"/> 72 HR <input checked="" type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS <small>SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)</small> <input type="checkbox"/> RWQCB REPORTING <input type="checkbox"/> ARCHIVE SAMPLES UNTIL ___ / ___ / ___ <small>SPECIAL INSTRUCTIONS</small> <b>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.</b>			<b>REQUESTED ANALYSIS</b>								
<small>LAB USE ONLY</small>	SAMPLE ID	LOCATION/ DESCRIPTION	SAMPLING		NO. OF CONT.	TPH - g (8015M)	TPH-fp (8015M)	VOCs, Full List (8260B)			Comments
	DATE	TIME	MAT- RIX								
	INF-06-02	Influent	6/2/15	1115	WW	8	X	X	X		ND15883-1
											Monthly
<small>Relinquished by: (Signature)</small>			<small>Received by: (Signature)</small>			<small>Date:</small>		<small>Time:</small>			
<i>[Signature]</i>			<i>[Signature]</i>			6-2-15		3:45 PM			
<small>Relinquished by: (Signature)</small>			<small>Received by: (Signature)</small>			<small>Date:</small>		<small>Time:</small>			
<i>[Signature]</i>			<i>[Signature]</i>			6/2/15		4:05 PM			
<small>Relinquished by: (Signature)</small>			<small>Received by: (Signature)</small>			<small>Date:</small>		<small>Time:</small>			
<i>[Signature]</i>			<i>[Signature]</i>								

*3-902  
1R#2*

# 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: 6/3/2015 Workorder: N015883  
 Rep sample Temp (Deg C): 3.9 IR Gun ID: 2  
 Temp Blank:  Yes  No  
 Carrier name: Golden State Overnight  
 Last 4 digits of Tracking No.: 1420 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 <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/>            |
| 2. Custody seals intact, signed, dated on shipping container/cooler?                    | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles?  | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 5. Sampler's name present in COC?   | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 6. Chain of custody signed when relinquished and received?                              | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 7. Chain of custody agrees with sample labels?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 8. Samples in proper container/bottle?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 9. Sample containers intact?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 10. Sufficient sample volume for indicated test?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 11. All samples received within holding time?   | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 12. Temperature of rep sample or Temp Blank within acceptable limit?                    | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/>                     |
| 13. Water - VOA vials have zero headspace?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/>                     |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>          |
| 15. Did the bottle labels indicate correct preservatives used?                          | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/>                     |
| 16. Were there Non-Conformance issues at login?   | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>          |
| Was Client notified?  | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>          |

Comments:

Checklist Completed By: JPG  06/03/15

Reviewed By:  06/09/14

## Sample Control

---

**From:** Marlon B. Cartin <marlon@assetlaboratories.com>  
**Sent:** Wednesday, June 03, 2015 4:05 PM  
**To:** 'SampleControl.LV@assetlaboratories.com'  
**Cc:** 'Hanah Glodoviza'  
**Subject:** FW: COC and Work Order Summary for Sample Received 6/3/2015

Please note the request below.

Thanks,

### Marlon B. Cartin

Project Manager  
Nevada: 3151 W. Post Road, Las Vegas, NV 89118  
P: 702.307.2659 Ext. 410 | F: 702.307.2691 | M: 702.439.0421

---

**From:** [Vidal.Cortes@ch2m.com](mailto:Vidal.Cortes@ch2m.com) [<mailto:Vidal.Cortes@ch2m.com>]  
**Sent:** Wednesday, June 03, 2015 3:14 PM  
**To:** [marlon@assetlaboratories.com](mailto:marlon@assetlaboratories.com)  
**Cc:** [Daniel.Jablonski@CH2M.com](mailto:Daniel.Jablonski@CH2M.com)  
**Subject:** RE: COC and Work Order Summary for Sample Received 6/3/2015

Hi Marlon,

For WO N015883, please do not analyze for TPH-fp. Please add TPH-d and TPH-oil analysis.

For WO N015884, please add SVOC analysis.

Thank you,  
**Vidal Cortes**  
*Environmental Engineer*  
D 1 714 435 6255  
M 1 949 400 0608

**CH2M**  
6 Hutton Centre Dr  
Suite 700  
Santa Ana, CA 92707  
[www.ch2m.com](http://www.ch2m.com) | [LinkedIn](#) | [Twitter](#) | [Facebook](#)

---

**From:** ASSET LV Sample Control [<mailto:samplecontrol.lv@assetlaboratories.com>]  
**Sent:** Wednesday, June 03, 2015 3:08 PM  
**To:** Jablonski, Daniel/LAC; Cortes, Vidal/SCO  
**Subject:** COC and Work Order Summary for Sample Received 6/3/2015

Enclosed are COCs and WO Summaries for samples received 6/3/2015. If you have any questions, please contact your Project Manager listed below.

### Marlon Cartin

3151 W. Post Road  
Las Vegas, Nevada  
89118  
**Tel. No.:** (702)-307-2659 Ext. 410  
**Cel. No.:** (702)-439-0421  
**Email:** [marlon@assetlaboratories.com](mailto:marlon@assetlaboratories.com)

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Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 | F: 702.307.2691

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# ASSET Laboratories

## WORK ORDER Summary

04-Jun-15

**WorkOrder:** N015883

**Client ID:** CH2HI03

**Project:** SFPP - Norwalk Site

**QC Level:** RTNE

**Date Received:** 6/3/2015

**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
N015883-001A	INF-06-02	6/2/2015 11:15:00 AM	6/10/2015	Wastewater	EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VW
			6/10/2015		EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VW
N015883-001B			6/10/2015		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			6/10/2015		EPA 8015B	TPH EXTRACTABLE BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			6/10/2015		EPA 8015B	Total TPH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N015883-002A	FOLDER		6/10/2015		Folder	Folder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LAB



800-322-5555 www.gso.com

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

Tracking #: 528131420

CPS



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

**LVS**  
**LAS VEGAS**

**A**

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

**C89102A**

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



38447965

Print Date: 6/2/2015 4:37 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.

3.9°C IR#2  
8:00 AM