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KINDER MORGAN
ENERGY PARTNERS, L.P.

SFPP, L.P.
Operating Partnership

May 7, 2019

California Regional Water Quality Control Board
Los Angeles Region
320 W. 4th Street, Suite 200
Los Angeles, California 90013

Re: Effluent Monitoring Report
January through March 2019
SFPP, L.P. Norwalk Pump Station
15306 Norwalk Boulevard, Norwalk, California
(NPDES No. CA0063509, CI No. 7497)

Attention: Information Technology Unit

In reference to the subject National Pollutant Discharge Elimination System (NPDES) permit, please find enclosed the First Quarter 2019 Effluent Monitoring Report for the subject discharge.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on the 7th day of May 2019.
at 3:00 p.m.

_____ (signature)

Stephen T. Defibaugh (printed name)

Remediation Project Manager (title)

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Mr. Stephen Defibaugh
Kinder Morgan, Inc.
1100 Town and Country Road, Suite 700
Orange, California 92868

May 7, 2019

Subject: **Effluent Monitoring Report, January 1 to March 31, 2019 (First Quarter 2019)**
SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California
(NPDES No. CA0063509, CI No. 7497, Order No. R4-2016-0309)

Dear Mr. Defibaugh,

This report summarizes National Pollutant Discharge Elimination System (NPDES) monitoring related to the discharge of treated groundwater from the Kinder Morgan, Inc. (Kinder Morgan) product recovery and groundwater extraction (GWE) system located at the SFPP, L.P. (SFPP) Norwalk Pump Station within the Defense Fuel Support Point Norwalk (DFSP), at 15306 Norwalk Boulevard, Norwalk, California (the site; Figure 1).

This report describes NPDES monitoring activities during the period of January 1 to March 31, 2019. Kinder Morgan performed operations, maintenance, and monitoring tasks on the product recovery and GWE systems. This report has been prepared based on the NPDES monitoring conducted by Kinder Morgan.

Remediation Systems

Kinder Morgan operates remediation systems consisting of soil vapor extraction (SVE), total fluids extraction (TFE) of free product and/or groundwater using a top-loading pump, GWE using a bottom-loading pump, and treatment of extracted soil vapors and groundwater to address the south-central and southeastern areas of the site. Biosparging is also employed in the south-central area to enhance natural attenuation of hydrocarbon constituents.

The remedial objectives are to contain and control the migration of hydrocarbon constituents in groundwater and soil vapor, and to remove hydrocarbon mass from soil and groundwater. The remediation system includes the following wells:

- South-central area
  - 20 TFE/GWE wells
  - 24 onsite and 6 offsite SVE wells (most collocated with TFE wells)
  - 2 horizontal SVE wells
  - 1 horizontal biosparge well
- Southeastern area (24-inch block valve area)
  - 4 TFE/GWE wells
  - 3 SVE wells (collocated with TFE wells)
  - 1 horizontal biosparge well (not yet operable)

The remediation system layout is shown on Figure 2. A brief description of each system is provided below.

Soil Vapor Extraction System

SVE is performed using a blower to remove soil vapors from the south-central and southeastern areas of the site. The extracted vapors are conveyed to a knock-out tank that separates entrained moisture from the soil vapor. 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 regenerative thermal oxidizer (RTO) 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 systems is conducted in accordance with Permits to Operate (Permit Numbers [Nos.] G46188 A/N 578779 and G46187 A/N 578777, respectively; ID 110835) issued by the South Coast Air Quality Management District.

Groundwater Treatment System

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 fluid pumps and bottom-loading groundwater pumps are piped to a dissolved air floatation oil-water separator (DAF/OWS). Free product, if any, from the DAF/OWS is collected in a storage tank and transported to an offsite location. Water from the OWS is then gravity drained into a 300-gallon transfer tank. From the transfer tank, the water is then treated using liquid-phase granular activated carbon (LGAC). Treated water is routed through an onsite 3,000-gallon equalization tank. Two fluidized bed bioreactors installed downstream of the equalization tank treat fuel oxygenates such as tertiary butyl alcohol and methyl tertiary butyl ether. The treated groundwater then passes through polishing LGAC units prior to discharge to a storm drain that leads to Coyote Creek.

Discharge to Coyote Creek is performed in accordance with the NPDES permit (Permit No. CA0063509; Order No. R4-2016-0309), which was adopted on September 7, 2016, and became effective on November 1, 2016.

Horizontal Biosparge System

Kinder Morgan completed installation of a horizontal biosparge system in the south-central area of the site in 2014. The biosparge well is constructed of 4-inch-diameter, Schedule 80 polyvinyl chloride (PVC) casing and screen completed to a vertical depth of approximately 45 feet below ground surface (bgs). The lateral length of the screen is 600 feet; the screen interval is situated below the central portion of the south-central area hydrocarbon plume. Further details regarding the construction of the biosparge well are documented in the *Horizontal Biosparge Well and Soil Vapor Monitoring Probe Completion Report* (CH2M, 2015[1]).

A second horizontal biosparge well was installed in the southeastern area of the site in November 2017. The design of the second biosparge well is similar to the south-central biosparge well: 4-inch-diameter Schedule 80 PVC casing and screen completed to a depth of approximately 45 feet bgs. The lateral length of the screen is 240 feet centered below the southeastern area hydrocarbon plume. A construction completion report documenting construction activities and specifications was submitted to the Regional Water Quality Control Board (Water Board) on July 12, 2018 (Jacobs, 2018[2]).

[1] CH2M HILL Engineers Inc. (CH2M, now part of Jacobs). 2015. *Horizontal Biosparge Well and Soil Vapor Monitoring Probe Completion Report, SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California.* February 18.

[2] Jacobs Engineering Group Inc. (Jacobs). 2018. *Southeastern Horizontal Biosparge Well (BS-02) Completion Report, SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California.* July 12.

Biosparging involves introducing air into the groundwater in situ to enhance biodegradation of VOCs present in product and groundwater. A 100-horsepower (hp) biosparge compressor was installed in November 2015 to deliver ambient air to the biosparge well at a maximum design rate of approximately 500 standard cubic feet per minute (scfm). The 500-scfm sparge compressor was turned off temporarily and a new air sparge compressor (175 hp) that has a design flow rate of 883 scfm was installed in the fourth quarter 2018 to deliver ambient air to both the south-central and southeastern sparge wells. The 500-scfm and 883-scfm compressors are appropriately sized to deliver ambient air to both the south-central and southeastern sparge wells, and to allow for future system expansion. Vapors generated by the biosparge wells are captured by the SVE system. The SVE system has an interlock that prevents the biosparge system from turning on unless the SVE system is operating. Operation of the SVE system reduces the potential for off-gassing of VOCs during biosparge operations.

A summary of the GWTS operations during the reporting period is presented below. Operations of the SVE and biosparge systems are presented separately in quarterly remediation progress reports that are provided to the Water Board and Restoration Advisory Board (RAB).

Summary of Quarterly Groundwater Treatment System Operations

A total of 574,268 gallons of groundwater was extracted from the south-central and southeastern areas, treated, and discharged to Coyote Creek during the first quarter 2019. Wells that were in operation included MW-SF-3, MW-SF-15, GMW-9, GMW-O-11, and GMW-O-20 in the south-central area; and GMW-O-15, GMW-36, and GMW-SF-9 in the southeastern area. No groundwater was extracted from the West Side Barrier area during this period. Table 1 summarizes the average daily flow rate during the reporting period. The GWTS operated throughout the quarter, with the following exceptions:

- On December 22, 2018, the GWTS was shut down because the motors and regulators of the two air compressors (15-hp compressor installed in 2007, and 10-hp compressor installed in 2008) at the groundwater treatment pad required replacement. The 2007 and 2008 air compressors supply air to the GWTS well pumps and the pneumatic valves for the RTO. The GWTS was turned on temporarily on January 4, 5, 8, and 10, 2019, to test the system. The GWTS was restarted on January 11, 2019.
- The GWTS was shut down from March 19 through March 26, 2019 and from March 26 through March 31, 2019, for carbon changeout and repairs to carbon vessels. On March 26, 2019, the GWTS was turned on briefly for maintenance of other equipment.

No free product accumulated in the product holding tank of the GWTS during the first quarter 2019. In addition, hand bailing of free product (from wells not equipped for TFE) was not performed during this reporting period because free product was not detected in the wells.

Routine Effluent Monitoring

During the first quarter 2019, effluent water samples were collected pursuant to the Waste Discharge Requirements (WDRs) under Order No. R4-2016-0309. Samples were collected at the Order-designated monitoring point EFF-001 (Remediation System Effluent) for monthly and quarterly analyses.

All compliance samples were shipped to Asset Laboratories in Las Vegas, Nevada, for analysis. Asset Laboratories sent the quarterly samples collected on January 17, 2019, to BC Laboratories, Inc., in Bakersfield, California, to be analyzed for total petroleum hydrocarbons (gasoline, diesel, and oil), biochemical oxygen demand, and ammonia as nitrogen. The samples were analyzed in accordance with current U.S. Environmental Protection Agency (EPA) methods or as specified in the WDRs for the site. The laboratory reports are included in Attachment A. A data quality assurance/quality control evaluation conducted by Jacobs is included in Attachment B.

Summary of Compliance Results

Monthly and Quarterly Sampling

Effluent daily flow rates are presented in Table 1. All daily flows were below the permit maximum discharge limit of 150,000 gallons per day. Analytical results for the January, February, and March 2019 effluent sampling events are summarized in Table 2. The effluent samples (EFF-001) were collected after the secondary polishing LGAC vessel, prior to discharge into the storm drain at the site. The results were compared with the maximum daily and average monthly discharge limits under Order No. R4-2016-0309. As shown in Table 2, all discharge limits for the treatment system effluent were met during this reporting period. Laboratory analytical reports and chain-of-custody documents are included in Attachment A. The mass emission (in pounds per day) is calculated by multiplying the daily effluent flow measured during the day of the sampling event (in million gallons per day) by the concentration of the analyte (milligrams per liter) and the conversion factor of 8.34, as required by the discharge permit. If the analyte was not detected in the sample, the concentration used is half of the method detection limit.

Under NPDES Order No. R4-2016-0309, a wet weather condition is present when the maximum daily flow in Coyote Creek is equal to or greater than 156 cubic feet per second (cfs) as measured at the Los Angeles County Department of Public Works flow gauge station F354-R, located at the bottom of the creek just above the Long Beach Water Reclamation Plant. The daily flow rate in Coyote Creek, which is based on data from the Los Angeles County Department of Public Works flow gauge station F354-R, is presented in Table 3. Based on these data, the January 2019 sampling event, with a maximum daily flow of 3,158 cfs, occurred during wet weather conditions. The February and March 2019 sampling events, with a maximum daily flow less than 44 cfs, occurred during dry weather conditions. Therefore, the analytical results for January 2019 are compared to wet weather discharge limits, and February and March 2019 results are compared to dry weather discharge limits.

Los Angeles County Department of Public Works flow data for November 27 through December 2018 were not available for the previous (fourth quarter 2018) report, and therefore have been included in this current report.

Waste Handling

On March 7, 2019, approximately 160 pounds of nonhazardous non-Department of Transportation (DOT) regulated debris waste (empty drums) was removed from the site by Clean Harbors Environmental Service Inc. of 1737 East Denni Street, Wilmington, California 90744. The waste was transported to Clean Harbors Wilmington LLC. at 1737 E Denni Street, Wilmington, California 90744.

On March 7, 2019, approximately 300 pounds of non-Resource Conservation and Recovery Act (RCRA) hazardous waste (GWTS bag filters) was removed from the site by Clean Harbors Environmental Service Inc. of 1737 East Denni Street, Wilmington, California 90744. The waste was transported to Clean Harbors Wilmington LLC. at 1737 East Denni Street, Wilmington, California 90744.

On March 19, 2019, approximately 1,500 pounds of nonhazardous spent carbon was removed from the site for regeneration by Prominent Systems Inc., of 13095 East Temple Avenue, City of Industry, California 91746.

On March 22, 2019, approximately 2,500 pounds of nonhazardous spent carbon was removed from the site for regeneration by Prominent Systems Inc., of 13095 East Temple Avenue, City of Industry, California 91746.

Copies of the waste manifests are included in Attachment C.

JACOBS

Harbor Toxics Total Maximum Daily Load Monitoring

Wet chemistry monitoring and sampling for toxic pollutants in the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters total maximum daily load (TMDL) (herein referred to as the Harbor Toxics TMDL) were conducted on February 1, 2019 (wet weather event) and March 7, 2019 (wet weather event). The sediment sampling and dry weather event are scheduled in the third quarter 2019. The Harbor Toxics TMDL summary for 2019 will be included in the fourth quarter 2019 NPDES report.

Annual Review of Stormwater Pollution Prevention Plan, Best Management Practices Plan, and Spill Contingency Plan

As required in Section X.D.1 of the Monitoring and Reporting Program, the project Stormwater Pollution Prevention Plan (SWPPP)/Best Management Practices Plan (BMPP) and Spill Contingency Plan (SCP) are reviewed annually and updated as needed to verify that all actual and potential sources of pollutants in wastewater and stormwater discharged from the facility are addressed in the plans.

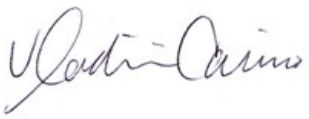
The existing SWPPP/BMPP and SCP documents have been reviewed and revised to incorporate the following changes:

- Revised site maps, process flow diagram, and equipment layout.
- Updated project team information.
- Provided details about the DAF overflow incident that occurred on August 20, 2018, related to the high level switch failures at the 300-gallon equalization tank and DAF containment pad. The report also included a discussion of the corrective measures that were implemented to avoid a future occurrence.

The above changes are now reflected in the SWPPP/BMPP and SCP documents, which are included in Attachment D. A copy of these documents will be maintained onsite for reference.

Should you require any further information, please contact Vladimir Carino at (949) 224-7548.

Regards,



Vladimir Carino
Project Engineer

Attachments:

Table 1 – Effluent Flow Rate Measurements, First Quarter 2019
Table 2 – NPDES Effluent Monitoring, First Quarter 2019
Table 3 – Maximum Daily Flow in Coyote Creek, First Quarter 2019

Figure 1 – Site Location Map
Figure 2 – Remediation System Layout

Attachment A – Laboratory Analytical Reports, Chain-of-Custody Documents, and Field Measurements
Attachment B – Data Quality Assurance/Quality Control
Attachment C – Waste Manifests
Attachment D - SWPPP/BMPP and SCP Documents

Tables

Table 1. Effluent Flow Rate Measurements, First Quarter 2019

SFPP Norwalk Pump Station, Norwalk, California

Date	Daily Flow Rate (gpd) (Maximum Daily Discharge Limit = 150,000 gpd[a])
01/01/19	0
01/02/19	0
01/03/19	0
01/04/19	762
01/05/19	48
01/06/19	0
01/07/19	0
01/08/19	422
01/09/19	4.0
01/10/19	1,658
01/11/19	5,956
01/12/19	9,308
01/13/19	8,930
01/14/19	6,554
01/15/19	6,040
01/16/19	9,660
01/17/19	9,224
01/18/19	8,924
01/19/19	8,792
01/20/19	9,114
01/21/19	8,788
01/22/19	8,894
01/23/19	9,924
01/24/19	9,006
01/25/19	9,134
01/26/19	8,084
01/27/19	7,808
01/28/19	11,720
01/29/19	3,960
01/30/19	7,932
01/31/19	8,912
02/01/19	8,714
02/02/19	9,806
02/03/19	9,048
02/04/19	8,392
02/05/19	8,246
02/06/19	7,650
02/07/19	6,984
02/08/19	6,008
02/09/19	6,138
02/10/19	6,162
02/11/19	6,414
02/12/19	6,362
02/13/19	4,756
02/14/19	8,044
02/15/19	4,956
02/16/19	5,084
02/17/19	4,964
02/18/19	5,200
02/19/19	6,930
02/20/19	10,478

Table 1. Effluent Flow Rate Measurements, First Quarter 2019

SFPP Norwalk Pump Station, Norwalk, California

Date	Daily Flow Rate (gpd) (Maximum Daily Discharge Limit = 150,000 gpd[a])
02/21/19	11,862
02/22/19	12,282
02/23/19	11,806
02/24/19	11,616
02/25/19	11,594
02/26/19	3,532
02/27/19	3,324
02/28/19	2,822
03/01/19	11,514
03/02/19	12,656
03/03/19	11,272
03/04/19	10,892
03/05/19	10,360
03/06/19	11,784
03/07/19	7,390
03/08/19	6,346
03/09/19	10,706
03/10/19	8,138
03/11/19	10,532
03/12/19	6,852
03/13/19	10,718
03/14/19	10,230
03/15/19	10,202
03/16/19	10,152
03/17/19	10,046
03/18/19	9,712
03/19/19	5,790
03/20/19	0
03/21/19	0
03/22/19	0
03/23/19	0
03/24/19	0
03/25/19	0
03/26/19	244
03/27/19	0
03/28/19	0
03/29/19	0
03/30/19	0
03/31/19	0

Notes:

[a] California Regional Water Quality Control Board Waste Discharge Requirements (WDRs).

gpd = gallons per day

Table 2. NPDES Effluent Monitoring, First Quarter 2019

SFPP Norwalk Pump Station, Norwalk, California

Analyte	Sampling Frequency	Analytical Method	Units	MDL[a]	RL[a]	ML[b]	1/17/2019	2/7/2019	3/14/2019	Discharge Limits[c]	
										Monthly Average	Daily Maximum
Flow	Daily	--	gpd	--	--	--	**9,224**	**6,984**	**10,230**	--	**150,000**
TPH as Gasoline (C4-C12)	Monthly	EPA 8015B	µg/L	22	50	NE	<22	<24	<23	--	--
TPH as Diesel (C13-C22)	Monthly	EPA 8015B	µg/L	16	40	NE	<6.8	<15	<16	--	--
TPH as Oil (C23+)	Monthly	EPA 8015B	µg/L	15	100	NE	<13	<14	<15	--	--
Total TPH	Monthly	EPA 8015B	µg/L	22	100	NE	<22	<24	<23	--	**100**
Total TPH	Monthly	Calculated	lb/day	--	--	--	**0.000846**	**0.001398**	**0.001962**	--	**0.13**
Benzene	Monthly	EPA 8260B	µg/L	0.34	1.0	2.0	<0.34	<0.34	<0.34	--	--
1,1-Dichloroethane	Monthly	EPA 8260B	µg/L	0.45	0.5	1.0	<0.45	<0.45	<0.45	--	--
1,2-Dichloroethane	Monthly	EPA 8260B	µg/L	0.29	0.5	2.0	<0.29	<0.29	<0.29	--	--
Ethylbenzene	Monthly	EPA 8260B	µg/L	0.31	1.0	2.0	<0.31	<0.31	<0.31	--	--
Phenol	Monthly	EPA 8270C	µg/L	0.35	1.1	1	<0.41	< 0.33	<0.35	--	--
Toluene	Monthly	EPA 8260B	µg/L	0.46	2.0	2.0	<0.46	<0.46	<0.46	--	--
Methyl Tertiary Butyl Ether	Monthly	EPA 8260B	µg/L	0.34	1.0	NE	<0.34	<0.34	<0.34	--	--
Tertiary Butyl Alcohol	Monthly	EPA 8260B	µg/L	2.4	5.0	NE	<2.4	<2.4	<2.4	--	--
Total Xylenes	Monthly	EPA 8260B	µg/L	1.5	2.0	NE	<1.5	<1.5	<1.5	--	--
Copper (total recoverable) (dry weather)	Monthly	EPA 200.8	µg/L	0.26	0.5	0.5	--	<0.26 J	<0.26 J	**9.7**	**32**
Copper (total recoverable) (dry weather)	Monthly	Calculated	lb/day	--	--	--	--	**0.000008**	**0.000011**	**0.012**	**0.04**
Copper (total recoverable) (wet weather)	Monthly	EPA 200.8	µg/L	0.26	0.5	0.5	<0.26 J	--	--	**8.3**	**27**
Copper (total recoverable) (wet weather)	Monthly	Calculated	lb/day	--	--	--	**0.00001**	--	--	**0.010**	**0.034**
Lead (total recoverable) (dry weather)	Monthly	EPA 200.8	µg/L	0.13	0.5	0.5	--	<0.13	<0.13	**33**	**106**
Lead (total recoverable) (dry weather)	Monthly	Calculated	lb/day	--	--	--	--	**0.000004**	**0.000006**	**0.041**	**0.13**
Mercury (total recoverable)	Monthly	EPA 245.1	µg/L	0.018	0.05	0.2	<0.018	**0.033**	**0.035**	**0.051**	**0.10**
Mercury (total recoverable)	Monthly	Calculated	lb/day	--	--	--	**0.000001**	**0.000002**	**0.000003**	**0.000064**	**0.00013**
Zinc (total recoverable) (dry weather)	Monthly	EPA 200.8	µg/L	0.27	1.0	1.0	--	**1.6**	<0.27	**64**	**220**
Zinc (total recoverable) (dry weather)	Monthly	Calculated	lb/day	--	--	--	--	**0.000093**	**0.000012**	**0.080**	**0.28**
Zinc (total recoverable) (wet weather)	Monthly	EPA 200.8	µg/L	0.27	1.0	1.0	**4.3**	--	--	**46**	**158**
Zinc (total recoverable) (wet weather)	Monthly	Calculated	lb/day	--	--	--	**0.000331**	--	--	**0.058**	**0.2**
Biochemical Oxygen Demand	Quarterly	SM 5210B	mg/L	1.5	1.5	NE	<1.5	--	--	**20**	**30**
Biochemical Oxygen Demand	Quarterly	Calculated	lb/day	--	--	--	**0.057696**	--	--	**25**	**38**
Total Suspended Solids	Quarterly	SM 2540D	mg/L	4.0	4.0	NE	<4.0	--	--	**50**	**75**
Total Suspended Solids	Quarterly	Calculated	lb/day	--	--	--	**0.153856**	--	--	**63**	**94**
pH	Quarterly	--	s.u.	0.1	0.1	NE	**7.32**	--	--	--	**6.5/8.5**
Oil and Grease	Quarterly	EPA 1664A	mg/L	0.77	4.8	NE	<0.77	--	--	**10**	**15**
Oil and Grease	Quarterly	Calculated	lb/day	--	--	--	**0.029617**	--	--	**13**	**19**
Ammonia Nitrogen (as N)	Quarterly	SM 4500 NH3	mg/L	0.05	0.2	NE	**0.054**	--	--	--	--
Settleable Solids	Quarterly	SM 2540F	mL/L/hr	0.09	0.09	NE	<0.09	--	--	**0.1**	**0.3**
Temperature	Quarterly	Temperature	°F	0.1	0.1	NE	**66.2**	**76**	--	--	**86**

Table 2. NPDES Effluent Monitoring, First Quarter 2019

SFPP Norwalk Pump Station, Norwalk, California

Analyte	Sampling Frequency	Analytical Method	Units	MDL[a]	RL[a]	ML[b]	1/17/2019	2/7/2019	3/14/2019	Discharge Limits[c]	
										Monthly Average	Daily Maximum
Turbidity	Quarterly	SM 2130B	NTU	0.1	0.1	NE	**0.25**	--	--	**50**	**75**
Salinity	2x/year	SM 2520B	--	--	--	NE	--	--	--	--	--
Chronic Toxicity	2x/year	--	--	--	--	NE	--	--	--	--	**Pass and % Effect <50**
Di-isopropyl Ether	Annually	EPA 8260B	µg/L	--	--	NE	--	--	--	--	--
Methyl Ethyl Ketone	Annually	EPA 8260B	µg/L	--	--	NE	--	--	--	--	--
Methylene Blue Active Substances	Annually	SM 5540C	mg/L	--	--	NE	--	--	--	--	--
Nitrate + Nitrite as N	Annually	EPA 300.0	mg/L	--	--	NE	--	--	--	--	--
Sulfides	Annually	SM 4500 SD	mg/L	--	--	NE	--	--	--	--	--
Tert Amyl Methyl Ether	Annually	EPA 8260B	µg/L	--	--	NE	--	--	--	--	--
TCDD Equivalents	Annually	EPA 8290	pg/L	--	--	NE	--	--	--	--	--
Other Priority Pollutants	Annually	--	--	--	--	--	--	--	--	--	--

Notes:

[a] The highest MDL and RL during this reporting period are shown.

[b] ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. It is also the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method-specified sample weights, volumes, and processing steps have been followed.

c California Regional Water Quality Control Board Waste Discharge Requirements (WDRs) under Order No. R4-2016-0309.

-- = not measured or not analyzed

< = not detected above the MDL

° F = degrees Fahrenheit

µg/L = micrograms per liter

EPA = U.S. Environmental Protection Agency

gpd = gallons per day

J = detected at a concentration below the RL and above the MDL; reported value is estimated

lb/day = pounds per day

MDL = laboratory method detection limit

mg/L = milligrams per liter

ML = minimum level (see note a)

mL/L/hr = milliliters per liter per hour

NE = not established

NPDES = National Pollutant Discharge Elimination System

NTU = nephelometric turbidity unit(s)

pg/L = picograms per liter

ppt = parts per trillion

s.u. = standard unit(s)

TCDD = tetrachlorodibenzodioxin

TPH = total petroleum hydrocarbons

Table 3. Maximum Daily Flow in Coyote Creek, First Quarter 2019

SFPP Norwalk Pump Station, Norwalk, California

Date	Maximum Daily Flow Rate (cfs)[a,b]	Comments
11/27/18	16.1	
11/28/18	12.1	
11/29/18	2,448.4	
11/30/18	97.3	
12/01/18	20.2	
12/02/18	17.6	
12/03/18	14.1	
12/04/18	77.2	
12/05/18	202.1	
12/06/18	4,579.8	
12/07/18	232.7	
12/08/18	132.8	
12/09/18	70.5	
12/10/18	72.1	
12/11/18	57.0	
12/12/18	63.8	
12/13/18	67.1	
12/14/18	67.1	December 2018 Sampling Conducted
12/15/18	60.4	
12/16/18	67.1	
12/17/18	77.2	
12/18/18	58.7	
12/19/18	55.4	
12/20/18	55.4	
12/21/18	57.0	
12/22/18	55.4	
12/23/18	68.8	
12/24/18	63.8	
12/25/18	78.8	
12/26/18	75.5	
12/27/18	73.8	
12/28/18	67.1	
12/29/18	75.5	
12/30/18	73.8	
12/31/18	77.2	
01/01/19	55.4	
01/02/19	75.5	
01/03/19	62.1	
01/04/19	57.0	
01/05/19	1,486.0	
01/06/19	1,396.5	
01/07/19	107.3	
01/08/19	77.2	
01/09/19	67.1	
01/10/19	47.0	
01/11/19	52.0	
01/12/19	1,110.1	
01/13/19	30.2	
01/14/19	787.9	
01/15/19	1,324.9	
01/16/19	557.5	
01/17/19	3,158.1	January 2019 sampling conducted
01/18/19	204.0	

Table 3. Maximum Daily Flow in Coyote Creek, First Quarter 2019

SFPP Norwalk Pump Station, Norwalk, California

Date	Maximum Daily Flow Rate (cfs)[a,b]	Comments
01/19/19	65.4	
01/20/19	67.1	
01/21/19	62.1	
01/22/19	23.7	
01/23/19	19.2	
01/24/19	18.7	
01/25/19	19.2	
01/26/19	19.2	
01/27/19	19.7	
01/28/19	20.7	
01/29/19	22.2	
01/30/19	30.2	
01/31/19	24.3	
02/01/19	184	
02/02/19	14,200	
02/03/19	1,460	
02/04/19	1,430	
02/05/19	1,340	
02/06/19	95.7	
02/07/19	37.0	February 2019 sampling conducted
02/08/19	25.2	
02/09/19	1,340	
02/10/19	1,090	
02/11/19	170	
02/12/19	17.8	
02/13/19	84.9	
02/14/19	12,300	
02/15/19	1,200	
02/16/19	845	
02/17/19	88.4	
02/18/19	122	
02/19/19	76.3	
02/20/19	249	
02/21/19	228	
02/22/19	144	
02/23/19	44.8	
02/24/19	30.8	
02/25/19	30.8	
02/26/19	33.8	
02/27/19	40.4	
02/28/19	43.3	
03/01/19	41.9	
03/02/19	2040	
03/03/19	555	
03/04/19	67.7	
03/05/19	130	
03/06/19	5480	
03/07/19	892	
03/08/19	170	
03/09/19	54.5	
03/10/19	40.4	

Table 3. Maximum Daily Flow in Coyote Creek, First Quarter 2019

SFPP Norwalk Pump Station, Norwalk, California

Date	Maximum Daily Flow Rate (cfs)[a,b]	Comments
03/11/19	74.6	
03/12/19	43.3	
03/13/19	38.7	
03/14/19	43.3	March 2019 sampling conducted
03/15/19	30.8	
03/16/19	33.8	
03/17/19	40.4	
03/18/19	44.8	
03/19/19	49.5	
03/20/19	1040	
03/21/19	1110	
03/22/19	146	
03/23/19	44.8	
03/24/19	115	
03/25/19	43.3	
03/26/19	61	
03/27/19	67.7	
03/28/19	86.6	
03/29/19	29.3	
03/30/19	37	
03/31/19	92	

Notes:

[a] A wet weather event is any day when the maximum daily flow of Coyote Creek is greater than or equal to 156 cfs. A dry weather event is any day when the maximum daily flow of Coyote Creek is less than 156 cfs.

[b] Included new revised maximum daily flow of Coyote Creek (Nov. 27 - Dec. 31)

cfs = cubic feet per second

Figures

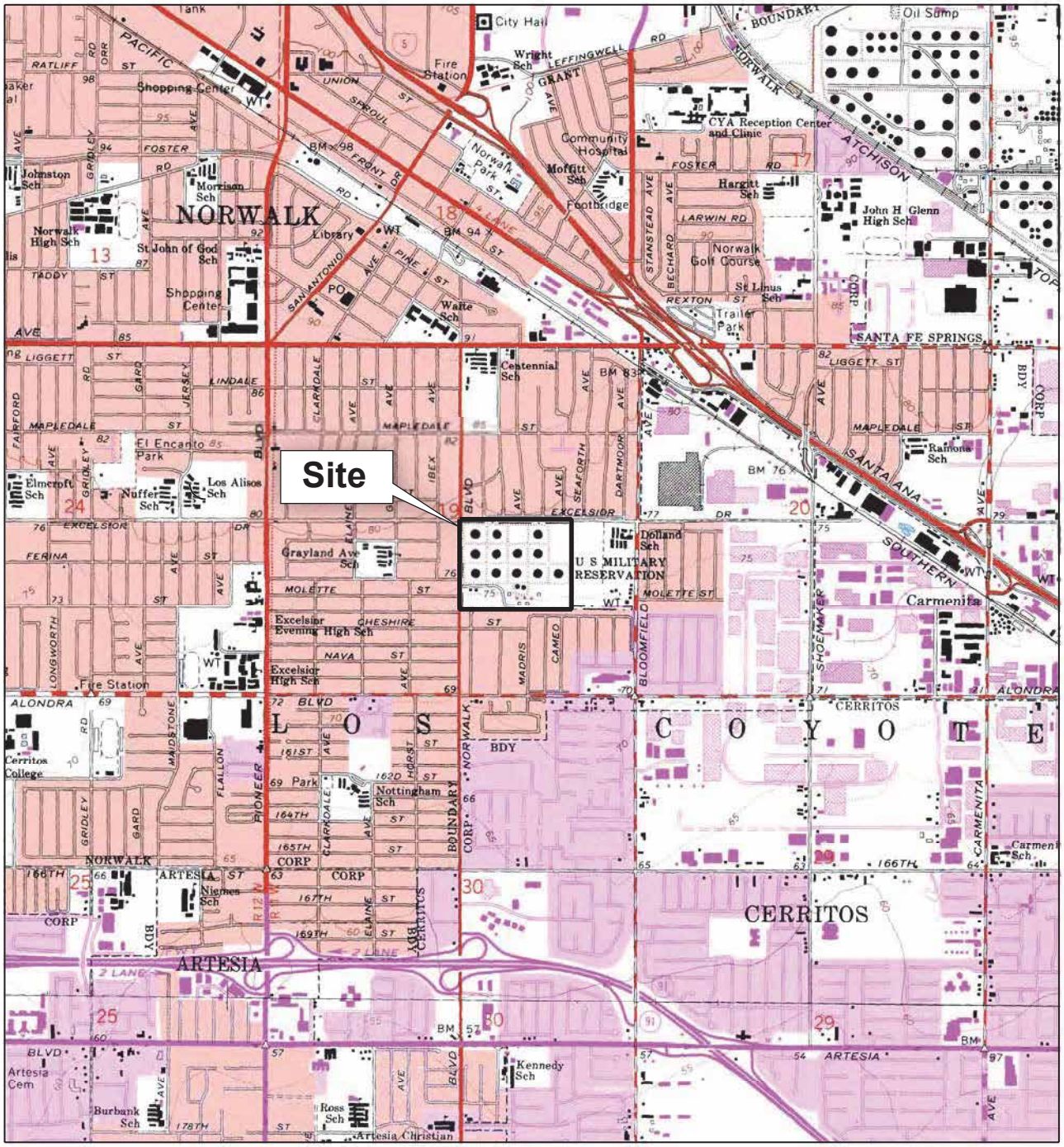
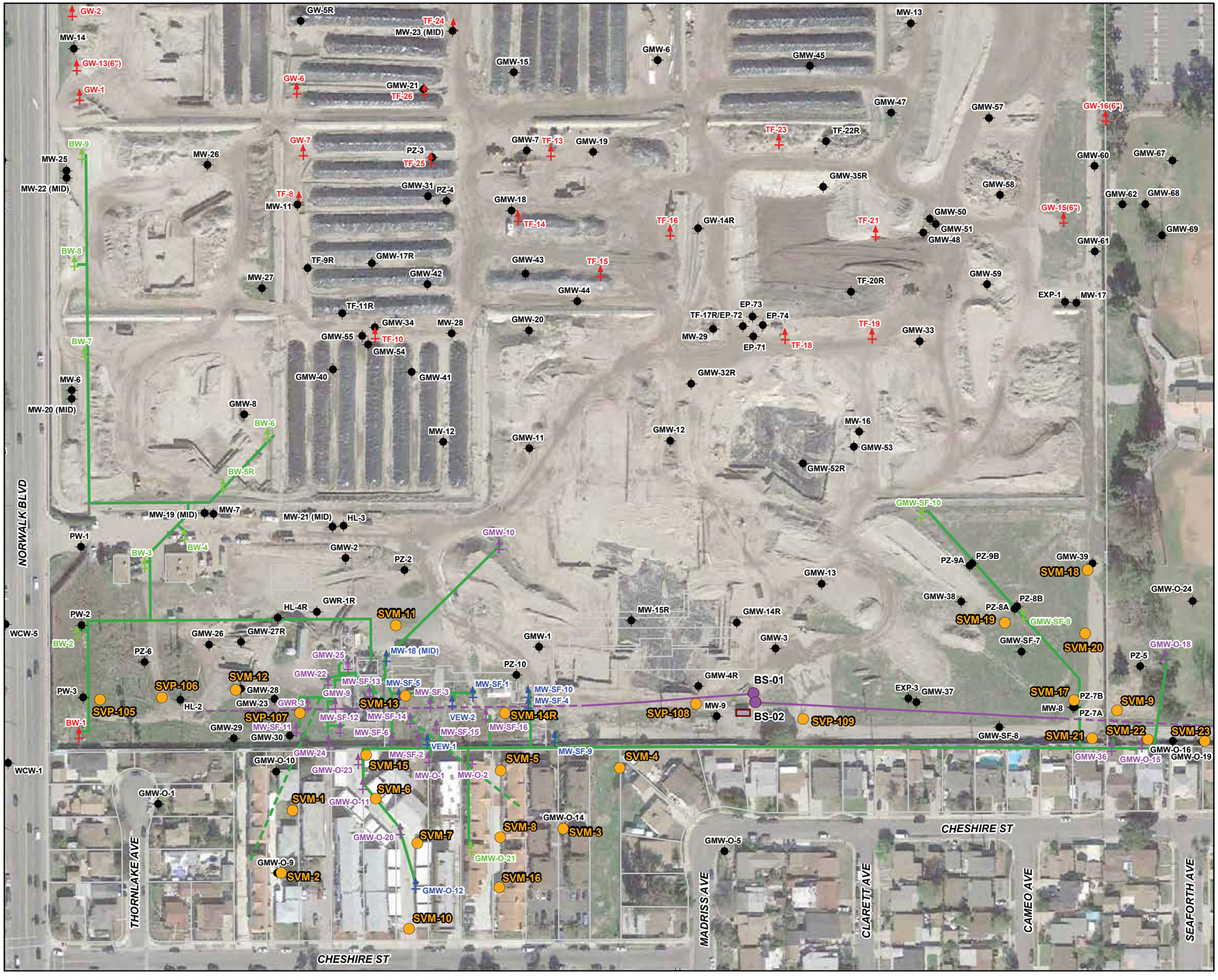


Figure 1. Site Location Map
SFPP Norwalk Pump Station
Norwalk, California

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

JACOBS®



LEGEND

- Soil Vapor Probe/Soil Vapor Monitoring Probe
- Horizontal Biosparge Well Entry Point
- Existing Groundwater Monitoring Well
- Existing Remediation Well
- Kinder Morgan Combined Soil Vapor and Total Fluids Extraction Wells
- Kinder Morgan Soil Vapor Extraction Wells
- Kinder Morgan Total Fluids and/or Groundwater Extraction Wells
- Kinder Morgan Remediation Piping Layout (Above Ground and Below Ground)
- Horizontal Vapor Extraction Well Piping
- Horizontal Biosparge Well (Dashed Line Depicts Approximate Lateral Extent of Well Screen)
- Air Compressor System

Imagery Source:
Google Earth October 18, 2016.

N

0 75 150 300

Feet

1 inch = 150 feet

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

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R:\ENBG\00_PROJ\K\KINDERMORGAN\NORWALK\MAPFILES\2018\FIGURE_2_REMEDIATION_SYSTEM_LAYOUT.MXD AESPEJO 2/15/2018

Attachment A
Laboratory Analytical Reports, Chain-of-Custody Documents, and Field Measurements

Kinder Morgan Field Meter Calibration and Log Form

Site Name	Site Location	Project Manager	CH2M Personnel	Norwalk Effluent Monitoring Form SFPP Norwalk Pump Station *Norwalk, CA* Form Revised 1/8/18	
SFPP Norwalk Pump Station	Norwalk, CA	Steve Defibaugh	Eric Davis, PM Vladimir Carino		
Date	**Time**	**SAMPLE TYPE (circle one):**		**Discharge Permit**	**Expiration Date**
1-17-19	1205	Grab, Composite, Flow-through, Other		R4-2016-0309	11/1/2021
O&M Technician#1	**O&M Technician#2**				
~~1-17-19~~ ~~James Dye~~	Nils Erlandsen				

EQUIPMENT

Multimeter	Make: ~~Oakton~~ NO 1-17-19 YSI	
	Model: 556 MPS	
	Serial Number: 02L0275	

CALIBRATION

Date of Calibration:	1-17-19	Time:	1130		
Calibration Standard:	(Yes) No	Standard	Expiration Date	Calibrated Within 0.2 pH units?	
pH Calibration Standard		4		Yes	No
		(7)	09/2019	(Yes)	No
		10		Yes	No
Cond. Calibration —	Equipment Reading: —		Calibrated to or within 10%?	Yes	No

FIELD PARAMETERS	FIELD MEASUREMENTS			
	Effluent (EFF-001)	Upstream (RSW-001)	Downstream (RSW-002)	Mid-Point
TIME	1205			
pH (DISCHARGE LIMIT 6.5 - 8.5) (Quarterly, Annually)	7.32			
TEMP (°F) (DISCHARGE LIMIT 86°F) (Quarterly, Annually)	66.2			
SALINITY (ppt)	—			
COND (mS/cm or uS/cm; Specific Cond.) *Circle or Note Units Used*	—			

OBSERVATIONS

Weather - Raining

KINDER MORGAN

Signed: _____ Date: 1-17-19

January 25, 2019

Eric Davis
CH2MHill
1000 Wilshire Blvd.
Los Angeles, CA 90017

TEL:
FAX:

Workorder No.: N033809

RE: SFPP Norwalk

Attention: Eric Davis

Enclosed are the results for sample(s) received on January 17, 2019 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,

Quennie Manimtim
Laboratory Director

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

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

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

Sample was analyzed within method holding time.

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

Subcontracted Analyses:

EPA 8015B for DRO, ORO and GRO was subcontracted to BC Laboratories, Bakersfield, CA. Total TPH was calculated and reported in the lab based on Subcon Lab's result.

BOD and Ammonia were subcontracted to BC Laboratories, Bakersfield, CA.

Analytical Comment for EPA 200.8:

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

Analytical Comment for EPA 8260B:

Surrogate recovery for Method Blank is biased high; however the results were non-detect (ND) for analytes of interest and reanalysis of the sample was not necessary.

CLIENT: CH2MHill
Project: SFPP Norwalk
Lab Order: N033809
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N033809-001A	EFF-01-17	Wastewater	1/17/2019 12:05:00 PM	1/17/2019	1/25/2019
N033809-001B	EFF-01-17	Wastewater	1/17/2019 12:05:00 PM	1/17/2019	1/25/2019
N033809-001C	EFF-01-17	Wastewater	1/17/2019 12:05:00 PM	1/17/2019	1/25/2019
N033809-001D	EFF-01-17	Wastewater	1/17/2019 12:05:00 PM	1/17/2019	1/25/2019
N033809-001E	EFF-01-17	Wastewater	1/17/2019 12:05:00 PM	1/17/2019	1/25/2019
N033809-001F	EFF-01-17	Wastewater	1/17/2019 12:05:00 PM	1/17/2019	1/25/2019
N033809-001G	EFF-01-17	Wastewater	1/17/2019 12:05:00 PM	1/17/2019	1/25/2019
N033809-001H	EFF-01-17	Wastewater	1/17/2019 12:05:00 PM	1/17/2019	1/25/2019
N033809-001I	EFF-01-17	Wastewater	1/17/2019 12:05:00 PM	1/17/2019	1/25/2019
N033809-001J	EFF-01-17	Wastewater	1/17/2019 12:05:00 PM	1/17/2019	1/25/2019
N033809-001K	EFF-01-17	Wastewater	1/17/2019 12:05:00 PM	1/17/2019	1/25/2019

CLIENT: CH2MHill
Lab Order: N033809
Project: SFPP Norwalk
Lab ID: N033809-001

Client Sample ID: EFF-01-17
Collection Date: 1/17/2019 12:05:00 PM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL NON-FILTERABLE RESIDUE							
			SM2540D				
RunID: **CA01638-WC01_190118A** QC Batch: **72208**				PrepDate:	**1/18/2019**		Analyst: **GAC**
Suspended Solids (Residue, Non-Filterable)	ND	4.0	4.0		mg/L	1	1/18/2019
SETTLEABLE MATTER							
			SM2540F				
RunID: **NV00922-WC_190118G** QC Batch: **72181**				PrepDate:	**1/18/2019**		Analyst: **QBM**
Settleable Matter	ND	0.090	0.090		ml/L	1	1/18/2019
HEXANE EXTRACTABLE MATERIAL (HEM)							
			EPA 1664 _HEM REV B				
RunID: **NV00922-WC_190121D** QC Batch: **72190**				PrepDate:	**1/21/2019**		Analyst: **LR**
Oil & Grease	ND	0.77	4.8		mg/L	1	1/21/2019 09:03 AM
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_190118F** QC Batch: **R131310**				PrepDate:			Analyst: **LR**
Turbidity	0.25	0.10	0.10		NTU	1	1/18/2019 02:50 PM
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
		EPA 3510C	**EPA 8270C**				
RunID: **NV00922-MS9_190124A** QC Batch: **72237**				PrepDate:	**1/24/2019**		Analyst: **RRS**
Phenol	0.41	0.34	1.0	J	µg/L	1	1/24/2019 05:46 PM
Surr: 1,2-Dichlorobenzene-d4	51.0	0	24-101		%REC	1	1/24/2019 05:46 PM
Surr: 2-Fluorobiphenyl	64.0	0	29-102		%REC	1	1/24/2019 05:46 PM
Surr: 4-Terphenyl-d14	78.0	0	27-108		%REC	1	1/24/2019 05:46 PM
Surr: Phenol-d5	41.0	0	25-108		%REC	1	1/24/2019 05:46 PM
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **CA01638-MS10_190117A** QC Batch: **CA19VW006**				PrepDate:			Analyst: **GAC**
1,1-Dichloroethane	ND	0.45	0.50		ug/L	1	1/17/2019 01:25 PM
1,2-Dichloroethane	ND	0.29	0.50		ug/L	1	1/17/2019 01:25 PM
Benzene	ND	0.34	1.0		ug/L	1	1/17/2019 01:25 PM
Ethylbenzene	ND	0.31	1.0		ug/L	1	1/17/2019 01:25 PM
m,p-Xylene	ND	0.23	1.0		ug/L	1	1/17/2019 01:25 PM
MTBE	ND	0.34	1.0		ug/L	1	1/17/2019 01:25 PM
o-Xylene	ND	0.31	1.0		ug/L	1	1/17/2019 01:25 PM

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

CLIENT: CH2MHill
Lab Order: N033809
Project: SFPP Norwalk
Lab ID: N033809-001

Client Sample ID: EFF-01-17
Collection Date: 1/17/2019 12:05:00 PM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **CA01638-MS10_190117A** QC Batch: **CA19VW006**				PrepDate:			Analyst: **GAC**
Tert-Butanol	ND	2.4	5.0		ug/L	1	1/17/2019 01:25 PM
Toluene	ND	0.46	2.0		ug/L	1	1/17/2019 01:25 PM
Xylenes, Total	ND	1.5	2.0		ug/L	1	1/17/2019 01:25 PM
Surr: 1,2-Dichloroethane-d4	119	0	72-119		%REC	1	1/17/2019 01:25 PM
Surr: 4-Bromofluorobenzene	94.7	0	76-119		%REC	1	1/17/2019 01:25 PM
Surr: Dibromofluoromethane	113	0	85-115		%REC	1	1/17/2019 01:25 PM
Surr: Toluene-d8	109	0	81-120		%REC	1	1/17/2019 01:25 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 245.1				
RunID: **NV00922-AA1_190118A** QC Batch: **72164**				PrepDate: **1/18/2019**			Analyst: **MG**
Mercury	ND	0.018	0.050		µg/L	1	1/18/2019 10:40 AM
TOTAL METALS BY ICPMS							
			EPA 200.8				
RunID: **NV00922-ICP7_190118A** QC Batch: **72168**				PrepDate: **1/18/2019**			Analyst: **CEI**
Copper	ND	0.26	0.50		µg/L	1	1/18/2019 12:39 PM
Lead	ND	0.13	0.50		µg/L	1	1/18/2019 12:39 PM
Zinc	4.3	0.27	1.0		µg/L	1	1/18/2019 12:39 PM
TOTAL TPH							
			EPA 8015B				
RunID: **SUBCONTRACT_190125A** QC Batch: **R131402**				PrepDate:			Analyst: **admin**
Total TPH	ND	22	100		ug/L	1	1/25/2019

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

CLIENT: CH2MHill
Work Order: N033809
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.2_2540D_W

Sample ID: **LCS-72208**	SampType: **LCS**	TestCode: **160.2_2540D_**	Units: **mg/L**	Prep Date: **1/18/2019**	RunNo: **131355**
Client ID: **LCSW**	Batch ID: **72208**	TestNo: **SM2540D**		Analysis Date: **1/18/2019**	SeqNo: **3267697**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter	1022.000	10	1000	0	102	80	120				

Sample ID: **MB-72208**	SampType: **MBLK**	TestCode: **160.2_2540D_**	Units: **mg/L**	Prep Date: **1/18/2019**	RunNo: **131355**
Client ID: **PBW**	Batch ID: **72208**	TestNo: **SM2540D**		Analysis Date: **1/18/2019**	SeqNo: **3267698**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter	ND	10									

Sample ID: **N033810-003A-DUP**	SampType: **DUP**	TestCode: **160.2_2540D_**	Units: **mg/L**	Prep Date: **1/18/2019**	RunNo: **131355**
Client ID: **ZZZZZZ**	Batch ID: **72208**	TestNo: **SM2540D**		Analysis Date: **1/18/2019**	SeqNo: **3267701**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter	30.000	10						29.00	3.39	5	

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N033809
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.5_2540F_W

Sample ID: **MB-72181** SampType: **MBLK** TestCode: **160.5_2540F_** Units: **ml/L** Prep Date: **1/18/2019** RunNo: **131347**
Client ID: **PBW** Batch ID: **72181** TestNo: **SM2540F** Analysis Date: **1/18/2019** SeqNo: **3267553**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Settleable Matter	ND	0.10									

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N033809
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 1664_HEM_W

Sample ID: **MB-72190** SampType: **MBLK** TestCode: **1664_HEM_W** Units: **mg/L** Prep Date: **1/21/2019** RunNo: **131303**
Client ID: **PBW** Batch ID: **72190** TestNo: **EPA 1664 _H** Analysis Date: **1/21/2019** SeqNo: **3265959**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil & Grease	ND	4.0									

Sample ID: **LCS-72190** SampType: **LCS** TestCode: **1664_HEM_W** Units: **mg/L** Prep Date: **1/21/2019** RunNo: **131303**
Client ID: **LCSW** Batch ID: **72190** TestNo: **EPA 1664 _H** Analysis Date: **1/21/2019** SeqNo: **3265960**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil & Grease	32.300	4.0	40.00	0	80.8	78	114				

Sample ID: **LCSD-72190** SampType: **LCSD** TestCode: **1664_HEM_W** Units: **mg/L** Prep Date: **1/21/2019** RunNo: **131303**
Client ID: **LCSS02** Batch ID: **72190** TestNo: **EPA 1664 _H** Analysis Date: **1/21/2019** SeqNo: **3265961**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil & Grease	32.500	4.0	40.00	0	81.2	78	114	32.30	0.617	18	

Sample ID: **N033809-001HMS** SampType: **MS** TestCode: **1664_HEM_W** Units: **mg/L** Prep Date: **1/21/2019** RunNo: **131303**
Client ID: **ZZZZZZ** Batch ID: **72190** TestNo: **EPA 1664 _H** Analysis Date: **1/21/2019** SeqNo: **3265967**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil & Grease	40.732	4.9	48.78	0	83.5	78	114				

Sample ID: **N033809-001HMSD** SampType: **MSD** TestCode: **1664_HEM_W** Units: **mg/L** Prep Date: **1/21/2019** RunNo: **131303**
Client ID: **ZZZZZZ** Batch ID: **72190** TestNo: **EPA 1664 _H** Analysis Date: **1/21/2019** SeqNo: **3265968**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil & Grease	39.048	4.8	47.62	0	82.0	78	114	40.73	4.22	18	

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N033809
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: **MB-72168** SampType: **MBLK** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **1/18/2019** RunNo: **131275**
Client ID: **PBW** Batch ID: **72168** TestNo: **EPA 200.8** Analysis Date: **1/18/2019** SeqNo: **3263935**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.50									
Lead	ND	0.50									
Zinc	ND	1.0									

Sample ID: **LCS-72168** SampType: **LCS** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **1/18/2019** RunNo: **131275**
Client ID: **LCSW** Batch ID: **72168** TestNo: **EPA 200.8** Analysis Date: **1/18/2019** SeqNo: **3263936**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	10.170	0.50	10.00	0	102	85	115				
Lead	9.971	0.50	10.00	0	99.7	85	115				
Zinc	10.069	1.0	10.00	0	101	85	115				

Sample ID: **N033809-001D-DUP** SampType: **DUP** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **1/18/2019** RunNo: **131275**
Client ID: **ZZZZZZ** Batch ID: **72168** TestNo: **EPA 200.8** Analysis Date: **1/18/2019** SeqNo: **3263939**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.50						0	0	20	
Lead	ND	0.50						0	0	20	
Zinc	4.056	1.0						4.252	4.71	20	

Sample ID: **N033809-001D-MS** SampType: **MS** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **1/18/2019** RunNo: **131275**
Client ID: **ZZZZZZ** Batch ID: **72168** TestNo: **EPA 200.8** Analysis Date: **1/18/2019** SeqNo: **3263941**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	7.222	0.50	10.00	0	72.2	75	125				S
Lead	10.264	0.50	10.00	0	103	75	125				
Zinc	13.504	1.0	10.00	4.252	92.5	75	125				

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N033809
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: **N033809-001D-MSD** SampType: **MSD** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **1/18/2019** RunNo: **131275**
Client ID: **ZZZZZZ** Batch ID: **72168** TestNo: **EPA 200.8** Analysis Date: **1/18/2019** SeqNo: **3263942**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	7.022	0.50	10.00	0	70.2	75	125	7.222	2.80	20	S
Lead	10.203	0.50	10.00	0	102	75	125	10.26	0.595	20	
Zinc	13.113	1.0	10.00	4.252	88.6	75	125	13.50	2.94	20	

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N033809
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 2130_W

Sample ID: **MB-R131310**	SampType: **MBLK**	TestCode: **2130_W**	Units: **NTU**	Prep Date:	RunNo: **131310**
Client ID: **PBW**	Batch ID: **R131310**	TestNo: **SM 2130B**		Analysis Date: **1/18/2019**	SeqNo: **3266234**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	ND	0.10									

Sample ID: **N033809-001KDUP**	SampType: **DUP**	TestCode: **2130_W**	Units: **NTU**	Prep Date:	RunNo: **131310**
Client ID: **ZZZZZZ**	Batch ID: **R131310**	TestNo: **SM 2130B**		Analysis Date: **1/18/2019**	SeqNo: **3266236**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	0.240	0.10						0.2500	4.08	30	

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N033809
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 245.1_W_LL

Sample ID: **MB-72164** SampType: **MBLK** TestCode: **245.1_W_LL** Units: **µg/L** Prep Date: **1/18/2019** RunNo: **131246**
Client ID: **PBW** Batch ID: **72164** TestNo: **EPA 245.1** Analysis Date: **1/18/2019** SeqNo: **3262416**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.050									

Sample ID: **LCS-72164** SampType: **LCS** TestCode: **245.1_W_LL** Units: **µg/L** Prep Date: **1/18/2019** RunNo: **131246**
Client ID: **LCSW** Batch ID: **72164** TestNo: **EPA 245.1** Analysis Date: **1/18/2019** SeqNo: **3262417**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.340	0.050	2.500	0	93.6	85	115				

Sample ID: **N033809-001D-MS** SampType: **MS** TestCode: **245.1_W_LL** Units: **µg/L** Prep Date: **1/18/2019** RunNo: **131246**
Client ID: **ZZZZZZ** Batch ID: **72164** TestNo: **EPA 245.1** Analysis Date: **1/18/2019** SeqNo: **3262418**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.240	0.050	2.500	0	89.6	75	125				

Sample ID: **N033809-001D-MSD** SampType: **MSD** TestCode: **245.1_W_LL** Units: **µg/L** Prep Date: **1/18/2019** RunNo: **131246**
Client ID: **ZZZZZZ** Batch ID: **72164** TestNo: **EPA 245.1** Analysis Date: **1/18/2019** SeqNo: **3262419**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.337	0.050	2.500	0	93.5	75	125	2.240	4.25	20	

Sample ID: **N033809-001D-DUP** SampType: **DUP** TestCode: **245.1_W_LL** Units: **µg/L** Prep Date: **1/18/2019** RunNo: **131246**
Client ID: **ZZZZZZ** Batch ID: **72164** TestNo: **EPA 245.1** Analysis Date: **1/18/2019** SeqNo: **3262421**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.050						0	0	20	

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N033809
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_SFPPTOT

Sample ID: **MB-R131402** SampType: **MBLK** TestCode: **8015_W_SFP** Units: **ug/L** Prep Date: RunNo: **131402**
Client ID: **PBW** Batch ID: **R131402** TestNo: **EPA 8015B** Analysis Date: **1/25/2019** SeqNo: **3270447**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total TPH	ND	100									

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N033809
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: **CA190117-LCS** SampType: **LCS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **131235**
Client ID: **LCSW** Batch ID: **CA19VW006** TestNo: **EPA 8260B** Analysis Date: **1/17/2019** SeqNo: **3261574**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	21.110	0.50	20.00	0	106	69	133				
1,2-Dichloroethane	18.390	0.50	20.00	0	92.0	69	132				
Benzene	20.230	1.0	20.00	0	101	81	122				
Ethylbenzene	21.940	1.0	20.00	0	110	73	127				
m,p-Xylene	45.760	1.0	40.00	0	114	76	128				
MTBE	16.740	1.0	20.00	0	83.7	65	123				
o-Xylene	20.780	1.0	20.00	0	104	80	121				
Tert-Butanol	73.550	5.0	100.0	0	73.6	70	130				
Toluene	21.540	2.0	20.00	0	108	77	122				
Xylenes, Total	66.540	2.0	60.00	0	111	75	125				
Surr: 1,2-Dichloroethane-d4	22.360		25.00		89.4	72	119				
Surr: 4-Bromofluorobenzene	26.860		25.00		107	76	119				
Surr: Dibromofluoromethane	25.590		25.00		102	85	115				
Surr: Toluene-d8	25.200		25.00		101	81	120				

Sample ID: **CA190117-LCSD** SampType: **LCSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **131235**
Client ID: **LCSS02** Batch ID: **CA19VW006** TestNo: **EPA 8260B** Analysis Date: **1/17/2019** SeqNo: **3261575**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	20.630	0.50	20.00	0	103	69	133	21.11	2.30	20	
1,2-Dichloroethane	18.750	0.50	20.00	0	93.8	69	132	18.39	1.94	20	
Benzene	20.110	1.0	20.00	0	101	81	122	20.23	0.595	20	
Ethylbenzene	22.170	1.0	20.00	0	111	73	127	21.94	1.04	20	
m,p-Xylene	45.710	1.0	40.00	0	114	76	128	45.76	0.109	20	
MTBE	16.180	1.0	20.00	0	80.9	65	123	16.74	3.40	20	
o-Xylene	21.750	1.0	20.00	0	109	80	121	20.78	4.56	20	
Tert-Butanol	77.560	5.0	100.0	0	77.6	70	130	73.55	5.31	20	
Toluene	21.340	2.0	20.00	0	107	77	122	21.54	0.933	20	
Xylenes, Total	67.460	2.0	60.00	0	112	75	125	66.54	1.37	20	
Surr: 1,2-Dichloroethane-d4	22.930		25.00		91.7	72	119		0		

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

CLIENT: CH2MHill
Work Order: N033809
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: **CA190117-LCSD** SampType: **LCSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **131235**
Client ID: **LCSS02** Batch ID: **CA19VW006** TestNo: **EPA 8260B** Analysis Date: **1/17/2019** SeqNo: **3261575**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	28.440		25.00		114	76	119		0		
Surr: Dibromofluoromethane	25.050		25.00		100	85	115		0		
Surr: Toluene-d8	27.300		25.00		109	81	120		0		

Sample ID: **CA190117-MB3** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **131235**
Client ID: **PBW** Batch ID: **CA19VW006** TestNo: **EPA 8260B** Analysis Date: **1/17/2019** SeqNo: **3261578**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	ND	0.50									
1,2-Dichloroethane	ND	0.50									
Benzene	ND	1.0									
Ethylbenzene	ND	1.0									
m,p-Xylene	ND	1.0									
MTBE	ND	1.0									
o-Xylene	ND	1.0									
Tert-Butanol	ND	5.0									
Toluene	ND	2.0									
Xylenes, Total	ND	2.0									
Surr: 1,2-Dichloroethane-d4	27.190		25.00		109	72	119				
Surr: 4-Bromofluorobenzene	24.650		25.00		98.6	76	119				
Surr: Dibromofluoromethane	28.860		25.00		115	85	115				S
Surr: Toluene-d8	27.820		25.00		111	81	120				

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N033809
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270WATER_SIMEXT

Sample ID: **LCS-72237** SampType: **LCS** TestCode: **8270WATER_** Units: **µg/L** Prep Date: **1/24/2019** RunNo: **131381**
Client ID: **LCSW** Batch ID: **72237** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **1/24/2019** SeqNo: **3269130**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	3.130	1.0	6.000	0	52.2	24	120				
Surr: 1,2-Dichlorobenzene-d4	0.560		1.000		56.0	24	101				
Surr: 2-Fluorobiphenyl	0.740		1.000		74.0	29	102				
Surr: 4-Terphenyl-d14	0.690		1.000		69.0	27	108				
Surr: Phenol-d5	0.500		1.000		50.0	25	108				

Sample ID: **MB-72237** SampType: **MBLK** TestCode: **8270WATER_** Units: **µg/L** Prep Date: **1/24/2019** RunNo: **131381**
Client ID: **PBW** Batch ID: **72237** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **1/24/2019** SeqNo: **3269131**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	0.570	1.0									J
Surr: 1,2-Dichlorobenzene-d4	0.510		1.000		51.0	24	101				
Surr: 2-Fluorobiphenyl	0.640		1.000		64.0	29	102				
Surr: 4-Terphenyl-d14	0.690		1.000		69.0	27	108				
Surr: Phenol-d5	0.440		1.000		44.0	25	108				

Sample ID: **N033809-001E-MS** SampType: **MS** TestCode: **8270WATER_** Units: **µg/L** Prep Date: **1/24/2019** RunNo: **131381**
Client ID: **ZZZZZZ** Batch ID: **72237** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **1/24/2019** SeqNo: **3269133**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	3.267	1.1	6.667	0.4124	42.8	24	120				
Surr: 1,2-Dichlorobenzene-d4	0.544		1.111		49.0	24	101				
Surr: 2-Fluorobiphenyl	0.711		1.111		64.0	29	102				
Surr: 4-Terphenyl-d14	0.856		1.111		77.0	27	108				
Surr: Phenol-d5	0.489		1.111		44.0	25	108				

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N033809
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270WATER_SIMEXT

Sample ID: **N033809-001E-MSD** SampType: **MSD** TestCode: **8270WATER_** Units: **µg/L** Prep Date: **1/24/2019** RunNo: **131381**
Client ID: **ZZZZZZ** Batch ID: **72237** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **1/24/2019** SeqNo: **3269134**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	3.151	1.1	6.452	0.4124	42.4	24	120	3.267	3.62	20	
Surr: 1,2-Dichlorobenzene-d4	0.559		1.075		52.0	24	101		0		
Surr: 2-Fluorobiphenyl	0.742		1.075		69.0	29	102		0		
Surr: 4-Terphenyl-d14	0.742		1.075		69.0	27	108		0		
Surr: Phenol-d5	0.473		1.075		44.0	25	108		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

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

CHAIN OF CUSTODY RECORD

DATE: 1-17-19
PAGE: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		Section D Sampler Information:	
Company:	Kinder Morgan Energy Partners Attention: Steve Defibaugh	Report To:	Eric Davis	Attention:	Steve Defibaugh - Ref. AFE# 81195	Sampler Name:	Nils Orliczky
Address:	1100 Town & Country Road Orange, CA 92868	Copy To:	Steve Defibaugh	Company Name:	Kinder Morgan Energy Partners	Sampler Signature:	[signature]
Email To:	steve_defibaugh@kindermorgan.com eric.davis@ch2m.com	Purchase Order No.:		Address:	1100 Town & Country Road Orange, CA 92868	Sample Date:	01/17/19
Phone: 714-560-4802	Fax: 714-560-4801	Project Name:	SFPP Norwalk	ATL Project Manager:	Marlon Cartin		

Section E
Required Sample Information

								Analysis Test	BTEX, 1,1-DCA, 1,2-DCA, MTBE, TBA (8260B)	TPH-gas (C4-C12) (8015B)	TPH-d (C13-C22), TPH-oil (C23+), Total TPH (8015B)	Cu, Pb, Zn (200.8); Hg (245.1)	Phenol (8270)	BOD (@ 20 deg. C)(SM5210B)	Total Suspended Solids (SM2540D); ~~Turbidity (SM2130B)~~ NO 1-17-19	Oil & Grease (1664)	Ammonia Nitrogen (as N) (SM-4500 NH3C)	Settleable Solids (SM2540F)	Turbidity	
							CONTAINER TYPE		V	V	A	P	A	P	P	G	P	P	P	
							# OF CONTAINERS		3	3	~~2~~ 3	1	2	1	1	~~2~~ 3	1	1	1	
							PRESERVATIVE		H	H	--	N	--	--	--	S	S	--	--	
							VOLUME (mL)		40	40	1000	500	1000	1000	1000	1000	500	1000	250	
ITEM #	SAMPLE ID	LOCATION/ DESCRIPTION	MATRIX	SAMPLE TYPE (G=GRAB C=COMP)	SAMPLING DATE	SAMPLING TIME	TOTAL # OF CONTAINERS													Comments
1	EFF-01-17	EFFLUENT	WW	G	1/17/19	12:05	20		X	X	X	X	X	X	X	X	X	X	X	N033809-01
2																				Report metals, TPH and VOC preliminary data on 24-hr TAT
3																				Report total Xylenes
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

(Rows 2–12 lined out; initialed and dated 1-17-19)

Relinquished by (Signature and Printed Name):	Date / Time	Relinquished by (Signature and Printed Name):	Date / Time
[signature]	1-17-19 / 1230	KSevilla	1/17/19 1230
KSevilla	1/17/19 1245	MFanfor	1/17/19 1245
MFanfor	1/17/19 1300	[signature]	1/18/19 0835

450 5206   IR#2 2.5C

Turn Around Time (TAT):
- ☐ A = Same Day
- ☒ B = 24 Hours
- ☐ C = 48 Hours
- ☐ D = 72 Hours
- ☒ E = 5 Workdays
- ☐ E = 10 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00 PM.

Special Instruction:

Matrix:		
W = Water	WW = Wastewater	
O = Oil	P = Product	S = Soil
Others/Specify:		

Preservatives:		
H = HCl	N = HNO3	S = H2SO4
Z = Zn(AC)2	O = NaOH	T = Na2S2O3
Others/Specify:		

Container Type:			
T = Tube	V = VOA	P = Pint	A = Amber
J = Jar	B = Tedlar	G = Glass	
M = Metal	P = Plastic	C = Can	

ASSET Laboratories

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

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

Cooler Received/Opened On:	1/17/2019	Workorder:	N033809
Rep sample Temp (Deg C):	2.5	IR Gun ID:	2

Temp Blank: ☑ Yes ☐ No

Carrier name: Golden State Overnight

Last 4 digits of Tracking No.: 5256 Packing Material Used: Bubble Wrap

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

Sample Receipt Checklist

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

Comments:

Checklist Completed By: RM 1/18/2019

Reviewed By: 1/18/2019

ASSET Laboratories

WORK ORDER Summary

18-Jan-19

WorkOrder: N033809

Client ID: CH2HI03

Project: SFPP Norwalk **QC Level:** RTNE **Date Received:** 1/17/2019

Comments: Report metals, TPH and VOC preliminary data on 24-hr TAT.

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033809-001A	EFF-01-17	1/17/2019 12:05:00 PM	1/21/2019	Wastewater	EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS	☐	☐	☐	VW-CA
N033809-001B			1/21/2019		EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	☐	☐	☑	SUB
N033809-001C			1/21/2019		EPA 8015B	TPH EXTRACTABLE BY GC/FID	☐	☐	☑	SUB
			1/21/2019		EPA 8015B	Total TPH	☐	☐	☐	SUB
N033809-001D			1/21/2019			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			1/21/2019		EPA 200.8	TOTAL METALS BY ICPMS	☐	☐	☐	WW
			1/21/2019		EPA 245.1	MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			1/21/2019			MERCURY PREP	☐	☐	☐	WW
N033809-001E			1/25/2019		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: 8270C - SIM	☐	☐	☐	WW
			1/25/2019		EPA 8270C	SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS	☐	☐	☐	WW
N033809-001F			1/25/2019		SM 5210 B	BIOCHEMICAL OXYGEN DEMAND	☐	☐	☑	SUB
N033809-001G			1/25/2019		SM2540D	TOTAL NON-FILTERABLE RESIDUE	☐	☐	☐	WW-CA
			1/25/2019			Total Suspended Solids Prep	☐	☐	☐	WW-CA
N033809-001H			1/25/2019			Oil and Grease Sample Prep	☐	☐	☐	WW
			1/25/2019		EPA 1664 _HEM Rev B	Hexane Extractable Material (HEM)	☐	☐	☐	WW
N033809-001I			1/25/2019		SM4500-NH3C	AMMONIA-N	☐	☐	☑	SUB
N033809-001J			1/25/2019		SM2540F	SETTLEABLE MATTER	☐	☐	☐	WW
			1/25/2019			Setteable Matter	☐	☐	☐	WW
N033809-001K			1/25/2019		SM 2130B	TURBIDITY	☐	☐	☐	WW
N033809-002A	FOLDER	1/21/2019	1/21/2019		Folder	Folder	☐	☐	☐	LAB

ASSET Laboratories

WORK ORDER Summary

18-Jan-19

WorkOrder: N033809

Client ID: CH2HI03

Project: SFPP Norwalk **QC Level:** RTNE **Date Received:** 1/17/2019

Comments: Report metals, TPH and VOC preliminary data on 24-hr TAT.

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033809-002A	FOLDER	1/21/2019	1/21/2019		Folder	Folder	☐	☐	☐	LAB

SUB TO: BC LABS

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.3072691
California: 11110 Artesia Blvd., Ste B, Cerritos, CA 90703
P: 562.219.7435 F: 562.219.7436
www.assetlaboratories.com

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: ASSET Laboratories	**Report to:** Marlon Cartin	**Bill to:** Elvira Allegaert	**EDD Requirement:** Excel EDD ☐ Geotracker ☐ Labspec7 ☑ Others ☐ Specify:
Address: 11110 Artesia Blvd Ste B	**Company:** Same	**Address:** Same	**QA/QC:** RTNE ☐ RWQCB ☐ CalTrans ☐ Level III ☐ LEVEL IV ☐ Regulatory ☐ Specify State:
Address: Cerritos, CA 90703	**Email:** marlon@assetlaboratories.com; reports.lv@assetlaboratories.com		**Sampe Receipt Condition:** Y / N — 1. Chilled ☐☐ 2. Headspace ☐☐ 3. Container Intact ☐☐ 4. Seal Present ☐☐ 5. IR number 6. Method of Cooling Sample Temp:
Phone: 562.219.7435 **Fax:**	**Address:** Same	**Email to:** elvira@assetlaboratories.com **PO#** N33809A	
Submitted By: Marlon Cartin		**Phone:** **Fax:**	**Global ID:**
Title:	**Phone:** **Fax:**		
Signature: **Date:** *I hereby authorize ASSET Labs to perform the tests indicated below:*	**Sampled by:** *I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.* Signature:		
Project Name: SFPP Norwalk			
Project Number:			

Matrix: Ground ☐ Sediment ☐ Potable ☐ Soil ☐ NPDES ☐ Other Solid ☐ Surface ☐

Analyses Requested: TPH-gas (8015B) | TPH-d, TPH-o (8015M) ~~Total TPH~~ | Ammonia Nitrogen (as N) (SM-4500 NH3C) | BOD

Item No.	Laboratory Work Order No.	Sample ID/Location	Date	Time	Water	Solid	Others	TPH-gas	TPH-d, TPH-o	Ammonia	BOD	Turn Around Time	No. of container	Container Type	PRESERVATION	Remarks
1		EFF-01-17	1/17/19	12:05	X			X	X	X	X		8			TPH due 1/21/19
2																BOD & Ammonia
3																due 1/25/19
4																
5																
6																
7																
8																
9																
10																
11																
12																

Courier:
Tracking No.

Relinquished by (Signature and Printed Name): jsevilla 1/17/19	Date / Time: 1400	Received by (Signature and Printed Name): / Date / Time
Relinquished by (Signature and Printed Name): / Date / Time		Received by (Signature and Printed Name): / Date / Time
Relinquished by (Signature and Printed Name): / Date / Time		Received by (Signature and Printed Name): / Date / Time

Turn Around Time (TAT)
- ☐ A < 24 Hrs or Same Day TAT
- ☐ B = Next Workday
- ☐ C = 2 Workdays
- ☐ D = 3 Workdays
- ☐ E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00 PM.

Special Instruction:
Please analyze for TPHg (C4-C12), TPHd (C13-C22), TPHo (C23+), ~~& Total TPH~~

Report format: MDL/PQL "J-flagged". EDD Requirement: "CH2MHILL" LabSpec7.

Please cc Report to Lucille Golosinda at lucille.golosinda@assetlaboratories.com

Terms
1. All samples will be disposed in 45 days upon receipt and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5- 7 business days, surcharges will apply for rush analysis.
Less than 24 Hrs = 200% Next Day = 100% 2 Workdays = 50% 3 Workdays = 35% 4 Workdays = 20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 30% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. ASSET Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 Days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives: H = HCl | N = HNO_3 | S = H_2SO_4 | C = 4°C | Z = $Zn(AC)_2$ | O = NaOH | T = $Na_2S_2O_3$ | Others/Specify:

Container Type: T = Tube | V = VOA | P = Pint | J = Jar | B = Tedlar | G = Glass | M = Metal | P = Plastic | C = Can

White = Laboratory Copy

Yellow = Customer's Copy

GSO | GLS

800-322-5555
www.gso.com

Ship From
ASSET LABORATORIES
MOLKY BRAR
11110 ARTESIA BLVD. SUITE B
CERRITOS, CA 90703

Ship To
ASSET LABORATORIES
MARLON CARTIN
3151 W. POST RD.,
LAS VEGAS, NV 89118

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

Delivery Instructions:
HOLD FOR PICK-UP
Signature Type: STANDARD

Tracking #: 543485256

CPS

LVS

A

LAS VEGAS

C89102A

96892495

Print Date: 1/17/2019 5:50 PM

Package 1 of 2

IR#2 2.50

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the GSO service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gso.com.

Date of Report: 02/07/2019

Marlon Cartin

ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Client Project:	N033809: SFPP Norwalk
BCL Project:	CH2MHILL
BCL Work Order:	1902019
Invoice ID:	B329023

Enclosed are the results of analyses for samples received by the laboratory on 1/18/2019. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000844398

Sincerely,

Contact Person: Vanessa Sandoval
Client Service Rep

Stuart Buttram
Technical Director

Table of Contents

SUB TO: BC LABS

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

Page 1 of 1

19-02019

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.3072691
California: 11110 Artesia Blvd., Ste B, Cerritos, CA 90703 P: 562.219.7435 F: 562.219.7436
www.assetlaboratories.com

Client: ASSET Laboratories	Report to: Marlon Cartin	Bill to: Elvira Allegaert
Address: 11110 Artesia Blvd Ste B	Company: Same	Address: Same
Address: Cerritos, CA 90703	Email: marlon@assetlaboratories.com reports.lv@assetlaboratories.com	
Phone: 562.219.7435 Fax:	Address: Same	Email to: elvira@assetlaboratories.com PO#: N33809A
Submitted By: Marlon Cartin		Phone: Fax:
Title:	Phone: Fax:	
Signature: Date:	Sampled by:	
I hereby authorize ASSET Labs to perform the tests indicated below:	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Signature:	
Project Name: SFPP Norwalk		
Project Number:		

EDD Requirement	
Excel EDD	☐
Geotracker	☐
LabspecT	☑
Others	☐
Specify:	
Global ID:	

QA/QC	
RTNE	☐
RWQCB	☐
CalTrans	☐
Level III	☐
LEVEL IV	☐
Regulatory	☐
Specify State:	

Sample Receipt Condition	Y	N
1. Chilled	☐	☐
2. Headspace	☐	☐
3. Container Intact	☐	☐
4. Seal Present	☐	☐
5. IR number		
6. Method of Cooling		
Sample Temp:		

Matrix: Ground ☐ Sediment ☐ Potable ☐ Soil ☐ NPDES ☐ Other Solid ☐ Surface ☐

Analyses Requested: TPH-gas (8015B); TPH-d, TPH-o, ~~Total TPH~~; ~~Ammonia N~~; Ammonia Nitrogen (as N) (SM-4500 NH3C); BOD

Courier:
Tracking No.

Item No.	Laboratory Work Order No.	Sample ID/Location	Date	Time	Water	Solid	Others	TPH-gas (8015B)	TPH-d, TPH-o	Ammonia N	Ammonia Nitrogen (as N) (SM-4500 NH3C)	BOD	Turn Around Time	No. of container	Container Type	PRESERVATION	Remarks
1	—	EFF-01-17	1/17/19	12:05	X			X	X		X	X		8			TPH due 1/21/19
2																	BOD & Ammonia
3																	due 1/25/19
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 (BOD) MBAS COT

CHK BY DISTRIBUTION
SUB-OUT ☐

Relinquished by (Signature and Printed Name)	Date / Time	Received by (Signature and Printed Name)	Date / Time
[signature]	1/17/19 1400	[signature]	1.18.19 08:48

Turn Around Time (TAT):
☐ A < 24 Hrs or Same Day TAT
☐ B = Next Workday
☐ C = 2 Workdays
☐ D = 3 Workdays
☐ E = Routine 5-7 Workdays
TAT Starts at 8 AM the following day if samples received after 3:00 PM.

Special Instruction:
Please analyze for TPHg (C4-C12), TPHd (C13-C22), TPHo (C23+), ~~& Total TPH~~ MS 1/17/19
Report format: MDL/PQL "J-flagged". EDD Requirement: "CH2MHILL" LabSpec7.
Please cc Report to Lucille Golosinda at lucille.golosinda@assetlaboratories.com

Preservatives: H = HCl; N = HNO3; S = H2SO4; C = 4°C; Z = ZnAcCl; O = NaOH; T = Na2S2O3; Others/Specify

Container Types: T = Tube; V = VOA; P = Pint; J = Jar; B = Tedlar; G = Glass; M = Metal; P = Plastic; C = Can

Terms: [fine print illegible]

White = Laboratory Copy Yellow = Customer's Copy

Chain of Custody and Cooler Receipt Form for 1902019 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 19-02019

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☐ (Specify) GSO	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Containers ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: .97 Container: Triple Thermometer ID: 274

Temperature: (A) 0.0 °C / (C) 0.4 °C

Date/Time 1/8/19 0848

Analyst Init

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	D									
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	E									
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	BVZL									
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER	FGH									
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By:

A = Actual / C = Corrected

Date/Time: 1/8/19 1019

Rev 21 05/23/2016

ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 02/07/2019 13:10
Project: CH2MHILL
Project Number: N033809: SFPP Norwalk
Project Manager: Marlon Cartin

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1902019-01	**COC Number:**	---	**Receive Date:**	01/18/2019 08:48
	Project Number:	---	**Sampling Date:**	01/17/2019 12:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EFF-01-17	**Lab Matrix:**	Water
	Sampled By:	---	**Sample Type:**	Water

ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 02/07/2019 13:10
Project: CH2MHILL
Project Number: N033809: SFPP Norwalk
Project Manager: Marlon Cartin

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1902019-01 | **Client Sample Name:** EFF-01-17, 1/17/2019 12:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	22	EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	90.0	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	01/18/19 12:50	01/18/19 14:35	JBR	GC-V9	1	B035175

ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 02/07/2019 13:10
Project: CH2MHILL
Project Number: N033809: SFPP Norwalk
Project Manager: Marlon Cartin

Total Petroleum Hydrocarbons

BCL Sample ID: 1902019-01 | **Client Sample Name:** EFF-01-17, 1/17/2019 12:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
TPH - Diesel (C13 - C22)	ND	ug/L	40	6.8	EPA-8015CC	ND		1
TPH - Motor Oil (C23 - C36)	ND	ug/L	100	13	EPA-8015CC	ND		1
Tetracosane (Surrogate)	96.0	%	37 - 134 (LCL - UCL)		EPA-8015CC			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015CC	01/21/19 08:30	01/21/19 14:06	RSM	GC-2	0.980	B035568

ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 02/07/2019 13:10
Project: CH2MHILL
Project Number: N033809: SFPP Norwalk
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1902019-01 | **Client Sample Name:** EFF-01-17, 1/17/2019 12:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	**0.054**	**mg/L**	**0.20**	**0.050**	**SM-4500-NH3G**	ND		1
Biochemical Oxygen Demand - Seeded	ND	mg/L	1.5	1.5	SM17-5210B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	01/22/19 11:00	01/24/19 11:24	JMH	SC-1	1	B035714
2	SM17-5210B	01/18/19 06:05	01/18/19 06:05	HPR	YSIPRO	1.525	B035837

ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 02/07/2019 13:10
Project: CH2MHILL
Project Number: N033809: SFPP Norwalk
Project Manager: Marlon Cartin

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B035175						
Gasoline Range Organics (C4 - C12)	B035175-BLK1	ND	ug/L	50	22	
a,a,a-Trifluorotoluene (FID Surrogate)	**B035175-BLK1**	**94.7**	%	**70 - 130 (LCL - UCL)**		

ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 02/07/2019 13:10
Project: CH2MHILL
Project Number: N033809: SFPP Norwalk
Project Manager: Marlon Cartin

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B035175										
Gasoline Range Organics (C4 - C12)	B035175-BS1	LCS	903.24	1000.0	ug/L	90.3		85 - 115		
a,a,a-Trifluorotoluene (FID Surrogate)	B035175-BS1	LCS	39.408	40.000	ug/L	98.5		70 - 130		

ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 02/07/2019 13:10
Project: CH2MHILL
Project Number: N033809: SFPP Norwalk
Project Manager: Marlon Cartin

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B035175	Used client sample: N										
Gasoline Range Organics (C4 - C12)	MS	1840070-86	ND	959.25	1000.0	ug/L		95.9		70 - 130	
	MSD	1840070-86	ND	943.05	1000.0	ug/L	1.7	94.3	20	70 - 130	
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1840070-86	ND	39.410	40.000	ug/L		98.5		70 - 130	
	MSD	1840070-86	ND	39.054	40.000	ug/L	0.9	97.6		70 - 130	

ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 02/07/2019 13:10
Project: CH2MHILL
Project Number: N033809: SFPP Norwalk
Project Manager: Marlon Cartin

Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B035568						
TPH - Diesel (C13 - C22)	B035568-BLK1	ND	ug/L	40	6.8	
TPH - Motor Oil (C23 - C36)	B035568-BLK1	ND	ug/L	100	13	
Tetracosane (Surrogate)	**B035568-BLK1**	**92.9**	%	**37 - 134 (LCL - UCL)**		

ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 02/07/2019 13:10
Project: CH2MHILL
Project Number: N033809: SFPP Norwalk
Project Manager: Marlon Cartin

Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B035568										
TPH - Diesel (C13 - C22)	B035568-BS1	LCS	444.95	500.00	ug/L	89.0		52 - 128		
Tetracosane (Surrogate)	B035568-BS1	LCS	17.035	20.000	ug/L	85.2		37 - 134		

ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 02/07/2019 13:10
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Project Manager: Marlon Cartin

Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B035568	Used client sample: N										
TPH - Diesel (C13 - C22)	MS	1840070-82	ND	436.03	500.00	ug/L		87.2		50 - 127	
	MSD	1840070-82	ND	454.01	500.00	ug/L	4.0	90.8	30	50 - 127	
Tetracosane (Surrogate)	MS	1840070-82	ND	9.1980	20.000	ug/L		46.0		37 - 134	
	MSD	1840070-82	ND	18.063	20.000	ug/L	65.0	90.3		37 - 134	

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Reported: 02/07/2019 13:10
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Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B035714						
Ammonia as N (Distilled)	B035714-BLK1	ND	mg/L	0.20	0.050	
QC Batch ID: B035837						
Biochemical Oxygen Demand - Seeded	B035837-BLK1	ND	mg/L	1.0	1.0	

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Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B035714										
Ammonia as N (Distilled)	B035714-BS1	LCS	0.96840	1.0000	mg/L	96.8		85 - 115		
QC Batch ID: B035837										
Biochemical Oxygen Demand - Seeded	B035837-BS1	LCS	215.02	198.00	mg/L	109		85 - 115		

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Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B035714	Used client sample: Y - Description: EFF-01-17, 01/17/2019 12:05										
Ammonia as N (Distilled)	DUP	1902019-01	0.053800	0.059400		mg/L	9.9		20		
	MS	1902019-01	0.053800	1.2661	1.1111	mg/L		109		80 - 120	
	MSD	1902019-01	0.053800	1.2617	1.1111	mg/L	0.4	109	20	80 - 120	
QC Batch ID: B035837	Used client sample: N										
Biochemical Oxygen Demand - Seeded	DUP	1901979-02	373.62	365.24		mg/L	2.3		20		

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Reported: 02/07/2019 13:10
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Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit

February 20, 2019

Eric Davis
CH2MHill
1000 Wilshire Blvd.
Los Angeles, CA 90017

TEL:
FAX:

Workorder No.: N034059

RE: SFPP Norwalk

Attention: Eric Davis

Enclosed are the results for sample(s) received on February 07, 2019 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,

Quennie Manimtim
Laboratory Director

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

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

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

Sample was analyzed within method holding time.

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

Analytical Comment for EPA 200.8:

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

Analytical Comment for EPA 8260B:

RPD for Matrix Spike (MS)/Matrix Spike Duplicate (MSD) is outside criteria for tert-Butanol possibly due to non-homogeneity of sample; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Analytical Comment for EPA 8270C_SIM_PHENOL:

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

ASSET Laboratories

Date: *20-Feb-19*

CLIENT: CH2MHill
Project: SFPP Norwalk
Lab Order: N034059
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N034059-001A	EFF-02-07	Wastewater	2/7/2019 10:00:00 AM	2/7/2019	2/20/2019
N034059-001B	EFF-02-07	Wastewater	2/7/2019 10:00:00 AM	2/7/2019	2/20/2019
N034059-001C	EFF-02-07	Wastewater	2/7/2019 10:00:00 AM	2/7/2019	2/20/2019
N034059-001D	EFF-02-07	Wastewater	2/7/2019 10:00:00 AM	2/7/2019	2/20/2019
N034059-001E	EFF-02-07	Wastewater	2/7/2019 10:00:00 AM	2/7/2019	2/20/2019
N034059-001F	EFF-02-07	Wastewater	2/7/2019 10:00:00 AM	2/7/2019	2/20/2019

CLIENT: CH2MHill
Lab Order: N034059
Project: SFPP Norwalk
Lab ID: N034059-001

Client Sample ID: EFF-02-07
Collection Date: 2/7/2019 10:00:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3510C			**EPA 8270C**				
RunID: **NV00922-MS9_190215A** QC Batch: **72484**				PrepDate:	**2/14/2019**		Analyst: **RRS**
Phenol	0.33	0.33	1.0	J	µg/L	1	2/15/2019 07:05 PM
Surr: 1,2-Dichlorobenzene-d4	54.0	0	24-101		%REC	1	2/15/2019 07:05 PM
Surr: 2-Fluorobiphenyl	66.0	0	29-102		%REC	1	2/15/2019 07:05 PM
Surr: 4-Terphenyl-d14	82.0	0	27-108		%REC	1	2/15/2019 07:05 PM
Surr: Phenol-d5	39.0	0	25-108		%REC	1	2/15/2019 07:05 PM
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 8260B							
RunID: **CA01638-MS10_190207A** QC Batch: **CA19VW012**				PrepDate:			Analyst: **GAC**
1,1-Dichloroethane	ND	0.45	0.50		ug/L	1	2/7/2019 04:29 PM
1,2-Dichloroethane	ND	0.29	0.50		ug/L	1	2/7/2019 04:29 PM
Benzene	ND	0.34	1.0		ug/L	1	2/7/2019 04:29 PM
Ethylbenzene	ND	0.31	1.0		ug/L	1	2/7/2019 04:29 PM
m,p-Xylene	ND	0.23	1.0		ug/L	1	2/7/2019 04:29 PM
MTBE	ND	0.34	1.0		ug/L	1	2/7/2019 04:29 PM
o-Xylene	ND	0.31	1.0		ug/L	1	2/7/2019 04:29 PM
Tert-Butanol	ND	2.4	5.0		ug/L	1	2/7/2019 04:29 PM
Toluene	ND	0.46	2.0		ug/L	1	2/7/2019 04:29 PM
Xylenes, Total	ND	1.5	2.0		ug/L	1	2/7/2019 04:29 PM
Surr: 1,2-Dichloroethane-d4	89.2	0	72-119		%REC	1	2/7/2019 04:29 PM
Surr: 4-Bromofluorobenzene	84.0	0	76-119		%REC	1	2/7/2019 04:29 PM
Surr: Dibromofluoromethane	103	0	85-115		%REC	1	2/7/2019 04:29 PM
Surr: Toluene-d8	99.2	0	81-120		%REC	1	2/7/2019 04:29 PM
TPH EXTRACTABLE BY GC/FID							
EPA 3510C			**EPA 8015B**				
RunID: **NV00922-GC3_190211A** QC Batch: **72416**				PrepDate:	**2/8/2019**		Analyst: **LLR**
TPH-Diesel (C13-C22)	ND	15	25		ug/L	1	2/11/2019 04:47 PM
TPH-Oil (C23-C36)	ND	14	25		ug/L	1	2/11/2019 04:47 PM
Surr: Octacosane	96.9	0	26-152		%REC	1	2/11/2019 04:47 PM
Surr: p-Terphenyl	100	0	57-132		%REC	1	2/11/2019 04:47 PM
GASOLINE RANGE ORGANICS BY GC/FID							
EPA 8015B							
RunID: **NV00922-GC4_190211A** QC Batch: **E19VW007**				PrepDate:			Analyst: **QBM**
TPH-Gasoline (C4-C12)	24	21	50	J	ug/L	1	2/11/2019 01:02 PM

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

CLIENT: CH2MHill
Lab Order: N034059
Project: SFPP Norwalk
Lab ID: N034059-001

Client Sample ID: EFF-02-07
Collection Date: 2/7/2019 10:00:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
GASOLINE RANGE ORGANICS BY GC/FID							
EPA 8015B							
RunID: **NV00922-GC4_190211A** QC Batch: **E19VW007** PrepDate: Analyst: **QBM**							
Surr: Chlorobenzene - d5	106	0	74-138		%REC	1	2/11/2019 01:02 PM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_190211A** QC Batch: **72404** PrepDate: **2/8/2019** Analyst: **CEI**							
Mercury	0.033	0.018	0.050	J	µg/L	1	2/11/2019 08:34 AM
TOTAL METALS BY ICPMS							
EPA 200.8							
RunID: **NV00922-ICP7_190211A** QC Batch: **72421** PrepDate: **2/11/2019** Analyst: **CEI**							
Copper	ND	0.26	0.50		µg/L	1	2/11/2019 11:32 AM
Lead	ND	0.13	0.50		µg/L	1	2/11/2019 11:32 AM
Zinc	1.6	0.27	1.0		µg/L	1	2/11/2019 11:32 AM
TOTAL TPH							
EPA 8015B							
RunID: **NV00922-GC3_190211A** QC Batch: **R131745** PrepDate: Analyst: **LLR**							
Total TPH	24	21	100	J	ug/L	1	2/11/2019

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N034059
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: **MB-72421** SampType: **MBLK** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **2/11/2019** RunNo: **131734**
Client ID: **PBW** Batch ID: **72421** TestNo: **EPA 200.8** Analysis Date: **2/11/2019** SeqNo: **3285196**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	0.415	0.50									J
Lead	ND	0.50									
Zinc	ND	1.0									

Sample ID: **LCS-72421** SampType: **LCS** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **2/11/2019** RunNo: **131734**
Client ID: **LCSW** Batch ID: **72421** TestNo: **EPA 200.8** Analysis Date: **2/11/2019** SeqNo: **3285197**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	10.619	0.50	10.00	0	106	85	115				
Lead	9.846	0.50	10.00	0	98.5	85	115				
Zinc	9.939	1.0	10.00	0	99.4	85	115				

Sample ID: **N034059-001D-DUP** SampType: **DUP** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **2/11/2019** RunNo: **131734**
Client ID: **ZZZZZZ** Batch ID: **72421** TestNo: **EPA 200.8** Analysis Date: **2/11/2019** SeqNo: **3285200**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.50						0	0	20	
Lead	ND	0.50						0	0	20	
Zinc	1.364	1.0						1.556	13.1	20	

Sample ID: **N034059-001D-MS** SampType: **MS** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **2/11/2019** RunNo: **131734**
Client ID: **ZZZZZZ** Batch ID: **72421** TestNo: **EPA 200.8** Analysis Date: **2/11/2019** SeqNo: **3285202**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	6.671	0.50	10.00	0	66.7	75	125				S
Lead	9.863	0.50	10.00	0	98.6	75	125				
Zinc	10.376	1.0	10.00	1.556	88.2	75	125				

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N034059
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: **N034059-001D-MSD** SampType: **MSD** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **2/11/2019** RunNo: **131734**
Client ID: **ZZZZZZ** Batch ID: **72421** TestNo: **EPA 200.8** Analysis Date: **2/11/2019** SeqNo: **3285203**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	6.681	0.50	10.00	0	66.8	75	125	6.671	0.143	20	S
Lead	10.014	0.50	10.00	0	100	75	125	9.863	1.51	20	
Zinc	10.144	1.0	10.00	1.556	85.9	75	125	10.38	2.25	20	

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N034059
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 245.1_W_LL

Sample ID: **MB-72404**	SampType: **MBLK**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **2/8/2019**	RunNo: **131723**
Client ID: **PBW**	Batch ID: **72404**	TestNo: **EPA 245.1**		Analysis Date: **2/11/2019**	SeqNo: **3284868**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.050									

Sample ID: **LCS-72404**	SampType: **LCS**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **2/8/2019**	RunNo: **131723**
Client ID: **LCSW**	Batch ID: **72404**	TestNo: **EPA 245.1**		Analysis Date: **2/11/2019**	SeqNo: **3284869**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.551	0.050	2.500	0	102	85	115				

Sample ID: **N034059-001D-MS**	SampType: **MS**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **2/8/2019**	RunNo: **131723**
Client ID: **ZZZZZZ**	Batch ID: **72404**	TestNo: **EPA 245.1**		Analysis Date: **2/11/2019**	SeqNo: **3284870**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.492	0.050	2.500	0.03348	98.3	75	125				

Sample ID: **N034059-001D-MSD**	SampType: **MSD**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **2/8/2019**	RunNo: **131723**
Client ID: **ZZZZZZ**	Batch ID: **72404**	TestNo: **EPA 245.1**		Analysis Date: **2/11/2019**	SeqNo: **3284871**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.538	0.050	2.500	0.03348	100	75	125	2.492	1.84	20	

Sample ID: **N034059-001D-DUP**	SampType: **DUP**	TestCode: **245.1_W_LL**	Units: **µg/L**	Prep Date: **2/8/2019**	RunNo: **131723**
Client ID: **ZZZZZZ**	Batch ID: **72404**	TestNo: **EPA 245.1**		Analysis Date: **2/11/2019**	SeqNo: **3284873**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.022	0.050						0.03348	0	20	J

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N034059
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_FP_SFPP

Sample ID: **MB-72416** SampType: **MBLK** TestCode: **8015_W_FP_** Units: **ug/L** Prep Date: **2/8/2019** RunNo: **131745**
Client ID: **PBW** Batch ID: **72416** TestNo: **EPA 8015B** **EPA 3510C** Analysis Date: **2/11/2019** SeqNo: **3285582**

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)	20.094	25									J
Surr: Octacosane	71.622		80.00		89.5	26	152				
Surr: p-Terphenyl	73.225		80.00		91.5	57	132				

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N034059
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_SFPPTOT

Sample ID: **MB-R131745** SampType: **MBLK** TestCode: **8015_W_SFP** Units: **ug/L** Prep Date: RunNo: **131745**
Client ID: **PBW** Batch ID: **R131745** TestNo: **EPA 8015B** Analysis Date: **2/11/2019** SeqNo: **3285619**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total TPH	44.094	100									J

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N034059
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_WSFPP

Sample ID: **E190211LCS** SampType: **LCS** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **131740**
Client ID: **LCSW** Batch ID: **E19VW007** TestNo: **EPA 8015B** Analysis Date: **2/11/2019** SeqNo: **3285500**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	906.000	50	1000	0	90.6	67	136				
Surr: Chlorobenzene - d5	46646.000		50000		93.3	74	138				

Sample ID: **E190211MB1** SampType: **MBLK** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **131740**
Client ID: **PBW** Batch ID: **E19VW007** TestNo: **EPA 8015B** Analysis Date: **2/11/2019** SeqNo: **3285501**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	24.000	50									J
Surr: Chlorobenzene - d5	41435.000		50000		82.9	74	138				

Sample ID: **N034059-001BMS** SampType: **MS** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **131740**
Client ID: **ZZZZZZ** Batch ID: **E19VW007** TestNo: **EPA 8015B** Analysis Date: **2/11/2019** SeqNo: **3285507**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	1042.000	50	1000	24.00	102	67	136				
Surr: Chlorobenzene - d5	59755.000		50000		120	74	138				

Sample ID: **N034059-001BMSD** SampType: **MSD** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **131740**
Client ID: **ZZZZZZ** Batch ID: **E19VW007** TestNo: **EPA 8015B** Analysis Date: **2/11/2019** SeqNo: **3285508**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	1018.000	50	1000	24.00	99.4	67	136	1042	2.33	30	
Surr: Chlorobenzene - d5	58810.000		50000		118	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

CLIENT: CH2MHill
Work Order: N034059
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: **CA190207-LCS** SampType: **LCS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **131693**
Client ID: **LCSW** Batch ID: **CA19VW012** TestNo: **EPA 8260B** Analysis Date: **2/7/2019** SeqNo: **3283825**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	18.240	0.50	20.00	0	91.2	69	133				
1,2-Dichloroethane	16.590	0.50	20.00	0	83.0	69	132				
Benzene	18.610	1.0	20.00	0	93.0	81	122				
Ethylbenzene	21.350	1.0	20.00	0	107	73	127				
m,p-Xylene	43.680	1.0	40.00	0	109	76	128				
MTBE	14.650	1.0	20.00	0	73.2	65	123				
o-Xylene	19.740	1.0	20.00	0	98.7	80	121				
Tert-Butanol	70.220	5.0	100.0	0	70.2	70	130				
Toluene	20.310	2.0	20.00	0	102	77	122				
Xylenes, Total	63.420	2.0	60.00	0	106	75	125				
Surr: 1,2-Dichloroethane-d4	19.300		25.00		77.2	72	119				
Surr: 4-Bromofluorobenzene	23.870		25.00		95.5	76	119				
Surr: Dibromofluoromethane	21.830		25.00		87.3	85	115				
Surr: Toluene-d8	24.030		25.00		96.1	81	120				

Sample ID: **CA190207-MB3** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **131693**
Client ID: **PBW** Batch ID: **CA19VW012** TestNo: **EPA 8260B** Analysis Date: **2/7/2019** SeqNo: **3283829**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	ND	0.50									
1,2-Dichloroethane	ND	0.50									
Benzene	ND	1.0									
Ethylbenzene	ND	1.0									
m,p-Xylene	ND	1.0									
MTBE	ND	1.0									
o-Xylene	ND	1.0									
Tert-Butanol	ND	5.0									
Toluene	ND	2.0									
Xylenes, Total	ND	2.0									
Surr: 1,2-Dichloroethane-d4	23.790		25.00		95.2	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

CLIENT: CH2MHill
Work Order: N034059
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: **CA190207-MB3** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **131693**
Client ID: **PBW** Batch ID: **CA19VW012** TestNo: **EPA 8260B** Analysis Date: **2/7/2019** SeqNo: **3283829**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	22.940		25.00		91.8	76	119				
Surr: Dibromofluoromethane	25.590		25.00		102	85	115				
Surr: Toluene-d8	25.190		25.00		101	81	120				

Sample ID: **N033988-009BMS** SampType: **MS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **131693**
Client ID: **ZZZZZZ** Batch ID: **CA19VW012** TestNo: **EPA 8260B** Analysis Date: **2/7/2019** SeqNo: **3283840**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	190.400	5.0	200.0	0	95.2	69	133				
1,2-Dichloroethane	172.200	5.0	200.0	0	86.1	69	132				
Benzene	197.000	10	200.0	0	98.5	81	122				
Ethylbenzene	211.000	10	200.0	0	106	73	127				
m,p-Xylene	431.700	10	400.0	0	108	76	128				
MTBE	147.900	10	200.0	0	74.0	65	123				
o-Xylene	195.800	10	200.0	0	97.9	80	121				
Tert-Butanol	863.900	50	1000	0	86.4	70	130				
Toluene	214.700	20	200.0	0	107	77	122				
Xylenes, Total	627.500	20	600.0	0	105	75	125				
Surr: 1,2-Dichloroethane-d4	198.300		250.0		79.3	72	119				
Surr: 4-Bromofluorobenzene	251.400		250.0		101	76	119				
Surr: Dibromofluoromethane	229.600		250.0		91.8	85	115				
Surr: Toluene-d8	251.700		250.0		101	81	120				

Sample ID: **N033988-009BMSD** SampType: **MSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **131693**
Client ID: **ZZZZZZ** Batch ID: **CA19VW012** TestNo: **EPA 8260B** Analysis Date: **2/7/2019** SeqNo: **3283841**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	191.600	5.0	200.0	0	95.8	69	133	190.4	0.628	20	
1,2-Dichloroethane	181.900	5.0	200.0	0	91.0	69	132	172.2	5.48	20	
Benzene	195.100	10	200.0	0	97.6	81	122	197.0	0.969	20	

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N034059
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: **N033988-009BMSD** SampType: **MSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **131693**
Client ID: **ZZZZZZ** Batch ID: **CA19VW012** TestNo: **EPA 8260B** Analysis Date: **2/7/2019** SeqNo: **3283841**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	214.600	10	200.0	0	107	73	127	211.0	1.69	20	
m,p-Xylene	450.400	10	400.0	0	113	76	128	431.7	4.24	20	
MTBE	152.400	10	200.0	0	76.2	65	123	147.9	3.00	20	
o-Xylene	200.600	10	200.0	0	100	80	121	195.8	2.42	20	
Tert-Butanol	705.900	50	1000	0	70.6	70	130	863.9	20.1	20	R
Toluene	210.100	20	200.0	0	105	77	122	214.7	2.17	20	
Xylenes, Total	651.000	20	600.0	0	108	75	125	627.5	3.68	20	
Surr: 1,2-Dichloroethane-d4	213.500		250.0		85.4	72	119		0		
Surr: 4-Bromofluorobenzene	245.100		250.0		98.0	76	119		0		
Surr: Dibromofluoromethane	247.500		250.0		99.0	85	115		0		
Surr: Toluene-d8	256.700		250.0		103	81	120		0		

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N034059
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270WATER_SIMEXT

Sample ID: **LCS-72484** SampType: **LCS** TestCode: **8270WATER_** Units: **µg/L** Prep Date: **2/14/2019** RunNo: **131887**
Client ID: **LCSW** Batch ID: **72484** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **2/15/2019** SeqNo: **3291684**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	2.290	1.0	6.000	0	38.2	24	120				
Surr: 1,2-Dichlorobenzene-d4	0.470		1.000		47.0	24	101				
Surr: 2-Fluorobiphenyl	0.700		1.000		70.0	29	102				
Surr: 4-Terphenyl-d14	0.910		1.000		91.0	27	108				
Surr: Phenol-d5	0.430		1.000		43.0	25	108				

Sample ID: **LCSD-72484** SampType: **LCSD** TestCode: **8270WATER_** Units: **µg/L** Prep Date: **2/14/2019** RunNo: **131887**
Client ID: **LCSS02** Batch ID: **72484** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **2/15/2019** SeqNo: **3291685**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	3.030	1.0	6.000	0	50.5	24	120	2.290	27.8	20	R
Surr: 1,2-Dichlorobenzene-d4	0.660		1.000		66.0	24	101		0		
Surr: 2-Fluorobiphenyl	0.850		1.000		85.0	29	102		0		
Surr: 4-Terphenyl-d14	0.880		1.000		88.0	27	108		0		
Surr: Phenol-d5	0.590		1.000		59.0	25	108		0		

Sample ID: **MB-72484** SampType: **MBLK** TestCode: **8270WATER_** Units: **µg/L** Prep Date: **2/14/2019** RunNo: **131887**
Client ID: **PBW** Batch ID: **72484** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **2/15/2019** SeqNo: **3291686**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	0.350	1.0									J
Surr: 1,2-Dichlorobenzene-d4	0.510		1.000		51.0	24	101				
Surr: 2-Fluorobiphenyl	0.670		1.000		67.0	29	102				
Surr: 4-Terphenyl-d14	0.820		1.000		82.0	27	108				
Surr: Phenol-d5	0.420		1.000		42.0	25	108				

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

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

CHAIN OF CUSTODY RECORD

DATE: 2/7/19
PAGE: 1 of 1

Section A Required Client Information:

Company:	Kinder Morgan Energy Partners Attention: Steve Defibaugh
Address:	1100 Town & Country Road Orange, CA 92868
Email To:	steve_defibaugh@kindermorgan.com eric.davis@ch2m.com
Phone: 714-560-4802	Fax: 714-560-4801

Section B Required Project Information:

Report To:	Eric Davis
Copy To:	Steve Defibaugh
Purchase Order No.:	
Project Name:	SFPP Norwalk

Section C Invoice Information:

Attention:	Steve Defibaugh - Ref. AFE# 81195
Company Name:	Kinder Morgan Energy Partners
Address:	1100 Town & Country Road Orange, CA 92868
ATL Project Manager:	Marlon Cartin

Section D Sampler Information:

Sampler Name:	James Dye
Sampler Signature:	[signature]
Sample Date:	2/7/19

Section E Required Sample Information

ITEM #	SAMPLE ID	LOCATION/ DESCRIPTION	MATRIX	SAMPLE TYPE (G=GRAB C=COMP)	SAMPLING DATE	SAMPLING TIME	TOTAL # OF CONTAINERS		Analysis Test	BTEX, 1,1-DCA, 1,2-DCA, MTBE, TBA (8260B)	TPH-gas (C4-C12) (8015B)	TPH-d (C13-C22), TPH-oil (C23+), Total TPH (8015B)	Cu, Pb, Zn (200.8); Hg (245.1)	Phenol (8270)	Comments
									CONTAINER TYPE	V	V	A	P	A	
									# OF CONTAINERS	3	3	2	1	2	
									PRESERVATIVE	H	H	–	N	--	
									VOLUME (mL)	40	40	1000	500	1000	
1	EFF-02-07	EFFLUENT	WW	G	2/7/19	1000	11			X	X	X	X	X	N034059-01
2															Report metals, TPH and VOC preliminary data on 24-hr TAT
3															Report total Xylenes
4															
5															
6															
7															
8															
9															
10															
11															
12															

Relinquished by (Signature and Printed Name):	Date / Time	Relinquished by (Signature and Printed Name):	Date / Time
[signature]	2/7/19 1100	KSevilla	2/7/19 1100
KSevilla	2/7/19 1530	[signature]	2/7/19 1530
[signature]	2/7/19 1600	[signature] JORDAN LI	2/8/19 0900

Turn Around Time (TAT):
- ☐ A = Same Day
- ☑ B = 24 Hours
- ☐ C = 48 Hours
- ☐ D = 72 Hours
- ☑ E = 5 Workdays
- ☐ E = 10 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00 PM.

Special Instruction:

Matrix:

W = Water	WW = Wastewater	
O = Oil	P = Product	S = Soil
Others/Specify:		

Preservatives:

H = HCl	N = HNO3	S = H2SO4
Z = Zn(AC)2	O = NaOH	T = Na2S2O3
Others/Specify:		

Container Type:

T = Tube	V = VOA	P = Pint	A = Amber
J = Jar	B = Tedlar	G = Glass	
M = Metal	P = Plastic	C = Can	

3.1°C IR#2 ICE

ASSET Laboratories

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

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

Cooler Received/Opened On:	2/7/2019	Workorder:	N034059
Rep sample Temp (Deg C):	3.1	IR Gun ID:	2
Temp Blank:	☑ Yes ☐ No		
Carrier name:	Golden State Overnight		
Last 4 digits of Tracking No.:	9858	Packing Material Used:	Bubble Wrap
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

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

Comments:

Checklist Completed By: RM 2/8/2019

Reviewed By: MBC 2/10/2019

ASSET Laboratories

WORK ORDER Summary

08-Feb-19

WorkOrder: N034059

Client ID: CH2HI03

Project: SFPP Norwalk **QC Level:** RTNE **Date Received:** 2/7/2019

Comments: Report metals, TPH and VOC preliminary data on 24-hr TAT

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N034059-001A	EFF-02-07	2/7/2019 10:00:00 AM	2/11/2019	Wastewater	EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS	☐	☐	☐	V-CA
N034059-001B			2/11/2019		EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	☐	☐	☐	VW
N034059-001C			2/11/2019		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS	☐	☐	☐	WW
			2/11/2019		EPA 8015B	TPH EXTRACTABLE BY GC/FID	☐	☐	☐	WW
			2/11/2019		EPA 8015B	Total TPH	☐	☐	☐	WW
N034059-001D			2/11/2019			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/11/2019		EPA 200.8	TOTAL METALS BY ICPMS	☐	☐	☐	WW
			2/11/2019		EPA 245.1	MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			2/11/2019			MERCURY PREP	☐	☐	☐	WW
N034059-001E			2/14/2019		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: 8270C - SIM	☐	☐	☐	WW
			2/14/2019		EPA 8270C	SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS	☐	☐	☐	WW
N034059-001F			2/11/2019		EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	☑	☐	☑	SUB
N034059-002A	FOLDER	2/11/2019	2/11/2019		Folder	Folder	☐	☐	☐	LAB
			2/11/2019		Folder	Folder	☐	☐	☐	LAB

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Subcontracted To: BC LABS

CHAIN OF CUSTODY RECORD

Page 1 of 1

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.3072691
California: 11110 Artesia Blvd., Ste B, Cerritos, CA 90703
P: 562.219.7435 F: 562.219.7436
www.assetlaboratories.com

Client: ASSET Laboratories	**Report to:** Marlon Cartin	**Bill to:** Elvira Allegaert	**EDD Requirement**
Address: 11110 Artesia Blvd Ste B	**Company:** Same	**Address:** Same	Excel EDD ☐
Address: Cerritos, CA 90703	**Email:** marlon@assetlaboratories.com; reports.lv@assetlaboratories.com		Geotracker ☐
Phone: 562.219.7435 **Fax:**	**Address:** Same	**Email to:** elvira@assetlaboratories.com **PO#** N34059A	Labspec7 ☑
Submitted By: Marlon Cartin		**Phone:** **Fax:**	Others ☐
Title:	**Phone:** **Fax:**		Specify:
Signature: **Date:**	**Sampled by:**		Global ID:
I hereby authorize ASSET Labs to perform the tests indicated below:	*I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.*		
Project Name: SFPP Norwalk	**Signature:**		
Project Number:			

QA/QC		Sampe Receipt Condition	Y	N
RTNE	☐	1. Chilled	☑	☐
RWQCB	☐	2. Headspace	☐	☐
CalTrans	☐	3. Container Intact	☑	☐
Level III	☐	4. Seal Present	☐	☑
LEVEL IV	☐	5. IR number	CJ1	
Regulatory	☐	6. Method of Cooling	Ice	
Specify State:		Sample Temp:	3.2°C	

Matrix: Ground ☐ Sediment ☐ | Potable ☐ Soil ☐ | NPDES ☐ Other Solid ☐ | Surface ☐

Item No.	Laboratory Work Order No.	Sample ID/Location	Date	Time	Water	Solid	Others	Analyses Requested: TPHgas (C4-C12)	Turn Around Time	No. of container	Container Type	PRESERVATION
1		EFF-02-07	2/7/19	1000	NW			X	B	2	V	H
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

Courier:

Tracking No.

Remarks
Please hold until further instructions

Relinquished by (Signature and Printed Name):	Date / Time	Received by (Signature and Printed Name):	Date / Time
[signature]	2/7/19 1734		
Relinquished by (Signature and Printed Name):	Date / Time	Received by (Signature and Printed Name):	Date / Time
Relinquished by (Signature and Printed Name):	Date / Time	Received by (Signature and Printed Name):	Date / Time

Turn Around Time (TAT)
- ☐ A = < 24 Hrs or Same Day TAT
- ☑ B = Next Workday
- ☐ C = 2 Workdays
- ☐ D = 3 Workdays
- ☐ E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00 PM.

Special Instruction:
Please analyze for TPHg (C4-C12)

Report format: MDL/PQL "J-flagged". EDD Requirement: "CH2MHILL" LabSpec7.

Please cc Report to Lucille Golosinda at lucille.golosinda@assetlaboratories.com

Terms
1. All samples will be disposed in 45 days upon receipt and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis.
Less than 24 Hrs = 200% Next Day = 100% 2 Workdays = 50% 3 Workdays = 35% 4 Workdays = 20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 25% for Level IV Data Packages. Surcharges applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. ASSET Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 Days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:				Container Type:		
H = HCl	N = HNO3	S = H2SO4	C = 4°C	T = Tube	V = VOA	P = Pint
Z = Zn(AC)2	O = NaOH	T = Na2S2O3		J = Jar	B = Tedlar	G = Glass
Others/Specify:				M = Metal	P = Plastic	C = Can

White = Laboratory Copy

Yellow = Customer's Copy

GSO GLS

800-322-5555
www.gso.com

Ship From
ASSET LABORATORIES
MARIANNE SANTOS
11110 ARTESIA BLVD. SUITE B
CERRITOS, CA 90703

Ship To
ASSET LABORATORIES
MARLON CARTIN
3151 W. POST RD.,
LAS VEGAS, NV 89118

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

Delivery Instructions:
HOLD FOR PICK-UP
Signature Type: STANDARD

Tracking #: 543719858

CPS

LVS A

LAS VEGAS

C89102A

97915521

Print Date: 2/7/2019 5:38 PM

Package 2 of 2

3.1 °C

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the GSO service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gso.com.

March 27, 2019

Eric Davis
CH2MHill
1000 Wilshire Blvd.
Los Angeles, CA 90017

TEL:
FAX:

Workorder No.: N034616

RE: SFPP Norwalk

Attention: Eric Davis

Enclosed are the results for sample(s) received on March 14, 2019 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,

for

Quennie Manimtim
Laboratory Director

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

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

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

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 200.8:

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

Analytical comments for EPA 8260B:

Surrogate 1,2-Dichloroethane-d4 recovery for sample N034616-001 biased high possibly due to matrix interferences. Sample results were non-detect (ND) for analytes of interest therefore reanalysis of the sample was not necessary.

Surrogate 1,2-Dichloroethane-d4 recovery for Method Blank is biased high; however the results were non-detect (ND) for analytes of interest and reanalysis of the sample was not necessary.

Matrix Spike (MS) on surrogate 1,2-Dichloroethane-d4 is biased high possibly due to matrix interferences. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical comments for EPA 8270C:

Matrix Spike (MS) surrogate Phenol-d5 is outside recovery criteria possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

CLIENT: CH2MHill
Project: SFPP Norwalk
Lab Order: N034616
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N034616-001A	EFF-03-14	Wastewater	3/14/2019 11:05:00 AM	3/14/2019	3/27/2019
N034616-001B	EFF-03-14	Wastewater	3/14/2019 11:05:00 AM	3/14/2019	3/27/2019
N034616-001C	EFF-03-14	Wastewater	3/14/2019 11:05:00 AM	3/14/2019	3/27/2019
N034616-001D	EFF-03-14	Wastewater	3/14/2019 11:05:00 AM	3/14/2019	3/27/2019
N034616-001E	EFF-03-14	Wastewater	3/14/2019 11:05:00 AM	3/14/2019	3/27/2019

CLIENT: CH2MHill
Lab Order: N034616
Project: SFPP Norwalk
Lab ID: N034616-001

Client Sample ID: EFF-03-14
Collection Date: 3/14/2019 11:05:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3510C			**EPA 8270C**				
RunID: **NV00922-MS9_190326A** QC Batch: **73023**				PrepDate:	**3/21/2019**		Analyst: **MDM**
Phenol	ND	0.35	1.1		µg/L	1	3/26/2019 01:28 PM
Surr: Phenol-d5	26.0	0	25-108		%REC	1	3/26/2019 01:28 PM
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **NV00922-MS5_190315B** QC Batch: **P19VW034**				PrepDate:			Analyst: **QBM**
1,1-Dichloroethane	ND	0.45	0.50		ug/L	1	3/15/2019 10:02 AM
1,2-Dichloroethane	ND	0.29	0.50		ug/L	1	3/15/2019 10:02 AM
Benzene	ND	0.34	1.0		ug/L	1	3/15/2019 10:02 AM
Ethylbenzene	ND	0.31	1.0		ug/L	1	3/15/2019 10:02 AM
m,p-Xylene	ND	0.23	1.0		ug/L	1	3/15/2019 10:02 AM
MTBE	ND	0.34	1.0		ug/L	1	3/15/2019 10:02 AM
o-Xylene	ND	0.31	1.0		ug/L	1	3/15/2019 10:02 AM
Tert-Butanol	ND	2.4	5.0		ug/L	1	3/15/2019 10:02 AM
Toluene	ND	0.46	2.0		ug/L	1	3/15/2019 10:02 AM
Xylenes, Total	ND	1.5	2.0		ug/L	1	3/15/2019 10:02 AM
Surr: 1,2-Dichloroethane-d4	124	0	72-119	S	%REC	1	3/15/2019 10:02 AM
Surr: 4-Bromofluorobenzene	103	0	76-119		%REC	1	3/15/2019 10:02 AM
Surr: Dibromofluoromethane	113	0	85-115		%REC	1	3/15/2019 10:02 AM
Surr: Toluene-d8	109	0	81-120		%REC	1	3/15/2019 10:02 AM
TPH EXTRACTABLE BY GC/FID							
EPA 3510C			**EPA 8015B**				
RunID: **NV00922-GC3_190318A** QC Batch: **72950**				PrepDate:	**3/18/2019**		Analyst: **MGB**
TPH-Diesel (C13-C22)	ND	16	27		ug/L	1	3/18/2019 06:12 PM
TPH-Oil (C23-C36)	ND	15	27		ug/L	1	3/18/2019 06:12 PM
Surr: Octacosane	81.2	0	26-152		%REC	1	3/18/2019 06:12 PM
Surr: p-Terphenyl	83.3	0	57-132		%REC	1	3/18/2019 06:12 PM
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **NV00922-GC4_190316A** QC Batch: **E19VW014**				PrepDate:			Analyst: **QBM**
TPH-Gasoline (C4-C12)	23	21	50	J	ug/L	1	3/16/2019 12:35 PM
Surr: Chlorobenzene - d5	120	0	74-138		%REC	1	3/16/2019 12:35 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

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *27-Mar-19*

CLIENT: CH2MHill
Lab Order: N034616
Project: SFPP Norwalk
Lab ID: N034616-001

Client Sample ID: EFF-03-14
Collection Date: 3/14/2019 11:05:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_190317A** QC Batch: **72915** PrepDate: **3/15/2019** Analyst: **CEI**							
Mercury	0.035	0.018	0.050	J	µg/L	1	3/17/2019 10:23 AM
TOTAL METALS BY ICPMS							
EPA 200.8							
RunID: **NV00922-ICP7_190319A** QC Batch: **72916** PrepDate: **3/15/2019** Analyst: **CEI**							
Copper	ND	0.26	0.50		µg/L	1	3/19/2019 04:33 PM
Lead	ND	0.13	0.50		µg/L	1	3/18/2019 02:50 PM
Zinc	ND	0.27	1.0		µg/L	1	3/19/2019 08:17 PM
TOTAL TPH							
EPA 8015B							
RunID: **NV00922-GC3_190318A** QC Batch: **R132579** PrepDate: Analyst: **MGB**							
Total TPH	23	21	100	J	ug/L	1	3/18/2019

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

CLIENT: CH2MHill
Work Order: N034616
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: **MB-72916** SampType: **MBLK** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **3/15/2019** RunNo: **132610**
Client ID: **PBW** Batch ID: **72916** TestNo: **EPA 200.8** Analysis Date: **3/19/2019** SeqNo: **3322058**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.50									

Sample ID: **LCS-72916** SampType: **LCS** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **3/15/2019** RunNo: **132610**
Client ID: **LCSW** Batch ID: **72916** TestNo: **EPA 200.8** Analysis Date: **3/19/2019** SeqNo: **3322059**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	10.245	0.50	10.00	0	102	85	115				

Sample ID: **N034616-001D-DUP** SampType: **DUP** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **3/15/2019** RunNo: **132610**
Client ID: **ZZZZZZ** Batch ID: **72916** TestNo: **EPA 200.8** Analysis Date: **3/19/2019** SeqNo: **3322062**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.50						0	0	20	

Sample ID: **N034616-001D-MS** SampType: **MS** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **3/15/2019** RunNo: **132610**
Client ID: **ZZZZZZ** Batch ID: **72916** TestNo: **EPA 200.8** Analysis Date: **3/19/2019** SeqNo: **3322064**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	6.085	0.50	10.00	0	60.8	75	125				S

Sample ID: **N034616-001D-MSD** SampType: **MSD** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **3/15/2019** RunNo: **132610**
Client ID: **ZZZZZZ** Batch ID: **72916** TestNo: **EPA 200.8** Analysis Date: **3/19/2019** SeqNo: **3322065**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	5.858	0.50	10.00	0	58.6	75	125	6.085	3.79	20	S

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N034616
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: **MB-72916**	SampType: **MBLK**	TestCode: **200.8_W_SFP**	Units: **µg/L**	Prep Date: **3/15/2019**	RunNo: **132613**
Client ID: **PBW**	Batch ID: **72916**	TestNo: **EPA 200.8**		Analysis Date: **3/18/2019**	SeqNo: **3322165**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.50									

Sample ID: **LCS-72916**	SampType: **LCS**	TestCode: **200.8_W_SFP**	Units: **µg/L**	Prep Date: **3/15/2019**	RunNo: **132613**
Client ID: **LCSW**	Batch ID: **72916**	TestNo: **EPA 200.8**		Analysis Date: **3/18/2019**	SeqNo: **3322166**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.870	0.50	10.00	0	98.7	85	115				

Sample ID: **N034616-001D-DUP**	SampType: **DUP**	TestCode: **200.8_W_SFP**	Units: **µg/L**	Prep Date: **3/15/2019**	RunNo: **132613**
Client ID: **ZZZZZZ**	Batch ID: **72916**	TestNo: **EPA 200.8**		Analysis Date: **3/18/2019**	SeqNo: **3322169**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.50						0	0	20	

Sample ID: **N034616-001D-MS**	SampType: **MS**	TestCode: **200.8_W_SFP**	Units: **µg/L**	Prep Date: **3/15/2019**	RunNo: **132613**
Client ID: **ZZZZZZ**	Batch ID: **72916**	TestNo: **EPA 200.8**		Analysis Date: **3/18/2019**	SeqNo: **3322171**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.615	0.50	10.00	0	96.1	75	125				

Sample ID: **N034616-001D-MSD**	SampType: **MSD**	TestCode: **200.8_W_SFP**	Units: **µg/L**	Prep Date: **3/15/2019**	RunNo: **132613**
Client ID: **ZZZZZZ**	Batch ID: **72916**	TestNo: **EPA 200.8**		Analysis Date: **3/18/2019**	SeqNo: **3322172**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.656	0.50	10.00	0	96.6	75	125	9.615	0.423	20	

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N034616
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: **MB-72916** SampType: **MBLK** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **3/15/2019** RunNo: **132616**
Client ID: **PBW** Batch ID: **72916** TestNo: **EPA 200.8** Analysis Date: **3/19/2019** SeqNo: **3322699**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	ND	1.0									

Sample ID: **LCS-72916** SampType: **LCS** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **3/15/2019** RunNo: **132616**
Client ID: **LCSW** Batch ID: **72916** TestNo: **EPA 200.8** Analysis Date: **3/19/2019** SeqNo: **3322700**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	10.086	1.0	10.00	0	101	85	115				

Sample ID: **N034616-001D-DUP** SampType: **DUP** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **3/15/2019** RunNo: **132616**
Client ID: **ZZZZZZ** Batch ID: **72916** TestNo: **EPA 200.8** Analysis Date: **3/19/2019** SeqNo: **3322703**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	ND	1.0						0	0	20	

Sample ID: **N034616-001D-MS** SampType: **MS** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **3/15/2019** RunNo: **132616**
Client ID: **ZZZZZZ** Batch ID: **72916** TestNo: **EPA 200.8** Analysis Date: **3/19/2019** SeqNo: **3322705**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	8.170	1.0	10.00	0	81.7	75	125				

Sample ID: **N034616-001D-MSD** SampType: **MSD** TestCode: **200.8_W_SFP** Units: **µg/L** Prep Date: **3/15/2019** RunNo: **132616**
Client ID: **ZZZZZZ** Batch ID: **72916** TestNo: **EPA 200.8** Analysis Date: **3/19/2019** SeqNo: **3322706**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	8.324	1.0	10.00	0	83.2	75	125	8.170	1.87	20	

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N034616
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 245.1_W_LL

Sample ID: **LCS-72915** SampType: **LCS** TestCode: **245.1_W_LL** Units: **µg/L** Prep Date: **3/15/2019** RunNo: **132542**
Client ID: **LCSW** Batch ID: **72915** TestNo: **EPA 245.1** Analysis Date: **3/17/2019** SeqNo: **3318882**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.474	0.050	2.500	0	99.0	85	115				

Sample ID: **N034616-001D-MS** SampType: **MS** TestCode: **245.1_W_LL** Units: **µg/L** Prep Date: **3/15/2019** RunNo: **132542**
Client ID: **ZZZZZZ** Batch ID: **72915** TestNo: **EPA 245.1** Analysis Date: **3/17/2019** SeqNo: **3318883**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.503	0.050	2.500	0.03467	98.7	75	125				

Sample ID: **N034616-001D-MSD** SampType: **MSD** TestCode: **245.1_W_LL** Units: **µg/L** Prep Date: **3/15/2019** RunNo: **132542**
Client ID: **ZZZZZZ** Batch ID: **72915** TestNo: **EPA 245.1** Analysis Date: **3/17/2019** SeqNo: **3318884**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.595	0.050	2.500	0.03467	102	75	125	2.503	3.61	20	

Sample ID: **N034616-001D-DUP** SampType: **DUP** TestCode: **245.1_W_LL** Units: **µg/L** Prep Date: **3/15/2019** RunNo: **132542**
Client ID: **ZZZZZZ** Batch ID: **72915** TestNo: **EPA 245.1** Analysis Date: **3/17/2019** SeqNo: **3318887**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.020	0.050						0.03467	0	20	J

Sample ID: **MB-72915** SampType: **MBLK** TestCode: **245.1_W_LL** Units: **µg/L** Prep Date: **3/15/2019** RunNo: **132542**
Client ID: **PBW** Batch ID: **72915** TestNo: **EPA 245.1** Analysis Date: **3/17/2019** SeqNo: **3318889**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.050									

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N034616
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_FP_SFPP

Sample ID: **MB-72950** SampType: **MBLK** TestCode: **8015_W_FP_** Units: **ug/L** Prep Date: **3/18/2019** RunNo: **132579**
Client ID: **PBW** Batch ID: **72950** TestNo: **EPA 8015B** **EPA 3510C** Analysis Date: **3/18/2019** SeqNo: **3320931**

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)	19.278	25									J
Surr: Octacosane	77.614		80.00		97.0	26	152				
Surr: p-Terphenyl	76.990		80.00		96.2	57	132				

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N034616
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_SFPPTOT

Sample ID: **MB-R132579** SampType: **MBLK** TestCode: **8015_W_SFP** Units: **ug/L** Prep Date: RunNo: **132579**
Client ID: **PBW** Batch ID: **R132579** TestNo: **EPA 8015B** Analysis Date: **3/18/2019** SeqNo: **3321655**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total TPH	29.000	100									J

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N034616
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_WSFPP

Sample ID: **E190316MB1** SampType: **MBLK** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **132549**
Client ID: **PBW** Batch ID: **E19VW014** TestNo: **EPA 8015B** Analysis Date: **3/16/2019** SeqNo: **3319715**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	29.000	50									J
Surr: Chlorobenzene - d5	54162.000		50000		108	74	138				

Sample ID: **E190316LCS** SampType: **LCS** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **132549**
Client ID: **LCSW** Batch ID: **E19VW014** TestNo: **EPA 8015B** Analysis Date: **3/16/2019** SeqNo: **3319716**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	865.000	50	1000	0	86.5	67	136				
Surr: Chlorobenzene - d5	48388.000		50000		96.8	74	138				

Sample ID: **N034616-001BMS** SampType: **MS** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **132549**
Client ID: **ZZZZZZ** Batch ID: **E19VW014** TestNo: **EPA 8015B** Analysis Date: **3/16/2019** SeqNo: **3319718**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	939.000	50	1000	23.00	91.6	67	136				
Surr: Chlorobenzene - d5	45550.000		50000		91.1	74	138				

Sample ID: **N034616-001BMSD** SampType: **MSD** TestCode: **8015GAS_WS** Units: **ug/L** Prep Date: RunNo: **132549**
Client ID: **ZZZZZZ** Batch ID: **E19VW014** TestNo: **EPA 8015B** Analysis Date: **3/16/2019** SeqNo: **3319719**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	929.000	50	1000	23.00	90.6	67	136	939.0	1.07	30	
Surr: Chlorobenzene - d5	45208.000		50000		90.4	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

CLIENT: CH2MHill
Work Order: N034616
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: **P190315LCS** SampType: **LCS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **132556**
Client ID: **LCSW** Batch ID: **P19VW034** TestNo: **EPA 8260B** Analysis Date: **3/15/2019** SeqNo: **3320045**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	21.370	0.50	20.00	0	107	69	133				
1,2-Dichloroethane	22.660	0.50	20.00	0	113	69	132				
Benzene	20.400	1.0	20.00	0	102	81	122				
Ethylbenzene	19.560	1.0	20.00	0	97.8	73	127				
m,p-Xylene	41.050	1.0	40.00	0	103	76	128				
MTBE	19.050	1.0	20.00	0	95.2	65	123				
o-Xylene	20.340	1.0	20.00	0	102	80	121				
Tert-Butanol	97.820	5.0	100.0	0	97.8	70	130				
Toluene	19.980	2.0	20.00	0	99.9	77	122				
Xylenes, Total	61.390	2.0	60.00	0	102	75	125				
Surr: 1,2-Dichloroethane-d4	28.440		25.00		114	72	119				
Surr: 4-Bromofluorobenzene	25.600		25.00		102	76	119				
Surr: Dibromofluoromethane	27.140		25.00		109	85	115				
Surr: Toluene-d8	26.790		25.00		107	81	120				

Sample ID: **N034616-001BMS** SampType: **MS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **132556**
Client ID: **ZZZZZZ** Batch ID: **P19VW034** TestNo: **EPA 8260B** Analysis Date: **3/15/2019** SeqNo: **3320050**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	22.440	0.50	20.00	0	112	69	133				
1,2-Dichloroethane	23.570	0.50	20.00	0	118	69	132				
Benzene	20.770	1.0	20.00	0	104	81	122				
Ethylbenzene	19.720	1.0	20.00	0	98.6	73	127				
m,p-Xylene	41.080	1.0	40.00	0	103	76	128				
MTBE	20.190	1.0	20.00	0	101	65	123				
o-Xylene	20.280	1.0	20.00	0	101	80	121				
Tert-Butanol	107.830	5.0	100.0	0	108	70	130				
Toluene	20.600	2.0	20.00	0	103	77	122				
Xylenes, Total	61.360	2.0	60.00	0	102	75	125				
Surr: 1,2-Dichloroethane-d4	30.660		25.00		123	72	119				S

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N034616
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: **N034616-001BMS** SampType: **MS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **132556**
Client ID: **ZZZZZZ** Batch ID: **P19VW034** TestNo: **EPA 8260B** Analysis Date: **3/15/2019** SeqNo: **3320050**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	26.190		25.00		105	76	119				
Surr: Dibromofluoromethane	27.780		25.00		111	85	115				
Surr: Toluene-d8	27.440		25.00		110	81	120				

Sample ID: **N034616-001BMSD** SampType: **MSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **132556**
Client ID: **ZZZZZZ** Batch ID: **P19VW034** TestNo: **EPA 8260B** Analysis Date: **3/15/2019** SeqNo: **3320051**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	22.770	0.50	20.00	0	114	69	133	22.44	1.46	20	
1,2-Dichloroethane	22.950	0.50	20.00	0	115	69	132	23.57	2.67	20	
Benzene	21.410	1.0	20.00	0	107	81	122	20.77	3.03	20	
Ethylbenzene	20.680	1.0	20.00	0	103	73	127	19.72	4.75	20	
m,p-Xylene	42.770	1.0	40.00	0	107	76	128	41.08	4.03	20	
MTBE	20.430	1.0	20.00	0	102	65	123	20.19	1.18	20	
o-Xylene	21.030	1.0	20.00	0	105	80	121	20.28	3.63	20	
Tert-Butanol	99.910	5.0	100.0	0	99.9	70	130	107.8	7.62	20	
Toluene	20.840	2.0	20.00	0	104	77	122	20.60	1.16	20	
Xylenes, Total	63.800	2.0	60.00	0	106	75	125	61.36	3.90	20	
Surr: 1,2-Dichloroethane-d4	29.730		25.00		119	72	119		0		
Surr: 4-Bromofluorobenzene	26.460		25.00		106	76	119		0		
Surr: Dibromofluoromethane	27.480		25.00		110	85	115		0		
Surr: Toluene-d8	26.570		25.00		106	81	120		0		

Sample ID: **P190315MB2** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **132556**
Client ID: **PBW** Batch ID: **P19VW034** TestNo: **EPA 8260B** Analysis Date: **3/15/2019** SeqNo: **3320776**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	ND	0.50									
1,2-Dichloroethane	ND	0.50									
Benzene	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

CLIENT: CH2MHill
Work Order: N034616
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: **P190315MB2** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **132556**
Client ID: **PBW** Batch ID: **P19VW034** TestNo: **EPA 8260B** Analysis Date: **3/15/2019** SeqNo: **3320776**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	ND	1.0									
m,p-Xylene	ND	1.0									
MTBE	ND	1.0									
o-Xylene	ND	1.0									
Tert-Butanol	ND	5.0									
Toluene	ND	2.0									
Xylenes, Total	ND	2.0									
Surr: 1,2-Dichloroethane-d4	30.740		25.00		123	72	119				S
Surr: 4-Bromofluorobenzene	26.510		25.00		106	76	119				
Surr: Dibromofluoromethane	28.560		25.00		114	85	115				
Surr: Toluene-d8	27.180		25.00		109	81	120				

Qualifiers:

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

CLIENT: CH2MHill
Work Order: N034616
Project: SFPP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270WATER_SIMEXT

Sample ID: **LCS-73023** SampType: **LCS** TestCode: **8270WATER_** Units: **µg/L** Prep Date: **3/21/2019** RunNo: **132787**
Client ID: **LCSW** Batch ID: **73023** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **3/26/2019** SeqNo: **3330560**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	3.160	1.0	6.000	0	52.7	24	120				
Surr: Phenol-d5	0.290		1.000		29.0	25	108				

Sample ID: **MB-73023** SampType: **MBLK** TestCode: **8270WATER_** Units: **µg/L** Prep Date: **3/21/2019** RunNo: **132787**
Client ID: **PBW** Batch ID: **73023** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **3/26/2019** SeqNo: **3330561**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	ND	1.0									
Surr: Phenol-d5	0.300		1.000		30.0	25	108				

Sample ID: **N034616-001E-MS** SampType: **MS** TestCode: **8270WATER_** Units: **µg/L** Prep Date: **3/21/2019** RunNo: **132787**
Client ID: **ZZZZZZ** Batch ID: **73023** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **3/26/2019** SeqNo: **3330563**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	3.105	1.1	6.316	0	49.2	24	120				
Surr: Phenol-d5	0.242		1.053		23.0	25	108				S

Sample ID: **N034616-001E-MSD** SampType: **MSD** TestCode: **8270WATER_** Units: **µg/L** Prep Date: **3/21/2019** RunNo: **132787**
Client ID: **ZZZZZZ** Batch ID: **73023** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **3/26/2019** SeqNo: **3330564**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	3.742	1.1	6.742	0	55.5	24	120	3.105	18.6	20	
Surr: Phenol-d5	0.303		1.124		27.0	25	108		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

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

CHAIN OF CUSTODY RECORD

DATE: 3-14-19
PAGE: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		Section D Sampler Information:	
Company:	Kinder Morgan Energy Partners Attention: Steve Defibaugh	Report To:	Eric Davis	Attention:	Steve Defibaugh - Ref. AFE# 81195	Sampler Name:	Nils Orliczky
Address:	1100 Town & Country Road Orange, CA 92868	Copy To:	Steve Defibaugh	Company Name:	Kinder Morgan Energy Partners	Sampler Signature:	[signature]
Email To:	steve_defibaugh@kindermorgan.com eric.davis@ch2m.com	Purchase Order No.:		Address:	1100 Town & Country Road Orange, CA 92868	Sample Date:	3-14-19
Phone: 714-560-4802	Fax: 714-560-4801	Project Name:	SFPP Norwalk	ATL Project Manager:	Marlon Cartin		

Section E
Required Sample Information

		CONTAINER TYPE	V	V	A	P	A
		# OF CONTAINERS	3	3	3	1	3
		PRESERVATIVE	H	H	–	N	–
		VOLUME (mL)	40	40	1000	500	1000

ITEM #	SAMPLE ID	LOCATION/ DESCRIPTION	MATRIX	SAMPLE TYPE (G=GRAB C=COMP)	SAMPLING DATE	SAMPLING TIME	TOTAL # OF CONTAINERS		Analysis Test	BTEX, 1,1-DCA, 1,2-DCA, MTBE, TBA (8260B)	TPH-gas (C4-C12) (8015B)	TPH-d (C13-C22), TPH-oil (C23+), Total TPH (8015B)	Cu, Pb, Zn (200.8); Hg (245.1)	Phenol (8270)	Comments
1	EFF-03.14	EFFLUENT	WW	G	3-14-19	1105	13			X	X	X	X	X	N034616-01
2															Report metals, TPH and VOC preliminary data on 24-hr TAT
3															Report total Xylenes
4															
5															
6															
7															
8															
9															
10															

3-14-19

Relinquished by (Signature and Printed Name):	Date / Time	Relinquished by (Signature and Printed Name):	Date / Time
[signature]	3-14-19 / 1205	[signature] Karla Sevilla	3/14/19 1205
[signature] Karla Sevilla	3/14/19 1747	[signature] MARIANNE SANTOS	3/14/19 1747
[signature] MARIANNE SANTOS	3/14/19 1800	[signature] JORDAN LEE	3/15/19 0800

Turn Around Time (TAT):
- ☐ A = Same Day
- ■ B = 24 Hours
- ☐ C = 48 Hours
- ☐ D = 72 Hours
- ■ E = 5 Workdays
- ☐ E = 10 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00 PM.

Special Instruction:

Matrix:		
W = Water	WW = Wastewater	
O = Oil	P = Product	S = Soil
Others/Specify:		

Preservatives:		
H = HCl	N = HNO3	S = H2SO4
Z = Zn(AC)2	O = NaOH	T = Na2S2O3
Others/Specify:		

Container Type:			
T = Tube	V = VOA	P = Pint	A = Amber
J = Jar	B = Tedlar	G = Glass	
M = Metal	P = Plastic	C = Can	

2.3° IR#2 GSO 1153

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:	3/14/2019	Workorder:	N034616
Rep sample Temp (Deg C):	2.3	IR Gun ID:	2
Temp Blank:	☑ Yes ☐ No		
Carrier name:	Golden State Overnight		
Last 4 digits of Tracking No.:	1153	Packing Material Used:	Bubble Wrap
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

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

Comments:

For:

Checklist Completed By: RM 3/15/2019

Reviewed By: MBC 3/18/2019

ASSET Laboratories

WORK ORDER Summary

15-Mar-19

WorkOrder: N034616

Client ID: CH2HI03

Project: SFPP Norwalk **QC Level:** RTNE **Date Received:** 3/14/2019

Comments: Report metals, TPH and VOC preliminary data on 24-hr TAT

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N034616-001A	EFF-03-14	3/14/2019 11:05:00 AM	3/18/2019	Wastewater	EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS	☐	☐	☐	V-CA
N034616-001B			3/18/2019		EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	☐	☐	☐	VW
N034616-001C			3/18/2019		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS	☐	☐	☐	WW
			3/18/2019		EPA 8015B	TPH EXTRACTABLE BY GC/FID	☐	☐	☐	WW
			3/18/2019		EPA 8015B	Total TPH	☐	☐	☐	WW
N034616-001D			3/18/2019			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/18/2019		EPA 200.8	TOTAL METALS BY ICPMS	☐	☐	☐	WW
			3/18/2019		EPA 245.1	MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			3/18/2019			MERCURY PREP	☐	☐	☐	WW
N034616-001E			3/21/2019		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: 8270C - SIM	☐	☐	☐	WW
			3/21/2019		EPA 8270C	SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS	☐	☐	☐	WW
N034616-002A	FOLDER	3/18/2019	3/18/2019		Folder	Folder	☐	☐	☐	LAB
			3/18/2019		Folder	Folder	☐	☐	☐	LAB

IKLE

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800-322-5555
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Ship From
ASSET LABORATORIES
MARIANNE SANTOS
11110 ARTESIA BLVD. SUITE B
CERRITOS, CA 90703

Ship To
ASSET LABORATORIES
MARLON CARTIN
3151 W. POST RD.,
LAS VEGAS, NV 89118

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

Delivery Instructions:
HOLD FOR PICK-UP
Signature Type: STANDARD

Tracking #: 544111153

CPS

LVS

A

LAS VEGAS

C89102A

99644751

Print Date: 3/14/2019 6:20 PM

Package 1 of 3

2.3# 1/2#/2

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the GSO service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gso.com.

Attachment B
Data Quality Assurance/Quality Control

Data Quality Assurance/Quality Control

Data quality was evaluated by examining the holding times, laboratory method blanks, surrogate percent recoveries, laboratory control sample/laboratory control sample duplicate (LCS/LCSD) and matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent differences (RPDs). Data quality review results for each analysis are outlined in the following subsections.

Analytical Data

This data quality evaluation report covers three normal effluent samples. Samples were collected between January 17 and March 14, 2019. Analyses were performed by Asset Laboratories in Las Vegas, Nevada, and BC Laboratories in Bakersfield, California. The sample results were reported as three sample delivery groups:

Sample Delivery Groups
N033809
N034059
N034616

Eleven methods were used to analyze the environmental samples. Samples were collected and submitted directly to the Asset Laboratories for analysis. Asset Laboratories was responsible for shipment of samples to BC Laboratories. Samples were analyzed for the following analytes/method:

Parameter	Method
Turbidity	SM2130B
Total suspended solids	SM2540D
Settleable solids	SM2540F
Biochemical oxygen demand	SM5210B
Oil and grease	E1664
Metals	E200.8/E245.1
Ammonia	SM4500NH3G
Total petroleum hydrocarbons (TPH) – gasoline, diesel, and motor oil ranges	SW8015B
Volatile organic compounds	SW8260B
Phenol	SW8270C

Data validation flags were assigned using guidance from the U.S. Environmental Protection Agency (EPA) Contract Laboratory National Functional Guidelines for Organic Superfund Methods Data Review (EPA, 2017) and EPA Contract Laboratory National Functional Guidelines for Inorganic Superfund Methods Data Review (EPA, 2017). Multiple flags are routinely applied to specific sample method/ matrix/ analyte combinations, but there will be only one final flag. A final flag is applied to the data and is the most conservative of the applied data validation flags. The final flag also includes blank sample impacts.

The data validation flags are as follows:

- J = Analyte was present, but the reported value may not be accurate or precise (estimated). The result was estimated because it was less than the referenced reporting limit, but greater than the method detection limit, or because a quality control (QC) exceedance occurred.
- R = Data were unusable because of deficiencies in the ability to analyze the sample and meet QC criteria.
- U = Analyte was not detected at the specified detection limit.
- UJ = Analyte was not detected, and the specified detection limit may not be accurate or precise (estimated).

Findings

The overall summaries of the data validation findings are contained in the following subsections.

Holding Times

All holding time criteria were met.

Method Blanks

Method blanks were analyzed at the required frequency and were free of contamination that would affect the sample results with the following exceptions:

- TPH-gasoline was detected less than the reporting limit (RL) in the method blanks for Method SW8015B. Two associated results were detected less than five times the blank concentrations and were qualified as not detected and flagged “U” in samples EFF-03-14 and EFF-02-07.
- Total TPH was detected less than the RL in the method blanks for Method SW8015B. Two associated results were detected less than five times the blank concentrations and were qualified as not detected and flagged “U” in samples EFF-02-07 and EFF-03-14.
- Phenol was detected less than the RL in the method blanks for Method SW8270C. Two associated results were detected less than five times the blank concentrations and were qualified as not detected and flagged “U” in samples EFF-01-17 and EFF-02-07.

Surrogates

All surrogate recovery criteria were met.

Internal Standards

All internal standard criteria were met.

Laboratory Control Samples

LCS/LCSDs were analyzed as required. All accuracy and precision criteria were met.

Matrix Spikes/Matrix Spike Duplicates

The results of MS/MSD analyses provide information about the possible influence of the matrix on either accuracy or precision of the measurements. There were no MS/MSD recovery or RPD exceedances that would affect the sample results with the following exceptions:

- The recovery of copper was less than the lower control limit in the MSs and/or MSDs of samples EFF-01-17, EFF-02-07, and EFF-03-14 for Method E200.8, indicating the associated parent sample

results are possibly biased low. The associated nondetected results were qualified as estimated and flagged “UJ.”

Chain-of-Custody

Each sample was documented in a completed chain-of-custody form and received at the laboratory in good condition.

Miscellaneous

Samples EFF-11-15-18 and RSW-001-11-15-18 were analyzed for acrolein and acrylonitrile from sample vials with headspace, associated sample results are possibly biased low. Four associated nondetected results were qualified as estimated and flagged “UJ.”

Overall Assessment

An overall evaluation of the data indicates that the sample handling, shipment, and analytical procedures have been adequately completed, and that the analytical results are considered usable taking into consideration possible biases as described above.

Attachment C
Waste Manifests

Please print or type. DW 1900944728 SC PPW 2/14/2019 Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	CAT080033962	1	(800) 483-3718	012314086 FLE

GENERATOR

5. Generator's Name and Mailing Address
Sfpp, L.P. Norwalk Station
1100 Town And Country Road
Orange, CA 92868
Generator's Phone: (714) 560-4887 ATTN: Karina Hankins

Generator's Site Address (if different than mailing address)
15306 Norwalk Boulevard
Norwalk, CA 90651

6. Transporter 1 Company Name: Clean Harbors Environmental Services, Inc.
U.S. EPA ID Number: MAD039322250

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors Wilmington LLC
1737 East Denni Street
Wilmington, CA 90744
Facility's Phone: (310) 835-9998
U.S. EPA ID Number: CAD044429835

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-RCRA HAZARDOUS WASTE, SOLID, (FILTERS)	002	DM	300	P	181
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. CH1424321 2X55DM
1. Groundwater Treatment System Filters (LGAC)

Contract retained by generator confers agency authority on initial transporter to add or substitute additional transporters on generator's behalf for purposes of transportation efficiency, convenience or safety

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: JAMISS DYS Signature: Month 03 Day 07 Year 19

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: HOWARD MENDEZ Signature: Month 03 Day 07 Year 19
Transporter 2 Printed/Typed Name: Signature: Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Signature: Month Day Year

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	001		NHZ-031919KMNW

GENERATOR

5. Generator's Name and Mailing Address

SFPP-LP ....
1100 TOWN & COUNTRY RD
ORANGE, CA 92868

Generator's Phone: 714-560-4400-4823

Generator's Site Address (if different than mailing address)

NORWALK TANK FARM
15306 NORWALK BLVD
NORWALK, CA 90650

6. Transporter 1 Company Name: PROMINENT SYSTEMS, INC — U.S. EPA ID Number:

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address

PROMINENT SYSTEMS, INC
13095 E. TEMPLE AVENUE
CITY OF INDUSTRY, CA 91746

Facility's Phone: 626-858-1888

U.S. EPA ID Number:

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS SPENT CARBON	1	BA	~~4000~~ 1500	P	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

PROFILE #: PSP180017L

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: JAMES DYK — Signature — Month 3 Day 19 Year 19

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Tanjung Siregar — Signature — Month 3 Day 19 Year 19

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Wick — Signature — Month 3 Day 28 Year 19

Please print or type
(Form designed for use on elite (12-pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address: SFPP LP
1100 TOWN & COUNTRY RD
ORANGE CA 92868

4. Generator's Phone (714) 560-4400-4823

SITE ADDRESS
NORWALK TANK FARM
15306 NORWALK BLVD
NORWALK CA 90650

5. Transporter 1 Company Name: PROMINENT SYSTEMS INC | 6. US EPA ID Number

7. Transporter 2 Company Name | 8. US EPA ID Number

9. Designated Facility Name and Site Address: PROMINENT SYSTEMS INC
13095 E TEMPLE AVE.
CITY OF INDUSTRY CA 91746 | 10. US EPA ID Number

A. Transporter's Phone 626-858-1888
B. Transporter's Phone
C. Facility's Phone

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NO HAZARDOUS SPENT CARBON	2	BA	2500	P
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above: WASTE TRACKING NUMBER NHZ-031919KMNW-A

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information: PROFILE # PSP 180017L

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: JAMES DYR | Signature | Month 03 Day 22 Year 19

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: ANTONIO LANDGRAS | Signature | Month 03 Day 22 Year 19

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Nick | Signature | Month 3 Day 28 Year 19

ORIGINAL – RETURN TO GENERATOR

EPA Form 8700-22 (Rev. 3-94)

PROMINENT SYSTEMS INC

CERTIFICATE OF REGENERATION

Prominent Systems Inc hereby certifies that 1500 lbs of Spent Carbon described in manifest/bill-of-lading No. NHZ-031919KMNW was regenerated in compliance with all applicable Federal, State and Municipal laws and regulations.

Generator:
SFPP-LP
15306 NORWALK BLVD
NORWALK, CA 90650

Profile No.:
PSP180017L

Prominent Systems, Inc.

By: Wick

Date: 03-28-2019

13095 E. TEMPLE AVENUE, INDUSTRY, CA 91746
Ph.: 626.858.1888 Fax: 626.628.3716
www.Prominentinc.com

PROMINENT SYSTEMS INC

CERTIFICATE OF REGENERATION

Prominent Systems Inc hereby certifies that 2500 lbs of Spent Carbon described in manifest/bill-of-lading No. NHZ-031919KMNW-A was regenerated in compliance with all applicable Federal, State and Municipal laws and regulations.

Generator:
SFPP-LP
15306 NORWALK BLVD
NORWALK, CA 90650

Profile No.:
PSP180017L

Prominent Systems, Inc.

By: Wick

Date: 03-28-2019

13095 E. TEMPLE AVENUE, INDUSTRY, CA 91746
Ph.: 626.858.1888 Fax: 626.628.3716
www.Prominentinc.com

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

DW 1900944728

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAT080033962

Manifest Document No. NH1900944728

2. Page 1 of 1

3. Generator's Name and Mailing Address
Sfpp. L.P. Norwalk Station
1100 Town And Country Road
Orange CA 92868

4. Generator's Phone ((714) 560-4887 ATTN:Karina Hankins

Site Address :
15306 Norwalk Boulevard
Norwalk, CA 90651

5. Transporter 1 Company Name: Clean Harbors Environmental Services, Inc.

6. US EPA ID Number: MAD039322250

A. State Transporter's ID

B. Transporter 1 Phone (781) 792-5000

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
Clean Harbors Wilmington LLC
1737 East Denni Street
Wilmington, CA 90744

10. US EPA ID Number: CAD044429835

E. State Facility's ID

F. Facility's Phone (310) 835-9998

11. WASTE DESCRIPTION	Containers No.	Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. NON DOT REGULATED, (RCRA EMPTY DRUM)	4	DM	160	P
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above
11a.CH839470 4X55 DM

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
11a. CA-Empty Drums

EMERGENCY PHONE #: (800) 483-3718
GENERATOR: Sfpp, L.P. Norwalk Station

GENERATOR

16. **GENERATOR'S CERTIFICATION:** I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name: JAMES DYER | Signature | Date: Month 3 Day 7 Year 19

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: HOWARD MENDEZ | Signature | Date: Month 03 Day 07 Year 19

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name | Signature | Date: Month Day Year

NON-HAZARDOUS WASTE

Attachment D
SWPPP/BMPP and SCP Documents
(provided on CD)

KINDER MORGAN
ENERGY PARTNERS, L.P.

SFPP, L.P.
Operating Partnership

March 13, 2019

California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Subject: **Revised Stormwater Pollution Prevention Plan**
SFPP, L.P. Norwalk Pump Station
15306 Norwalk Boulevard, Norwalk, California
(NPDES No. CA0063509, CI No. 7497)

Attention: Information Technology Unit

In reference to the subject National Pollutant Discharge Elimination System (NPDES) permit, please find enclosed the Revised Stormwater Pollution Prevention Plan and Best Management Practices Plan (SWPPP and BMP Plan) for identifying potential sources of stormwater contamination and preventive measures employed to reduce the risk of stormwater contamination, and ongoing management practices designed to prevent stormwater pollution at the Norwalk Pump Station located at 15306 Norwalk Boulevard, Norwalk, California. This SWPPP and BMP Plan is meant to comply with the SWPPP and BMP requirements of NPDES Permit No. CA0063509 for the site, as required in Order R4-2011-0095 issued by the California Regional Water Quality Control Board, Los Angeles Region.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on the 13th day of March 2019.
at 4:12 PM

_____ (signature)

Stephen T. Defibaugh (printed name)

Remediation Project Manager (title)

SFPP Norwalk Pump Station
Norwalk, California

Stormwater Pollution Prevention Plan and Best Management Practices Plan

Revision 5

March 2019

SFPP, L.P., an operating partnership of Kinder Morgan, Inc.

SFPP Norwalk Pump Station, Norwalk, California

Project No: D3184800
Document Title: Stormwater Pollution Prevention Plan and Best Management Practices Plan
Revision: 5
Date: March 2019
Client Name: SFPP, L.P., an operating partnership of Kinder Morgan, Inc.
Client Address: 1100 Town and Country Road
Orange, California 92868
Project Manager: Eric Davis
Author: Vladimir Carino

Jacobs Engineering Group Inc.

2600 Michelson Drive, Suite 500
Irvine, California 92612
United States
T +1.949.224.7500
F +1.949.224.7501
www.jacobs.com

Document History and Status

Revision	Date	Description	By
Initial Plan	September 2011	*Stormwater Pollution Prevention Plan and Best Management Practices Plan*	CH2M
Amendment 1	February 26, 2014	*Stormwater Pollution Prevention Plan/Best Management Plan Amendment 1*	CH2M
Revision 1	March 2015	*Stormwater Pollution Prevention Plan and Best Management Plan Revision 1*	CH2M
Revision 2	March 2016	*Stormwater Pollution Prevention Plan and Best Management Plan Revision 2*	CH2M
Revision 3	January 2017	*Stormwater Pollution Prevention Plan and Best Management Plan Revision 3*	CH2M
Revision 4	February 2018	*Stormwater Pollution Prevention Plan and Best Management Plan Revision 4*	CH2M-Jacobs
Revision 5	March 2019	*Stormwater Pollution Prevention Plan and Best Management Plan Revision 5*	CH2M-Jacobs

Contents

Appendixes

Table

Figures

Acronyms and Abbreviations

API	American Petroleum Institute
bgs	below ground surface
BMP	Best Management Practice
BS	biosparging
BTEX	benzene, toluene, ethylbenzene, and xylenes
CH2M	CH2M HILL, now part of Jacobs Engineering Group Inc.
DAF	dissolved air flotation
DFSP	Defense Fuel Support Point
FBBR	fluidized bed bioreactor
gpd	gallons per day
GWE	groundwater extraction
GWTS	groundwater treatment system
HCl	hydrochloric acid
Jacobs	Jacobs Engineering Group Inc.
Kinder Morgan	Kinder Morgan, Inc.
LGAC	liquid-phase granular activated carbon
LNAPL	light nonaqueous phase liquid
MTBE	methyl tertiary butyl ether
NPDES	National Pollutant Discharge Elimination System
O&M	operation and maintenance
OWS	oil-water separator
RTO	regenerative thermal oxidizer
scfm	standard cubic feet per minute
SCP	Spill Contingency Plan
SFPP	SFPP, L.P., an operating partnership of Kinder Morgan, Inc.
STI	Steel Tank Institute
SVE	soil vapor extraction
SWPPP	Stormwater Pollution Prevention Plan
SWPPP/BMP Plan	Stormwater Pollution Prevention Plan and Best Management Practices Plan
TBA	tertiary butyl alcohol
TFE	total fluids extraction
TPH-d	total petroleum hydrocarbons, diesel range
TPH-g	total petroleum hydrocarbons, gasoline range
Water Board	California Regional Water Quality Control Board, Los Angeles Region
WSB	West Side Barrier

1. Introduction

This Stormwater Pollution Prevention Plan and Best Management Practices Plan (SWPPP/BMP Plan) was developed for SFPP, L.P. (SFPP), an operating partnership of Kinder Morgan, Inc. (Kinder Morgan). This plan addresses the groundwater, biosparging (BS), and soil vapor remediation systems at the SFPP Norwalk Pump Station, located within the Defense Fuel Support Point (DFSP) Norwalk, at 15306 Norwalk Boulevard, Norwalk, California 90650 (the site). Figure 1 shows the site location. This SWPPP/BMP Plan is meant to comply with the SWPPP and BMP requirements of National Pollutant Discharge Elimination System (NPDES) Permit No. CA0063509 for the site, as required in Order No. R4-2016-0309 issued by the California Regional Water Quality Control Board, Los Angeles Region (Water Board). This SWPPP/BMP Plan identifies potential sources of stormwater contamination and preventive measures employed to reduce the risk of stormwater contamination, and ongoing management practices designed to prevent stormwater pollution at the site.

This SWPPP/BMP Plan supersedes the following SWPPP/BMP Plans or Amendments that were previously submitted to the Water Board:

- Stormwater Pollution Prevention Plan and Best Management Practices Plan, SFPP Norwalk Pump Station, Norwalk, California 90650, prepared by CH2M HILL (CH2M), dated September 2011.
- Stormwater Pollution Prevention Plan/Best Management Plan Amendment 1, SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California (NPDES No. CA0063509, CI No. 7497), prepared by CH2M, dated February 26, 2014.
- Stormwater Pollution Prevention Plan and Best Management Plan Revision 1, SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California (NPDES No. CA0063509, CI No. 7497), prepared by CH2M, dated March 2015.
- Stormwater Pollution Prevention Plan and Best Management Plan Revision 2, SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California (NPDES No. CA0063509, CI No. 7497), prepared by CH2M, dated March 2016.
- Stormwater Pollution Prevention Plan and Best Management Plan Revision 3, SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California (NPDES No. CA0063509, CI No. 7497), prepared by CH2M, dated January 2017.
- Stormwater Pollution Prevention Plan and Best Management Plan Revision 4, SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California (NPDES No. CA0063509, CI No. 7497), prepared by CH2M-Jacobs, dated February 2018.

1.1 Summary Information

Waste Discharge Identification Number:	4B192597001
Discharger:	SFPP, L.P.
Name of Facility:	SFPP Norwalk Pump Station
Facility Contact:	Stephen Defibaugh, Kinder Morgan Project Manager, Environmental Remediation 1100 Town and Country Road, Orange, California 92868
Telephone Number:	(714) 560-4802
Type of Facility:	Decommissioned Fuel Tank Farm and Pumping Station
NPDES Permit:	CA0063509
Receiving Water:	Coyote Creek
Capacity:	Treats a maximum 150,000 gallons per day (gpd)
Hours of Operation:	24 hours per day, 7 days per week

Emergency Contact:	James Dye/Kinder Morgan Operator
Emergency Phone (Cell):	(909) 631-0231
Secondary Contact:	Patrick Loya/Kinder Morgan Operator
Emergency Phone (Cell):	(909) 231-0182
Tertiary Contact:	Vladimir Carino/Jacobs Project Engineer
Emergency Phone (Cell):	(619) 621-9406

1.2 Background

Kinder Morgan discharges treated groundwater to one outfall, under the existing NPDES Permit No. CA0063509 (Order No. R4-2016-0309). The Order was adopted by the Water Board on September 7, 2016, and became effective on November 1, 2016. The permit provides coverage for treated groundwater to be discharged from the Kinder Morgan groundwater remediation system to the city stormwater system along Norwalk Boulevard. The water is then conveyed south and eventually to Coyote Creek, a water of the United States, within the San Gabriel River Watershed. CH2M HILL Engineers, Inc., now part of Jacobs Engineering Group Inc. (Jacobs), has been contracted by Kinder Morgan to supervise, coordinate, and optimize the operation and maintenance (O&M) of the groundwater remediation system located at the site. This SWPPP/BMP Plan will be maintained onsite at all times and will be made available to the Water Board or their authorized agent when requested. This SWPPP/BMP Plan is intended to assist Kinder Morgan, their contractors, and subcontractors in managing and controlling stormwater at the site.

1.3 Facility Assessment

1.3.1 Description of Facility Operations

The former SFPP Norwalk Pump Station was located on a 50-acre military tank farm. Kinder Morgan had equipment within 2 acres of the site and easements for its pipelines along the southern and eastern boundaries of the facility. Previously, Kinder Morgan operated a pump station near the south-central area of the site. The pump station was used to transfer fuel to and from the site, and as an in-line pumping station for portions of the Kinder Morgan pipeline network. The pump station was decommissioned in 2001, but three pipelines remain in service and continue to convey refined petroleum fuels, including gasoline, diesel, and jet fuel. The three pipelines include two 16-inch pipelines and one 24-inch pipeline heading eastward along the southern boundary of the site (one of the 16-inch pipelines bends at the southeastern corner of the facility and continues northward within the eastern easement). The pipelines were fitted with block valves and motor-operated valves within the site. The block valve located in the south-central area of the site was historically referred to as the “intermediate 24-inch block valve.” The intermediate 24-inch block valve and other motor-operated valves were removed between third quarter 2016 and second quarter 2017. There is a block valve located offsite near the southeastern area of the site, which is still in use and is referred to as the “southeastern 24-inch block valve” or “offsite 24-inch block valve.”

Kinder Morgan operates remediation systems consisting of soil vapor extraction (SVE), BS, total fluids extraction (TFE), groundwater extraction (GWE), and treatment of extracted soil vapor and groundwater to address two specific areas at and near the site: the south-central area, and the southeastern area. Kinder Morgan also previously operated a GWE system for remediation of the western offsite area (or West Side Barrier [WSB] area).

The SVE and BS systems were offline from October 2016 to June 2017 to facilitate the removal of an old thermal oxidizer and replacement with a new regenerative thermal oxidizer (RTO) system for treatment of extracted soil vapor. The new RTO is able to remove soil vapors at a rate of up to 2,500 standard cubic feet per minute (scfm) from up to 33 SVE wells. The extracted vapors are conveyed to a knockout tank that separates entrained moisture from the soil vapors. Soil vapors are then treated in a three-bed RTO prior to emission to the atmosphere. Operation of the SVE and RTO treatment system will continue to be

conducted in accordance with Permit to Operate No. G46187 A/N 578777 issued by the South Coast Air Quality Management District.

There are two BS systems at the site, and each consists of multiple integrated components designed to supply compressed air for injection of clean air (oxygen) into the subsurface through two horizontal BS wells: BS-01 and BS-02. The BS systems are designed to inject air at a combined rate up to 1,400 scfm. The purpose of BS is to enhance microbial degradation of hydrocarbon constituents in the saturated zone of the water table aquifer.

The TFE and GWE systems are designed to:

- Contain and reduce the extent of light nonaqueous phase liquid (LNAPL, or free product).
- Provide hydraulic capture of dissolved chemicals of potential concern.
- Lower the LNAPL surface (where present) and groundwater table, thus exposing more hydrocarbon-impacted soil for SVE.

The free product and GWE portion of the system currently consists of:

- In the south-central part of the site: 20 TFE wells
- In the southeastern part of the site: 5 TFE wells

The WSB GWE system was shut down in August 2008 based on the reduced lateral extent and low concentrations of volatile organic compounds west of the site. Figure 2 shows the remediation system layout including the location of the SVE, TFE, BS, and GWE wells onsite.

Groundwater, free product, liquid condensate from the SVE knockout tank, and stormwater collected from the treatment pad are piped to a dissolved air flotation (DAF) oil-water separator (OWS) (herein referred to as DAF/OWS). Free product, if any, recovered from the DAF/OWS is collected in a storage tank and recycled at an offsite location. The water from the DAF/OWS is sent through a bag filter and two liquid-phase granular activated carbon (LGAC) vessels in series, and then into an equalization tank. From the equalization tank, the water is sent to two fluidized bed bioreactors (FBBRs) in parallel. The FBBRs have been installed downstream of the LGAC units to treat tertiary butyl alcohol (TBA), a new discharge parameter in the current Waste Discharge Requirements. From the FBBRs, the water is sent to two more LGAC vessels in series before being discharged to the storm drain and subsequently to Coyote Creek. The groundwater treatment system (GWTS) operates at a maximum rate of 150,000 gpd. Figure 3 shows the process flow diagram of the GWTS. Figure 4 presents the equipment layout of the GWTS, including all tanks, drums, sump, and equipment for the GWTS and SVE.

The SVE and GWTS remediation equipment is contained within three bermed concrete containment pads (treatment pads). Stormwater from the treatment pads is pumped through the GWTS prior to discharge. Treated stormwater, treated groundwater, and treated condensate from the BS and SVE systems are discharged to the site stormwater collection system that conveys water to Coyote Creek (Figure 2).

1.3.2 Site Layout

The site is bounded by Excelsior Drive to the north, Norwalk Boulevard to the west, Cheshire Street and residential housing to the south, and Holifield Park and Bloomfield Avenue to the east. Access to the site is from Norwalk Boulevard.

Runoff is limited by a block wall to the west and south of the site and an approximately 5-foot-high berm north of Kinder Morgan's remediation system. The nearest water body is Coyote Creek, which is approximately 3.5 miles south of the site.

Figure 2 presents the location of the treatment pads, extraction and monitoring wells, buildings, access, location of Kinder Morgan's remediation system, site stormwater collection system, Kinder Morgan's remediation system discharge line, and stormwater flow directions to the storm drain near the treatment pad.

1.3.3 Stormwater Collection System

The stormwater collection system at the site consists of one storm drain inlet located approximately 150 feet east of the treatment pad as shown on Figure 2. The storm drain inlet east of the treatment pad and the discharge point for the GWTS are both connected and drain to Coyote Creek. Stormwater from graveled and nonpaved areas infiltrates into the ground.

1.3.4 Water Usage

Groundwater is extracted from 25 TFE wells throughout the site, and then treated by the GWTS at the treatment pad. Water also will be used to clean the treatment pad and equipment associated with the SVE and GWTS. The washwater is collected in a sump within the treatment pad area and then treated by the GWTS (Figure 4). The treated groundwater and washwater are then discharged to the stormwater system and conveyed to Coyote Creek.

1.4 SWPPP/BMP Plan Goals and Objectives

The goals of this SWPPP/BMP Plan are to:

- Control "significant materials" that may pollute stormwater.
- Reduce the concentration of such materials so that stormwater discharge will not cause violations of California water quality standards.

To accomplish these goals, the SWPPP/BMP Plan will focus on two major objectives:

- Identify and evaluate sources of pollutants associated with the remediation activities conducted by Kinder Morgan, their contractors, and subcontractors that may affect the quality of stormwater discharges and authorized non-stormwater discharges from the site.
- Identify and implement site-specific BMPs to reduce or prevent pollutants in stormwater discharges and authorized non-stormwater discharges.

The implementation and success of the SWPPP rely on traditional stormwater management practices, including BMPs that are tailored to the operations of the remediation systems.

1.5 SWPPP/BMP Plan Availability

A copy of this SWPPP/BMP Plan is maintained at the treatment pad and will be made available to the Water Board or an authorized agency representative upon request in accordance with NPDES Permit No. CA0063509.

1.6 SWPPP/BMP Plan Amendments

This SWPPP/BMP Plan must be reviewed annually as required by Section VII.C.3 of the NPDES permit. This SWPPP/BMP Plan will be updated or amended as follows:

- If there is a change in the SVE or GWTS processes, BMP design, construction, operations, or maintenance as a result of exceedances of a benchmark
- If the description of the potential pollutant sources or the pollution prevention measures and control identified in this SWPPP/BMP Plan are deemed inadequate

- When routine inspections or compliance evaluations determine that additional BMPs are required to maintain compliance with permit conditions
- When an inspection by local, state, or federal officials determines that modifications to the SWPPP/BMP Plan are necessary
- If there is a spill or unauthorized discharge that is associated with remediation activities by Kinder Morgan, their contractors, and subcontractors at the site

If the amendment is due to a release or unauthorized discharge, the following information will be included in the amendment: description of release, actions taken to respond to the release, and measures to prevent recurrence of such releases.

The proposed modifications shall be submitted to the Water Board at least 30 days prior to implementation unless otherwise approved by the Water Board. The SWPPP/BMP Plan, reports, and amendments submitted to the Water Board will be signed in accordance with Attachment D Section V.B. of NPDES Permit No. CA0063509.

SWPPP/BMP Plan amendments will be maintained in an “Amendment SWPPP and BMP Plan” file at the site. A record of the changes and amendments to the SWPPP/BMP Plan will be maintained on a summary sheet to be included with this file. Documentation of the annual review also will be included in this file. The summary will include date of amendment, reason for the amendment, and description of corrective actions taken. An example of the summary sheet is provided in Appendix A.

2. Stormwater Pollution Prevention Team

The Stormwater Pollution Prevention Team (SWPPP team) consists of the Kinder Morgan Project Manager, Jacobs Project Manager, Jacobs Project Engineer, Kinder Morgan operators, contractors, and subcontractors who are assigned various responsibilities for implementing the SWPPP/BMP Plan.

Members of the team are responsible for conducting inspections, maintaining BMPs, conducting training for new members of the pollution prevention teams, and responding to spill events. SWPPP team members will meet annually and following spill events to re-evaluate the effectiveness of BMPs employed throughout the site, and will modify the SWPPP/BMP Plan if necessary. Should any member of the team need to be replaced, an equally qualified individual will be assigned to the SWPPP team, or responsibilities will be assigned to other members of the SWPPP team. The responsibilities of each team member are presented in Section 4.2.1 of this SWPPP/BMP Plan. The current team members are listed below.

SWPPP Team Members	
Kinder Morgan Project Manager	Stephen Defibaugh Kinder Morgan 1100 Town and Country Road Orange, California, 92868 (714) 560-4802
Jacobs Project Manager:	Eric Davis Jacobs 1000 Wilshire Boulevard, Suite 2100 Los Angeles, California 90017 (404) 323-1600 (mobile phone)
Jacobs Project Engineer:	Vladimir Carino Jacobs 6 Hutton Centre Drive, Suite 700 Santa Ana, California 92707 (619) 621-9406 (mobile phone)
Kinder Morgan Operators:	James Dye Kinder Morgan 2319 South Riverside Avenue Bloomington, California 92316 (909) 631-0231 (mobile phone)
	Patrick Loya Kinder Morgan 2000 East Sepulveda Boulevard Long Beach, California 90810-1937 (909) 231-0182 (mobile phone)
	Hoyt Ryales Kinder Morgan 9950 San Diego Mission Road San Diego, California 92108 (619) 517-5593 (mobile phone)

3. Summary of Potential Contamination Sources

3.1 Site Drainage and Outfalls

The site stormwater collection system and stormwater flows are presented on Figure 2. Stormwater is managed in two separate methods. Stormwater is either collected and discharged into Coyote Creek, or allowed to infiltrate into the ground. The stormwater collection system at the site consists of one storm drain inlet located approximately 150 feet east of the treatment pad as shown on Figure 2. The storm drain inlet east of the treatment pad and the discharge point for the GWTS are both connected and drain to Coyote Creek. Stormwater from graveled and nonpaved areas infiltrates into the ground. As shown on Figure 2, the majority of the site is unpaved. The grade surrounding the site is relatively flat. Stormwater in these areas percolates into the ground.

3.2 Description of Potential Pollution Sources

The potential sources that may be expected to add pollutants to stormwater discharges are the SVE, the GWTS, and associated equipment. The SVE has a knockout tank that separates entrained moisture from the extracted soil vapors. The GWTS includes a DAF/OWS and its associated tank (transfer tank), the product tank, the equalization tank, bag filters, five LGAC vessels, a hydrochloric acid (HCl) tank, and two FBBRs and their associated tanks. The GWTS also includes the piping, pumps, and valves that are connected to the extraction wells, tanks, and filters.

Key components of the systems and their potential stormwater risks are described below.

- **Knockout Tank** – The knockout tank (980-gallon capacity, a working volume of 300 gallons) separates moisture from the extracted soil vapors. A release of the condensate could potentially occur if there is an overflow of the knockout tank.
- **BS Compressor Air Tank** – The BS compressor air tank (200-gallon capacity) stores the compressed air to be used for the BS well. Condensate will build up in the tank. A release of the condensate could potentially occur from leaks and ruptures of the drain valves and associated piping.
- **DAF/OWS and Transfer Tank** – Groundwater, stormwater, free product, and condensate from the SVE knockout tank and BS compressor air tank are continuously being pumped into the DAF/OWS and the transfer tank. The current DAF/OWS and transfer tank capacities are 1,855 gallons and 300 gallons, respectively. A release of these fluids could potentially occur if there is an overflow of the DAF/OWS or transfer tank.
- **Product Tank** – Free product, if any, from the DAF/OWS will be conveyed to the product tank. The product tank capacity is 1,100 gallons. A release of product could potentially occur if there is an overflow of the product tank.
- **Backwash Tank** – A 500-gallon polyethylene backwash disinfection tank and associated piping are located within the main equipment pad near the primary LGAC vessels. The backwash tank is used to treat backwash water from the lead LGAC vessels. The backwash water frequently contains biological mass that can clog the carbon vessels. Backwashing is accomplished by using pretreated groundwater from the equalization tank. Backwash water from the carbon vessels can then be treated with a dilute HCl solution, if needed, to destroy biological mass before being sent to the head of the treatment system. Once full, the water from the backwash tank is pumped to the surge tank (near the head of the GWTS, after the DAF/OWS) for additional treatment.
- **Equalization Tank** – After the DAF/OWS, the treated groundwater, stormwater, and condensate from the SVE knockout tank will flow to two LGAC vessels in series. The water is then conveyed to a 3,000-gallon equalization tank. A release of the LGAC treated water could potentially occur if there is an overflow of the equalization tank.

- **FBBR and Associated Tanks** – After the equalization tank, water is conveyed to two FBBR units in parallel. Each FBBR unit has an influent and effluent tank. A release of the water could potentially occur if there is an overflow of any of the tanks associated with the FBBRs.
- **Potable Water Tank and Eye Wash Station** – A 500-gallon polyethylene tank is staged near the Conex box outside the treatment pad. Potable water is stored in the tank and is used for water supply to the eye wash station, which is located inside the treatment pad. There is no risk to stormwater since the tank contains potable water.
- **Pipes, Pumps, and Valves** – A release of the extracted groundwater can occur due to leaks and ruptures of the GWTS-associated pipes, pumps, and valves.
- **Leaking Containers** – 55-gallon drums, which can contain liquid methyl tertiary butyl ether (MTBE), groundwater, and nonhazardous or hazardous solid wastes, are stored on the treatment pad. The MTBE drum is contained within a 120-gallon secondary containment bin. Maintenance fluids of less than 5 gallons also are contained within the treatment pad or inside the steel conex container near the treatment pad. Drums and small containers are kept closed. These items can potentially leak and release their contents.
- **HCl Storage and Replenishment** – A 540-gallon tank containing HCl (31 percent solution) is stored on the treatment pad. The HCl tank is also contained within a 650-gallon secondary containment. The liquid HCl is used to control the pH of the pretreated groundwater and reduce the formation of calcium carbonate precipitates in the FBBRs and downstream carbon vessels. The HCl tank is filled approximately once per month and a release of HCl could potentially occur during this process.
- **Carbon Changeout** – Once breakthrough of contaminants is observed in samples collected from the LGAC tanks, a routine changeout of the activated carbon occurs. The spent carbon and trace influent water are removed with a vacuum from the top of the tank and loaded into a tank on the supplier's truck. Spent carbon or water can potentially leak during this process.
- **Groundwater Sampling and Well Redevelopment** – Groundwater sampling of monitoring and extraction wells and well redevelopment by Kinder Morgan contractors occur routinely at the facility. A pump or bailer is used to extract groundwater and/or product from the wells. The product and purged groundwater are transferred to 55-gallon drums or to the sump located inside the treatment pad. A release of the extracted groundwater could potentially occur during this process.

3.3 Inventory of Significant Materials and Storage Areas

The following is a list of materials and chemicals located at the treatment pad:

- **Extracted Groundwater** – Groundwater is continuously being extracted and then treated, at a maximum rate of 150,000 gpd, from several wells at the site. The treated groundwater is not stored onsite, but is discharged via a storm drain system and eventually conveyed to Coyote Creek.
- **Free Product** – Free product may be extracted from some TFE wells. Free product, if any, recovered from the DAF/OWS is collected in a storage tank and recycled at an offsite location.
- **LGAC** – There are currently five LGAC vessels located on the treatment pad. Each vessel can hold approximately 2,000 pounds of dry LGAC.
- **HCl** – HCl is used to control the pH of the pretreated groundwater and reduce the formation of calcium carbonate precipitates in the FBBRs and downstream carbon vessels. The HCl is stored in one 540-gallon tank and a 650-gallon secondary containment on the treatment pad.
- **MTBE** – MTBE is used as a nutrient for the biomass in the FBBR units. Prior to dilution in the 55-gallon MTBE feed drum, MTBE is stored in small quantities (less than 1 liter) within a fire-resistant chemical storage cabinet. Within the cabinet, MTBE is placed in a secondary containment tray that will hold 1.5-liters of liquid. The Safety Data Sheet for MTBE is also kept onsite.

Other significant materials such as machinery maintenance fluids are also present onsite; however, these are in small quantities (less than 5 gallons) and are located within the treatment pad or inside the steel conex container near the treatment pad. Therefore, they have limited potential to impact stormwater.

Unless otherwise noted, the materials listed above are located within three concrete bermed treatment pads, which have a combined storage capacity of approximately 13,014 gallons. The SVE equipment pad volume is 4,500 gallons, the volume for the FBBRs equipment pad is 3,200 gallons, and their shared sump has a volume of 242 gallons. The DAF/OWS remediation pad volume is 4,870 gallons and its sump volume is 202 gallons. Also, temporary storage tanks with secondary containment may be used onsite for groundwater collected from groundwater monitoring activities or well redevelopment activities.

3.4 Dust- and Particulate-Generating Activities

Activities by Kinder Morgan, their contractors, and subcontractors with the potential to generate dust or particulates that may be deposited within the boundaries of the site include driving through unpaved areas, weed abatement, and small-scale excavation work. If necessary, excessive dust will be controlled with water (for example, water trucks or hoses).

Demolition activities conducted by the military also may generate dust or particulates; however, these activities are included as part of the military's construction SWPPP, previously submitted under separate cover.

3.5 Historical Leaks and Spills from Remediation System

3.5.1 Generator Spill

On June 22, 2010, a release of diesel fuel from a 1,000-gallon external tank for a generator was discovered in an unpaved area east of the power building on the Kinder Morgan former lease area. The generator was being used to supply temporary power to the remediation system. The release had stopped by the time it was discovered, and Kinder Morgan promptly notified the appropriate regulatory agencies including the Water Board.

Between June and July 2010, approximately 40 cubic yards of nonhazardous soil was excavated from an approximately 290-square-foot area to a maximum depth of 7 feet. More extensive excavation was not feasible due to the presence of electrical conduits and the proximity of the power building entry platform.

During the excavation, soil samples were collected and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), as well as total petroleum hydrocarbons diesel range (TPH-d). Results indicated that TPH-d and BTEX in soil remaining in place decreased with depth and distance from the source area. The excavation was backfilled with clean, imported soil on October 22, 2010.

The generator was removed from the site when the power to the remediation system was restored. To prevent a leak in the future, all the equipment used at the site and associated hoses and tanks will be inspected prior to and during use. Also, if the equipment holds chemicals such as diesel, gasoline, or oil greater than 5 gallons, the equipment will be placed on a secondary containment to prevent the chemicals from leaking.

3.5.2 DAF/OWS Containment Pad Overflow

On August 21, 2018, approximately 1,937 gallons of partially treated, extracted groundwater was released from the 21-foot-wide by 31-foot-long by 1-foot-deep secondary containment pad containing the DAF/OWS and LNAPL product holding tank. As a result of this incident, released water flowed on the ground surface to the north and east of the DAF/OWS containment pad, wetting a 3,108-square-foot area of unpaved, unvegetated soil.

To evaluate whether petroleum hydrocarbons may have impacted the ground surface, soil samples were collected from 0 to 6 inches below ground surface (bgs.) and from 6 to 12 inches bgs. at various locations within the wetted areas and sent to an analytical laboratory to test for the presence of BTEX, TPH-d, and TPH gasoline range (TPH-g). Results indicated that BTEX and TPH-g were not detected in any of the samples and TPH-d concentrations were below action levels.

There are level sensors in the 300-gallon DAF/OWS transfer tank and the DAF/OWS containment pad sump. These level sensors will shut down the groundwater pumps instantly to stop more water from going into the system. An alarm will also notify the operator that there is a high-level situation at the site. These level sensors likely malfunctioned due to a buildup of dirt/debris, and therefore did not shut down the groundwater pumps or notify the plant operator as they are programmed to do.

Corrective actions taken were to clean the level sensors, test their functionality, and add redundant level sensors on the DAF/OWS, main system, and the FBBR containment pads. Also, an additional administrative control was added to include inspecting the level sensors weekly and cleaning them on a monthly basis.

There were no other known leaks or spills due to Kinder Morgan's remediation system at the site.

The spill history form included in Appendix A will be updated as needed to provide a record of all leaks and spills at the site.

4. Best Management Practices

The BMPs used at this facility are designed to prevent accidental releases of extracted groundwater to the stormwater collection system or Coyote Creek (the permitted receiving water). These BMPs include measures and controls taken to promote good housekeeping, spill prevention, preventive maintenance, engineering controls, secondary containments, and additional measures such as site inspections, BMP functionality inspections, employee training, record keeping, and data management.

4.1 Structural Source Controls

The SVE and GWTS are located within three concrete bermed containment pads (treatment pads). The floors of the pads are slightly graded toward a sump, which collects spills and leaks from the treatment pads. The total capacity of the three treatment pads is 13,014 gallons: the SVE equipment pad has a volume of 4,500 gallons; the FBBRs equipment pad has a volume of 3,200 gallons; the SVE and FBBR pads share a sump that has a volume of 242 gallons; the DAF/OWS pad volume is 4,870 gallons, and its sump volume is 202 gallons. Also, temporary storage tanks with secondary containment may be used onsite for groundwater collected from groundwater monitoring activities or well redevelopment activities.

4.2 Nonstructural Source Controls

4.2.1 Stormwater Pollution Prevention Team

Jacobs has formed an SWPPP team, led by the Kinder Morgan and Jacobs project managers who assign responsibilities to comply with the NPDES permit conditions. The team members and their responsibilities include:

- **Kinder Morgan Project Manager:** Responsible for the overall O&M of the SVE and GWTS at the site and for seeing that all discharges are in compliance with the NPDES permit conditions.
- **Jacobs Project Manager:**
  1. Assigns one or more individuals by name and title to be responsible for development of, and modifications to, the SWPPP.
  2. Leads the SWPPP team and ensures that inspections are performed, maintenance of BMPs is conducted, and new members of the SWPPP team are trained.
  3. Ensures the availability of the team for emergency situations.
- **Jacobs Project Engineer:**
  1. Assigns responsibilities to the SWPPP team and assists the Jacobs project manager in implementation.
  2. Ensures that inspections are performed, maintenance of BMPs is conducted, and new members of the SWPPP team are trained.
  3. Will respond to spill events associated with operations of the SVE and GWTS on the treatment pad at the site.
- **Site Operators:**
  1. Conduct inspections, maintain BMPs, and train new members of the SWPPP team.
  2. Supervise contractors (involved during the carbon changeout task, extraction pump maintenance, soil and/or groundwater sampling task, etc.) to ensure that this SWPPP is executed.
  3. Will respond to spill events associated with operation of the SVE and GWTS on the treatment pad at the site.

4.2.2 Good Housekeeping

Kinder Morgan, their contractors, and subcontractors employ good housekeeping practices at the site; associated discharge data and documentation are managed in an orderly fashion. The good housekeeping BMPs include the following:

- Personnel are assigned to keep the area in and around the treatment pad free of excess material, debris, and wastes. Site operators will inspect the site weekly and will pick up excess material, debris, and wastes and place them in a drum on the treatment pad. The drums will be labeled and removed from the site on an as-needed basis. If the contents of the drums are hazardous waste, they will be removed from the site within 90 days of when the first material was placed in the drum.
- Materials will not be stored outside of the treatment pad, but will be kept on the treatment pad or in the steel conex box near the treatment pad at the site.
- Debris due to operations such as maintenance of the system, carbon changeout, groundwater sampling, soil or soil vapor sampling, extraction pump replacement, or other tasks conducted or supervised by Kinder Morgan, their contractors, or subcontractors will be picked up to prevent the debris from entering storm drains and the stormwater collection system.
- Site operators will wash the treatment pad with water and remove the contents of the sump on an as-needed basis.

4.2.3 Preventive Maintenance

The preventive maintenance program includes routine inspection of site operations and equipment maintenance. Equipment including tanks, pumps, pipes, and valves will be checked regularly for signs of deterioration. Table 1 provides a maintenance schedule that will be performed by the site operators. The following are additional preventive BMPs applicable at the GWTS facility:

- Prevent the discharge of unpermitted liquid or solid wastes (which can occur during groundwater monitoring and sampling, well redevelopment, pipe replacement, repairs, etc.) onto the ground, surface water, or stormwater collection system by inspecting all equipment prior to and during use.
- Conduct washing of equipment inside an impervious contained area.
- Use drip pans, buckets, plastic liners, etc., to collect leaks and spills from vehicles such as the carbon supply trucks or drill rigs, and empty drip pans immediately after leaks or spills are collected from an uncovered area.
- Cover and contain fuels, lubricants, and other petroleum products.

4.2.4 Engineering Controls

The DAF/OWS, the tank associated with the DAF/OWS, the product tank, the backwash tank, the equalization tank, and the tanks associated with the FBBRs are all equipped with high-water-level switches. If the water level in the DAF/OWS, the tank associated with the DAF/OWS, the product tank, the backwash tank, or the equalization tank hit a high level, which may cause water to overflow from the tank, the air compressors that supply air for the pumps in the extraction wells will turn off and an automatic ball valve upstream of the DAF/OWS will close. If the water levels in the tanks associated with the FBBRs reach a high level, some of the pumps (responsible for overflow) for the FBBRs will turn off. However, the recirculation pumps will stay on to keep water flowing through the bioreactors, thereby keeping the biomass alive.

There is also a pump inside the sump of the FBBR and DAF/OWS containment pads. When each sump exceeds a certain depth, the sump pump turns on and transfers the fluid in the sump to the DAF/OWS to be treated by the GWTS. Each containment pad (DAF/OWS, main treatment, and the FBBR containment pads) has a separate high- and a redundant high-high-level sensor. When the high- and high-high-level sensors on the treatment pad are triggered, the GWTS will shut down and can only be turned back on manually.

The BS condensate tank is equipped with a high-level switch that will shut down the compressor should the tank hit a high level.

4.3 Spill Prevention and Reporting and Emergency Cleanup

A Spill Contingency Plan (SCP) has been completed for Kinder Morgan's remediation systems at the site. The SCP details prevention and control aspects, including where secondary containment is provided. The SCP includes established procedures used by the GWTS facility personnel in the event of spills or releases of significant materials. Kinder Morgan, their contractors, and subcontractors who may be involved in spill events are familiar with the response procedures to the extent that, during a spill emergency, they can act without the need to refer to a plan for procedural guidance. The SCP will be kept in the same location as this SWPPP/BMP Plan within the treatment pad.

4.4 Erosion and Sediment Control

To prevent sediment from entering the storm drain 150 feet east of the remediation systems, military personnel have installed wattles or sand bags around the storm drain near the treatment pad. The grade surrounding the site is relatively flat; therefore, erosion control is not required at the site.

4.5 Training

Jacobs will train those employees who will be responsible for maintaining the structural and nonstructural BMPs in place at the site. They also will be trained in the maintenance and operation of the GWTS. A record of the training will be logged in the Training Form (included in Appendix A).

4.6 Inspection

Kinder Morgan site operators and Jacobs will complete numerous inspections of the SVE system and GWTS at the treatment pad and other operations specifically related to the SWPPP/BMP Plan. Kinder Morgan site operators and Jacobs will inspect and promptly repair or replace all leaking connections, pipe hoses, valves, etc., that could contaminate stormwater.

Kinder Morgan will also visually inspect each aboveground tank associated with the remediation systems on a weekly basis. The level sensors on the containment pads will also be inspected on a weekly basis.

The military inspects the storm drain, 150 feet east of the remediation systems, on a routine basis as part of their sitewide SWPPP requirements. Kinder Morgan also performs inspections of the storm drain on a weekly basis.

4.7 Record Keeping

Record keeping BMPs and requirements are detailed in Section 5 of this SWPPP/BMP Plan.

5. Inspection and Record Keeping

5.1 Inspection Procedures

SWPPP and BMP personnel from both Kinder Morgan and Jacobs will be assigned the responsibility of conducting routine inspections while performing their normal tasks at the site. The inspections will be conducted monthly, quarterly, or annually.

The following inspection procedures will be followed:

- Obtain a copy of the Inspection Checklist (see Appendix A).
- Enter the inspection date and the inspector's initials at the top of the checklist.
- Check-off each item listed in the "status" column as passing or failing.
- Note on the inspection form and discuss with the Kinder Morgan project manager and Jacobs project manager the recommended corrective action if a violation is found that cannot be corrected immediately, such as those requiring replacement parts that are not available, or capital improvements, or a need for engineering controls.
- Indicate the date that the corrective actions have been completed.
- Place completed inspection forms in a dedicated file within the GWTS facility.

5.2 Record Keeping

All completed inspection forms, monitoring data, correspondence with the Water Board, and other records generated as a result of this SWPPP/BMP Plan will be maintained by the Kinder Morgan and Jacobs project managers. These records will be stored in files that are easily accessible within the treatment pad. These records must be made available to the Water Board, or an authorized agency, upon request. These records shall be maintained as part of the SWPPP/BMP Plan and the NPDES permit for a minimum of 3 years, unless directed otherwise by the Water Board.

5.3 Employee Training

Employee training programs will be established to inform personnel at all levels of responsibility at the GWTS facility of the components and goals of the SWPPP/BMP Plan. The Kinder Morgan and/or Jacobs project manager or other trained and qualified individuals will perform annual stormwater pollution and prevention training. The SWPPP and BMP team will participate in the annual training. Additional elements to be included in the training will be as follows:

- Stormwater pollution laws and regulations and, if applicable, modifications
- Specific stormwater pollution prevention policies
- Review of the SWPPP/BMP Plan
- Review of the SCP
- Inspection requirements, and results and recommendations of previous inspections
- Designated personnel identified as SWPPP/BMP Plan team members, and updates for additional personnel

Temporary or seasonal workers will be informed on a "general awareness" level of the stormwater pollution prevention polices, emergency response contacts, and SCP procedures.

Table

Table 1. Treatment Systems Routine Maintenance Schedule

Stormwater Pollution Prevention Plan, Soil Vapor Extraction and Groundwater Treatment System

SFPP Norwalk Pump Station, Norwalk, California

Task	Frequency	Equipment Specs	Order Information
Mechanical			
Soil Vapor Extraction Treatment System			
Check belts for SVE treatment system blower	Monthly/replace as needed		
Inspect the automated 10-inch header and 10-inch dilution valves	Monthly	--	--
Inspect conveyance lines to check for leaks or breaks	Monthly		
Verify vacuum at SVE wellheads and SVE manifold	Monthly		
Check flame arrestor for fouling	Every 6 months	--	--
Change oil in SVE treatment system blower	Every 5,000 operating hours	Mobil Vacuum Oil: ISO Grade 68, SAE Grade 20, 32-oz package; order 6	McMaster Carr: Pt No. 2158K71
Thermocouple and controller calibration	Annually		CTC: (562) 989-2366
Biosparging Systems			
Check the cooling oil level	Weekly	Kaeser CSD 100 and Kaeser DSD 175	--
Control cabinet: check the filter mat	Weekly	Kaeser CSD 100 and Kaeser DSD 175	--
Condensate drainage maintenance	Weekly	Kaeser CSD 100 and Kaeser DSD 175	--
Clean the coolers	Every 1,000 operating hours	Kaeser CSD 100 and Kaeser DSD 175	--
Check the cooling air filter mat	Every 1,000 operating hours	Kaeser CSD 100 and Kaeser DSD 175	--
Change the cooling air filter mat	Every 3,000 operating hours	Kaeser CSD 100 and Kaeser DSD 175	--
Control cabinet: change the filter mat	Every 3,000 operating hours	Kaeser CSD 100 and Kaeser DSD 175	--
Change the service module	Every 6,000 operating hours	Kaeser CSD 100 and Kaeser DSD 175	--
Change the air filter element	Indicated on Sigma Control 2	Kaeser CSD 100 and Kaeser DSD 175	--
Motor bearing maintenance	Indicated on Sigma Control 2	Kaeser CSD 100 and Kaeser DSD 175	--
Check the coupling	Indicated on Sigma Control 2	Kaeser CSD 100 and Kaeser DSD 175	--
Check the condensate drain	Indicated on Sigma Control 2	Kaeser CSD 100 and Kaeser DSD 175	--
Change the oil filter	Indicated on Sigma Control 2; annually	Kaeser CSD 100 and Kaeser DSD 175	--
Change the oil separator cartridge	Indicated on Sigma Control 2; 3 years	Kaeser CSD 100 and Kaeser DSD 175	--
Change the cooling oil	Annually	Kaeser CSD 100 and Kaeser DSD 175	--
Check the safety relief valve	Annually	Kaeser CSD 100 and Kaeser DSD 175	--
Check the overheating safety shutdown function	Annually	Kaeser CSD 100 and Kaeser DSD 175	--
Check the coolers for leaks	Annually	Kaeser CSD 100 and Kaeser DSD 175	--
Water-cooling maintenance.	Annually	Kaeser CSD 100 and Kaeser DSD 175	--
Heat recovery system maintenance	Annually	Kaeser CSD 100 and Kaeser DSD 175	--
Check that all electrical connections are tight	Annually	Kaeser CSD 100 and Kaeser DSD 175	--

Table 1. Treatment Systems Routine Maintenance Schedule

Stormwater Pollution Prevention Plan, Soil Vapor Extraction and Groundwater Treatment System

SFPP Norwalk Pump Station, Norwalk, California

Task	Frequency	Equipment Specs	Order Information
Mechanical (continued)			
Total Fluids Extraction/Groundwater Extraction Treatment System			
Change bag filters	Biweekly or as needed	Polypropylene, 25-micron, 8-1/4-inch diameter x 34-inch length	McMaster Carr: Pt No. 51595K74
Inspect all pressure gauges in the treatment pad and replace as necessary	Weekly		
Inspect pressure regulators and pressure gauges at air compressor manifold	Weekly		
Inspect conveyance lines to check for leaks or breaks	Weekly		
Perform backwash of lead LGAC unit	Monthly or as needed		
Confirm pump presence and operation (flow rate) at extraction wellheads	Monthly or as needed	--	--
Inspect air relief valves on carbon vessels	Monthly		
Pull and inspect pneumatic pumps. Adjust depths based on depth to product measurements.	Quarterly or as needed	AP4T top-loading and AP4B bottom-loading pumps	QED: (800) 624-2026
Inspect the level switches in the 300-gallon transfer tank, product tank, and sump	Quarterly or as needed	--	--
Check/change south-central air compressor belts	Every 6 months or as needed	--	
Check/change southeastern air compressor belts	Every 6 months or as needed	Kaeser SM-11	American Compressor: (562) 572-1463
Change south-central air compressor oil	Every 6 months	Curtis-Toledo Motor 15 hp	Accessorie Air: (714) 634-2292
Change southeastern air compressor oil	Every 6 months	Kaeser SM-11, M-460 oil	American Compressor: (562) 572-1463:
Check/replace hoses for pneumatic pumps	Every 6 months	Air Exhaust: 1/2-inch ID; Air Supply: 3/8-inch ID; Liquid Discharge: 1-inch ID	QED: (800) 624-2026
Inspect inside of LGAC units, replace gaskets as needed	During changeouts	Siemens PV-2000, 75 gpm max	--
Inspection of the fire extinguishers on the main pad	Annually	--	Fire Master
Housekeeping			
Soil Vapor Extraction Treatment System			
Inspect SVE knockout tank, remove water and debris from bottom	Quarterly or as needed	--	--
Heat clean catalyst in catalytic oxidizer	As needed	--	--
Clean 10-inch header butterfly valve	Annually	--	--
Clean 10-inch dilution butterfly valve	Annually	--	--
Clean dilution and combustion air filters	Annually	--	--

Table 1. Treatment Systems Routine Maintenance Schedule

Stormwater Pollution Prevention Plan, Soil Vapor Extraction and Groundwater Treatment System

SFPP Norwalk Pump Station, Norwalk, California

Task	Frequency	Equipment Specs	Order Information
Housekeeping (continued)			
Total Fluids Extraction/Groundwater Extraction Treatment System			
Clean flow sensors in totalizers	Quarterly or as needed	Flow Sensor Pt No.: F51530-P0	GF-Signet: (915) 581-2550
Clean oil/water separator	Quarterly or as needed	Ecologix VLT-410	Ecologix Environmental Systems; (678) 514-2100
Clean the level switches in the 300 gallon transfer tank, product tank, and sump	Quarterly or as needed	--	--
Power wash both pads and sump	Quarterly or as needed	--	--
Pressure Wash 300 gallon transfer tank	Quarterly or as needed	--	--
Clean sump pump	Quarterly or as needed	--	--
Clean transfer pump No. 1	Quarterly or as needed	Index: 0152578, Model No: 3656 Imp Diameter: 5- 5/8-inch, size 1-½ x 2-6	Goulds Pumps, Inc.
Remove trash from site and label drums	As needed	--	--
Change air compressor particulate filter	As needed		

Notes:

gpm = gallons per minute

hp = horsepower

ID = inner diameter

LGAC - liquid-phase granular activated carbon

SVE = soil vapor extraction

VGAC = vapor-phase granular activated carbon

Figures

Aerial image © Google Earth, 2014. Annotation by CH2M HILL, 2014.

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

North

0 .5 1.0

Approximate scale in miles

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AX0311191258SAC Figure_1_SFPP_norwalk_site_location_map.ai tdaus 03.11.2019

Legend

- Horizontal Biosparge Well Entry Point
- Existing Groundwater Monitoring Well
- Existing Remediation Well
- KMEP Remediation Piping Layout (Above Ground and Below Ground)
- Horizontal Vapor Extraction Well Piping
- Horizontal Biosparge Well (Dashed Line Depicts Approximate Lateral Extent of Well Screen)
- Bermed Area
- Storm Drain
- Stormwater Flow
- Stormwater Conveyance Line
- SFPP's Remediation System Discharge Line
- Air Compressor System

Imagery Source:
Google Earth October 18, 2016.

N

0 75 150 300
Feet

1 inch = 150 feet

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

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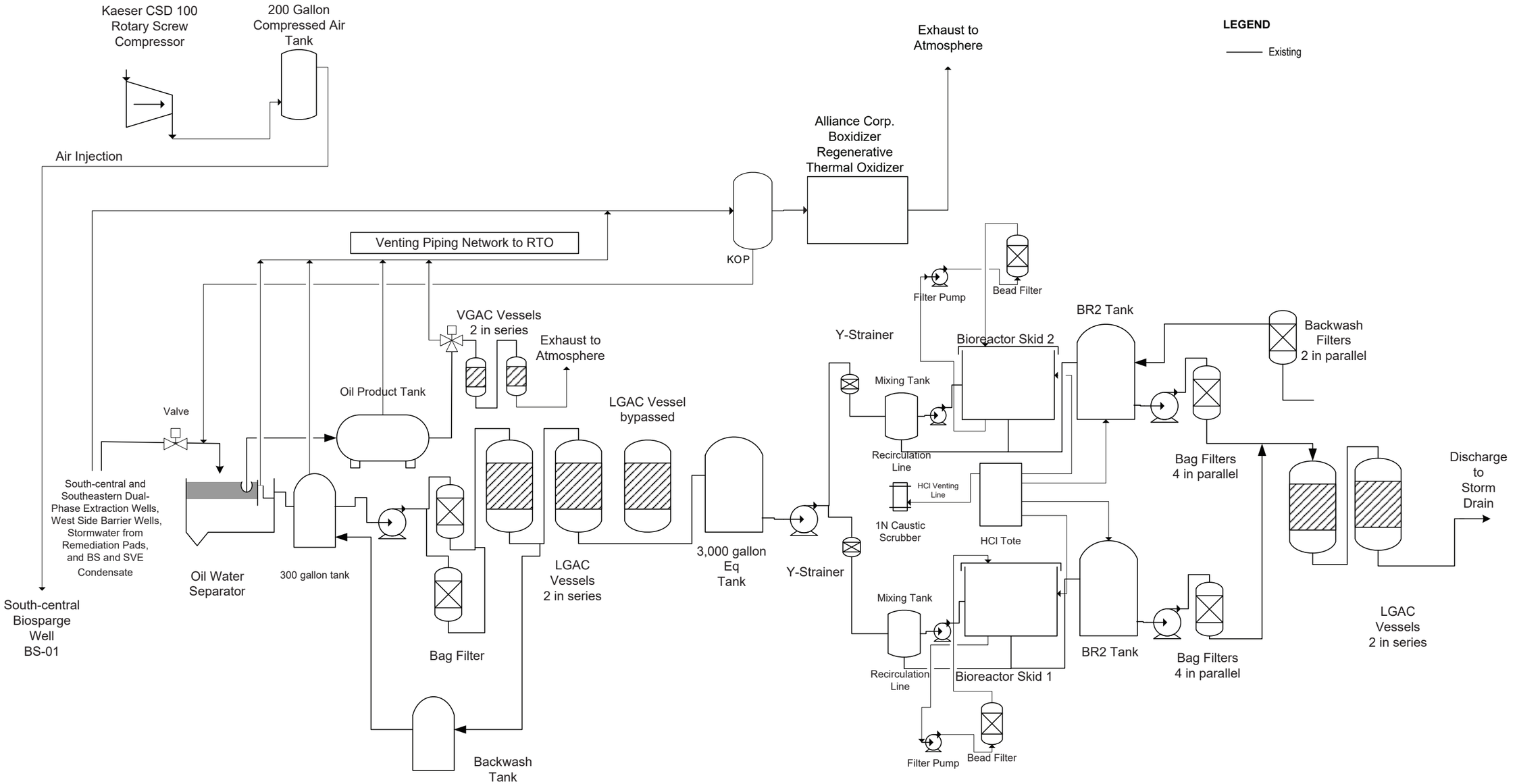
AX0311191258SAC Figure_2_SFPP_norwalk_remediation_system_layout.ai tdaus 03.11.2019

BIOSPARGE SYSTEM

VAPOR EXTRACTION SYSTEM



LEGEND

Existing

GROUNDWATER AND PRODUCT EXTRACTION SYSTEM

Figure 3. Process Flow Diagram
SFPP Norwalk Pump Station
Norwalk, California

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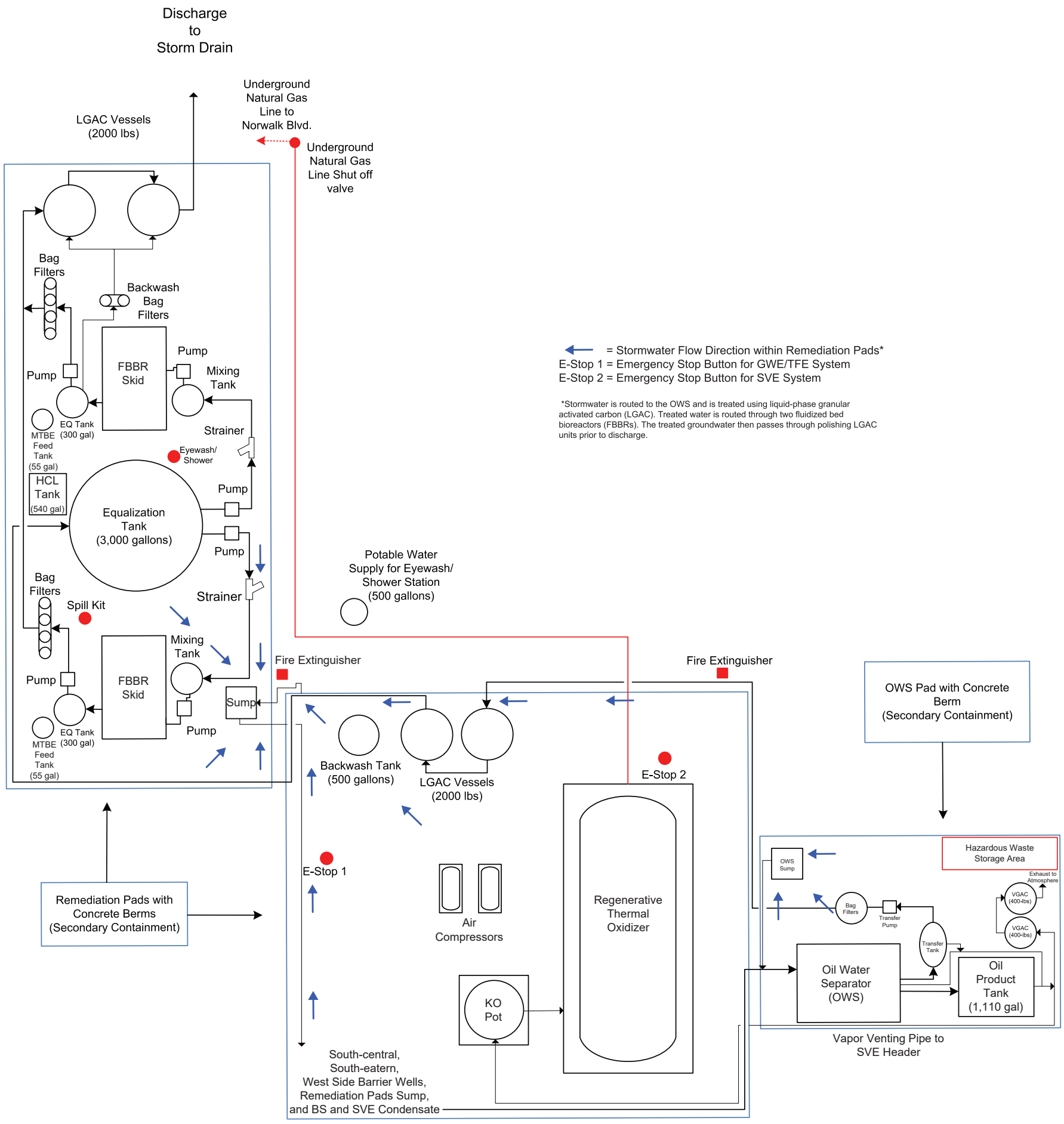

Figure 4. Equipment Layout
SFPP Norwalk Pump Station
Norwalk, California

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Appendix A
Supporting Forms

Record of Changes and Amendments
Stormwater Pollution Prevention Plan
Soil Vapor Extraction and Groundwater Treatment System
SFPP Norwalk Pump Station, Norwalk, California

Date	Amendment	Reason
3/6/2015	Updates to September 2011 SWPPP	Upgrades to Soil Vapor Extraction (SVE) System and Groundwater Treatment System (GWTS)
3/15/2016	Updates to September 2015 SWPPP	Updated Figure 3; SWPPP includes Biosparging (BS) System.
1/13/17	Updates to March 2016 SWPPP	Updated Figure 3 and Figure 4. Included new DAF/OWS remediation pad in text.
2/15/2018	Updates to January 2017 SWPPP	Revised site maps, process flow diagram, and equipment layout. Updated project team. Included removal of block valves in the south-central area, installation of a new regenerative thermal oxidizer, and the installation of a second biosparge well (BS-02) at the southeastern area.
3/8/2019	Updates to February 2018 SWPPP	Updated Section 3.5 to include the DAF/OWS containment pad overflow that occurred on August 21, 2018, and corrective measures that were implemented to avoid a future occurrence. Updated Section 4.2 to include the redundant level sensors on the DAF/OWS, main treatment, and FBBR containment pads.

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Training Form
Stormwater Pollution Prevention Plan
Soil Vapor Extraction and Groundwater Treatment System
SFPP Norwalk Pump Station, Norwalk, California

Date	Name (Print)	Signature

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Spill History Form
Stormwater Pollution Prevention Plan
Soil Vapor Extraction and Groundwater Treatment System
SFPP Norwalk Pump Station, Norwalk, California

Date	Reason for Spill	Actions and Results
6/22/2010	See Section 3.5	See Section 3.5
8/21/2018	See Section 3.5	See Section 3.5

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Inspection Checklist
Stormwater Pollution Prevention Plan
Soil Vapor Extraction and Groundwater Treatment System
SFPP Norwalk Pump Station, Norwalk, California

Inspector:	**Date:**	

No.	Best Management Practices	Yes	No
1	**Good Housekeeping**		
	Are interior and exterior free of excess material, debris, and wastes?		
	Are all materials, tools, and equipment stored in the GWTS facility building?		
	Are the treatment pads clean and sump free of debris?		
	Are all wastes due to operations conducted or supervised by Kinder Morgan or Jacobs picked up and disposed of?		
	Are drums and/or containers properly labeled?		
	Is there any hazardous waste onsite?		
	If hazardous waste is onsite, has it been less than 90 days of when the first material was placed in the container or drum?		
2	**Preventive Maintenance/Engineering Controls**		
	Has an inspection of the SVE and GWTS been conducted?		
	Were leaks and spills from pipes, pumps, and valves observed?		
	Are the high level switches in the concrete containment pads functional?		
	Is the transfer tank high-high level switch functional?		
	Is the equalization tank high-high level switch function?		
	Do the high level switches in the FBBR effluent tanks functional?		
	Are the lids of drums, buckets, janitorial supplies, or maintenance fluids properly secured?		
	Were leaks or spills from drums, buckets, or other containers filled with fluids observed?		
	Has all equipment been cleaned, washed, or serviced as necessary?		
3	**Erosion and Sediment Control**		
	Is the storm drain 150 feet east of the treatment pad free of debris?		
	Are hay wattles or sandbags installed around the storm drain?		
	If so, do the hay wattles or sandbags need replacement?		
4	**Employee Training Program**		
	Are all the employees assigned to the SVE and GWTS trained regarding the site structural and nonstructural BMPs that are in place?		
	Are all the employees assigned to the SVE and GWTS trained regarding the operation and maintenance of the SVE and GWTS?		

Inspection Checklist
Stormwater Pollution Prevention Plan
Soil Vapor Extraction and Groundwater Treatment System
SFPP Norwalk Pump Station, Norwalk, California

Corrective Actions:

Additional Comments:

STI SP001 AST Record

OWNER INFORMATION	FACILITY INFORMATION	INSTALLER INFORMATION
Name	Name	Name
Number and Street	Number and Street	Number and Street
City, State, Zip Code	City, State, Zip Code	City, State, Zip Code

.

TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____ ☐ Other _____

☐ Unknown

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: _____ Type: _____

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____ ☐ Other _____

☐ Unknown

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: Type:

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____

☐ Unknown ☐ Other _____

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: Type:

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____

☐ Unknown ☐ Other _____

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: Type:

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____

☐ Unknown ☐ Other _____

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: Type:

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

STI SP001 Monthly Inspection Checklist

General Inspection Information:

Inspection Date: _____ Retain Until Date: _____ (36 months from inspection date)

Prior Inspection Date: _____ Inspector Name: _____

Tanks Inspected (ID #'s): _____

Inspection Guidance:

- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.
- Upon discovery of water in the primary tank, secondary containment area, interstice, or spill container, remove promptly or take other corrective action. Before discharge to the environment, inspect the liquid for regulated products or other contaminants and disposed of it properly.
- (*) designates an item in a non-conformance status. This indicates that action is required to address a problem.
- Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for 36 months.
- **In the event of severe weather (snow, ice, wind storms) or maintenance (such as painting) that could affect the operation of critical components (normal and emergency vents, valves), an inspection of these components is required as soon as the equipment is safely accessible after the event.**

Item	Task	Status	Comments
1.0 Tank Containment			
1.1 Containment structure	Check for water, debris, cracks or fire hazard	□Yes* □No □N/A	
1.2 Primary tank	Check for water	□Yes* □No	
1.3 Containment drain valves	Operable and in a closed position	□Yes □No* □N/A	
1.4 Pathways and entry	Clear and gates/doors operable	□Yes □No* □N/A	
2.0 Leak Detection			
2.1 Tank	Visible signs of leakage	□Yes* □No	
2.2 Secondary Containment	Visible signs of leakage from tank into secondary containment	□Yes* □No	
2.3 Surrounding soil	Visible signs of leakage	□Yes* □No □N/A	
2.4 Interstice	Visible signs of leakage	□Yes* □No □N/A	

Item	Task	Status	Comments
3.0 Tank Equipment			
3.1 Valves	a. Check for leaks.	□Yes* □No □N/A	
	b. Tank drain valves must be kept locked.	□Yes* □No □N/A	
3.2 Spill containment boxes on fill pipe	a. Inspect for debris, residue, and water in the box and remove.	□Yes* □No □N/A	
	b. Drain valves must be operable and closed.	□Yes* □No □N/A	
3.3 Liquid level equipment	a. Both visual and mechanical devices must be inspected for physical damage.	□Yes □No* □N/A	
	b. Check that the device is easily readable	□Yes □No* □N/A	
3.4 Overfill equipment	a. If equipped with a "test" button, activate the audible horn or light to confirm operation. This could be battery powered. Replace the battery if needed	□Yes □No* □N/A	
	b. If overfill valve is equipped with a mechanical test mechanism, actuate the mechanism to confirm operation.	□Yes □No* □N/A	
3.5 Piping connections	Check for leaks, corrosion and damage	□Yes* □No	
4.0 Tank Attachments and Appurtenances			
4.1 Ladder and platform structure	Secure with no sign of severe corrosion or damage?	□Yes □No* □N/A	
5.0 Other Conditions			
5.1 Are there other conditions that should be addressed for continued safe operation or that may affect the site spill prevention plan?		□Yes* □No	

Additional Comments:

STI SP001 Annual Inspection Checklist

General Inspection Information:

Inspection Date: _____ Retain Until Date: _____ (36 months from inspection date)

Prior Inspection Date: _____ Inspector Name: _____

Tanks Inspected (ID #'s): _____

Inspection Guidance:

- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.
- Remove promptly upon discovery standing water or liquid in the primary tank, secondary containment area, interstice, or spill container. Before discharge to the environment, inspect the liquid for regulated products or other contaminants and disposed of it properly.
- In order to comply with EPA SPCC (Spill Prevention, Control and Countermeasure) rules, a facility must regularly test liquid level sensing devices to ensure proper operation (40 CFR 112.8(c)(8)(v)).
- (*) designates an item in a non-conformance status. This indicates that action is required to address a problem.
- Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for 36 months.
- Complete this checklist on an annual basis supplemental to the owner monthly-performed inspection checklists.
- **Note: If a change has occurred to the tank system or containment that may affect the SPCC plan, the condition should be evaluated against the current plan requirement by a Professional Engineer knowledgeable in SPCC development and implementation.**

Item	Task	Status	Comments
1.0 Tank Containment			
1.1 Containment structure	Check for: • Holes or cracks in containment wall or floor • Washout • Liner degradation • Corrosion • Leakage • Paint failure • Tank settling	□Yes* □No □N/A	
2.0 Tank Foundation and Supports			
2.1 Foundation	Settlement or foundation washout?	□Yes* □No	
2.2 Concrete pad or ring wall	Cracking or spalling?	□Yes* □No □N/A	

Item	Task	Status	Comments
2.3 Supports	Check for corrosion, paint failure, etc.	□Yes* □No □N/A	
2.4 Water drainage	Water drains away from tank?	□Yes □No* □N/A	
2.5 Tank grounding	Strap secured and in good condition?	□Yes □No* □N/A	
3.0 Cathodic Protection			
3.1 Gavlvanic cathodic protection system	Confirm system is functional, includes the wire connections for galvanic systems	□Yes □No* □N/A	
3.2 Impressed current system	a. Inspect the operational components (power switch, meters, and alarms).	□Yes □No* □N/A	
	b. Record hour meter, ammeter and voltmeter readings.	□Yes □No* □N/A	
4.0 Tank Shell, Heads, Roof			
4.1 Coating	Check for coating failure	□Yes* □No	
4.2 Steel condition	Check for: • Dents • Buckling • Bulging • Corrosion • Cracking	□Yes* □No	
4.3 Roof slope	Check for low points and standing water	□Yes* □No □N/A	
5.0 Tank Equipment			
5.1 Vents	Verify that components are moving freely and vent passageways are not obstructed for: • Emergency vent covers • Pressure/vacuum vent poppets • Other moving vent components	□Yes* □No	

Item	Task	Status	Comments
5.2 Valves	Check the condition of all valves for leaks, corrosion and damage.	□Yes* □No	
5.2.1 Anti-siphon, check and gate valves	Cycle the valve open and closed and check for proper operation.	□Yes □No* □N/A	
5.2.2 Pressure regulator valve	Check for proper operation. (Note that there may be small, 1/4 inch drain plugs in the bottom of the valve that are not visible by looking from above only)	□Yes □No* □N/A	
5.2.3 Expansion relief valve	Check that the valve is in the proper orientation. (Note that fuel must be discharged back to the tank via a separate pipe or tubing.)	□Yes □No* □N/A	
5.2.4 Solenoid valves	Cycle power to valve to check operation. (Electrical solenoids can be verified by listening to the plunger opening and closing. If no audible confirmation, the valve should be inspected for the presence and operation of the plunger.)	□Yes □No* □N/A	
5.2.5 Fire and shear valves	a. Manually cycle the valve to ensure components are moving freely and that the valve handle or lever has clearance to allow valve to close completely.	□Yes □No* □N/A	
	b. Valves must not be wired in open position.	□Yes □No* □N/A	

Item	Task	Status	Comments
	c. Make sure fusible element is in place and correctly positioned.	□Yes □No* □N/A	
	d. Be sure test ports are sealed with plug after testing is complete and no temporary test fixture or component remains connected to valve.	□Yes □No* □N/A	
5.3 Interstitial leak detection equipment	Check condition of equipment, including: • The window is clean and clear in sight leak gauges. • The wire connections of electronic gauges for tightness and corrosion • Activate the test button, if applicable.	□Yes □No* □N/A	
5.4 Spill containment boxes on fill pipe	a. If corrosion, damage, or wear has compromised the ability of the unit to perform spill containment functions, replace the unit.	□Yes* □No □N/A	
	b. Inspect the connections to the AST for tightness, as well as the bolts, nuts, washers for condition and replace if necessary.	□Yes* □No □N/A	
	c. Drain valves must be operable and closed	□Yes* □No □N/A	
5.5 Strainer	a. Check that the strainer is clean and in good condition.	□Yes □No* □N/A	

Item	Task	Status	Comments
5.5 Strainer	b. Access strainer basket and check cap and gasket seal as well as bolts.	□Yes □No* □N/A	
5.6 Filter	a. Check that the filter is in good condition and is within the manufacturer's expected service life. Replace, if necessary.	□Yes □No* □N/A	
	b. Check for leaks and decreased fuel flow	□Yes □No* □N/A	
5.7 Flame arrestors	Follow manufacturer's instructions. Check for corrosion and blockage of air passages.	□Yes* □ No □N/A	
5.8 Leak detector for submersible pump systems	Test according to manufacturer's instructions and authority having jurisdiction (AHJ). Verify leak detectors are suited and properly installed for aboveground use.	□Yes □No* □N/A	
5.9 Liquid level equipment	a. Has equipment been tested to ensure proper operation?	□Yes □No* □N/A	
	b. Does equipment operate as required?	□Yes □No* □N/A	
	c. Follow manufacturer's instructions	□Yes □No* □N/A	
5.10 Overfill equipment	a. Follow manufacturer's instructions and regulatory requirements for inspection and functionality verification.	□Yes □No* □N/A	
	b. Confirm device is suited for above ground use by the manufacturer	□Yes □No* □N/A	

Item	Task	Status	Comments
6.0 Insulated Tanks			
6.1 Insulation	Check condition of insulation for: • Missing sections • Areas of moisture • Mold • Damage	□Yes* □ No □N/A	
6.2 Insulation cover or jacket	Check for damage that will allow water intrusion	□Yes* No □N/A	
7.0 Miscellaneous			
7.1 Electrical wiring and boxes	Are they in good condition?	□Yes □No* □N/A	
7.2 Labels and tags	Ensure that all labels and tags are intact and readable.	□Yes □No* □N/A	

Additional Comments:

STI SP001 Portable Container Monthly Inspection Checklist

General Inspection Information:

Inspection Date: _____ Retain Until Date: _____ (36 months from inspection date)

Prior Inspection Date: _____ Inspector Name: _____

Containers Inspected (ID #'s): _____

Inspection Guidance:

- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.
- (*) designates an item in a non-conformance status. This indicates that action is required to address a problem.
- Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for 36 months.

Item	Area: _____	Area: _____	Area: _____	Area: _____
1.0 AST Containment/Storage Area				
1.1 ASTs within designated storage area?	□Yes □No*	□Yes □No*	□Yes □No*	□Yes □No*
1.2 Debris, spills, or other fire hazards in containment or storage area?	□Yes* □No	□Yes* □No	□Yes* □No	□Yes* □No
1.3 Water in outdoor secondary containment?	□Yes* □No	□Yes* □No	□Yes* □No	□Yes* □No
1.4 Drain valves operable and in a closed position?	□Yes □No*	□Yes* □No	□Yes* □No	□Yes* □No
1.5 Egress pathways clear and gates/doors operable?	□Yes □No*	□Yes* □No	□Yes* □No	□Yes* □No

Item	Area: _____	Area: _____	Area: _____	Area: _____
2.0 Leak Detection				
2.1 Visible signs of leakage around the container or storage area?	□Yes* □No	□Yes* □No	□Yes* □No	□Yes* □No
3.0 Container				
3.0 Noticeable container distortions, buckling, denting or bulging?	□Yes* □No	□Yes* □No	□Yes* □No	□Yes* □No

Comments:

KINDER MORGAN
ENERGY PARTNERS, L.P.

SFPP, L.P.
Operating Partnership

March 13, 2019

California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Subject: **Spill Contingency Plan Revision 5**
SFPP, L.P. Norwalk Pump Station
15306 Norwalk Boulevard, Norwalk, California
(NPDES No. CA0063509, CI No. 7497)

Attention: Information Technology Unit

In reference to the subject National Pollutant Discharge Elimination System (NPDES) permit, please find enclosed the revised Spill Contingency Plan for controlling accidental discharges for the product recovery and groundwater extraction and treatment system at the Norwalk Pump Station located at 15306 Norwalk Boulevard, Norwalk, California.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on the __13th___ day of __March 2019.
at __4:17 p.m._____

_____ (signature)

Stephen T. Defibaugh__ (printed name)

Remediation Project Manager___ (title)

2600 Michelson Drive, Suite 500
Irvine, California 92612
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F +1.949.224.7501
www.jacobs.com

Mr. Stephen Defibaugh
Kinder Morgan Energy Partners, L.P.
1100 Town and Country Road
Orange, California 92868

March 13, 2019

Subject: **Spill Contingency Plan, Revision 5**
SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California
(NPDES No. CA0063509, CI No. 7497)

Dear Mr. Defibaugh,

This Revised Spill Contingency Plan (SCP) for controlling accidental discharges has been prepared for SFPP, L.P. (SFPP), an operating partnership of Kinder Morgan, Inc. (Kinder Morgan), and was developed pursuant to the Waste Discharge Requirements of National Pollutant Discharge Elimination System (NPDES) Permit No. CA0063509 for the site, as required in Order No. R4-2016-0309 issued by the California Regional Water Quality Control Board, Los Angeles Region (RWQCB). This plan supersedes the previous SCP submitted to the RWQCB on January 27, 2017.

The SCP describes existing controls and contingency measures to be taken in the event of an accidental discharge of untreated groundwater from Kinder Morgan's product recovery and groundwater extraction and treatment system. The treatment system is installed at the SFPP Norwalk Pump Station within the Defense Fuel Support Point Norwalk, located at 15306 Norwalk Boulevard, Norwalk, California (the site; Figure 1).

Background

Kinder Morgan operates remediation systems consisting of soil vapor extraction (SVE), total fluids extraction (TFE), groundwater extraction (GWE), and treatment of extracted soil vapor and groundwater to address the south-central and southeastern areas of the site. Biosparging (BS) is also performed in the south-central area to enhance natural attenuation of hydrocarbon constituents. A second BS well was installed in the southeastern area in November 2017, and an additional BS system (a compressor that is able to inject air at a rate up to 882 standard cubic feet per minute) will be installed later this year. Kinder Morgan previously operated a GWE system for remediation of the western offsite area (or West Side Barrier area); however, the system was shut down in August 2008 based on the reduced lateral extent and low concentrations of volatile organic compounds west of the site.

The objectives of the remediation systems are to contain and control the migration of hydrocarbon constituents in groundwater and soil vapor, and to remove hydrocarbon mass from soil and groundwater.

The remediation system includes the following wells:

- South-Central Area
  - 20 TFE wells
  - 24 onsite and 6 offsite SVE wells (most collocated with TFE wells)
  - 2 horizontal SVE wells
  - 1 horizontal BS well
- Southeastern Area (24-inch Block Valve Area)
  - 5 TFE wells
  - 3 SVE wells (collocated with TFE wells)
  - 1 horizontal BS well

A site plan of the remediation equipment is presented on Figure 2. Groundwater, free product, liquid condensate from the SVE knockout tank, liquid condensate from the two BS system air compressor tanks, and stormwater collected from the treatment pads are piped to a dissolved air flotation (DAF) oil-water separator (OWS) (herein referred to as the DAF/OWS). Free product, if any, recovered from the DAF/OWS is collected in a storage tank and recycled at an offsite location. The water from the DAF/OWS is sent through a bag filter and two liquid-phase granular activated carbon (LGAC) vessels in series, and then into an equalization tank. From the equalization tank, the water is sent to two fluidized bed bioreactors (FBBRs) in parallel. The FBBRs have been installed downstream of the LGAC units to treat fuel oxygenates including methyl tertiary butyl ether and tertiary butyl alcohol, which are not effectively treated in the LGAC. From the FBBRs, the water is conveyed to two more LGAC vessels in series before being discharged to the storm drain that leads to Coyote Creek.

The SVE and groundwater treatment system (GWTS) remediation equipment is contained within three bermed concrete containment pads (treatment pads). Stormwater from the treatment pads is pumped through the GWTS for treatment. Treated stormwater, treated groundwater, and treated condensate from the SVE and BS systems are discharged to the storm drain that leads to Coyote Creek. Discharge to Coyote Creek is performed in accordance with NPDES Permit CA0063509, Order No. R4-2016-0309.

Spill Contingency Plan

The following provides a summary and evaluation of preventive measures currently in place, and procedures to be followed in the event that accidental discharge occurs. Preventive controls associated with areas of potential accidental discharge in the groundwater extraction and treatment system are summarized below:

1. Piping between the TFE and GWE wells and the treatment system pads is set inside secondary containment piping.
2. Groundwater treatment processes including the carbon vessels, DAF/OWS and transfer tank, product tank, backwash tank, equalization tank, and two FBBRs and their respective tanks are located within three bermed concrete pads designed to contain any spills and leakage. The floors of the pads are graded and piping connected so that any spills, leaks, or rainwater are collected into two sumps. The water in the sumps is pumped into the DAF/OWS and then treated by the GWTS.
3. High-level switches and redundant high-high-level switches are installed in each bermed concrete pad; this activates a high-level alarm that shuts down the treatment system and GWE pumps.
4. The DAF/OWS is equipped with a high-level switch. The treatment system and GWE pumps shut down in the event of a high alarm in the DAF/OWS.
5. The transfer tank associated with the DAF/OWS is equipped with a high-high-level switch. The treatment system and GWE pumps shut down in the event of a high-high alarm in the transfer tank.
6. The product tank is equipped with a high-high-level switch. The treatment system and GWE pumps shut down in the event of a high-high alarm in the product tank.

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7. The backwash tank is equipped with a float valve. If the water level in the tank reaches a high level, the float valve will stop the flow of water into the tank.
8. The tanks associated with the FBBRs are equipped with high-level switches. If the water levels in the tanks associated with the FBBRs reach a high level, the pumps inside the equalization tank, which feeds the bioreactors, will turn off; this allows the water level in the equalization tank to reach a high-high level. The treatment system and GWE pumps shut down in the event of a high-high alarm in the equalization tank. The recirculation pumps for the FBBRs will stay on to keep water flowing through the bioreactors in recirculation mode, thereby keeping the biomass alive.
9. GWE pumps, air compressors, and process pumps are linked to the treatment system control panel. Shutdown of the treatment system and GWE pumps is simultaneously triggered in the event of a shutdown or power failure in any of the treatment process components.
10. The control panel is also linked to an autodialer onsite. Therefore, if there is a shutdown of the treatment system, site operators will automatically receive a call informing them of the shutdown status of the treatment system.
11. All wastes generated from the groundwater treatment process, such as used bag filters, sludge from the DAF/OWS, and FBBR backwash waste, are stored in sealed 55-gallon drums within the treatment system bermed concrete containment pads before being sent offsite for proper disposal.
12. The SVE knockout tank is equipped with a level transmitter that shuts down the SVE system through an analog signal to the programmable logic controller (PLC) if the water level in the tank reaches a high level.
13. All aboveground storage tanks associated with the remediation systems will be visually inspected weekly by Kinder Morgan personnel to confirm tank integrity. In addition, high-level switches associated with the tanks or treatment pads will be tested on a quarterly basis.

Kinder Morgan personnel are trained to follow the Kinder Morgan California Notification Process and Integrated Contingency Plan, and are trained in proper spill prevention, minimization, and notification procedures prior to working at the site. In the event of an actual or threatened release where hazardous or potentially hazardous materials contact or threaten to contact the ground or water, all facility personnel are trained to immediately notify appropriate agencies, safely shut down system components, and minimize any release that has already occurred. The spill reporting requirements, procedures, list of contacts, and absorptive material are kept onsite at all times. In the event of a release, Kinder Morgan's California Field Notification Forms (Attachment A) are kept onsite to assist personnel in properly documenting the conditions, contacting the appropriate parties, and providing the required information. The forms shall be completed immediately following each incident of release and forwarded to the appropriate parties.

The preventive controls and contingency procedures described above are currently operational and fully effective. No additional preventive controls or contingency procedures beyond those already in use at the site are deemed to be necessary.

Should you require any further information, please contact Vladimir Carino/Jacobs at (949) 224-7548.

Sincerely,

Vladimir Carino
Project Engineer

Attachments:

Figure 1 – Site Location Map
Figure 2 – Remediation System Layout
Attachment A – Kinder Morgan California Field Notification Forms

Distribution List:

Mr. Stephen Defibaugh/Kinder Morgan
Ms. Ching-Yin To/RWQCB
Mr. Eric Davis/Jacobs

Figures

Aerial image © Google Earth, 2014. Annotation by CH2M HILL, 2014.

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

North

0 .5 1.0

Approximate scale in miles

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AX0311191258SAC Figure_1_SFPP_norwalk_site_location_map.ai tdaus 03.11.2019

Legend

- Horizontal Biosparge Well Entry Point
- Existing Groundwater Monitoring Well
- Existing Remediation Well
- KMEP Remediation Piping Layout (Above Ground and Below Ground)
- Horizontal Vapor Extraction Well Piping
- Horizontal Biosparge Well (Dashed Line Depicts Approximate Lateral Extent of Well Screen)
- Bermed Area
- Storm Drain
- Stormwater Flow
- Stormwater Conveyance Line
- SFPP's Remediation System Discharge Line
- Air Compressor System

Imagery Source:
Google Earth October 18, 2016.

N

0 75 150 300
Feet

1 inch = 150 feet

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

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Attachment A
Kinder Morgan California Field Notification Forms

KINDER MORGAN ENERGY PARTNERS, L.P.

Revised March 2010

California Field Notification Form

Date of Incident: _____
Time of Incident: _____

Name of Person(s) Making Notifications:
_____

1. ☐ 911 ☐ N/A
Call start time: _____ end time: _____
Follow-up call* - Time: _____ Date: _____
Contact: _____

2. ☐ Initiate Shutdown
Method Used: _____
_____
KM Contact, if any: _____
Call start time: _____ end time: _____
Follow-up call* - Time: _____ Date: _____
Contact: _____

3. ☐ Area Manager/QI (or designee)
AM Contact: _____
Call start time: _____ end time: _____
Follow-up call* - Time: _____ Date:_____
Note: **Area Manager** or Qualified Individual [QI] must notify the OSRO (oil spill contractor) whenever OSPR jurisdiction is involved. See ICP Vol.2, Section 9.
OSRO Contact: _____
Call start time: _____ end time: _____
Follow-up call* - Time: _____ Date: _____
Contact: _____
☐ **Project Manager** ☐ **N/A**
Contact: _____
Call start time: _____ end time: _____
Follow-up call* - Time: _____ Date: _____

4. ☐ CEMA 800-852-7550
CEMA Control #:_____
CEMA Contact:_____
Call start time: _____ end time: _____
Follow-up call* - Time: _____ Date: _____
Contact: _____

5. ☐ NRC 800-424-8802
NRC Control #: _____
NRC Contact: _____
Call start time: _____ end time: _____
Follow-up call* - Time: _____ Date: _____
Contact: _____

LM = Left Message – a message MUST be left for any agency if a person does not pick up and there is voice mail.

NR = No response – Indicate "NR" if no one at the agency answered the call and there is no voice mail available to leave a message.

*** Record Follow-up Call information in the last box on Page 2 of this form**

6. ☐ CUPA(s) See CUPA list
County Notified: _____
CUPA Contact: _____
Call start time: _____ end time: _____
Follow-up call* - Time: _____ Date: _____
Contact: _____
County Notified: _____
CUPA Contact: _____
Call start time: _____ end time: _____
Follow-up call* - Time: _____ Date: _____
Contact: _____
County Notified: _____
CUPA Contact: _____
Call start time: _____ end time: _____
Follow-up call* - Time: _____ Date: _____
Contact: _____
County Notified: _____
CUPA Contact: _____
Call start time: _____ end time: _____
Follow-up call* - Time: _____ Date: _____
Contact: _____

7. Bureau of Reclamation (if reservoir impacted)
☐ Southern Region 702-293-8060
☐ Northern Region 916-979-3004 (or 3003, or 3002)
BOR Contact: _____
Call start time: _____ end time: _____
Follow-up call* - Time: _____ Date: _____
Contact: _____

8. ☐ ORCC 714-560-4839
ORCC Contact: _____
Call start time: _____ end time: _____
Follow-up call* - Time: _____ Date: _____
Contact: _____

9. Local Special Agreement Agencies
- **San Bernardino Cnty Communications Center** 800-338-6942
  Contact _____ Time_____
- **San Diego County RWQCB** 858-467-2980
  Contact _____ Time_____
- **Contra Costa Cnty Hlth Services** 925-646-1112
  Contact _____ Time_____
- **Solano Cnty Dept of Resource Mgmt** 707-784-6765
  Contact _____ Time_____

Follow-up call* - Time: _____ Date: _____
Contact: _____

Fax copies to ORCC and appropriate Regional Office. Area Manager retains original copy for files.
• ORCC fax# 714-541-3682 • Southern Region fax # 909-877-9036 • Northern Region fax# 707-424-6089

California Field Notification Form

- Below are variations of the questions you will be asked when making notifications.
- **Have this information readily available during the notifications.**
- To ensure KM reports uniform information when calling multiple agencies, write down the information and report it consistently.

Name and phone number of KM caller:
Name and phone number of designated KM employee for follow-up calls (Area Manager or Designee):
Company Name and Mailing Address: *Mailing address for reports: Kinder Morgan Energy Partners L.P. 1100 Town & Country Rd. Orange, CA 92868*
Date and Time of Incident:
Product Type:
Location of Release or Threatened Release (see facility address list as needed): ☐ Terminal _____ ☐ Breakout Facility _____ ☐ Pump Station/ Booster _____ ☐ Pipeline: LS _____ / PLMP _____ Line size _____ Cross Street / Landmark _____
County:
Weather Conditions:
Description of what happened:
Amount Released (area dimensions not quantity); estimate size of release area (i.e. 5ft by 5ft): **Approximately = by**
Water Affected or Threatened, if any:
Measures taken or plans to abate, contain and cleanup the spill:
Death or Injuries, if any:
Other Agencies Notified, if any:
Information provided in follow-up calls:

If the answer to any question is unknown, tell the agency the information is "unknown at this time"; then document the response to the agencies was "unknown at this time".

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