

SFPP, L.P.Operating Partnership

May 13, 2016

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 2016 SFPP, L.P. Norwalk Pump Station 15306 Norwalk Boulevard, Norwalk, California (NPDES No. CA0063509, CI No. 7497)

Executed on the <u>13th</u> day of <u>May</u> 2016.

at <u>1:53 p.m.</u>

Attention: Information Technology Unit

In reference to the subject National Pollutant Discharge Elimination System (NPDES) permit, please find enclosed the First Quarter 2016 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.

Hysle Og
(signature)
phen T. Defibaugh (printed name)



CH2M

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

May 13, 2016

Subject: Effluent Monitoring Report, January 1 to March 31, 2016 (First Quarter 2016)

SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California

(NPDES No. CA0063509, CI No. 7497)

Dear Mr. Defibaugh,

This report has been prepared by CH2M HILL Engineers, Inc. (CH2M), on behalf of SFPP, L.P. (SFPP), an operating partnership of Kinder Morgan Energy Partners, L.P. (Kinder Morgan), to summarize National Pollutant Discharge Elimination System (NPDES) monitoring related to the discharge of treated groundwater from SFPP's product recovery and groundwater extraction (GWE) system. This system is installed at the SFPP Norwalk Pump Station located within the Defense Fuel Support Point Norwalk, at 15306 Norwalk Boulevard, Norwalk, California (the site).

SFPP performed certain operations, maintenance, and monitoring tasks on the product recovery and GWE systems. SFPP retained CH2M to prepare this report based on the NPDES monitoring performed by SFPP. This report describes NPDES monitoring activities during the period of January 1 to March 31, 2016.

Remediation Systems

SFPP currently operates remediation systems consisting of soil vapor extraction (SVE), total fluids extraction (TFE) of free product, GWE for hydraulic control, and treatment of extracted soil vapors and groundwater to address two specific areas at and near the site: the south-central area and the southeastern area. Operation of the West Side Barrier (WSB) GWE system (WSB system) for remediation of the western offsite area was discontinued in August 2008 based on the reduced lateral extent and low concentrations of volatile organic compounds (VOCs) west of the site. SFPP also operates a horizontal biosparge system to enhance mass removal of free-phase and dissolved-phase hydrocarbon constituents in the south-central area of the site. Further discussion of this system is provided below.

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

The main GWTS processes free product and groundwater from up to 20 extraction wells located in the south-central area and up to 5 extraction wells located in the southeastern area of the site. During the first quarter 2016, the GWTS extracted from 11 wells equipped with pneumatically operated top-loading total fluids pumps, including 10 wells in the south-central area (GMW-9, GMW-10, GMW-22, GMW-24, GMW-25, GMW-0-20, GMW-O-23, MW-SF-2, MW-SF-11, and MW-SF-12) and 3 wells in the southeastern area (GMW-36, GMW-O-15, and GMW-O-18). Free product and groundwater recovered by pneumatically operated top-loading total fluids pumps are piped to an oil-water separator (OWS). Free product from the OWS is collected in a storage tank and recycled at an offsite location. Water from the OWS is treated using liquid-phase granular activated carbon (LGAC). Treated water is routed through an onsite 3,000-gallon equalization tank. Two fluidized bed bioreactors (FBBRs) installed downstream of the equalization tank treat fuel oxygenates such as tertiary butyl alcohol (TBA) and methyl tertiary butyl ether (MTBE) that are not treated in the LGAC. The treated groundwater then passes through polishing LGAC units prior to discharge in accordance with the NPDES permit (No. CA0063509, CI No. 7497).

SFPP recently completed installation of a horizontal biosparge system in the south-central area of the site. Construction of the biosparge well is documented in the report titled, *Horizontal Biosparge Well and Soil Vapor Monitoring Probe Completion Report* (CH2M, 2015). The biosparge system injects ambient air into the horizontal biosparge well, BS-01, via a rotary screw air compressor, at a maximum design rate of approximately 500 standard cubic feet per minute (scfm). SFPP's SVE system has an interlock that ensures the biosparge system cannot operate unless the SVE system is operating. Operation of the SVE system reduces the potential for off-gassing of VOCs during biosparge operations. Pilot testing commenced on January 6, 2016, and is anticipated to continue for approximately 1 year in order to evaluate the feasibility of system expansion.

Summary of Quarterly GWTS Operations

A total of 767,657 gallons of groundwater were extracted from the south-central and southeastern areas during the first quarter 2016. No groundwater was extracted from the WSB 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:

- The GWTS was turned off on February 9, 2016, to clean out the OWS, sump, equalization tank, and transfer tank. In both cases, the system was restarted on the same day.
- The GWTS was turned off on February 11, 2016, to facilitate collection of groundwater samples as
 part of a sulfur hexafluoride (SF6) tracer gas study for the biosparge pilot test. The system remained
 offline until March 16, 2016, for maintenance of the FBBRs.

The amount of free product that accumulated in the product holding tank of the GWTS was estimated to be 194 gallons during the first quarter 2016. Recovered free product was hauled away and disposed of at Kinder Morgan-approved disposal facilities as described in the Waste Hauling section of this report.

Routine Effluent Monitoring

During the first quarter 2016, effluent water samples were collected pursuant to the Waste Discharge Requirements (WDRs) under Order No. R4-2011-0095. Samples were collected at the Order-designated monitoring point EFF-001 (Remediation System Effluent), RSW-001 (50 feet upstream of the discharge in Coyote Creek) and RSW-002 (50 feet downstream of the discharge in Coyote Creek). Samples were collected at EFF-001 on a monthly and quarterly basis. Samples were also collected at EFF-001, RSW-001, and RSW-002 as part of the accelerated toxicity sampling program and Initial Investigation Toxicity Reduction Evaluation (TRE), which is further discussed below.

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Toxicity samples were shipped to CH2M's Applied Sciences Laboratory (ASL) in Corvallis, Oregon, for analysis; all remaining compliance samples were shipped to Advanced Technology Laboratories (ATL) in Las Vegas, Nevada, for analysis. ASL and ATL are certified by the National Environmental Laboratory Accreditation Program and the California Department of Public Health Environmental Laboratory Accreditation Program. The samples were analyzed in accordance with current U.S. Environmental Protection Agency (EPA) guidelines or as specified in the WDRs for the site.

Atherinops affinis (topsmelt) was used in lieu of the previously used toxicity test species under this permit due to the slightly brackish (saline) water conditions of the effluent and receiving water, and as allowed by the permit. The rationale for using this test species was documented in the report titled, Cause of Apparent Chronic Toxicity and Planned Corrective Action Plan, prepared by CH2M and submitted to the Regional Water Quality Control Board on December 11, 2013.

Summary of Compliance Results

Monthly and Quarterly Sampling

Analytical results for the monthly and quarterly monitoring at the effluent are summarized in Tables 2 and 3. The discharge limits for the treatment system effluent were met during the reporting period. The laboratory reports and chain-of-custody documents for the monthly and quarterly samples collected during the first quarter 2016 are included in Appendix A.

Toxicity Sampling

As stated in the fourth quarter 2015 effluent monitoring report, the second round of TRE samples was collected from EFF 001 (24-hour composite effluent samples), RSW-001 (upstream grab samples), and RSW-002 (downstream grab samples) between January 20 and 25, 2016. TRE testing was performed as part of the accelerated monitoring and Initial Investigation TRE, which was triggered as a result of the September 2015 toxicity testing. As shown in Table 3, acute toxicity was in compliance (100 percent survival) at the effluent and the upstream and downstream receiving water. The chronic toxicity at the effluent exceeded the TRE trigger of 1.0 chronic toxicity unit (TUc) while the downstream chronic toxicity was below 1.0 TUc, indicating that the effluent does not cause or contribute to downstream chronic toxicity. However, the chronic test endpoint was invalid since the reference toxicant test results did not meet test acceptability criteria (TAC) as further described below.

The chronic reference toxicant test results for the second TRE sampling event fell outside of the recommended cumulative summary chart limits, suggesting that the tested topsmelt were less sensitive than normal. Reference toxicant testing is performed to document both initial and ongoing laboratory performance of the test method. While the health of the test organisms is primarily evaluated by the performance of the laboratory control, reference toxicant test results may be used to assess the health and sensitivity of the test organisms. Reference toxicant test results within their respective cumulative summary chart limits are indicative of consistent laboratory performance and normal test organism sensitivity.

Because the reference toxicity test results for the second TRE sampling event were outside of the cumulative summary chart limits, one additional round of TRE samples will be collected at the effluent and receiving water in 2016. This next event will also satisfy the annual requirement to perform toxicity sampling at the treatment system effluent. Currently, there is only one known supplier of topsmelt for toxicity testing. Until these quality control issues can be resolved by the supplier (or a different supplier can be identified) additional toxicity sampling as part of the TRE is not recommended, unless it can be demonstrated that the supplier's topsmelt are within the acceptable reference toxicity range.

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Waste Hauling

Following is a summary of liquid and solid waste removed from the site during the first quarter 2016.

Liquids

Approximately 4,425 gallons of flammable liquid waste was removed from the site during the first quarter 2016 by Patriot Environmental Services of 508 East E Street, Wilmington, California 90744. The waste included a mixture of recovered fuel product and water generated from cleaning out the OWS transfer tank, equalization tank, and sump. The waste was transported to Demenno/Kerdoon at 2000 North Alameda Street, Compton, California 90222. Provided below is a summary of quantities removed during each event:

- February 9, 2016 2,800 gallons
- March 15, 2016 2,200 gallons

Solids

Approximately 2,000 pounds of nonhazardous spent LGAC (carbon) was removed from the site on January 8. 2016, by Prominent Systems, Inc., of 13095 E. Temple Avenue, City of Industry, California 91746. The waste was transported to California Carbon Co. at 2825 East Grant Street, Wilmington, California 90744.

Approximately 800 pounds of nonhazardous spent vapor-phase granular activated carbon (VGAC) (carbon) was removed from the site on January 22, 2016, by Prominent Systems, Inc. The waste was transported to California Carbon Co.

Copies of the waste manifests are included in Appendix B.

Should you require any further information, please contact me at (714) 435-6255.

Regards,

CH2M HILL Engineers, Inc.

Vidal Cortes

Project Engineer

Attachments:

Table 1 – Effluent Flow Rate Measurements, First Quarter 2016

Table 2 – NPDES Effluent Monitoring, First Quarter 2016

Table 3 – NPDES Effluent Acute and Chronic Toxicity Monitoring, First Quarter 2016

Appendix A – Laboratory Analytical Reports and Chain-of-Custody Documents

Appendix B – Waste Manifests

Tables

Table 1. Effluent Flow Rate Measurements, First Quarter 2016

SFPP Norwalk Pump Station, Norwalk, California

	Average Flow Rate (gpd) (Maximum Daily Discharge
Date	Limit = 150,000 gpd ^a)
01/01/16	18,582
01/02/16	14,991
01/03/16	16,066
01/04/16	15,206
01/05/16	15,253
01/06/16	18,620
01/07/16	17,984
01/08/16	16,213
01/09/16	16,023
01/10/16	20,219
01/11/16	16,825
01/12/16	4,345
01/13/16	14,837
01/14/16	15,016
01/15/16	9,297
01/16/16	11,985
01/17/16	13,616
01/18/16	13,094
01/19/16	8,908
01/20/16	9,815
01/21/16	15,225
01/22/16	13,114
01/23/16	7,708
01/24/16	4,910
01/25/16	2,922
01/26/16	6,522
01/27/16	14,783
01/28/16	16,572
01/29/16	17,306
01/30/16	18,881
01/31/16	26,677
02/01/16	7,918
02/02/16	23,397
02/03/16	23,191
02/04/16	22,866
02/05/16	28,901
02/06/16	27,455
02/07/16	17,493
02/08/16	7,624
02/09/16	9,269
02/10/16	23,039
02/11/16	14,279
02/12/16	51
02/13/16	9
02/14/16	10
02/15/16	16
02/16/16	5
02/17/16	0
02/18/16	6
02/19/16	0
02/20/16	0
02/21/16	0
02/22/16	22
02/23/16	48
02/24/16	31
02/25/16	10

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Table 1. Effluent Flow Rate Measurements, First Quarter 2016

SFPP Norwalk Pump Station, Norwalk, California

3111 Norwalk Fullip Station, Norwalk, Canjorna	Average Flow Rate (gpd) (Maximum Daily Discharge
Date	Limit = 150,000 gpd ^a)
02/26/16	26
02/27/16	15
02/28/16	16
02/29/16	54
03/01/16	88
03/02/16	0
03/03/16	0
03/04/16	0
03/05/16	0
03/06/16	0
03/07/16	0
03/08/16	0
03/09/16	0
03/10/16	0
03/11/16	0
03/12/16	0
03/13/16	0
03/14/16	0
03/15/16	0
03/16/16	1,923
03/17/16	4,344
03/18/16	4,279
03/19/16	4,126
03/20/16	3,969
03/21/16	6,456
03/22/16	11,271
03/23/16	10,014
03/24/16	10,306
03/25/16	10,403
03/26/16	10,257
03/27/16	10,114
03/28/16	10,518
03/29/16	10,874
03/30/16	10,842
03/31/16	10,607

Notes:

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^a California Regional Water Quality Control Board Waste Discharge Requirements gpd = gallons per day

Table 2. NPDES Effluent Monitoring, First Quarter 2016

SFPP Norwalk Pump Station, Norwalk, California

Prequency												Dischar	ge Limits ²
Temperature		Sampling	Analytical									Monthly	Daily
Oil and Grease Monthly EPA 1664A mg/L 0.77 4.4 NE <0.73 <0.79 <0.71 10 15 TPH as gas (C4-C12) Monthly EPA 8015B µg/L 16 50 NE 33 J 30 J 42 J TPH as Dissel (C33-C22) Monthly EPA 8015B µg/L 16 50 NE 33 J 30 J 42 J TPH as Dissel (C33-C22) Monthly EPA 8015B µg/L 16 50 NE 33 J 30 J 42 J NE 100 TPH as Dissel (C33-C22) Monthly EPA 8015B µg/L 14 25 NE <15 <15 <	Analyte	Frequency	Method	Units	MDL ³	RL ³	ML^1	1/19/2016	2/2/2016	3/29/2016	3/31/2016	Average	Maximum
PPH as gas (G4-C12) Monthly EPA 8015B μg/L 16 50 NE 33 30 42 PPH as Dises (C13-C22) Monthly EPA 8015B μg/L 16 25 NE <15 <15 <15 < PPH as Dises (C13-C22) Monthly EPA 8015B μg/L 14 25 NE <14 <14 <14 < PPH as Dises (C13-C22) Monthly EPA 8015B μg/L 16 50 NE 33 30 42 NE 100 Monthly EPA 8015B μg/L 16 50 NE 33 30 42 NE 100 Monthly EPA 8015B μg/L 16 50 NE 33 30 42 NE 100 Monthly EPA 8015B μg/L 10 50 50 <10 <10 <10 50 75 Monthly EPA 8015B μg/L 10 50 50 <10 <10 <10 50 75 Monthly EPA 8260B μg/L 10 50 50 <10 <10 <10 50 75 Monthly EPA 8260B μg/L 0.036 1 2.0 <0.036 <0.036 <0.036 <- 1 NE 1,0-10 Monthly EPA 8260B μg/L 0.062 0.5 1.0 <0.022 <0.022 <0.022 <0.052 NE EPA 8260B μg/L 0.066 0.5 2.0 <0.0044 <0.064 <0.064 <- 0.056 <0.036 <0.036 <- 0.055 NE EPA 8260B μg/L 0.062 1 NE <0.0052 <0.0054 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036 <0.036	Temperature	Monthly		°F			NE	71	60.5		79.7		86
TPH as Dilese (C13-C22)	Oil and Grease	Monthly	EPA 1664A	mg/L	0.77	4.4	NE	< 0.73	< 0.79	<0.71		10	15
PPH as Oil (C23+) Monthly EPA 80158 μg/L 14 25 NE <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14 <14	TPH as gas (C4-C12)	Monthly	EPA 8015B	μg/L	16	50	NE	33 J	30 J	42 J			
Total TPH Monthly M	TPH as Diesel (C13-C22)	Monthly	EPA 8015B	μg/L	16	25	NE	<15	<15	<15			
Settleable Solids	TPH as Oil (C23+)	Monthly	EPA 8015B	μg/L	14	25	NE	<14	<14	<14			
Total Suspended Solids	Total TPH	Monthly	EPA 8015B	μg/L	16	50	NE	33 J	30 J	42 J		NE	100
Phenolics	Settleable Solids	Monthly	SM 2540F	mL/L/hr	0.088	0.088	NE	<0.087	< 0.091	<0.088		0.1	0.3
Benzene	Total Suspended Solids	Monthly	SM 2540D	mg/L	10	10	NE	<10	<10	<10		50	75
1,1-Dichloroethane Monthly EPA 8260B μg/L 0.02 0.5 1.0 <0.022 <0.022 <0.022 <0.022 <0.022 <0.022 <0.022 <0.022 <0.022 <0.022 <0.022 <0.022 <0.022 <0.022 <0.024 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.064 <0.	Phenolics	Monthly	EPA 420.4	μg/L	10	50	50	<10	<10	11 J		300	NE
1,2-Dichloroethane	Benzene	Monthly	EPA 8260B	μg/L	0.036	1	2.0	< 0.036	< 0.036	< 0.036		1	NE
Ethylbenzene	1,1-Dichloroethane	Monthly	EPA 8260B	μg/L	0.022	0.5	1.0	<0.022	<0.022	<0.022		5	NE
Ethylbenzene	1,2-Dichloroethane	Monthly	EPA 8260B	μg/L	0.06	0.5	2.0	< 0.064	< 0.064	< 0.064		0.5	NE
Toluene	Ethylbenzene	Monthly	EPA 8260B		0.036	1	2.0	< 0.036	< 0.036	< 0.036		10	NE
Methyl tertiary-butyl ether Monthly EPA 8260B µg/L 0.062 1 NE <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062 <0.062	Toluene	Monthly	EPA 8260B		0.042	2	2.0	< 0.042	< 0.042	< 0.042		10	NE
Tertiary butyl alcohol Monthly EPA 8260B μg/L 1.5 2 NE <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5	Methyl tertiary-butyl ether	Monthly	EPA 8260B		0.062	1	NE	< 0.062	< 0.062	< 0.062		NE	5.0
Total Xylenes	Tertiary butyl alcohol	Monthly	EPA 8260B		0.3	5	NE	<0.3	<0.3	<0.3		NE	12
Copper (total recoverable) (dry weather) Monthly EPA 200.8 μg/L 0.26 1 0.5 5.7 <0.26 <0.26 16 33 Copper (total recoverable) (wet weather) Monthly EPA 200.8 μg/L 0.026 1 0.5 5.7 <0.26	Total Xylenes	Monthly	EPA 8260B		1.5	2	NE	<1.5	<1.5	<1.5		10	NE
Copper (total recoverable) (wet weather) Monthly EPA 200.8 μg/L 0.26 1 0.5 5.7 <0.26 <0.26 13 27	Copper (total recoverable) (dry weather)	Monthly	EPA 200.8		0.26	1	0.5	5.7	<0.26	<0.26		16	33
Lead (total recoverable) (dry weather) Lead (total recoverable) (wet weather) Monthly EPA 200.8 Mg/L Lead (total recoverable) (wet weather) Monthly EPA 200.8 Mg/L Lead (total recoverable) (wet weather) Monthly EPA 200.8 Mg/L Lead (total recoverable) Monthly EPA 245.1 Mg/L Lead (total recoverable) Monthly EPA 245.1 Mg/L Lead (total recoverable) Monthly EPA 200.8 Mg/L Lead (total recoverable) Monthly EPA 245.1 Mg/L Lead (total recoverable) Monthly EPA 200.8 Mg/L Lead (total recoverable) Monthly Monthly EPA 200.8 Mg/L Lead (total recoverable) Monthly EPA 200.8 Mg/L Lead (t	Copper (total recoverable) (wet weather)	Monthly	EPA 200.8		0.26	1	0.5	5.7	<0.26	<0.26		13	27
Lead (total recoverable) (wet weather) Monthly EPA 200.8 μg/L 0.053 0.5 0.5 1.5 <0.053 <0.053 <0.053 <0.053 <0.053 <0.053 <0.053 <0.053 <0.053 <0.053 <0.053 <0.053 <0.053 <0.053 <0.053 <0.053 <0.053 <0.053 <0.053 <0.053 <0.053 <0.053 <0.053 <0.018 <0.0053 <0.018 <0.0053 <0.018 <0.0053 <0.018 <0.0053 <0.018 <0.0053 <0.018 <0.007 <0.014 <0.014 <0.007 <0.014 <0.007 <0.014 <0.007 <0.014 <0.007 <0.014 <0.007 <0.014 <0.007 <0.014 <0.007 <0.014 <0.007 <0.034 <0.015 <0.034 <0.015 <0.034 <0.014 <0.0034 <0.014 <0.0034 <0.014 <0.0034 <0.014 <0.0034 <0.014 <0.0034 <0.014 <0.0034 <0.014 <0.0034 <0.014 <0.0039 <0.0039 <0.0034	Lead (total recoverable) (dry weather)	Monthly	EPA 200.8		0.053	0.5	0.5	1.5	< 0.053	< 0.053		8.2	15
Mercury (total recoverable) Monthly EPA 245.1 μg/L 0.018 0.05 0.2 <0.018 0.023 J <0.018 0.051 0.14 Selenium (total recoverable) Monthly EPA 200.8 μg/L 0.07 0.5 2.0 <0.07 0.14 J <0.07 3.4 9.2	Lead (total recoverable) (wet weather)	Monthly	EPA 200.8		0.053	0.5	0.5	1.5	< 0.053	< 0.053		34	106
Selenium (total recoverable) Monthly family EPA 200.8 μg/L μg/L μg/L μg/L μg/L μg/L μg/L μg/L	Mercury (total recoverable)	Monthly	EPA 245.1		0.018	0.05	0.2	<0.018	0.023 J	<0.018		0.051	0.14
Thallium (total recoverable) Monthly EPA 200.8 μg/L 0.034 0.5 1.0 <0.034 0.14 J 0.2 J 6.3 13 2inc (total recoverable) (wet weather) 4 Monthly EPA 200.8 μg/L 0.039 10 1.0 15 1.8 J 0.039 79 158 Chromium VI PH Quarterly S.u. NE NE NE 7.1 NE Di-isopropyl Ether Quarterly EPA 8260B μg/L 0.015 0.02 0.05 0.017 0.017 0.	, ,	Monthly	EPA 200.8		0.07	0.5	2.0	< 0.07	0.14 J	< 0.07		3.4	9.2
Chromium VI Monthly Quarterly PH EPA 7199 Quarterly PH μg/L Su. PH 0.015 PH 0.2 PM 0.5 PM <0.015 PM <0.017 PM <0.0	•	Monthly	EPA 200.8		0.034	0.5	1.0	< 0.034	0.14 J	0.2 J		6.3	13
Chromium VI Monthly Quarterly EPA 7199 Quarterly μg/L v. s.u. 0.015 v.	Zinc (total recoverable) (wet weather) 4	Monthly	EPA 200.8	μg/L	0.039	10	1.0	15	1.8 J	<0.039		79	158
pH Quarterly s.u. NE 7.1 6.5/8.1 Ammonia Nitrogen (as N) Quarterly SM 4500 NH3C mg/L 0.082 0.2 NE <0.03	Chromium VI	Monthly	EPA 7199		0.015	0.2	0.5	< 0.015	< 0.015	< 0.015		8.1	16
Di-isopropyl Ether Quarterly EPA 8260B μg/L 0.017 1 NE <0.017 NE NE NE NE NE NE NE	рН	Quarterly					NE		7.1				6.5/8.5
Di-isopropyl Ether Quarterly EPA 8260B μg/L 0.017 1 NE <0.017 NE NE NE NE NE NE	Ammonia Nitrogen (as N)	Quarterly	SM 4500 NH3C	mg/L	0.082	0.2	NE		< 0.03			NE	NE
Methylene Blue Active Substances Quarterly EPA 425.1 mg/L 0.015 0.1 NE 0.069 J NE NE Tert-amyl-methyl Ether Quarterly EPA 8260B μg/L 0.039 1 NE <0.039	<u> </u>		EPA 8260B	-	0.017	1	NE		< 0.017			NE	NE
Tert-amyl-methyl Ether Quarterly EPA 8260B μg/L 0.039 1 NE - <0.039 NE NE Turbidity Quarterly SM 2130B NTU 0.1 0.1 NE - 0.35 50 75 Methyl ethyl ketone Quarterly EPA 8260B μg/L 0.48 10 NE - <0.48 50 NE	,	. ,	EPA 425.1		0.015	0.1	NE		0.069 J			NE	NE
Turbidity Quarterly SM 2130B NTU 0.1 0.1 NE 0.35 50 75 Methyl ethyl ketone Quarterly EPA 8260B μg/L 0.48 10 NE <0.48 50 NE	•			-		1	NE					NE	NE
Methyl ethyl ketone Quarterly EPA 8260B μg/L 0.48 10 NE <0.48 50 NE						0.1	NE					50	
	•	. ,		_		-							
Other Priority Pollutants Quarterly	Other Priority Pollutants	Quarterly ⁵										NE	NE

Notes:

- 1. 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.
- 2. California Regional Water Quality Control Board Waste Discharge Requirements (WDRs).
- 3. The highest MDL and RL during this reporting period is shown.
- 4. There are no dry weather limitations for zinc.
- 5. Effluent monitoring shall occur quarterly for the first two years after the Order is adopted. After the first two years, effluent shall be monitored once per year.
- -- = not measured or not analyzed
- < = not detected above the MDL
- ° F = degrees Fahrenheit
- μg/L = micrograms per liter
- J = detected at a concentration below the RL and above the MDL. Reported value is estimated.

MDL = laboratory method detection limit

mg/L = milligrams per liter

ML = minimum level. See note 1.

mL/L/hr = milliliters per liter per hour

NE = not established

NPDES = National Pollutant Discharge Elimination System

NTU = nephelometric turbidity units

RL = reporting limit

s.u. = standard units

TPH = total petroleum hydrocarbons

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Table 3. NPDES Effluent Acute and Chronic Toxicity Monitoring, First Quarter 2016

SFPP Norwalk Pump Station, Norwalk, California

	Sampling Dates			1/20, 1/22, 1/25	
		1/21 to 1/28			
			TRE 2		
Analyte ¹	Accelerated Trigger ²	Units	EFF-001 (Effluent)	RSW-001 (Upstream)	RSW-002 (Downstream)
Acute - <i>A. affinis</i> (top smelt) – Survival	<90% / <70%	% survival	100%	100%	100%
Chronic - <i>A. affinis</i> (top smelt) – Growth	>1.0	TUc	>1.0 ³	1.0 ³	1.0 ³

Notes:

mg = milligrams

NOEC = no observed effect concentration

NPDES = National Pollutant Discharge Elimination System

TRE = toxicity reduction evaluation

TUc = chronic toxicity unit, where TUc = 100/NOEC

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 $^{^{\}rm 1}$ Acute and chronic toxicity analysis was conducted using EPA Method 600-R-95-136.

² Accelerated testing will be implemented if either the acute toxicity result is less or less than 70% survival in any single test, or if the chronic toxicity result is more

³ Concurrent reference toxicant outside cumulative summary chart limits; therefore, chronic test results are invalid

Appendix A Laboratory Analytical Reports and Chain-of-Custody Documents February 03, 2016

Dan Jablonski CA-ELAP No.: 2676

CH2MHill NV Cert. No.:NV-00922

1000 Wilshire Blvd.

Los Angeles, CA 90017

TEL:

FAX: Workorder No.: N018441

RE: SFPP - Norwalk Site

Attention: Dan Jablonski

Enclosed are the results for sample(s) received on January 20, 2016 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,

Glen Gesmundo

gregermendo

QA Manager

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



ASSET Laboratories

CLIENT: CH2MHill

Project: SFPP - Norwalk Site CASE NARRATIVE

Date: 03-Feb-16

Lab Order: N018441

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

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

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

Samples were analyzed within method holding time.

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

Subcontracted Test:

Phenols was subcontracted to BC Laboratories.

Analytical Comments for EPA 200.8:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Copper on QC samples N018441-001H-MS and N018441-001H-MSD possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.



ASSET Laboratories

CLIENT: CH2MHill

Project: SFPP - Norwalk Site Work Order Sample Summary

Date: 03-Feb-16

Lab Order: N018441

Contract No:

Lab Sample ID Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N018441-001A EFF-01-16	Wastewater	1/19/2016 12:30:00 PM	1/20/2016	2/3/2016
N018441-001B EFF-01-16	Wastewater	1/19/2016 12:30:00 PM	1/20/2016	2/3/2016
N018441-001C EFF-01-16	Wastewater	1/19/2016 12:30:00 PM	1/20/2016	2/3/2016
N018441-001D EFF-01-16	Wastewater	1/19/2016 12:30:00 PM	1/20/2016	2/3/2016
N018441-001E EFF-01-16	Wastewater	1/19/2016 12:30:00 PM	1/20/2016	2/3/2016
N018441-001F EFF-01-16	Wastewater	1/19/2016 12:30:00 PM	1/20/2016	2/3/2016
N018441-001H EFF-01-16	Wastewater	1/19/2016 12:30:00 PM	1/20/2016	2/3/2016
N018441-001I EFF-01-16	Wastewater	1/19/2016 12:30:00 PM	1/20/2016	2/3/2016
N018441-001J EFF-01-16	Wastewater	1/19/2016 12:30:00 PM	1/20/2016	2/3/2016



ANALYTICAL RESULTS

ASSET Laboratories

Print Date: 03-Feb-16

CLIENT: CH2MHill Client Sample ID: EFF-01-16

Lab Order: N018441 **Collection Date:** 1/19/2016 12:30:00 PM

Project: SFPP - Norwalk Site Matrix: WASTEWATER

Lab ID: N018441-001

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL NON-FILTERABLE RESI	DUE						
			SN	12540D			
RunID: WETCHEM_160120E	QC Batch: 55	902		PrepD	Date:	1/20/2016	Analyst: LR
Suspended Solids (Residue, Non-Filterable)	ND	10	10		mg/L	1	1/20/2016 12:56 PM
SETTLEABLE MATTER							
			SM	12540F			
RunID: WETCHEM_160120F	QC Batch: 55	908		PrepD	Date:	1/20/2016	Analyst: QBM
Settleable Matter	ND	0.087	0.087		ml/L	1	1/20/2016
HEXANE EXTRACTABLE MATE	RIAL (HEM)						
	(,		EPA 1664	_HEM RE	V B		
RunID: WETCHEM_160121B	QC Batch: 55	929		PrepD	Date:	1/21/2016	Analyst: LR
Oil & Grease	ND	0.73	4.2		mg/L	1	1/21/2016 09:09 AM
VOLATILE ORGANIC COMPOUN	NDS BY GC/MS						
	.50 51 00/1110		EPA	A 8260B			
RunID: MS5_160120A	QC Batch: P1	6VW016		PrepD	Date:		Analyst: QBM
1,1-Dichloroethane	ND	0.022	0.50		ug/L	1	1/21/2016 12:27 AM
1,2-Dichloroethane	ND	0.064	0.50		ug/L	1	1/21/2016 12:27 AM
Benzene	ND	0.036	1.0		ug/L	1	1/21/2016 12:27 AM
Ethylbenzene	ND	0.036	1.0		ug/L	1	1/21/2016 12:27 AM
m,p-Xylene	0.040	0.024	1.0	J	ug/L	1	1/21/2016 12:27 AM
MTBE	ND	0.062	1.0		ug/L	1	1/21/2016 12:27 AM
o-Xylene	ND	0.042	1.0		ug/L	1	1/21/2016 12:27 AM
Tert-Butanol	ND	0.30	5.0		ug/L	1	1/21/2016 12:27 AM
Toluene	ND	0.042	2.0		ug/L	1	1/21/2016 12:27 AM
Xylenes, Total	ND	1.5	2.0		ug/L	1	1/21/2016 12:27 AM
Surr: 1,2-Dichloroethane-d4	102	0	72-119		%REC	1	1/21/2016 12:27 AM
Surr: 4-Bromofluorobenzene	101	0	76-119		%REC	1	1/21/2016 12:27 AM
Surr: Dibromofluoromethane	102	0	85-115		%REC	1	1/21/2016 12:27 AM
Surr: Toluene-d8	101	0	81-120		%REC	1	1/21/2016 12:27 AM
TPH EXTRACTABLE BY GC/FID							
	EPA 3510C		EPA	A 8015B			
RunID: GC1_160120C	QC Batch: 55	905		PrepD	Date:	1/20/2016	Analyst: MDM
TPH-Diesel (C13-C22)	ND	15	25		ug/L	1	1/21/2016 03:53 AM

Runid: GC1_160120C	QC Batch: 55905	Prepuate:	1/20/2016	Analyst: MDM
TPH-Diesel (C13-C22)	ND 15 25	ug/L	1	1/21/2016 03:53 AM
TPH-Oil (C23-C36)	ND 14 25	ug/L	1	1/21/2016 03:53 AM
Surr: Octacosane	124 0 26-152	%REC	1	1/21/2016 03:53 AM

Qualifiers: B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out



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

ANALYTICAL RESULTS

ASSET Laboratories

Print Date: 03-Feb-16

CLIENT: CH2MHill Client Sample ID: EFF-01-16

Lab Order: N018441 **Collection Date:** 1/19/2016 12:30:00 PM

Project: SFPP - Norwalk Site Matrix: WASTEWATER

Lab ID: N018441-001

Analyses		Res	ult	MDL	PQL	Qual	Units	DF	Date Analyzed
TPH EXTE	RACTABLE BY GC/FI	D							
		EPA 3510C			EPA	8015B			
RunID: G	C1_160120C	QC Batch:	559	005		Prep	Date:	1/20/2016	Analyst: MDM
Surr: p	-Terphenyl	1	113	0	57-132		%REC	1	1/21/2016 03:53 AM
GASOLIN	E RANGE ORGANIC	S BY GC/FID							
					EPA	8015B			
RunID: G	C4_160121A	QC Batch:	E16	6VW005		Prep[Date:		Analyst: QBM
TPH-Gas	oline (C4-C12)		33	16	50	J	ug/L	1	1/21/2016 02:32 PM
Surr: C	Chlorobenzene - d5	1	129	0	74-138		%REC	1	1/21/2016 02:32 PM
HEXAVAL	ENT CHROMIUM BY	IC							
					EP.	A 7199			
RunID: IC	C6_160120A	QC Batch:	R10	05414		Prep	Date:		Analyst: RB
Hexavale	nt Chromium		ND	0.015	0.20		μg/L	1	1/20/2016 10:10 AM
MERCURY	Y BY COLD VAPOR 1	TECHNIQUE							
					EP	A 245.1			
RunID: A	A1_160121A	QC Batch:	558	399		Prep[Date:	1/20/2016	Analyst: CEI
Mercury			ND	0.018	0.050		μg/L	1	1/21/2016 12:40 PM
TOTAL MI	ETALS BY COLLISIO	N/REACTION C	ELL	. ICPMS					
					EP	A 200.8			
RunID: IC	CP7_160121D	QC Batch:	559	009		Prep[Date:	1/21/2016	Analyst: CEI
Selenium	ı		ND	0.070	0.50		μg/L	1	1/21/2016 12:02 PM
TOTAL MI	ETALS BY ICPMS								
					EP	A 200.8			
RunID: IC	CP7_160121D	QC Batch:	559	009		Prep	Date:	1/21/2016	Analyst: CEI
Copper			5.7	0.26	0.50		μg/L	1	1/21/2016 12:02 PM
Lead			1.5	0.053	0.50		μg/L	1	1/21/2016 12:02 PM
Thallium			ND	0.034	0.50		μg/L	1	1/21/2016 12:02 PM
Zinc			15	0.039	10		μg/L	1	1/21/2016 12:02 PM
TOTAL TF	РН								
					EPA	8015B			
RunID: G	C1_160120C	QC Batch:	R10	05371		Prep	Date:		Analyst: MDM
Total TPH	4		33	16	50	J	ug/L	1	1/20/2016

Qualifiers: B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out



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Date: 03-Feb-16

CLIENT: CH2MHill Work Order: N018441

Project:

SFPP - Norwalk Site TestCode: 160.2_2540D_W

Sample ID: MB-55902	SampType: MBLK	TestCode: 160.2_2540D_ Units: mg/L	Prep Date: 1/20/2016	RunNo: 105437
Client ID: PBW	Batch ID: 55902	TestNo: SM2540D	Analysis Date: 1/20/2016	SeqNo: 2208163
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Suspended Solids (Residue, N	Non-Filter ND	10		
Sample ID: LCS-55902	SampType: LCS	TestCode: 160.2_2540D_ Units: mg/L	Prep Date: 1/20/2016	RunNo: 105437
Client ID: LCSW	Batch ID: 55902	TestNo: SM2540D	Analysis Date: 1/20/2016	SeqNo: 2208164
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Suspended Solids (Residue, N	Non-Filter 960.000	10 1000 0	96.0 80 120	
Sample ID: N018421-001BDU	JP SampType: DUP	TestCode: 160.2_2540D_ Units: mg/L	Prep Date: 1/20/2016	RunNo: 105437
Client ID: ZZZZZZ	Batch ID: 55902	TestNo: SM2540D	Analysis Date: 1/20/2016	SeqNo: 2208166
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Suspended Solids (Residue, N	Non-Filter 262.000	20	258.0	1.54 5

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected below quantitation limits

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
 - NEVADA
 - 3151 W. Post F P: 702.307.2

- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

 Calculations are based on raw values

ANALYTICAL QC SUMMARY REPORT



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Project:

ANALYTICAL QC SUMMARY REPORT

SFPP - Norwalk Site

TestCode: 160.5_2540F_W

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Sample ID: MB-55908	SampType: MBLK	TestCode: 160.5_2540F_ Units: ml/L	Prep Date: 1/20/2016	RunNo: 105512
Client ID: PBW	Batch ID: 55908	TestNo: SM2540F	Analysis Date: 1/20/2016	SeaNo: 2211363

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

Settleable Matter ND 0.10

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

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P: 562.219.7435 F: 562.219.7436

N018441

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 1664_HEM_W

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Sample ID: MB-55929 Client ID: PBW	SampType: MBLK Batch ID: 55929	TestCode: 1664_HEM_W Units: mg/L TestNo: EPA 1664_H	Prep Date: 1/21/2016 Analysis Date: 1/21/2016	RunNo: 105360 SeqNo: 2205214
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-55929 Client ID: LCSW	SampType: LCS Batch ID: 55929	TestCode: 1664_HEM_W Units: mg/L TestNo: EPA 1664_H	Prep Date: 1/21/2016 Analysis Date: 1/21/2016	RunNo: 105360 SeqNo: 2205215
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Oil & Grease	35.600	4.0 40.00 0	89.0 78 114	
Sample ID: LCSD-55929 Client ID: LCSS02	SampType: LCSD Batch ID: 55929	TestCode: 1664_HEM_W Units: mg/L TestNo: EPA 1664_H	Prep Date: 1/21/2016 Analysis Date: 1/21/2016	RunNo: 105360 SeqNo: 2205216
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Oil & Grease	34.900	4.0 40.00 0	87.2 78 114 35.60	1.99 18

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits
- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out



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Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_DRC

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

	: MB-55909	SampType: MBLK	TestCode: 200.8_W_DR Units: μg/L	Prep Date: 1/21/2016	RunNo: 105385
Client ID: Analyte	PBW	Batch ID: 55909 Result	TestNo: EPA 200.8 PQL SPK value SPK Ref Val	Analysis Date: 1/21/2016 %REC LowLimit HighLimit RPD Ref Val	SeqNo: 2206119 %RPD RPDLimit Qual
Selenium		ND	0.50	MILE LOWEITH HIGHEITH TED IVEL VAL	//INFO REDEIIIII Quai
	: LCS-55909	SampType: LCS	TestCode: 200.8_W_DR Units: μg/L	Prep Date: 1/21/2016	RunNo: 105385
Client ID: Analyte	LCSW	Batch ID: 55909 Result	TestNo: EPA 200.8 PQL SPK value SPK Ref Val	Analysis Date: 1/21/2016 %REC LowLimit HighLimit RPD Ref Val	SeqNo: 2206120 %RPD RPDLimit Qual
Selenium		8.900	0.50 10.00 0	89.0 85 115	
Sample ID:	N018441-001H-MS	SampType: MS	TestCode: 200.8_W_DR Units: μg/L	Prep Date: 1/21/2016	RunNo: 105385
	: N018441-001H-MS ZZZZZZ	SampType: MS Batch ID: 55909	TestCode: 200.8_W_DR Units: μg/L TestNo: EPA 200.8	Prep Date: 1/21/2016 Analysis Date: 1/21/2016	RunNo: 105385 SeqNo: 2206124
				·	
Client ID:		Batch ID: 55909	TestNo: EPA 200.8	Analysis Date: 1/21/2016	SeqNo: 2206124
Client ID: Analyte Selenium		Batch ID: 55909 Result	TestNo: EPA 200.8 PQL SPK value SPK Ref Val	Analysis Date: 1/21/2016 %REC LowLimit HighLimit RPD Ref Val	SeqNo: 2206124
Client ID: Analyte Selenium	ZZZZZZ : N018441-001H-MSD	Batch ID: 55909 Result 8.056	TestNo: EPA 200.8 PQL SPK value SPK Ref Val 0.50 10.00 0	Analysis Date: 1/21/2016 %REC LowLimit HighLimit RPD Ref Val 80.6 75 125	SeqNo: 2206124 %RPD RPDLimit Qual
Client ID: Analyte Selenium Sample ID:	ZZZZZZ : N018441-001H-MSD	Batch ID: 55909 Result 8.056 SampType: MSD	TestNo: EPA 200.8 PQL SPK value SPK Ref Val 0.50 10.00 0 TestCode: 200.8_W_DR Units: μg/L	Analysis Date: 1/21/2016 **REC LowLimit HighLimit RPD Ref Val 80.6 75 125 Prep Date: 1/21/2016	SeqNo: 2206124 %RPD RPDLimit Qual RunNo: 105385

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

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Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Sample ID:	: MB-55909	SampType: MBLK	TestCo	de: 200.8_W _	SFP Units: µg/L		Prep Da	te: 1/21/20	116	RunNo: 10	5385	
Client ID:	PBW	Batch ID: 55909	TestN	No: EPA 200. 8	•		Analysis Da	te: 1/21/20	116	SeqNo: 22 0	06192	
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									
Thallium		ND	0.50									
Zinc		ND	10									
Sample ID:	: LCS-55909	SampType: LCS	TestCo	de: 200.8_W _:	SFP Units: µg/L		Prep Da	te: 1/21/20	116	RunNo: 10	5385	
Client ID:	LCSW	Batch ID: 55909	Test	No: EPA 200. 8	}		Analysis Da	te: 1/21/20	16	SeqNo: 22 0	06193	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper		9.432	0.50	10.00	0	94.3	85	115				
Lead		10.468	0.50	10.00	0	105	85	115				
Thallium		10.162	0.50	10.00	0	102	85	115				
Zinc		95.055	10	100.0	0	95.1	85	115				
Sample ID:	: N018441-001H-MS	SampType: MS	TestCo	de: 200.8_W _	SFP Units: µg/L		Prep Da	te: 1/21/20	16	RunNo: 10	5385	
Client ID:	ZZZZZZ	Batch ID: 55909	TestN	No: EPA 200. 8	}		Analysis Da	te: 1/21/20	116	SeqNo: 220	06197	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper		13.087	0.50	10.00	5.741	73.5	75	125				S
Lead		11.701	0.50	10.00	1.508	102	75	125				
Thallium		8.972	0.50	10.00	0	89.7	75	125				
Zinc		93.470	10	100.0	15.23	78.2	75	125				
Sample ID:	: N018441-001H-MSD	SampType: MSD	TestCo	de: 200.8_W _	SFP Units: µg/L		Prep Da	te: 1/21/20)16	RunNo: 10	5385	
Client ID:	ZZZZZZ	Batch ID: 55909	Test	No: EPA 200. 8	}		Analysis Da	te: 1/21/20	116	SeqNo: 22 0	06198	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	<u> </u>	12.789	0.50	10.00	5.741	70.5	75	125	13.09	2.30	20	S
Lead		11.725	0.50	10.00	1.508	102	75	125	11.70	0.210	20	

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

ASSET LABORATORIES

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

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ANALYTICAL QC SUMMARY REPORT

Project: SFPP - Norwalk Site TestCode: 200.8_W_SFPP

Sample ID: N018441-001H-MSD Client ID: ZZZZZZ	SampType: MSD Batch ID: 55909		de: 200.8_W_ 9 No: EPA 200. 8		Prep Da Analysis Da	te: 1/21/20 te: 1/21/20	RunNo: 105385 SeqNo: 2206198				
Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Thallium	9.043	0.50 10.00 0			90.4	75	125	8.972	0.790	20	
Zinc	92.154	10 100.0 15.23			76.9 75 125 93.4				1.42	20	

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

ASSET LABORATORIES

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

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Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

N018441

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 245.1_W_LL

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Sample ID:	: MB-55899 PBW	SampType: MBLK Batch ID: 55899	TestCode: 245.1_W_LL Units: μg/L TestNo: EPA 245.1	Prep Date: 1/20/2016 Analysis Date: 1/21/2016	RunNo: 105361 SeqNo: 2205251
Analyte		Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Mercury		ND	0.050		
Sample ID: Client ID: Analyte	: LCS-55899 LCSW	SampType: LCS Batch ID: 55899 Result	TestCode: 245.1_W_LL Units: μg/L TestNo: EPA 245.1 PQL SPK value SPK Ref Val	Prep Date: 1/20/2016 Analysis Date: 1/21/2016 %REC LowLimit HighLimit RPD Ref Val	RunNo: 105361 SeqNo: 2205252 %RPD RPDLimit Qual
Mercury		2.411	0.050 2.500 0	96.4 85 115	
Sample ID:	: N018441-001H-MS ZZZZZZ	SampType: MS Batch ID: 55899	TestCode: 245.1_W_LL Units: μg/L TestNo: EPA 245.1	Prep Date: 1/20/2016 Analysis Date: 1/21/2016	RunNo: 105361 SeqNo: 2205253
,				·	
Client ID:		Batch ID: 55899	TestNo: EPA 245.1	Analysis Date: 1/21/2016	SeqNo: 2205253
Client ID: Analyte Mercury Sample ID:		Batch ID: 55899 Result	TestNo: EPA 245.1 PQL SPK value SPK Ref Val	Analysis Date: 1/21/2016 %REC LowLimit HighLimit RPD Ref Val	SeqNo: 2205253

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

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CALIFORNIA

P: 702.307.2659 F: 702.307.2691

CLIENT: CH2MHill

Work Order: N018441

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 7199_WPGE

Sample ID: MB-R105414	SampType: MBLK	TestCode: 7199_WPGE Units: µg/L	Prep Date:	RunNo: 105414
Client ID: PBW	Batch ID: R105414	TestNo: EPA 7199	Analysis Date: 1/20/2016	SeqNo: 2207256
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	ND	0.20		
Sample ID: LCS-R105414	SampType: LCS	TestCode: 7199_WPGE Units: μg/L	Prep Date:	RunNo: 105414
Client ID: LCSW	Batch ID: R105414	TestNo: EPA 7199	Analysis Date: 1/20/2016	SeqNo: 2207257
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	4.817	0.20 5.000 0	96.3 90 110	
Sample ID: N018441-001EDUP	SampType: DUP	TestCode: 7199_WPGE Units: µg/L	Prep Date:	RunNo: 105414
Client ID: ZZZZZZ	Batch ID: R105414	TestNo: EPA 7199	Analysis Date: 1/20/2016	SeqNo: 2207259
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	ND	0.20	0	0 20
Sample ID: N018445-002A-DUP	SampType: DUP	TestCode: 7199_WPGE Units: μg/L	Prep Date:	RunNo: 105414
Client ID: ZZZZZZ	Batch ID: R105414	TestNo: EPA 7199	Analysis Date: 1/20/2016	SeqNo: 2207264
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	7.509	0.20	7.647	1.82 20
Sample ID: N018445-002AMS	SampType: MS	TestCode: 7199_WPGE Units: µg/L	Prep Date:	RunNo: 105414
Client ID: ZZZZZZ	Batch ID: R105414	TestNo: EPA 7199	Analysis Date: 1/20/2016	SeqNo: 2207265
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	12.384	0.20 5.000 7.647	94.8 85 115	

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Value above quantitation range
- Not Detected at the Reporting Limit

Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out



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Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits Calculations are based on raw values

N018441

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 7199_WPGE

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Sample ID: N018445-002AMS	D SampType: MSD	TestCo	de: 7199_WP (GE Units: μg/L		Prep Da	te:		RunNo: 105	6414	
Client ID: ZZZZZZ	Batch ID: R105414	Test	TestNo: EPA 7199			Analysis Da	te: 1/20/20	16	SeqNo: 220		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	12.301	0.20	5.000	7.647	93.1	85	115	12.38	0.672	20	

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

ASSET LABORATORIES

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

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N018441

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_FP_SFPP

Sample ID: MB-55905 Client ID: PBW	SampType: MBLK Batch ID: 55905	TestCode: 8015_W_ TestNo: EPA 801			•	te: 1/20/2016 te: 1/21/2016		RunNo: 105371 SeqNo: 2205569			
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RF	PD Ref Val	%RPD	RPDLimit	Qual	
TPH-Diesel (C13-C22)	ND	25									
TPH-Oil (C23-C36)	ND	25									
Surr: Octacosane	105.577	80.00		132	26	152					
Surr: p-Terphenyl	96.001	80.00		120	57	132					

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits
- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

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Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits Calculations are based on raw values

N018441

Project: SFPP - Norwalk Site ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_SFPPTOT

Sample ID: MB-R105371 Prep Date: RunNo: 105371 SampType: MBLK TestCode: 8015_W_SFP Units: ug/L

Client ID: PBW Batch ID: R105371 TestNo: EPA 8015B Analysis Date: 1/20/2016 SeqNo: 2205571

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

Total TPH ND 50

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

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Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

CLIENT: CH2MHill

Work Order: N018441

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_WSFPP

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Sample ID: E160121LCS Client ID: LCSW	SampType: LCS Batch ID: E16VW005	TestCode: 8015GAS_WS Units: ug/L TestNo: EPA 8015B				Prep Dat Analysis Dat		116	RunNo: 105 SeqNo: 220				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
TPH-Gasoline (C4-C12) Surr: Chlorobenzene - d5	1047.000 55694.000	50	1000 50000	0	105 111	67 74	136 138						
Sample ID: E160121MB1	SampType: MBLK	TestCode: 8015GAS_WS Units: ug/L				Prep Dat	e:		RunNo: 105	5373			
Client ID: PBW	Batch ID: E16VW005	TestNo	o: EPA 8015	В		Analysis Dat	te: 1/21/20	16	SeqNo: 220	06290			
Analyte	Result				%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
TPH-Gasoline (C4-C12) Surr: Chlorobenzene - d5	42.000 61797.000	50 50000				74	138		J				
Sample ID: E160121LCS Client ID: LCSW	SampType: LCS Batch ID: E16VW005		e: 8015GAS o: EPA 8015	_WS Units: ug/L		Prep Dat Analysis Dat		016	RunNo: 105 SeqNo: 220				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref			RPD Ref Val	f Val %RPD RPDLimit				
TPH-Gasoline (C4-C12) Surr: Chlorobenzene - d5	980.000 56869.000	50	1000 50000	0	98.0 114	67 74	136 138						
Sample ID: N018441-001JMS Client ID: ZZZZZZ	SampType: MS Batch ID: E16VW005		e: 8015GAS o: EPA 8015	_WS Units: ug/L		Prep Dat Analysis Dat		016	RunNo: 105 SeqNo: 220				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
TPH-Gasoline (C4-C12) Surr: Chlorobenzene - d5	889.000 51354.000	50	1000 50000	33.00	85.6 103	67 74	136 138						
Sample ID: N018441-001JMSD Client ID: ZZZZZZ	SampType: MSD Batch ID: E16VW005		e: 8015GAS o: EPA 8015	_WS Units: ug/L		Prep Dat Analysis Dat		016	RunNo: 105 SeqNo: 220				
Analyte	Result	PQL SPK value SPK Ref Val			%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
TPH-Gasoline (C4-C12)	888.000	50 1000 33.00			85.5	67	136	889.0	889.0 0.113 30				

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

CALIFORNIA

- Value above quantitation range
- Not Detected at the Reporting Limit

NEVADA

P: 702.307.2659 F: 702.307.2691



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

3151 W. Post Rd., Las Vegas, NV 89118

Project:

N018441

SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_WSFPP

Sample ID: N018441-001JMSD	SampType: MSD	TestCod	le: 8015GAS _	_WS Units: ug/L		Prep Da	te:		RunNo: 105			
Client ID: ZZZZZZ	Batch ID: E16VW005	TestN	lo: EPA 8015	В		Analysis Da	te: 1/21/20	16	SeqNo: 2206294			
Analyte	Result	PQL	PQL SPK value SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Surr: Chlorobenzene - d5	52808 000	50000		106	74	138		0 0				

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

NEVADA

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

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

- Holding times for preparation or analysis exceeded
- RPD outside accepted recovery limits Calculations are based on raw values



CLIENT: CH2MHill

Work Order: N018441

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

SampType: LCS	TestCod	de: 8260_WP _	SF Units: ug/L		Prep Da	te:		RunNo: 105	379	
Batch ID: P16VW016	TestN	lo: EPA 8260 I	3		Analysis Da	te: 1/20/20	16	SeqNo: 220	5967	
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
18.180	0.50	20.00	0	90.9	69	133				
20.240	0.50	20.00	0	101	69	132				
20.320					81	122				
20.000					73	127				
41.640					76	128				
21.670					65	123				
21.040					80	121				
113.740	5.0 100.0 0 1				70	130				
20.040					77	122				
62.680					75	125				
25.260		25.00		101	72	119				
26.410		25.00		106	76	119				
24.400		25.00		97.6	85	115				
25.850		25.00		103	81	120				
SampType: LCSD	TestCod	de: 8260_WP _	SF Units: ug/L		Prep Da	te:		RunNo: 105		
Batch ID: P16VW016	TestN	lo: EPA 8260 I	3		Analysis Da	te: 1/20/20	16	SeqNo: 220	5968	
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
18.060	0.50	20.00	0	90.3	69	133	18.18	0.662	20	
20.010	0.50	20.00	0	100	69	132	20.24	1.14	20	
19.930	1.0	20.00	0	99.7	81	122	20.32	1.94	20	
19.620	1.0	20.00	0	98.1	73	127	20.00	1.92	20	
41.030	1.0	40.00	0	103	76	128	41.64	1.48	20	
22.140				111	65	123	21.67	2.15	20	
21.020				105	80	121	21.04	0.0951	20	
					70	400	440.7	0.004	0.0	
114.770	5.0	100.0	0	115	70	130	113.7	0.901	20	
114.770 19.800	5.0 2.0	100.0 20.00	0	115 99.0	70 77	130	20.04	1.20	20	
	Result 18.180 20.240 20.320 20.000 41.640 21.670 21.040 113.740 20.040 62.680 25.260 26.410 24.400 25.850 Batch ID: P16VW016 Result 18.060 20.010 19.930 19.620 41.030 22.140	Result PQL 18.180 0.50 20.240 0.50 20.320 1.0 20.000 1.0 41.640 1.0 21.670 1.0 21.040 1.0 113.740 5.0 20.040 2.0 62.680 2.0 25.260 26.410 24.400 25.850 Result PQL 18.060 0.50 20.010 0.50 19.930 1.0 19.620 1.0 41.030 1.0 22.140 1.0	Result PQL SPK value 18.180 0.50 20.00 20.240 0.50 20.00 20.320 1.0 20.00 20.000 1.0 20.00 41.640 1.0 40.00 21.670 1.0 20.00 21.040 1.0 20.00 113.740 5.0 100.0 20.040 2.0 20.00 62.680 2.0 60.00 25.260 25.00 24.400 25.00 25.850 25.00 SampType: LCSD TestCode: 8260_WP_ Batch ID: P16VW016 TestNo: EPA 8260E Result PQL SPK value 18.060 0.50 20.00 20.010 0.50 20.00 19.930 1.0 20.00 19.620 1.0 20.00 41.030 1.0 40.00 22.140 1.0 20.00	Result PQL SPK value SPK Ref Val 18.180 0.50 20.00 0 20.240 0.50 20.00 0 20.320 1.0 20.00 0 20.000 1.0 20.00 0 41.640 1.0 40.00 0 21.670 1.0 20.00 0 21.040 1.0 20.00 0 21.040 1.0 20.00 0 20.040 2.0 20.00 0 20.040 2.0 20.00 0 25.260 25.00 25.00 26.410 25.00 25.00 24.400 25.00 25.00 25.850 25.00 25.00 Batch ID: P16VW016 TestCode: 8260_WP_SF Units: ug/L Result PQL SPK value SPK Ref Val 18.060 0.50 20.00 0 20.010 0.50 20.00 0 19.930 1.0	Result PQL SPK value SPK Ref Val %REC 18.180 0.50 20.00 0 90.9 20.240 0.50 20.00 0 101 20.320 1.0 20.00 0 102 20.000 1.0 20.00 0 100 41.640 1.0 40.00 0 104 21.670 1.0 20.00 0 108 21.040 1.0 20.00 0 105 113.740 5.0 100.0 0 104 20.040 2.0 20.00 0 100 62.680 2.0 60.00 0 104 25.260 25.00 101 26.410 25.00 97.6 25.850 25.00 103 3 3 8ampType: LCSD TestCode: 8260_WP_SF Units: ug/L Batch ID: P16VW016 TestNo: EPA 8260B 90.00 0 90.3 20.010 0.50 20.00 </td <td>Result PQL SPK value SPK Ref Val %REC LowLimit 18.180 0.50 20.00 0 90.9 69 20.240 0.50 20.00 0 101 69 20.320 1.0 20.00 0 102 81 20.000 1.0 20.00 0 100 73 41.640 1.0 40.00 0 104 76 21.670 1.0 20.00 0 108 65 21.040 1.0 20.00 0 105 80 113.740 5.0 100.0 0 104 76 20.040 2.0 20.00 0 100 77 62.680 2.0 60.00 0 104 75 25.260 25.00 106 76 85 25.850 25.00 97.6 85 25.850 25.00 103 81 Batch ID: P16VW016 Te</td> <td>Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit 18.180 0.50 20.00 0 90.9 69 133 20.240 0.50 20.00 0 101 69 132 20.320 1.0 20.00 0 102 81 122 20.000 1.0 20.00 0 100 73 127 41.640 1.0 20.00 0 104 76 128 21.670 1.0 20.00 0 104 76 128 21.670 1.0 20.00 0 108 65 123 21.040 1.0 20.00 0 105 80 121 113.740 5.0 100.0 0 104 75 125 25.260 25.00 101 77 122 62.680 2.0 60.00 0 104 75 125 25.850 25.00</td> <td>Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val 18.180 0.50 20.00 0 90.9 69 133 20.240 0.50 20.00 0 101 69 132 20.320 1.0 20.00 0 102 81 122 20.000 1.0 20.00 0 100 73 127 41.640 1.0 40.00 0 104 76 128 21.670 1.0 20.00 0 108 65 123 21.040 1.0 20.00 0 105 80 121 113.740 5.0 100.0 0 104 75 125 25.260 2.0 60.00 0 104 75 125 25.260 25.00 101 72 119 24.400 25.00 97.6 85 115 25.850 25.00 <</td> <td>Batch ID: P16VW016 TestIV: EPA 8260B* Analysis Date: 1/20/2016* Seq No: 220 Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD 18.180 0.50 20.00 0 90.9 69 132 </td> <td> Result PQL SPK value SPK Ref Val VREC LowLimit HighLimit RPD Ref Val VRPD RPDLimit </td>	Result PQL SPK value SPK Ref Val %REC LowLimit 18.180 0.50 20.00 0 90.9 69 20.240 0.50 20.00 0 101 69 20.320 1.0 20.00 0 102 81 20.000 1.0 20.00 0 100 73 41.640 1.0 40.00 0 104 76 21.670 1.0 20.00 0 108 65 21.040 1.0 20.00 0 105 80 113.740 5.0 100.0 0 104 76 20.040 2.0 20.00 0 100 77 62.680 2.0 60.00 0 104 75 25.260 25.00 106 76 85 25.850 25.00 97.6 85 25.850 25.00 103 81 Batch ID: P16VW016 Te	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit 18.180 0.50 20.00 0 90.9 69 133 20.240 0.50 20.00 0 101 69 132 20.320 1.0 20.00 0 102 81 122 20.000 1.0 20.00 0 100 73 127 41.640 1.0 20.00 0 104 76 128 21.670 1.0 20.00 0 104 76 128 21.670 1.0 20.00 0 108 65 123 21.040 1.0 20.00 0 105 80 121 113.740 5.0 100.0 0 104 75 125 25.260 25.00 101 77 122 62.680 2.0 60.00 0 104 75 125 25.850 25.00	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val 18.180 0.50 20.00 0 90.9 69 133 20.240 0.50 20.00 0 101 69 132 20.320 1.0 20.00 0 102 81 122 20.000 1.0 20.00 0 100 73 127 41.640 1.0 40.00 0 104 76 128 21.670 1.0 20.00 0 108 65 123 21.040 1.0 20.00 0 105 80 121 113.740 5.0 100.0 0 104 75 125 25.260 2.0 60.00 0 104 75 125 25.260 25.00 101 72 119 24.400 25.00 97.6 85 115 25.850 25.00 <	Batch ID: P16VW016 TestIV: EPA 8260B* Analysis Date: 1/20/2016* Seq No: 220 Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD 18.180 0.50 20.00 0 90.9 69 132	Result PQL SPK value SPK Ref Val VREC LowLimit HighLimit RPD Ref Val VRPD RPDLimit

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

25.00

NEVADA



Surr: 1,2-Dichloroethane-d4

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103

72

119

0

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

25.730

CLIENT: CH2MHill

Work Order: N018441

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Sample ID: P160120LCSD	SampType: LCSD	TestCo	de: 8260_WP _	_SF Units: ug/L		Prep Da	te:		RunNo: 108	5379	
Client ID: LCSS02	Batch ID: P16VW016	TestN	No: EPA 8260	В		Analysis Da	te: 1/20/20	116	SeqNo: 220	5968	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	26.080		25.00		104	76	119		0		
Surr: Dibromofluoromethane	24.200		25.00		96.8	85	115		0		
Surr: Toluene-d8	25.440		25.00		102	81	120		0		
Sample ID: P160120MB3	SampType: MBLK	TestCo	de: 8260_WP _	_SF Units: ug/L		Prep Da	te:		RunNo: 10	5379	
Client ID: PBW	Batch ID: P16VW016	Test	No: EPA 8260	В		Analysis Da	te: 1/20/20	16	SeqNo: 220	5969	
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	0.060	1.0									J
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	24.550		25.00		98.2	72	119				
Surr: 4-Bromofluorobenzene	25.000		25.00		100	76	119				
Surr: Dibromofluoromethane	24.750		25.00		99.0	85	115				
Surr: Toluene-d8	25.430		25.00		102	81	120				

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Value above quantitation range
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

Not Detected at the Reporting Limit

ASSET LABORATORIES

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

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

Advanced Technology Laboratories

3151 W. Post Road Las Vegas, NV 89118

Tel: 702-307-2659 Fax: 702-307-2691 Marion Cartin (marion@ati-labs.com)

CHAIN OF CUSTODY RECORD

DATE: 1/9/16 PAGE: 1 OF 1

LABO	PRATORY CLIENT:				THE RESERVE OF THE PERSON NAMED IN		CLIE	NIPR	OJECT	NAME 7	NUMBE	R.	-		-		-	-	200110		
Kin	der Morgan Energy Pa	artners, Attn: Steve	Defibaugh	1			1												P.O. NO.:		
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	nago roquirou ese i	iowest possible det	ecuon min	t - an m	sullous.			& TPH-oil (8015B)	Settleable Solids (SM2540F)	Solids (SM2540D)		BTEX, 1,1-DCA, 1,2-DCA (8260B)	MTBE & TBA (8260B); 48 Hr TAT	-5	: 48						
-			-	*****	-	Total Control	_	2	SMS	e e		å	18;	Cu, Pb, Ti, & Zn (200.8)	Se (200.8) & Hg (245.1);						
			SAM	PLING		NO. OF CONT.	364	1 6	8 (8	Sp		1,2	1260	620	124						
							Grease (1664)	9	Pilo	Total Suspended	5	ÇA,	A (8	Zn	E E						
	SAMPLE ID	LOCATION/ DESCRIPTION			MAT-		ase	TPH-d	S	be	Phenol (420.1)	Q.	18	مخ م	8	6					
LAB		DESCRIPTION	DATE	TIME	RIX		Gre	F	apl	Sus	2 2	1,1	85 111	, T	9.0	Cr VI (7199)					
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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:	1/20/2016				Workorder:	N018441						
Rep sample Temp (Deg C):	1.2				IR Gun ID:	2						
Temp Blank:	✓ Yes	□ No										
Carrier name:	Golden St	ate Overnight										
Last 4 digits of Tracking No.:	7839			Packing	Material Used:	Bubble Wrap						
Cooling process:	✓ Ice	☐ Ice Pack	Dry Ice	Other	☐ None							
		S	ample Receip	t Checklist	:							
1. Shipping container/cooler in	good condit	tion?			Yes 🗸	No 🗌	Not Present					
2. Custody seals intact, signed	l, dated on s	hippping containe	er/cooler?		Yes	No 🗌	Not Present	✓				
3. Custody seals intact on sam	ple bottles?				Yes	No 🗌	Not Present	✓				
4. Chain of custody present?					Yes 🗹	No \square						
5. Sampler's name present in 0	COC?				Yes 🗹	No \square						
6. Chain of custody signed who	en relinquish	ned and received?			Yes 🗸	No 🗌						
7. Chain of custody agrees with	h sample lab	pels?			Yes 🗸	No 🗌						
8. Samples in proper container	/bottle?				Yes 🗸	No 🗌						
9. Sample containers intact?					Yes 🗸	No 🗌						
10. Sufficient sample volume for	or indicated	test?			Yes 🗸	No 🗌						
11. All samples received within	holding tim	e?			Yes 🗹	No 🗌						
12. Temperature of rep sample	e or Temp B	lank within accep	table limit?		Yes 🗹	No 🗌	NA					
13. Water - VOA vials have ze	ro headspac	ce?			Yes 🗸	No 🗌	NA					
14. Water - pH acceptable upo Example: pH > 12 for (C	•	for Metals			Yes	No 🗹	NA					
15. Did the bottle labels indicat	te correct pro	eservatives used	?		Yes 🗸	No 🗌	NA					
16. Were there Non-Conforma W	nce issues a as Client no				Yes ✓ Yes □	No 🗌 No 🗆	NA NA					
Comments: Sample for meta	ils was adjus	sted to <2.0										

ASSET Laboratories

WORK ORDER Summary

21-Jan-16

WorkOrder: N018441

Client ID: CH2HI03

Project: SFPP - Norwalk Site

QC Level: RTNE Date Received: 1/20/2016

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

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N018441-001A	EFF-01-16	1/19/2016 12:30:00 PM					ww			
			1/27/2016		EPA 1664 _HEM	Hexane Extractable Material (HEM)				WW
N018441-001B			1/22/2016		EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS				Consume
N018441-001C			1/27/2016		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS				Consume
			1/27/2016		EPA 8015B	TPH EXTRACTABLE BY GC/FID				Consume
			1/27/2016		EPA 8015B	Total TPH				Consume
N018441-001D			1/27/2016		SM2540F	SETTLEABLE MATTER				Consume
			1/27/2016			Setteable Matter				Consume
N018441-001E			1/27/2016		EPA 7199	Hexavalent Chromium by IC				RB
N018441-001F			1/27/2016		EPA 420.1	PHENOLICS			~	SUB
N018441-001H			1/22/2016			AQPREP TOTAL METALS: ICP, FLAA				WW
			1/22/2016		EPA 200.8	TOTAL METALS BY COLLISION/REACTION CELL ICPMS				WW
			1/22/2016		EPA 200.8	TOTAL METALS BY ICPMS				WW
			1/22/2016		EPA 245.1	MERCURY BY COLD VAPOR TECHNIQUE				WW
			1/22/2016			MERCURY PREP				WW
N018441-001I			1/27/2016		SM2540D	TOTAL NON-FILTERABLE RESIDUE				LR
			1/27/2016			Total Suspended Solids Prep				LR
N018441-001J			1/27/2016		EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID				VW
N018441-002A	FOLDER		1/22/2016		Folder	Folder				LAB

Page 1 of 1

20-Jan-16

ASSET Laboratories 3151-3153 W Post Rd., Las Vegas, NV 89118 www.atl-labs.com TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: RTNE

Field Sampler: James Dye

Subcontractor:

Bakersfield, CA 93308

BC Labs TEL: (661) 327-4911 4100 Atlas Court FAX: (661) 327-1918

Acct #:

					Requested Tests	
Sample ID	Matrix	Matrix Date Collected		EPA 420.1		
N018441-001F / EFF-01-16	Wastewater	1/19/2016 12:30:00 PM	32OZA	1		

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N18441A Please email Invoices and Account Receivable Statements to AssetAP@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Normal TAT

	Adardon actin	Date/Time		Date/Time
Relinquished by:	MarlonCartín	1/19/20 @ 17:00	Received by:	
Relinquished by:			Received by:	



CHAIN OF CUSTODY RECORD

Contact us:

Nevada: 3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.3072691

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

www.assetlaboratories.com

Client: ASSE+ Labs			Report to:				Bill to:	Oi	1			EDD Requi	rement	T	QA/QC		Sampe Receip	t Condition	
Address:			Company:				Address:					Excel EDD	IC	RT	E			Y N	
												Geotracker		_	QCB		1. Chillied		
Address	s:		Email:									Labspec		_	Trans		2. Headspace		
												Others	L		el III		Container Intact		
Phone:	Fax:		Address:				Email to:			PO	d.	Specify:		LEV	EL IV	-	4. Seal Present		
															ulatory	_	5. IR number		
Submitt	ted By: Molky	Romer					Phone:			Fax	C	Global ID:		Spe	cify State		6. Method of Cooling		
Title:	10,7	8100	Phone:	Fax:	-						- The second second		_				Sample Temp:	1	
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Signatu	re:	Date:	Sampled By:				Ground [Sediment [1										
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 All samp Regular 	TAT is 5-7 business days, surcharges will apply fo	records will be destroyed in 5 years upon submiss r rush analysis	ion of final report. 6.7	ASSET Laboratories is not Ferms are net 30 Days.	responsible for samp	ples collected using it					H = HCI N = HN		C = 4		T = Tube		V = VOA P	= Pint	
Less to 3. Custom I	than 24 Hrs = 200% Next Day = 100% 2 EDD formats will be an additional 3% of the total	Workdays = 50% 3 Workdays = 35% 4 project price.	Workdays = 20% 8.1	All reports are submitted For subcontract analysis.			Laboratrories if ha	rd copy of report is a	needed.		Z = Zn(AC)a O = NaC	OH T = Na2S2O1			J = Jar			= Glass	
4. Add 10%	surcharge for Level III Data Packages, 15% for Li	evel IV Data Packages. Surcharge applied on total	project price. 3.		me and somewhiles						Others/Specify:				M = Metal		P = Plastic C	= Can	



800-322-5555 www.gso.com

Ship From

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

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

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

Delivery Instructions: HOLD FOR PICK UP

Signature Type: REQUIRED

Tracking #: 530627839

CPS



LVS

A

LAS VEGAS

C89102A



47253312

Print Date: 1/19/2016 3:40 PM

Package 1 of 2

LABEL INSTRUCTIONS:

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

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



Date of Report: 02/03/2016

Molky Brar

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

Client Project: SFPP-Norwalk site Water Analysis **BCL Project:**

BCL Work Order: 1601955 B225708 Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 1/20/2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Vanessa Sandoval

Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

Report ID: 1000443974



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Sample Information	
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Sample Results	
1601955-01 - EFF-01-06	
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Method Blank Analysis	8
Laboratory Control Sample	9
Precision and Accuracy	10
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Notes and Definitions	11

Page 2 of 11 Report ID: 1000443974



Chain of Custody and Cooler Receipt Form for 1601955 Page 1 of 3 Page 1 of 1 20-Jan-16 Date/Time CHAIN-OF-CUSTODY RECORD Please use PO#: N18441A Please email Invoices and Account Receivable Statements to AssetAP@assetlaboratories.com. For questions, call Marlon at (702)-307-2559. Please e-mail results to reports.lv@assetlaboratories.com by: Normal TAT Requested Tests 16-01955 Field Sampler. James Dye QC Level: RTNE EPA 420. **Bottle Type** 320ZA Received by: Received by: 1/19/2016 12:30:00 PM Date Collected Date/Time 1/19/20 @ 17:00 (661) 327-4911 (661) 327-1918 Please email sample receipt acknowledgement to the PM. Wastewater Matrix TEL: FAX: Acct #: 3151-3153 W Post Rd., Las Vegas, NV 89118 FAX: 7023072691 MarlonCartin ASSET Laboratories TEL: 7023072659 / EFF-01-16 Sample ID Bakersfield, CA 93308 General Comments: Relinquished by: Relinquished by: 4100 Atlas Court N018441-001F Subcontractor: BC Labs

Page 3 of 11 Report ID: 1000443974



ANALYRCAL SLEPOR		Page T of T		P: 562.219.7435 F: 562.219.7436 www.assetlaboratories.com
TSSET Labs	report to.	011100	EDD Requirement	QA/QC Sampe Receipt Condition
	Company:	Address:	Excel EDD Geotracker	1 Chilled
	Email:		\parallel	2. Headspace
Fax:	Address:	Email to: PO#		
Submitted By: Molky Brown		Phone: Fax:	Global ID:	_
	Phone: Fax:	Matrix	Analyses Requested	Sample Temp:
Signature: Date: Investy authorite ASSET Labs to perform the tests indicated below:	Sampled Byr.	Ground Sedment		Courier
SFRP - Norwalk Site	I aftest to the validity and authenticity of this sample, I am aware that tamporing with or inheritously mislateling the sample bootion, date or time of collection is	NPDES Owner Sould Source		omit bruce oqyT varieting NOITAVH;
	considered fraud and may be grounds for legal section. Sprintum:) pour		No. of or Contains
Item Laboratory Work Order No. Sampl	Sample ID/Location Date Time	Water Solid Others		Remarks
- EFF-0 -	@ 1/a/11 9 1-	3		\$ 512
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P	Lacal Los 15725 Common and Printed Name).	1/20/14 MAS) ime Day TAT sy	Special Instruction:
	Date / Time Received by (Signifum and Printed Name):	Date / Time	C = 2 Workdays D = 3 Workdays D = 8 Woutine 5-7 Workdays TAY Starts at 8 AM the following day IT	Deg.
TOTTING TO A MATERIAL SET A SET OF THE SET		bronnet methodology. Il skonstrodest hard dayy of report is needed.	Preservatives Preservative	Container Type: T = Tube
Charge for Lavel III Data Pachager, 15% for Level IV Data Pachages. Surcharge applied on total pro-	9. For subcontract analysis. TAT and Surcharges will vary.		Minnestonnika	-

Report ID: 1000443974 Page 4 of 11



Chain of Custody and Cooler Receipt Form for 1601955 Page 3 of 3

Submission #: 16-019	20	С	OOLER	RECEIPT	FORM			Pag	eC	Of _/
					HIPPING	CONTAI	NED		FREE LIQ	IIID
SHIPPING INFO Fed Ex UPS Ontr BC Lab Field Service Oth	ac ☐ Hand ner ☐ (Specify	d Delivery		Ice Ch	est 🖾 er 🗆 (Spec	None	Box 🗆		YES N	
Refrigerant: Ice Blue Ice	e 🗆 None		Other 🗆	Comr	nents:					
Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐	Containe Intact? Yes		None	Com	ments:					
All samples received? Yes 🗹 No 🗆	All samples	containers	intact? Y	es No		Descrip	tion(s) ma	tch COC?	res No	Q
COC Received	Emissivity: ().	95 (Container:	Amber	Thermom	eter ID:	208	_	ne 1/26/ Init NSC	-
CAMPI E CONTAINEDS						NUMBERS				
SAMPLE CONTAINERS	111	2	3	4	- Б	- 6	7	1 8	9	10
QT PE UNPRES		-	-				-	-		-
4oz / 8oz / 16oz PE UNPRES		-						-	-	-
2oz Cr* ⁶		-					-	-		
QT INORGANIC CHEMICAL METALS	3	-						-		
NORGANIC CHEMICAL METALS 40z / 80z /	160z	-								
PT CYANIDE										_
PT NITROGEN FORMS								-	-	_
T TOTAL SULFIDE	_	-						-	-	
oz. NITRATE / NITRITE		_						-		_
T TOTAL ORGANIC CARBON								-		
PT CHEMICAL OXYGEN DEMAND										
TA PHENOLICS										
0ml VOA VIAL TRAVEL BLANK										
0ml VOA VIAL										
OT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL			Jan							
10 ml VOA VIAL- 504										
QT EPA 508/608/8080					, E					
OT EPA 515.1/8150										
OT EPA 525										
OT EPA 525 TRAVEL BLANK										
0ml EPA 547										
0ml EPA 531.1										
oz EPA 548										
OT EPA 549										
T EPA 8015M										
OT EPA 8270										
02/1602/6202 AMBERT W H2SOY	A									
oz / 160z / 320z JAR										
OIL SLEEVE										
CB VIAL										
LASTIC BAG										
EDLAR BAG										
ERROUS IRON										
NCORE									6	
MART KIT										
Control of the Contro										
JMMA CANISTER mments:						20-10				

Report ID: 1000443974



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

Reported: 02/03/2016 16:01 Project: Water Analysis Project Number: SFPP-Norwalk site

Project Manager: Molky Brar

Laboratory / Client Sample Cross Reference

Laboratory **Client Sample Information** 1601955-01 01/20/2016 08:00 **COC Number:** Receive Date: **Project Number:** Sampling Date: 01/19/2016 12:30 Sample Depth: **Sampling Location:** Sampling Point: EFF-01-06 Lab Matrix: Water Sampled By: Sample Type: Water

Page 6 of 11 Report ID: 1000443974



ASSET Laboratories

3151-3153 W. Post Rd

Las Vegas, NV 89118

02/03/2016 16:01 Reported:

> Project Number: SFPP-Norwalk site Project Manager: Molky Brar

Project: Water Analysis

Water Analysis (General Chemistry)

BCL Sample ID:	1601955-01	Client Sampl	e Name:	EFF-01-0	6, 1/19/201	6 12:30:00PM			
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Phenolics		ND	ug/L	50	10	EPA-420.4	ND		1

			Run				QC	
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-420.4	01/25/16	01/25/16 12:54	TDC	KONE-1	1	BZA1975	

Page 7 of 11 Report ID: 1000443974



ASSET Laboratories 3151-3153 W. Post Rd Las Vegas, NV 89118 Reported: 02/03/2016 16:01
Project: Water Analysis
Project Number: SFPP-Norwalk site

Project Manager: Molky Brar

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BZA1975						
Total Phenolics	BZA1975-BLK1	ND	ug/L	50	10	

Report ID: 1000443974 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 8 of 11



ASSET Laboratories 3151-3153 W. Post Rd Las Vegas, NV 89118 Reported: 02/03/2016 16:01
Project: Water Analysis
Project Number: SFPP-Norwalk site
Project Manager: Molky Brar

Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control L Percent Recovery	<u>imits</u>	Lab Quals
QC Batch ID: BZA1975										
Total Phenolics	BZA1975-BS1	LCS	523.00	500.00	ug/L	105		85 - 115		

Report ID: 1000443974 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 9 of 11

ASSET Laboratories 3151-3153 W. Post Rd

Las Vegas, NV 89118

Reported: 02/03/2016 16:01

Project: Water Analysis

Project Number: SFPP-Norwalk site Project Manager: Molky Brar

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

									Cont	rol Limits	
		Source	Source		Spike			Percent		Percent	Lab
Constituent	Type	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery	Quals
QC Batch ID: BZA1975	Use	d client samp	ole: N								
Total Phenolics	DUP	1601527-02	17124	17326		ug/L	1.2		20		
	MS	1601527-02	17124	17326	500.00	ug/L		40.4		80 - 120	A03
	MSD	1601527-02	17124	17450	500.00	ug/L	0.7	65.2	20	80 - 120	A03

Report ID: 1000443974 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 10 of 11

Reported: 02/03/2016 16:01 Project: Water Analysis Project Number: SFPP-Norwalk site

Project Manager: Molky Brar

Notes And Definitions

ASSET Laboratories

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

MDL Method Detection Limit ND Analyte Not Detected

PQL Practical Quantitation Limit

A03 The sample concentration is more than 4 times the spike level.

Page 11 of 11 Report ID: 1000443974

February 15, 2016

Dan Jablonski CA-ELAP No.: 2676

CH2MHill NV Cert. No.:NV-00922

1000 Wilshire Blvd.

Los Angeles, CA 90017

TEL:

FAX: Workorder No.: N018642

RE: SFPP - Norwalk Site

Attention: Dan Jablonski

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

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

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

Sincerely,

gryesmundo

Glen Gesmundo

QA Manager

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



ASSET Laboratories

CLIENT: CH2MHill

Project: SFPP - Norwalk Site CASE NARRATIVE

Date: 15-Feb-16

Lab Order: N018642

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

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

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

Samples were analyzed within method holding time.

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

Subcontracted Test:

Phenol, MBAS and Ammonia were subcontracted to BC Laboratories.



ASSET Laboratories

CLIENT: CH2MHill

Project: SFPP - Norwalk Site Work Order Sample Summary

Date: 15-Feb-16

Lab Order: N018642

Contract No:

Lab Sample ID Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N018642-001A EFF-02-02	Wastewater	2/2/2016 1:45:00 PM	2/3/2016	2/15/2016
N018642-001B EFF-02-02	Wastewater	2/2/2016 1:45:00 PM	2/3/2016	2/15/2016
N018642-001C EFF-02-02	Wastewater	2/2/2016 1:45:00 PM	2/3/2016	2/15/2016
N018642-001D EFF-02-02	Wastewater	2/2/2016 1:45:00 PM	2/3/2016	2/15/2016
N018642-001E EFF-02-02	Wastewater	2/2/2016 1:45:00 PM	2/3/2016	2/15/2016
N018642-001F EFF-02-02	Wastewater	2/2/2016 1:45:00 PM	2/3/2016	2/15/2016
N018642-001G EFF-02-02	Wastewater	2/2/2016 1:45:00 PM	2/3/2016	2/15/2016
N018642-001H EFF-02-02	Wastewater	2/2/2016 1:45:00 PM	2/3/2016	2/15/2016
N018642-001I EFF-02-02	Wastewater	2/2/2016 1:45:00 PM	2/3/2016	2/15/2016
N018642-001J EFF-02-02	Wastewater	2/2/2016 1:45:00 PM	2/3/2016	2/15/2016
N018642-001K EFF-02-02	Wastewater	2/2/2016 1:45:00 PM	2/3/2016	2/15/2016



ANALYTICAL RESULTS

ASSET Laboratories

Print Date: 15-Feb-16

CLIENT: CH2MHill Client Sample ID: EFF-02-02

Lab Order: N018642 **Collection Date:** 2/2/2016 1:45:00 PM

Project: SFPP - Norwalk Site Matrix: WASTEWATER

Lab ID: N018642-001

Lab ID:	N018642-001							
Analyses		Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL NON-FILT	ERABLE RESID	DUE						
				SN	/12540D			
RunID: WETCHEN	/I_160204A	QC Batch: 56	124		PrepDa	ate:	2/4/2016	Analyst: LR
Suspended Solids Filterable)	(Residue, Non-	ND	10	10		mg/L	1	2/4/2016 11:03 AM
SETTLEABLE MA	TTER							
				SN	/12540F			
RunID: WETCHEN	/_160203G	QC Batch: 56	102		PrepDa	ate:	2/3/2016	Analyst: QBM
Settleable Matter	_	ND	0.091	0.091	·	ml/L	1	2/3/2016
TURBIDITY			0.00.	0.00.			•	2/0/2010
TORBIDITY				SM	1 2130B			
RunID: WETCHEN	//_160203B	QC Batch: R1	05648		PrepDa	ate:		Analyst: LR
Turbidity	_	0.35	0.10	0.10		NTU	1	2/3/2016 02:00 PM
•	TABLE MATER							
HEXANE EXTRAC	IADLE WATER	KIAL (HEIVI)		EPA 1664	HEM REV	/ B		
RunID: WETCHEN	/_160205A	QC Batch: 56	146		PrepDa	ate:	2/5/2016	Analyst: LR
Oil & Grease		ND	0.79	4.5		mg/L	1	2/5/2016 08:49 AM
VOLATILE ORGA	NIC COMPOUN	DS BY GC/MS						
		2021 00/1110		EP	A 8260B			
RunID: MS5_1602	03A	QC Batch: P1	6VW024		PrepDa	ate:		Analyst: QBM
1,1-Dichloroethane	e	ND	0.022	0.50		ug/L	1	2/3/2016 12:37 PM
1,2-Dichloroethane	•	ND	0.064	0.50		ug/L	1	2/3/2016 12:37 PM
2-Butanone		ND	0.48	10		ug/L	1	2/3/2016 12:37 PM
Benzene		ND	0.036	1.0		ug/L	1	2/3/2016 12:37 PM
Di-isopropyl ether		ND	0.017	1.0		ug/L	1	2/3/2016 12:37 PM
Ethylbenzene		ND	0.036	1.0		ug/L	1	2/3/2016 12:37 PM
m,p-Xylene		ND	0.024	1.0		ug/L	1	2/3/2016 12:37 PM
MTBE		ND	0.062	1.0		ug/L	1	2/3/2016 12:37 PM
o-Xylene		ND	0.042	1.0		ug/L	1	2/3/2016 12:37 PM
Tert-amyl methyl e	ther	ND	0.039	1.0		ug/L	1	2/3/2016 12:37 PM
Tert-Butanol		ND	0.30	5.0		ug/L	1	2/3/2016 12:37 PM
Toluene		ND	0.042	2.0		ug/L	1	2/3/2016 12:37 PM
Xylenes, Total		ND	1.5	2.0		ug/L	1	2/3/2016 12:37 PM
Surr: 1,2-Dichlo	roethane-d4	111	0	72-119		%REC	1	2/3/2016 12:37 PM
		102	0	76 110		%REC	1	2/3/2016 12:37 PM
Surr: 4-Bromofli	JOIODENZENE	102	U	76-119		70KEC		2/0/2010 12.07 1 1

Qualifiers: B

- 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



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

ANALYTICAL RESULTS

ASSET Laboratories

Print Date: 15-Feb-16

CLIENT: CH2MHill Client Sample ID: EFF-02-02

Lab Order: N018642 **Collection Date:** 2/2/2016 1:45:00 PM

Project: SFPP - Norwalk Site Matrix: WASTEWATER

Lab ID: N018642-001

Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NDS BY GC/MS						
		EPA	8260B			
QC Batch: P1	6VW024		Prep[Date:		Analyst: QBM
104	0	81-120		%REC	1	2/3/2016 12:37 PM
ס						
EPA 3510C		EPA	8015B			
QC Batch: 561	111		Prep[Date:	2/4/2016	Analyst: MDM
ND	15	25		ug/L	1	2/5/2016 09:41 PM
ND	14	25		ug/L	1	2/5/2016 09:41 PM
88.9	0	26-152		%REC	1	2/5/2016 09:41 PM
91.6	0	57-132		%REC	1	2/5/2016 09:41 PM
S BY GC/FID						
		EPA	8015B			
QC Batch: E10	6VW012		Prep[Date:		Analyst: QBM
30	16	50	J	ug/L	1	2/8/2016 04:41 PM
103	0	74-138		%REC	1	2/8/2016 04:41 PM
IC						
		EP.	A 7199			
QC Batch: R1	05699		Prep[Date:		Analyst: RB
ND	0.015	0.20		μg/L	1	2/3/2016 11:36 AM
ECHNIQUE						
		EP	A 245.1			
QC Batch: 561	110		Prep	Date:	2/4/2016	Analyst: CEI
0.023	0.018	0.050	J	μg/L	1	2/5/2016 11:19 AM
N/REACTION CELL	ICPMS					
		EP	A 200.8			
QC Batch: 561	104		Prep[Date:	2/3/2016	Analyst: CEI
0.14	0.070	0.50	J	μg/L	1	2/5/2016 11:23 AM
				. 0		
		EP	A 200.8			
QC Batch: 561	104		Prent	Date:	2/3/2016	Analyst: CEI
		0.50				2/5/2016 11:23 AM
ND	0.20	0.50		μ9/ L		2/3/2010 11.23 AW
	QC Batch: P10 104 D EPA 3510C QC Batch: 564 ND ND 88.9 91.6 S BY GC/FID QC Batch: E10 30 103 IC QC Batch: R10 ND FECHNIQUE QC Batch: 564 0.023 N/REACTION CELL QC Batch: 564 0.14	QC Batch: P16VW024 104 0 DEPA 3510C QC Batch: 56111 ND 15 ND 14 88.9 0 91.6 0 S BY GC/FID QC Batch: E16VW012 30 16 103 0 IC QC Batch: R105699 ND 0.015 FECHNIQUE QC Batch: 56110 0.023 0.018 N/REACTION CELL ICPMS QC Batch: 56104 0.14 0.070	QC Batch: P16VW024 104 0 81-120 EPA 3510C QC Batch: 56111 ND 15 25 ND 14 25 88.9 0 26-152 91.6 0 57-132 S BY GC/FID QC Batch: E16VW012 30 16 50 103 0 74-138 IC QC Batch: R105699 ND 0.015 0.20 ECHNIQUE QC Batch: 56110 0.023 0.018 0.050 N/REACTION CELL ICPMS EPA QC Batch: 56104 0.14 0.070 0.50 EPA	EPA 8260B QC Batch: P16VW024 Prept 104 0 81-120 DEPA 3510C EPA 8015B QC Batch: 56111 Prept ND 15 25 ND 14 25 88.9 0 26-152 91.6 0 57-132 S BY GC/FID EPA 8015B QC Batch: E16VW012 Prept 30 16 50 J 103 0 74-138 IC EPA 7199 QC Batch: R105699 Prept ND 0.015 0.20 ECHNIQUE EPA 245.1 QC Batch: 56110 Prept 0.023 0.018 0.050 J N/REACTION CELL ICPMS QC Batch: 56104 Prept 0.14 0.070 0.50 J EPA 200.8 QC Batch: 56104 Prept 0.14 0.070 0.50 J EPA 200.8	PrepDate PrepDat	PrepDate: Pre

Qualifiers: B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out



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ANALYTICAL RESULTS

ASSET Laboratories Print Date: 15-Feb-16

CLIENT: CH2MHill Client Sample ID: EFF-02-02

Lab Order: N018642 **Collection Date:** 2/2/2016 1:45:00 PM

Project: SFPP - Norwalk Site Matrix: WASTEWATER

Lab ID: N018642-001

Analyses	Result MDL	PQL	Qual Ui	nits DF	Date Analyzed
TOTAL METALS BY ICPMS					
		EP	A 200.8		
RunID: ICP7_160205B	QC Batch: 56104		PrepDate:	2/3/2016	Analyst: CEI
Thallium	0.14 0.034	0.50	J μg/L	1	2/5/2016 11:23 AM
Zinc	1.8 0.039	10	J μg/L	1	2/5/2016 11:23 AM
TOTAL TPH					
		EP#	8015B		
RunID: GC3_160205A	QC Batch: R105707		PrepDate:		Analyst: MDM
Total TPH	30 16	50	J ug/L	1	2/5/2016

Qualifiers: B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out



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Date: 15-Feb-16

CLIENT: CH2MHill Work Order: N018642

Project:

SFPP - Norwalk Site TestCode: 160.2_2540D_W

ANALYTICAL QC SUMMARY REPORT

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Sample ID: MB-56124	SampType: MBL	TestCode: 160.2_2540D_	Units: mg/L	Prep Date: 2/4/2016	RunNo: 105728
Client ID: PBW	Batch ID: 56124	TestNo: SM2540D		Analysis Date: 2/4/2016	SeqNo: 2223712
Analyte	Resu	t PQL SPK value SP	K Ref Val %REC	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Suspended Solids (Residue,	Non-Filter N	10			
Sample ID: LCS-56124	SampType: LCS	TestCode: 160.2_2540D_	Units: mg/L	Prep Date: 2/4/2016	RunNo: 105728
Client ID: LCSW	Batch ID: 56124	TestNo: SM2540D		Analysis Date: 2/4/2016	SeqNo: 2223713
Analyte	Resu	t PQL SPK value SP	K Ref Val %REC	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Suspended Solids (Residue,	Non-Filter 1008.00	10 1000	0 101	80 120	
Sample ID: N018649-002AD	UP SampType: DUP	TestCode: 160.2_2540D_	Units: mg/L	Prep Date: 2/4/2016	RunNo: 105728
Client ID: ZZZZZZ	Batch ID: 56124	TestNo: SM2540D		Analysis Date: 2/4/2016	SeqNo: 2223719
Analyte	Resu	t PQL SPK value SP	K Ref Val %REC	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Suspended Solids (Residue,	Non-Filter 75.00) 10		75.00	0 5

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected below quantitation limits

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

ited Out



11060 Artesia Blvd., Ste C, Cerritos, CA 90703 P: 562.219.7435 F: 562.219.7436 3151 W. Post Rd., Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691 **CLIENT:** CH2MHill Work Order:

Project:

N018642

SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.5_2540F_W

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Sample ID: MB-56102	SampType: MBLK	TestCode: 160.5_2540F_ Units: ml/L	Prep Date: 2/3/2016	RunNo: 105874
	D / / ID ==			

Client ID: PBW Batch ID: 56102 Analysis Date: 2/3/2016 SeqNo: 2231943 TestNo: SM2540F

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

Settleable Matter ND 0.10

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

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Work Order: N018642

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 1664_HEM_W

Sample ID: MB-56146 Client ID: PBW	SampType: MBLK Batch ID: 56146	TestCode: 1664_HEM_W Units: mg/L TestNo: EPA 1664_H	Prep Date: 2/5/2016 Analysis Date: 2/5/2016	RunNo: 105724 SeqNo: 2223228
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-56146 Client ID: LCSW	SampType: LCS Batch ID: 56146	TestCode: 1664_HEM_W Units: mg/L TestNo: EPA 1664_H	Prep Date: 2/5/2016 Analysis Date: 2/5/2016	RunNo: 105724 SeqNo: 2223229
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Oil & Grease	32.200	4.0 40.00 0	80.5 78 114	
Sample ID: LCSD-56146 Client ID: LCSS02	SampType: LCSD Batch ID: 56146	TestCode: 1664_HEM_W Units: mg/L TestNo: EPA 1664_H	Prep Date: 2/5/2016 Analysis Date: 2/5/2016	RunNo: 105724 SeqNo: 2223230
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Oil & Grease	32.400	4.0 40.00 0	81.0 78 114 32.20	0.619 18

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected below quantitation limits
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

luted Out

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- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

 Calculations are based on raw values



Work Order: N018642

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_DRC

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Sample ID:	MB-56104	SampType: MBLK	TestCode: 200.8_W_DR Units: μg/L	Prep Date: 2/3/2016	RunNo: 105704
Client ID:	PBW	Batch ID: 56104	TestNo: EPA 200.8	Analysis Date: 2/5/2016	SeqNo: 2222065
Analyte		Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Selenium		ND	0.50		
Sample ID:	LCS-56104	SampType: LCS	TestCode: 200.8_W_DR Units: μg/L	Prep Date: 2/3/2016	RunNo: 105704
Client ID:	LCSW	Batch ID: 56104	TestNo: EPA 200.8	Analysis Date: 2/5/2016	SeqNo: 2222066
Analyte		Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Selenium		9.620	0.50 10.00 0	96.2 85 115	
Sample ID:	N018642-001H-MS	SampType: MS	TestCode: 200.8_W_DR Units: μg/L	Prep Date: 2/3/2016	RunNo: 105704
	N018642-001H-MS ZZZZZZ	SampType: MS Batch ID: 56104	TestCode: 200.8_W_DR Units: μg/L TestNo: EPA 200.8	Prep Date: 2/3/2016 Analysis Date: 2/5/2016	RunNo: 105704 SeqNo: 2222070
				·	
Client ID:		Batch ID: 56104	TestNo: EPA 200.8	Analysis Date: 2/5/2016	SeqNo: 2222070
Client ID: Analyte Selenium		Batch ID: 56104 Result	TestNo: EPA 200.8 PQL SPK value SPK Ref Val	Analysis Date: 2/5/2016 %REC LowLimit HighLimit RPD Ref Val	SeqNo: 2222070
Client ID: Analyte Selenium Sample ID:	ZZZZZZ	Batch ID: 56104 Result 9.193	TestNo: EPA 200.8 PQL SPK value SPK Ref Val 0.50 10.00 0.1393	Analysis Date: 2/5/2016 %REC LowLimit HighLimit RPD Ref Val 90.5 75 125	SeqNo: 2222070 %RPD RPDLimit Qual
Client ID: Analyte Selenium Sample ID:	N018642-001H-MSD	Batch ID: 56104 Result 9.193 SampType: MSD	TestNo: EPA 200.8 PQL SPK value SPK Ref Val 0.50 10.00 0.1393 TestCode: 200.8_W_DR Units: μg/L	Analysis Date: 2/5/2016 ***REC LowLimit HighLimit RPD Ref Val 90.5 75 125 Prep Date: 2/3/2016	SeqNo: 2222070 %RPD RPDLimit Qual RunNo: 105704

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

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Work Order: N018642 **Project:** SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: MB-56104	SampType: MBLK	TestCod	e: 200.8_W _	SFP Units: µg/L		Prep Da	te: 2/3/201	6	RunNo: 105	704	
Client ID: PBW	Batch ID: 56104	TestN	o: EPA 200.8	3		Analysis Da	te: 2/5/201	6	SeqNo: 222	2159	
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									
Thallium	ND	0.50									
Zinc	ND	10									
Sample ID: LCS-56104	SampType: LCS	TestCod	e: 200.8_W _	SFP Units: µg/L		Prep Da	te: 2/3/201	6	RunNo: 105	704	
Client ID: LCSW	Batch ID: 56104	TestN	o: EPA 200.8	3		Analysis Da	te: 2/5/201	6	SeqNo: 222	2160	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	10.101	0.50	10.00	0	101	85	115				
Lead	9.753	0.50	10.00	0	97.5	85	115				
Thallium	10.909	0.50	10.00	0	109	85	115				
Zinc	95.888	10	100.0	0	95.9	85	115				
Sample ID: N018642-001H-N	IS SampType: MS	TestCod	e: 200.8_W _	SFP Units: µg/L		Prep Da	te: 2/3/201	6	RunNo: 105	704	
Client ID: ZZZZZZ	Batch ID: 56104	TestN	o: EPA 200.8	3		Analysis Da	te: 2/5/201	6	SeqNo: 222	2164	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	7.857	0.50	10.00	0	78.6	75	125				
Lead	10.061	0.50	10.00	0	101	75	125				
Thallium	9.771	0.50	10.00	0.1351	96.4	75	125				
Zinc	85.268	10	100.0	1.797	83.5	75	125				
Sample ID: N018642-001H-N	ISD SampType: MSD	TestCod	e: 200.8_W _	SFP Units: µg/L		Prep Da	te: 2/3/201	6	RunNo: 105	704	
Client ID: ZZZZZZ	Batch ID: 56104	TestN	o: EPA 200.8	3		Analysis Da	te: 2/5/201	6	SeqNo: 222	2165	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	7.866	0.50	10.00	0	78.7	75	125	7.857	0.105	20	

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

Holding times for preparation or analysis exceeded

NEVADA

RPD outside accepted recovery limits Calculations are based on raw values



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CLIENT: CH2MHill Work Order:

N018642

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: N018642-001H-MSD	SampType: MSD	TestCod	de: 200.8_W_ \$	SFP Units: µg/L		Prep Da	te: 2/3/201	6	RunNo: 105	704	
Client ID: ZZZZZZ	Batch ID: 56104	TestN	lo: EPA 200.8			Analysis Da	te: 2/5/201	6	SeqNo: 222	2165	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	9.737	0.50	10.00	0.1351	96.0	75	125	9.771	0.349	20	
Zinc	85.211	10	100.0	1.797	83.4	75	125	85.27	0.0667	20	

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits
- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

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Holding times for preparation or analysis exceeded RPD outside accepted recovery limits

Calculations are based on raw values

Work Order: N018642

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 2130_W

Sample ID: MB-R105648 Client ID: PBW	SampType: MBLK Batch ID: R105648	TestCode: 2130_W TestNo: SM 2130B	Units: NTU	Prep Date: Analysis Date: 2/3/2016	RunNo: 105648 SeqNo: 2217471
Analyte	Result	PQL SPK value S	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Turbidity	ND	0.10			
Sample ID: N018642-001E DUP	. ,,	TestCode: 2130_W	Units: NTU	Prep Date:	RunNo: 105648
Sample ID: N018642-001E DUP Client ID: ZZZZZZ	SampType: DUP Batch ID: R105648	TestCode: 2130_W TestNo: SM 2130B	Units: NTU	Prep Date: Analysis Date: 2/3/2016	RunNo: 105648 SeqNo: 2217473
•	. ,,	_		•	

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

ASSET LABORATORIES

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out CALIFORNIA 11060 Artesia Blvd., Ste C, Cerritos, CA 90703

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Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Work Order: N018642

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 245.1_W_LL

Sample ID:	: MB-56110 PBW	SampType: MBLK Batch ID: 56110	TestCode: 245.1_W_LL Units: μg/L TestNo: EPA 245.1	Prep Date: 2/4/2016 Analysis Date: 2/5/2016	RunNo: 105725 SeqNo: 2223338
Analyte		Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Mercury		ND	0.050		
Sample ID:	: LCS-56110 LCSW	SampType: LCS Batch ID: 56110	TestCode: 245.1_W_LL Units: μg/L TestNo: EPA 245.1	Prep Date: 2/4/2016 Analysis Date: 2/5/2016	RunNo: 105725 SeqNo: 2223339
Analyte		Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Mercury		2.622	0.050 2.500 0	105 85 115	
Sample ID:	: N018642-001H-MS	SampType: MS	TestCode: 245.1_W_LL Units: μg/L	Prep Date: 2/4/2016	RunNo: 105725
Sample ID:	: N018642-001H-MS ZZZZZZ	SampType: MS Batch ID: 56110	TestCode: 245.1_W_LL Units: μg/L TestNo: EPA 245.1	Prep Date: 2/4/2016 Analysis Date: 2/5/2016	RunNo: 105725 SeqNo: 2223340
				·	
Client ID:		Batch ID: 56110	TestNo: EPA 245.1	Analysis Date: 2/5/2016	SeqNo: 2223340
Client ID: Analyte Mercury		Batch ID: 56110 Result	TestNo: EPA 245.1 PQL SPK value SPK Ref Val	Analysis Date: 2/5/2016 %REC LowLimit HighLimit RPD Ref Val	SeqNo: 2223340
Client ID: Analyte Mercury Sample ID:	ZZZZZZ : N018642-001H-MSD	Batch ID: 56110 Result 2.497 SampType: MSD	TestNo: EPA 245.1 PQL SPK value SPK Ref Val 0.050 2.500 0.02315 TestCode: 245.1_W_LL Units: μg/L	Analysis Date: 2/5/2016 ***REC LowLimit HighLimit RPD Ref Val 99.0 75 125 Prep Date: 2/4/2016	SeqNo: 2223340 %RPD RPDLimit Qual

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

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NEVADA

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Work Order: N018642

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 7199_WPGE

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Sample ID: MB-R105699	SampType: MBLK	TestCode: 7199_WPGE Units: μg/L	Prep Date:	RunNo: 105699
Client ID: PBW	Batch ID: R105699	TestNo: EPA 7199	Analysis Date: 2/3/2016	SeqNo: 2220692
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	ND	0.20		
Sample ID: LCS-R105699	SampType: LCS	TestCode: 7199_WPGE Units: µg/L	Prep Date:	RunNo: 105699
Client ID: LCSW	Batch ID: R105699	TestNo: EPA 7199	Analysis Date: 2/3/2016	SeqNo: 2220693
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	4.905	0.20 5.000 0	98.1 90 110	
Sample ID: N018642-001IDUP	SampType: DUP	TestCode: 7199_WPGE Units: µg/L	Prep Date:	RunNo: 105699
Client ID: ZZZZZZ	Batch ID: R105699	TestNo: EPA 7199	Analysis Date: 2/3/2016	SeqNo: 2220695
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	ND	0.20	0	0 20
Sample ID: N018619-001AMS	SampType: MS	TestCode: 7199_WPGE Units: µg/L	Prep Date:	RunNo: 105699
Client ID: ZZZZZZ	Batch ID: R105699	TestNo: EPA 7199	Analysis Date: 2/3/2016	SeqNo: 2220697
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	1.091	0.20 1.000 0.03980	105 85 115	
Sample ID: N018619-001AMSD	SampType: MSD	TestCode: 7199_WPGE Units: µg/L	Prep Date:	RunNo: 105699
Client ID: ZZZZZZ	Batch ID: R105699	TestNo: EPA 7199	Analysis Date: 2/3/2016	SeqNo: 2220698
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	1.099	0.20 1.000 0.03980	106 85 115 1.091	0.731 20

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

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NEVADA P: 702.307.2659 F: 702.307.2691 **CLIENT:** CH2MHill Work Order:

Project:

N018642

SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_FP_SFPP

Sample ID: MB-56111 Client ID: PBW	SampType: MBLK Batch ID: 56111	TestCode: 8015_W TestNo: EPA 80	0		Prep Da Analysis Da	te: 2/4/201		RunNo: 105 SeqNo: 222		
Analyte	Result	PQL SPK valu	e SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel (C13-C22)	ND	25								
TPH-Oil (C23-C36)	ND	25								
Surr: Octacosane	69.806	80.0	0	87.3	26	152				
Surr: p-Terphenyl	73.785	80.0	0	92.2	57	132				

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

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- Holding times for preparation or analysis exceeded
- RPD outside accepted recovery limits Calculations are based on raw values



ASSET LABORATORIES

CLIENT: CH2MHill Work Order:

N018642

Project: SFPP - Norwalk Site ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_SFPPTOT

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Sample ID: MB-R105707 Prep Date: RunNo: 105707 SampType: MBLK TestCode: 8015_W_SFP Units: ug/L

Client ID: PBW Batch ID: R105707 TestNo: EPA 8015B Analysis Date: 2/5/2016 SeqNo: 2231833

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

Total TPH ND 50

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

NEVADA

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



P: 562.219.7435 F: 562.219.7436

3151 W. Post Rd., Las Vegas, NV 89118

Work Order: N018642

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_WSFPP

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Sample ID: E160208LCS2	SampType: LCS	TestCo	de: 8015GAS	_WS Units: ug/L		Prep Da	te:		RunNo: 10	5748	
Client ID: LCSW	Batch ID: E16VW012	Testi	No: EPA 8015	В		Analysis Da	te: 2/8/201	6	SeqNo: 222	25105	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	894.000	50	1000	0	89.4	67	136				
Surr: Chlorobenzene - d5	50555.000		50000		101	74	138				
Sample ID: E160208MB2	SampType: MBLK	TestCo	de: 8015GAS	_WS Units: ug/L		Prep Da	te:		RunNo: 10	5748	
Client ID: PBW	Batch ID: E16VW012	Testi	No: EPA 8015	В		Analysis Da	te: 2/8/201	6	SeqNo: 222	25106	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	36.000	50									J
Surr: Chlorobenzene - d5	56680.000		50000		113	74	138				
Sample ID: N018642-001BMS	SampType: MS	TestCo	de: 8015GAS	_WS Units: ug/L		Prep Da	te:		RunNo: 10	5748	
Client ID: ZZZZZZ	Batch ID: E16VW012	Testi	No: EPA 8015	В		Analysis Da	te: 2/8/201	6	SeqNo: 222	25110	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	892.000	50	1000	30.00	86.2	67	136				
Surr: Chlorobenzene - d5	50243.000		50000		100	74	138				
Sample ID: N018642-001BMSD	SampType: MSD	TestCo	de: 8015GAS	_WS Units: ug/L		Prep Da	te:		RunNo: 10	5748	
Client ID: ZZZZZZ	Batch ID: E16VW012	Testi	No: EPA 8015	В		Analysis Da	te: 2/8/201	6	SeqNo: 222	25111	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12)	826.000	50	1000	30.00	79.6	67	136	892.0	7.68	30	
Surr: Chlorobenzene - d5	48040.000		50000		96.1	74	138		0	0	
Sample ID: E160212LCS2	SampType: LCS	TestCo	de: 8015GAS	_WS Units: ug/L		Prep Da	te:		RunNo: 10	5852	
Client ID: LCSW	Batch ID: E16VW012	Testi	No: EPA 8015	В		Analysis Da	te: 2/12/20	16	SeqNo: 223	31085	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
TPH-Gasoline (C4-C12)	833.000	50	1000	0	83.3	67	136				

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits
- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

NEVADA

P: 702.307.2659 F: 702.307.2691



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

3151 W. Post Rd., Las Vegas, NV 89118

CALIFORNIA

Work Order: N018642

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_WSFPP

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Sample ID: E160212LCS2 Client ID: LCSW	SampType: LCS Batch ID: E16VW012	TestCode: 8015GAS_WS Units: ug/L TestNo: EPA 8015B	Prep Date: Analysis Date: 2/12/2016	RunNo: 105852 SeqNo: 2231085		
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual		
Surr: Chlorobenzene - d5	46161.000	50000	92.3 74 138			
Sample ID: E160212MB2 Client ID: PBW	SampType: MBLK Batch ID: E16VW012	TestCode: 8015GAS_WS Units: ug/L TestNo: EPA 8015B				
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual		
TPH-Gasoline (C4-C12) Surr: Chlorobenzene - d5	32.000 53319.000	50 50000	107 74 138	J		
Sample ID: N018735-003AMS	SampType: MS	TestCode: 8015GAS_WS Units: ug/L	Prep Date:	RunNo: 105852		
Client ID: ZZZZZZ	Batch ID: E16VW012	TestNo: EPA 8015B	Analysis Date: 2/12/2016	SeqNo: 2231091		
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual		
TPH-Gasoline (C4-C12) Surr: Chlorobenzene - d5	837.000 48392.000	50 1000 37.00 50000	80.0 67 136 96.8 74 138			
Sample ID: N018735-003AMSD Client ID: ZZZZZZ	SampType: MSD Batch ID: E16VW012	TestCode: 8015GAS_WS Units: ug/L TestNo: EPA 8015B	Prep Date: Analysis Date: 2/12/2016	RunNo: 105852 SeqNo: 2231092		
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual		
TPH-Gasoline (C4-C12) Surr: Chlorobenzene - d5	858.000 50478.000	50 1000 37.00 50000	82.1 67 136 837.0 101 74 138	2.48 30 0 0		

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

- Value above quantitation range
- Not Detected at the Reporting Limit
 - NEVADA





Work Order: N018642

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Sample ID: P160203LCS	SampType: LCS	TestCode: 8260_WP_SF Units: ug/L Prep Date:					RunNo: 105653				
Client ID: LCSW	Batch ID: P16VW024	TestN	No: EPA 8260	3	Analysis Date: 2/3/2016			6	SeqNo: 2217801		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	21.140	0.50	20.00	0	106	69	133				
1,2-Dichloroethane	20.420	0.50	20.00	0	102	69	132				
2-Butanone	237.680	10	200.0	0	119	49	136				
Benzene	20.930	1.0	20.00	0	105	81	122				
Di-isopropyl ether	21.690	1.0	20.00	0	108	70	130				
Ethylbenzene	20.330	1.0	20.00	0	102	73	127				
m,p-Xylene	42.150	1.0	40.00	0	105	76	128				
MTBE	20.990	1.0	20.00	0	105	65	123				
o-Xylene	21.430	1.0	20.00	0	107	80	121				
Tert-amyl methyl ether	21.140	1.0	20.00	0	106	70	130				
Tert-Butanol	103.120	5.0	100.0	0	103	70	130				
Toluene	21.140	2.0	20.00	0	106	77	122				
Xylenes, Total	63.580	2.0	60.00	0	106	75	125				
Surr: 1,2-Dichloroethane-d4	26.510		25.00		106	72	119				
Surr: 4-Bromofluorobenzene	26.800		25.00		107	76	119				
Surr: Dibromofluoromethane	26.470		25.00		106	85	115				
Surr: Toluene-d8	26.390		25.00		106	81	120				

Sample ID: P160203LCSD Client ID: LCSS02	SampType: LCSD Batch ID: P16VW024	TestCode: 8260_WP_SF Units: ug/L TestNo: EPA 8260B			Prep Date: Analysis Date: 2/3/2016				RunNo: 105 SegNo: 221		
Client ID. LC3302	Daten 10. F16444024								Seq140. 2217602		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	21.460	0.50	20.00	0	107	69	133	21.14	1.50	20	
1,2-Dichloroethane	21.390	0.50	20.00	0	107	69	132	20.42	4.64	20	
2-Butanone	224.210	10	200.0	0	112	49	136	237.7	5.83	20	
Benzene	21.310	1.0	20.00	0	107	81	122	20.93	1.80	20	
Di-isopropyl ether	22.450	1.0	20.00	0	112	70	130	21.69	3.44	20	
Ethylbenzene	20.600	1.0	20.00	0	103	73	127	20.33	1.32	20	
m,p-Xylene	42.830	1.0	40.00	0	107	76	128	42.15	1.60	20	
MTBE	21.840	1.0	20.00	0	109	65	123	20.99	3.97	20	

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Value above quantitation range
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
- Not Detected at the Reporting Limit

NEVADA

P: 702.307.2659 F: 702.307.2691



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

3151 W. Post Rd., Las Vegas, NV 89118

Work Order: N018642

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Sample ID: P160203LCSD	SampType: LCSD	TestCode: 8260_WP_SF Units: ug/L Prep Date:					RunNo: 105653				
Client ID: LCSS02	Batch ID: P16VW024	Testi	No: EPA 8260	В		Analysis Da	te: 2/3/201	6	SeqNo: 22 1	17802	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	21.540	1.0	20.00	0	108	80	121	21.43	0.512	20	
Tert-amyl methyl ether	21.910	1.0	20.00	0	110	70	130	21.14	3.58	20	
Tert-Butanol	116.680	5.0	100.0	0	117	70	130	103.1	12.3	20	
Toluene	21.170	2.0	20.00	0	106	77	122	21.14	0.142	20	
Xylenes, Total	64.370	2.0	60.00	0	107	75	125	63.58	1.23	20	
Surr: 1,2-Dichloroethane-d4	27.020		25.00		108	72	119		0		
Surr: 4-Bromofluorobenzene	27.100		25.00		108	76	119		0		
Surr: Dibromofluoromethane	26.770		25.00		107	85	115		0		
Surr: Toluene-d8	26.430		25.00		106	81	120		0		
Sample ID: P160203MB3	SampType: MBLK	TestCo	de: 8260_WP _	SF Units: ug/L		Prep Da	te:		RunNo: 105	5653	
Client ID: PBW	Batch ID: P16VW024	TestNo: EPA 8260B		Analysis Date: 2/3/2016			6	SeqNo: 2217803			
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									
2-Butanone	ND	10									
Benzene	ND	1.0									
Di-isopropyl ether	ND	1.0									
Ethylbenzene	ND	1.0									
m,p-Xylene	0.030	1.0									J
MTBE	ND	1.0									
o-Xylene	ND	1.0									
Tert-amyl methyl ether	ND	1.0									
Tert-Butanol	ND	5.0									
Toluene	ND	2.0									
Xylenes, Total	ND	2.0									
Surr: 1,2-Dichloroethane-d4	27.940		25.00		112	72	119				
Surr: 4-Bromofluorobenzene	25.700		25.00		103	76	119				
Surr: Dibromofluoromethane	27.680		25.00		111	85	115				

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

CALIFORNIA

NEVADA



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

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

CLIENT: CH2MHill Work Order:

N018642

Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: P160203MB3	SampType: MBLK	TestCode: 8260_WP_SF Units: ug/L			Prep Date:				RunNo: 105653		
Client ID: PBW	Batch ID: P16VW024	TestN	No: EPA 8260	В		Analysis Da	ite: 2/3/2016	6	SeqNo: 221	7803	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Toluene-d8	25.680		25.00		103	81	120				

Qualifiers:

- Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits

- Value above quantitation range
- Not Detected at the Reporting Limit
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

NEVADA

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

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

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits Calculations are based on raw values



Advanced Technology Laboratories

3151 W. Post Road Las Vegas, NV 89118

Revised: 08/23/12

Tel: 702-307-2659 Fax: 702-307-2691 Marlon Cartin (marlon@atl-labs.com)

CHAIN OF CUSTODY RECORD

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

T. 0.90C CLIENT PROJECT NAME / NUME Kinder Morgan Energy Partners, Attn: Steve Defibaugh SFPP - Norwalk Site PROJECT CONTACT: 1100 Town & Country Road QUOTE NO .: James Dye Orange, CA 92868 SAMPLER(S): (SIGNATURE LAB USE ONLY 714-560-4802 714-560-4601 TURNAROUND TIME REQUESTED ANALYSIS SAME DAY 24 HR 48HR 72 HR 5 DAYS 10 DAYS Ammonia Nitrogen (as N) (SM-4500 NH3C) Cu, Pb, Se, Tl, and Zn (200.8); 48 Hr TAT RWQCB REPORTING ARCHIVE SAMPLES UNTIL SPECIAL INSTRUCTIONS Total Suspended Solids (SM2540D) TPH-9, TPH-d, and TPH-oil (8015B) MTBE and TBA, (8260B) 48HR TAT Report to D. Jablonski/CH2M HILL, cc: KMEP BTEX, 1,1-DCA, 1,2-DCA (8260B) Direct Bill KMEP/SFPP - Steve Defibaugh-ref. AFE# 81195 DIPE, TAME, and WEK (8260B) Settleable Solids (SM2540F) "J" flags required/Use lowest possible detection limit - all methods. Hg (245.1); 48 Hr TAT Turbidity (SM2130B) Oil & Grease (1664) SAMPLING MBAs (SM 5540C) Phenol (420.1) LOCATION/ MAT-Cr VI (7199) SAMPLE ID DESCRIPTION RIX DATE TIME LAB USE ONLY Comments 2/2/16/1345 4018642-EFF-02-02 X X X X X X X X X X X X X Effluent WW Received by (Signature) Received by: (Signature) 2-2-16 15:15 clinquished by: (Signature) Received by: (Signature)

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 of	or further in	struction, pleas	se contact our F	Project Coor	dinator at (702	2) 307-2659.		
Cooler Received/Opened On:	2/3/2016				Workorder:	N018642		
Rep sample Temp (Deg C):	0.9				IR Gun ID:	2		
Temp Blank:	✓ Yes	☐ No						
Carrier name:	Golden Sta	ate Overnight						
Last 4 digits of Tracking No.:	7954			Packing	Material Used:	Bubble Wrap		
Cooling process:	✓ Ice	☐ Ice Pack	☐ Dry Ice	Other	☐ None			
		Sa	ımple Receip	t Checklis	<u>t</u>			
1. Shipping container/cooler in g	good condition	n?			Yes 🗹	No \square	Not Present	
2. Custody seals intact, signed,	dated on ship	ppping container/o	cooler?		Yes	No \square	Not Present	✓
3. Custody seals intact on samp	le bottles?				Yes	No 🗌	Not Present	✓
4. Chain of custody present?					Yes 🗸	No 🗌		
5. Sampler's name present in C	OC?				Yes 🗸	No 🗌		
6. Chain of custody signed when	n relinquished	d and received?			Yes 🗸	No \square		
7. Chain of custody agrees with	sample label	s?			Yes 🗸	No 🗌		
8. Samples in proper container/b	oottle?				Yes 🗹	No 🗌		
9. Sample containers intact?					Yes 🗸	No 🗆		
10. Sufficient sample volume for	r indicated tes	st?			Yes 🗹	No \square		
11. All samples received within I	holding time?	•			Yes 🗹	No \square		
12. Temperature of rep sample	or Temp Blan	nk within acceptab	le limit?		Yes 🗸	No 🗆	NA	
13. Water - VOA vials have zero	headspace?	?			Yes 🗸	No 🗌	NA	
14. Water - pH acceptable upon Example: pH > 12 for (CN		or Metals			Yes 🗹	No 🗌	NA	
15. Did the bottle labels indicate	correct pres	ervatives used?			Yes 🗸	No \square	NA	
16. Were there Non-Conforman W	ce issues at l as Client noti	-			Yes Yes	No 🗌 No 🗆	NA NA	
Comments:								

ASSET Laboratories

WORK ORDER Summary

03-Feb-16

WorkOrder: N018642

Client ID: CH2HI03

Project: SFPP - Norwalk Site

QC Level: RTNE Date Received: 2/3/2016

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

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N018642-001A	EFF-02-02	2/2/2016 1:45:00 PM	2/10/2016	Wastewater		Oil and Grease Sample Prep				ww
			2/10/2016		EPA 1664 _HEM	Hexane Extractable Material (HEM)				WW
N018642-001B			2/10/2016		EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID				VW
N018642-001C			2/10/2016		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS				WW
			2/10/2016		EPA 8015B	TPH EXTRACTABLE BY GC/FID				WW
			2/10/2016		EPA 8015B	Total TPH				WW
N018642-001D			2/10/2016		SM2540F	SETTLEABLE MATTER				WW
			2/10/2016			Setteable Matter				WW
N018642-001E			2/10/2016		SM2540D	TOTAL NON-FILTERABLE RESIDUE				WW
			2/10/2016			Total Suspended Solids Prep				WW
			2/10/2016		SM 2130B	TURBIDITY				WW
N018642-001F			2/10/2016		EPA 420.1	PHENOLICS			~	SUB
N018642-001G			2/5/2016		EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS				VW
N018642-001H			2/5/2016			AQPREP TOTAL METALS: ICP, FLAA				WW
			2/5/2016		EPA 200.8	TOTAL METALS BY COLLISION/REACTION CELL ICPMS				WW
			2/5/2016		EPA 200.8	TOTAL METALS BY ICPMS				ww
			2/5/2016		EPA 245.1	MERCURY BY COLD VAPOR TECHNIQUE				WW
			2/5/2016			MERCURY PREP				WW
N018642-001I			2/10/2016		EPA 7199	Hexavalent Chromium by IC				WW
N018642-001J			2/10/2016		SM4500-NH3C	AMMONIA-N			~	SUB

ASSET Laboratories

WORK ORDER Summary

03-Feb-16

WorkOrder: N018642

Client ID: CH2HI03

Project: SFPP - Norwalk Site

QC Level: RTNE

Date Received: 2/3/2016

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

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld MS Sub Storage
N018642-001K	EFF-02-02	2/2/2016 1:45:00 PM	2/10/2016	Wastewater	SM 5540 C	SURFACTANTS	□ □ SUB
N018642-002A	FOLDER		2/5/2016		Folder	Folder	LAB

Page 1 of 1

ASSET Laboratories 3151-3153 W Post Rd., Las Vegas, NV 891 18 www.atl-labs.com TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: RTNE

Field Sampler: James Dye

Subcontractor:

BC Labs TEL: (661) 327-4911 4100 Atlas Court FAX: (661) 327-1918

Bakersfield, CA 93308 Acct #: **03-Feb-16**

				Requested Tests				
Sample ID	Matrix	Date Collected	Bottle Type	EPA 420.1	SM 5540 C	SM4500-NH3C		
N018642-001F / EFF-02-02	Wastewater	2/2/2016 1:45:00 PM	32OZA	1				
N018642-001J / EFF-02-02	Wastewater	2/2/2016 1:45:00 PM	16OZP			1		
N018642-001K / EFF-02-02	Wastewater	2/2/2016 1:45:00 PM	32OZP		1			

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N18642A Please email Invoices and Account Receivable Statements to AssetAP@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Normal TAT

Please analyze for Ammonia, Phenols and MBAS.

	Date/Time		Date/Time
Relinquished by:	2/2/15 @ 15:10	Received by:	
Relinquished by:		Received by:	



800-322-5555 www.gso.com

Ship From

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

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

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

Delivery Instructions: HOLD FOR PICK UP

Signature Type: REQUIRED

Tracking #: 530787954

CPS



LVS

A

LAS VEGAS

C89102A



47809109

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

Package 1 of 2

LABEL INSTRUCTIONS:

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

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

0.9°C



Date of Report: 02/12/2016

Molky Brar

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

Client Project: SFPP-Norwalk Site

BCL Project: Cerritos
BCL Work Order: 1603263
Invoice ID: B226566

Enclosed are the results of analyses for samples received by the laboratory on 2/3/2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Vanessa Sandoval

Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

Report ID: 1000447460 4100 A



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Precision and Accuracy	
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Notes and Definitions.	1 ¹

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Chain of Custody and Cooler Receipt Form for 1603263 Page 1 of 3 Page 1 of 1 03-Feb-16 SM4500-NH3C Date/Time CHAIN-OF-CUSTODY RECORD Please use PO#: N18642A Please email Invoices and Account Receivable Statements to AssetAP@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports. M@assetlaboratories.com by: Normal TAT Requested Tests SM 5540 C Field Sampler: James Dye 10-03263 QC Level: RTNE EPA 420. **Bottle Type** 320ZA 160ZP 320ZP Received by: Received by: 2/2/2016 1:45:00 PM 2/2/2016 1:45:00 PM 2/2/2016 1:45:00 PM Date Collected Date/Time 2/2/15 @ 15:10 (661) 327-4911 (661) 327-1918 Please email sample receipt acknowledgement to the PM. Phenols and MBAS. Wastewater Wastewater Wastewater Matrix TEL: FAX: Acct #: FAX: 7023072691 3151-3153 W Post Rd., Las Vegas, NV 89118 Please analyze for Ammonia, ASSET Laboratories www.atl-labs.com TEL: 7023072659 / EFF-02-02 / EFF-02-02 / EFF-02-02 Sample ID Bakersfield, CA 93308 Relinquished by: 4100 Atlas Court General Comments: Relinquished by: N018642-001J N018642-001K N018642-001F Subcontractor

Page 3 of 11 Report ID: 1000447460



Chain of Custody and Cooler Receipt Form for 1603263 Page 2 of 3 Contact us:
Newdel: 3151 W, Post Road, Las Vegas, NV 83118
P; 702,307,3659 F; 702,307,269
Callemin: 1,1050 phreia Blvd. Ste C, Corritos, CA 90703
P; 562,219,7436
P; 562,219,7446
P; 562,7416
P; 562,7 Remarks **Р**ВЕЅЕВУАТІОИ QAVQC alner Type No. of container xcel EDD Analyses Requested CHAIN OF CUSTODY RECORD (1.05H) (420.1) DOHSS WS) 3 & SW Solid 8 NOLO Water 3 SS COT APDES SUB-1345 Time 2/2/16 HOID Š Date の末野 NO SHORT 5 Cr+6 00 01:5 Sample ID/Location LABORATORIES EFF-02-62 Labs No-0326 SFPP-Normalk site Brar SSET Laboratory Work Order No. Molky

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Chain of Custody and Cooler Receipt Form for 1603263 Page 3 of 3

1	-		2000-01-01-01-0	RECEIPT				Pag		Of
Submission #: 16-0326	3									
SHIPPING INFORI Fed Ex U UPS Ontrac BC Lab Field Service Other	MATION □ Har Specif	nd Delive	750	Ice Ch	est 🞾	None ccify)	Box □		FREE LIC YES	
Refrigerant: Icey Blue Ice	Non	e 🗆	Other 🗆	Comr	nents:					
	Contain	CITY OF THE PARTY		Com	ments:					
	All camples	container	rs intact? Y	Vac of No	п	Docaria	tion(s) matc	h coca	Vac 🗆 Na	
COC Received Em	issivity:	-97	Container:	, C /	Thermo	meter ID:	28 8	Date/Ti	me 2.3.	
SAMPLE CONTAINERS					SAMPL	E NUMBERS		,	./_	
	13	2	3	4	5	- 6	7	8	9	10
QT PE UNPRES 4oz / 8oz / 16oz PE UNPRES	12	-	-						-	-
	1-	+	+	+1			-			
20z Cr*6 QT INORGANIC CHEMICAL METALS	1	1							-	-
QT INORGANIC CHEMICAL METALS INORGANIC CHEMICAL METALS 40z / 80z / 160z										
PT CYANIDE	922		1		12000					
PT NITROGEN FORMS	A					†				
PT TOTAL SULFIDE	1									
20z. NITRATE/NITRITE										
PT TOTAL ORGANIC CARBON						1				
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS X37	(1				
10ml VOA VIAL TRAVEL BLANK								· ·		
IOMI VOA VIAL										
OT EPA 1664	1	7								
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
0 ml VOA VIAL- 504										
OT EPA 508/608/8080					1					
OT EPA 515.1/8150										
OT EPA 525										
T EPA 525 TRAVEL BLANK										
0ml EPA 547				- 6						
0ml EPA 531.1										
oz EPA 548									*:	
T EPA 549										
T EPA 8015M										
T EPA 8270										
z/16oz/32oz AMBER										
z / 160z / 320z JAR										
DIL SLEEVE										
CB VIAL										
ASTIC BAG										
EDLAR BAG										
ERROUS IRON										
NCORE	L									
MART KIT			7.							
IMMA CANISTER										
nments:					-					



ASSET Laboratories Reported: 02/12/2016 9:54 3151-3153 W. Post Rd Project: Cerritos

Las Vegas, NV 89118 Project Number: SFPP-Norwalk Site
Project Manager: Molky Brar

Laboratory / Client Sample Cross Reference

Laboratory **Client Sample Information** 1603263-01 **COC Number:** 02/03/2016 10:25 **Receive Date: Project Number:** Sampling Date: 02/02/2016 13:45 Sample Depth: **Sampling Location:** Sampling Point: EFF-02-02 Lab Matrix: Water Sampled By: Client Sample Type: Water

Report ID: 1000447460 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 6 of 11



ASSET Laboratories

3151-3153 W. Post Rd

Las Vegas, NV 89118

02/12/2016 9:54 Reported:

Project: Cerritos Project Number: SFPP-Norwalk Site

Project Manager: Molky Brar

Water Analysis (General Chemistry)

BCL Sample ID:	1603263-01	Client Sampl	e Name:	EFF-02-0	2, 2/2/2016	1:45:00PM, C	Client		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run#
MBAS		0.069	mg/L	0.10	0.015	EPA-425.1	ND	J	1
Total Phenolics		ND	ug/L	50	10	EPA-420.4	ND		2
Ammonia as NH3		ND	mg/L	0.13	0.030	EPA-350.1	ND		3

			Run				QC
Run#	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-425.1	02/03/16	02/03/16 10:00	JMN	MANUAL	1	BZB0224
2	EPA-420.4	02/10/16	02/10/16 13:10	TDC	KONE-1	1	BZB1051
3	EPA-350.1	02/08/16	02/09/16 09:36	JMH	SC-1	1	BZB0797

Page 7 of 11 Report ID: 1000447460

ASSET Laboratories 3151-3153 W. Post Rd Las Vegas, NV 89118 **Reported:** 02/12/2016 9:54

Project: Cerritos

Project Number: SFPP-Norwalk Site Project Manager: Molky Brar

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BZB0224						
MBAS	BZB0224-BLK1	ND	mg/L	0.10	0.015	
QC Batch ID: BZB0797						
Ammonia as NH3	BZB0797-BLK1	ND	mg/L	0.13	0.030	
QC Batch ID: BZB1051						
Total Phenolics	BZB1051-BLK1	ND	ug/L	50	10	

Report ID: 1000447460 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 8 of 11

ASSET Laboratories 3151-3153 W. Post Rd Las Vegas, NV 89118 **Reported:** 02/12/2016 9:54

Project: Cerritos

Project Number: SFPP-Norwalk Site Project Manager: Molky Brar

Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

							Control Limits				
				Spike		Percent		Percent		Lab	
Constituent	QC Sample ID	Type	Result	Level	Units	Recovery	RPD	Recovery	RPD	Quals	
QC Batch ID: BZB0224											
MBAS	BZB0224-BS1	LCS	0.19410	0.20000	mg/L	97.0		85 - 115			
QC Batch ID: BZB0797											
Ammonia as NH3	BZB0797-BS1	LCS	1.1556	1.2160	mg/L	95.0		90 - 110			
QC Batch ID: BZB1051											
Total Phenolics	BZB1051-BS1	LCS	491.91	500.00	ug/L	98.4		85 - 115			

Report ID: 1000447460 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 9 of 11

ASSET Laboratories 3151-3153 W. Post Rd Las Vegas, NV 89118 **Reported:** 02/12/2016 9:54

Project: Cerritos

Project Number: SFPP-Norwalk Site Project Manager: Molky Brar

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

									Cont	rol Limits	
		Source	Source		Spike			Percent		Percent	Lab
Constituent	Туре	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery	Quals
QC Batch ID: BZB0224	Use	d client samp	ole: N								
MBAS	DUP	1603065-01	0.060000	0.060000		mg/L	0		20		J
	MS	1603065-01	0.060000	0.45700	0.40000	mg/L		99.2		80 - 120	
	MSD	1603065-01	0.060000	0.46560	0.40000	mg/L	1.9	101	20	80 - 120	
QC Batch ID: BZB0797	Use	d client samp	ole: Y - Des	cription: EF	F-02-02, 02/	02/2016 1	3:45				
Ammonia as NH3	DUP	1603263-01	ND	ND		mg/L			10		
	MS	1603263-01	ND	1.3288	1.3511	mg/L		98.4		90 - 110	
	MSD	1603263-01	ND	1.2976	1.3511	mg/L	2.4	96.0	10	90 - 110	
QC Batch ID: BZB1051	Use	d client samp	ole: Y - Des	cription: EF	F-02-02, 02/	02/2016 1	3:45				
Total Phenolics	DUP	1603263-01	ND	ND		ug/L			20		
	MS	1603263-01	ND	484.92	500.00	ug/L		97.0		80 - 120	
	MSD	1603263-01	ND	502.38	500.00	ug/L	3.5	100	20	80 - 120	

Report ID: 1000447460 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 10 of 11



ASSET Laboratories Reported: 02/12/2016 9:54 3151-3153 W. Post Rd Project: Cerritos

Las Vegas, NV 89118 Project Number: SFPP-Norwalk Site

Project Manager: Molky Brar

Notes And Definitions

Estimated Value (CLP Flag)

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

Page 11 of 11 Report ID: 1000447460

April 08, 2016

Dan Jablonski CA-ELAP No.: 2676 CH2MHill NV Cert. No.: NV-00922

1000 Wilshire Blvd.

Los Angeles, CA 90017

TEL:

FAX: Workorder No.: N019260

RE: SFPP - Norwalk Site

Attention: Dan Jablonski

Enclosed are the results for sample(s) received on March 30, 2016 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,

Glen Gesmundo

Manay libucar Tor

QA Manager

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



ASSET Laboratories

CLIENT: CH2MHill

Project: SFPP - Norwalk Site CASE NARRATIVE

Date: 08-Apr-16

Lab Order: N019260

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

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

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

Samples were analyzed within method holding time.

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

Subcontracted Analyses:

Phenols was subcontracted to BC Labs- Bakersfield, CA.

Analytical Comments for EPA 200.8:

Matrix Spike (MS) is outside recovery criteria for Copper on QC sample N019260-001H-MS possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.



ASSET Laboratories

CLIENT: CH2MHill

Project: SFPP - Norwalk Site

Lab Order: N019260

Contract No:

Lab Sample ID Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N019260-001A EFF-03-29	Wastewater	3/29/2016 1:10:00 PM	3/30/2016	4/8/2016
N019260-001B EFF-03-29	Wastewater	3/29/2016 1:10:00 PM	3/30/2016	4/8/2016
N019260-001C EFF-03-29	Wastewater	3/29/2016 1:10:00 PM	3/30/2016	4/8/2016
N019260-001D EFF-03-29	Wastewater	3/29/2016 1:10:00 PM	3/30/2016	4/8/2016
N019260-001E EFF-03-29	Wastewater	3/29/2016 1:10:00 PM	3/30/2016	4/8/2016
N019260-001F EFF-03-29	Wastewater	3/29/2016 1:10:00 PM	3/30/2016	4/8/2016
N019260-001H EFF-03-29	Wastewater	3/29/2016 1:10:00 PM	3/30/2016	4/8/2016
N019260-001I EFF-03-29	Wastewater	3/29/2016 1:10:00 PM	3/30/2016	4/8/2016
N019260-001J EFF-03-29	Wastewater	3/29/2016 1:10:00 PM	3/30/2016	4/8/2016

Date: 08-Apr-16

Work Order Sample Summary



ANALYTICAL RESULTS

Print Date: 08-Apr-16

ASSET Laboratories

CLIENT: CH2MHill Client Sample ID: EFF-03-29

Lab Order: N019260 **Collection Date:** 3/29/2016 1:10:00 PM

Project: SFPP - Norwalk Site Matrix: WASTEWATER

NO10260 001 I ok ID

Analyse	es	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL	NON-FILTERABLE RESID	E						
IOIAL	NON-I ILI LINABLE RESID	,OL		SM2	2540D			
RunID:	WETCHEM_160331B	QC Batch: 56	819		PrepDa	ite	3/31/2016	Analyst: LR
Suspe Filtera	ended Solids (Residue, Non-	ND	10	10	·	mg/L	1	3/31/2016 08:45 AM
SETTL	EABLE MATTER							
				SM	2540F			
RunID:	WETCHEM_160330D	QC Batch: 56	813		PrepDa	ite	3/30/2016	Analyst: QBM
Settle	able Matter	ND	0.088	0.088		ml/L	1	3/30/2016
HEXAN	IE EXTRACTABLE MATER	RIAL (HEM)						
		:= (- :=)		EPA 1664	_HEM REV	В		
RunID:	WETCHEM_160401A	QC Batch: 56	836		PrepDa	ite	4/1/2016	Analyst: LR
Oil &	Grease	ND	0.71	4.1		mg/L	1	4/1/2016 08:48 AM
VOLAT	TILE ORGANIC COMPOUN	DS BY GC/MS						
				EPA	8260B			
RunID:	MS5_160330A	QC Batch: P1	6VW067		PrepDa	ite		Analyst: QBM
1,1-Di	ichloroethane	ND	0.022	0.50		ug/L	1	3/30/2016 12:19 PM
1,2-Di	ichloroethane	ND	0.064	0.50		ug/L	1	3/30/2016 12:19 PM
Benze	ene	ND	0.036	1.0		ug/L	1	3/30/2016 12:19 PM
Ethylb	penzene	ND	0.036	1.0		ug/L	1	3/30/2016 12:19 PM
m,p-X	(ylene	ND	0.024	1.0		ug/L	1	3/30/2016 12:19 PM
MTBE	<u> </u>	ND	0.062	1.0		ug/L	1	3/30/2016 12:19 PM
o-Xyle	ene	ND	0.042	1.0		ug/L	1	3/30/2016 12:19 PM
Tert-B	Butanol	ND	0.30	5.0		ug/L	1	3/30/2016 12:19 PM
Tolue	ne	ND	0.042	2.0		ug/L	1	3/30/2016 12:19 PM
Xylene	es, Total	ND	1.5	2.0		ug/L	1	3/30/2016 12:19 PM
Sur	rr: 1,2-Dichloroethane-d4	103	0	72-119		%REC	1	3/30/2016 12:19 PM
Sur	rr: 4-Bromofluorobenzene	103	0	76-119		%REC	1	3/30/2016 12:19 PM
Sur	rr: Dibromofluoromethane	104	0	85-115		%REC	1	3/30/2016 12:19 PM
Sur	rr: Toluene-d8	103	0	81-120		%REC	1	3/30/2016 12:19 PM
TPH EX	KTRACTABLE BY GC/FID							
	E	EPA 3510C		EPA	8015B			
RunID:	GC1_160404B	QC Batch: 56	848		PrepDa	ite	4/4/2016	Analyst: MDM
TPH-	Diesel (C13-C22)	ND	15	25		ug/L	1	4/4/2016 06:40 PM
TPH-0	Oil (C23-C36)	ND	14	25		ug/L	1	4/4/2016 06:40 PM
Sur	rr: Octacosane	141	0	26-152		%REC	1	4/4/2016 06:40 PM

Qualifiers: Analyte detected in the associated Method Blank

> Η Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit Results are wet unless otherwise specified

- Value above quantitation range
- Analyte detected below quantitation limits J
- Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out



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



ANALYTICAL RESULTS

Print Date: 08-Apr-16

ASSET Laboratories

CLIENT: CH2MHill Client Sample ID: EFF-03-29

Lab Order: N019260 **Collection Date:** 3/29/2016 1:10:00 PM

Project: SFPP - Norwalk Site Matrix: WASTEWATER

Lab ID: N019260-001

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC							
	EPA 3510C		EPA	8015B			
RunID: GC1_160404B	QC Batch: 56	348		PrepD	Date	4/4/2016	Analyst: MDM
Surr: p-Terphenyl	127	0	57-132		%REC	1	4/4/2016 06:40 PM
GASOLINE RANGE ORGAN	ICS BY GC/FID						
			EPA	8015B			
RunID: GC4_160330A	QC Batch: E1	6VW023		PrepD	Date		Analyst: QBM
TPH-Gasoline (C4-C12)	42	16	50	J	ug/L	1	3/30/2016 10:45 AM
Surr: Chlorobenzene - d5	101	0	74-138		%REC	1	3/30/2016 10:45 AM
HEXAVALENT CHROMIUM E	BY IC						
			EP	A 7199			
RunID: IC7_160330A	QC Batch: R1	06675		Prep[ate		Analyst: JJS
Hexavalent Chromium	ND	0.015	0.20		μg/L	1	3/30/2016 11:39 AM
MERCURY BY COLD VAPOR	RITECHNIQUE				1.3		
MERCORI DI COED VAI OI	(I E O I I I I I I I I I I I I I I I I I		EP/	A 245.1			
RunID: AA1_160330A	QC Batch: 56	308		Prep[)ate	3/30/2016	Analyst: AM
Mercury	ND	0.018	0.050		μg/L	1	3/30/2016 01:30 PM
TOTAL METALS BY COLLIS			0.000		pg/L		0/00/2010 01:00 1 W
TOTAL WETALS BY COLLIS	ION/REACTION CELI	LICPINIS	EP#	A 200.8			
RunID: ICP7_160330A	QC Batch: 56	244		PrepD) at a	3/30/2016	Analyst: CEI
Selenium	ND	0.070	0.50	ПСРЕ		1	3/30/2016 02:15 PM
	ND	0.070	0.50		μg/L	l	3/30/2016 02.15 PW
TOTAL METALS BY ICPMS			ED/	A 200.8			
D 10 1000	000.						
RunID: ICP7_160330A	QC Batch: 56			Prep[3/30/2016	Analyst: CEI
Copper	ND	0.26	0.50		μg/L	1	3/30/2016 02:15 PM
Lead Thallium	ND 0.20	0.053 0.034	0.50 0.50	J	μg/L μg/L	1 1	3/30/2016 02:15 PM 3/30/2016 02:15 PM
Zinc	ND	0.034	10	J	μg/L	1	3/30/2016 02:15 PM
TOTAL TPH	115	0.000			r3' -	,	5.25.25.6 52.75 TW
TOTAL IFII			EPA	8015B			
RunID: GC1_160404B	QC Batch: R1	06750	•	Prep[) at a		Analyst: MDM
=			E0	•		4	Analyst: MDM 4/4/2016
Total TPH	42	16	50	J	ug/L	1	4/4/2016

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



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

Date: 08-Apr-16 **ASSET Laboratories**

CLIENT: CH2MHill Work Order: N019260

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.2_2540D_W Project: SFPP - Norwalk Site

Sample ID MB-56819 Client ID: PBW	SampType: MBLK Batch ID: 56819	TestCode: 160.2_2540D Units: mg/L TestNo: SM2540D	Prep Date: 3/31/2016 Analysis Date: 3/31/2016	RunNo: 106699 SeqNo: 2283740
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Suspended Solids (Residue, N	Non-Filter ND	10		
Sample ID LCS-56819 Client ID: LCSW	SampType: LCS Batch ID: 56819	TestCode: 160.2_2540D Units: mg/L TestNo: SM2540D	Prep Date: 3/31/2016 Analysis Date: 3/31/2016	RunNo: 106699 SeqNo: 2283741
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Suspended Solids (Residue, N	Non-Filter 947.000	10 1000 0	94.7 80 120	
Sample ID N019260-001IDUI	P SampType: DUP Batch ID: 56819	TestCode: 160.2_2540D Units: mg/L TestNo: SM2540D	Prep Date: 3/31/2016 Analysis Date: 3/31/2016	RunNo: 106699 SeqNo: 2283743
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Suspended Solids (Residue, N	Non-Filter ND	10	0	0 5

Qualifiers:

- B Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out CALIFORNIA
- E Value above quantitation range
- Not Detected at the Reporting Limit

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

- H Holding times for preparation or analysis exceeded
- RPD outside accepted recovery limits Calculations are based on raw values



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

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.5_2540F_W

SFPP - Norwalk Site **Project:**

Sample ID MB-56813 SampType: MBLK Prep Date: 3/30/2016 RunNo: 106719 TestCode: 160.5_2540F_ Units: mI/L Analysis Date: 3/30/2016 Client ID: PBW Batch ID: 56813 TestNo: SM2540F SeqNo: 2283053

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

Settleable Matter ND 0.10

Qualifiers:

B Analyte detected in the associated Method Blank

Analyte detected below quantitation limits

Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

Not Detected at the Reporting Limit

E Value above quantitation range

- H Holding times for preparation or analysis exceeded
- RPD outside accepted recovery limits Calculations are based on raw values



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

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

ANALYTICAL QC SUMMARY REPORT

Project:	SFPP - Norwalk Site	TestCode:	1664_HEM_W
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Sample ID MB-56836	SampType:	MBLK	TestCode: 1	1664_HEM_	Units: mg/L		Prep Date	e: 4/1/2016	·	RunNo: 10	6717	
Client ID: PBW	Batch ID:	56836	TestNo: E	EPA 1664 _I	4		Analysis Date	e: 4/1/2016		SeqNo: 22	82989	
Analyte		Result	PQL SF	PK value S	SPK Ref Val	%REC	LowLimit	HighLimit RP	D Ref Val	%RPD	RPDLimit	Qual
Oil & Grease		ND	4.0									
Sample ID LCS-56836	SampType:	LCS	TestCode: 1	1664_HEM_	Units: mg/L		Prep Date	e: 4/1/2016		RunNo: 10	6717	
Client ID: LCSW	Batch ID:	56836	TestNo: E	EPA 1664 _I	4		Analysis Date	e: 4/1/2016		SeqNo: 22	82990	
Analyte		Result	PQL SF	PK value S	SPK Ref Val	%REC	LowLimit	HighLimit RP	D Ref Val	%RPD	RPDLimit	Qual
Oil & Grease		33.300	4.0	40.00	0	83.3	78	114				
Sample ID N019260-001AMS	SampType:	MS	TestCode: 1	1664_HEM_	Units: mg/L		Prep Date	e: 4/1/2016		RunNo: 10	6717	
Sample ID N019260-001AMS Client ID: ZZZZZZ	SampType: Batch ID:			1664_HEM_ EPA 1664 _I	·		Prep Date Analysis Date			RunNo: 10 0 SeqNo: 22 0		
			TestNo: E	 EPA 1664 _I	·	%REC	Analysis Date		PD Ref Val			Qual
Client ID: ZZZZZZ	Batch ID:	56836	TestNo: E	 EPA 1664 _I	4		Analysis Date	e: 4/1/2016	PD Ref Val	SeqNo: 22	82992	Qual
Client ID: ZZZZZZ Analyte	Batch ID:	56836 Result 33.571	TestNo: E	PK value S	H SPK Ref Val	%REC	Analysis Date LowLimit 78	e: 4/1/2016 HighLimit RP	PD Ref Val	SeqNo: 22	82992 RPDLimit	Qual
Client ID: ZZZZZZ Analyte Oil & Grease	Batch ID:	56836 Result 33.571	PQL SF 4.1 TestCode: 1	PK value S	SPK Ref Val 0 Units: mg/L	%REC 82.3	Analysis Date LowLimit 78	e: 4/1/2016 HighLimit RP 114 e: 4/1/2016	PD Ref Val	SeqNo: 22:	RPDLimit	Qual
Client ID: ZZZZZZ Analyte Oil & Grease Sample ID N019260-001AMSD	Batch ID: SampType:	56836 Result 33.571	PQL SF 4.1 TestCode: 1 TestNo: E	PK value S 40.82 1664_HEM_	SPK Ref Val 0 Units: mg/L	%REC 82.3	Analysis Date LowLimit 78 Prep Date Analysis Date	e: 4/1/2016 HighLimit RP 114 e: 4/1/2016		SeqNo: 22: %RPD RunNo: 10	RPDLimit	Qual

Qualifiers:

B Analyte detected in the associated Method Blank

Analyte detected below quantitation limits

Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

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

Not Detected at the Reporting Limit

E Value above quantitation range

RPD outside accepted recovery limits Calculations are based on raw values



H Holding times for preparation or analysis exceeded

SFPP - Norwalk Site

Project:

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_DRC

Sample ID MB-56811	SampType: MBLK	TestCode: 200.8_W_DR Units: µg/L	Prep Date: 3/30/2016	RunNo: 106689
Client ID: PBW	Batch ID: 56811	TestNo: EPA 200.8	Analysis Date: 3/30/2016	SeqNo: 2281003
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Selenium	ND	0.50		
Sample ID LCS-56811	SampType: LCS	TestCode: 200.8_W_DR Units: µg/L	Prep Date: 3/30/2016	RunNo: 106689
Client ID: LCSW	Batch ID: 56811	TestNo: EPA 200.8	Analysis Date: 3/30/2016	SeqNo: 2281004
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Selenium	9.768	0.50 10.00 0	97.7 85 115	
Sample ID N019260-001H	H-MS SampType: MS	TestCode: 200.8_W_DR Units: μg/L	Prep Date: 3/30/2016	RunNo: 106689
Sample ID N019260-001H Client ID: ZZZZZZ	H-MS SampType: MS Batch ID: 56811	TestCode: 200.8_W_DR Units: μg/L TestNo: EPA 200.8	Prep Date: 3/30/2016 Analysis Date: 3/30/2016	RunNo: 106689 SeqNo: 2281008
			·	
Client ID: ZZZZZZ	Batch ID: 56811	TestNo: EPA 200.8	Analysis Date: 3/30/2016	SeqNo: 2281008
Client ID: ZZZZZZZ	Batch ID: 56811 Result 8.434	TestNo: EPA 200.8 PQL SPK value SPK Ref Val	Analysis Date: 3/30/2016 %REC LowLimit HighLimit RPD Ref Val	SeqNo: 2281008
Client ID: ZZZZZZ Analyte Selenium	Batch ID: 56811 Result 8.434	TestNo: EPA 200.8 PQL SPK value SPK Ref Val 0.50 10.00 0	Analysis Date: 3/30/2016 %REC LowLimit HighLimit RPD Ref Val 84.3 75 125	SeqNo: 2281008 %RPD RPDLimit Qual
Client ID: ZZZZZZ Analyte Selenium Sample ID N019260-001H	Batch ID: 56811 Result 8.434 H-MSD SampType: MSD	TestNo: EPA 200.8 PQL SPK value SPK Ref Val 0.50 10.00 0 TestCode: 200.8_W_DR Units: μg/L	Analysis Date: 3/30/2016 **REC LowLimit HighLimit RPD Ref Val 84.3 75 125 Prep Date: 3/30/2016	SeqNo: 2281008 %RPD RPDLimit Qual RunNo: 106689

Qualifiers:

B Analyte detected in the associated Method Blank

Analyte detected below quantitation limits

E Value above quantitation range

Not Detected at the Reporting Limit

Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out



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RPD outside accepted recovery limits Calculations are based on raw values

CLIENT: CH2MHill ANALYTICAL QC SUMMARY REPORT Work Order: N019260

TestCode: 200.8_W_SFPP **Project:** SFPP - Norwalk Site

Sample ID	MB-56811	SampType: MBLK	TestCo	de: 200.8_W _	SF Units: µg/L		Prep Date	3/30/20	116	RunNo: 10	6689	
Client ID:	PBW	Batch ID: 56811	Test	No: EPA 200. 8	3		Analysis Date	e: 3/30/20	116	SeqNo: 22	80954	
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									
Thallium		ND	0.50									
Zinc		ND	10									
Sample ID	LCS-56811	SampType: LCS	TestCo	de: 200.8_W _	SF Units: µg/L		Prep Date	e: 3/30/20	116	RunNo: 10	6689	
Client ID:	LCSW	Batch ID: 56811	Test	No: EPA 200.8	3		Analysis Date	3/30/20	116	SeqNo: 22	80955	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper		10.162	0.50	10.00	0	102	85	115				
Lead		9.664	0.50	10.00	0	96.6	85	115				
Thallium		10.421	0.50	10.00	0	104	85	115				
Zinc		99.749	10	100.0	0	99.7	85	115				
	N019260-001H-MS	SampType: MS			SF Units: µg/L		Prep Date	e: 3/30/20)16	RunNo: 10	6689	
			TestCo		SF Units: µg/L					RunNo: 10		
Sample ID		SampType: MS	TestCo	de: 200.8_W_ No: EPA 200.8	SF Units: µg/L		Prep Date Analysis Date	e: 3/30/20				Qual
Sample ID Client ID:		SampType: MS Batch ID: 56811	TestCo TestI PQL	de: 200.8_W_ No: EPA 200.8	SF Units: μg/L		Prep Date Analysis Date	e: 3/30/20	116	SeqNo: 22	80959	Qual S
Sample ID Client ID: Analyte		SampType: MS Batch ID: 56811 Result	TestCo TestI PQL 0.50	de: 200.8_W_ No: EPA 200.8 SPK value	SF Units: μg/L 3 SPK Ref Val	%REC	Prep Date Analysis Date LowLimit	e: 3/30/20	116	SeqNo: 22	80959	
Sample ID Client ID: Analyte Copper		SampType: MS Batch ID: 56811 Result	TestCo Test! PQL 0.50 0.50	de: 200.8_W_ No: EPA 200.8 SPK value	SF Units: μg/L 3 SPK Ref Val	%REC 74.9	Prep Date Analysis Date LowLimit 75	e: 3/30/20 HighLimit 125	116	SeqNo: 22	80959	
Sample ID Client ID: Analyte Copper Lead		SampType: MS Batch ID: 56811 Result 7.487 10.011	TestCo TestN PQL 0.50 0.50 0.50	de: 200.8_W_ No: EPA 200.8 SPK value 10.00 10.00	SF Units: μg/L SPK Ref Val 0 0	%REC 74.9 100	Prep Date Analysis Date LowLimit 75 75	2: 3/30/20 HighLimit 125 125	116	SeqNo: 22	80959	
Sample ID Client ID: Analyte Copper Lead Thallium Zinc		SampType: MS Batch ID: 56811 Result 7.487 10.011 9.635 80.143	TestCo TestN PQL 0.50 0.50 0.50 10	de: 200.8_W_ No: EPA 200.8 SPK value 10.00 10.00 10.00	SF Units: μg/L SPK Ref Val 0 0 0 0.1980 0	%REC 74.9 100 94.4	Prep Date Analysis Date LowLimit 75 75 75 75	25 125 125 125	RPD Ref Val	SeqNo: 22	RPDLimit	
Sample ID Client ID: Analyte Copper Lead Thallium Zinc	ZZZZZZ N019260-001H-MSD	SampType: MS Batch ID: 56811 Result 7.487 10.011 9.635 80.143	TestCo Testf PQL 0.50 0.50 0.50 10 TestCo	de: 200.8_W_ No: EPA 200.8 SPK value 10.00 10.00 10.00 100.0	SF Units: μg/L 3 SPK Ref Val 0 0 0 0.1980 0 SF Units: μg/L	%REC 74.9 100 94.4 80.1	Prep Date Analysis Date LowLimit 75 75 75 75	e: 3/30/20 HighLimit 125 125 125 125	RPD Ref Val	SeqNo: 22 %RPD	RPDLimit 6689	
Sample ID Client ID: Analyte Copper Lead Thallium Zinc Sample ID	ZZZZZZ N019260-001H-MSD	SampType: MS Batch ID: 56811 Result 7.487 10.011 9.635 80.143 SampType: MSD	TestCoo Testf	de: 200.8_W_ No: EPA 200.8 SPK value 10.00 10.00 10.00 100.0 de: 200.8_W_ No: EPA 200.8	SF Units: μg/L 3 SPK Ref Val 0 0 0 0.1980 0 SF Units: μg/L	%REC 74.9 100 94.4 80.1	Prep Date Analysis Date LowLimit 75 75 75 75 Prep Date Analysis Date	HighLimit 125 125 125 125 2: 3/30/20 2: 3/30/20	RPD Ref Val	SeqNo: 22 %RPD RunNo: 10	RPDLimit 6689	
Sample ID Client ID: Analyte Copper Lead Thallium Zinc Sample ID Client ID:	ZZZZZZ N019260-001H-MSD	SampType: MS Batch ID: 56811 Result 7.487 10.011 9.635 80.143 SampType: MSD Batch ID: 56811	TestCoo Testf	de: 200.8_W_ No: EPA 200.8 SPK value 10.00 10.00 10.00 100.0 de: 200.8_W_ No: EPA 200.8	SF Units: μg/L 3 SPK Ref Val 0 0 0 0.1980 0 SF Units: μg/L 3	%REC 74.9 100 94.4 80.1	Prep Date Analysis Date LowLimit 75 75 75 75 Prep Date Analysis Date	HighLimit 125 125 125 125 2: 3/30/20 2: 3/30/20	RPD Ref Val	SeqNo: 22: %RPD RunNo: 10 SeqNo: 22:	RPDLimit 6689 80960	S
Sample ID Client ID: Analyte Copper Lead Thallium Zinc Sample ID Client ID: Analyte	ZZZZZZ N019260-001H-MSD	SampType: MS Batch ID: 56811 Result 7.487 10.011 9.635 80.143 SampType: MSD Batch ID: 56811 Result	TestCor TestN PQL 0.50 0.50 0.50 10 TestCor TestN	de: 200.8_W_ No: EPA 200.8 SPK value 10.00 10.00 10.00 100.0 de: 200.8_W_ No: EPA 200.8	SF Units: μg/L SPK Ref Val 0 0 0.1980 0 SF Units: μg/L 3 SPK Ref Val	%REC 74.9 100 94.4 80.1	Prep Date Analysis Date LowLimit 75 75 75 75 Prep Date Analysis Date LowLimit	HighLimit 125 125 125 125 22 3/30/20 3/30/20 HighLimit	RPD Ref Val	SeqNo: 22: %RPD RunNo: 10 SeqNo: 22: %RPD	RPDLimit 6689 RPDLimit	S

Qualifiers:

- B Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
- Not Detected at the Reporting Limit

E Value above quantitation range

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

- H Holding times for preparation or analysis exceeded
- RPD outside accepted recovery limits Calculations are based on raw values



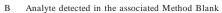
CALIFORNIA 11060 Artesia Blvd., Ste C, Cerritos, CA 90703 P: 562.219.7435 F: 562.219.7436

ANALYTICAL QC SUMMARY REPORT

Project:	SFPP - Norwalk Site	TestCode:	200.8_W_SFPP

Sample ID	N019260-001H-MSD	SampType: N	MSD	TestCode	e: 200.8_W_	SF Units: μg/L		Prep Da	te: 3/30/2 0	116	RunNo: 100	689	
Client ID:	ZZZZZZ	Batch ID: §	56811	TestNo	EPA 200.8	3		Analysis Da	te: 3/30/20	16	SeqNo: 228	30960	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium			9.598	0.50	10.00	0.1980	94.0	75	125	9.635	0.389	20	
Zinc		8	30.563	10	100.0	0	80.6	75	125	80.14	0.522	20	

Qualifiers:



Analyte detected below quantitation limits

Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

CALIFORNIA

Not Detected at the Reporting Limit

NEVADA

RPD outside accepted recovery limits Calculations are based on raw values

H Holding times for preparation or analysis exceeded



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

E Value above quantitation range

ANALYTICAL QC SUMMARY REPORT

TestCode: 245.1_W_LL

Project:	SFPP -	Norwalk	Site

Sample ID	MB-56808	SampType:	MBLK	TestCode	e: 245.1_W _	LL Units: µg/L		Prep Date:	: 3/30/2016	RunNo: 106 6	681	
Client ID:	PBW	Batch ID:	56808	TestNo	o: EPA 245. 1	1		Analysis Date:	3/30/2016	SeqNo: 2280	0047	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit F	HighLimit RPD Ref Val	%RPD	RPDLimit	Qual
Mercury			ND	0.050								
Sample ID	LCS-56808	SampType:	LCS	TestCode	e: 245.1_W _	LL Units: μg/L		Prep Date:	: 3/30/2016	RunNo: 106 6	681	
Client ID:	LCSW	Batch ID:	56808	TestNo	o: EPA 245. 1	1		Analysis Date:	3/30/2016	SeqNo: 2280	0048	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit F	HighLimit RPD Ref Val	%RPD	RPDLimit	Qual
Mercury			2.664	0.050	2.500	0	107	85	115			
Sample ID	N019260-001H-MS	SampType:	MS	TestCod	e: 245.1_W_	LL Units: µg/L		Prep Date	: 3/30/2016	RunNo: 106 6	681	
Sample ID Client ID:		SampType: Batch ID:			e: 245.1_W_ o: EPA 245. 1			Prep Date:		RunNo: 1066 SeqNo: 2286		
					o: EPA 245. 1		%REC	Analysis Date:		SeqNo: 2280		Qual
Client ID:			56808	TestNo	o: EPA 245. 1	1		Analysis Date:	: 3/30/2016	SeqNo: 2280	0049	Qual
Client ID: Analyte Mercury		Batch ID:	56808 Result 2.351	PQL 0.050	o: EPA 245. 1	SPK Ref Val	%REC	Analysis Date: LowLimit F	e: 3/30/2016 HighLimit RPD Ref Val	SeqNo: 2280	0049 RPDLimit	Qual
Client ID: Analyte Mercury	ZZZZZZ N019260-001H-MSD	Batch ID:	56808 Result 2.351 MSD	PQL 0.050	o: EPA 245. 1 SPK value 2.500	SPK Ref Val 0 LL Units: µg/L	%REC 94.0	Analysis Date: LowLimit F	:: 3/30/2016 HighLimit RPD Ref Val	SeqNo: 2280 %RPD	RPDLimit	Qual
Client ID: Analyte Mercury Sample ID	ZZZZZZ N019260-001H-MSD	Batch ID: SampType:	56808 Result 2.351 MSD	PQL 0.050	2.500 e: 245.1_W_ o: EPA 245.1	SPK Ref Val 0 LL Units: µg/L	%REC 94.0	Analysis Date: LowLimit F 75 Prep Date: Analysis Date:	:: 3/30/2016 HighLimit RPD Ref Val	SeqNo: 2286 %RPD RunNo: 1066 SeqNo: 2286	RPDLimit	Qual

Qualifiers:

- B Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
 - CALIFORNIA
- NEVADA

E Value above quantitation range

Not Detected at the Reporting Limit

- H Holding times for preparation or analysis exceeded
- RPD outside accepted recovery limits Calculations are based on raw values



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

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

ANALYTICAL QC SUMMARY REPORT

Project:	SFPP - Norwalk Site	TestCode:	7199_WPGE

Sample ID MB-R106675	SampType: MBLK	TestCode: 7199_WPGE Units: µg/L	Prep Date:	RunNo: 106675
Client ID: PBW	Batch ID: R106675	TestNo: EPA 7199	Analysis Date: 3/30/2016	SeqNo: 2279856
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	0.047	0.20		J
Sample ID LCS-R106675	SampType: LCS	TestCode: 7199_WPGE Units: µg/L	Prep Date:	RunNo: 106675
Client ID: LCSW	Batch ID: R106675	TestNo: EPA 7199	Analysis Date: 3/30/2016	SeqNo: 2279857
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	4.770	0.20 5.000 0	95.4 90 110	
Sample ID N019260-001REP	SampType: DUP	TestCode: 7199_WPGE Units: µg/L	Prep Date:	RunNo: 106675
Client ID: ZZZZZZ	Batch ID: R106675	TestNo: EPA 7199	Analysis Date: 3/30/2016	SeqNo: 2279859
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	ND	0.20	0	0 20
Sample ID N019254-001ADUP	SampType: DUP	TestCode: 7199_WPGE Units: µg/L	Prep Date:	RunNo: 106675
Client ID: ZZZZZZ	Batch ID: R106675	TestNo: EPA 7199	Analysis Date: 3/30/2016	SeqNo: 2279861
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	1.707	0.20	1.708	0.0820 20
Sample ID N019254-001AMS	SampType: MS	TestCode: 7199_WPGE Units: µg/L	Prep Date:	RunNo: 106675
Client ID: ZZZZZZ	Batch ID: R106675	TestNo: EPA 7199	Analysis Date: 3/30/2016	SeqNo: 2279862
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	6.663	0.20 5.000 1.708	99.1 85 115	

Qualifiers:

- B Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
- E Value above quantitation range
- Not Detected at the Reporting Limit

- H Holding times for preparation or analysis exceeded
- RPD outside accepted recovery limits Calculations are based on raw values



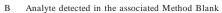
NEVADA 3151 W. Post Rd., Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691

ANALYTICAL QC SUMMARY REPORT

Project:	SFPP - Norwalk Site	TestCode: 7199_WPGE
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Sample ID N019254-001AMS	D SampType: MSD	TestCoo	de: 7199_WP 0	GE Units: μg/L		Prep Da	te:		RunNo: 106	675	
Client ID: ZZZZZZ	Batch ID: R106675	TestN	lo: EPA 7199			Analysis Da	te: 3/30/2016		SeqNo: 227	9863	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Re	f Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	6 569	0.20	5 000	1 708	97.2	85	115 6	663	1 42	20	

Qualifiers:



J Analyte detected below quantitation limits

ethod Blank E Value above quantitation range limits ND Not Detected at the Reporting Limit

S Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

NEVADA 3151 W. Post Rd., Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691 H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits Calculations are based on raw values



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

ANALYTICAL QC SUMMARY REPORT

Project:	SFPP - Norwalk Site	TestCode:	8015_W_FP	_SFPP
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Sample ID MB-56848	SampType: MBLK	TestCode: 8015_W_FP_ Units: ug/L	Prep Date: 4/4/2016	RunNo: 106750
Client ID: PBW	Batch ID: 56848	TestNo: EPA 8015B EPA 3510C	Analysis Date: 4/4/2016	SeqNo: 2285357
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
TPH-Diesel (C13-C22)	88.749	25		
TPH-Oil (C23-C36)	26.348	25		
Surr: Octacosane	109.397	80.00	137 26 152	
Surr: p-Terphenyl	96.872	80.00	121 57 132	

Qualifiers:

B Analyte detected in the associated Method Blank

Analyte detected below quantitation limits

Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

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

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

E Value above quantitation range

Not Detected at the Reporting Limit

RPD outside accepted recovery limits Calculations are based on raw values



H Holding times for preparation or analysis exceeded

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_SFPPTOT

Project: SFPP - Norwalk Site

Sample ID MB-R106750	SampType: MBLK	TestCode: 8015_W_S	FP Units: ug/L		Prep Da	te:		RunNo: 100	3750	
Client ID: PBW	Batch ID: R106750	TestNo: EPA 8015	3		Analysis Da	te: 4/4/201	16	SeqNo: 228	39173	
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total TPH	ND	50								

Qualifiers:

B Analyte detected in the associated Method Blank

J Analyte detected below quantitation limits

Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

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

E Value above quantitation range

Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits Calculations are based on raw values



ANALYTICAL QC SUMMARY REPORT

Project: SFPP - Norwalk Site

TestCode: 801	15GAS	WSFPP
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Sample ID E160330LCS	SampType: LCS	TestCode	: 8015GAS_	_W Units: ug/L		Prep Da	te:		RunNo: 10	6687	
Client ID: LCSW	Batch ID: E16VW023	TestNo	EPA 8015	В		Analysis Da	te: 3/30/2	016	SeqNo: 22	80653	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12) Surr: Chlorobenzene - d5	885.000 48182.000	50	1000 50000	0	88.5 96.4	67 74	136 138				
Sample ID E160330MB1	SampType: MBLK	TestCode	: 8015GAS_	_W Units: ug/L		Prep Da	te:		RunNo: 10	6687	
Client ID: PBW	Batch ID: E16VW023	TestNo	EPA 8015	В		Analysis Da	te: 3/30/2	016	SeqNo: 22	80654	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline (C4-C12) Surr: Chlorobenzene - d5	37.000 47898.000	50	50000		95.8	74	138				J
Sample ID N019260-001JMS	SampType: MS	TestCode	: 8015GAS_	_W Units: ug/L		Prep Da	te:		RunNo: 10	6687	
Sample ID N019260-001JMS Client ID: ZZZZZZ	SampType: MS Batch ID: E16VW023		e: 8015GAS_ o: EPA 8015	-		Prep Da Analysis Da		016	RunNo: 10 SeqNo: 22		
·			EPA 8015	-	%REC	Analysis Da	te: 3/30/20	016 RPD Ref Val			Qual
Client ID: ZZZZZZ	Batch ID: E16VW023	TestNo	EPA 8015	В		Analysis Da	te: 3/30/20		SeqNo: 22	80656	Qual
Client ID: ZZZZZZ Analyte TPH-Gasoline (C4-C12)	Batch ID: E16VW023 Result 900.000	PQL 50	SPK value	SPK Ref Val	%REC 85.8	Analysis Da	te: 3/30/20 HighLimit 136 138		SeqNo: 22	80656 RPDLimit	Qual
Client ID: ZZZZZZ Analyte TPH-Gasoline (C4-C12) Surr: Chlorobenzene - d5	Batch ID: E16VW023 Result 900.000 48598.000	PQL 50	SPK value 1000 50000	SPK Ref Val 42.00 W Units: ug/L	%REC 85.8 97.2	Analysis Da LowLimit 67 74	HighLimit 136 138	RPD Ref Val	SeqNo: 22 %RPD	80656 RPDLimit	Qual
Client ID: ZZZZZZ Analyte TPH-Gasoline (C4-C12) Surr: Chlorobenzene - d5 Sample ID N019260-001JMSD	Result 900.000 48598.000 SampType: MSD	PQL 50	DE EPA 8015 SPK value 1000 50000 E: 8015GAS C: EPA 8015	SPK Ref Val 42.00 W Units: ug/L	%REC 85.8 97.2	Analysis Da LowLimit 67 74 Prep Da Analysis Da	te: 3/30/20 HighLimit 136 138 te: te: 3/30/20	RPD Ref Val	SeqNo: 22 %RPD RunNo: 10	80656 RPDLimit	Qual

Qualifiers:

Analyte detected below quantitation limits

E Value above quantitation range

Not Detected at the Reporting Limit

NEVADA

Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

H Holding times for preparation or analysis exceeded RPD outside accepted recovery limits Calculations are based on raw values



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

B Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

Project: SFPP - Norwalk Site TestCode: 8260_WP_SFPP

H Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Calculations are based on raw values

Sample ID P160330LCS	SampType: LCS	TestCo	de: 8260_WP	_SF Units: ug/L	·	Prep Da	te:		RunNo: 10	6693	
Client ID: LCSW	Batch ID: P16VW067	Test	No: EPA 8260	В		Analysis Da	te: 3/30/20)16	SeqNo: 22	80914	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	17.050	0.50	20.00	0	85.2	69	133				
1,2-Dichloroethane	19.250	0.50	20.00	0	96.2	69	132				
Benzene	18.710	1.0	20.00	0	93.6	81	122				
Ethylbenzene	19.040	1.0	20.00	0	95.2	73	127				
m,p-Xylene	38.900	1.0	40.00	0	97.3	76	128				
MTBE	17.890	1.0	20.00	0	89.4	65	123				
o-Xylene	19.400	1.0	20.00	0	97.0	80	121				
Tert-Butanol	97.030	5.0	100.0	0	97.0	70	130				
Toluene	19.530	2.0	20.00	0	97.6	77	122				
Xylenes, Total	58.300	2.0	60.00	0	97.2	75	125				
Surr: 1,2-Dichloroethane-d4	24.660		25.00		98.6	72	119				
Surr: 4-Bromofluorobenzene	25.510		25.00		102	76	119				
Surr: Dibromofluoromethane	24.750		25.00		99.0	85	115				
Surr: Toluene-d8	25.470		25.00		102	81	120				

Sample ID P160330LCSD	SampType: LCSD	TestCo	de: 8260_WP	_SF Units: ug/L		Prep Da	te:		RunNo: 100	6693	
Client ID: LCSS02	Batch ID: P16VW067	Test	No: EPA 8260	В		Analysis Da	te: 3/30/20)16	SeqNo: 228	80915	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	16.580	0.50	20.00	0	82.9	69	133	17.05	2.80	20	
1,2-Dichloroethane	19.520	0.50	20.00	0	97.6	69	132	19.25	1.39	20	
Benzene	19.040	1.0	20.00	0	95.2	81	122	18.71	1.75	20	
Ethylbenzene	19.010	1.0	20.00	0	95.1	73	127	19.04	0.158	20	
m,p-Xylene	39.100	1.0	40.00	0	97.8	76	128	38.90	0.513	20	
MTBE	18.140	1.0	20.00	0	90.7	65	123	17.89	1.39	20	
o-Xylene	19.530	1.0	20.00	0	97.6	80	121	19.40	0.668	20	
Tert-Butanol	95.920	5.0	100.0	0	95.9	70	130	97.03	1.15	20	
Toluene	19.550	2.0	20.00	0	97.8	77	122	19.53	0.102	20	
Xylenes, Total	58.630	2.0	60.00	0	97.7	75	125	58.30	0.564	20	
Surr: 1,2-Dichloroethane-d4	24.770		25.00		99.1	72	119		0		

Qualifiers:

ASSET LABORATORIES

- B Analyte detected in the associated Method Blank
- Analyte detected below quantitation limits
- Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
- E Value above quantitation range
- Not Detected at the Reporting Limit

NEVADA

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ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Project:	SFPP -	Norwalk	Site

Sample ID P160330LCSD	SampType: LCSD	TestCode: 8260_WP_SF Units: ug/L	Prep Date:	RunNo: 106693
Client ID: LCSS02	Batch ID: P16VW067	TestNo: EPA 8260B	Analysis Date: 3/30/2016	SeqNo: 2280915
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Surr: 4-Bromofluorobenzene	26.290	25.00	105 76 119	0
Surr: Dibromofluoromethane	24.980	25.00	99.9 85 115	0
Surr: Toluene-d8	25.840	25.00	103 81 120	0
Sample ID P160330MB3	SampType: MBLK	TestCode: 8260_WP_SF Units: ug/L	Prep Date:	RunNo: 106693
Client ID: PBW	Batch ID: P16VW067	TestNo: EPA 8260B	Analysis Date: 3/30/2016	SeqNo: 2280918
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	24.600	25.00	98.4 72 119	
Surr: 4-Bromofluorobenzene	25.090	25.00	100 76 119	
Surr: Dibromofluoromethane	25.570	25.00	102 85 115	
Surr: Toluene-d8	26.140	25.00	105 81 120	

Qualifiers:

B Analyte detected in the associated Method Blank

Analyte detected below quantitation limits

Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out

E Value above quantitation range

Not Detected at the Reporting Limit

NEVADA 3151 W. Post Rd., Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691 RPD outside accepted recovery limits Calculations are based on raw values



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

H Holding times for preparation or analysis exceeded

Advanced Technology Laboratories

3151 W. Post Road Las Vegas, NV 89118

Tel: 702-307-2659 Fax: 702-307-2691 Marlon Cartin (marlon@atl-labs.com)

CHAIN OF CUSTODY RECORD

DATE: 63/29/16
PAGE: 1 OF 1

LABORATORY CLIENT:									CUENT PROJECT NAME / NUMBER:												P.O. NO.;		
Kinder Morgan Energy Partners, Attn: Steve Defibaugh									SFPP - Norwalk Site														
1100 Town & Country Road									PROJECT CONTACT:												QUOTE NO.:		
CITY:									James Dye														
Orange, CA 92868									SAMPLER(S): (SIGNATURE)														
TEL: FAX: E-MAIL								$1 \propto 1/2$															
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Report to D. Jablonski/CH2M HILL, cc: KMEP																							
Direct Bill KMEP/SFPP - Steve Defibaugh-ref. AFE# 81195 "J" flags required/Use lowest possible detection limit - all methods.																							
"J"	flags required/Use I	lowest possible de	tection limit	t - all me	thods.			ē	406	(S)		8)	48	000									
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	SAMPLE ID	LOCATION/ DESCRIPTION			MAT- RIX		sas	H	e S	ads	Phenol (420.1)	5	- P	Se,	1	(66	1 1		11				
LAB USE ONLY		DESCRIPTION	DATE	TIME	KIA	. 1	Gre	L,	Settleable	Su	0			b, 8	Hg (245.1);	Cr VI (7199)			1				
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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: 3/30/2016 Workorder: N019260 Rep sample Temp (Deg C): 3.2/3.3 IR Gun ID: 2 ✓ Yes ☐ No Temp Blank: Golden State Overnight Carrier name: Last 4 digits of Tracking No .: 3785/3786 Packing Material Used: Bubble Wrap ✓ Ice ☐ Ice Pack None Cooling process: Dry Ice Other Sample Receipt Checklist Yes 🗸 No \square Not Present 1. Shipping container/cooler in good condition? No 🗌 Not Present 2. Custody seals intact, signed, dated on shippping container/cooler? Yes Not Present No 🗌 3. Custody seals intact on sample bottles? Yes Yes 🗸 No 🗌 4. Chain of custody present? 5. Sampler's name present in COC? Yes 🗹 No 🗌 Yes 🗸 No 🗌 6. Chain of custody signed when relinquished and received? Yes 🗸 No 🗌 7. Chain of custody agrees with sample labels? **V** No 🗌 8. Samples in proper container/bottle? Yes **V** No 🗆 9. Sample containers intact? Yes 10. Sufficient sample volume for indicated test? **V** No Yes 11. All samples received within holding time? Yes 🗸 No 🗌 **V** No \square NA 🗌 12. Temperature of rep sample or Temp Blank within acceptable limit? Yes **V** No 🗌 13. Water - VOA vials have zero headspace? NA Yes Yes 🗸 No 🗌 NA 🗌 14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals No 🗌 15. Did the bottle labels indicate correct preservatives used? Yes NA No 🗌 NA 🗸 16. Were there Non-Conformance issues at login? Yes Was Client notified? Yes No 🗌 NA 🗸 Comments:

Checklist Completed By: YR 3/30/2016

4/4/16

ASSET Laboratories

WORK ORDER Summary

30-Mar-16

WorkOrder: N019260

Client ID: CH2HI03

Project: SFPP - Norwalk Site

QC Level: RTNE Date Received: 3/30/2016

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

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N019260-001A	EFF-03-29	3/29/2016 1:10:00 PM	4/6/2016	Wastewater		Oil and Grease Sample Prep				ww
			4/6/2016		EPA 1664 _HEM	Hexane Extractable Material (HEM)				WW
N019260-001B			4/1/2016		EPA 8260B	B VOLATILE ORGANIC COMPOUNDS BY GC/MS				VW
N019260-001C	4/6/2016 EPA 3510C SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS					WW				
			4/6/2016		EPA 8015B	TPH EXTRACTABLE BY GC/FID				ww
			4/6/2016		EPA 8015B	Total TPH				ww
N019260-001D			4/6/2016		SM2540F	SETTLEABLE MATTER				Consume
			4/6/2016			Setteable Matter				Consume
N019260-001E			4/6/2016		EPA 7199	Hexavalent Chromium by IC				ww
N019260-001F			4/6/2016		EPA 420.1	PHENOLICS			~	SUB
N019260-001H			4/1/2016			AQPREP TOTAL METALS: ICP, FLAA				ww
			4/1/2016		EPA 200.8	TOTAL METALS BY COLLISION/REACTION CELL ICPMS				WW
			4/1/2016		EPA 200.8	TOTAL METALS BY ICPMS				WW
			4/1/2016		EPA 245.1	MERCURY BY COLD VAPOR TECHNIQUE				WW
			4/1/2016			MERCURY PREP				WW
N019260-001I			4/6/2016		SM2540D	TOTAL NON-FILTERABLE RESIDUE				ww
			4/6/2016			Total Suspended Solids Prep				ww
N019260-001J			4/6/2016		EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID				VW
N019260-002A	FOLDER		4/1/2016		Folder	Folder				LAB

ASSET Laboratories 3151-3153 W Post Rd., Las Vegas, NV 89118 www.atl-labs.com TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

30-Mar-16

QC Level: RTNE

Subcontractor:

BC Labs

4100 Atlas Court

Bakersfield, CA 93308

T.EL:

(661) 327-4911

FAX; Acct #: (661) 327-1918

Field Sampler:

(001) 321-1910

					Requested Tests
Sample ID	Matrix	Date Collected	Bottle Type	EPA 420.1	
N019260-001F / EFF-03-29	Wastewater	3/29/2016 1:10:00 PM	320ZA	1	

General Comments:

Please email sample receipt acknowledgement to the PM.

Please use PO#: N19260A Please email Invoices and Account Receivable Statements to AssetAP@assetlaboratories.com. For questions, call Molky at (562)-219-7435. Please e-mail results to reports@assetlaboratories.com by: Normal TAT.

Please analyze for Phenol by 420.1.

		Date/Time 6200 77 : 931913312	Date/Time
Relinquished by: Voano	na Rodniquez	3/30/16 17-00 Received by:	
Relinquished by:	1 / /	Received by:	



CHAIN OF CUSTODY RECORD

Contact us:

Nevada: 3151 W. Post Road, Las Vegas, NV 89118

P: 702.307.2659 F: 702.3072691

California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703

P: 562.219.7435 F: 562.219.7436 www.assetlaboratories.com

	ANALYTICA	Canabos	R SERVICES FOR ENVIRONMENTAL TECHNI	OLOGIES					Page	1	of [1					.219.7436 tories.com		
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. Add 10% s	urcharge for Level III Dato Packages, 1	d IV Data Packages. Surcharge applied on total pro	gest price.			Laboratory (-		Others/S	= Custo	mor's	Conv		-			M = N	ietal		P = Plastic	C = Can	-	



800-322-5555 www.gso.com

Ship From

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

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

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

Delivery Instructions: HOLD FOR PICK UP Signature Type: REQUIRED

Ship To

Tracking #: 531403785

CPS



LVS



LAS VEGAS

C89102A



49987901

Print Date: 3/29/2016 4:10 PM

Package 1 of 2

LABEL INSTRUCTIONS:

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

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

3.3°C



800-322-5555 www.gso.com

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Date of Report: 04/08/2016

Molky Brar

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

Client Project: N019260 **BCL Project:** Cerritos 1609229 **BCL Work Order:** B231997 Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 3/31/2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Vanessa Sandoval

Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101



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Report ID: 1000469326



Environmental Testing Laboratory Since 1949 Chain of Custody and Cooler Receipt Form for 1609229 Page 1 of 2 30-Mar-16 Page 1 of 1 Date/Time KRIBUTION SUB-OUT Requested Tests For Please use PO#: N19260A Please email Invoices and Account Receivable Statements to AssetAP@assetlaboratories.com, questions, call Molky at (562)-219-7435. Please e-mail results to reports@assetlaboratories.com by: Normal TAT, QC Level: RTNE 531413572 Field Sampler EPA 420.1 **Bottle Type** 320ZA 3/30/16 17.00 Received by: Received by: 3/29/2016 1:10:00 PM Date Collected Date/Time (661) 327-4911 (661) 327-1918 Please email sample receipt acknowledgement to the PM. Wastewater Matrix FAX: 702307269 Please analyze for Phenol by 420.1. Dandra www.atl-labs.com TEL: 7023072659 / EFF-03-29 Sample ID Bakersfield, CA 93308 Relinquished by: General Comments: Relinquished by: 4100 Atlas Court N019260-001F Subcontractor: BC Labs

Report ID: 1000469326 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 3 of 10



Chain of Custody and Cooler Receipt Form for 1609229 Page 2 of 2

BC LABORATORIES INC.			OOLER	RECEIPT	FORIVI			Pa	ge	Of _
Submission #: 6 - 6922					MINT - 22 - 20 - 20					
SHIPPING INFORM Fed Ex □ UPS □ Ontrac □ BC Lab Field Service □ Other		d Deliver	50	Ice Che Othe	HIPPING st ☐ (Spe	CONTAIN None □ cify)	NER Box □		FREE LIC YES □	
Refrigerant: Ice ✓ Blue Ice □	None		Other 🗆	Comn	ents:					W== ===
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All samples received? Yes ₩No □ Al	l samples	containers	intact? Y	es D No	П	Descript	ion(s) mat	ch COC?	Yes No	D
COC Received Emis	sivity: D	/	Container:		Phermon	neter ID: _	208 °c	Date/Ti	ime 3 - 3	10:3
					SAMPLE	NUMBERS			/	
SAMPLE CONTAINERS	1	2	3	4	5	- 6	7	8	9	10
QT PE UNPRES										
40z / 80z / 160z PE UNPRES					- 425			-	-	
20z Cr*6									-	
QT INORGANIC CHEMICAL METALS										-
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE									1	
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										-
PIA PHENOLICS										-
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL									1	
40 ml VOA VIAL- 504										-
QT EPA 508/608/8080					- 6					-
QT EPA 515.1/8150	-								-	-
QT EPA 525									-	
QT EPA 525 TRAVEL BLANK										
40ml EPA 547									-	
l0ml EPA 531.1									4	
oz EPA 548 .									-	
QT EPA 549										-
OT EPA 8015M									-	-
OT EPA 8270 Phena	A		-						-	
02/1602 3202 AMBER WHLSOY	19				-					
30z / 16oz / 32oz JÁR			-							
OIL SLEEVE				-					-	
CB VIAL										
LASTIC BAG									1	
EDLAR BAG										1
ERROUS IRON									-	
ENCORE									-	-
MART KIT									-	
SUMMA CANISTER				1						



Reported: 04/08/2016 17:23

Project: Cerritos Project Number: N019260 Project Manager: Molky Brar

Laboratory / Client Sample Cross Reference

Laboratory **Client Sample Information** 1609229-01 **COC Number:** 03/31/2016 10:36 **Receive Date: Project Number:** Sampling Date: 03/29/2016 13:10 Sample Depth: **Sampling Location:** Sampling Point: N019260-001F/ EFF-03-29 Lab Matrix: Water Sampled By: Client Sample Type: Wastewater

Page 5 of 10 Report ID: 1000469326

04/08/2016 17:23 Reported:

Project: Cerritos Project Number: N019260 Project Manager: Molky Brar

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

Water Analysis (General Chemistry)

BCL Sample ID:	1609229-01	Client Sampl	e Name:	N019260-	-001F/ EFF	-03-29, 3/29/20	16 1:10:00PM	5 1:10:00PM, Client				
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run#			
Total Phenolics		11	ug/L	50	10	EPA-420.4	ND	J	1			

			Run				QC	
Run#	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-420.4	04/05/16	04/07/16 11:08	JMH	KONE-1	1	BZD0315	

Page 6 of 10 Report ID: 1000469326



Reported: 04/08/2016 17:23

Project: Cerritos
Project Number: N019260
Project Manager: Molky Brar

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BZD0315						
Total Phenolics	BZD0315-BLK1	ND	ug/L	50	10	

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Reported: 04/08/2016 17:23

Project Cerritos
Project Number: N019260
Project Manager: Molky Brar

Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control L Percent Recovery	<u>imits</u>	Lab Quals
QC Batch ID: BZD0315										
Total Phenolics	BZD0315-BS1	LCS	541.20	500.00	ug/L	108		85 - 115		

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Reported: 04/08/2016 17:23

Project Number: N019260
Project Manager: Molky Brar

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

									Cont	rol Limits	
		Source	Source		Spike			Percent		Percent	Lab
Constituent	Type	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery	Quals
QC Batch ID: BZD0315 Used client sample: N											
Total Phenolics	DUP	1609273-02	ND	ND		ug/L			20		
	MS	1609273-02	ND	536.88	500.00	ug/L		107		80 - 120	
	MSD	1609273-02	ND	523.17	500.00	ug/L	2.6	105	20	80 - 120	

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ASSET Laboratories Reported: 04/08/2016 17:23 3151-3153 W. Post Rd Project: Cerritos

Las Vegas, NV 89118 Project Number: N019260 Project Manager: Molky Bran

Notes And Definitions

Estimated Value (CLP Flag)

MDL Method Detection Limit ND Analyte Not Detected

PQL Practical Quantitation Limit

Page 10 of 10 Report ID: 1000469326

SFPP NORWALK PUMP STATION

BIOASSAY REPORT CHRONIC AND ACUTE BIOASSAYS CONDUCTED January 21 through 28, 2016

Prepared for

KINDER MORGAN, INC.

ORANGE, CALIFORNIA

Prepared by



1100 NE Circle Boulevard, Suite 300 Corvallis, Oregon 97330 541-768-3160

State of Washington Department of Ecology (WDOE), Lab ID C1233 NELAC #OR100022

> Report Date: May 10, 2016 Lab I.D. No. B3470

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INTRODUCTION

CH2M HILL Applied Sciences Laboratory (ASL) conducted acute dual-endpoint and chronic bioassays from January 21 through 28, 2016, on effluent samples collected from Kinder Morgan's groundwater treatment system located at the SFPP Norwalk Pump Station, Norwalk, California. The testing was conducted using the topsmelt (*Atherinops affinis*).

Testing was performed as part of Accelerated Monitoring and TRE Initial Investigation triggered as a result of the September 2015 testing. The testing was conducted according to the Toxicity Reduction Evaluation (TRE) work plan (Kinder Morgan/CH2M HILL communication to the California Regional Water Quality Control Board, dated September 30, 2011).

Using this approach, the laboratory control was used both for the assessment of test acceptability criteria and as the basis of comparison for the field samples collected.

SUMMARY OF TEST RESULTS

Exhibits 1 and 2 provide a summary of the final test results.

EXHIBIT 1

Summary of Acute (96-hr) Dual-Endpoint Test Results (Effluent compared to Receiving Water).

Sample ID	Species	NOEC (%)	LOEC (%)	Survival in 100% Sample
Upstream (RSW-001) - Salinity Adjusted to 30 ppt	A. affinis	100	> 100	100%
Effluent - Salinity Adjusted to 30 ppt	A. affinis	100	> 100	100%
Downstream (RSW-002) - Salinity Adjusted to 30 ppt	A. affinis	100	> 100	100%

Note: acronyms are as defined below Exhibit 2.

From the TRE Workplan: Survival rates in the Downstream Sample (RSW-002) of greater than or equal to 90% indicates that the Effluent does not cause or contribute to downstream acute toxicity.

For this series of bioassay tests, the Downstream Sample (RSW-002) meets the conditions outlined in the TRE Workplan; therefore, the Effluent does not appear to cause or contribute to downstream acute toxicity.

EXHIBIT 2 Summary of Chronic (7-day) Test Results (Effluent compared to Receiving Water).

Sample ID	Species	NOEC (%)	LOEC (%)	TUc in the Sample
Upstream (RSW-001) - Salinity Adjusted to 30 ppt	A. affinis	100*	> 100*	1.0*
Effluent - Salinity Adjusted to 30 ppt	A. affinis	< 100*	100*	>1.0*
Downstream (RSW-002) - Salinity Adjusted to 30 ppt	A. affinis	100*	> 100*	1.0*

Note: acronyms are as defined below Exhibit 2.

From the TRE Workplan: A TUc value in the Downstream Sample (RSW-002) equal to 1.0 indicates that the Effluent does not cause or contribute to downstream chronic toxicity.

For this series of bioassay tests, the Downstream Sample (RSW-002) meets the conditions outlined in the TRE Workplan; therefore, the Effluent does not appear to cause or contribute to downstream chronic toxicity.

However, the reference toxicant test showed 7 day LC_{50} values above 205 ug/L Cu, which violates the Test Acceptability Criteria (TAC listed in EPA/600/R-95/136, section 11.12.1 (3)) making the test "invalid". These reference toxicity test results also suggests that the test organisms were insensitive which calls into question the sensitivity of the chronic testing.

Note: The NPDES permit (No CA0063509), Section V.C.2. states that "If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the test methods manuals ... then the Discharger must re-sample and re-test ..."

More detailed information is provided in the Results and Data Interpretation sections.

ACRONYM DEFINITIONS (from EPA guidance):

NOEC = No Observed Effect Concentration: The highest test concentration that causes no observable adverse effects on the test organisms (i.e. no statistically significant reduction from the control).

LOEC = Low Observed Effect Concentration: The lowest test concentration that does cause an observable adverse effect on the test organisms (i.e. is statistically significant reduction from the control).

TUc = Toxic Unit - chronic: Calculated as 100 / chronic NOEC.

^{*} Lab Reference Toxicant test was outside of the Cusum Chart limits for growth and greater than 205 ug/L for survival (does not meet Test Acceptability Criteria).

METHODS AND MATERIALS

TEST METHODS

The A. affinis chronic test methods were performed according to: Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine Organisms, First Edition, (EPA 1995), EPA/600/R-95-136.

Additional guidance on EPA method 1006.0 was provided by:

• Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Third Edition (2002); EPA 821-R-02-014.

Additional guidance on the interpretation of the acute dual-endpoint was provided by:

• Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, USEPA Office of Water (2002), EPA-821-R-02-012.

Additional guidance was provided by:

• The NPDES permit, Order No. R4-2011-0095, NPDES No. CA0063509.

DEVIATIONS FROM PROTOCOLS

Deviations from <u>required</u> procedures in the test methods:

• None.

Deviations from recommended procedures in the test methods:

None.

TEST ORGANISMS

The *A. affinis* larvae used in the chronic toxicity tests were obtained from Aquatic Biosystems, Fort Collins, Colorado, and were 11 days old and within a 24-hour span at test initiation. All organisms tested were fed and maintained during culturing, acclimation, and testing as prescribed by the EPA (2002). The test organisms appeared vigorous and in good condition prior to testing.

DILUTION WATER

The laboratory control water used for the *A. affinis* testing was artificial sea water (Tropic Marin® sea salts and ultra pure water) with a salinity of 30 parts per thousand (ppt) plus or minus 2 ppt.

TEST CONCENTRATIONS

The concentrations for the chronic test and acute dual end point test were 100 percent of each of the three samples with laboratory water for the control. For the *A. affinis* chronic test, five organisms per chamber, with five chambers per concentration for a total of 25 organisms per concentration were used.

SAMPLE COLLECTION

The "Receiving Water - Upstream (RSW-001)" (collected 50 feet upstream of the discharge) samples, the "Receiving Water - Downstream (RSW-002)" (collected 50 feet downstream of the discharge) and the "Effluent" samples were collected by CH2M personnel on January 20, 22, and 25, 2016. Upstream and downstream receiving water samples were grab samples; samples collected at the effluent were 24-hour composites. All samples were accepted as scheduled by CH2M's Applied Sciences Laboratory within the EPA recommended 0 to 6 °C range.

All samples were initially used for test initiation or test solution renewal within the EPA recommended maximum holding time of 36 hours from the time of sample collection.

All subsequent uses of samples occurred within the EPA recommended maximum holding time of 72 hours past the time of initial use of that sample.

The samples were stored in the dark at 0 to 6°C until daily test solutions were prepared for all other testing. Chain of custody forms documenting sample collection and handling are provided in Appendix C.

SAMPLE PREPARATION

Samples used during these tests were not filtered upon arrival and temperature was adjusted prior to test initiation and each daily renewal.

The Receiving Water, Downstream, and Effluent samples were salinity adjusted to 30 ppt by the addition of Tropic Marin® sea salts prior to use.

MONITORING OF BIOASSAYS

All samples arriving at ASL were monitored on arrival for salinity, alkalinity, total residual chlorine, ammonia, DO, pH, conductivity, and temperature. Following salinity adjustment to 30 ppt for the *A. affinis* chronic tests these samples were monitored again for salinity.

For the *A. affinis* chronic tests, pre- and post-renewal test solutions were monitored daily for DO, salinity, and pH. Organism mortality was recorded daily, and organism growth was determined by dry weight analysis at test termination. Test temperatures were monitored in test solutions daily and in the incubator or waterbath continuously throughout the testing period.

DATA ANALYSIS

The effects measured during the *A. affinis* dual-endpoint acute test included survival data taken from the chronic test over the initial 96 hour exposure period. The statistical analyses performed were those outlined in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, USEPA Office of Water (2002), EPA-821-R-02-012, using CETIS. The acute NOEC and LOEC values were established by hypothesis testing as follows: Equal Variance T-test, Unequal Variance T-test, or Fisher's Exact Test was used to compare the survival data and Equal Variance T-test, Unequal Variance T-test, or Wilcoxon Two-sample t-test was used to compare the reproduction or growth data between the control and each sample treatment. When the assumptions of normality necessary for a T-test could not be met, Mann-Whitney U-test was used to analyze the data.

The effects measured during the *A. affinis* chronic test included survival and biomass during the 7-day exposure period. The statistical analyses performed were those outlined in EPA-821-R-02-013, and *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, Third Edition (2002); EPA 821-R-02-014, using CETIS. The chronic NOEC and LOEC values were established by hypothesis testing as follows: Equal Variance T-test, Unequal Variance T-test, or Fisher's Exact Test was used to compare the survival data and Equal Variance T-test, Unequal Variance T-test, or Wilcoxon Two-sample t-test was used to compare the reproduction or growth data between the control and each sample treatment. When the assumptions of normality necessary for a T-test could not be met, Mann-Whitney U-test was used to analyze the data.

DATA INTERPRETATION

<u>From EPA Guidance West Coast Chronic manual</u> (EPA/600/R-95/136, "Acceptability of Test Results" section 11.12.1 (3)):

"The LC50 for survival must be within two standard deviations of the control chart mean for the laboratory. The LC50 for survival with copper must be <205 ug/L."

- The observed LC₅₀ calculation for survival was <u>not within</u> control chart range for the laboratory (+ 2 standard deviations of the mean).
- The observed LC₅₀ for survival with copper was 293 ug/L.

From the NPDES Permit (No CA0063509) abbreviated:

V.A.1. **Definition of Acute Toxicity**.

Acute toxicity is a measure of primarily lethal effects that occur over a 96-hour period. Acute toxicity shall be measured in percent survival measured in undiluted (100%) effluent.

- a. The average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, and
- b. No single test shall produce less than 70% survival.

[Note: 68% survival was noted on the test initiated Sept 15, 2015, prompting accelerated testing]

V.A.2. Acute Toxicity Effluent Monitoring Program.

d. Acute Toxicity Accelerated Monitoring. If either of the above requirements (sections 1.a and 1.b) is not met, the Discharger shall conduct six additional tests, approximately every two weeks, over a 12-week period. The Discharger shall ensure that they receive results of a failing toxicity test within 24 hours of the close of the test and the additional tests shall begin within 5 business days of the receipt of the result. If the additional tests indicate compliance with the toxicity limitation, the Discharger may resume regular testing.

V.A.2.e. Toxicity Identification Evaluation (TIE).

i. If the results of any two of the six accelerated tests are less than 90% survival, then the Discharger shall immediately begin a Toxicity Identification Evaluation (TIE) and implement the Initial Investigation Toxicity Reduction Evaluation (TRE) workplan. The TIE shall include all reasonable steps to identify the sources of toxicity. Once the sources are identified, the Discharger shall take all reasonable steps to reduce toxicity to meet the objective.

ii. If the initial test and any of the additional six acute toxicity bioassay tests results are less than 70% survival, the Discharger shall immediately begin a Toxicity Identification Evaluation (TIE) and implement Initial Investigation Toxicity Reduction Evaluation (TRE) workplan. Once the sources are identified the Discharger shall take all reasonable steps to reduce toxicity to meet the requirements:

V.B.1. Definition of Chronic Toxicity.

This Order includes a chronic toxicity trigger defined as an exceedance of 1.0 TUc in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed, 1 TUc in a critical life stage test.)

[Note: a TUc of > 1.0 was noted in the test initiated September 15, 2015, prompting accelerated testing]

V.B.2.a. Chronic Toxicity Effluent Monitoring Program.

i. For brackish effluent, the Discharger shall conduct the chronic toxicity test in accordance with USEPA's *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine Organisms*, First Edition, (EPA 1995), EPA/600/R-95-136 ...

V.B.2.b. Chronic Toxicity Accelerated Monitoring.

If the chronic toxicity of the effluent exceeds the monthly trigger median of 1.0 TUc, the Discharger shall conduct six additional tests, approximately every two weeks, over a 12-week period. The Discharger shall ensure that they receive results of a failing chronic toxicity test within 24 hours of the completion of the test and the additional tests shall begin within 5 business days of the receipt of the result.

i. If any three out of the initial test and the six additional tests results exceed 1.0 TUc, the Discharger shall immediately implement the Initial Investigation TRE workplan.

V.C. Quality Assurance.

- 1. Concurrent testing with a reference toxicant shall be conducted.
- 2. If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the test methods ... then the Discharger must re-sample and re-test ...

<u>From the Toxicity Reduction Evaluation (TRE) work plan</u> (Kinder Morgan/CH2M HILL communication to the California Regional Water Quality Control Board, dated September 30, 2011) abbreviated:

Step 2 – Accelerated Effluent Toxicity Monitoring

- **Acute Toxicity:** If the results of any two of the six accelerated tests are less than 90 percent survival, or if the first test and any of the additional six acute toxicity bioassay tests results are less than 70 percent survival
- **Chronic Toxicity:** If the results of two or more of the six accelerated tests exceed 1.0 TUc.

Step 3 – TRE Implementation

Step 3a. Receiving Water Monitoring.

If toxicity, as defined by the accelerated monitoring triggers, is not detected in the sample collected from RSW-002, then the effluent does not cause or contribute to downstream chronic toxicity and the Initial Investigation TRE will be considered to be complete.

Alternatively, if there is toxicity exceeding the TRE triggers in both the upstream and downstream samples, then these samples will be compared in a two-step process to determine if there is a statistically significant increase in toxicity that could be due to the SFPP discharge.

RESULTS AND DISCUSSION

The raw data sheets are presented in Appendix A.

ACUTE BIOASSAYS

Table 1 summarizes the survival data for the *A. affinis* acute dual-endpoint tests that were salinity adjusted with Tropic Marin® sea salts to a salinity of 30 ppt. These toxicity endpoints were measured after 4-day exposures in the chronic test.

Table 1											
Summary of Acute Results Percent Survival											
Concentration (%) 0 hr 24 hr 48 hr 72 hr 96 hr											
		A. affinis	5								
Laboratory Control	100	100	100	100	100						
Receiving Water Upstream 100%	100	100	100	100	100						
Effluent 100%	100	100	100	100	100						
Receiving Water Downstream 100%	100	100	100	100	100						

<u>Receiving Water – Upstream</u>: The *A. affinis* acute dual-endpoint test indicated no statistically significant reduction in survival at the 100 percent Receiving Water – Upstream concentration when compared to the Laboratory Control. By EPA definition, the NOEC and the LOEC were 100 and greater than 100 percent, respectively.

<u>Effluent:</u> The *A. affinis* acute dual-endpoint test indicated no statistically significant reduction in survival at the 100 percent Effluent concentration when compared to the Laboratory Control. By EPA definition, the NOEC and the LOEC were 100 and greater than 100 percent, respectively.

<u>Receiving Water – Downstream</u>: The *A. affinis* acute dual-endpoint test indicated no statistically significant reduction in survival at the 100 percent Receiving Water – Downstream concentration when compared to the Laboratory Control. By EPA definition, the NOEC and the LOEC were 100 and greater than 100 percent, respectively.

From the TRE work plan "If toxicity, as defined by the accelerated monitoring triggers, is not detected in the sample collected from RSW-002 (50 feet downstream of discharge), then the effluent does not cause or contribute to downstream chronic toxicity and the Initial Investigation TRE will be considered complete".

Dissolved oxygen concentrations remained at 4.0 mg/L or greater throughout the test period. Test temperatures remained in the range of $20\pm1\,^{\circ}\text{C}$.

Both the Receiving Water and Laboratory controls met Test Acceptability Criteria (TAC) of a minimum 90 percent control survival for acute tests.

Unless referenced above, the tests proceeded without any noted deviations or interruptions that could have affected test results. The acute client testing is considered "valid".

CHRONIC BIOASSAYS

Table 2 summarizes the survival and biomass data for the *A. affinis* chronic tests that were salinity adjusted with Tropic Marin® Sea salts to a salinity of 30 ppt. These toxicity endpoints were measured after 7-day exposures.

Table 2 TRE Summary of Chronic Results A. affinis									
Sample Concentration	Percent Survival	Growth (i.e. Biomass) (mg)							
Laboratory Control	100	1.039							
Receiving Water Upstream 100%	100	0.914							
Effluent 100%	96	0.752 ^a							
Receiving Water Downstream 100%	100	0.940							
^a Indicates a statistically significant red	uction from the control	at p equal to 0.05.							

<u>Receiving Water – Upstream</u>: The *A. affinis* chronic test indicated no statistically significant reduction in survival or growth (biomass) at the 100 percent Receiving Water – Upstream concentration when compared to the Laboratory Control. By EPA definition, the NOEC and the LOEC were 100 and greater than 100 percent, respectively.

<u>Effluent:</u> The *A. affinis* chronic test indicated no statistically significant reduction in survival at the 100 percent Effluent concentration when compared to the Laboratory Control. The chronic test did indicate a statistically significant reduction in growth (biomass) at the 100 percent Effluent concentration when compared to the Laboratory Control. By EPA definition, the NOEC and the LOEC were less than 100 and 100 percent, respectively.

<u>Receiving Water – Downstream</u>: The *A. affinis* chronic test indicated no statistically significant reduction in survival or growth (biomass) at the 100 percent Receiving Water – Downstream concentration when compared to the Laboratory Control. By EPA definition, the NOEC and the LOEC were 100 and greater than 100 percent, respectively.

From the TRE work plan "If toxicity, as defined by the accelerated monitoring triggers, is not detected in the sample collected from RSW-002 (50 feet downstream of discharge), then the effluent does not cause or contribute to downstream chronic toxicity and the Initial Investigation TRE will be considered complete".

(Please note the weight data presented above is based on the weight per organism <u>added at test initiation</u> (biomass) which agrees with the latest version of EPA method 1006.0, EPA 821-R-02-014.

Note: The concurrent reference toxicant test performed by CH2M HILL did not meet the TAC for all 7-day chronic endpoints within control chart range (± 2 SD of mean for the lab) or maximum allowed concentration (< 205 ug/l Cu) for the 7 day chronic LC₅₀ value. See the Reference Toxicant Test section for further details. A reference toxicant test will be conducted again as soon as the sensitivity of the topsmelt are within historical range with this supplier as there are no alternative suppliers at the moment for this test organism.

Other than referenced above, the tests proceeded without any noted deviations or interruptions that could have affected test results. However, due to:

- the control chart limits not being met
- and the reftox LC50 value for survival above 205 ug/L Cu,

TAC for the test was not met and the chronic client testing should be considered "invalid".

REFERENCE TOXICANT TEST

Reference toxicant (reftox) testing is performed to document both initial and ongoing laboratory performance of the test method(s). While the health of the test organisms is primarily evaluated by the performance of the laboratory control, reftox test results also may be used to assess the health and sensitivity of the test organisms. Reftox test results within their respective cumulative summary (Cusum) chart limits are indicative of consistent laboratory performance and normal test organism sensitivity.

Acute Dual-endpoint:

- The concurrent reference toxicant test <u>did</u> meet chronic Test Acceptability Criteria (TAC) for a minimum 90% survival at 4 days the control.
- The LC₅₀ calculation for survival was within control chart range (2 standard deviations of the mean).
- These data indicate that the reftox test should be considered "valid" for the acute dual-endpoint.

Chronic endpoint:

- The concurrent reference toxicant test <u>did</u> meet chronic Test Acceptability Criteria (TAC) for a minimum 80% survival at 7 days the control.
- The LC₅₀ calculation for survival was <u>not within</u> control chart range (2 standard deviations of the mean).
 - o This violates the TAC listed in EPA/600/R-95/136, section 11.12.1 (3)
 - This also suggests the test organisms for this endpoint in the associated client testing were insensitive.
- The LC₅₀ calculation for survival was greater than upper limit of 205 ug/L
 - o This violates the TAC listed in EPA/600/R-95/136, section 11.12.1 (3)
- The IC₂₅ calculation was <u>not within</u> control chart range indicating suggesting insensitive test organisms for this end point for 7 day survival and growth.
- In accordance with EPA/600/R-95/136, section 11.12.1 (3), LC₅₀ results such as these that do not meet TAC mean the testing should be considered "invalid".
- In accordance with the NPDES permit (section V.C.2), LC₅₀ results such as these that do not meet TAC prompt the discharger to re-sample and re-test.

The *A. affinis* reftox test was conducted using copper (as copper chloride). The data sheets for the reference toxicant tests are provided in Appendix B.

Tables 3 and 4 summarizes the reference toxicant test results and Cusum chart limits.

Table 3										
Acute Dual-Endpoint Reference Toxicant Test (CH2M Hill – ASL testing)										
Cu (as CuCl ₂) ug/L										
Species (test)	Endpoint	Control Chart Limits								
A. affinis (96 hour survival)	$LC_{50} = 254$	66 to 263								

Table 4											
Chronic Reference Toxicant Test (CH2M Hill – ASL testing)											
Cu (as CuCl ₂) ug/L											
Species (test)	Endpoint	Control Chart Limits									
A. affinis (7 day survival)	$LC_{50} = 293^{*, \#}$	68 to 181									
A. affinis (7 day survival)	$IC_{25} = 190*$	46 to 133									
A. affinis (7 day growth)	$IC_{25} = 161*$	42 to 128									

^{*} Indicates a value out of control chart range and the test result does not meet TAC listed in EPA/600/R-95/136, section 11.12.1 (3).

Additional chronic reference toxicant testing information was also obtained from the organism supplier (Aquatic Bio Systems (ABS)).

Chronic endpoint:

- The NOEC calculation was consistent with the previous 5 months of calculations presented indicating typical chronic test sensitivity for survival.
- The 7 day LC₅₀ datum point was not provided.
- The IC₂₅ calculation was within control chart range for the January 2016 datum point.
- Note, however, there appears to be a recent trend in the ABS reftox testing (that matches the one seen by CH2M Hill ASL). The growth control chart entries for Nov. and Dec. 2015 were above limits, suggesting insensitive test organisms for the growth endpoint for that time period, and that these points effectively widened the limits for the Jan 2016 datum point. While in range, the Jan 2016 IC₂₅ value is similar to the Nov and Dec 2015 data (both @ 380 ug/L), is well above the mean for the lab (227 ug/L), and is not within historical norms. (see chart included in Appendix B)

[#] Indicates a value above the TAC limit of 205 ug/L and the test result does not meet TAC listed in EPA/600/R-95/136, section 11.12.1 (3).

Table 5 summarizes the reference toxicant test results and Cusum chart limits for the testing performed in January 2016 by Aquatic Biosystems.

Table 5										
Chronic Reference Toxicant Test										
Performed by ABS										
C	Cu (as CuCl ₂) ug/L									
Species (test)	Endpoint	Control Chart Limits								
A. affinis (7 day survival)	NOEC = 180	not provided								
A. affinis (7 day growth)	$IC_{25} = 356$	162 to 391								

Note: Values converted to ug/L Cu from the $CuCl_2$ values provided by the ABS report included in Appendix C. (0.473 ug/l Cu = 1.00 ug/L CuCl₂) This was done to allow for easier comparisons to the values presented in Table 4.

APPENDIX A RAW DATA SHEETS

A 1 1 8	11	113
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FRESHWATER TOXICITY TEST: SAMPLE AND DILUTION WATER DATA

Client			Kinde	r Mor	gan EP - N	lorwalk			Test Initiation: Date \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \								
Contact		Cam	Irvine/ Daniel	Jablon	ski 916.335	.2369/ 21	3-228-8271		,		.	Test Term	ination: I	Date	1-23-1	6	
Sample II Number			Field ID		Collect Date (mm/dd/yy)	Time (Pacific Zone)	Date Received / Treated	Temp (°C)	Total Re Chlorine Dechlorinat	(mg/l)	Ammonia NH ₃ -N mg/l	Salinity (ppt)	Alkalinity mg/l as CaCO ₃	DO (mg/L)	pH as Rę'vd	Cond. (uS)	60 um filtered prior to use?
133470	-01	- Effluen	ţ	6	01/FL/10	09:00	01/21/16	2.5	KO,021		40,10	4/	461	0.))	7.0	2510	1
]	-02	- Effluent	, Adj to 30 ppt		Salinity adj	1	I	-	- /	_	_	30	_	-	-	-	☑
	-03	- Effluen	t		1122116	0900	1 R311	2-8	<0.02-1	_	20.10	4	454	10.0	7.1	2450	Ø
	-04	- Effluent	, Adj to 30 ppt		Salinity adj	usted on ->	1 23/16	_	- /	-	-	30	-	-	-	-	Ø
	-05	- Effluen	t		1 124116	09:35	1 126 116	0.3	0.06/	_	LO:10	3	384	10.5	6.8	2660	Ø
	-06	- Effluent	, Adj to 30 ppt		Salinity adj	usted on ->	1 126 116	140	- /	-	-	30	_	_	_	_	Ø
		7.	· .			1		1			1		1				
	-07	- Receivi	ng Water "psw-a	121	01/20/16	00:00	01/21/16	2.5	20.021	_	40.10	4	236	11.0	8.2	1420	Ø
	-08	- Receivin	ng Water, Adj to	30 рр	Salinity adj	usted on ->	1/21/16	<u> - </u>	- /	***		30	bon	***	_	-	Ø
	-09	- Receivi	ng Water		1122116	1030	1123116	2.8	(0.021	_	20,10	3	277	14.3	8.9	1266	Ø
	-10	- Receivin	ng Water, Adj to	30 рр	Salinity adj	usted on ->	1 123 114	_	/	-	_	30	-	-	***	**	Ø
	-11	- Receivi	ng Water		1 1251 16	10:00	1 12416	0.9	0.051	_	40,10	1	247	12.6	8.2	1594	Ø
l l	-12	- Receivin	ng Water, Adj to	30 рр	Salinity adj	usted on ->	1 126 116	_	- /	-	-	30	_	_			Ø
	K.			1201.9		Repor	rting Limits:	na	0.02 m	g/L	0.10 mg/L	4 mg/L	4 mg/L	na	na	na	na
		Note:	"-" Indicates da	ta collec	tion or dechlor	ination not	needed. Any oth	ner adjustm	ents to samples	orior to use	are docume	nted in Con	nments belo	w or on Di	lutions pag	e.	
				Hardn	ess Alkalinity	Salinity	Comments:	Indicates	the action was ta	ken, (□= a	ction not tak	:en'):- " = sa	mple not de	echlorinated	d, or analyte	e not collect	ted/needed
Dilution Wa	iter		ID#	mg/l : CaÇ((ppt)	Note	: likely onl	y 1 sample of Re	ceiving wat	ter ("RSW")	to be colle	cted.				
Art. Sea (30	(tgg (4312	-	/38	30	It is REQUIRED that the client (Cam and/or Daniel) be notified within 24 hours										
4318 - 138 30 of the test ending																	
									1	1			,				
							V=-05	عاي ک	WE USED TOW	16-56	5 5	(7)	Cely ty	no or C	10C 3	~ 5/16	
							<u> </u>										
				W	Vater Ouality M	leters Used	/ID#: Dissol	ved Oxvge	n # 3	oH #	Cond	uctivity	# 2				

Client		Kinde	r Morga	n EP - N	orwalk			SDG#B	3470		Test In	itiation: D	ate	1-21	-16	
Contact	Cam	Irvine/ Daniel	Jablonsk	i 916.335	.2369/ 21	3-228-8271					Test Term	ination: D	Date (28-4		
Sample ID Number		Field ID	(n	Collect Date nm/dd/yy)	Time (Pacific Zone)	Date Received / Treated	Temp (°C)	Total Re- Chlorine Dechlorinati as Re'vd /	(mg/l)	Ammonia NH3-N mg/l	Salinity (ppt)	Alkalinity mg/l as CaCO ₃	DO (mg/L)	pH as Rgʻvd	Cond. (uS)	60 um filtere prior t use?
33470 -13	- Down S	Stream 185W- 00:	2 " 0(/20/(6	୦ଥ : 15	01/21/16	2.5	20.021	-	20,10	4	138	11.11	8.2	1400	Ø
-14	- Down S	Stream, Adj to 30	ppt	Salinity adj	usted on ->	学/21/16	-	- /	_	100	30	_	_	_	-	☑
-15	- Down S	Stream	1	12716	1035	1123166	5-8	60.021	-	20,10	3	195	14.4	8. 9	1225	Ø
-16	- Down S	Stream, Adj to 30	ppt	Salinity adj	usted on ->	1 723116	-	- /	-		30	_	-	_	_	Ø
-17	- Down S	Stream	7	125/16	10:10	1/26/16	0,9	0.041	_	K0,10	nazer.	27 ~ E	10.5	8.7	1555	· ^ 🗹
-18	- Down S	Stream, Adj to 30	ppt	Salinity adj	usted on ->	1/26/16	-	- /	***	-	702 -21-	2-3 - (4	_		-	Ø
	I				ı	T		1		<u> </u>	271			T :	1	· · · · · · · · · · · · · · · · · · ·
								/								
		10.21.11.11.11.11.11.11.11.11.11.11.11.11.		Salinity adj	usted on ->	·	-	- /		_		-		-	-	
								/						1		
				Salinity adj	usted on ->		- 10	- /		-		-		-	-	
								/								
				Salinity adj			_	- /		_				-	•	
					1	rting Limits:	na	0.02 m	-	0.10 mg/L	4 mg/L	4 mg/L	na	na	na	na
	Note	: "" Indicates da	ta collectio	T	i											
			Hardness	1 -	Salinity			the action was ta					echlorinate	d, or analyte	e not collect	ed/neede
Dilution Water		ID#	mg/l as CaGO ₃	mg/l as CaGO ₃	(ppt)	Note	: likely only	y 1 sample of Re	ceiving wat	er ("RSW")	to be colle	cted.				
Art. Sea (30 ppt)	43/2 - 138 30 It is REQUIRE					RED that the client (Cam and/or Daniel) be notified within 24 hours									
		9318		20 2			ending if	ing if the the test shows toxicity.								

Water Quality Meters Used/ID#: Dissolved Oxygen # 3 pH # // Conductivity # 2

Comments:

FRESHWATER TOXICITY TEST: TEST ORGANISM INFORMATION

Client Kinde	er Morgan EP - Nor	walk	Sample D	Sample Designation (SDG): B 3474				
	AA# 074							
Test Species Information	Atherinops affinis							
	Chronic							
Organism Age at Initiation	i (days							
Test Container Size	400 ml							
Test Volume	200 ml							
Feeding: Type and	Artemia ,							
Amount	2 x Daily							
Aeration:	☐ None							
	☐ Prior to use							
In Test Chambers via Slow Bubb	ole: 🔲 @hrs							
Acclimation Period	2 Days							
Organism Source	ABS							
Size	_							
Loading Rate	-							
Dissolved Oxygen aeration justified Test(s): All Date:	eations (in test chambers):							

Kinder Morgan - Norwalk - TIE work - topsmelt chronics.xlsm

Doc Control ID: ASL636-1111

Kinder Morgan - Norwalk - TIE work - topsmelt chronics.xlsm Doc Control ID ASLABA-1111

									The second of the second	The Advance of
Client:	Kinder Morgan EP - Norwalk	3P - Norw	alk		Ditto marks ('') ind	Ditto marks ('') indic Ditto marks ('') indic Ditto marks (''') indicate that the same SDG, batch of dilution water,	lic Ditto marks ('') inc	dicate that the same SL	OG, batch of dill	ıtion water,
Atherinops af	Atherinops affinis - Chronic		Sample ID:	30 ppt	30 ppt	30 ppt	30 ppt			
Test	Sample	Final	Test	Lab Control - 30 ppt	"Receiving Water"	"Effluent"	"Downstream"	Date	Time	Initials
Concentration	Volume	Volume	Day	Water ID Used	Sample ID Used	Sample ID Used	Sample ID Used			
(%)	(slut)	(mls)	0 (Initiation) D#H?	D#4312	B3460 08	B3460 02	B3460-14	1/21/2016	(3:15	MA
			.	D# 4312	B3460 08	B 3460 02	B37/60 14	1 1221 16	08:30	Z
			2	D# 4318) B	№ - ОЧ	B - 16	1 23/16	8 2) M
All scree	All screens - no dilutions needed.	ed.	r	m# 4318	B . (Ô	B - O4	B . 16	1/24/16	OF 05	MA
Use 1000 m.	Use 1000 ml of each of the listed waters.	waters.	4	D#4318	В . 10	B - 04	В - 1 (Д	1/25 / 16 08 :55	08:35	J
			\$	B 15/1 # CI	B . 12	B - 0 6	B . 18	1 126 1 16 12 :30	12:30	9
			9	四# 4318	BJ . 12	90. Pa	B 7 . 18	1 121 16	07 :30	Div)

4 Rote (123-14

			See randor	mization sh	Waterbath/incubator				Date Initiated					
Initial san			470	-	•		# 10	_ Da	ate Terminated	1 /29	3 /2016	_ Time	10:	10
Client		Kinder						-	le Description					
Tech:		m 327	Day 1	<u> </u>	ay 2 <u>M</u>	C Day	y3 <u>MC</u>	Day 4 <u>M</u> (Day_5		BY 6 - C - C	Day 7	MC	
	Day 0	1222	Day 1 11	<u> </u>	ay 2 <u>123</u>	<u>රිර</u> Day			5 Day 5	1400 D	ay 6S	Day 7		
Conc. or	Day		Number	r of Live O	rganisms		Dissol (m	.ved Q 1g/l)	į.	Н	Sal	inity	Temp.	Therm. ID #
Percent		A	В	С	D	Е	Pre	Post	Pre	Post	Pre	Post	Рге	
	0	7_2	5	5	5	5	6.3	9·6	8.2	કે. 4	31	30 30	19.7 19.9	186
[]	2	5	5	<u> </u>	5	5	5.8	7.0	8-0	8.4	31	31	19.7	154
5 Contro 30 ppt	3	5	5	5	5	5	4.0	(o-7	8.0	83	30	30	19.6	154
Lab Control - 30 ppt	5	5	5	2	j.	5	10-7	6.9	8.2	8-4	30	30	19-7	15G
<u></u>	6	67	2	2	5	5	2. E 2. E	6.7	8.0	8.4	31	3,	19.8	177
	7	5	5	5	5	5	5.9		7.8		3i \	3 /	19.8	177
 ,,	0	2	5	5	5	5		6.6		წ.ე		29	Post: 19.6	
/atei	2	5	5	2	<u>S</u>	2	6.2	7.6	8.7	8-4	30	3 ₂	19.7	<u> </u>
ig W	3	5	5	5	5	5	5.9	8.9	8.2	8.3	20	30	19.6	
ivin -	4	5	5	5	5	5	6.7	8.6	8.4	8.4	30	30	19.6	
Receiving Water - 30 ppt	5 6	2	7 <u>2</u> 7 <u>2.</u>	<u>5</u>	<u>2</u> 2	5	2. 8	9.0	8.2	8.3	30	3/	20.0	
-	7	5	5	5	5	5	5.9	17.0	8.2	0.3	32	ه ک	19.7	
	0	5	5	5	5	5		6.6		7.4		29	Post: 19.6	
	1	5	2	2	5	7	6.4	7.6	8.8	7.5	30	30	19.8	
ent	3	r) îv	5	5	<i>5</i> /5	5	6.2 5.9	7.9 8.3	8.1	7,3	30 30	30	19.7	
Effluent - 30 ppt	4	5	Š	5 5	5	5	6.7	8.5	8-1	7-5	30	30	19.6	2
'	5			-5	5	Ž	2.3	6,5	8.1	7.4	30	31	19.5	
	6 7	5	5 5	<i>S</i>	4	<u>5</u>	5.8	7.9	7,5 8.1	7.3	3/	37	19.6	
	0	5	5	5	5	5	((/ -)	6.7	7) (გ.ට	3 (29	Post: 19.7	
l _e	1	<u>s</u>	2	2	5	5	6.4	7.7	\$.2	8.1	37	30	19.8	
Stream	3	<u>র্</u> ছ	<u>5</u> 5	5	<u>5</u>	55	5-9	8.9 8.8	8.2	8.3	30	30	19.4	,
wn Strear 30 pptw	4	5	5	2	5	5	6-7	8.8	8.Z 8.3	8.3	30	30 30	19.6	
Down - 30 ₁	5	Ś	5	2	2	<u>5</u>	2.8	6.6	8.2	8.3	33	31	19,0	}
	6 7	<u>5</u>	2	-2.	Š	5	2.3	7.0	8.5	8.4	31	31	19.8	
	/		<i>'</i> -y-	5	5	5	5-4		8.3		31		19:4 Post:	0
								(-						
													Post:	
✓ Indica	ites one	organism i	nadvertentl	v noured of	ff during so	dution rene	wal, replaced	into container	$p_{re} = p_r$	e-renewal sol	itions Post	-Doct renew	al colutions	

[✓] Indicates one organism inadvertently poured off during solution renewal, replaced into container.

☐ Aeration in test chambers begun @ _____ (Note observations on Test Organism Info sheet)

(23.8) = Temp. out of recommended range

Pre =Pre-renewal solutions. Post =Post-renewal solutions.

Day 0 Temperatures = Post-renewals

[&]quot;M" = organism missing, start count reduced. "Inj" = organism injured, remove from stats. "F" = fungus noted on dead organisms.

Therm ID# = Thermometer ID used for all measurements that day.

ATHERINOPS AFFINIS 7-DAY GROWTH DATA

Client	Kinder Morgan EP - 1	Norwalk	Tins Labeled As:	Kinder	
<u> </u>	B3470		Start Date	1/21/2016	
Sample Description:					
	Technician:	KJ	МЈО		
	Date:	1/29/2016	1/9/2016		
	Balance Serial #:	B328543647	B328543647		

	Balance Serial #:	B328543647	B328543647	
Percent	Replicate	Total Weight (mg)	Tare Weight (mg)	No. of Fish
	A	1204.02	1198.45	5
Control	В	1171.60	1167.64	5
	c	1127.75	1121.69	5
	D	1091.77	1087.20	5
	E	1130.55	1124.74	5
	A	1150.25	1145.96	5
RW %	В	1147.17	1142.03	5
	С	1187.81	1184.58	5
	D	1143.91	1138.88	5
	Е	1119.91	1114.74	5
	A	1117.90	1113.84	5
100 %	В	1170.08	1165.91	5
	С	1118.46	1114.90	5
	D	1121.54	1117.62	4
	E	1116.24	1113.14	5
<u></u>	A	1121.43	1116.09	5
Downstream %	В	1129.75	1125.88	5
	С	1128.60	1124.07	5
	D	1148.96	1144.49	5
	E	1178.75	1173.47	5
-		Se ₁		
-				

weigh to 0.01 mg

ATHERINOPS AFFINIS 7-DAY GROWTH DATA

Client	Kinder Morgan EP -	Norwalk	Tins Labeled As:	Kinder
			Start Date	
Sample Description:				
	Technician:		MJO	
	Date: Balance Serial #:	B328543647	1/9/2016 B328543647	

	Balance Serial #:	<u>B328543647</u>	B328543647	
Concentration	Replicate	Total Weight (mg)	Tare Weight (mg)	No. of Fish
	A		1198.45	5
Control	В		1167.64	5
_	С		1121.69	5
Γ	D		1087.20	5
	Е		1124.74	5
D37.0/	A		1145.96	<u>5</u> 5
RW %	B C		1142.03	5
			1184.58	
-	D		1138.88	<u>45</u>
	Е		1114.74	5
	A		1113.84	<u>5</u>
100 %	В		1165.91	5
	C		1114.90	5
_	D		1117.62	4
	Е		1113.14	5
	A		1116.09	5 5 5
Downstream %	В		1125.88	5
	С		1124.07	5
	D		1144.49	5
	E		1173.47	<u>\$</u> 5
: 	A			
-	В			***************************************
_	C			
	D			
	Е	·····		
	A			
	В			
	С			
	D			
	Е			

weigh to 0.01 mg

As per EPA-600-R-95-136, Section 11.12.1 Acceptability of Test Results: "The mean weight per larvae must exceed 0.85 mg ... in the control"



CETIS Summary Report

Report Date: Test Code: 29 Jan-16 09:46 (p 1 of 1) B347008aac | 12-6860-6870

Pacific Topsr	nelt 7-d Surviva	and G	Frowth Test								CH2M I	HILL - ASL
Batch ID: Start Date: Ending Date: Duration:	16-6031-1911 21 Jan-16 15:5 28 Jan-16 10:1 6d 18h		Test Type: Protocol: Species: Source:	Growth-Surviva EPA/600/R-95/ Atherinops affir Aquatic Biosys	(136 (1995) nis			Analyst: Diluent: Brine: Age:		t Muckey oratory Seav	water	
Sample ID:	15-2314-7706		Code:	B3470-08				Client:				
Sample Date: Receive Date	20 Jan-16 08:0	0	Material: Source:	Industrial Efflue Kinder Morgan				Project:				
Sample Age:			Station:	Upstream Rece		(RSW-00	1)					
Batch Note:	Dilution water i	s Lab 0	Control (Milli-	q water + Tropic	Marin sea s	alts))				
	Salinity adjuste		*			,						
Comparison	Summary											
Analysis ID	Endpoint	<u>ر </u>	NOEL	_ LOEL	TOEL	PMSD	TU	Met	thod			
11-2573-0953	7d Survival Ra	te	100	>100	ΝA	NA	1	Wile	coxon	Rank Sum	Two-Sample	e Test
11-4140-0886	Mean Dry Bion	ass-m	g 100	>100	NA	19.5%	1	Equ	ıal Var	iance t Two	-Sample Te	st
Test Acceptal	bility	*	·									
Analysis ID	Endpoint		Attrib	ute	Test Stat	TAC Lin	nits	Ove	erlap	Decision		
11-2573-0953	7d Survival Ra	te	Contr	ol Resp	1	0.8 - NL		Yes	;	Passes A	cceptability	Criteria
7d Survival R	ate Summary											
C-%	Control Type	Cou	nt Mean	95% LCL	95% UCL	Min	Max	Std	Err	Std Dev	CV%	%Effect
0	Dilution Water	5	1	1	1	1	1	0		0	0.0%	0.0%
100		5	1	1	1	1	1	0		0	0.0%	0.0%
Mean Dry Bio	mass-mg Sumn	nary										
C-%	Control Type	Cou					Max		Err	Std Dev	CV%	%Effect
0	Dilution Water	5	1.039		1.26	0.792	1.21		7979	0.1784	17.17%	0.0%
100		5	0.914	4 0.7077	1.121	0.646	1.03	4 0.07	7443	0.1664	18.2%	11.98%
7d Survival R	ate Detail											
C-%	Control Type	Rep		•	Rep 4	Rep 5						
0	Dilution Water	1	1 1	1	1	1						
100		-	<u> </u>	1	1	1						
Mean Dry Bio	mass-mg Detail											
C-%	Control Type				Rep 4	Rep 5						····
0	Dilution Water	1.114			0.914	1.162						
100		0.858	3 1.028	0.646	1.006	1.034						
7d Survival R	ate Binomials											
C-%	Control Type	Rep	1 Rep 2	Rep 3	Rep 4	Rep 5						
0	Dilution Water	5/5	5/5	5/5	5/5	5/5						
100		5/5	5/5	5/5	5/5	5/5						

Report Date:

29 Jan-16 09:46 (p 1 of 4)

Test Code:

B347008aac | 12-6860-6870

Pacific Tops											12-6860-687
	melt 7-d Surviva	l and Grow	th Test							CH2N	I HILL - ASL
Analysis ID: Analyzed:	11-2573-0953 29 Jan-16 9:45		.,	l Survival Rat onparametric-	-	le		S Version		.8.8	
Batch ID:	16-6031-1911	Tes	t Type: G	rowth-Surviva	l (7d)		Anal	yst: Bro	ett Muckey		
Start Date:	21 Jan-16 15:5			PA/600/R-95/			Dilu	=	boratory Sea	water	
Ending Date :	: 28 Jan-16 10:1	0 Sp e	ecies: At	herinops affir	is		Brin	e:			
Duration:	6d 18h	Sou	ırce: A	quatic Biosyst	ems, CO		Age:				
Sample ID:	15-2314-7706	Cod		3470-08			Clier	nt:			
•	20 Jan-16 08:0			dustrial Efflue			Proj	ect:			
Receive Date				nder-Morgan-		- /DOW 004					
Sample Age:				ostream Rece) \}				
Batch Note:	Dilution water is			,		salts)					
Sample Note	e: Salinity adjuste	d with Trop	ic Marin art	ificail sea sal	s						
Data Transfo	orm	Zeta	Alt Hyp	Trials	Seed			Test Res	sult		
Angular (Corr	rected)	NA	C > T	NA	NA			Passes 1	7d survival ra	te	
Wilcoxon Ra	ank Sum Two-Sai	mple Test									***************************************
Control	vs C-%		Test Sta	t Critical	Ties D	F P-Value	P-Type	Decision	n(α:5%)		
Dilution Wate	er 100)	27.5	NA	1 8	1.0000	Exact	Non-Sigr	nificant Effec	t ,	
Auxiliary Tes	sts									أمر	
Attribute	Test			Test Stat	Critical	P-Value	Decision	α:5%)			
Control Trend	d Mann-Ke	ndall Trend				1.0000	Non-signi	icant Tren	d in Controls		
ANOVA Table	e										
Source	Sum Squ	ares	Mean So	juare	DF	F Stat	P-Value	Decision	n(a:5%)		
Between	0		0	·	1	65540	<0.0001	Significa	<u> </u>		
Error	0		0		8						
Total	0				9						
7d Survival F	Rate Summary										
C-%	Control Type	Count	Mean	95% LCL	95% UCI	. Median	Min	Max	Std Err	CV%	%Effect
0	Dilution Water	5	1	1	1	1	1	1	0	0.0%	0.0%
100		5	1	1	1	1	1	1	0	0.0%	0.0%
Angular (Cor	rrected) Transfor	med Sumn	nary								
C-%	Control Type	Count	Mean	95% LCL	95% UCI	. Median	Min	Max	Std Err	CV%	%Effect
0	Dilution Water	5	1.345	1.345	1.346	1.345	1.345	1.345	0	0.0%	0.0%
100		5 	1.345	1.345	1.346	1.345	1.345	1.345	0	0.0%	0.0%
7d Survival F	Rate Detail										
	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5					
C-%		11001	ITOP E		b .						
0	Dilution Water	1	1	1	1	1					
0 100		1	1	1	1	1					
0 100 Angular (Cor C-%	Dilution Water rrected) Transfor Control Type	1 1 med Detail Rep 1	1	1	1	1					
0 100 Angular (Cor C-%	Dilution Water	1 1 med Detail Rep 1 1.345	1 1 Rep 2 1.345	1 1 Rep 3 1.345	1 1 Rep 4 1.345	1 1 Rep 5 1.345					
0 100 Angular (Cor C-%	Dilution Water rrected) Transfor Control Type	1 1 med Detail Rep 1	1 1 Rep 2	1 1 Rep 3	1 1 Rep 4	1 1 Rep 5					
0 100 Angular (Cor C-% 0 100	Dilution Water rrected) Transfor Control Type	1 1 med Detail Rep 1 1.345	1 1 Rep 2 1.345	1 1 Rep 3 1.345	1 1 Rep 4 1.345	1 1 Rep 5 1.345					
0 100 Angular (Cor C-% 0 100	Dilution Water rrected) Transfor Control Type Dilution Water	1 1 med Detail Rep 1 1.345	1 1 Rep 2 1.345	1 1 Rep 3 1.345	1 1 Rep 4 1.345	1 1 Rep 5 1.345					
0 100 Angular (Cor C-% 0 100 7d Survival F	Dilution Water rrected) Transfor Control Type Dilution Water	1 1 med Detail Rep 1 1.345 1.345	1 1 Rep 2 1.345 1.345	1 1 Rep 3 1.345 1.345	Rep 4 1.345 1.345	1 1 Rep 5 1.345 1.345					

Report Date:

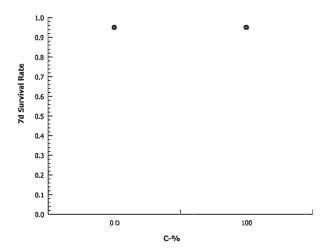
29 Jan-16 09:46 (p 2 of 4)

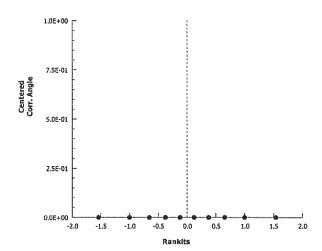
Test Code:

B347008aac | 12-6860-6870

Pacific Topsn	nelt 7-d Survival and	d Growth Test			CH2M HILL - ASL
Analysis ID:	11-2573-0953	Endpoint:	7d Survival Rate	CETIS Version:	CETISv1.8.8
Analyzed:	29 Jan-16 9:45	Analysis:	Nonparametric-Two Sample	Official Results:	Yes







Report Date:

29 Jan-16 09:46 (p 3 of 4)

Test Code: B347008aac | 12-6860-6870

Pacific Topsm	nelt 7-d Survival	and Grow	th Test							CH2M	HILL - ASI
Analysis ID:	11-4140-0886	Enc	ipoint: Me	ean Dry Biom	ass-mg		CETI	S Version	: CETISv1	.8.8	
Analyzed:	29 Jan-16 9:46	Ana	ilysis: Pa	rametric-Two	Sample		Offic	ial Results	: Yes		
Batch ID:	16-6031-1911	Tes	t Type: Gr	owth-Surviva	l (7d)		Anal	yst: Bre	ett Muckey		
Start Date:	21 Jan-16 15:55	5 Pro	tocol: EF	PA/600/R-95/	136 (1995)		Dilue	ent: Lab	oratory Sea	water	
Ending Date:	28 Jan-16 10:10) Spe	cies: At	herinops affin	is		Brine	ə:			
Duration:	6d 18h	Sou	ırce: Ad	ıuatic Biosyst	ems, CO		Age:				
Sample ID:	15-2314-7706	Cod	de: B3	3470-08			Clier	nt:			
Sample Date:	20 Jan-16 08:00) Mat	erial: Ind	lustrial Efflue	nt		Proje	ect:			
Receive Date:	21 Jan-16		- Contraction of the Contraction	nder-Morgan	Norwalk						
Sample Age:	32h	Sta	tion: Up	stream Rece	iving Water	(RSW-001)					
Batch Note:	Dilution water is	Lab Contr	ol (Milli-q w	ater + Tropic	Marin-sea-s	alts)					
Sample Note:	Salinity adjusted	d with Tropi	ic Marin arti	ficail sea salt	s						
Data Transfort	m	Zeta	Ait Hyp	Trials	Seed		PMSD	Test Res	ult		
Untransformed		NA	C>T	NA	NA		19.5%	Passes n	nean dry bior	mass-mg	
Equal Varianc	e t Two-Sample	Test									
Control	vs C-%		Test Stat	Critical	MSD DF	P-Value	P-Type	Decision	ι(α:5%)		
Dilution Water	100		1.14	1.86	0.203 8	0.1436	CDF	Non-Sign	ificant Effect		
Auxiliary Tests	s										
Attribute	Test			Test Stat	Critical	P-Value	Decision(a:5%)			
Control Trend	Mann-Ker	idall Trend				0.8151	Non-signif	icant Trend	in Controls		
ANOVA Table											
Source					DF	E 04-4	P-Value	Decision	ι(α:5%)		
D-1	Sum Squa	ıres	Mean Sq	uare	Ur-	F Stat	r-value				
Between	Sum Squa 0.0386880	·	0.038688		1	1.3	0.2873		ificant Effect	<u> </u>	
Error		3		03		·····			ificant Effect	<u> </u>	
	0.0386880	3	0.038688	03	1	·····			ificant Effect		
Error	0.0386880 0.2381374 0.2768254	3	0.038688	03	1 8	·····			ificant Effect	<u> </u>	
Error Total	0.0386880 0.2381374 0.2768254	3	0.038688	03	1 8 9	·····		Non-Sign	ificant Effect	t	
Error Total Distributional	0.0386880 0.2381374 0.2768254 Tests	3	0.038688 0.029767	03 17	1 8 9	1.3	0.2873	Non-Sign α:1%)	ificant Effect	t	
Error Total Distributional Attribute	0.0386880 0.2381374 0.2768254 Tests Test	3	0.038688 0.029767	03 17 Test Stat	1 8 9 Critical	1.3	0.2873 Decision(Non-Sign α:1%) iances	ificant Effect		
Error Total Distributional Attribute Variances Distribution	0.0386880 0.2381374 0.2768254 Tests Test	3 Ratio F Tes Vilk W Norr	0.038688 0.029767	03 17 Test Stat 1.149	1 8 9 Critical 23.15	P-Value 0.8961	0.2873 Decision(Equal Vari	Non-Sign α:1%) iances	ificant Effect		
Error Total Distributional Attribute Variances Distribution Mean Dry Bior	0.0386880 0.2381374 0.2768254 Tests Test Variance I Shapiro-W	3 Ratio F Tes Vilk W Norr	0.038688 0.029767	03 17 Test Stat 1.149	1 8 9 Critical 23.15 0.7411	P-Value 0.8961	0.2873 Decision(Equal Vari	Non-Sign α:1%) iances	ificant Effect	cv%	%Effect
Error Total Distributional Attribute Variances Distribution Mean Dry Bior C-%	0.0386880 0.2381374 0.2768254 Tests	3 Ratio F Tes Vilk W Norr ary	0.038688 0.029767 st nality	03 17 Test Stat 1.149 0.8465	1 8 9 Critical 23.15 0.7411	P-Value 0.8961 0.0528	Decision(Equal Vari	Non-Sign α:1%) iances stribution			%Effect 0.0%
Error Total Distributional Attribute Variances Distribution Mean Dry Bior C-%	0.0386880 0.2381374 0.2768254 Tests	Ratio F Tes Vilk W Norr ary Count	0.038688 0.029767 st nality Mean	17 Test Stat 1.149 0.8465 95% LCL	1 8 9 Critical 23.15 0.7411	P-Value 0.8961 0.0528	Decision(Equal Vari Normal Di	Non-Sign α:1%) iances stribution Max	Std Err	CV%	***************************************
Error Total Distributional Attribute Variances Distribution Mean Dry Bior C-% 0 100	0.0386880 0.2381374 0.2768254 Tests	Ratio F Tes Vilk W Norr ary Count 5	0.038688 0.029767 st nality Mean 1.039	Test Stat 1.149 0.8465 95% LCL 0.8173	1 8 9 Critical 23.15 0.7411 95% UCL 1.26	P-Value 0.8961 0.0528 Median 1.114	Decision(Equal Vari Normal Di Min 0.792	Non-Sign α:1%) iances stribution Max 1.212	Std Err 0.07979	CV% 17.17%	0.0%
Error Total Distributional Attribute Variances Distribution Mean Dry Bior C-% 0 100 Mean Dry Bior	0.0386880 0.2381374 0.2768254 Tests Test Variance I Shapiro-W mass-mg Summ Control Type Dilution Water	Ratio F Tes Vilk W Norr ary Count 5	0.038688 0.029767 st nality Mean 1.039	Test Stat 1.149 0.8465 95% LCL 0.8173	1 8 9 Critical 23.15 0.7411 95% UCL 1.26	P-Value 0.8961 0.0528 Median 1.114	Decision(Equal Vari Normal Di Min 0.792	Non-Sign α:1%) iances stribution Max 1.212	Std Err 0.07979	CV% 17.17%	0.0%
Error Total Distributional Attribute Variances Distribution Mean Dry Bior C-% 0 100 Mean Dry Bior C-%	0.0386880 0.2381374 0.2768254 Tests Test Variance I Shapiro-W mass-mg Summ Control Type Dilution Water	Ratio F Tes Vilk W Norr ary Count 5	0.038688 0.029767 st nality Mean 1.039 0.9144	7 Test Stat 1.149 0.8465 95% LCL 0.8173 0.7077	1 8 9 Critical 23.15 0.7411 95% UCL 1.26 1.121	P-Value 0.8961 0.0528 Median 1.114 1.006	Decision(Equal Vari Normal Di Min 0.792	Non-Sign α:1%) iances stribution Max 1.212	Std Err 0.07979	CV% 17.17%	0.0%

Analyst:___3~

Report Date: Test Code:

29 Jan-16 09:46 (p 4 of 4) B347008aac | 12-6860-6870

Pacific Topsmelt 7-d Survival and Growth Test

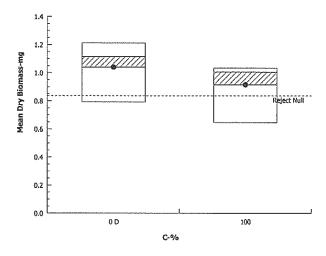
CH2M HILL - ASL

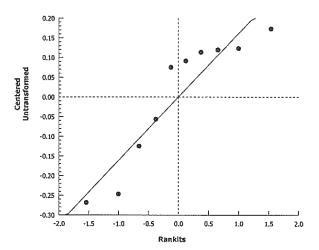
Analysis ID: Analyzed:

11-4140-0886 29 Jan-16 9:46 Endpoint: Mean Dry Biomass-mg Analysis: Parametric-Two Sample **CETIS Version:** Official Results: **CETISv1.8.8**

Yes

Graphics





CETIS Summary Report

Report Date: Test Code:

29 Jan-16 09:54 (p 1 of 1) B347002aac | 00-0812-7645

							164	st Code.	DOTI	002000 00	-001E-704
Pacific Topsm	nelt 7-d Survival	and Grov	vth Test							CH2M I	IILL - ASL
Batch ID:	16-6031-1911	Te	st Type:	Growth-Surviva	l (7d)		An	alyst: Bret	t Muckey		
Start Date:	21 Jan-16 15:55	5 Pr	otocol:	EPA/600/R-95/	136 (1995)		Dil	uent: Labo	oratory Seav	vater	
Ending Date:	28 Jan-16 10:10) Sp	ecies:	Atherinops affin	is		Bri	ne:			
Duration:	6d 18h	Sc	urce:	Aquatic Biosyst	ems, CO		Ag	e:			
Sample ID:	09-6301-5631	Co	de:	B3470-02			Cli	ent:			
Sample Date:	20 Jan-16 09:00	O Ma	iterial:	Industrial Efflue	nt		Pro	oject:			
Receive Date:	21 Jan-16	Sc	urce:	Kinder Morgan	- Norwalk						
Sample Age:	31h	St	ation:	Effluent							
Batch Note:	Dilution water is	Lab Con	rol (Milli-	q water + Tropic	Marin sea s	alts)					
Sample Note:	Salinity Adjuste	d with Rtr	opic Mari	n sea salts							
Comparison S	Summary			The state of the s							
Analysis ID	Endpoint		NOE	_ LOEL	TOEL	PMSD	TU	Method			
17-9048-8528	7d Survival Rati	e	100	>100	ΝĄ	9.54%	1	Wilcoxon	Rank Sum	Two-Sample	e Test
08-5571-4412	Mean Dry Biom	ass-mg	<100	100	NA	15.9%	>1	Equal Var	iance t Two	-Sample Te	st
Test Acceptab	oility	\		and the second s							
Analysis ID	Endpoint		Attrik	ute	Test Stat	TAC Lin	iits	Overlap	Decision		
17-9048-8528	7d Survival Rat	e	Contr	ol Resp	1	0.8 - NL		Yes	Passes A	cceptability	Criteria
7d Survival Ra	ate Summary										
C-%	Control Type	Count	Mear	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Dilution Water	5	1	1	1	1	1	0	0	0.0%	0.0%
100		5	0.96	0.8489	1	8.0	1	0.04	0.08944	9.32%	4.0%
Mean Dry Bior	mass-mg Summ	nary									
C-%	Control Type	Count	Mear	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Dilution Water	5	1.039	0.8173	1.26	0.792	1.212	0.07979	0.1784	17.17%	0.0%
100		5	0.752	4 0.6442	0.8606	0.62	0.834	0.03897	0.08714	11.58%	27.57%
7d Survival Ra	ate Detail										
C-%	Control Type	Rep 1	Rep	2 Rep 3	Rep 4	Rep 5					
0	Dilution Water	1	1	1	1	1					
100		1	1	1	8.0	1					
Mean Dry Bio	mass-mg Detail										
C-%	Control Type	Rep 1	Rep	2 Rep 3	Rep 4	Rep 5					
0	Dilution Water	1.114	0.792	1.212	0.914	1.162					
					0.704	0.62					
100		0.812	0.834	0.712	0.784	0.02					
100 7d Survival Ra	ate Binomials	0.812	0.834	0.712	0.784	0.02					
7d Survival Ra	ate Binomials	0.812 Rep 1	0.834 Rep		0.784 Rep 4	Rep 5					
7d Survival Ra											

Analyst: S~ QA:____

21 Jan-16 15:55

Report Date:

Project:

29 Jan-16 09:54 (p 1 of 4) B347002aac | 00-0812-7645

Test Code:

Laboratory Seawater

Pacific Topsi	melt 7-d Survival an	d Growth Test	CH2M HILL - ASL
Analysis ID:	17-9048-8528	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.8.8
Analyzed:	29 Jan-16 9:52	Analysis: Nonparametric-Two Sample	Official Results: Yes
Batch ID:	16-6031-1911	Test Type: Growth-Survival (7d)	Analyst: Brett Muckey

EPA/600/R-95/136 (1995)

Diluent: Ending Date: 28 Jan-16 10:10 Species: Atherinops affinis Brine: Duration: 6d 18h Source: Aquatic Biosystems, CO Age:

Sample ID: 09-6301-5631 Code: B3470-02 Client:

Sample Date: 20 Jan-16 09:00 Material: Industrial Effluent Source: Receive Date: 21 Jan-16 Kinder Morgan - Norwalk

Sample Age: 31h Station: Effluent

Batch Note: Dilution water is Lab Control (Milli-q water + Tropic Marin sea salts)

Protocol:

Sample Note: Salinity Adjusted with Rtropic Marin sea salts

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Angular (Corrected)	NA	C > T	NA	NA	9.54%	Passes 7d survival rate

Wilcoxon Rank Sum Two-Sample Test

Control	vs	C-%	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Dilution Water		100	25	NA	1	8	0.5000	Exact	Non-Significant Effect

Auxiliary Tests

Start Date:

Attribute	Test	Test Stat	Critical	P-Value	Decision(a:5%)
Control Trend	Mann-Kendall Trend			1.0000	Non-significant Trend in Controls

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.00567079	0.00567079	1	1	0.3466	Non-Significant Effect
Error	0.04536632	0.00567079	8			
Total	0.05103711	•	9	***************************************		

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	1	13.75	0.3559	Equal Variances
Variances	Levene Equality of Variance	7.111	11.26	0.0285	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.6247	0.7411	0.0001	Non-normal Distribution

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Dilution Water	5	1	1	1	1	1	1	0	0.0%	0.0%
100		5	0.96	0.8489	1	1	8.0	1	0.04	9.32%	4.0%

Angular (Corrected) Transformed Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Dilution Water	5	1.345	1.345	1.346	1.345	1.345	1.345	0	0.0%	0.0%
100		5	1.298	1.165	1.43	1.345	1.107	1.345	0.04763	8.21%	3.54%

7d Survival Rate Detail

_C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	
0	Dilution Water	1	1	1	1	1	
100		1	1	1	0.8	1	

Angular (Corrected) Transformed Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	Dilution Water	1.345	1.345	1.345	1.345	1.345
100		1.345	1.345	1.345	1.107	1.345

Report Date:

29 Jan-16 09:54 (p 2 of 4) B347002aac | 00-0812-7645

Test Code:

Pacific	Topsmelt 7-	'-d Survival	and Growtl	n Test
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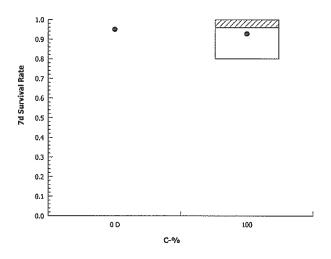
CH2M HILL - ASL

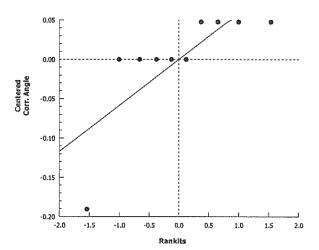
Analysis ID:17-9048-8528Endpoint:7d Survival RateCETIS Version:CETISv1.8.8Analyzed:29 Jan-16 9:52Analysis:Nonparametric-Two SampleOfficial Results:Yes

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	Dilution Water	5/5	5/5	5/5	5/5	5/5
100		5/5	5/5	5/5	4/5	5/5

Graphics





Report Date:

29 Jan-16 09:54 (p 3 of 4)

Test Code: B347002aac | 00-0812-7645 Pacific Topsmelt 7-d Survival and Growth Test CH2M HILL - ASL **CETIS Version:** 08-5571-4412 Mean Dry Biomass-mg CETISv1.8.8 Analysis ID: Endpoint: Parametric-Two Sample Analyzed: 29 Jan-16 9:52 Analysis: Official Results: Yes Batch ID: 16-6031-1911 Test Type: Growth-Survival (7d) **Brett Muckey** Analyst: Start Date: 21 Jan-16 15:55 Protocol: EPA/600/R-95/136 (1995) Diluent: Laboratory Seawater Ending Date: 28 Jan-16 10:10 Species: Atherinops affinis Brine: Duration: 6d 18h Source: Aquatic Biosystems, CO Age: 09-6301-5631 Sample ID: Code: B3470-02 Client: Sample Date: 20 Jan-16 09:00 Material: Industrial Effluent Project: Receive Date: 21 Jan-16 Source: Kinder Morgan - Norwalk Sample Age: 31h Station: Effluent **Batch Note:** Dilution water is Lab Control (Milli-q water + Tropic Marin sea salts) Sample Note: Salinity Adjusted with Rtropic Marin sea salts **Data Transform** Zeta Seed **PMSD** Alt Hyp **Trials Test Result** Untransformed NA C > T NA NΑ 15.9% Fails mean dry biomass-mg **Equal Variance t Two-Sample Test** Control C-% Critical MSD DF P-Value Test Stat P-Type Decision(a:5%) 100* **Dilution Water** 3.225 1.86 0.165 8 0.0061 CDF Significant Effect **Auxiliary Tests** Attribute Test Stat Critical P-Value Decision(a:5%) Test Mann-Kendall Trend Control Trend 0.8151 Non-significant Trend in Controls **ANOVA Table** Source Sum Squares Mean Square DF F Stat P-Value Decision(a:5%) Between 0.2050783 0.2050783 1 10.4 0.0121 Significant Effect 0.1576992 Error 0.0197124 8 Total 0.3627775 9 **Distributional Tests Attribute** Test Test Stat Critical P-Value Decision(a:1%) Variances Variance Ratio F Test 4.192 23.15 0.1940 Equal Variances Distribution Shapiro-Wilk W Normality 0.938 0.7411 0.5314 Normal Distribution Mean Dry Biomass-mg Summary **Control Type** Count 95% LCL 95% UCL Median Min Max CV% Mean Std Err %Effect 0 Dilution Water 5 1.039 0.792 0.8173 1.26 1.114 1.212 0.07979 17.17% 0.0% 100 0.7524 0.6442 0.8606 0.784 0.62 0.834 0.03897 11.58% 27.57% Mean Dry Biomass-mg Detail

Analyst:_____ QA:____

C-%

100

0

Control Type

Dilution Water

Rep 1

1.114

0.812

Rep 3

1.212

0.712

Rep 2

0.792

0.834

Rep 5

1.162

0.62

Rep 4

0.914

0.784

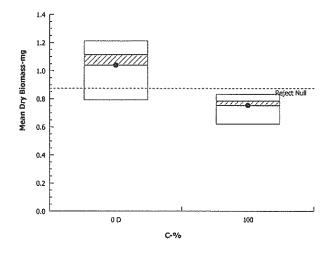
Report Date: Test Code: 29 Jan-16 09:54 (p 4 of 4) B347002aac | 00-0812-7645

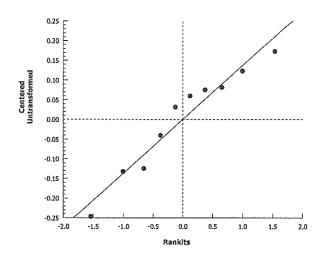
Pacific Topsmelt 7-d Survival and Growth Test

CH2M HILL - ASL

Analysis ID:	08-5571-4412	Endpoint:	Mean Dry Biomass-mg	CETIS Version:	CETISv1.8.8
Analyzed:	29 Jan-16 9:52	Analysis:	Parametric-Two Sample	Official Results:	Yes

Graphics





Analyst: 3~ QA:

CETIS Summary Report

Report Date:

29 Jan-16 09:49 (p 1 of 1)

B347014aac | 03-7116-7735 Test Code:

Pacific Topsn	nelt 7-d Surviva	l and G	owth Test								CH2M	HILL - ASL
Batch ID: Start Date: Ending Date: Duration:	16-6031-1911 21 Jan-16 15:5 28 Jan-16 10:1 6d 18h	5 0	Test Type: Protocol: Species: Source:	Growth-Surviva EPA/600/R-95/ Atherinops affii Aquatic Biosys	/136 (1995) nis			Analyst: Diluent: Brine: Age:		it Muckey oratory Sea	water	
Sample ID: Sample Date: Receive Date: Sample Age:	04-3089-7319 20 Jan-16 08:1 : 21 Jan-16 32h	5	Code: Material: Source: Station:	B3470-14 Industrial Efflue Kinder Morgan Down Stream (- Norwalk	>	Client: Project:					
Batch Note: Sample Note:	Dilution water is Salinty Adjuste		•	q water + Tropic artifical sea salt		alts)						
Comparison S	Summary		- Standard									
Analysis ID 03-7022-0767 15-4792-4547	Endpoint 7d Survival Rat Mean Dry Bion		100 100	>100EL >100 >100	NA NA	PMSD NA 17.4%	TU 1 1	W			Two-Sample -Sample Te	
Test Acceptai	-	-	***************************************									
Analysis ID	Endpoint 7d Survival Rat	fa.	Attrib	ute ol Resp	Test Stat	0.8 - NL	nits	O ₁	verlap	Decision	cceptability	Critoria
7d Survival R				or Nesp	'	0.0 - IVL		10		r asses A	cceptability	Citteria
C-%	Control Type	Count	. Mean	95% LCL	95% UCL	Min	Max	, St	d Err	Std Dev	CV%	%Effect
0	Dilution Water	5	1	1	1	1	1	0	<u>u Lii</u>	0	0.0%	0.0%
100		5	1	1	1	1	1	0		0	0.0%	0.0%
Mean Dry Bio	mass-mg Sumn	nary										
C-%	Control Type	Count	: Mean	95% LCL	95% UCL	Min	Max	: St	d Err	Std Dev	CV%	%Effect
0	Dilution Water	5	1.039		1.26	0.792	1.21		7979	0.1784	17.17%	0.0%
100		5	0.939	6 0.7867	1.093	0.774	1.06	68 0.6	05508	0.1232	13.11%	9.55%
7d Survival R												
C-%	Control Type	Rep 1	Rep 2		Rep 4	Rep 5	·····					
0 100	Dilution Water	1 1	1 1	1 1	1	1 1						
 	mass-mg Detail		•			•						
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5						
0	Dilution Water	1.114	0.792		0.914	1.162						
100		1.068	0.774		0.894	1.056						
7d Survival R	ate Binomials											
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5						
0	Dilution Water	5/5	5/5	5/5	5/5	5/5						
100		5/5	5/5	5/5	5/5	5/5						

Analyst: 05 QA:____

Report Date:

29 Jan-16 09:49 (p 1 of 4)

Test Code: B347014aac | 03-7116-7735 Pacific Topsmelt 7-d Survival and Growth Test CH2M HILL - ASL

Analysis ID: Analyzed:	03-7022-0767 29 Jan-16 9:48		7d Survival Rate Nonparametric-Two Sample	CETIS Version: CETISv1.8.8 Official Results: Yes
Batch ID: Start Date:	16-6031-1911 21 Jan-16 15:55	Test Type:	Growth-Survival (7d) EPA/600/R-95/136 (1995)	Analyst: Brett Muckey Diluent: Laboratory Seawater
Ending Date: Duration:	28 Jan-16 10:10 6d 18h	Species: Source:	Atherinops affinis Aquatic Biosystems, CO	Brine: Age:
Sample ID:	04-3089-7319	Code:	B3470-14	Client:
Sample Date:	20 Jan-16 08:15	Material:	Industrial Effluent	Project:
Receive Date:	21 Jan-16	Source:	Kinder Morgan - Norwalk	-
Sample Age:	32h	Station:	Down Stream (RSW-002)	

Batch Note: Dilution water is Lab Control (Milli-q water + Tropic Marin sea salts)

Sample Note: Salinty Adjusted with Tropic Marin artifical sea salts

Data Transform	Zeta	Alt Hyp	Trials	Seed	Test Result
Angular (Corrected)	NA	C>T	NA	NA	Passes 7d survival rate
Wilcoxon Rank Sum Two	-Sample Test				

Control	٧s	C-%	Test Stat	Critical	Ties	DF P-	-Value	P-Type	Decision(α:5%)
Dilution Water		100	27.5	NA	1	8 1.0	.0000	Exact	Non-Significant Effect

Auxiliary Tests

Attribute	Test	Test Stat Critical	P-Value	Decision(a:5%)
Control Trend	Mann-Kendall Trend		1.0000	Non-significant Trend in Controls

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1	65540	<0.0001	Significant Effect
Error	0	0	8			
Total	0		9			

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Dilution Water	5	1	1	1	1	1	1	0	0.0%	0.0%
100		5	1	1	1	1	1	1	0	0.0%	0.0%

Angular (Corrected) Transformed Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Dilution Water	5	1.345	1.345	1.346	1.345	1.345	1.345	0	0.0%	0.0%
100		5	1.345	1.345	1.346	1.345	1.345	1.345	0	0.0%	0.0%

7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	
0	Dilution Water	1	1	1	1	1	
100		1	1	1	1	1	

Angular (Corrected) Transformed Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5		
0	Dilution Water	1.345	1.345	1.345	1.345	1.345		
100		1.345	1.345	1.345	1.345	1.345		

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	
0	Dilution Water	5/5	5/5	5/5	5/5	5/5	
100		5/5	5/5	5/5	5/5	5/5	

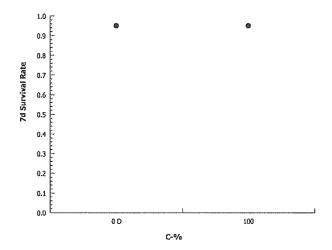
Report Date: Test Code: 29 Jan-16 09:49 (p 2 of 4) B347014aac | 03-7116-7735

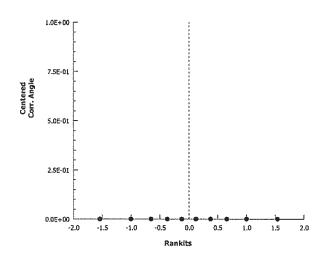
Pacific Topsmelt 7-d Survival and Growth Test

CH2M HILL - ASL

Analysis ID: 03-7022-0767 Endpoint: 7d Survival Rate CETIS Version: CETISv1.8.8
Analyzed: 29 Jan-16 9:48 Analysis: Nonparametric-Two Sample Official Results: Yes

Graphics





Report Date: Test Code: 29 Jan-16 09:49 (p 3 of 4) B347014aac | 03-7116-7735

									lesi	Code: B34/014aac 03-/116-/
Pacific Topsm	elt 7-	d Survival and	Growth Test							CH2M HILL - A
Analysis ID:	15-4	792-4547	Endpoint:	Mea	an Dry Biom	ass-mg			CET	IS Version: CETISv1.8.8
Analyzed:	29 J	an-16 9:49	Analysis:	Para	ametric-Two	Sampl	3		Offic	cial Results: Yes
Batch ID:	16-6	031-1911	Test Type:	Gro	wth-Surviva	l (7d)			Ana	lyst: Brett Muckey
Start Date:	21 J	an-16 15:55	Protocol:	EP/	V600/R-95/	136 (199	}5)		Dilu	ent: Laboratory Seawater
Ending Date:	28 J	an-16 10:10	Species:	Athe	erinops affin	iis			Brin	e:
Duration:	6d 1	8h	Source:	Aqu	atic Biosyst	ems, C)		Age	:
Sample ID:	04-3	089-7319	Code:	B34	70-14				Clie	nt:
Sample Date:	20 J	an-16 08:15	Material:	Indu	ustrial Efflue	nt			Proj	ect:
Receive Date:	21 Ja	an-16	Source:	Kind	der Morgan	- Norwa	ik			
Sample Age:	32h		Station:	Dov	vn Stream (I	RSW-00	2)			
Batch Note:	Dilut	ion water is Lab	Control (Milli-	q wat	ter + Tropic	Marin s	ea si	alts)		
Sample Note:	Salir	ity Adjusted with	Tropic Marin	artific	cal sea salts	5				
Data Transforr	m	Zet	a Alt H	ур	Trials	Seed			PMSD	Test Result
Untransformed		NA	C > T		NA	NA			17.4%	Passes mean dry biomass-mg
Equal Variance	e t Tv	/o-Sample Test								
Control	٧s	C-%	Test	Stat	Critical	MSD	DF	P-Value	P-Type	Decision(a:5%)
Dilution Water		100	1.023		1.86	0.180	8	0.1681	CDF	Non-Significant Effect
Auxiliary Tests	5									
Attribute		Test			Test Stat	Critica	ıl	P-Value	Decision	(α:5%)
Control Trend		Mann-Kendall	Trend					0.8151	Non-signi	ficant Trend in Controls

Distr	ihut	ional	Tests
D19(1	INU	101191	10363

ANOVA Table Source

Between

Error

Total

Attribute	Test	Test Stat	Critical	P-Value	Decision(a:1%)
Variances	Variance Ratio F Test	2.099	23.15	0.4905	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9166	0.7411	0.3292	Normal Distribution

DF

1

8

9

F Stat

1.047

P-Value

0.3361

Decision(a:5%)

Non-Significant Effect

Mean Dry Biomass-mg Summary

Sum Squares

0.02460363

0.1879998

0.2126034

Mean Square

0.02460363

0.02349997

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Dilution Water	5	1.039	0.8173	1.26	1.114	0.792	1.212	0.07979	17.17%	0.0%
100		5	0.9396	0.7867	1.093	0.906	0.774	1.068	0.05508	13.11%	9.55%

Mean Dry Biomass-mg Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	
0	Dilution Water	1.114	0.792	1.212	0.914	1.162	
100		1.068	0.774	0.906	0.894	1.056	

Analyst: 3~ QA:

Report Date: Test Code: 29 Jan-16 09:49 (p 4 of 4) B347014aac | 03-7116-7735

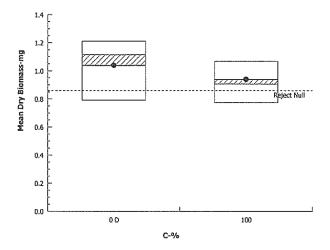
Pacific Topsmelt 7-d Survival and Growth Test

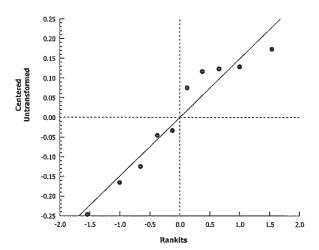
CH2M HILL - ASL

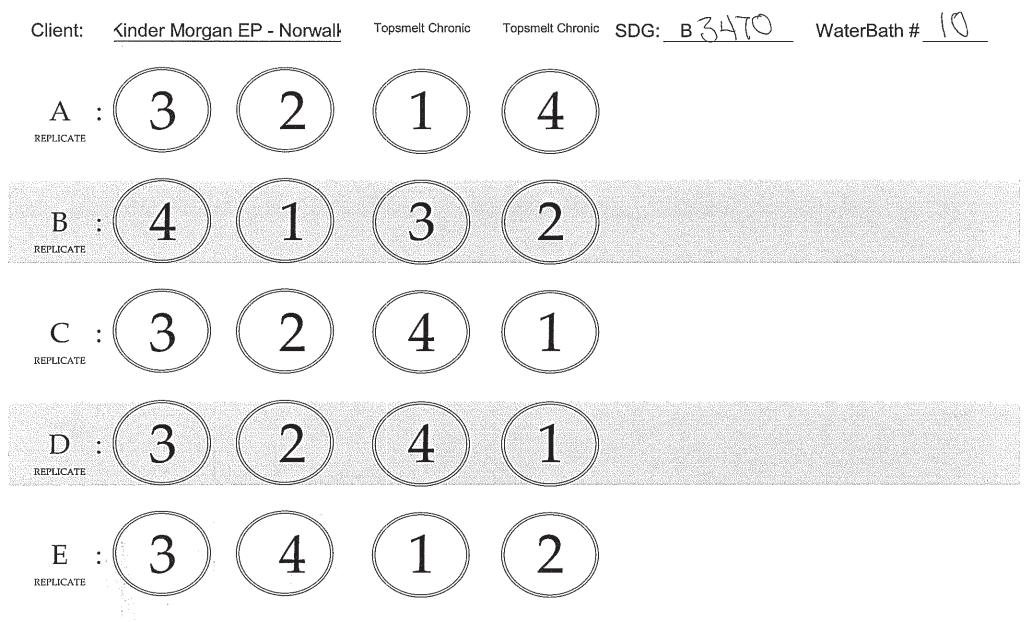
Analysis ID: 15-4792-4547 Endpoint: Mean Dry Biomass-mg CETIS Version: CETISv1.8.8

Analyzed: 29 Jan-16 9:49 Analysis: Parametric-Two Sample Official Results: Yes

Graphics







Number = Test Concentration (1= control, 2= Lowest conc., etc.)

FATHEAD MINNOW 7-DAY GROWTH DATA

Client	Emergency FHM Tir	ns 911	Tins Labeled As:	911
Lab ID:			Start Date:	
Sample Description:		Tins Made 12/10/2014	1	
	Technician: Date: Balance Serial #:	KJ 1/22/2015 B328543647	KJ 12/14/2014 B328543647	-
Percent	Replicate	Total Weight (mg)	Tare Weight (mg)	No. of Fish
0	A	1170.83	1168.28	5
8	В	1180.00	1177.99	5
	C D	1159.52 1161.32	1157.67 1159.39	5 5
		<u></u>		

weigh to 0.01 mg

TOPSmelt -FATHEAD MINNOW 7-DAY GROWTH DATA Pre-Weights

Client	Emergency FHM Tir	ıs 911	Tins Labeled As:	911
Lab ID:			Start Date:	
Sample Description:	-	Γins Made 12/10/2014		
	Technician:		KJ	
	Date:	D000540645	12/14/2014	_
	Balance Serial #:	B328543647	B328543647	
Percent	Replicate	Total Weight (mg)	Tare Weight (mg)	No. of Fish
	A		1168.28	5
8	В		1177.99	5
	C		1157.67	5
	D		1159.39	5
ļ				
	1	·	1	

APPENDIX B REFERENCE TOXICANT DATA SHEETS

Rando	m Temp	plate Used:	See randomi			Wate	rbath/incubator	Used:	Date Initiated		120 / 6	,	12 :	
		2B0		- or			# 100 Container Size:		ate Terminated	1 - 128	120 16	Time	10 :	<u>35</u>
Organi	sm ID:	AA 7	<u>.</u>			Test	Container Size:	400 ml		Solution V	olume / rep:	200 ml		
Client				QA/0	OC	Pole		Sam	ple Description		Cu (a	s CuCl2)		
		0/4,	Dayle		110	2 2	MC Day4 L	10. 5						
Tech:	Day D	1522	Day	Day 2	<u>MC</u>	Day 3	7 Day 4 F	Day 5	0047AVIDE	11/1/6	Day 7 <u>\\</u> C	-		
	Day 0	1320	Day l	Day 2	18725	Day 3 10.	30_ Day 4 11		Tag Day	161013	Day 7 105:	3		
Conc.	_		Numbe	r of Live Org	ganisms			ved O ₂	p ⁱ	Н	Sali	nity	Temp.	Ã.
or Percent	Day	A	В	С	D	E	(m Pre	Post	Pre	Post	Pre	Post	Pre	Thom.
1 CICCIII	0	5	5	5	5	5	1.0	7.0		8.3		30	Post 19.8	
	1	Z	5	2	5	-5	6,3	7.0	8.0	8.4	30	31	14.8	186
	2		5	5	5	\$ <u></u>	(4.0	7.1	8.0	B.3	31	30	19.6	159
trol	3	<u>5</u>	5	5	ĺω	5	6-1	(0.0	8.	8-3	30	30	19.7	
Control	4	5 5	5	5	5	5	(o- [(3.0) (4.0)	8.0	00000000000000000000000000000000000000	31	31	19.6	159
	5	5	5	5	. 2	5	6.4	69	8.0	8.4	31	30	19.3	212
	6	3	5	5	2,	2	6,3	6,8		8.4	30	_3/	20.0	(-37
	7	5	5	5	_5	.5	5.2	-	7.9		3			7 777
	0	5	5	5	5	5		7.0	6			13/3/2003/19/30/	Post: 15.	5
	1	2	5	2	2	5	6.3 5.9	7.0	8.1		31		19.	
	2	5	5	5 5	5	5		7.2	9.0		31 30	na ny nagy ny Tanàna mandra	10.6	
32	3	5	5	5	5	5 5	5.9	9.9	8.0	ing de værene greger. Ing des die selve, bel	30	9 9 (19 1 % 1/1)	19.7	
	<u>4</u> 5	5 3	5	5	3	2	6,4	7·0 69	8.0		31		19.	<u> </u>
	6	2	5	2	2	3	6,3	6.9	7,9		31	N. S. VAC S. T. S.	19.0	
	7	9	.5	3 5	S	.55	5.4	S. /	7.9		31		19.1	
	0	5	5	5	5	5		7.0		váraslkohas			Post: 15.	
	1	5	2	2	Ŝ	5	6.4	7.0	8.2		3,	性经验检	19.	
	2		5	5	5	5	5.8	7.0	8-1		30	ACH PRÈS	19.	
56	3	5	5	5	5	5	5.8	7.0	8.1		30	ta (filipse)(f	19108	
ν.	4	5	5	5	হ		6.3	7.0	8:1	Vitta: Prince	3	widely hip	19.	
	5			5	2	2	64	7.0	8.7	309939900	31	/3/04/2005/A	19,1	
	6	2	5	5	5		2.8	7.6	7.7	W250143 E 2100.	3(400000000000000000000000000000000000000	19.	
	7	5		5_	5	5_	5-5	2 /	7.9		91		19. Po= 19.8	
	0	5	5	5	5	5	6, 3	7.1	D 2		3,	06990.0393		
	1	5		<u>5</u>	5		6.3	7.0	8.2 95.1	Tensource; septiminations		Agreement (Cripale - Kill yak ili yak	19.	
	3	5 5	5	5	5	5	5.9	6.9	8.1	sainte and dáile	31 30	160.653.550	15.	e e
188	4	*	5	5	5	5	6-3	7-1	9.8	SECTION OF SECTION	31		15.	
	5	2		Ś	5	3	6.5	7.0	8.0		31	13/15/27/2	17	
	6	2	\ <u>Z</u>	2	5	.5	2.7	7.1	7.9	140300000000000000000000000000000000000	3/		19,	
	7	5	5	S	5	5	5,5		7.9		31		19.	
	0	5	5	5	5	5		7.0		1987年中华的8年		Altroductship	Post / 5.	
	1	2	<u> </u>	<u>5</u>	3	5	6.6	7-1	8.2	besselfing	30	1960,000	14,	8
	2	Li.	<u> 5</u>	5	5	5	6.2	7.	8.2	STATE OF STATE	30	Page 1841	19	<u>6</u>
180	3	3,	1.5	_5_	7	- 급	6.3	4.9	8.2		30		19.	
-	4	3	14-	5	4	+	6-2	7.	8.2	. 102 (10.00) 100 (4.00)	30	3%, 49% c	19.	
	5	3	4	2	4	4	6.5	7.1	8.0		31		15.	
	7	3	4	5	4	7	5-5	7,2	98. V		31		19.1	
	0	5	5	5	5	5	0-3	2.7	1 V · []	8.4		30	Post / 5'.	
	1	4	13	3	11	12	6.5	7.2	8.2	8.4	37	30	19	
1	2	ユ	2	1	3	2	6.3	7.1	8.2	8.4	30	30	19	
0	3	l	2	1	2	7_	6.4	7.0	8.2	8.4	30	30	19	
320	4	1	2			2	6.3	7-1	8. 2	8.4	BÒ	(3C)	11/19	.7
1	5		2		-	2_	6.6	7.0	8.1	8.4	30	30	19	
	6		7_	/	1	2	6.6	1 7.1	8.1	8,4	30	30	19.	
	7	1 -	2	(1) (1) (4)	0	72_	5-6		8.0		31		19.	. : " ما
"M" = 01	rganism ngus no	missing, st	art count redu organisms.	ced. "Inj" = c	rganism inji	red, remove	placed into cont from stats. Organism Info sh			=Pre-renewal s	Day 0 Tem D used for al	peratures = P	ost-renewa	als y
1	Endpo	<u>int</u>	<u>IC25</u>	 	•	sum Char		T	ask Manager	X	7			
	Surviv	al	190	×	32	to	162	Pro	ject Manager	Janus	1 JA)	ΔΛΛΑ		

QA Officer

31

to

Growth

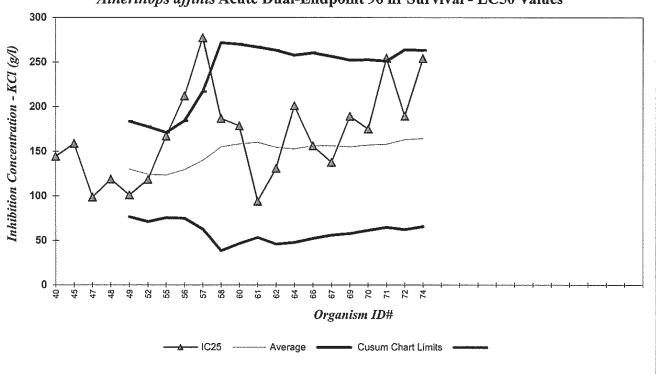
^{*}Note: Weight (dry wt. / # of surviving organisms) endpoint is required by the EPA method, but often generates ">" values for IC25. Biomass (dry wt. / # of organisms at test initiation) is used for Reftox growth charting.

REFTOX. Topsmelt Chronic (ASL686-013).xipm Doc Control ID: ASL686-0114

BIOASSAY REFTOX AND CUSUM CHART EVALUATION FORM

	Test Type: Topsout	☐ Acute - OR - Chronic	Analyst doing review:	Date: 1/29/16
	Test Endpoint: UCCS SURV 1C25 SURV	☐ Survival - OR - ☐	Peer Reviewer. Mile Since	Date: 2-3-/4
	REFTOX test start date: 1/21/16 1 Cas 544	wth	Bioassay Section Lead: Shows	Date: (/24/(6
	4. 沙		QA Officer:	Date:
	No USEPA Quartiles apply	ASL limits <u>within</u> USEPA 25th Quartile	ASL limits <u>between</u> USEPA 25th Quartile and USEPA 75th Quartile	ASL limits outside of the USEPA 75th Quartile
Analysis	Cultured inhouse -OR - A1 Reftox results from supplier available A2 Test is Routine (10+ per year) A3 Previous 19+ reftox tests in limits A4 NOT subject to WDOE regulation IF ALL APPLY, reftox test need NOT be immediately repeated Otherwise, REPEAT as soon as Practicable (preferrably within same calendar month) Does the reftox test need to be repeated? (check one) Yes -OR - NO	Cultured inhouse -OR - B1	☐ Cultured inhouse -OR - C1 ☐ Reflox results from supplier available C2 ☐ Test is Routine (10+ per year) C3 ☐ Previous 19+ reflox tests in limits C4 ☐ NOT subject to WDOE regulation IF ALL APPLY, reflox test need NOT be immediately repeated Otherwise, REPEAT as soon as Practicable (preferrably within same calendar month) Does the reflox test need to be repeated? (check one) ☐ Yes -OR - ☐ No	REPEAT as soon as Practicable (preferrably within same calendar month) Does the reftox test need to be repeated? ✓ Yes
	Root Cause Analysis: Correct Toxicant used?:	Other Comments / Observations: 3 Lest part "feading training" Supplier redo dso shows ab	12/30 Ted i mange 21m = 1/12/16 Ted = above range 1/2/16 Ted = above range re range realls, 3m 2/3/16	0.27 milish (TAC-min 0.25 mg 0.86 milish be pent when 5 mphlin 15
Peer Raviewer	Does the reftox test need to be repeated? (check one) Yes -OR - I No If in disagreement with Analyst assessment, forward to Section Leador QA officer	Does the reftox test need to be repeated? (check one) Yes -OR - No If in disagreement with Analyst assessment, forward to Section Leador QA officer	Does the reftox test need to be repeated? (check one) Yes -OR - No If in disagreement with Analyst assessment, forward to Section Leador QA officer	
Sect Lead / QA	Does the reftox test need to be repeated? (check one) ☑Yes -OR - ☐ No	Does the reftox test need to be repeated? (check one) ☐ Yes -OR - ☐ No .	Does the reftox test need to be repeated? (check one) ☐ Yes -OR - ☐ No	

REFERENCE TOXICANT CUMLATIVE SUMMARY (CUSUM) CHART Atherinops affinis Acute Dual-Endpoint 96 hr Survival - LC50 Values



Atherinops affinnis - Acute Dual Endpoint (EPA Test Method 1006.0)

Copper (as CuCl2)

Organism age:

Endpoint: 96 hour Survival

Stats Method: Probit, Spearman-Karber, Linear Interpolation

Test Conditions: Artificial Sea water, 20 oC

From EPA 833-R-00-003:

10th Quartile CV (control limit) =

na

na

25th Quartile CV (warning limit) =

na

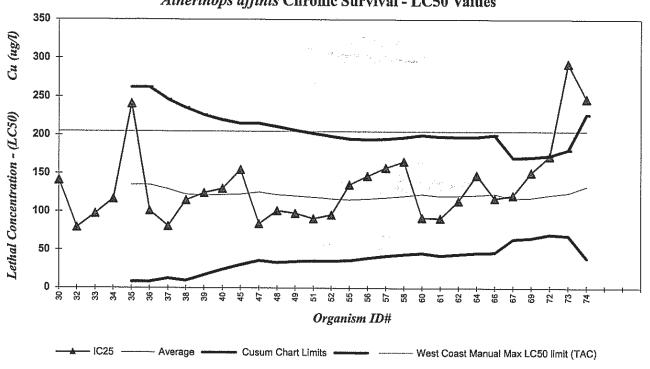
75th Quartile CV (warning limit) =

90th Quartile CV (control limit) =

As per EPA 833-R-00-003, section B.2.1, the quartiles listed above are from just a few labs (0) and therefore not to be considered typical or representative. Cusum limits are based on ASL data only.

Event	МВ	Test Start	LC50	Running	Running	Lagrance in a suffer that	nart Limits	Intralab
#	ID#	Date		Average	SD	AVG-2SD	AVG+2SD	CV
9	57	3/17/2015	277	140	39	63	217	0.38
10	58	5/5/2015	187	155	58	38	272	0.35
11	60	7/28/2015	178	158	56	46	270	0.33
12	61	9/15/2015	94	160	53	53	267	0.35
13	62	10/8/2015	131	155	54	46	263	0.34
14	64	10/15/2015	201	153	52	48	258	0.33
15	66	10/29/2015	156	156	52	52	260	0.32
16	67	11/5/2015	138	156	50	56	256	0.31
17	69	11/25/2015	189	155	49	58	252	0.30
18	70	12/3/2015	175	157	48	61	253	0.29
19	71	12/10/2015	254	158	47	65	251	0.31
20	72	12/30/2015	189	163	50	62	264	0.30
21	74	1/21/2016	254	164	49	66	263	0.31
22								





Atherinops affinis - Chronic (EPA Lest Method 1006.0)

COPPER (ug/L) (as CuCl2)

Endpoint: Chronic Survival

Stats Method: Linear Interpolation

Test Conditions: 30 ppt Artificial Sea water, 20 oC

From EPA 833-R-00-003:

na

na

10th Quartile CV (control limit) =

25th Quartile CV (warning limit) =

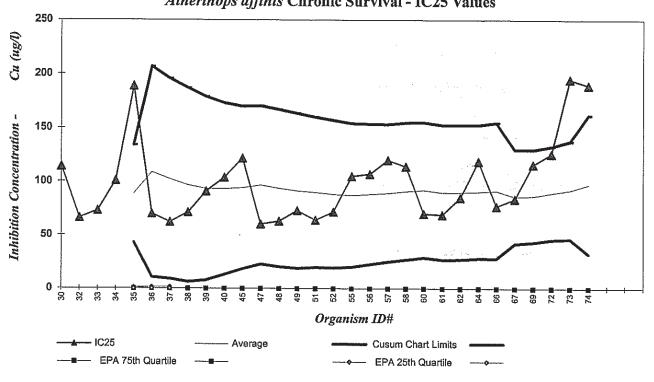
75th Quartile CV (warning limit) = na

90th Quartile CV (control limit) =

As per EPA 833-R-00-003, section B.2.1, the quartiles listed above are from just a few labs (0) and therefore not to be considered typical or representative. Cusum limits are based on ASL data only.

Event	AA	Test Start	LC50	Running	Running			Intralab
#	ID#	Date		Average	SD	AVG-2SD	AVG+2SD	CV
20	58	5/5/2015	166	121	38	44	197	0.32
21	60	7/28/2015	92	123	39	46	200	0.31
22	61	9/15/2015	92	120	39	43	198	0.31
23	62	10/8/2015	114	121	38⊜.	44	198	0.31
24	64	10/15/2015	148	122	38	46	198	0.31
25	66	10/29/2015	118	123	38	47	200	0.30
26	67	11/5/2015	121	117	27	64	171	0.30
27	69	11/25/2015	151	118	26	66	171	0.29
28	72	12/30/2015	172.6	122	26	70	173.4	0.29
29	73	1/12/2016	293	125	28	68	181	0.29
30	74	1/21/2016	247	133	47	39	227	0.36
31	61						main menatura paga seresah dalam a	
32	62				gen generalis di kana	. — Carly .		

REFERENCE TOXICANT CUMLATIVE SUMMARY (CUSUM) CHART Atherinops affinis Chronic Survival - IC25 Values



Athermops affinis - Chronic (EPA Test Method 1006.0)

COPPER (ug/L) (as CuCl2)

Endpoint: Chronic Survival

Stats Method: Linear Interpolation

Test Conditions: 30 ppt Artificial Sea water, 20 oC

From EPA 833-R-00-003:

na

na

na

10th Quartile CV (control limit) =

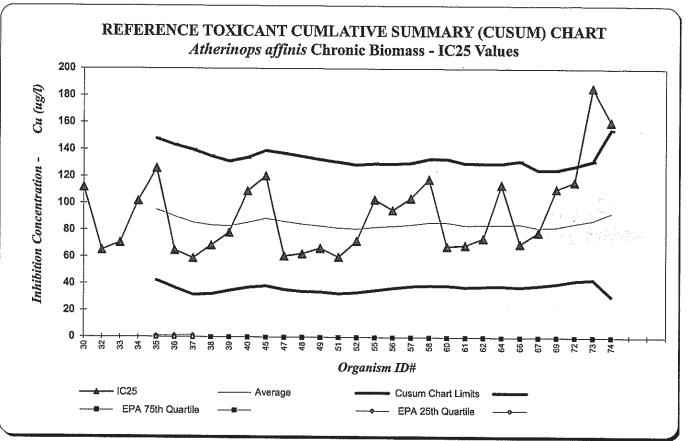
25th Quartile CV (warning limit) =

75th Quartile CV (warning limit) =

90th Quartile CV (control limit) =

As per EPA 833-R-00-003, section B.2.1, the quartiles listed above are from just a few labs (0) and therefore not to be considered typical or representative. Cusum limits are based on ASL data only.

Event	,AA	Test Start	IC25	Running	Running	Cusum Cl	hart Limits	Intralab
#	ID#	Date	DATES AND	Average	SD	AVG-2SD	AVG+2SD	CV
21	60	7/28/2015	70	92	32	29	155	0.34
22	61	9/15/2015	69	90	31	27	153	0.34
· 23	62	10/8/2015	85	90	31	27	153	0.34
24	64	10/15/2015	119	. 91	- 31	28	153	0.33
25	66	10/29/2015	77 · -	91	32	28	155	0.33
26	67	11/5/2015	84	86	22	42	130	0.33
27	69	11/25/2015	116	87	22	43	130	0.32
28	72	12/30/2015	126	89	22	46	133	0.32
29	73	1/12/2016	195	92	23	46	138	0.31
30	74	1/21/2016	190	97	32	:: -	162	€ 0.36
31						· -	Projection.	
32								
33			error in the greater	. राष्ट्रिक राज्य	sance of the	. "		



Athermops affinis - Chronic (EPA Lest Method 1006.0)

COPPER (ug/L) (as CuCl2)

Endpoint: Chronic Biomass

Stats Method: Linear Interpolation

i Caraca de Colonia do Caraca d

Test Conditions: 30 ppt Artificial Sea water, 20 oC

(*Weight should be used, but often uncalculable for RT data)

From EPA 833-R-00-003:

na

10th Quartile CV (control limit) =

in Quartile CV (control timit) = na

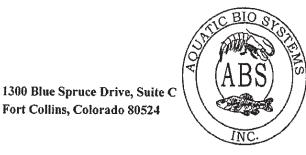
25th Quartile CV (warning limit) =

75th Quartile CV (warning limit) = na

90th Quartile CV (control limit) =

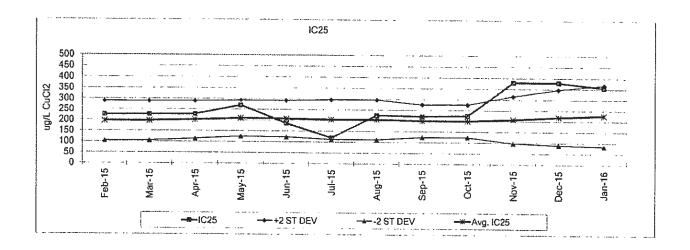
As per EPA 833-R-00-003, section B.2.1, the quartiles listed above are from just a few labs (0) and therefore not to be considered typical or representative. Cusum limits are based on ASL data only.

Event	AA	Test Start	order (p. 65 kernek altreds)	Running	Running	Cusum C	hart Limits	Intralab
****#*****	D#	Date	IC25	Average	SD	AVG-2SD	AVG+2SD	CV
21	60	7/28/2015	68	86	24	39	133	0.28
22	61	9/15/2015	69	- 84	23	37	130	0.27
23	62	10/8/2015	74	84	23	38	130	0.27
24	64	10/15/2015	114	84	23	38	130	0.27
25	66	10/29/2015	70	85	24	38	132	0.27
26	67	11/5/2015	78	82	. 22	39	125	0.27
27	69	11/25/2015	111, 🔑	. 83	21	- 40	125	0.26
28	72	12/30/2015	116	85	<u></u> ,21	42	128	0.26
29	73	1/12/2016	186	88	22	43	132	0.26
30	74	1/21/2016	161	93	31	31 🧺 🐇	155 · · ·	0.32
31								
32	٠,							
33			u	and L				



Toll Free: 800/331-5916 Tel:970/484-5091 Fax:970/484-2514

Atherinops affinis



Chronic 7-Day Survival Test Data

IC 25 for Growth Test

Date	NOEC	LOEC	Date	IC25	95% Co	95% Confidence		Avg. IC25+2 ST DEV-2		
garana maka ina sin an kamada ida 14 mili baga k	(ng/L CuCl ₂)	(ug/L CuCl ₂)		(ug/L CuCl ₂)	(upper)	(lower)	(ug/L CnCl ₂)			
Aug-15	081	320	Aug-15	225.67	336.88	209.66	204.70	297.36	112.04	
Sep-15	180	320	Sep-15	221.13	390.71	124.30	199,67	275.83	123.51	
Oct-15	180	320	Oct-15	224.17	305.12	210.41	200.22	276.91	123.52	
Nov-15	180	320	Nov-15	380.00	380.00	380.00	207.62	316.82	98.41	
Dec-15	180	320	Dec-15	380.00	353.42	380.00	219.11	348.26	89.96	
Jan-16	180	320	Jan-16	356.52	391.74	161.58	226.52	368.69	84.35	
September 1800 illiano de la compansión de										

Dates Tested: 01/16-26/2016

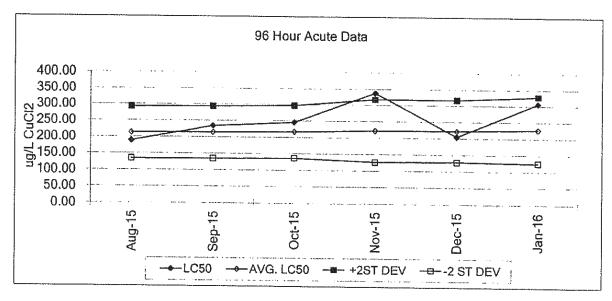
Note: "Not Detected" indicates that all tested concentrations showed no significant difference from the control.

1300 Blue Spruce Drive, Suite C Fort Collins, Colorado 80524



Toll Free: 800/331-5916 Tel:970/484-5091 Fax:970/484-2514

Atherinops affinis
Reference Toxicant LC50



Acute 96 Hour Test Data

TEST	EST LC50		onfidence	AVG. LC50	METHOD	+2ST DEV	-2 ST DEV		
DATE	(ug/L CuCl ₂)	(upper)	(lower)	(ug/L CuCl ₂)					
Aug 15	189.02	216.37	164.76	213.36	SPKR	202.60	40444		
Sep 15	233.93	262.46	209.02	214.18	PROBIT	292.60 293.92	134.11 134.44		
Oct 15	245.67	277.34	217.38	216.83	PROBIT	297.06	136.59		
Nov 15	337.35	377.90	301.16	221.60	SPKR	317.13	126.07		
Dec 15	204.87	228.18	183.93	222.49	SPKR	317.05	127.94		
Jan 16	306.38	346.81	270.05	226.75	PROBIT	328.12	125.39		

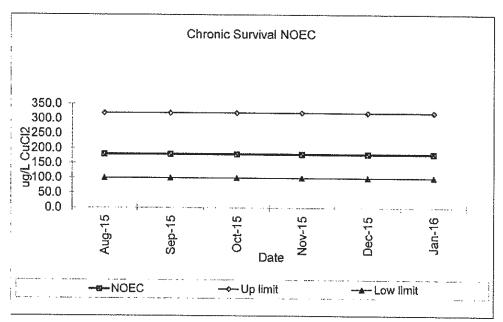
Dates Tested :1/19-23/2016

1300 Blue Spruce Drive, Suite C Fort Collins, Colorado 80524



Toll Free: 800/331-5916 Tel:970/484-5091 Fax:970/484-251

Atherinops affinis



Chronic 7 Day Survival Test Data

Date	NOEC	LOEC
	(ug/L CuCl ₂	(ug/L CuCl ₂)
Aug 15	180.0	320.0
Sep 15	180.0	320.0
Oct 15	180.0	320,0
Nov 15	180.0	320.0
Dec 15	180.0	320.0
Jan 16	180.0	320.0

Date Tested: 01/19-26/2016

APPENDIX C CHAIN OF CUSTODY

CH2.VIHILL CHAIN OF CUSTODY RECORD FOR NPDES COMPLIANCE BIOMONITORING

Client CHZW Address 6 HyTON C		1L 2-		. NPC	ES#															oles				
SANTA A	-la, CA	92707		Initia	ated:	Composite S	-1/	141	16	•	Tim	ie C	990	····			Atte	ntic	n:	Bioa	isssay	Lab		_aborator
Contact Person: DAN JABUNGE Phone: E-mail:				Initiated: Date 1/4/16 Time 0900 Time 0900 Chilled During Collection? Yes No Dechlorinated prior to shipping? Yes No						1	1100 NE Circle Blvd. Suite 300 Corvallis, OR 97330 Lab Phone: (541) 768-3160 Customer Service: (541) 768-3120													
CH2M HILL Project # / Purch	ase Order#	66647	3. H(-1																Cor	nme	ents			
Sample ID	Date	Time	i	nple /pe Grab	# of Containers	Lab ID#	athead Acute	athead Chronic	erio Acute	erio Chronic	red Algae	Sheepshead Acute	heepshead Chronid	fenidia Acute	lenidia Chronic	lysid Acute	lysid Chronic	az waste	TOP SWELT ACUTE	R SWETT GREATE		Co	icentra and/or ommer	nts
EFFLUENT -01-19	1/14/16	0900	×		1	ਲੋ3470-0)	<u>L</u>	<u>" </u>	0	0 10	۲ <u>۱</u>	- IS	S	2	2	≥ .	≥ =	- 13	X , 임/	7	<u> Nee</u>).1°C	
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Sampled By & Title Vion Outs Received By	(Please sign ar Please sign ar			Date/Ti Date/Ti	(,	6900	1	e Ĉo	71	ed B))	-		sign sign						1	ate/Tin /20/ ate/Tin	6	120	0
Received By (Please sign and print name)			Date/Time			Relinquished By (Please sign and						print name)				Da	Date/Time							
Hends Casho	(Please sign ar	He Ca.	stro	Date/Ti ע בון	15	11:20	Shi UF				_ F	ed-Ex	·	Har	nd	_ 0	ther.		***************************************	Sř	nipping	#		
Work Authorized By	(Please sign ar	nd print name)		Remarl		6470 A	<u> </u>															-		

CH2-VIHILL CHAIN OF CUSTODY RECORD FOR NADES COMPLIANCE BIOMONITORING CH24 Client NPDES#____ Ship Samples to: Address 6 HUTTON CENTRE # 700 CH2M HILL - Applied Sciences Laboratory SALTA ANA, CA 92707 Composite Sample Information: Attention: Bioasssay Lab Tîme _____ Initiated: Date 1100 NE Circle Blvd. Suite 300 Contact Person: DAN JABLONSKI Time Ended: Date Corvallis, OR 97330 Phone: Chilled During Collection ? Yes No Lab Phone: (541) 768-3160 E-mail: Dechlorinated prior to shipping ? Yes ___ No ___ Customer Service: (541) 768-3120 CH2M HILL Project # / Purchase Order # 668473 . AL. 01 Analysis Required / Comments Trout Acute
Sheepshead Acute
Sheepshead Chronic
Menidia Acute
Mysid Acute
Mysid Acute
Mysid Chronic
Haz Waste Containers Fathead Acute Fathead Chronic Cerio Acute Cerio Chronic Tor Suber Chaustic Sample Concentration Green Algae Lab Type and/or ID# Comments Sample ID Date Time Comp. Grab 1ce 2.5°C 1/20/16 × 33470-207 0800 RSW-001-01-20 UPSTREAM RSW-002-01-20 03470-13 1/20/16 0815 X DOW: TSTEEAM Sampled By & Title (Please sign and print name) Date/Time Relinquished By (Please sign and print name) Date/Time 1/20/16 0800 1/20/16 1200 VIDAL GREES Received By (Please sign and print name) Date/Time Relinquished By (Please sign and print name) Date/Time

Received By	(Please sign and print name)	Date/Time	Relinquished By (Please sign and print name)	Date/Time
Received By	(Please sign and print name)	Date/Time	Shipped Via	Shipping #
Hontz Cash		1/21/15 11:20	UPS Bus Fed-Ex Hand Other	
Work Authorized By	(Please sign and print name)	Remarks B3470A	-ot= Rec. Water - 13 = Downstran	٨



Sample Receipt Record

Batch Number: <u>B3470 A</u>		Date Received: 1/2/15			
Client/Project: Kinder More	gan	Received By:	,		
Were custody seals intact? Packing Material:			Yes	☐ No] Blue Ice	□ N/A
Temp OK? (<6C) Therm ID: TH173	Exp. If he	ે	Yes	☐ No	□ N/A
Was a Chain of Custody (CoC) Provide	1		Z-Yes	☐ No	□ N/A
	name displayed in Beet to comparation	The state of the s	√√ Yes	☐ No	□ N/A
Was the CoC correctly filled out (If No,					
Were the sample containers in good co	ndition (not broken or leaking)?	en e	Yes	□ No	□ N/A
Are all samples within 36 hours of colle	ction?		Yes	☐ No	□ N/A
Method of Shipment:	Hand Delivered FedEx	UPS Greyhound Other:			☐ N/A
Sám	ple Exception Report (The follo	wing exceptions were noted			
		ining analysis in the tracks,			
Client was notified on:	Client contact:				
Resolution to Exception:					

ORIGIN ID:DTHA (849) 400-0608 CH2M HILL

6 HUTTON CENTER DR STE 700 SANTA ANA, CA 92707 UNITED STATES US

13

SHIP DATE: 20JAN16 ACTWGT: 39.80 LB CAD: 6995376/SSF01621 DIMS: 24×13×14 IN

BILL THIRD PARTY

10 CH2M
APPLIED SCIENCES LAB
1100 NE CIRCLE BLVD
SUITE 300

CORVALLIS OR 97330 (541) 788-3120 REF:

NEDT

FedEx

Part # 156297-455 HT2 72/15015

TRK# 7822 0758 3591

THU - 21 JAN 10:30A PRIORITY OVERNIGHT

WS CVOA

97330 on-us PDX



ORIGIN ID:DTHA (849) 400-0608 CH2M HILL

6 HUTTON CENTER DR STE 700 SANTA ANA, CA 92707 UNITED STATES US SHIP DATE: 20JAN16 ACTWGT: 59.60 LB CAD: 6995376/SSF01621 DIMS: 24×13×15 IN

BILL THIRD PARTY

TO CH2M
APPLIED SCIENCES LAB
1100 NE CIRCLE BLVD
SUITE 300
CORVALLIS OR 97330

(541) 768-3120

F:

FedEx Express

TRK# 7822 0759 1681

THU - 21 JAN 10:30A PRIORITY OVERNIGHT

WS CVOA

97330 OR-US PDX



Part # 156297-435-411298/1505

CH21/1HILL CHAIN OF CUSTODY RECORD FOR NPDES COMPLIANCE BIOMONITORING

Client CH2M Address 1000 Wilshim	ni. i	41 00	NPE	ES#	CAOC	7 (4	, }	50	9											to:	ences Labora	.4	
Contact Person: 29 General:	, CH 7 n Jahlor 257-363 blor 1 (a)	CHZM.	(OM	Er Chi	prinat	Composite S Date Date During Collections and prior to ship	_ <u> /</u> 	2//	/ 6 / 6	: : es x	Time Time	No No No	190 X	10		11 (Atter 1100 Corv Lab I Cust	ntior NE allis Pho ome	n: f E Ci s, O ne: er S	Bioa ircle R (54 Serv	asssay Lab e Blvd. Suit 97330 41) 768-310 vice: (541) 1	e 300 60	tor
Sample ID	Date		Sar	mple /pe	# of Containers	Lab ID#	Fathead Acute	Fathead Chronic	Cerio Acute	Cerio Chronic Green Algae	Trout Acute	Sheepshead Acute	Sheepshead Chronid	Menidia Acute	Menidia Chronic	Mysid Acute	Mysid Chronic	Town H. L.	TOWNELL IN THE	Epsine Thirding		ncentration and/or comments	-
EFF_0127/6	1/22/16	0900	Х		1	3470-03													у				
	1/22/16	1030	·.	Х	i	3470-09												X	X				
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Received By	(Please sign a			Date/Ti	me			ppe		a a	_ Fe	d-Ex		Han	d	_ Ot	her_			S	hipping #		
Work Authorized By	(Please sign a	nd print name)		Remarl	(S													-		1			

Authorization to Proceed

Completion of the Chain of Custody (COC) and submission of the samples to the laboratory by the Client or the Client's representative constitutes Execution of the Agreement and authorizes CH2M HILL Inc. to proceed with the laboratory work.

Compensation and Terms of Payment

For services described on this Chain of Custody, CH2M HILL Inc. will be compensated based on verbal or written quotations, or the standard rates per analysis contained in our current published Price Guide. Invoices will be issued by laboratory as services are completed. Invoices

a written quotation a will be added to the right to change publ Any requested MS/I supplies are include samples are not reti

Standard of Cari

The standard of car testing industry per

- Warranty and Li CH2M HILL Inc. m resulting solely fron the compensation r
- Severability and If any of the provisie shall not be impaired
- Asbestos or Haza

To the maximum exte parent firm, sub-cons consequential damag discharge, release, o

7. Interpretation

The limitation of liabil including negligence Inc.'s officers, emplo conflict with the agre-

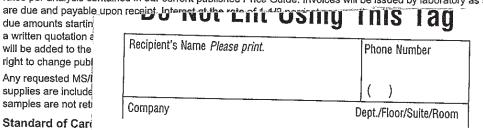
Sample Disposal

Proper disposal of ha samples will be dispo samples may be stor

Sample Preserval Samples are expecte

10. Sample Acceptan CH2M HILL, Inc. res

- · Proper, full, and name, preserval
- Proper sample I. of the labels (wa
- Use of appropris
- · Adherence to st.
- · Adequate sampl
- No custody seal
- · Preservation ina
- · Sample contains
- · Sample received
- · Samples have high levels of polychlorinated dibenzo-p-dioxins/dibenzofurans (PCDD/PCDFs)
- · Samples have high levels of gross alpha or beta radiation.



ORIGIN ID: JDYA (541) 752-4271 1100 NE CIRCLE BLVD STE 300

CORVALLIS, OR 973304741 UNITED STATES US

SHIP DATE: 22JAN16 ACTWGT: 52.50 LB CAD: /POS1621 DIMS: 25x14x13 IN BILL SENDER

MIKE STANAWAY CHZM APPLIED SCIENCES LAB 1100 NE CIRCLE BLVD SUITE 300 CORVALLIS OR 97330

(641) 752-4271

2 of 2

7754 8341 0706



FedEx Express



made, hazardous waste ts and upon special request,

Part # 156297-435 Fift 2 78/15 088

SATURDAY 12:00P PRIORITY OVERNIGHT

0200

97330 OR-US PDX

I time of collection, collector's

ser, may be charged on past al amount. The prices stated in

I testing. The cost of these

lion, if 80% of the quoted

es. Such taxes, when applicable,

CH2M HILL Inc. reserves the

normally employed by laboratory

ms or damages except those

v for damages will not exceed

y of the remaining provisions

nc. and its officers, employees.

nited to, direct, indirect, or

elating to the presence,

ontract or warranty; tort,

nd shall apply to CH2M HILL

edence in the event there is a

t for any cause.

ments concerning the durability

REV 11/2009 LAB FORM 340



Sample Receipt Record

Batch Number: 3470		Date Received:	1-23-16	
Client/Project: Kinder Ma	40-	Received By:	义二	
Were custody seals intact?			Yes No	□ N/A
Packing Material:			Ice Blue Ice	Box
Temp OK? (<6C) Therm ID: TH173 E	ixp. 4-15-16	2.8	°C ⊠Yes □ No	☐ N/A
Was a Chain of Custody (CoC) Provided	1?		Yes 🗌 No	☐ N/A
Was the CoC correctly filled out (If No, o	locument below)		Yes No	□ N/A
Were the sample containers in good cor	ndition (not broken or leaking)?		Yes No	☐ N/A
Are all samples within 36 hours of collect	tion?		Yes No	☐ N/A
Method of Shipment:	Hand Delivered FedEx	UPS Greyhound] Other:	□ N/A
Samı	ple Exception Report (The follow	wing exceptions were no	oted)	

Client was notified on:	Client contact:			
Resolution to Exception:				

CH2.VIHILL CHAIN OF CUSTODY RECORD FOR NPDES COMPLIANCE BIOMONITORING

Client CH2M Address 6 HuTTON Contact Person: Dr Phone: E-mail: CH2M HILL Project # / Purch	AHA, C	4 927	07	lniti Er Chi Dechlo	ated:	Composite S Date Date Ouring Collection During to ship	Sam	ple 24	Info	orma Le	atio Tim	n: e	09:	35		: :	Atte 1100 Corv Lab Cus	onticon on valli Ph	HIL on: E (is, one ner	L - Bio Circ OR o: (! Se	Ap passile E 97 541 rvic	oplied Sciences Labor issay Lab Blvd. Suite 300 7330 I) 768-3160 ce: (541) 768-3120	ator
Chizwi Filet Froject #7 Fulcii	T Tuel #	0001	12-7	1.01	1					_	_	_	Ana L≌	-		-						ıts	
Sample ID	Date	Time	Ty	mple /pe Grab	# of Containers	Lab ID#	Fathead Acute	Fathead Chronic	Cerio Acute	Cerio Chronic	Trout Acute	Sheepshead Acute	Sheepshead Chroni	Menidia Acute	Menidia Chronic	Mysid Acufe	Mysid Chronic	Haz waste	HOSTE TOP DATE	CHEMIC TOP SHOTS		Concentration and/or Comments	
EFF-01-24	1/24/16	0935	1		l	3472-25												Ž		X			
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						The Brook of Contract				-	+					-					-		
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Sampled By & Title V. Cafra Received By	(Please sign a			Date/T 1/24 Date/T	7/19	, 0935	٧	<u>/- (</u>	0-	ed E	_	·	ease ease								1/2	te/Time 25 / 16 ØZ00 te/Time	
Received By	(Please sign a	nd print name)		Date/Ti	ime		Rel	linqu	uish	ed E	Ву	(Pi	ease	sign	and	print	nam	ne)	-	1	Dat	te/Time	
Received By Received By Received By	(Please sign at	e Castr	6	Date/Ti	116	10:45		ppe			Fe	ed-Ex	·	Har	ıd	_ 0	ther.			,	Ship	pping #	
Work Authorized By	(Please sign ar	nd print name)		Remark	B3	3470 C	l 	-		1.10	1	, +	700	, ,	Cn	1 2	Lh	20	£ .	On	γeš	site should	

be 1/25/16 Br 5/1/16

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		1 3 (1)		

CHAIN OF CUSTODY RECORD FOR NPDES COMPLIANCE BIOMONITORING

Client CHZM Address 6 HuTT	4 CENTA	×2	NPC	ES#													2M	HIL	L - /	Арр	olied So		s Labı	orator	
SANTA Contact Person: DAN Phone:	JABLO.	CA 92 NSRI		En Chil		Date During Collection	 on ?		Y	: es	Tim Tim	ie_ ie_ No			-		110 Cor Lab	00 N vali Ph	IE C is, (one	ircle DR : (5	e Bl 973 41)	768-3	ite 300 160		
E-mail:				Dechic	prinat	ed prior to ship	opin	g ?	Y (es_	_	No					Cus	ston	ner:	Ser	vice	e: (541)	768-	3120	
CH2M HILL Project # / Purch	ase Order#					en-servatainen det effere à l'announce l'anche de l'announce l'ann							Ana	alys	is I	Req	uire	ed /	Col	nm	ent	s			
Sample ID	Date	Time	1	nple /pe Grab	# of Containers	Lab ID#	Fathead Acute	Fathead Chronic	Cerio Acute	Cerio Chronic	Trail Acute	Sheepshead Acute	Sheepshead Chronic	Menidia Acute	Menidia Chronic	Mysid Acute	Mysid Chronic	Haz Waste	POUTE TOP SMELT	1	CHENIC TOP Such		and Comn		
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R5W-002-01-25	1/25/16	1010		1/	1	33470-17													<	:	×				
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Work Authorized By	(Please sign ar	nd print name)		Rèmari	(S	70C																			



Sample Receipt Record

Batch Number: <u>B3470 C</u>	Date Received: _	[26/10	
Client/Project: 12 Incl v Morgan	Received By:	PC	
Were custody seals intact?		X Yes ☐ No	□ N/A
Packing Material:		ice Blue Ice	Вох
Temp OK? (<6C) Therm ID: TH173 Exp. リル	6	3 °C XYes □ No	□ N/A
Was a Chain of Custody (CoC) Provided?		Yes No	☐ N/A
Was the CoC correctly filled out (If No, document below)		🔀 Yes 🔲 No	□ N/A
Were the sample containers in good condition (not broken	or leaking)?	Yes No	□ N/A
Are all samples within 36 hours of collection?	Lot marin	∭Yes ☑ No	□ N/A
Method of Shipment:	d DedEx UPS Greyhound	i Other:	□ N/A
Sample Exception R	eport (The following exceptions were	e noted)	
Client was notified on: Client conta	ct:		
Resolution to Exception:			

ORIGIN ID:DTHA (541) 752-4271 CH2M HILL

1100 NE CIRCLE BLVD STE 300

CORVALLIS, OR 973304741 UNITED STATES US

SHIP DATE: 25JAN16 ACTWGT: 41.10 LB CAD: /OFFC1621 DIMS: 24x14x14 IN

BILL SENDER

CH2M -- ASL 1100 NE CIRCLE BLVD STE 300 CORVALLIS OR 97330
(641) 768-3120
(1801)

FedEx Express

Part # 156297-4354415279/15085 52/10 964E881*

1 of 2 TRK# 8091 9513 8671 ## MASTER ##

WS CVOA

TUE - 26 JAN 10:30A PRIORITY OVERNIGHT

97330 OR-US PDX





CHAIN OF CUSTODY RECORD FOR NPDES COMPLIANCE BIOMONITORING

Client CH2W Address b Hwitter (CHTEE =	H 700		_ NPD)ES#	<u> </u>	·										hip H2N					Scienc	es Laborat	or
SANTA A Contact Person: Phone: E-mail: CH2M HILL Project # / Purch	NA JABU	97707 ONSKI		En Chil Dechlo	ated: nded: lled [orinat	Composite S : Date : Date During Collection ted prior to ship	1/ 1/2 on ?	201	/(∂ t∈⁄ Ye	_ T _ T s *	Γime Γime	No No	100		s Re	A ^r C C La	tten 100 orva ab F usto	tion NE allis Phor ome	n: B E Cir s, Ol ne: er S	Bioas rcle R 9 (54 Servi	sssay I Blvd. 5 97330 1) 768- ice: (54	Lab Suite 30	00	
Sample ID	Date	Time	Ту	mple /pe Grab	# of Containers	Lab ID#	Fathead Acute	Fathead Chronic	Cerio Acute	Green Algae	Trout Acute	Sheepshead Acute	Sheepshead Chronic	Menidia Acute	Menidia Chronic	Mysid Chronic	Haz Waste		5 40 ·			and	ntration d/or ments	
EFF LUENT - 01-191	Male	09(:)	×			33470-01			1						1			×						
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Vork Authorized By	(Please sign ar	id print name)		Remark	(S	5470 A	<u>. </u>							-						-				

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CHAIN OF CUSTODY RECORD FOR NPDES COMPLIANCE BIOMONITORING

Client CH2M Address 6 Hatte	N CENTR	giller and	(a);)	_ NPI	DES#								-							ples	to: Applied Sciences Laborator
$\leq A \rightarrow TA$	product of	· 427	7-7-	1	iated:		Sam	ple	Inf		Tir	ne		***			Att	enti 00 l	on: VE (Bioa Circle	asssay Lab 😅 e Blvd. Suite 300
Contact Person: DA Phone: E-mail:	N JAPED			Chi	nded: illed I orina:	: Date During Collection ted prior to shi	on ? ppin	g ?	Y	'es	•	me_ 1 1	10 _ 10 _		-		Lai	b P	non	e: (54	97330 41) 768-3160 vice: (541) 768-3120
CH2M HILL Project # / Puro	chase Order#	6684	15.AL	01																mme	ents
Sample ID	Date	Time	Ty	mple ype . Grab	1 77	Lab ID# 5470- <i>d</i> 1	Fathead Acute	Fathead Chronic	Cerio Acute	Cerio Chronic	Green Algae	Trout Acute	Sheepshead Acute	Menidia Acute	Menidia Chronic	Mysid Acute	Mysid Chronic	Haz Waste	Drshen Channe		Concentration and/or Comments
100 W-001-01-20	1/20/16	0900		4	1	134W-177	8												X	<	WESTERRY
RSW-002-01-20	1/20/16	0515		X	and the second	13470 13							-						X.	X	bordstean
							District Control of the Control of t														
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Received By Cashu		4eCan	rro	Date/Ti		11:20	Shi	- ,			/	Fed-E	x	_ Ha	and _		Othe	r		SI	nipping #
Work Authorized By	(Please sign a	nd print name)	Remark	ks	3470A												•			3

Appendix B Waste Manifests

A	NON-HAZARDOUS	1. Generator ID Number	2. Page 1 of	3. Emergency Respons	se Phone	4. Waste T	racking Num	ber		
	WASTE MANIFEST		001			NH	Z-010816	BKMNNA		
	5. Generator's Name and Mail	SFPP-LP 1100 TOWN & COUNTRY RD ORANGE, CA 92868		Generator's Site Addres NORWAL 15306 NO NORWAL	K TANK F RWALK B	han mailing addre FARM BLVD	ess)			
	Generator's Phone: 714-58 6. Transporter 1 Company Nar			1401(00)	,,, 0,, 00	U.S. EPA ID	Number			
		PROMINENT SYSTEMS, INC				0.5. EFAID	Number			
	7. Transporter 2 Company Nar	ne				U.S. EPA ID	Number			
	8. Designated Facility Name and Section 1982.	CALIFORNIA CARBON CO 2825 E. GRANT STREET WILMINGTON, CA 90744).			U.S. EPA ID	Number			
	Facility's Phone: 562-436			10. Cont	tainare		I T			
	9. Waste Shipping Nam	e and Description		No.	Type	11. Total Quantity	12. Unit Wt./Vol.			
GENERATOR -	1. NON HAZAF	RDOUS SPENT CARBON		2	BA	2000	Р			
- GENE	2.									
	3.									
1										
	4.									
1	13. Special Handling Instruction	ns and Additional Information		2	33					
	APP# 10-097-2									
		200-0								
	LIQ									
	14. GENERATOR'S/OFFEROR	B'S CERTIFICATION: I hereby declare that the contents of the	this consignment are	fully and accurately des	cribed above b	y the proper ship	ping name, ar	nd are classified	l, packag	ed.
	Generator's/Offeror's Printed/Ty	ed, and are in all respects in proper condition for transport a	according to applicat	ole international and national	onal governme	ntal regulations.				
*	Patrick	LoyA	Sign	lature 2	1			Month /		Year
N L	15. International Shipments	Import to U.S.	Export from U.	.S. Port of er	ntry/exit				0	1/6
	Transporter Signature (for expo	rts only):		Date leav		y 7				
TRANSPORTER	16. Transporter Acknowledgme Transporter 1 Printed/Typed Na		Çian	natura A				11-11		- 11
POH	TROI B	LNGA (Sign	ature				Month I I	Day	Year
ANS	Transporter 2 Printed/Typed Na	me	Sign	ature)			Month	Day	Year
H								1 1		1
4	17. Discrepancy									
	17a. Discrepancy Indication Spa	Quantity Type		Residue		Partial Reje	ction	□F	ull Rejec	ction
- AII	17b. Alternate Facility (or Generative Control of Contr	ator)		Manifest Reference I	Number:	U.S. EPA ID N	umber			
FACILITY	Facility's Di					1				
ED F	Facility's Phone: 17c. Signature of Alternate Faci	lity (or Generator)						Month	Day	Vac
NAI								Month	Day	Year
DESIGNATED										
1										
	18. Designated Facility Owner of	r Operator: Certification of receipt of materials covered by the	ne manifest except a	s noted in Item 17a						

1	NON-HAZARDOUS WASTE MANIFEST	Generator ID Number			3. Emergen	cy Response	Phone		racking Nu			
	5. Generator's Name and Maili	ing Address		001	Generator's	Site Address	(if different th	an mailing addre	Z-01221	16KMNT		
	or definition of family and main	•					(TANK F		200)			
		SFPP-LP 1100 TOWN & 0	CHINTRY PD									
		ORANGE, CA 9	2868				RVVALK B K, CA 906					
	Generator's Phone: 714-58	0-4400			IAC	TEANUTE	I, CA BUI					
	6. Transporter 1 Company Nar							U.S. EPA ID	Number			
		PROMINENT SYSTE	MS, INC									
	7. Transporter 2 Company Nan	ne						U.S. EPA ID	Number			
1	8. Designated Facility Name ar	nd Site Address	0400001100					U.S. EPA ID	Number			
		CALIFORNIA	CARBON CO.									
		2825 E. GRA WILMINGTO	N, CA 90744									
	Facility's Phone: 562-436											
						10. Conta	niners	11. Total	12. Unit			
	9. Waste Shipping Nam	ne and Description				No.	Туре	Quantity	Wt./Vol.			
1	1.						.,,,,,					
GENERATOR	THE RESERVE THE PROPERTY OF THE PARTY OF THE	RDOUS SPENT CARBO	N				BA	800	P			
3AT												
NE	2.											
GE	2.											
1												
			2									
	3.											
	4.											
	40. On right to all and to all											
1	13. Special Handling Instruction	ns and Additional Information										
	Acceptance # 1	5-175190-A			1							
	VAP.											
-		R'S CERTIFICATION: I hereby declar							oping name,	, and are classifie	ed, package	ed,
		ded, and are in all respects in proper c	ondition for transport acco			nal and natio	nal governmen	ntal regulations.				
1	Generator's/Offeror's Printed/T	_ 1		Sig	gnature	//	1/1			Month		Year
•	JAMIZS	DYIC			1	m/	//			/	22	16
INT	15. International Shipments	Import to U.S.		Export from J	U.S.	Port of en	try/exit:					
=	Transporter Signature (for expo			_//		Date leav	ing U.S.:					
TRANSPORTER	16. Transporter Acknowledgme											
JR1	Transporter 1 Printed/Typed No			Sig	gnature					Month	Day	Year
SP	tanjong	Gregar		-						ı	22	18
AN	Transporter 2 Printed/Typed Na	ame		Sig	gnature					Month	Day	Year
F												
1	17. Discrepancy					3						
	17a. Discrepancy Indication Sp	pace Quantity	Туре		ПВ	esidue		Partial Re	ioction		Full Reject	tion
		addinity	турс			Colduc		- I allial lie	jection		i uli riejeci	uon
1					Manifest	Reference N	Number:					
1	17b. Alternate Facility (or Gene	erator)						U.S. EPA ID	Number			
등												
FAC	Facility's Phone:											
ED	17c. Signature of Alternate Fac	cility (or Generator)								Month	Day	Year
DESIGNATED FACILITY												
SIGI												
DE												
1												
-	18. Designated Facility Owner	or Operator: Certification of receipt of	materials covered by the	manifest except	t as noted in Ite	em 17a						

Ple	ase pr	rint or type. (Form desig			pewriter.)							Approved.	OMB No.	2050-003
1		FORM HAZARDOUS	1. Generator	ID Number	V 80	2. Page 1 of	3. Emerg	ency Response	Phone	4. Manifest	Tracking Nu	mber	* •	117
$\ \ $		VASTE MANIFEST	I .	80033962		1		00-624-91			528	<u>45U</u> () J	JK_
Ш	1	enerator's Name and Mailir	· ·		19				•	an mailing addre	ess)			
		SFPP. LP (NORWAL 1100 TOWN AND (ina li			D6 NORWAL						
Ш		ORANGE	COMMENT	CA	92868		MOR	WALK, CA	90651					
	1	erator's Phone	714-560-		02000	· I								
Ш	6. Tra	ansporter 1 Company Nam						7		U.S. EPA ID	Number			
Ш		PATRIOT ENVIRON	IMENTAL S	ERVICES						I CADO)53866794			'.
	7. Tra	ansporter 2 Company Nam	nė							U.S. EPA ID	Number			
										1				
П	8. De	signated Facility Name and	d Site Address	3	·					U.S. EPA ID	Number			
		DEMENNO KERDOC									08001335	3		
		2000 N. ALAMEDA	. ST.								GGGG LG.J.J.	£.,		
	ı	COMPTON ity's Phone: 310-53	37-7100	CA	90222			1		ŀ		1		
П		1, 01 1101101			101 101 1									
	9a. HM	and Packing Group (if a		roper Snipping Name,	Hazard Class, ID Number,			10. Contain		11. Total Quantity	12. Unit Wt./Vol.	. 13. W	aste Code	98
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뜽)	UN 1993, Y	NASTE FL	ammable liquii), NOS, 3, FG II (G/	ASOLINE)						0001	0016	
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1			建筑 生物					; .				entronomica i interior de care can agraca	merana and an announced COSTs.	
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		CALI	FURNIA.	IHIS FACILITY	HAS THE NECESS	A C						sales (School		in the state of th
		PERI	MITS TO I	RECEIVE YOUR	WASTE STREAM	42	1				-		***************************************	
	34.0	pecial Handling Instruction	HFIED O	UR EPA NUMB	<u>ER IS CAT080013</u>	352							E	
	14. 5	pecial Handling Instruction MEAR ATTROFRIAT	s and Addition	ai information	organic company of	er de la la descrip	Halley John A.		(because of block	e programa de la como	وللد والأنواطاة و	dend delevitie	م دور المارية	ويستان والمعاولة
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				and frame or married		11103		LL TO SEPE						
	45 6	OFUED ATODIO (OFFERO	DIO CEDEURIO				ra.	TN: STEVE	DEFIRAL	KaH				
	15. C	GENERATOR'S/OFFEROR marked and labeled/placare	ded, and are i	ATION: Thereby decia	re that the contents of this condition for transport acco	consignment a ording to applica	re fully and able interna	accurately desi otional and natio	cribed above	by the proper sh	ipping name, a	and are classi	fied, pack	aged,
		Exporter, I certify that the c	contents of this	consignment conform	to the terms of the attached	EPA Acknowle	edament of	Consent.	interest of the second	11/1/19	п одроге опірі	morn and ran	1 410 1 11111	A1.3
		certify that the waste mini		ment identified in 40 CF	R 262.27(a) (if I am a large) (if I am a small	quantity gen	erator) is true.				
	Gener			12	21. ³	. •	ature		and the state of t	17	Michigan Company	Month		
*	X 16 Int	ternational Shipments	MES	11/5-		X		A CONTRACT		There are in the second		Linear	- 9	16
INT				ort to U.S.		Export from U	8.	Port of entr	,	***************************************	**			
_		porter signature (for export						Date leaving	g U.S.:					
TRANSPORTER		ansporter Acknowledgment porter 1/Printed/Typed Nam		watenais		Clan	atura						Б.	
S.	/	La - > A	1 <	4		oigii I ✓ [*]	ature		yend territores consu			Month	Day	Year
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>-	18b A	Iternate Facility (or Genera			Willia		Mani	estReference l	Númber:	U.S. EPA ID N	limbor	777		. 4
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DESIGNATED FACILITY	19. Ha	azardous Waste Report Ma	nagement Me	thod Codes (i.e. codes	for hazardous waste treat	ment disposal	and recycli	na svetama)	· · · · · · · · · · · · · · · · · · ·					
	1.	1 /	agomont ivic	2.	ioi nazaraous waste treati	3.	and recycli	ng oyotemb)		4.				
7		+10	39			1								
	20. De	esignated Facility Owner or	Operator: Ce	rtification of receipt of h	azardous materials covere	d by the manife	st excent a	s noted in Item	18a	1.5			1.	
		d/Typed Name	<i>t</i> :				alure	III NOIII				Month	Day	Year
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Certificate of Treatment/Recycling

SFPP - NORWALK STATION							
		FOR					
MANIFEST NUMBER_	015284506ЈЈК		DATE RECEIVED 2/9/2016				

The aqueous waste received on the above manifest will be treated to standards mandated by the FEDERAL CLEAN WATER ACT and to effluent requirements established by the Sanitation Districts of Los Angeles County. Waste treatment and recycling is performed under permits granted to DeMENNO/KERDOON, a California Corporation, by the California Department of Toxic Control (DTSC), in coordination with the Environmental Protection Agency, in accordance with the provisions of the Resource Conservation and Recovery Act (RCRA) of 1976, together with applicable federal and state regulations including but not limited to waste discharge requirements established by the Sanitation Districts of Los Angeles County.

When the above described waste material is accepted by DeMENNO/KERDOON and treated/recycled and the aqueous phase discharged for further treatment by the Sanitation Districts, the certificate holder's responsibility for the waste material is eliminated under both RCRA and Proposition 65. Upon request, DeMENNO/KERDOON will issue this certificate that all waste material has been handled in accordance with applicable permits and the certificate holder's liability has been terminated.

DeMENNO/KERDOON

"Compliance Through Recycling"

Date: 2/26/2016

Cyrus Pourhassanian
Laboratory Manager

2000 North Alameda Street @ Compton @ California @ 90222 Telephone (310) 537-7100 @ Facsimile (310) 639-2946

Plea		int or type. (Form desig	1. Generator ID Nu		wnter.)	2 Page 1	of 3 Eme	ergency Response	Phone	4. Manifest	Tracking Nun	nber	711111110. 2		
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П		WASTE MANIFEST CAT080033962			1				<u> </u>						
		5. Generator's Name and Mailing Address SPPP. LP (NORWALK STATION) 1100-TOWN AND COUNTRY RD. ATTN: Karina H.					Generator's Site Address (if different than mailing address) 15306 NORWALK BLVD. NORWALK, CA 90651								
		ORANGE	THE RESIDENCE AND RESIDENCE	_ CA	92968		1								
П		Generator's Phone: 714-560-4887													
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П	8 De	esignated Facility Name ar	nd Site Address							U.S. EPA ID N	lumber		111111111111111111111111111111111111111		
		DEMENNO KERDO						CAT080013352							
	l	2000 N. ALAMEDA	VST.												
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Ш	Facil	ity's Phone:	37-7100					1							
	9a.	9b. U.S. DOT Descript		Shipping Name, Ha	azard Class, ID Numb	er,		10. Contai	iners	11. Total	12. Unit	13. W	aste Codes	S	
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Ш		961.) PROFILE NU	MBER: 393888	(REMEDIATIO	ON SYSTEM RIN	ISATE)	Carles	PATRIOT JOE	3 NUMBER	*					
Ш								BILL TO SH		t smit					
$ 1 \rangle$	15.	GENERATOR'S/OFFER	TO'S CERTIFICATIO	Mr. I haraby dadar	e that the contents of	this consignme	nt are fully	ATTN: STEV	escribed abov	e by the proper sh	ipping name	and are class	sified, packs	aged.	
	15.	marked and labeled/placa	arded, and are in all r	respects in proper d	ondition for transport	according to ap	plicable int	emational and na	tional governr	nental regulations	. If export ship	ment and I a	m the Prima	ary	
		Exporter I certify that the	contents of this cons	sianment conform to	the terms of the attach	ched EPA Ackn	owledgmei	nt of Consent.	1000	Aller.					
		I certify that the waste mi		identified in 40 CFI	R 262.27(a) (if I am a			or (b) (if I am a sm	all quantity ge	nerator) is true.		Mant	h Day	Voor	
	Gene	erator's/Offeror's Printed/T		esia.	1		Signature	and the same of th	11 6			Mont	h Day	Year	
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18	-	1	4	Codes (1	for honordays	trootmant dia	cal and	oveling eveterne)							
DESIGNATED FACILITY	19.1	Hazardous Waste Report N	vanagement Method	Lodes (i.e., codes	ior nazardous waste t	treatment, dispo		cycling systems)		4.					
법	1.	LINZG] ^{2.}		3				⁴ ·					
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							:								
			or Operator: Certific	ation of receipt of ha	azardous materials co				m 18a	. 4			il. D	. V	
	Print	ted/Typed Name	1 0	MIANI			Signature	In Soller		PAA	- Marian	Mon	ith Day	Year	
11	1 %	-5/14/1/ <i>H</i>	7 · · // . · (V/ZLY		I	120	ユーナログリイイ	1/1/1	1 Kind how	A CONTRACTOR OF THE PARTY OF TH	-1/7	VIII.		

Certificate of Treatment/Recycling

	SFPP -	NORWALK STA	ATION				
FOR							
MANIFEST NUMBER_	015284514JJK		DATE RECEIVED 3/15/2016				

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DeMENNO/KERDOON

"Compliance Through Recycling"

Date: 4/6/2016

Cyrus Pourhassanian
Laboratory Manager

2000 North Alameda Street 🖸 Compton 🛈 California 🛈 90222 Telephone (310) 537-7100 🛈 Facsimile (310) 639-2946