

100 West Walnut Street • Pasadena, California 91124 • (626) 440-2000 • Fax (626) 440-6200 • www.parsons.com

May 7, 2013

Information Technology Unit
California Regional Water Quality Control Board, Los Angeles Region
320 W. 4<sup>th</sup> Street, Suite 200
Los Angeles, California 90013

Subject: First Quarter 2013 Groundwater Discharge Monitoring Report
NPDES No. CAG994004; Compliance File No. CI-7585
DFSP Norwalk Facility, 15306 Norwalk Boulevard, Norwalk, California

In compliance with the subject NPDES Permit, Parsons is submitting this quarterly Discharge Monitoring Report (DMR) on behalf of the Defense Logistics Agency (DLA) Energy for the subject reporting period. The system is installed at the Defense Fuel Support Point Norwalk, at 15306 Norwalk Boulevard, Norwalk, California. This report describes NPDES monitoring activities during the period of January 1 through March 31, 2013.

#### SUMMARY OF REMEDIATION PROGRESS AND DISCHARGE VOLUMES

Parsons, on behalf of DLA Energy currently operates remediation systems consisting of soil vapor extraction (SVE), groundwater extraction (GWE), and treatment of extracted soil vapors and groundwater to address the entire former tank farm, the former water tank, former truck fueling, and pump house areas.

The GWE systems consists of five vertical extraction wells of which four are 6-inch diameter wells and one is a 4-inch; three bag filter vessels; two MYCELX vessels; ion exchange vessel; and three granular activated carbon (GAC) vessels. Four wells, GW-2, GW-13, GW-15, and GW-16, were in operation during this reporting period. The treated groundwater is discharged in accordance with the NPDES permit No. CAG994004, CI No.

7585. Overall, the GWE system operated approximately 37 percent of the time for the reporting period and taking into account the planned shutdowns, the GWE system operated approximately 47 percent of the time during the first quarter 2013.

The GWE system discharge volumes and field notes are summarized in Table 1. Periodic site visits were conducted to assess and optimize system operation and record operational data. During the first quarter 2013, 748,341 gallons of groundwater were processed and discharged. Total hydrocarbons removed via groundwater treatment during the subject reporting period is 819 gallons (5,807 pounds). Other than discharge of treated groundwater to the permitted NPDES outfall, no groundwater was managed off-site as an investigation-derived waste.

There were no changes in the operation of the facility that have or would change the character, location, or volume of the groundwater discharge. A summary of the operational periods with dates and groundwater volumes processed is provided in Table 1.

#### **OPERATION, MAINTENANCE, AND MONITORING**

Tasks performed for OM&M of the GWE remediation system during the reporting period included:

- Weekly maintenance and monitoring of the GWE wells and treatment systems;
- Collecting and analyzing system influent vapor and groundwater samples;
- Changing out MYCELX (MX-7) and bag filters (No. 1, 2, and 3); and
- Water samples from the GWE system were collected on January 31<sup>st</sup>.

In addition, system effluent vapor and water samples were collected and analyzed for compliance with the SCAQMD and NPDES permits. Results for the NPDES effluent monitoring will be provided in a subsequent section.

Remediation system inspections were performed on a weekly basis. The GWE and SVE systems operated during the first quarter with the following exceptions:

 Both systems were off from January 7<sup>th</sup> through 17<sup>th</sup> for the first quarter groundwater monitoring and sampling event.

- GWE system was shut down on February 12<sup>th</sup> due to high arsenic results reported by laboratory and remained off for the duration of the reporting period.
- SVE system operation was interrupted from March 8<sup>th</sup> to 11<sup>th</sup> during unplanned repairs to the vacuum lines going into the main treatment system.
- SVE system was shut down briefly on March 25<sup>th</sup> during blower oil change.

As a result of the GWE system arsenic discharge permit exceedance, a comprehensive evaluation of changes in influent characterization was completed to assess reasons for reduced lifetime expectancy of the ion exchange resin. It was determined the appropriate resin is in use; however, increases in pH and competing ions, since initial resin selection in 2009, are diminishing the capacity of the resin for arsenic removal. System modifications may be incorporated at a later date to increase the longevity of the resin; however, in the meantime, resin will be changed out and arsenic field test kits procured to resume GWE and treatment. Field test kits have detection limits below the NPDES effluent discharge limit (0.01 mg/L) and will be used at increased intervals to evaluate process efficiency and detect early break-through. Routine sampling of GWE discharge will continue at intervals as required by permit. The GWE system remained off-line through the end of the subject quarter during groundwater characterization evaluation.

#### **SUMMARY OF COMPLIANCE RESULTS**

Representative samples of treated groundwater were collected from the system effluent and analyzed for compounds as required by the Monitoring and Reporting Program (MRP).

The sample dates and summary of test results are provided in Table 2. A complete set of laboratory reports are provided in Attachment B. Representative sample results indicate concentrations were below detection limits or did not exceed permit required discharge levels with the exception of arsenic. Arsenic was reportedly detected in the effluent sample collected on January 31st (0.0162 mg/L). Mr. Gensen Kai of RWQCB was notified by telephone on February 14th, 2013 of the arsenic discharge exceedance in the effluent samples. A Groundwater Discharge Monitoring Exceedance Report was submitted to Gensen Kai on March 4th detailing actions planned to investigate and correct the cause of high arsenic in the representative sample of the GWE treatment system discharge. Additional water quality analyses of the groundwater influent were performed and these results were used to understand root causes for reduced efficiency of the resin and modifications which may improve GWE treatment for arsenic removal efficiency. Field

test kits were procured and will be used to assist with early detection of arsenic break-through and understanding process efficiency of the arsenic exchange resin.

Following re-bedding or change-out of the arsenic selective ion exchange resin, the GWE system was restarted on April 11, 2013, and as required by permit, representative discharge samples of arsenic are in the process of being collected on an accelerated sampling schedule (weekly) until four consecutive weekly sample results for arsenic re-establish system compliance.

#### **VISUAL OBSERVATIONS**

Based on the periodic inspections as documented in Attachment C and referenced in Table 1, the effluent stream was consistently clear and did not contain oil sheen, debris, or other particulate material. No odor has been detected in the effluent sample. Copies of the GWE System Monitoring Logs are provided in Attachment C.

#### **SUMMARY OF NON-COMPLIANCE**

As indicated previously, arsenic concentrations in representative samples exceeded the NPDES permit, No. CAG994004, daily maximum discharge limit (0.01 mg/L). The GWE system was shut down February 12<sup>th</sup> to evaluate the changes in influent groundwater characterization and system optimization options. Restart of the system was April 11, 2013 following re-bedding of the arsenic exchange resin vessel. As required by permit, representative discharge samples for arsenic will be collected on an accelerated sampling schedule (weekly) until four consecutive weekly sample results for arsenic re-establish system compliance.

#### LABORATORY CERTIFICATION

All analyses were conducted at a laboratory certified for such analyses by the Department of Health Services or approved by the Executive Officer and in accordance with current USEPA procedures or as specified in this Monitoring Program. The laboratory's quality control data is attached. A copy of the laboratory certification is provided in Attachment B.

#### REPORT CERTIFICATION

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 a fine and imprisonment for knowing violations.

Executed on the 7 day of May 2013, at Pasadena, California.

Sincerely,

Joseph R. Watts

Senior Engineer

Redwan Hassan

**Project Manager** 

PARSONS as a duty authorized representative of the Defense Logistics Agency (DLA) Energy.

#### **Attachments**

Attachment A Tables

Table 1 Groundwater Treatment System Operational Data

Table 2 Analytical Results of Effluent Water Samples

Attachment B Analytical Laboratory Reports and Electronic Submittal Confirmation

Attachment C Groundwater Extraction Treatment System Monitoring Logs

# ATTACHMENT A

**Tables** 

# Table 1 Groundwater Treatment System Operation Data DFSP Norwalk 15306 Norwalk Boulevard, Norwalk, CA

	Outlet Totalizer	Monthly	
Date	(gals)	Flow (gals)	Comments
01/02/13	64,586,031	44 201	CWTC on exeting a new cells.
01/02/13	04,360,031	44,291	GWTS operating normally.
01/07/13	64,700,050	114,019	GWTS operating normally. System shut down for quarterly groundwater monitoring.
01/07/13	04,700,030	114,019	Changed bag and MX-7 filters.System restarted. GWTS operating
01/17/13	64,705,720	5,670	normally.
01/23/13	64,834,745	-	GWTS operating normally.
01/25/13	64,880,345		GWTS operating normally.
01/28/13	64,946,570		GWTS operating normally.
	.,,	,	GWTS operating normally. Monthly NPDES compliance sample
01/31/13	65,014,040	67,470	collected.
Jan-13	472,300	472,300	
02/04/13	65,107,976	93,936	GWTS operating normally.
02/05/13	65,131,231	23,255	GWTS operating normally.
02/06/13	65,157,470		GWTS operating normally.
02/08/13	65,197,372		GWTS operating normally.
02/11/13	65,265,920	68,548	GWTS operating normally.
			System operating normally. Shut down system after high Arsenic
02/12/13	65,290,081	,	detected in effluent.
Feb-13	276,041	276,041	
Total	748,341	748,341	8504 gpd Average Flow Rate for Quarter

# Table 2 Analytical Results of Effluent Water Samples DFSP Norwalk 15306 Norwalk Boulevard, Norwalk, California

Analytical Method  Date Sampl Loc.  10/1/2009 Effluer 10/29/2009 Effluer 11/5/2009 Effluer 11/13/2009 Effluer 11/19/2009 Effluer 11/25/2009 Effluer 12/18/2009 Effluer 1/26/2010 Effluer 2/17/2010 Effluer	pH  nt nt 7.21  nt 7.06  nt nt nt nt 7.14  7.27	Temp. °C 24.0 26.4	ND <100	Benzene μg/L  ND < 0.50	-		Oil & Grease mg/L ND <1.0 ND <1.0	Copper mg/L ND <0.0100 ND <0.0100	Arsenic mg/L  0.05	Lead mg/L	Zinc mg/L	Selenium mg/L 	SM2130B  Turbidity  NTU	SM4500S2-D Sulfide mg/L	SM4500- CL F Residual Chlorine mg/L	SM2540D  Total Suspended Solids mg/L	SM2540F  Settleable Solid mL/L/hr  ND < 0.10	SM5540 C MBAS mg/L	EPA 420.1 Phenols mg/L ND <0.10	BOD5 20°C mg/L	EPA821R 02012 96 hr Fathead Minnow Survival %
Date Loc.  10/1/2009 Effluer  10/29/2009 Effluer  11/5/2009 Effluer  11/13/2009 Effluer  11/19/2009 Effluer  11/25/2009 Effluer  12/18/2009 Effluer  1/26/2010 Effluer	nt nt 7.21 nt 7.06 nt nt nt 7.14 nt 7.27	°C 24.0	TPH μg/L ND <100 ND <100	μg/L ND < 0.50 ND < 0.50	μg/L  ND < 0.50 ND < 0.50	μg/L  ND <10 ND <10	Grease mg/L  ND <1.0 ND <1.0	mg/L ND <0.0100	mg/L  0.05			mg/L	,		Residual Chlorine	Suspended Solids mg/L	Solid mL/L/hr	MBAS mg/L	Phenols mg/L	BOD5 20°C mg/L	96 hr Fathead Minnow Survival
10/29/2009 Effluer 11/5/2009 Effluer 11/13/2009 Effluer 11/19/2009 Effluer 11/25/2009 Effluer 12/18/2009 Effluer 1/26/2010 Effluer	7.21 nt 7.06 nt nt nt nt 7.14 nt 7.27	24.0	ND <100 ND <100	ND < 0.50 ND < 0.50	ND < 0.50 ND < 0.50	ND <10 ND <10	ND <1.0 ND <1.0	ND <0.0100	0.05		-						ND -0.10	ND <0.10	ND <0.10		
11/5/2009 Effluer 11/13/2009 Effluer 11/19/2009 Effluer 11/25/2009 Effluer 12/18/2009 Effluer 1/26/2010 Effluer	7.06 nt nt nt nt 7.14 nt 7.27	24.0	ND <100	ND < 0.50	ND < 0.50	ND <10	ND <1.0							ND < 0.050	ND < 0.10	ND <1.0	ND <0.10				
11/13/2009 Effluer 11/19/2009 Effluer 11/25/2009 Effluer 12/18/2009 Effluer 1/26/2010 Effluer	nt nt nt 7.14 nt 7.27	24.0						ND <0.0100				ND <0.0150	<0.050								
11/19/2009 Effluer 11/25/2009 Effluer 12/18/2009 Effluer 1/26/2010 Effluer	nt nt 7.14 nt 7.27								0.0302			ND <0.0150	7.3	ND <0.050	ND <0.10	ND <1.0	ND <0.10	ND <0.10	ND <0.10	7.1	100%
11/25/2009 Effluer 12/18/2009 Effluer 1/26/2010 Effluer	nt nt 7.14 nt 7.27																				
12/18/2009 Effluer 1/26/2010 Effluer	nt 7.14 nt 7.27			ND < 0.50					0.0266												
1/26/2010 Effluer	nt 7.27	26.4		1	ND < 0.50	4.4															
			ND <100	ND < 0.50	ND < 0.50	ND <10	ND <1.0	ND <0.00100	0.0381			0.00640	0.15								
2/17/2010 Efflue	nt 7.17	23.7	ND <100	ND < 0.50	ND < 0.50	4.5	ND <1.0	ND <0.00100	0.0217			0.00436	0.15								
2/11/2010 Elliuei		20.9	ND <100	ND < 0.50	ND < 0.50	ND <10	ND <1.0	ND <0.00100	0.0289			0.00238	ND <0.050	ND <0.050	ND <0.10	ND <1.0	ND <0.10	ND <0.10	ND <0.10		
3/18/2010 Effluer	nt 6.84	21.5	ND <100	ND < 0.50	ND < 0.50	5.9	ND <1.0	ND <0.00100	0.0208			0.00163	80.0								
4/1/2011 Effluer	nt		ND <100																		
4/29/2011 Effluer	nt 7.21	24.0	ND <100	ND <0.50	ND <0.50	ND <10	ND <1.0	0.00101	0.0151	ND <0.00100	0.0387	ND <0.00100	ND <0.050								
5/27/2011 Effluer	nt 7.27	21.9	ND <100	ND <0.50	ND <0.50	ND <10	ND <1.0	ND <0.00100	0.0169	ND <0.00100	0.0187	ND <0.00100	ND <0.050	ND <0.10	ND <0.10	ND <1.0	ND <0.10	ND <0.10	ND <0.10		
6/28/2011 Effluer	nt 6.91	25.7	ND <100	ND <0.50	ND <0.50	8.7	ND <1.0	ND <0.00100	0.0199	ND <0.00100	0.00553	ND <0.00100	0.36								
7/14/2011 Ifter GA	-				ND <0.50																
7/22/2011 Ifter GA				ND <0.50																	
7/27/2011 Effluer		26.3	ND <100	ND <0.50			ND <1.0	0.00134	0.0223	ND <0.00100	ND <0.00500	ND <0.00100	0.22								
8/5/2011 Ifter GA	_			ND <0.50		5.6															
8/12/2011 Ifter GA					ND <0.50	7.2															
8/30/2011 Effluer		26.8	ND <100	ND <0.50	0.39	14.0	ND <1.0	0.00108	0.0331	ND <0.00100	0.02140	0.00192	ND <0.050	ND <0.050	ND <0.10	ND <1.0	ND <0.10	ND <0.10	ND <0.10	1.2	
9/9/2011 Effluer				 ND -0 50	0.61	11															
9/13/2011 Ifter GA 9/22/2011 Effluer				ND <0.50 ND <0.50	0.61 0.42	8.5 6.7															
9/30/2011 Effluer		22.4	ND <100	ND <0.50	0.42	7.9	ND <1.0	0.00162	0.0333	ND <0.00100	0.02830	ND <0.00100									
10/28/2011 Effluer		20.8			0.79	9.5	ND <1.0	0.00162	0.0338	ND <0.00100	0.02630	ND <0.00100	8.6								
11/29/2011 Effluer		21.1			0.79	10	ND <1.0	0.00203 ND <0.00100	0.0389		ND <0.00500		17	ND <0.050	ND <0.10	2.7	ND <0.10	ND <0.10	ND <0.10	2.7	100
12/28/2011 Efflue		17.9		ND <0.50	0.79	14	1.5	0.00106	0.0309	ND <0.00100	ND <0.00500		17							2.1	
1/20/2012 Effluer					ND<0.50	ND<10	1.0														
1/26/2012 Effluer		20.7	ND<100	ND<0.50		ND<10	ND <1.0	0.00104	0.0361		ND <0.00500		0.21								
2/3/2012 Effluer				ND<0.50																	

# Table 2 Analytical Results of Effluent Water Samples DFSP Norwalk 15306 Norwalk Boulevard, Norwalk, California

Sampling Fre	equency							Mo	nthly								Quarterly				Aı	nnually
Analytical N	/lethod	SM4500 H+B	Field	8015B mod.	Е	PA8260B		SM5520B		EP	A 6010B/EPA 6	6020		SM2130B	SM4500S2-D	SM4500- CL F	SM2540D	SM2540F	SM5540 C	EPA 420.1	EPA 405.1	EPA821R 02012
Date	Sample Loc.	рН	Temp. °C	TPH μg/L	Benzene μg/L	MTBE μg/L	TBA μg/L	Oil & Grease mg/L	Copper mg/L	Arsenic mg/L	Lead mg/L	Zinc mg/L	Selenium mg/L	Turbidity NTU	Sulfide mg/L	Residual Chlorine mg/L	Total Suspended Solids mg/L	Settleable Solid mL/L/hr	MBAS mg/L	Phenols mg/L	BOD5 20°C mg/L	96 hr Fathead Minnow Survival %
2/10/2012	Effluent				ND<0.50	ND<0.50	6.4															
2/17/2012	Effluent				ND<0.50	ND<0.50	14															
2/23/2012	Effluent				ND<0.50	ND<0.50	ND<10															
2/24/2012	Effluent	7.27	21.4	ND<100	ND<0.50	ND<0.50	ND<10	ND <1.0	0.00107	0.0222	ND <0.00100	ND <0.00500	ND <0.00100	0.12	ND <0.050	ND <0.10	ND <1.0	ND <0.10	ND <0.10	ND <0.10		
3/2/2012	Effluent				ND<0.50	ND<0.50	13															
3/6/2012	Effluent				ND<0.50	ND<0.50	8.0															
3/9/2012	Effluent				ND<0.50	ND<0.50	ND<10															
3/16/2012	Effluent				ND<0.50	ND<0.50	ND<10															
3/23/2012	Effluent				ND<0.50	ND<0.50	ND<10															
3/28/2012	Effluent	7.23	18.1	ND<100	ND<0.50	ND<0.50	ND<10	ND <1.0	ND <0.00100	0.0221	ND <0.00100	ND <0.00500	ND <0.00100	0.18								
04/05/12	Effluent				ND<0.50	ND<0.50	ND<10															
04/27/12	Effluent	7.12	21.1	ND<100	ND<0.50	ND<0.50	ND<10	ND <1.0	0.00119	0.0140	ND <0.00100	ND <0.00500	ND <0.00100	ND <0.050								
05/18/12	Effluent				ND<0.50	ND<0.50	6.9															
01/31/13	Effluent	7.11		ND<100	ND<0.50	ND<0.50	ND<10	ND <1.0	0.00123	0.01620	ND <0.00100	ND <0.00500	ND <0.00100	ND<0.050								
GWTS was sh	ut down Fe	bruary 12	th followi	ng an arse	nic exceed	ance and p	ending r	nitigation.														
RL MDL		0.01		100	0.50 0.14	0.50 0.31	10 4.6	1.0	0.00100	0.00100	0.00100	0.00500	0.00100	1.0	0.050	0.10	1.0	0.10	0.10	0.10	1.0	
Daily Max	imum	within 6.5-8.5	100°F (38°C)	100	1	5	12	15	0.02	0.01	0.106	0.158	0.008	150	1	0.1	150	0.3	0.5	1	30	minimum 90%
Monthly Av	erage							10	0.01		0.053	0.079	0.004	50			50	0.1			20	

Notes: Analytical method for metals analysis changed from EPA 6010B to EPA 6020 to obtain lower reporting limit.

Bold = Exceedance of standard
--- = not analyzed/not applicable
mg/L = milligram per liter
μg/L = microgram per liter
NTU = nephelometric turbidity units

TPH = total petroleum hydrocarbon

$$\begin{split} & \text{MTBE} = \text{methyl-tert-butyl ether} \\ & \text{MBAS} = \text{methyl blue active substances (sufactants)} \\ & \text{MDL} = \text{Method detection limit (or Reporting Limit if MDL not provided)} \\ & \text{ML= Minimum Reporting Limit } \left(\mu g/L\right) \end{split}$$

<sup>\*</sup> TPH as Diesel result, TPH as Gasoline not detected (reporting limit 100 ug/L)

## ATTACHMENT B

Analytical Laboratory Reports





## **CALSCIENCE**

**WORK ORDER NUMBER: 13-01-1839** 

The difference is service



AIR SOIL WATER MARINE CHEMISTRY

**Analytical Report For** 

Client: Parsons Government Services, Inc.

Client Project Name: DFSP - Norwalk

**Attention:** Mary Lucas

100 West Walnut Street Pasadena, CA 91124-0002

Ranjit X. T. Clarke

Approved for release on 02/11/2013 by: Ranjit Clarke

Project Manager



\_ \_ \_

ResultLink >

Email your PM >

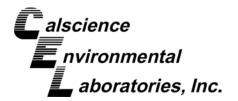
Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



### **Contents**

Client Project Name: DFSP - Norwalk Work Order Number: 13-01-1839

1	Case Narrative - 13011839	3
2	Client Sample Data	4
	2.1 EPA 8015B (M) TPH Diesel (Aqueous)	4
	2.2 SM 5520 B Oil and Grease (Aqueous)	5
	2.3 EPA 8015B (M) TPH Gasoline (Aqueous)	6
	2.4 EPA 8260B Volatile Organics (Aqueous)	7
	2.5 EPA 6020 ICP/MS Metals (Aqueous)	9
	2.6 Combined Inorganic Tests	10
3	Quality Control Sample Data	11
	3.1 MS/MSD and/or Duplicate	11
	3.2 LCS/LCSD	16
4	Sample Analysis Summary	21
5	Glossary of Terms and Qualifiers	22
6	Chain of Custody/Sample Receipt Form	23





#### **Work Order Case Narrative**

Project Name: DFSP - Norwalk Calscience Work Order Number: 13-01-1839

#### 1. Sample Analyses:

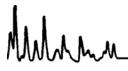
The COC received with this SDG was received without any analyses marked off. An e-mail was received from Parsons on 01/31/13 confirming the following analyses:

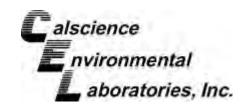
Effluent: Turbidity, Oil & Grease, pH, Diesel, Gas, VOCs+oxys, Metals

(As,Cu,Se,Pb,Zn)

Surge Tank: TPH-Diesel, TPH-Gasoline

Unfortunately, only one sample bottle was received for sample "Surge Tank". As a result, only TPH-Diesel was analyzed for this sample.





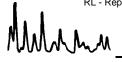


Parsons Government Services, Inc. 100 West Walnut Street Pasadena, CA 91124-0002 Date Received: Work Order No: Preparation: Method: 01/31/13 13-01-1839 EPA 3510C EPA 8015B (M)

Project: DFSP - Norwalk

Page 1 of 1

- rejecti Bi Gi Iteritant								<del>.go . o</del>
Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EFFLUENT		13-01-1839-1-K	01/31/13 12:14	Aqueous	GC 45	02/01/13	02/05/13 17:16	130201B03
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
TPH as Diesel	ND	100	1		ug/L			
Surrogates:	REC (%)	Control Limits		<u>Qual</u>				
n-Octacosane	104	68-140						
SURGE TANK		13-01-1839-2-A	01/31/13 12:30	Aqueous	GC 45	02/01/13	02/05/13 17:34	130201B03
Parameter	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	Units			
TPH as Diesel	3600	100	1	HD	ug/L			
Surrogates:	REC (%)	Control Limits		<u>Qual</u>				
n-Octacosane	83	68-140						
Method Blank		099-15-282-75	N/A	Aqueous	GC 45	02/01/13	02/05/13 14:20	130201B03
Parameter	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
TPH as Diesel	ND	100	1		ug/L			
Surrogates:	REC (%)	Control Limits		<u>Qual</u>				

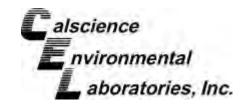


n-Octacosane

93

68-140





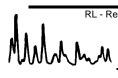


Parsons Government Services, Inc. 100 West Walnut Street Pasadena, CA 91124-0002 Date Received: Work Order No: Preparation: Method: 01/31/13 13-01-1839 N/A SM 5520 B

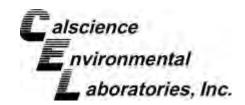
Project: DFSP - Norwalk

Page 1 of 1

Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EFFLUENT		13-01-1839-1-M	01/31/13 12:14	Aqueous	N/A	02/04/13	02/04/13 17:30	D0204OGL1
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
Oil and Grease	ND	1.0	1		mg/L			
Method Blank		099-05-081-2,887	N/A	Aqueous	N/A	02/04/13	02/04/13	D0204OGL1
meniod Blank		039-03-001-2,007	IVA	Aqueous	IN/A	02/04/13	17:30	D0204OGL1
<u>Parameter</u>	Result	RL	<u>DF</u>	Qual	<u>Units</u>	02/04/13		D02040GL1









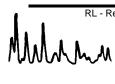
Parsons Government Services, Inc. 100 West Walnut Street Pasadena, CA 91124-0002 Date Received: Work Order No: Preparation: Method: 01/31/13 13-01-1839 EPA 5030C EPA 8015B (M)

Project: DFSP - Norwalk

Page 1 of 1

FAX: (714) 894-7501

Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EFFLUENT		13-01-1839-1-F	01/31/13 12:14	Aqueous	GC 42	02/01/13	02/01/13 19:15	130201B01
Parameter	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
TPH as Gasoline	ND	100	1		ug/L			
Surrogates:	REC (%)	Control Limits		<u>Qual</u>				
1,4-Bromofluorobenzene	78	38-134						
.,		30-13-						
Method Blank		099-15-704-216	N/A	Aqueous	GC 42	02/01/13	02/01/13 12:51	130201B01
,	Result		<b>N/A</b>	Aqueous  Qual	GC 42  Units	02/01/13		130201B01
Method Blank		099-15-704-216		•		02/01/13		130201B01
Method Blank  Parameter	Result	099-15-704-216 RL	<u>DF</u>	•	<u>Units</u>	02/01/13		130201B01

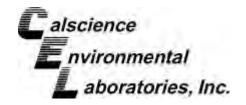


DF - Dilution Factor , Qual - Qualifiers

01/31/13

13-01-1839





#### **Analytical Report**



Parsons Government Services, Inc.

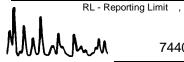
100 West Walnut Street Pasadena, CA 91124-0002 Date Received: Work Order No:

Preparation: EPA 5030C Method: EPA 8260B

Units: ug/L

Project: DFSP - Norwalk Page 1 of 2

Client Sample Number			Lab Sa Num	•		Date/Time Collected	Matrix	Instrument	Date Prepa		ate/Time Analyzed	QC Bat	ch ID
EFFLUENT			13-01-	1839-1-	A	01/31/13 12:14	Aqueous	GC/MS T	02/01/	13	02/01/13 23:51	130201	L01
Comment(s): -Results were	evaluated to th	he MDL (D	L), conce	ntrations	s >= to	the MDL (DL	_) but < RL (L	OQ), if found	d, are quali	ified witl	h a "J" flaç	<b>j</b> .	
<u>Parameter</u>	Result	<u>RL</u>	<u>MDL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	<u>MDL</u>	<u>DF</u>	Qual
Acetone	ND	20	10	1		c-1,3-Dichl	oropropene		ND	0.50	0.25	1	
Benzene	ND	0.50	0.14	1		t-1,3-Dichlo	propropene		ND	0.50	0.25	1	
Bromobenzene	ND	1.0	0.30	1		Ethylbenze	ne		ND	0.50	0.14	1	
Bromochloromethane	ND	1.0	0.48	1		2-Hexanon	е		ND	10	2.1	1	
Bromodichloromethane	ND	1.0	0.21	1		Isopropylbe	enzene		ND	1.0	0.58	1	
Bromoform	ND	1.0	0.50	1		p-Isopropyl	toluene		ND	1.0	0.16	1	
Bromomethane	ND	5.0	3.9	1		Methylene (	Chloride		ND	5.0	0.64	1	
2-Butanone	ND	10	2.2	1		4-Methyl-2-	Pentanone		ND	10	4.4	1	
n-Butylbenzene	ND	1.0	0.23	1		Naphthalen	ie		ND	10	2.5	1	
sec-Butylbenzene	ND	1.0	0.25	1		n-Propylbei	nzene		ND	1.0	0.17	1	
tert-Butylbenzene	ND	1.0	0.28	1		Styrene			ND	1.0	0.17	1	
Carbon Disulfide	ND	10	0.41	1		1,1,1,2-Tet	rachloroethar	ie	ND	1.0	0.40	1	
Carbon Tetrachloride	ND	0.50	0.23	1		1,1,2,2-Tet	rachloroethar	ie	ND	1.0	0.41	1	
Chlorobenzene	ND	1.0	0.17	1		Tetrachloro	ethene		ND	1.0	0.39	1	
Chloroethane	ND	5.0	2.3	1		Toluene			ND	0.50	0.24	1	
Chloroform	ND	1.0	0.46	1		1.2.3-Trich	lorobenzene		ND	1.0	0.51	1	
Chloromethane	ND	5.0	1.8	1			lorobenzene		ND	1.0	0.50	1	
2-Chlorotoluene	ND	1.0	0.24	1		1,1,1-Trich			ND	1.0	0.30	1	
4-Chlorotoluene	ND	1.0	0.13	1			loro-1,2,2-Tri	fluoroethane		10	0.78	1	
Dibromochloromethane	ND	1.0	0.25	1		1,1,2-Trich			ND	1.0	0.38	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1		Trichloroeth			ND	1.0	0.37	1	
1,2-Dibromoethane	ND	1.0	0.36	1			oromethane		ND	10	1.7	1	
Dibromomethane	ND	1.0	0.46	1			loropropane		ND	5.0	0.64	1	
1,2-Dichlorobenzene	ND	1.0	0.46	1			ethylbenzene		ND	1.0	0.36	1	
1,3-Dichlorobenzene	ND	1.0	0.40	1			ethylbenzene		ND	1.0	0.28	1	
1,4-Dichlorobenzene	ND	1.0	0.43	1		Vinyl Aceta	,		ND	10	2.8	1	
Dichlorodifluoromethane	ND	1.0	0.45	1		Vinyl Chlori			ND	0.50	0.30	1	
1,1-Dichloroethane	ND	1.0	0.40	1		p/m-Xylene			ND	0.50	0.24	1	
1,2-Dichloroethane	ND	0.50	0.24	1		o-Xylene			ND	0.50	0.24	1	
1,1-Dichloroethene	ND	1.0	0.43	1		•	ityl Ether (MT	BE)	ND	0.50	0.23	1	
c-1,2-Dichloroethene	ND	1.0	0.43	1		•	Alcohol (TBA)	,	ND	10	4.6	1	
t-1,2-Dichloroethene	ND	1.0	0.48	1		•	Ether (DIPE)		ND	2.0	0.33	1	
1,2-Dichloropropane	ND	1.0	0.37	1			/I Ether (ETB		ND	2.0	0.33	1	
1,3-Dichloropropane	ND	1.0	0.42	1			Methyl Ether (	,	ND	2.0	0.22	1	
2,2-Dichloropropane	ND	1.0	0.36	1		Ethanol	viculyi Eulel (	i AIVIL)	ND	100	50	1	
1,1-Dichloropropane	ND ND	1.0	0.46	1		∟uiali∪i			טויו	100	OU	ı	
-				•		0			DEO (0()	•		1	
<u>Surrogates:</u>	<u>REC (%)</u>	Control Limits	<u>Qua</u>	<u>al</u>		<u>Surrogates</u> :	_		REC (%)	Contro Limits		<u>lual</u>	
1,4-Bromofluorobenzene	96	80-120				Dibromoflu	oromethane		104	80-12			
1,2-Dichloroethane-d4	99	80-134				Toluene-d8			99	80-12			
1,2-DICHIOIOGHANE-U4		00 104				i oluci ie-uo	•			00-12			



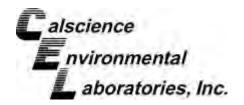
DF - Dilution Factor , Qual - Qualifiers

01/31/13

13-01-1839

**EPA 8260B** 





#### **Analytical Report**



Parsons Government Services, Inc.

100 West Walnut Street Pasadena, CA 91124-0002

Project: DFSP - Norwalk

Date Received: Work Order No:

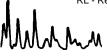
Preparation: **EPA 5030C** Method: Units:

ug/L Page 2 of 2

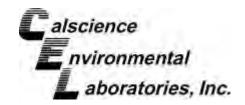
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-9,965	N/A	Aqueous	GC/MS T	02/01/13	02/01/13 16:00	130201L01

Method Blank	099-14-001	1-9,965	N/A Aqueous GC/MST	02/01/		/01/13  6:00	130201	L01
Comment(s): -Results were evaluated to the MDL	(DL), concentrat	tions >= to t	he MDL (DL) but < RL (LOQ), if foun	d, are quali	fied with a	a "J" flag		
<u>Parameter</u> <u>Result</u> <u>RL</u>	MDL DF	<u>Qual</u>	<u>Parameter</u>	Result	<u>RL</u>	<u>MDL</u>	<u>DF</u>	Qual
Acetone ND 20	10 1		c-1,3-Dichloropropene	ND	0.50	0.25	1	
Benzene ND 0.50	0.14 1		t-1,3-Dichloropropene	ND	0.50	0.25	1	
Bromobenzene ND 1.0	0.30 1		Ethylbenzene	ND	0.50	0.14	1	
Bromochloromethane ND 1.0	0.48 1		2-Hexanone	ND	10	2.1	1	
Bromodichloromethane ND 1.0	0.21 1		Isopropylbenzene	ND	1.0	0.58	1	
Bromoform ND 1.0	0.50 1		p-Isopropyltoluene	ND	1.0	0.16	1	
Bromomethane ND 5.0	3.9 1		Methylene Chloride	ND	5.0	0.64	1	
2-Butanone ND 10	2.2 1		4-Methyl-2-Pentanone	ND	10	4.4	1	
n-Butylbenzene ND 1.0	0.23 1		Naphthalene	ND	10	2.5	1	
sec-Butylbenzene ND 1.0	0.25 1		n-Propylbenzene	ND	1.0	0.17	1	
ert-Butylbenzene ND 1.0	0.28 1		Styrene	ND	1.0	0.17	1	
Carbon Disulfide ND 10	0.41 1		1,1,2-Tetrachloroethane	ND	1.0	0.40	1	
Carbon Tetrachloride ND 0.50	0.23 1		1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1	
Chlorobenzene ND 1.0	0.17 1		Tetrachloroethene	ND	1.0	0.39	1	
Chloroethane ND 5.0	2.3 1		Toluene	ND	0.50	0.24	1	
Chloroform ND 1.0	0.46 1		1,2,3-Trichlorobenzene	ND	1.0	0.51	1	
Chloromethane ND 5.0	1.8 1		1,2,4-Trichlorobenzene	ND	1.0	0.50	1	
2-Chlorotoluene ND 1.0	0.24 1		1,1,1-Trichloroethane	ND	1.0	0.30	1	
I-Chlorotoluene ND 1.0	0.13 1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.78	1	
Dibromochloromethane ND 1.0	0.25 1		1,1,2-Trichloroethane	ND	1.0	0.38	1	
,2-Dibromo-3-Chloropropane ND 5.0	1.2 1		Trichloroethene	ND	1.0	0.37	1	
,2-Dibromoethane ND 1.0	0.36 1		Trichlorofluoromethane	ND	10	1.7	1	
Dibromomethane ND 1.0	0.46 1		1,2,3-Trichloropropane	ND	5.0	0.64	1	
,2-Dichlorobenzene ND 1.0	0.46 1		1,2,4-Trimethylbenzene	ND	1.0	0.36	1	
,3-Dichlorobenzene ND 1.0	0.40 1		1,3,5-Trimethylbenzene	ND	1.0	0.28	1	
,4-Dichlorobenzene ND 1.0	0.43 1		Vinyl Acetate	ND	10	2.8	1	
Dichlorodifluoromethane ND 1.0	0.46 1		Vinyl Chloride	ND	0.50	0.30	1	
,1-Dichloroethane ND 1.0	0.28 1		p/m-Xylene	ND	0.50	0.24	1	
,2-Dichloroethane ND 0.50	0.24 1		o-Xylene	ND	0.50	0.23	1	
,1-Dichloroethene ND 1.0	0.43 1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	0.31	1	
c-1,2-Dichloroethene ND 1.0	0.48 1		Tert-Butyl Alcohol (TBA)	ND	10	4.6	1	
-1,2-Dichloroethene ND 1.0	0.37 1		Diisopropyl Ether (DIPE)	ND	2.0	0.33	1	
,2-Dichloropropane ND 1.0	0.42 1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	0.44	1	
,3-Dichloropropane ND 1.0	0.30 1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	0.22	1	
2,2-Dichloropropane ND 1.0	0.36 1		Ethanol	ND	100	50	1	
,1-Dichloropropene ND 1.0	0.46 1			110	700	00	,	
Surrogates: REC (%) Cont			Surrogates:	REC (%)	Control Limits	Qı	<u>ual</u>	
,4-Bromofluorobenzene 94 80-12	_		Dibromofluoromethane	101	80-126			
,2-Dichloroethane-d4 101 80-13	-		Toluene-d8	103	80-120			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers









Parsons Government Services, Inc.

100 West Walnut Street Pasadena, CA 91124-0002 Date Received: Work Order No: Preparation:

01/31/13 13-01-1839 EPA 3020A Total

Method:

Units:

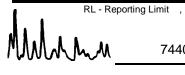
**EPA 6020** 

Project: DFSP - Norwalk

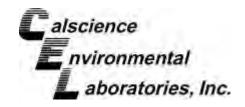
Page 1 of 1

mg/L

Client Sample Number			Lab Samp Numbe		Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EFFLUENT			13-01-183	39-1-J	01/31/13 12:14	Aqueous	ICP/MS 03	02/01/13	02/01/13 21:40	130201L02
Parameter	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	Parameter		Result	RL	<u>DF</u>	Qual
Arsenic	0.0162	0.00100	1		Selenium		ND	0.00		
Copper	0.00123	0.00100	1		Zinc		ND	0.00	500 1	
Lead	ND	0.00100	1							
Method Blank			096-06-00	03-4,023	N/A	Aqueous	ICP/MS 03	02/01/13	02/01/13 21:14	130201L02
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Parameter</u>		<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual
Arsenic	ND	0.00100	1		Selenium		ND	0.00	100 1	
Copper	ND	0.00100	1		Zinc		ND	0.00	500 1	
Lead	ND	0.00100	1							









Parsons Government Services, Inc. 100 West Walnut Street Pasadena, CA 91124-0002 Date Received: Work Order No:

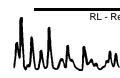
01/31/13 13-01-1839

Project: DFSP - Norwalk

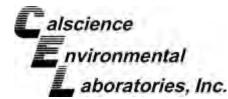
Page 1 of 1

FAX: (714) 894-7501

Client Sample Number		La	ab Sample I	Number	Date Collected	Matrix		
EFFLUENT		1	13-01-1839	-1	01/31/13	Aqueous		
<u>Parameter</u>	Results	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> Analyzed	Method
Turbidity	ND	0.050	1		NTU	N/A	01/31/13	SM 2130 B
рН	7.11	0.01	1		pH units	N/A	01/31/13	SM 4500 H+ B



r , Qual - Qualifiers



#### **Quality Control - Spike/Spike Duplicate**



Parsons Government Services, Inc. 100 West Walnut Street Pasadena, CA 91124-0002

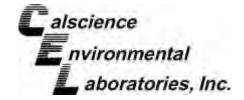
Date Received: Work Order No: Preparation: Method:

01/31/13 13-01-1839 EPA 3020A Total EPA 6020

Quality Control Sample ID		Matrix Instrument			Pate epared	Date Analyzed				
EFFLUENT		Aqueous ICP/MS 03		02/	01/13	02/01/13	130201S02			
<u>Parameter</u>	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	<u>RPD</u>	RPD CL	Qualifiers
Arsenic	0.01624	0.1000	0.1262	110	0.1280	112	73-127	1	0-11	
Copper	0.001234	0.1000	0.09457	93	0.09749	96	72-108	3	0-10	
Lead	ND	0.1000	0.1070	107	0.1093	109	79-121	2	0-10	
Selenium	ND	0.1000	0.09643	96	0.09780	98	59-125	1	0-12	
Zinc	ND	0.1000	0.09694	97	0.09855	99	43-145	2	0-39	







#### **Quality Control - PDS / PDSD**



Parsons Government Services, Inc. 100 West Walnut Street Pasadena, CA 91124-0002 Date Received Work Order No: Preparation: Method: 01/31/13 13-01-1839 EPA 3020A Total EPA 6020

Quality Control Sample ID	Matrix	k Instrur	nent	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
EFFLUENT	Aqueo	ous ICP/N	IS 03	02/01/13	02/01/13	130201S02
<u>Parameter</u>	SAMPLE CONC	SPIKE_ADDED	PDS_CONC	PDS %REC	%REC CL	Qualifiers
Arsenic	0.01624	0.1000	0.1244	108	75-125	
Copper	0.001234	0.1000	0.09177	91	75-125	
Lead	ND	0.1000	0.1045	104	75-125	
Selenium	ND	0.1000	0.09516	95	75-125	
Zinc	ND	0.1000	0.09393	94	75-125	





#### **Quality Control - Spike/Spike Duplicate**



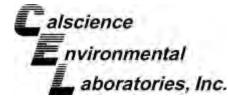
Parsons Government Services, Inc. 100 West Walnut Street Pasadena, CA 91124-0002

Date Received: Work Order No: Preparation: Method:

01/31/13 13-01-1839 **EPA 5030C** EPA 8015B (M)

Quality Control Sample ID		ontrol Sample ID Matrix Instrument					Date epared	Date Analyzed		ISD Batch umber
13-01-1840-1			Aqueo	us G	GC 42	02/	01/13	02/01/13	130	201S01
<u>Parameter</u>	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	<u>RPD</u>	RPD CL	Qualifiers
TPH as Gasoline	ND	2000	2104	105	1999	100	68-122	5	0-18	





#### **Quality Control - Spike/Spike Duplicate**



Parsons Government Services, Inc. 100 West Walnut Street Pasadena, CA 91124-0002

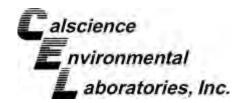
Date Received: Work Order No: Preparation: Method:

13-01-1839 EPA 5030C

01/31/13

Quality Control Sample ID			Matrix		Instrument		Date epared	Date Analyzed		ISD Batch umber
13-01-1636-1			Aqueou	IS	GC/MS T	02/	01/13	02/01/13	130	201S01
<u>Parameter</u>	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	<u>RPD</u>	RPD CL	Qualifiers
Benzene	ND	50.00	50.26	101	49.27	99	78-120	2	0-20	
Carbon Tetrachloride	ND	50.00	56.86	114	58.18	116	67-139	2	0-20	
Chlorobenzene	ND	50.00	50.74	101	50.60	101	80-120	0	0-20	
1,2-Dibromoethane	ND	50.00	49.65	99	50.46	101	80-123	2	0-20	
1,2-Dichlorobenzene	ND	50.00	49.75	99	47.84	96	76-120	4	0-20	
1,2-Dichloroethane	ND	50.00	54.52	109	53.14	106	76-130	3	0-20	
1,1-Dichloroethene	ND	50.00	47.11	94	47.42	95	70-130	1	0-27	
Ethylbenzene	ND	50.00	53.17	106	52.29	105	73-127	2	0-20	
Toluene	ND	50.00	49.70	99	50.01	100	72-126	1	0-20	
Trichloroethene	ND	50.00	47.58	95	46.28	93	74-122	3	0-20	
Vinyl Chloride	ND	50.00	52.50	105	52.76	106	65-131	0	0-24	
p/m-Xylene	ND	100.0	111.7	112	110.4	110	70-130	1	0-30	
o-Xylene	ND	50.00	54.10	108	53.56	107	70-130	1	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	51.43	103	52.13	104	69-123	1	0-20	
Tert-Butyl Alcohol (TBA)	ND	250.0	286.6	115	281.2	112	65-131	2	0-22	
Diisopropyl Ether (DIPE)	ND	50.00	57.07	114	56.76	114	68-128	1	0-22	
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	67.93	136	68.62	137	69-123	1	0-21	3
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	56.06	112	55.79	112	70-124	0	0-20	
Ethanol	ND	500.0	492.4	98	490.9	98	41-155	0	0-35	





#### **Quality Control - Duplicate**

Parsons Government Services, Inc. 100 West Walnut Street Pasadena, CA 91124-0002

Date Received: Work Order No:

N/A 13-01-1839

Project: DFSP - Norwalk

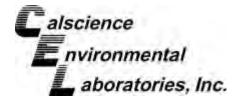
Matrix: Aqueous or Solid	
--------------------------	--

Parameter	Method	QC Sample ID	Date Analyzed	Sample Conc	DUP Conc	<u>RPD</u>	RPD CL Qualifiers
Turbidity	SM 2130 B	13-01-1802-1	01/31/13	0.36	0.37	3	0-25
рН	SM 4500 H+ B	13-01-1775-1	01/31/13	6.94	6.92	0	0-25



FAX: (714) 894-7501

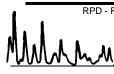




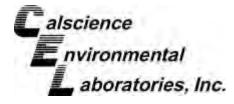


Parsons Government Services, Inc. 100 West Walnut Street Pasadena, CA 91124-0002 Date Received: Work Order No: Preparation: Method: N/A 13-01-1839 EPA 3020A Total EPA 6020

Quality Control Sample ID	Matrix	In	strument		ate oared	Date Analyzed	t	LCS/LCSD Batch Number	
096-06-003-4,023	Aqueous	IC	P/MS 03	02/0	1/13	02/01/13		130201L02	
<u>Parameter</u>	<u>SPIKE</u> ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	0.1000	0.1039	104	0.1056	106	80-120	2	0-20	
Copper	0.1000	0.1163	116	0.1195	120	80-120	3	0-20	
Lead	0.1000	0.1002	100	0.09971	100	80-120	0	0-20	
Selenium	0.1000	0.09071	91	0.09138	91	80-120	1	0-20	
Zinc	0.1000	0.1073	107	0.1087	109	80-120	1	0-20	







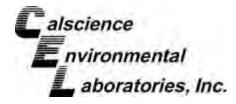


Parsons Government Services, Inc. 100 West Walnut Street Pasadena, CA 91124-0002 Date Received: Work Order No: Preparation: Method: N/A 13-01-1839 N/A SM 5520 B

Quality Control Sample ID	Matrix		Instrument		ate pared	Date Analyzed	l	LCS/LCSD Batch Number	
099-05-081-2,887	Aqueous		N/A	02/	04/13	02/04/13		D0204OGL1	
<u>Parameter</u>	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Oil and Grease	40.00	37.80	94	37.50	94	80-120	1	0-20	



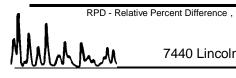




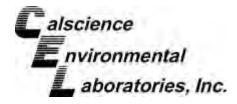


Parsons Government Services, Inc. 100 West Walnut Street Pasadena, CA 91124-0002 Date Received: Work Order No: Preparation: Method: N/A 13-01-1839 EPA 3510C EPA 8015B (M)

Quality Control Sample ID	Matrix		Instrument		ate pared	Date Analyzed	l	LCS/LCSD Batch Number	
099-15-282-75	Aqueous		GC 45	02/	01/13	02/05/13		130201B03	
<u>Parameter</u>	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	<u>RPD</u>	RPD CL	Qualifiers
TPH as Diesel	4000	3316	83	3465	87	75-117	4	0-13	



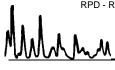




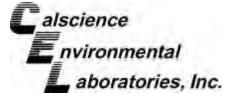


Parsons Government Services, Inc. 100 West Walnut Street Pasadena, CA 91124-0002 Date Received: Work Order No: Preparation: Method: N/A 13-01-1839 EPA 5030C EPA 8015B (M)

Quality Control Sample ID	Matrix		Instrument		ate pared	Date Analyzed	l	LCS/LCSD Batch Number	
099-15-704-216	Aqueous		GC 42	02/	01/13	02/01/13		130201B01	
<u>Parameter</u>	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	<u>RPD</u>	RPD CL	Qualifiers
TPH as Gasoline	2000	2185	109	2142	107	78-120	2	0-10	









Parsons Government Services, Inc. 100 West Walnut Street Pasadena, CA 91124-0002

Date Received: Work Order No: Preparation: Method:

N/A 13-01-1839 **EPA 5030C EPA 8260B** 

Project: DFSP - Norwalk

Quality Control Sample ID	М	atrix	Instrumen	nt	Date Prepared		ate llyzed	LCS	JLCSD Batch Number	1
099-14-001-9,965	Aque	eous	GC/MS T		02/01/13	02/0	1/13	1	30201L01	
<u>Parameter</u>	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	ME CL	<u>RPD</u>	RPD CL	Qualifiers
Benzene	50.00	51.07	102	47.54	95	80-120	73-127	7	0-20	
Carbon Tetrachloride	50.00	58.86	118	58.99	118	66-138	54-150	0	0-20	
Chlorobenzene	50.00	50.49	101	48.75	98	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	49.65	99	48.07	96	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	50.00	49.38	99	47.02	94	80-120	73-127	5	0-20	
1,2-Dichloroethane	50.00	53.94	108	50.52	101	80-129	72-137	7	0-20	
1,1-Dichloroethene	50.00	43.96	88	42.48	85	71-131	61-141	3	0-20	
Ethylbenzene	50.00	54.49	109	50.30	101	80-123	73-130	8	0-20	
Toluene	50.00	49.65	99	46.14	92	79-121	72-128	7	0-20	
Trichloroethene	50.00	48.28	97	44.91	90	80-120	73-127	7	0-20	
Vinyl Chloride	50.00	46.81	94	46.25	92	70-136	59-147	1	0-20	
p/m-Xylene	100.0	112.7	113	104.7	105	75-125	67-133	7	0-25	
o-Xylene	50.00	54.09	108	50.50	101	75-125	67-133	7	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	48.44	97	49.49	99	72-126	63-135	2	0-22	
Tert-Butyl Alcohol (TBA)	250.0	255.8	102	253.7	101	71-125	62-134	1	0-25	
Diisopropyl Ether (DIPE)	50.00	52.40	105	52.97	106	69-129	59-139	1	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	61.67	123	63.42	127	69-129	59-139	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	55.11	110	53.34	107	67-133	56-144	3	0-20	
Ethanol	500.0	429.3	86	413.7	83	47-155	29-173	4	0-36	

Total number of LCS compounds: 19 Total number of ME compounds: 0 Total number of ME compounds allowed:

LCS ME CL validation result: Pass







#### **Sample Analysis Summary Report**



WORK ORDER #: 13-01-1839

Lab Sample Number	Client Sample ID	Method	Extraction	Date/Time Analyzed	Chemist ID	Instrument	Analytical Location
1-M	EFFLUENT	SM 5520 B	N/A	02/4/2013 17:30	29	N/A	1
1-L	EFFLUENT	SM 2130 B	N/A	01/31/2013 18:28	688	TUR 3	1
1-J	EFFLUENT	EPA 6020	EPA 3020A T	02/1/2013 21:40	598	ICP/MS 03	1
1-A	EFFLUENT	EPA 8260B	EPA 5030C	02/1/2013 23:51	839	GC/MS T	2
1-F	EFFLUENT	EPA 8015B (M)	EPA 5030C	02/1/2013 19:15	797	GC 42	2
1-L	EFFLUENT	SM 4500 H+ B	N/A	01/31/2013 18:09	688	PH 1	1
1-K	EFFLUENT	EPA 8015B (M)	EPA 3510C	02/5/2013 17:16	628	GC 45	1
2-A	SURGE TANK	EPA 8015B (M)	EPA 3510C	02/5/2013 17:34	628	GC 45	1

Location	Description
1	7440 Lincoln Way, Garden Grove, CA 92841
2	7445 Lampson Avenue, Garden Grove, CA 92841



#### **Glossary of Terms and Qualifiers**

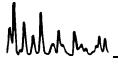


Work Order Number: 13-01-1839

TOIN GIGOIT	tuniber 16 61 1666
Qualifier	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
В	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
Е	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for

% moisture. All QC results are reported on a wet weight basis.

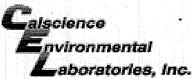
MPN - Most Probable Number



Ē,	Calscience E	Environmental Laboratories, Inc.							1 9													FCUSTODY RECORD  31-13					
	SoCal Laboratory 7440 Lincoln Way Garden Grove, CA (714) 895-5494	92841-1427	5063 Co	mmercial , CA 9452	Circle,		4		wo	#/LA   <b>3</b> :		ONL	A:	R9			Date Pag		1:	<i>&gt;ı</i> .		of	(				
										CLIENT PROJECT NAME / NUMBER:										P.O.	NO.:	**************************************	forticecontamount	sindomorousiano mai en	SECURIORA CONTROLLO	SAMERICANY	
ADDRESS: LOO W. WALNUT									DFSP-NORWALE-MOWHLY PROJECT CONTACT: MARY LUCAS										SAMPLER(S): (PRINT) Milhol L Gradiuas								
CITY	PASADAIA		STATE	and the second s	<del>*************************************</del>	91	ZIP	4		MA	RY	L		<						Mi	Ho	li	Gri	نامد	LA	3	
TEL:	Pasaoa.a 140.6032 =	-MAIL:						•		***************************************	***************************************				May Market Sales Little				VAI	_Y§	SES	, D					
TURN.	AROUND TIME:	48 HR72	HR S	TANDAR	:D	Log	CODE			C44)	Î															ossuatur	
COELT EDF									92) 16					335)							2)						
SPECIAL INSTRUCTIONS:  LAB USE SAMPLE ID SAMPLING MATRIX OF OF USE SAMPLE ID SAMPLING MATRIX OF OF USE SAMPLE ID SAMPLING MATRIX OF OF USE SAMPLE ID SAMPLING MATRIX OF USE SAMPLING MATRIX							J) or GRO	1) or DRO or (C6-C36) or (C6-C44)		BTEX / MTBE (8260) or (	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010/747X)	Cr(VI) [7196 or 7199 or 218.6]	Air - VOCs (TO-14A) or (TO-15)	TPH (g) [TO-3]						
LAB USE ONLY	SAMPLE ID	SAMF	SAMPLING TIME		NO. OF CONT.	Unpre	Preserved	Field	TPH (g) or (	TPH (d)	TPH (	BTEX	VOCs	Oxyge	En Co	SVOC	Pestic	PCBs	PNAs	T22 M	Cr(VI)	Air - V	Air - T		-		
ì	Effluent	1.31.13	12:14	W	13					Carrier Control of Control			*********										iatorioriumonicata				
2	EFFLUENT Subje TANK	1.31.13	12:30	W	1			<u></u>				***************************************															
									-		ļ										ļ	<b></b>					
																									-	-	
										<u> </u>	<u> </u>														_		
						<u> </u>																			-		
						<b></b>			<u> </u>	<u> </u>															+		
									<b>1</b>	<u> </u>																	
									T																		
Relinquished by: (Signature)								ture/Affiliation)										Date	131/13			Time: 1436					
Relinquished by: (Signature) Received by: (Signature)								ture/Affiliation)  DANNAL CA									Date: /				3	1 111177727					
Relinquished by: (Signatture)  Receiv							d by: (	Signat	gnature/Affiliation/										Date		1		Time:				

DISTRIBUTION: White with final report, Green and Yellow to Client.

Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Green and Yellow copies respectively.



WORK ORDER #: 13-01- [] [8] [9]

#### aboratories, inc. SAMPLE RECEIPT FORM Cooler \ of \ DATE: 01/31/13 CLIENT: TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0 °C - 6.0 °C, not frozen except sediment/tissue) Temperature $2.4 ^{\circ}\text{C} - 0.2 ^{\circ}\text{C} \text{ (CF)} = 2.2 ^{\circ}\text{C}$ **⊟** Blank □ Sample ☐ Sample(s) outside temperature criteria (PM/APM contacted by: \_\_\_\_\_). ☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling. ☐ Received at ambient temperature, placed on ice for transport by Courier. Initial: Ambient Temperature: Air ☐ Filter **CUSTODY SEALS INTACT:** Initial: Not Present ☐ Cooler ☐ No (Not Intact) □ N/A ☑ Not Present ☐ No (Not Intact) Initial: TS ☐ Sample SAMPLE CONDITION: Yes N/A No Chain-Of-Custody (COC) document(s) received with samples..... П COC document(s) received complete..... 0 ☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels. / ೨ / ۱ン ☑ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished. Sampler's name indicated on COC..... Sample container label(s) consistent with COC...... $\Box$ Sample container(s) intact and good condition...... $\Box$ Proper containers and sufficient volume for analyses requested...... $\Box$ Analyses received within holding time..... Z pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours...

Tedlar bag(s) free of condensation..... □ **CONTAINER TYPE:** 

Solid: □4ozCGJ □8ozCGJ □16ozCGJ □Sleeve (\_\_\_\_\_) □EnCores® □TerraCores® □ Water: □VOA ØVOAh □VOAna, □125AGB □125AGBh □125AGBp □1AGB □1AGBna, ☑1AGBs

□500AGB ☑500AGJ □500AGJs □250AGB □250CGB □250CGBs ☑1PB □1PBna □500PB

□250PB ☑250PBn □125PB □125PBznna □100PJ □100PJna<sub>2</sub> □ □ □

Air: □Tedlar® □Canister Other: □ Trip Blank Lot#: Labeled/Checked by:

Reviewed by: Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope

Preservative: h: HCL n: HNC<sub>3</sub> na<sub>2</sub>:Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> u: Ultra-pure znna: ZnAc<sub>2</sub>+NaOH f: Filtered Scanned by:

\*(-1) and (-2) have 1x 500 A65

Volatile analysis container(s) free of headspace.....

☐ Unpreserved vials received for Volatiles analysis

# eturn to Contents

#### Ranjit Clarke

From: Zicker, Cindy [Cindy.Zicker@parsons.com]
Sent: Friday, February 01, 2013 12:23 PM

To: Ranjit Clarke; Androsko, Glenn; Lucas, Mary

**Cc:** Gradillas, Milton

Subject: RE: No analyses on COC: DFSP - Norwalk (01/31/13)

#### Ranjit,

Thanks for bringing this to our attention. Log-in for the effluent sample is correct (monthly sampling event).

Please log-in the "surge tank" sample for TPH (diesel and gas).

Thanks, Cindy

From: Ranjit Clarke [mailto:rclarke@calscience.com]

Sent: Friday, February 01, 2013 9:21 AM

To: Androsko, Glenn; Zicker, Cindy; Lucas, Mary

Subject: No analyses on COC: DFSP - Norwalk (01/31/13)

Importance: High

#### Glenn/Cindy,

See attached. There were no analyses listed on the COC. Here is what we lgged in:

Effluent: Turbidity, Oil & Grease, pH, Diesel, Gas, VOCs+oxys, Metals

(As,Cu,Se,Pb,Zn)

Surge Tank: ???

For the "Surge Tank" sample, we received 4 bottles total (not 1 as listed on the COC). Do you want us to log this sample in for Diesel and Gas or something else?

Ranjit Clarke Project Manager



7440 Lincoln Way Garden Grove, CA 92841-1427 (714) 895-5494 www.calscience.com



### ATTACHMENT C

Groundwater Extraction Treatment System

Monitoring Logs

UIPMENT	Inlet Pressure (psig)	Outlet Pressure (psig)		Delta P (psig)	Filter Change Guide	COMMENTS
AG FILTERS (BF)					If > 25 psig; change filter	001111111111
F1 (East)	P2 <b>3</b> 8	P3 35	P2-P3	0		
F2 (Center)	P4 39	P5 35	P4-P5	0		
F3 (West)	P6 42	P7 38	P6-P7	0		
IYCELX					If > 15 psig; change filter	
IX-7 (small)	РВ 39	P9 26	P8-P9	0		
MX-21 (large)	P9 26	P10 27	P9-P10	0		
GAC FILTERS					If > 10 psig; notify.	
GAC - 1	P10 27	P11 23	P10-P11	0		
GAC - 2	P11 23	P12 19	P11-P12	0		
GAC - 3	P12 19	P13 17.5	P12-P13	0		
on Exchange	P13 19.5	P14 9.5	P13-P14	0		
	Instantaneous Flow	Totalizer Reading	Last To	talizer Reading	Flow Volume	
LOW METERS	(GPM)	(GAL)	Lust 10	(GAL)	(GAL)	
Vells: GW-2	6.3	721921.5	704	138.0		
Vells: GW-13	4.5	493987.8	481	120.0	-	
Vells: GW-2/13	10	12090563.7	1201	03006.6		
Vells: GW-15	3.4	392309.9	389	744.2		
Vells: GW-16	4.5	453 580 7.5	452	3303.7		
Vells: GW-15/16	8.5	1049217.5	1020	1172.2		
NPDES Discharge	40	64586031	645	41740		

PERATOR NAME:	DINGS	G. Androsk			REV'D BY:			
EQUIPMENT	_	t Pressure (psig)	Out	et Pressure (psig)		Delta P (psig)	Filter Change Guide	COMMENTS
BAG FILTERS (BF)		4.4.					If > 25 psig; change filter	
BF1 (East)	P2	39	P3	34	P2-P3	0		
BF2 (Center)	P4	39	P5	34	P4-P5	0		
BF3 (West)	P6	43	P7	39	P6-P7	0		
MYCELX							If > 15 psig; change filter	
MX-7 (small)	P8	39	P9	25	P8-P9	0		
MX-21 (large)	P9	24	P10	27	P9-P10	0		
GAC FILTERS							If > 10 psig; notify.	
GAC - 1	P10	27	P11	23	P10-P11	0		
GAC - 2	P11	23	P12	20	P11-P12	0		
GAC - 3	P12	20	P13	20	P12-P13	0		
Ion Exchange	P13	20	P14	12	P13-P14	0		
FLOW METERS	Ins	tantaneous Flow (GPM)	T	otalizer Reading . (GAL)	Last To	otalizer Reading (GAL)	Flow Volume (GAL)	
Wells: GW-2		6.7	70	768134.3		921.5		
Wells: GW-13		4.8	1 0 10 1	522753.0		189.8		
Wells: GW-2/13		5.6		12161466.8		10563.7		
Wells: GW-15	3.4			416503.5		309.9		
Wells: GW-16		4.4		67226.2	453	5807.5		
Wells: GW-15/16	8.6			1197.5	1049	217.5		
		35		700050	645	8603		
NPDES Discharge	tion (circle			ANNUAL, OTHER (spe			- NPDES samples today, record effluent te	mperature (deg, C) and pH]

NOTES / DAILY TASK SUMMARY Shut down system @ 0945 for quarterly GW sampling event.

DATE: Th 1-17-13	TIME.	1420	WEATHER:	Sunn
DATE: IN 1-11-13	I IIVIE:	1700	WENTINE	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

OPERATOR NAME: G. Androsko REVD BY:

EQUIPMENT	Inlet	Pressure (psig)	Outle	t Pressure (psig)		Delta P (psig)	Filter Change Guide	COMMENTS
BAG FILTERS (BF		()					If > 25 psig; change filter	
BF1 (East)	P2	33	P3	32	P2-P3	0		
BF2 (Center)	P4	32	P5	18 1	P4-P5	0		
BF3 (West)	P6	36	P7	36	P6-P7	0		
MYCELX							If > 15 psig; change filter	
MX-7 (small)	P8	40	P9	33	P8-P9	0		
MX-21 (large)	P9	33	P10	30	P9-P10	0		
GAC FILTERS							If > 10 psig; notify.	
GAC - 1	P10	30	P11	26	P10-P11	0		
GAC - 2	P11	26	P12	24	P11-P12	0		
GAC - 3	P12	24	P13	22	P12-P13	0		
Ion Exchange	P13	22	P14	12	P13-P14	0		

FLOW METERS	Instantaneous Flow (GPM)	Totalizer Reading (GAL)	Last Totalizer Reading (GAL)	Flow Volume (GAL)	
Wells: GW-2	5.2	769880.0	768136.3		
Wells: GW-13	3,3	523791.2	522753.0		-
Wells: GW-2/13	2.8	12164557.2	12161466.8		-
Wells: GW-15	4.2	417776.1	416503.5.		
Wells: GW-16	4.7	4568532.2	4567226.2		
Wells: GW-15/16	9.7	1114787.4	1111197.5		
NPDES Discharge	45	64705720	64700050		

NPDES Sample Coll	ection (circle one): MONTHL	Y, QUARTERLY, ANNUAL, OTHER (specify)	[If collecting NPDES samples today, record effluent temperature (deg, C) and pH]	_
TEMP_	(degrees, C) pH_		☐ Horiba U-10 or ☐ Other (please specify)	_

LOUIS COM VITAGE CHAMARY	
NOTES / DAILY TASK SUMMARY	
Restarted system a 0745	
O Com stull - needs to be 14015411	
O Cargo sivile research	
Changed Mx7, BF-1, 2 and -2 filter	

F1 (East) P2 3	QUIPMENT	Inle	t Pressure (psig)	Ou	tlet Pressure (psig)		Delta P (psig)	Filter Change Guide	COMMENTS
SF2 (Center)	BAG FILTERS (BF)					, ,		If > 25 psig; change filter	
BF3 (West)   P6   3	BF1 (East)	P2	36	P3	34	P2-P3	0		
MY-21 (large)	BF2 (Center)	P4	35	P5	24	P4-P5	0		
MX-7 (small)	BF3 (West)	P6	39	P7	39	P6-P7	0		
MX-21 (large)   P9   35   P10   33   P9-P10   0	MYCELX							If > 15 psig; change filter	
SAC FILTERS	MX-7 (small)	P8	41	P9	35	P8-P9	0		
GAC - 1	MX-21 (large)	P9	35	P10	33	P9-P10	0		
GAC - 2 P11	GAC FILTERS							If > 10 psig; notify.	
P12   Z\$   P13   Z\$   P12-P13   0     P13-P14   0   P13-P14   P13-P14	GAC - 1	P10	33	P11	29	P10-P11	0		
Don Exchange	GAC - 2	P11	29	P12	26	P11-P12	0		
Description   Process	GAC - 3	P12	26	P13	25	P12-P13	0		
FLOW METERS (GPM) (GAL) (GAL) (GAL)  Wells: GW-2 (6,4 \$19773.6 769880.0  Wells: GW-13 3.6 552917.2 523791.2  Wells: GW-2/13 \(\frac{14}{15}\) \(\frac{1}{15}\) \(1	on Exchange	P13		P14	16	P13-P14	0		
FLOW METERS (GPM) (GAL) (GAL) (GAL)  Wells: GW-2 (6,4 \$19773.6 769880.0		Inst	tantaneous Flow	1	Totalizer Reading	Last To	otalizer Reading	Flow Volume	
Wells: GW-13       3.6       552917.2       523791.2       -         Wells: GW-2/13       14.8.7 9.7       12234633.0       12164557.2       -         Wells: GW-15       4.0       451664.8       470776.1       -         Wells: GW-16       4.5       4607416.0       4568532.2       -         Wells: GW-15/16       9.7       1197672.8       ///4787.4       -         NPDES Discharge       43       64834745       64705720       -     (If collecting NPDES samples today, record effluent temperature (deg, C) and pH)	LOW METERS				(GAL)				
Wells: GW-2/13         \( \)	Vells: GW-2					769880.0		-	
Wells: GW-15       4.0       451464.8       47776.1       -         Wells: GW-16       4.5       4607416.0       4568532.2       -         Wells: GW-15/16       9.7       1197672.8       ////////////////////////////////////	Vells: GW-13			5:	52917.2	523791.2		-	
Wells: GW-16         4.5         4607416.0         4568532.2         -           Wells: GW-15/16         9.7         1197672.8         /// 1/4787.4         -           NPDES Discharge         43         64834745         64705720         -   NPDES Sample Collection (circle one): MONTHLY, QUARTERLY, ANNUAL, OTHER (specify) [If collecting NPDES samples today, record effluent temperature (deg, C) and pH]	Vells: GW-2/13	34.	8.7 9.7	17	2234633.0	12164557.2			
Wells: GW-15/16 9.7 1197 G72.8 //14787.4 - NPDES Discharge 43 G4834745 G4705720 - NPDES Sample Collection (circle one): MONTHLY, QUARTERLY, ANNUAL, OTHER (specify) [If collecting NPDES samples today, record effluent temperature (deg, C) and pH]	Vells: GW-15		4.0	45	1464.8	40776.1		1.	
NPDES Discharge 43 64834745 64705720 -  NPDES Sample Collection (circle one): MONTHLY, QUARTERLY, ANNUAL, OTHER (specify) [If collecting NPDES samples today, record effluent temperature (deg, C) and pH]	Vells: GW-16		4.5	40	07416.0	4568	3532.2		
NPDES Sample Collection (circle one): MONTHLY, QUARTERLY, ANNUAL, OTHER (specify) [if collecting NPDES samples today, record effluent temperature (deg, C) and pH]	Vells: GW-15/16		9.7	11	97672.8	1114	787.4		
NPDES Sample Collection (circle one): MONTHLY, QUARTERLY, ANNUAL, OTHER (specify) [If collecting NPDES samples today, record effluent temperature (deg, C) and pH]	NPDES Discharge		43	64	1834745	6470	5720		
TEMP (degrees, C) pH Data collection instrument used (check one):  Horiba U-10 or Other (please specify)	IPDES Sample Collect	ion (circle	one): MONTHLY, QU	ARTERLY	, ANNUAL, OTHER (spec	cify)	[If collecting N	IPDES samples today, record effluent te	mperature (deg, C) and pH]
	TEMP	(degrees,	, C) pH	Data	collection instrument us	sed (check on	e): D Horiba U-10	or □ Other (please specify)	

OPERATOR NAME: PRESSURE REAL	DINGS	G.Androuco			REV'D BY:			
EQUIPMENT	_	t Pressure (psig)	Out	tlet Pressure (psig)		Delta P (psig)	Filter Change Guide	COMMENTS
BAG FILTERS (BF)							If > 25 psig; change filter	
3F1 (East)	P2	36	P3	35	P2-P3	0		
3F2 (Center)	P4	36	P5	33	P4-P5	0		
BF3 (West)	P6	39	P7	38	P6-P7	0		
MYCELX							If > 15 psig; change filter	
MX-7 (small)	P8	40	P9	33	P8-P9	0		
MX-21 (large)	P9	33	P10	32	P9-P10	0		
GAC FILTERS							If > 10 psig; notify.	
GAC - 1	P10	32	P11	29	P10-P11	0		
GAC - 2	P11	29	P12	25	P11-P12	0		
GAC - 3	P12	25	P13	24	P12-P13	0		
on Exchange	P13	24	P14	16	P13-P14	0		
	Inst	antaneous Flow	T	otalizer Reading	Last To	talizer Reading	Flow Volume	
FLOW METERS		(GPM)		(GAL)	0.05	(GAL)	(GAL)	
Wells: GW-2		6.6	4	57941.6		73.6		
Wells: GW-13		3.6	56	2894.5	552917.2			
Wells: GW-2/13	(	7.9	17	22505200	12234633.0			
Wells: GW-15		3.8	40	02685.7	451664.8			
Wells: GW-16	-	4.4	40	6.880020	4607416.0			
Wells: GW-15/16	9	i.0	13	259334.0	1197	8.56		
	1	43	111	880345	640	34745		

<b>GWTS Env</b>	vironmental Compliance	/ Operation Maintenance W	orksneets		
MON.	DATE: 1.28.13	TIME: 1000	WEATHER:	SUNDY	
	OPERATOR NAME:	Mitton L. Gradi	(a < REV'D BY:		

EQUIPMENT	Inle	t Pressure (psig)	Out	et Pressure (psig)		Delta P (psig)	Filter Change Guide	COMMENTS
BAG FILTERS (BF	_						If > 25 psig; change filter	
BF1 (East)	P2	36	P3	35	P2-P3	0		
BF2 (Center)	P4	35	P5	33	P4-P5	0		
BF3 (West)	P6	40	P7	39	P6-P7	0		
MYCELX							If > 15 psig; change filter	
MX-7 (small)	P8	40	P9	33	P8-P9	0		
MX-21 (large)	P9	33	P10	34	P9-P10	0		
GAC FILTERS							If > 10 psig; notify.	
GAC - 1	P10	34	P11	28	P10-P11	0		
GAC - 2	P11	28	P12	25	P11-P12	0		
GAC - 3	P12	25	P13	24	P12-P13	0		
Ion Exchange	P13	24	P14	15.5	P13-P14	0		

FLOW METERS	Instantaneous Flow (GPM)	Totalizer Reading (GAL)	Last Totalizer Reading (GAL)	Flow Volume (GAL)	
Wells: GW-2	65	866240.3	837941.6	-	
Wells: GW-13	3.9	578060.3	562894.5	-	
Wells: GW-2/13	9.2	17297375.3	12250520.0	-	
Wells: GW-15	3.8	478687.1	462685.7	-	
Wells: GW-16	4.5	4638843.1	4620088.3	-	
Wells: GW-15/16	9.8	1265381.4	12259334.0	-	
NPDES Discharge	43	64946570	64880345	-	

			Note that the series of the delegate angelful
TEMP	(degrees, C) pH	Data collection instrument used (check one):	Horiba U-10 or U Other (please specify)

EQUIPMENT	Inlet Pressure (psig)	Outlet Pressure (psig)		Delta P (psig)	Filter Change Guide	COMMENTS
BAG FILTERS (BF)	1				If > 25 psig; change filter	
BF1 (East)	P2 37	Р3 35	P2-P3	0		
BF2 (Center)	P4 37	P5 34	P4-P5	0		
F3 (West)	P6 40	P7 39	P6-P7	0		
IYCELX					If > 15 psig; change filter	
MX-7 (small)	P8 40	Р9 33	P8-P9	0		
MX-21 (large)	P9 33	P10 33	P9-P10	0		
GAC FILTERS					If > 10 psig; notify.	
GAC - 1	P10 33	P11 27	P10-P11	0		
GAC - 2	P11 27	P12 25	P11-P12	0		
GAC - 3	P12 25	P13 23.5	P12-P13	0		
on Exchange	P13 23.5	P14 /5./	P13-F14	0		
	Instantaneous Flow	Totalizer Reading	Last To	talizer Reading	Flow Volume	
LOW METERS	(GPM)	(GAL)	C.1.1	(GAL)	(GAL)	
Vells: GW-2	6.9	894775.0		240.3	-	
Vells: GW-13	4.4	3955500		060.3	*	
Vells: GW-2/13	9.2	12335165.8		17375.3		
Wells: GW-15	3.6	4945 11.0	4786			
	4.6	4657809.5	463	8843.1		
Wells: GW-16		13045 40	171,5	381.4	-	
Wells: GW-16 Wells: GW-15/16	4.8	1300311.0	1000	46570		

EQUIPMENT	Inlet	Pressure (psig)	Out	et Pressure (psig)		Delta P (psig)	Filter Change Guide	COMMENTS
BAG FILTERS (BF)							If > 25 psig; change filter	COMMENTO
BF1 (East)	P2	34	P3	32	P2-P3	0		
BF2 (Center)	P4	34	P5	30	P4-P5	0		
BF3 (West)	P6	38	P7	37	P6-P7	0		
MYCELX							If > 15 psig; change filter	
MX-7 (small)	P8	39	P9	32	P8-P9	0		
MX-21 (large)	P9	32	P10	30	P9-P10	0		
GAC FILTERS							If > 10 psig; notify.	
GAC - 1	P10	30	P11	25	P10-P11	0		
GAC - 2	P11	25	P12	22	P11-P12	0		
GAC - 3	P12	22	P13	21	P12-P13	0		
on Exchange	P13	21	P14	14	P13-P14	0		
	Instar	taneous Flow	To	talizer Reading	Last Tot	alizer Reading	Flow Volume	
LOW METERS	-	(GPM)		(GAL)		(GAL)	(GAL)	
Vells: GW-2		7.0		4632.7	894-	115.0		
Vells: GW-13		1.3	62	1267.2	5955	500		
Vells: GW-2/13		.5.	12.	389633.2	1233	5 165.8		
Vells: GW-15	3	.5	.518	678.2	4945			
veils: Gvv-15		.3	. 40	0.293 28	465	7809.5	-	
Vells: GW-16	4							
	9	.ŋ 13	13	6/212.5	1306	4040		

OPERATOR NAME: PRESSURE REAL	Milt	und Gradi	las		REV'D BY:	Clad		
EQUIPMENT		et Pressure (psig)	Out	tlet Pressure (psig)		Delta P (psig)	Filter Change Guide	COMMENTS
BAG FILTERS (BF)				011			If > 25 psig; change filter	
BF1 (East)	P2	37	P3	34	P2-P3	0		
BF2 (Center)	P4	37	P5	33	P4-P5	0		
BF3 (West)	P6	40	P7	38	P6-P7	0		
MYCELX							If > 15 psig; change filter	
MX-7 (small)	P8	39	P9	32	P8-P9	0		
MX-21 (large)	P9	32	P10	31	P9-P10	0		
GAC FILTERS							If > 10 psig; notify.	
GAC - 1	P10	31	P11	26	P10-P11	0		
GAC - 2	P11	26	P12	23	P11-P12	0		
GAC - 3	P12	23	P13	22.5	P12-P13	0		
Ion Exchange	P13	22.5	P14	13	P13-P14	0		
	I Ir	stantaneous Flow		Totalizer Reading	Last T	otalizer Reading	Flow Volume	
FLOW METERS	-	(GPM)	01	(GAL)	001	(GAL)	(GAL)	
Wells: GW-2		6-8	99	5 6 5 5.1		632.7		
Wells: GW-13		9.7	6	61112.5		267.2	-	
Wells: GW-2/13		9.4	12	1034 15.3		89633.2	-	
Wells: GW-15		3.5	5.	10865.5	_	678.2	-	
Wells: GW-16		4.4	46	0871061.5	46	83 293.0	-	
Wells: GW-15/16		9.5	13	74961.5	136	2.5151		
NPDES Discharge		43	6	5/3/23/	65	107976		
NPDES Sample Collec	ction (cir	cle one): MONTHLY, Q		Y, ANNUAL, OTHER (sp			NPDES samples today, record effluent	temperature (deg, C) and
TEMP	(degre	es, C) pH	Dat	a collection instrument	used (check o	one):   Horiba U-10	or□ Other (please specify)	

DAILY O&M

PERATOR NAME: RESSURE READ	INGS	G. Androske	)	R	EVD BT: _			
QUIPMENT		t Pressure (psig)	Outle	et Pressure (psig)		Delta P (psig)	Filter Change Guide	COMMENTS
AG FILTERS (BF)							If > 25 psig; change filter	
F1 (East)	P2	36	P3	32	P2-P3	0		
3F2 (Center)	P4	35	P5	31	P4-P5	0		
BF3 (West)	P6	39	P7	36	P6-P7	0		
MYCELX							If > 15 psig; change filter	
MX-7 (small)	P8	39	P9	31	P8-P9	0		
MX-21 (large)	P9	31	P10	28	P9-P10	0		
GAC FILTERS							If > 10 psig; notify.	
	P10	28	P11	25	P10-P11	0		
GAC - 1		25	P12	22	P11-P12	0		
GAC - 2	P11	22	P13	21	P12-P13	0		
GAC - 3	P12	21	P14	13	P13-P14	0		
lon Exchange	P13	61					Flow Volume	
FLOW METERS	Ins	stantaneous Flow (GPM)	Т	otalizer Reading (GAL)	Last T	otalizer Reading (GAL)	(GAL)	
Wells: GW-2		6.8	9	55786.5	945	235.	, i	
		4.8		36317.2	627	772.3		
Wells: GW-13		9.7		418710.8	1240	13415.3		
Wells: GW-2/13		3.7		26520.0	520	865.5	-	
Wells: GW-15		4.5		696558.0	_	1661.5		
Wells: GW-16	-	9,4		390189.0	137	1961.5		
Wells: GW-15/16	-		, .	157470		3 23	-	
NPDES Discharge		. 49	60	13 (170	1001			
NPDES Sample Collec	tion (circ	le one): MONTHLY, Q	UARTERLY	, ANNUAL, OTHER (spe	clfy)	[If collecting	NPDES samples today, record effluent	temperature (deg, C) and pH]
TEMP_		es, C) pH	Data	collection instrument u	sed (check o	one):  Horiba U-1	0 or ☐ Other (please specify)	

ironmental Compliance	Opera	ition Maintenance	vvorksneets
E 2 9-13	TIME.	1100	WEAT

WEATHER: Cloudy to showers 550 DATE: F 2-8-13 REV'D BY:

OPERATOR NAME: G. Androsko
PRESSURE READINGS

PRESSURE RE		Pressure (psig)	Outle	t Pressure (psig)		Delta P (psig)	Filter Change Guide	COMMENTS
BAG FILTERS (BF		11-01	•				If > 25 psig; change filter	
BF1 (East)	P2	37	P3	33	P2-P3	0		
BF2 (Center)	P4	38	P5	32	P4-P5	0	3.5	
BF3 (West)	P6	42	P7	38	P6-P7	0		
							If > 15 psig; change filter	
MX-7 (small)	P8	39	P9	31	P8-P9	0		
MX-21 (large)	P9	31	P10	31	P9-P10	0		
GAC FILTERS							If > 10 psig; notify.	
GAC - 1	P10	31	P11	24	P10-P11	0		
GAC - 2	P11	26	P12	23	P11-P12	0		
GAC - 3	P12	23	P13	22	P12-P13	0		
Ion Exchange	P13	7.7	P14	13	P13-P14	0		

FLOW METERS	Instantaneous Flow (GPM)	Totalizer Reading (GAL)	Last Totalizer Reading (GAL)	Flow Volume (GAL)	
Wells: GW-2	6.8	973461.5	955786.5		
Wells: GW-13	4,7	647290.0	635317.2		
Wells: GW-2/13	9.6	12443907.6	12418710.8		,
Wells: GW-15	3.3	534999.0	526520.0		-
Wells: GW-16	4.4	4707627.0	4696558.0		,
Wells: GW-15/16	8.8	1413441.2	1390189.0		-
NPDES Discharge	42	65197372	65 157470		

		(degrees, C) pH	Data collection instrument used (check one): ☐ Horiba U-10 or ☐ Other (please specify)
1-7 - 1		(degrees, s) s	
	DAILY	TASK SUMMARY	
DAILY TASK SUMMARY	DAIL	TAGIT COMMISSION	
J DAILY TASK SUMMARY			
S / DAILY TASK SUMMARY			
S / DAILY TASK SUMMARY			
S / DAILY TASK SUMMARY			

-	
TIM	-

vironmental Compliance /	Operati	ion Maintenance Workshee	5
DATE: 2-12-13	TIME:	1204	1

WEATHER: SUNDY

OPERATOR NAME: Milton L. Gradiles

REV'D BY:

PRESSURE RE	Inlet Pressure (psig)	Outlet Pressure (psig)		Delta P (psig)	Filter Change Guide	COMMENTS
					If > 25 psig; change filter	
BAG FILTERS (BF	P2 38	P3 32	P2-P3	0		
BF1 (East)	P4 36	P5 30	P4-P5	0		
BF2 (Center) BF3 (West)	P6 41	P7 36	P6-P7	0		
MYCELX					If > 15 psig; change filter	
MX-7 (small)	P8 38	P9 30	P8-P9	0		
MX-21 (large)	P9 30	P10 26	P9-P10	0		
GAC FILTERS					If > 10 psig; notify.	
GAC - 1	P10 26	P11 22	P10-P11	0		
GAC - 2	P11 22	P12 19	P11-P12	0		
GAC - 3	P12 19	P13 18	P12-P13	0		
Ion Exchange	P13 18	P14 /2	P13-P14	0		

FLOW METERS	Instantaneous Flow (GPM)	Totalizer Reading (GAL)	Last Totalizer Reading (GAL)	Flow Volume (GAL)	
Wells: GW-2	7.2	1015302.1	1003559.5	4	
Wells: GW-13	4.5	674146.0	666955.2	-	
Wells: GW-2/13	9.8	12500924.3	12485201.0	-	
Wells: GW-15	3.6	554972.0	549186.3		
Wells: GW-16	4.4	4733104.1	4726199.2		
Wells: GW-15/16	10.5	1467/66.5	1450651.7		
NPDES Discharge	39	65290081	65265920	-	

NDDES Samola	Collection (circle one): MONTHLY	QUARTERLY, ANNUAL, OTHER (specify)	[If collecting NPDES samples today, record effluent temperature (deg, C) and pH]	
TEMP_	(degrees, C) pH_		e): ☐ Horiba U-10 or ☐ Other (please specify)	

Shut down system @ 1530 (High arsenic lab results)	
Collected Surge Tank and Effluent sample	
collected sorge lank and errivent sample	