

# **Investigation Report**

# DATE: 2005



October 27, 2005

Mr. Wayne Price Senior Environmental Engineer Environmental Bureau New Mexico Oil Conservation Division 1220 S. St. Francis Drive Santa Fe, New Mexico 87505

Jan Street RECEIVEI A STATE NOV - 1 2005 OIL CONSERVATION DIVISION 1

#### Re: Groundwater Discharge Plan Renewal Investigation Report, Dynegy Midstream Services, L.P., Monument Gas Plant (GW-025), Unit Letter N, Section 36, Township 19 South, Range 36 East, Lea County, New Mexico

Dear Mr. Price:

Please find enclosed a copy of the above-referenced report. The report is submitted on behalf of Dynegy Midstream Services, L. P., and presents the final results of spill remediation conducted by Larson and Associates, Inc. Please call Cal Wrangham at (432) 688-0542 or myself at (432) 687-0901 if you have questions.

Sincerely, Larson and Associates, Inc.

indy K. Crain

Cindy K. Crain, P.G. Project Manager/Geologist

cc: Cal Wrangham - Dynegy James Lingnau – Dynegy Chris Williams – NMOCD Division I



October 26, 2005

Mr. Wayne Price Senior Environmental Engineer Environmental Bureau New Mexico Oil Conservation Division 1220 S. St. Francis Drive Santa Fe, New Mexico 87505

#### Re: Groundwater Discharge Plan Renewal Investigation Report, Dynegy Midstream Services, L.P., Monument Gas Plant (GW-025), U.L. N, Section 36, Township 19 South, Range 36 East, Lea County, New Mexico

Dear Mr. Price:

Dynegy Midstream Services, L.P. (Dynegy) has retained Larson and Associates, Inc. (LA) to conduct investigations at its Monument Gas Plant (Site) in response to conditions identified by the New Mexico Oil Conservation Division (NMOCD) during renewal of the Site groundwater discharge plan (GW-025). The Site is located in the SE/4, SW/4 (Unit Letter N), Section 36, Township 19 South, Range 36 East, Lea County, New Mexico. A report and work plan was submitted to the NMOCD on July 25, 2001 that addressed the following issues:

<u>Item 14 A</u>	Provide to OCD for approval a clean-up plan for the area located west of the plant, and between the gas storage brine well ponds;
<u>Item 14 B</u>	Investigate and provide the results for the contamination found near the west side of the oil/water tanks secondary containment;
<u>Item 14 D</u>	Provide an action plan for OCD approval for the #2 gas storage well and brine pond. Please identify if the well and brine pond has integrity; and
<u>Item 15</u>	Submit a storm water run-off plan for OCD by July 31, 2001.

A separate work plan was issued and approved on January 22, 2002, that included removal and disposal of sediment and liner material from the #2 bring pond (Item 14 D). The report also included the results of an investigation of the area near the oil/water tanks secondary containment (Item 14 B) where staining was identified by the NMOCD during its inspection of the Site. The remediation plan proposed tilling and amendments (i.e. fertilizer) to bioremediate the spill. Dynegy proposed to investigate soils beneath the #2 brine pond as a method to determining integrity of the liner (Item 14 D). Dynegy also proposed a mechanical integrity test (MIT) of the temporarily abandoned #2 brine storage well if and when the well is placed in service. The NMOCD requested that Dynegy conduct a MIT prior to January 1, 2003. A storm water management plan was included in the July 25, 2001 report (Item 15), was approved, and implemented.

On January 8, 2004, a Groundwater Discharge Plan Renewal Investigation Report was submitted to the NMOCD that reported the completion of Items 14 A and 14 D. The report also detailed the initial investigation and remediation efforts conducted at the secondary containment

Mr. Wayne Price Page 2 October 26, 2005

area (Item 14 B). Dynegy proposed to excavate soil with total petroleum hydrocarbons (TPH) concentrations above 100 milligrams per kilogram (mg/kg) at the area east of the #1 brine pond. Figure 1 presents a Site location map. Figure 2 presents a detailed drawing of the area.

#### **<u>Current Investigation</u>**

As reported on January 8, 2004, Dynegy tilled the soil near the secondary containment of the oil/water tanks (east of the #1 brine pond) where TPH exceeded the regulatory threshold of 100 milligrams per kilogram (mg/kg). Initial soil samples revealed that the impact was limited to about 2 feet below ground surface (bgs), and extended to about 4 feet bgs at location HA-4. The soil was tilled and nitrogen fertilizer was added to promote bioremediation of the TPH. Soil samples were collected on January 2, 2003 and June 4, 2003, and showed that the TPH had been reduced to concentrations below the regulatory threshold (100 mg/kg) at two (2) locations (HA-3 and HA-5), but remained above the regulatory threshold at three (3) locations (HA-1, HA-2 and HA-4). Dynegy proposed to remediate the remaining TPH by excavating the soil for disposal at an NMOCD permitted facility.

On September 14, 2004, excavation began at the secondary containment area and samples (SF-1 through SF-5) were collected at a depth of approximately four (4) feet below ground surface (bgs). The samples were placed in clean glass sample jars, labeled and chilled in an ice chest until they were hand delivered, under chain of custody control, to Environmental Lab of Texas (ELOT) located in Odessa, Texas. The soil samples were analyzed for TPH by EPA method SW-846-8015. A duplicate of each sample was collected for headspace analysis. The headspace jars were filled approximately ¼ full, and a layer of aluminum foil was placed over the opening of the jars before replacing the cap. The headspace samples were set aside and allowed to warm up to ambient temperature before a RAE Instruments, Model 2000 photoionization detector (PID) was used to measure the concentration of organic vapors in the sample headspace. The PID probe was inserted into the headspace of the sample jars (through the aluminum foil), and the concentration of organic vapors was displayed by the instrument in parts per million (ppm), and recorded in a bound field notebook. The PID was calibrated to 99.8 ppm isobutylene prior to obtaining headspace readings. Excavated soil was placed adjacent to the excavation and blended to reduce TPH concentrations below 100 mg/kg.

Table 1 presents a summary of the laboratory analyses of soil samples and PID readings. Figure 2 shows the location of the samples. Appendix A presents laboratory data and chain of custody documentation.

Referring to Table 1, only sample SF-1 (located south of HA-4) reported a TPH concentration (274.1 mg/kg) greater than 100 mg/kg. On September 23, 2004, excavation continued at the area south of HA-4, until a sample (SF-6) was collected at a depth of approximately five (5) feet bgs, and a sample was collected from the spoil pile. The samples were placed in clean glass sample jars, labeled and chilled in an ice chest until they were hand delivered, under chain of custody control, to ELOT and analyzed for TPH. A duplicate of each sample was collected for headspace analysis, as described above. Table 1 presents a summary of the laboratory analyses of soil samples and PID readings. Figure 2 shows the location of the samples. Appendix A presents laboratory data and chain of custody documentation.

Mr. Wayne Price Page 3 October 26, 2005

Referring to Table 1, sample SF-6 and the spoil sample reported concentrations of TPH above 100 mg/kg (420 mg/kg and 528.5 mg/kg, respectively). Blending of the stockpiled soil continued periodically until February 23, 2005, when the area south of HA-4 was excavated to a depth of approximately nine (9) feet bgs, and samples were collected from the excavation (SF-7, SF-8 and SF-9) and the stockpiled soil. The samples were placed in clean glass sample jars, labeled and chilled in an ice chest until they were hand delivered, under chain of custody control, to ELOT and analyzed for TPH and chloride by EPA method 300. A duplicate of each sample was collected for headspace analysis, as described above. Table 1 presents a summary of the laboratory analyses of soil samples and PID readings. Figure 2 shows the location of the samples. Appendix A presents laboratory data and chain of custody documentation.

Referring to Table 1, samples from the excavation (SF-7, SF-8 and SF-9) reported TPH concentrations below 100 mg/kg (24.8 mg/kg, <20 mg/kg, and <20 mg/kg, respectively). The sample from the spoil pile reported a TPH concentration above 100 mg/kg (267.9 mg/kg), and periodic blending of the stockpiled soil continued until a sample was collected on May 17, 2005, that reported a TPH concentration of 68.3 mg/kg.

The excavation was backfilled with blended soil on July 14, 2005. Dynegy feels that all conditions identified by the NMOCD during the 2001 renewal of the Site groundwater discharge plan (GW-025) have been completed. If you have any questions, or need additional information, please contact Mr. Cal Wrangham at (432) 688-0542 or myself at (432) 687-0901, or we may be reached by e-mail at Cal.Wrangham@Dynegy.com or cindy@LAenvironmental.com.

Sincerely, Larson and Associates, Inc.

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Cindy K. Crain, P.G. Project Manager/Geologist

Encl.

cc: Cal Wrangham - Dynegy James Lingnau – Dynegy Chris Williams – NMOCD District I Table

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Dynegy Midstream Services, L.P., Monument Gas Plant (GW-025) Summary of Headspace and Laboratory Analyses of Soil Samples SE/4, SW/4, Section 36, Township 19 South, Range 36 East I as County Nam Marine

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	Lea County	Lea County, New Mexico				Ч	Page 1 of 1	
Sample	Sample	Sample	Sample Location	PID	GRO	DRO	HAT	Chloride
Number	Date	Depth	I	Reading	C6-C12	>C12-C35	C6-C35	(mg/kg)
		(Feet bgs)			(mg/kg)	(mg/kg)	(mg/kg)	
	RF	RRAL					100	
SF-1	9/14/2004	4.0	South of HA-4	0.3	10.1	264.0	274.1	
SF-2	9/14/2004	4.0	South of HA-2	0.3	<10.0	40.3	40.3	
SF-3	9/14/2004	4.0	NE of HA-4	0.2	<10.0	<10.0	<20.0	1
SF-4	9/14/2004	4.0	South of HA-2	0.3	<10.0	<10.0	<20.0	-
SF-5	9/14/2004	4.0	South of HA-4	0.8	<10.0	96.1	96.1	
SF-6	9/23/2004	5.0	South of HA-4	5.0	148.0	273.0	420.0	2
SF-7	2/23/2005	3.0	South of HA-1	3.6	<10.0	24.8	24.8	100.0
SF-8	2/23/2005	0'6	South of HA-4	2.8	<10.0	<10.0	<20.0	398.0
SF-9	2/23/2005	7.5	South of HA-4	3.4	<10.0	<10.0	<20.0	92.2
Spoil	9/23/2004		1	4.8	42.5	486.0	528.5	1
Spoil	2/23/2005			5.2	8.9	259.0	267.9	740.0
Spoil	5/17/2005		-	1.7	<10.0	68.3	68.30	314.00
	Matas: Aual		Mataci: Analonia and and Lee The second at 11 at a Transaction	1 26 26 T		F.		

Notes: Analysis performed by Environmental Lab of Texas, Inc., Odessa, Texas

Sample depth in feet below ground surface Diesel-range organics 1. BGS:

2. DRO:
 3. GRO:
 4. TPH:
 5. mg/kg:
 6. <:</li>

Gasoline-range organics

Total petroleum hydrocarbons (Sum of DR0 + GR0)

Milligrams per kilogram

Below method detection limit

Table 1:

Figures

a 1

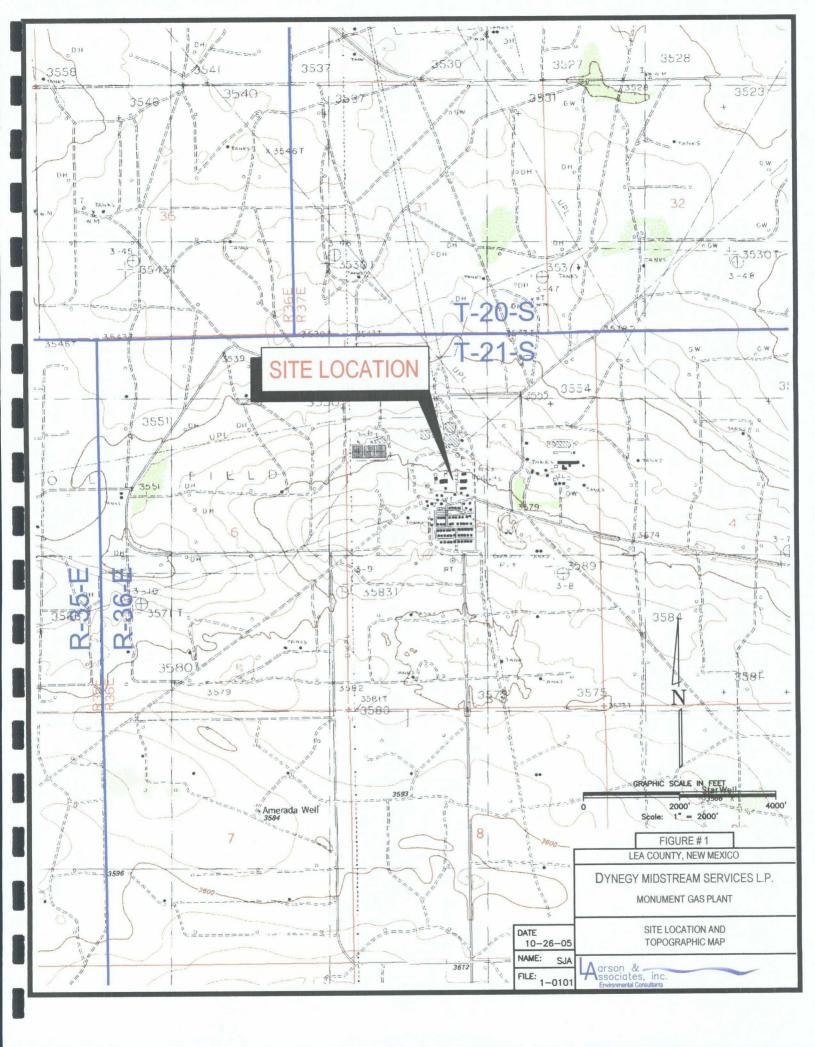
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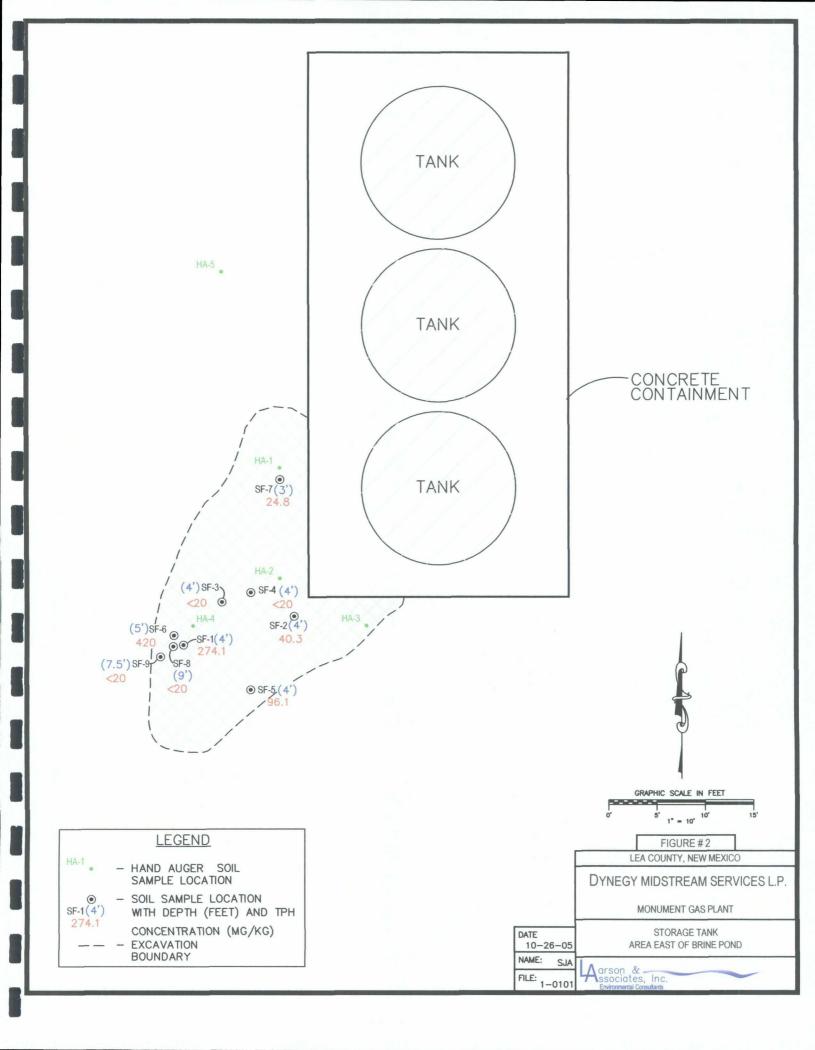
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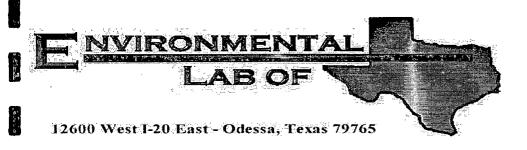




Appendix A

# Laboratory Reports

507 North Marienfeld, Suite 202 Midland, Texas 79701 Ph. (432) 687-0901 Fax (432) 687-0456



# Analytical Report

# **Prepared for:**

Mark Larson Larson & Associates, Inc. P.O. Box 50685 Midland, TX 79710

Project: Dynegy Monument Plant Project Number: 1-0101 Location: None Given

Lab Order Number: 4I15001

Report Date: 09/21/04

Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710

1

#### Project: Dynegy Monument Plant Project Number: 1-0101 Project Manager: Mark Larson

09/21/04 12:50

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SF-1	4115001-01	Soil	09/14/04 09:33	09/14/04 16:35
SF-2	4115001-02	Soil	09/14/04 09:56	09/14/04 16:35
SF-3	4115001-03	Soil	09/14/04 10:43	09/14/04 16:35
SF-4	4115001-04	Soil	09/14/04 10:45	09/14/04 16:35
SF-5	4115001-05	Soil	09/14/04 10:50	09/14/04 16:35

Project: Dynegy Monument Plant Project Number: 1-0101 Project Manager: Mark Larson

Fax: (432) 687-0456 **Reported:** 09/21/04 12:50

#### Organics by GC **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
SF-1 (4115001-01) Soil									
Gasoline Range Organics C6-C12	10.1	10.0	mg/kg dry	1	EI41404	09/15/04	09/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	264	10.0	"	м	11	н	. "		
Total Hydrocarbon C6-C35	274	10.0	n	n	**	"	n	**	
Surrogate: 1-Chlorooctane	······································	96.6 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		112 %	70-1	30	"	"	"	"	
SF-2 (4115001-02) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI41404	09/15/04	09/19/04	EPA 8015M	
Diesel Range Organics >C12-C35	40.3	10.0	N	u	n	11		"	
Total Hydrocarbon C6-C35	40.3	10.0	H	"	11	n	11	n	
Surrogate: 1-Chlorooctane		93.2 %	70-1	30	"	"	"	11	
Surrogate: 1-Chlorooctadecane		95.0 %	70-1	30	"	"	"	"	
SF-3 (4115001-03) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI41404	09/15/04	09/19/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"		Ħ		**		
Total Hydrocarbon C6-C35	ND	10.0	"		11	"	11	н	
Surrogate: 1-Chlorooctane		98.0 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		96.8 %	7 <b>0</b> -1	130	"	"	"	"	
SF-4 (4115001-04) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI41404	09/15/04	09/19/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	н	"	"	n	
Total Hydrocarbon C6-C35	ND	10.0	u	**		n	H	"	
Surrogate: 1-Chlorooctane		97.2 %	70	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		93.8 %	70	130	"	"	"	"	
SF-5 (4115001-05) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI41404	09/15/04	09/19/04	EPA 8015M	
Diesel Range Organics >C12-C35	96.1	10.0		"		11	**	19	
Total Hydrocarbon C6-C35	96.1	10.0	14	Ħ	"	н	н	*	
Surrogate: 1-Chlorooctane		87.6 %	70	130	н	"	"	"	
Surrogate: 1-Chlorooctadecane		87.6 %	70-	130	н	"	"	"	

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

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# General Chemistry Parameters by EPA / Standard Methods

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
SF-1 (4I15001-01) Soil									· · · · ·
% Solids	83.0		%	1	EI41610	09/15/04	09/15/04	% calculation	
SF-2 (4115001-02) Soil							į		
% Solids	89.0		%	1	EI41610	09/15/04	09/15/04	% calculation	
SF-3 (4115001-03) Soil									
% Solids	85.0		%	1	EI41610	09/15/04	09/15/04	% calculation	
SF-4 (4115001-04) Soil									
% Solids	87.0		%	1	EI41610	09/15/04	09/15/04	% calculation	
SF-5 (4115001-05) Soil									
% Solids	85.0		%	1	EI41610	09/15/04	09/15/04	% calculation	

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

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# **Organics by GC - Quality Control**

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI41404 - Solvent Extraction (	GC)									
Blank (EI41404-BLK1)				Prepared:	09/14/04	Analyzed	1: 09/16/04			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	n							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	39.6	77 <b>4104</b> 2	mg/kg	50.0		79.2	70-130			
Surrogate: 1-Chlorooctadecane	36.4		"	50.0		7 <b>2</b> .8	70-130			
Blank (EI41404-BLK2)				Prepared:	: 09/14/04	Analyzed	l: 09/17/04			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet		<u></u>				· · · · · · · ·	
Diesel Range Organics >C12-C35	ND	10.0								
Total Hydrocarbon C6-C35	ND.	10.0	"							
Surrogate: I-Chlorooctane	41.9		mg/kg	50.0		83.8	70-130			
Surrogate: 1-Chlorooctadecane	36.0		"	50.0		72.0	70-130			
LCS (EI41404-BS1)				Prepared:	: 09/14/04	Analyzed	I: 09/16/04			
Gasoline Range Organics C6-C12	414	10.0	mg/kg wet	500		82.8	75-125			
Diesel Range Organics >C12-C35	469	10.0	**	500		93.8	75-125			
Total Hydrocarbon C6-C35	883	10.0	Ħ	1000		88.3	75-125			
Surrogate: 1-Chlorooctane	40.7		mg/kg	50.0		81.4	70-130			
Surrogate: 1-Chlorooctadecane	40.1		"	50.0		80.2	70-130			
LCS (EI41404-BS2)				Prepared:	: 09/14/04	Analyzed	1: 09/17/04			
Gasoline Range Organics C6-C12	465	10.0	mg/kg wet	500		93.0	75-125			
Diesel Range Organics >C12-C35	496	10.0		500		99.2	75-125			
Total Hydrocarbon C6-C35	961	10.0	Π	1000		96.1	75-125			
Surrogate: T-Chlorooctane	43.2		mg/kg	50.0		86.4	70-130			
Surrogate: 1-Chlorooctadecane	39.1		"	50.0		78.2	70-130			
Calibration Check (EI41404-CCV1)				Prepared	: 09/14/04	Analyzed	1: 09/16/04			
Gasoline Range Organics C6-C12	440		mg/kg	500		88.0	80-120			
Diesel Range Organics >C12-C35	584		<b>H</b> ·	500		117	80-120			
Total Hydrocarbon C6-C35	1020		n	1000		102	80-120			
Surrogate: 1-Chlorooctane	52.6		"	50.0		105	70-130			
Surrogate: 1-Chlorooctadecane	61.3		"	50.0		123	70-130	·		

Environmental Lab of Texas

Project: Dynegy Monument Plant Project Number: 1-0101 Project Manager: Mark Larson

**Reported:** 09/21/04 12:50

#### **Organics by GC - Quality Control** 173 • . . . . e m

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI41404 - Solvent Extraction (	GC)									
Calibration Check (EI41404-CCV2)				Prepared:	09/14/04	Analyzed	: 09/17/04			
Gasoline Range Organics C6-C12	438		mg/kg	500		87.6	80-120			
Diesel Range Organics >C12-C35	520		"	500		104	80-120			
Total Hydrocarbon C6-C35	958			1000		95.8	80-120			
Surrogate: 1-Chlorooctane	51.3			50.0		103	70-130			
Surrogate: 1-Chlorooctadecane	38.8		"	50.0		77. <b>6</b>	70-130			
Matrix Spike (EI41404-MS1)	So	urce: 41140(	3-12	Prepared:	: 09/14/04	Analyzed	: 09/17/04			
Gasoline Range Organics C6-C12	572	10.0	mg/kg dry	617	11.8	90.8	75-125		····· .	
Diesel Range Organics >C12-C35	773	10.0		617	53.9	117	75-125			
Total Hydrocarbon C6-C35	1350	10.0	*	1230	65.7	104	75-125			
Surrogate: 1-Chlorooctane	56.7		mg/kg	50.0		113	70-130			
Surrogate: 1-Chlorooctadecane	56.2		**	50.0		112	70-130			
Matrix Spike (EI41404-MS2)	So	ource: 4I1400	)4-06	Prepared	: 09/14/04	Analyzed	: 09/17/04			
Gasoline Range Organics C6-C12	533	10.0	mg/kg dry	549	ND	97.1	75-125			
Diesel Range Organics >C12-C35	616	10.0	"	549	ND	112	75-125			
Total Hydrocarbon C6-C35	1150	10.0	n	1100	ND	105	75-125			
Surrogate: 1-Chlorooctane	56.4		mg/kg	50.0		113	70-130			
Surrogate: 1-Chlorooctadecane	41.1		"	50.0		82.2	70-130			
Matrix Spike Dup (EI41404-MSD1)	So	urce: 411400	)3-12	Prepared	: 09/14/04	Analyzed	l: 09/17/04			
Gasoline Range Organics C6-C12	661	10.0	mg/kg dry	617	11.8	105	75-125	14.4	20	
Diesel Range Organics >C12-C35	757	10.0	п	617	53.9	114	75-125	2.09	20	
Total Hydrocarbon C6-C35	1420	10.0	**	1230	65.7	110	75-125	5.05	20	
Surrogate: 1-Chlorooctane	57.3		mg/kg	50.0		115	70-130			
Surrogate: 1-Chlorooctadecane	56.7		"	50.0		113	70-130			
Matrix Spike Dup (EI41404-MSD2)	So	ource: 41140	)4-06	Prepared	: 09/14/04	Analyzed	l: 09/17/04			
Gasoline Range Organics C6-C12	507	10.0	mg/kg dry	549	ND	92.3	75-125	5.00	20	
Diesel Range Organics >C12-C35	609	10.0	"	549	ND	111	75-125	1.14	20	
Total Hydrocarbon C6-C35	1120	10.0	"	1100	ND	102	75-125	2.64	20	
Surrogate: I-Chlorooctane	54.0		mg/kg	50.0		108	70-130			
Surrogate: 1-Chlorooctadecane	36.9		"	50.0		73.8	7 <b>0-13</b> 0			

Environmental Lab of Texas

### General Chemistry Parameters by EPA / Standard Methods - Quality Control

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI41610 - General Prepar	ation (Prep)									
Blank (EI41610-BLK1)				Prepared	& Analyze	ed: 09/15/	04			
% Solids	100		%							
Duplicate (EI41610-DUP1)	So	urce: 411400	7-01	Prepared	& Analyz	ed: 09/15/	04 ·			
% Solids	97.0		%		97.0			0.00	20	

% Solids

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Environmental Lab of Texas

Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710

#### **Notes and Definitions**

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
<b>D</b>	

Dup Duplicate

dK. **Report Approved By:** Date: 0-21-04

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director James L. Hawkins, Chemist/Geologist Sandra Biezugbe, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

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# Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

Client: Larson': Associates

Date/Time: 09-15-04@ 0830

Order #: \_\_\_\_\_\_\_\_\_\_

Initials:

4 4 -

ALC: N

JMM

#### Sample Receipt Checklist

Temperature of container/cooler?	YES	No	4.0	С
Shipping container/cooler in good condition?	Tes	No		
Custody Seals intact on shipping container/cooler?	Yes	No	Not preser	ut 🛛
Custody Seals intact on sample bottles?	Yes	No	Not preser	it,
Chain of custody present?	Tes	No		
Sample Instructions complete on Chain of Custody?	(Tes)	No		
Chain of Custody signed when relinquished and received?	(Yes)	No		
Chain of custody agrees with sample label(s)	(Tes)	No		
Container labels legible and intact?	Tes	No		
Sample Matrix and properties same as on chain of custody?	(Yes)	No		
Samples in proper container/bottle?	(es)	No		
Samples properly preserved?	(Yes)	No		
Sample bottles intact?	Yes	No	· · ·	
Preservations documented on Chain of Custody?	Ves	No		
Containers documented on Chain of Custody?	Ves	No		
Sufficient sample amount for indicated test?	(Yes)	No		
All samples received within sufficient hold time?	Xes	No		
VOC samples have zero headspace?	(Yes	No	Not Applica	ole

Other observations:

## Variance Documentation:

Contact Person: Regarding:	Date/Time:	Contacted by:	
	· · · · · · · · · · · · · · · · · · ·		
Corrective Action Taken:			
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	CHAIN-OF-CUSTODY RECORD	Acron & Lax: 432-687-0456 Environmental Consultants 432-687-0901	arientela, St	NUMBER ILE, FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE)	4I15001-01	-05	43	čių	A								RECEIVED BY: (Signature) DATE. TIME:	SAMPLE SHIPPED BY: (Circle)		ЖI	et		1	SAMPLE TYPE:	کارو دیومیدند. در وارد در در این و میتراندان در این اور و در اور و وارد در این و در این و در این و در این و در	
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ولاح	-10	Plant															KELINGLIE	RECEIVED						n i ce		and the second secon
59°-90'-955	ANAGER:	VORUMENT	#	SAMPLE IDENTIFICATION	55-1	5-1	た N	27, 2	IN IN								DATE: 7/14/64		TIME:			Texas I-20 E.	STATE: ZIP: PHONE:	Hoz glass or		
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	CLIENT NAME:	CTNO: 1-0101		NATER NATER DATE	10933 4 1	1 7560	5/10/	1045	1 1050								SAMPLED.BY: (Signature)	RELINAUSHED BY: (Signature)		COMMENTS:		RECEIVING LABORATORY: EC	CITY: CONTACT:	DITION WHEN RECEIVED:	5	化化学学 化化学学 化化学学 化化学学 化化学学 化化学学 化化学学 化化学

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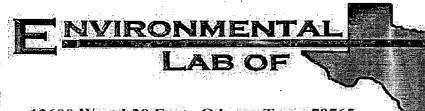
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#### 12600 West I-20 East - Odessa, Texas 79765

# Analytical Report

# Prepared for:

Cindy Crain Larson & Associates, Inc. P.O. Box 50685 Midland, TX 79710

Project: Dynegy/ Storage Tank Area Project Number: 1-0101 Location: None Given

Lab Order Number: 4I23018

Report Date: 09/28/04

Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710

#### Project: Dynegy/ Storage Tank Area Project Number: 1-0101 Project Manager: Cindy Crain

### Fax: (432) 687-0456

**Reported:** 09/28/04 08:07

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SF-6	4123018-01	Soil	09/23/04 08:30	09/23/04 13:45
Soil Piles (Comp.)	4I23018-02	Soil	09/23/04 08:47	09/23/04 13:45

Larson & Associates, Inc.	Proje
P.O. Box 50685	Project Numb
Midland TX, 79710	Project Manag

ject: Dynegy/ Storage Tank Area nber: 1-0101 ager: Cindy Crain

# Organics by GC

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SF-6 (4123018-01) Soil			·····						
Gasoline Range Organics C6-C12	148	10.0	mg/kg dry	1	EI42406	09/24/04	09/25/04	EPA 8015M	
Diesel Range Organics >C12-C35	273	10.0	n	"	N	"		Ħ	
Total Hydrocarbon C6-C35	420	10.0	"	н	**	"	۳		
Surrogate: 1-Chlorooctane		104 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		72.8 %	70-1	30	"	"	"	"	

#### Soil Piles (Comp.) (4123018-02) Soil

Gasoline Range Organics C6-C12	42.5	10.0 п	ng/kg dry	1	EI42406	09/24/04	09/25/04	EPA 8015M
Diesel Range Organics >C12-C35	486	10.0		**	"	"	"	"
Total Hydrocarbon C6-C35	529	10.0	Ħ	"	••	н	"	u
Surrogate: 1-Chlorooctane		108 %	70-13	0	"	"	"	"
Surrogate: 1-Chlorooctadecane		71.4 %	70-13	0	"	"	"	"

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 2 of 7

#### General Chemistry Parameters by EPA / Standard Methods

**Environmental Lab of Texas** 

		Environm	iental	Lab of 1	exas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
SF-6 (4123018-01) Soil									
% Solids	86.0	·	%	1	EI42712	09/24/04	09/24/04	% calculation	
Soil Piles (Comp.) (4123018-02) Soil									
% Solids	99.0	<u> </u>	%	1	EI42712	09/24/04	09/24/04	% calculation	
		:							
·									

Environmental Lab of Texas

Project: Dynegy/ Storage Tank Area Project Number: 1-0101 Project Manager: Cindy Crain

#### **Organics by GC - Quality Control**

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI42406 - Solvent Extraction (	GC)									
Blank (EI42406-BLK1)				Prepared:	09/24/04	Analyzed	: 09/25/04		_	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	**							
Total Hydrocarbon C6-C35	ND	10.0	17							
Surrogate: 1-Chlorooctane	47.2		mg/kg	50.0		94.4	70-130			
Surrogate: 1-Chlorooctadecane	35.3		"	50.0		70.6	70-130			
Blank (EI42406-BLK2)				Prepared:	09/24/04	Analyzed	I: 09/25/04			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	17							
Total Hydrocarbon C6-C35	ND	10.0	**							
Surrogate: 1-Chlorooctane	48.3		mg/kg	50.0		96.6	70-130			
Surrogate: 1-Chlorooctadecane	36.7		"	50.0		7 <b>3</b> .4	70-130			
LCS (EI42406-BS1)				Prepared:	: 09/24/04	Analyzed	1: 09/25/04			
Gasoline Range Organics C6-C12	436	10.0	mg/kg wet	500		87.2	75-125			
Diesel Range Organics >C12-C35	469	10.0	11	500		93.8	75-125			
Total Hydrocarbon C6-C35	905	10.0	Ħ	1000		90.5	75-125			
Surrogate: 1-Chlorooctane	56.6		mg/kg	50.0		113	70-130			
Surrogate: 1-Chlorooctadecane	<i>40.6</i>		"	50.0		81.2	70-130			
LCS (EI42406-BS2)				Prepared:	: 09/24/04	Analyzed	1: 09/25/04			
Gasoline Range Organics C6-C12	436	10.0	mg/kg wet	500		87.2	75-125			
Diesel Range Organics >C12-C35	457	10.0	"	500		91.4	75-125			
Total Hydrocarbon C6-C35	893	10.0	tt	1000		89.3	75-125			
Surrogate: 1-Chlorooctane	55.6		mg/kg	50.0	*		70-130			
Surrogate: 1-Chlorooctadecane	38.2		"	50.0		7 <b>6</b> .4	70-130			
Calibration Check (EI42406-CCV1)				Prepared	: 09/24/04	Analyzed	1: 09/25/04			
Gasoline Range Organics C6-C12	485		mg/kg	500		97.0	80-120		•	
Diesel Range Organics >C12-C35	546			500		109	80-120			
Total Hydrocarbon C6-C35	1030		"	1000		103	80-120			
Surrogate: 1-Chlorooctane	61.3		IT	50.0		123	70-130			
Surrogate: 1-Chlorooctadecane	58.1		"	50.0		116	70-130			

Environmental Lab of Texas

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Project: Dynegy/ Storage Tank Area Project Number: 1-0101 Project Manager: Cindy Crain

09/28/04 08:07

#### **Organics by GC - Quality Control**

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI42406 - Solvent Extraction (	GC)		-	_						
Calibration Check (EI42406-CCV2)				Prepared:	09/24/04	Analyzed	: 09/25/04			
Gasoline Range Organics C6-C12	506		mg/kg	500		101	80-120			
Diesel Range Organics >C12-C35	572		"	500		114	80-120			
Total Hydrocarbon C6-C35	1080		"	1000		108	80-120			
Surrogate: 1-Chlorooctane	62.6			50.0		125	70-130			
Surrogate: 1-Chlorooctadecane	51.7		"	50.0		103	70-130			
Matrix Spike (EI42406-MS1)	Sou	ırce: 4I2301	4-04	Prepared:	09/24/04	Analyzed	1: 09/25/04			
Gasoline Range Organics C6-C12	555	10.0	mg/kg dry	617	ND	90.0	75-125			
Diesel Range Organics >C12-C35	626	10.0	n	617	ND	101	75-125			
Total Hydrocarbon C6-C35	1180	10.0	n	1230	ND	95.9	75-125			
Surrogate: 1-Chlorooctane	56.2		mg/kg	50.0			70-130		~	
Surrogate: 1-Chlorooctadecane	36.7		"	50.0		73.4	70-130			
Matrix Spike (EI42406-MS2)	Sou	urce: 412401	0-01	Prepared:	09/24/04	Analyzed	1: 09/25/04			
Gasoline Range Organics C6-C12	509	10.0	mg/kg dry	526	ND	96.8	75-125			
Diesel Range Organics >C12-C35	599	10.0	н	526	ND	114	75-125			
Total Hydrocarbon C6-C35	1110	10.0	11	1050	ND	106	75-125			
Surrogate: 1-Chlorooctane	63.1		mg/kg	50.0		126	70-130			
Surrogate: 1-Chlorooctadecane	48.9		"	50.0		97.8	70-130			
Matrix Spike Dup (EI42406-MSD1)	So	urce: 412301	14-04	Prepared:	: 09/24/04	Analyzed	1: 09/25/04			
Gasoline Range Organics C6-C12	562	10.0	mg/kg dry	617	ND	91.1	75-125	1.25	20	
Diesel Range Organics >C12-C35	630	10.0	*	617	ND	102	75-125	0.637	20	
Total Hydrocarbon C6-C35	1190	10.0	"	1230	ND	96.7	75-125	0.844	20	
Surrogate: 1-Chlorooctane	54,5		mg/kg	50.0		109	70-130			
Surrogate: 1-Chlorooctadecane	37.0		"	50.0		74.0	70-130			
Matrix Spike Dup (EI42406-MSD2)	So	urce: 41240		Prepared	: 09/24/04	Analyzed	1: 09/25/04			
Gasoline Range Organics C6-C12	491	10.0	mg/kg dry	526	ND	93.3	75-125	3.60	20	
Diesel Range Organics >C12-C35	573	10.0	19	526	ND	109	75-125	4.44	20	
Total Hydrocarbon C6-C35	1060	10.0	"	1050	ND	101	75-125	4.61	20	
Surrogate: 1-Chlorooctane	59.9		mg/kg	50.0		120	70-130	•		
Surrogate: 1-Chlorooctadecane	45.3		"	50.0		90.6	7 <b>0-13</b> 0			

Environmental Lab of Texas

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- of

# General Chemistry Parameters by EPA / Standard Methods - Quality Control

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI42712 - % Solids										
Blank (EI42712-BLK1)		··· · · · · · · · · · · · · · · · · ·		Prepared	& Analyz	ed: 09/24/0	04			
% Solids	100		%							
Duplicate (EI42712-DUP1)	So	urce: 4I2200	9-01	Prepared	& Analyz	ed: 09/24/0	04			
% Solids	81.0		%		81.0			0.00	20	

Environmental Lab of Texas

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710

#### **Notes and Definitions**

DET	Analyte DETECTED
ND	· Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike

Dup Duplicate

KalandkJul Report Approved By: Date: 0-29-04

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director James L. Hawkins, Chemist/Geologist Sandra Biezugbe, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

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Page 7 of 7

# Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

Client: Larson & Associates

Date/Time: 09-23-04 @ 1445

Order #: 4 I 23018

Initials:

JMM

#### Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	1.5	С
Shipping container/cooler in good condition?	Tes	No		
Custody Seals intact on shipping container/cooler?	Yes	No	Not pres	ent <sub>&gt;</sub>
Custody Seals intact on sample bottles?	Yes	No	CNot pres	en⊳
Chain of custody present?	(Yes)	No		
Sample Instructions complete on Chain of Custody?	Yes	No		
Chain of Custody signed when relinquished and received?	res	No		
Chain of custody agrees with sample label(s)	(res)	No		
Container labels legible and intact?	res	No		
Sample Matrix and properties same as on chain of custody?	(es)	No		
Samples in proper container/bottle?	(res)	No		
Samples properly preserved?	(res)	No		
Sample bottles intact?	(res)	, No		
Preservations documented on Chain of Custody?	(res)	No		
Containers documented on Chain of Custody?	(es)	No		
Sufficient sample amount for indicated test?	(Yes)	No		
All samples received within sufficient hold time?	(res)	No		
VOC samples have zero headspace?	Yes	No	Not Applic	able

\_\_\_\_\_

Other observations:

 Variance Documentation:

 Contact Person: -\_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted by: \_\_\_\_\_

 Regarding:

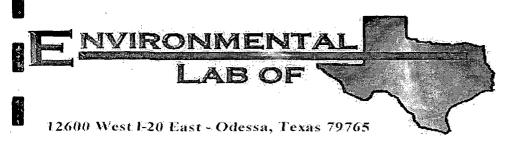
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 Corrective Action Taken:

 \_\_\_\_\_\_\_

 \_\_\_\_\_\_\_

	S, IDC, Fax: 432-687-0456 consultants 432-687-0901 id, Ste. 202 • Midland, TX 79701	REMARKS I.I.E., FILTRED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE)							e) DATE:	IS AIDRII #-		- Receiving Lab (10 be relurned 10 La After Receipt) - Project Manager - Qa/QC Coordinator	
CHAIN-OF	A drson & Marson Inc. Environmental Consultants 507 N. Marienfeld, Ste. 2	LAB. I.D. NUMBER (LAB USE ONLY)	14723018.01						RECEIVED BY: (Signature)	Sample Shipped BY: (Circle) Eedex	Ö,	YELLOW - RECEIVING LAB (10 BE F LA AFTER RECEIPT) PINK - PROJECT MANAGER GOLD - QA/QC COORDINATOR	SAMPLE TYPE:
PARAMETERS/METHOD NUMBER									DATE: 7/27/17 TIME: 1/345	DATE: TIME:	TURMAROUND TIME NEEDED	Signature) mcmuung 4 TIME: 1345	erson:
206-2010	BOIZW DE CONTRINERS		(cmp) 1 /						PUT RELINOUGHED BY: (Signature)	- RECEIVED B (Signature)		RECEIVED BY: (Signature ZIP: 79765 DATE 9-23 4	s Onice La contragt Person:
SITE MANAGER:	PROJECT NAME	S C SAMPLE IDENTIFICATION	$\mathbf{N}$	-					DATE <u>1/23/0</u> TIME: 05/1-7			N T-206 N T-206 STATE: 1X PHONE	1.5
CLIENT NAME:	PROJECT NO:: 1-0101 PAGE 0F	3 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 08320 0847					- •	SAMPLED BY: (Signature)	RELINOUIS (ED BY: Bignature)	COMMENTS:	RECEIVING LABORATORY: ADDRESS: 12600 1 CITY: 014556	SAMPLE CONDITION WHEN RECEIVED



# Analytical Report

## **Prepared for:**

Cindy Crain Larson & Associates, Inc. P.O. Box 50685 Midland, TX 79710

Project: Dynegy Monument Project Number: 1-0101 Location: None Given

Lab Order Number: 5B24003

Report Date: 02/25/05

Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710 Project: Dynegy Monument Project Number: 1-0101 Project Manager: Cindy Crain Fax: (432) 687-0456 Reported:

#### 02/25/05 11:07

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SF-7	5B24003-01	Soil	02/23/05 09:00	02/24/05 09:35
SF-8	5B24003-02	Soil	02/23/05 09:45	02/24/05 09:35
SF-9	5B24003-03	Soil	02/23/05 09:50	02/24/05 09:35
Spoil	5B24003-04	Soil	02/23/05 09:10	02/24/05 09:35

Project: Dynegy Monument Project Number: 1-0101 Project Manager: Cindy Crain

Organics by GC

		UI UI	games b	y uc					
Environmental Lab of Texas									
Anałyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SF-7 (5B24003-01) Soil							<b>`</b>		
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EB52307	02/24/05	02/24/05	EPA 8015M	
Diesel Range Organics >C12-C35	24.8	10.0	"	11	n	W	"	n	
Total Hydrocarbon C6-C35	24.8	10.0	H	11			11	11	
Surrogate: 1-Chlorooctane		88.2 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		107 %	70-130		"	"	"	"	
SF-8 (5B24003-02) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EB52307	02/24/05	02/24/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	и	11	
Total Hydrocarbon C6-C35	ND	10.0	11	м	t1	n	"	н	
Surrogate: 1-Chlorooctane		89.0 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		101 %	70-	130	n	"	"	"	
SF-9 (5B24003-03) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EB52307	02/24/05	02/24/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0		*1	"	н	u	н	
Total Hydrocarbon C6-C35	ND	10.0	"	"	11	N	11	n	
Surrogate: 1-Chlorooctane		86.6 %	70-	130	"	"	"	11	
Surrogate: 1-Chlorooctadecane		101 %	5 70-	130	"	"	".	"	
Spoil (5B24003-04) Soil					_		_		
Gasoline Range Organics C6-C12	J [8.88]	10.0	) mg/kg dry	1	EB52307	02/24/05	02/24/05	EPA 8015M	J
Diesel Range Organics >C12-C35	259	10.0	) "	14	"	"	"	11	
Total Hydrocarbon C6-C35	259	10.0	) "		"	*1	11	11	
Surrogate: 1-Chlorooctane		86.2 %	6 70-	130	"	"	"	"	

104 %

Environmental Lab of Texas

Surrogate: 1-Chlorooctadecane

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

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70-130

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Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710

#### General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
SF-7 (5B24003-01) Soil							·		
Chloride	100	5.00	mg/kg	10	EB52503	02/24/05	02/24/05	EPA 300.0	
% Moisture	4.5	0.1	%	1	EB52504	02/24/05	02/25/05	% calculation	
SF-8 (5B24003-02) Soil									
Chloride	398	20.0	mg/kg	40	EB52503	02/24/05	02/24/05	EPA 300.0	
% Moisture	22.1	0.1	%	1	EB52504	02/24/05	02/25/05	% calculation	
SF-9 (5B24003-03) Soil									
Chloride	92.2	5.00	mg/kg	10	EB52503	02/24/05	02/24/05	EPA 300.0	
% Moisture	16.5	0.1	%	1	EB52504	02/24/05	02/25/05	% calculation	
Spoil (5B24003-04) Soil									
Chloride	740	20.0	mg/kg	40	EB52503	02/24/05	02/24/05	EPA 300.0	
% Moisture	12.7	0.1	%	1	EB52504	02/24/05	02/25/05	% calculation	

Environmental Lab of Texas

#### **Organics by GC - Quality Control**

**Environmental Lab of Texas** 

···	Dec 1	Reporting	LI	Spike	Source	0/DEC	%REC	ססמ	RPD	N1-+-
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EB52307 - Solvent Extraction	(GC)									
Blank (EB52307-BLK1)				Prepared:	02/23/05	Analyzed	: 02/24/05			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	n							
Total Hydrocarbon C6-C35	ND	10.0	H							
Surrogate: 1-Chlorooctane	44.9		mg/kg	50.0	····	89.8	70-130		<u></u>	
Surrogate: 1-Chlorooctadecane	41.1		"	50.0		82.2	70-130			
LCS (EB52307-BS1)				Prepared:	02/23/05	Analyzed	1: 02/24/05			
Gasoline Range Organics C6-C12	453	10.0	mg/kg wet	500		90.6	75-125			
Diesel Range Organics >C12-C35	460	10.0	"	500		92.0	75-125			
Total Hydrocarbon C6-C35	913	10.0	II.	1000		91.3	75-125			
Surrogate: 1-Chlorooctane	46.7	····	mg/kg	50.0		93.4	70-130			
Surrogate: 1-Chlorooctadecane	36.7		"	50.0		73.4	70-130			
Calibration Check (EB52307-CCV1)				Prepared:	02/23/05	Analyzed	1: 02/24/05			
Gasoline Range Organics C6-C12	509		mg/kg	500		102	80-120			
Diesel Range Organics >C12-C35	565		"	500		113	80-120			
Total Hydrocarbon C6-C35	1070		**	1000		107	80-120			
Surrogate: 1-Chlorooctane	48.6		"	50.0		97.2	70-130			
Surrogate: 1-Chlorooctadecane	47.8	•	"	50.0		95.6	70-130			
Matrix Spike (EB52307-MS1)	Sou	rce: 5B230	07-03	Prepared	: 02/23/05	Analyzed	i: 02/24/05			
Gasoline Range Organics C6-C12	530	10.0	mg/kg dry	602	ND	88.0	75-125			
Diesel Range Organics >C12-C35	579	10.0	"	602	ND	96.2	75-125			
Total Hydrocarbon C6-C35	1110	10.0	"	1200	ND	92.5	75-125			
Surrogate: 1-Chlorooctane	37.3		mg/kg	50.0		74.6	70-130			
Surrogate: 1-Chlorooctadecane	39.3		"	50.0		78. <b>6</b>	70-130			
Matrix Spike Dup (EB52307-MSD1)	Sou	rce: 5B230	007-03	Prepared	: 02/23/05	Analyzed	1: 02/24/05			
Gasoline Range Organics C6-C12	516	10.0	mg/kg dry	602	ND	85.7	75-125	2.68	20	
Diesel Range Organics >C12-C35	600	10.0	"	602	ND	99.7	75-125	3.56	20	
Total Hydrocarbon C6-C35	1120	10.0	"	1200	ND	93.3	75-125	0.897	20	
Surrogate: 1-Chlorooctane	41.4		mg/kg	50.0		82.8	70-130			
Surrogate: 1-Chlorooctadecane	38.0		"	50.0		76.0	70-130			

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General Chemistry Parameters by EPA / Standard Methods -	Quality Control
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#### **Environmental Lab of Texas**

	·	· · · · · · · · · · · · · · · · · · ·								
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB52503 - Water Extraction										
Blank (EB52503-BLK1)				Prepared	& Analyz	ed: 02/24/	05			
Chloride	ND	0.500	mg/kg							
Blank (EB52503-BLK2)				Prepared	& Analyz	ed: 02/24/	05			
Chloride	ND	0.500	mg/kg							
LCS (EB52503-BS1)				Prepared	& Analyz	ed: 02/24/	05			
Chloride	10.3		mg/L	10.0		103	80-120			
LCS (EB52503-BS2)				Prepared	& Analyz	ed: 02/24/	05			
Chloride	10.4		mg/L	10.0		104	80-120			
Calibration Check (EB52503-CCV1)				Prepared	& Analyz	ed: 02/24/	05			
Chloride	10.4		mg/L	10.0		104	80-120			
Calibration Check (EB52503-CCV2)				Prepared	& Analyz	ed: 02/24/	05			
Chloride	10.4		mg/L	10.0		104	80-120			
Duplicate (EB52503-DUP1)	So	urce: 5B220	06-01	Prepared	& Analyz	ed: 02/24/	05			
Chloride	35.3	5.00	mg/kg		42.2			17.8	20	
Duplicate (EB52503-DUP2)	So	urce: 5B240	02-02	Prepared	& Analyz	ed: 02/24/	05			
Chloride	17.2	5.00	mg/kg		17.1			0.583	20	
Batch EB52504 - General Preparatio	n (Prep)									
Blank (EB52504-BLK1)				Prepared	: 02/24/05	Analyzed	d: 02/25/05	5		
% Moisture	ND	0.1	%			`				

Environmental Lab of Texas

#### General Chemistry Parameters by EPA / Standard Methods - Quality Control

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB52504 - General Prepar	ation (Prep)						<b>.</b> .			
Duplicate (EB52504-DUP1)	So	urce: 5B2400	02-01	Prepared:	02/24/05	Analyzed	: 02/25/05			
% Moisture	13.0	0.1	%		12.3			5.53	20	

Environmental Lab of Texas

CLIENT NAME:	SITE MANAGER:		PARAMET	parameters/method number	CHAIN-OF-CUSTODY RECORD
Dynegy	Cinty Crain				A cross 8
PROJECT NO :	PROJECT NAME:	ATAINER	ə, WS		Favironmental Consultants Environmental Consultants 432-687-0901
PAGE / OF /	LAB. PO #C, 324009		108		507 N. Marienfeld, Ste. 202 • Midland, TX 79701
1105 23141M 311111 311111	SAMPLE IDENTIFICATION	NUMBER	914D HJL		LAB. I.D. REMARKS NUMBER II.E., FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, (LAB USE ONLY) GRAB COMPOSITE)
~ 0900 2	SF-7 -	0	7 7		
	55-8		7 7		
- 0350 -	55-9 1	1 50	? 7		
" 0610 "	5ail -1	1 1	7		
					•
		-			
SAMPLED BY: (Signature)	DATE: 2/23/05	RELIMOUSHED BY: Signature)	(Signature)	DATE: 201/05	E RECEIVED BY: (Signature) DATE:
I willing Caper	TIME: 0945	( will a	der	TIME: 030	TIME:
RELINQUISHED BY: (Signature)	DATE:	RECEIVED BY: (Signature)	nature)	DATE:	SAMPLE SHIPPED BY: (Circle)
	TIME:			TIME:	A
COMMENTS:			F	TURNAROUND TIME NEEDED	WHITE - RECEIVING LAB
RECEIVING LABORATORY: ENDINOM MENTUL	monmental Lats of	TX RECEIVED	(Fa BY: (Signature)	le la	2
CITY: CONTACT:	STATE: ZIP: PHONE:	DATE:	12	TIME: 9:36	GOLD - QA/QC COORDINATOR
SAMPLE CONDITION WHEN RECEIVED:			LA CONTACT PERSON	No.	SAMPLE TYPE: Soil
					4. 化脱合物 化加加分离分离合物 化合合物合物 化合合物合物合合物合物合物合物合物合物合物合物合物合物合物合

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#### **Notes and Definitions**

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported

dry Sample results reported on a dry weight basis

- RPD Relative Percent Difference
- LCS Laboratory Control Spike
- MS Matrix Spike

Dup Duplicate

alandk Juli Report Approved By:

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director James L. Hawkins, Chemist/Geologist Sandra Sanchez, Lab Tech.

Date: 2-25-05

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If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

# Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

Client: <u>l</u>	arson & Associ	
Date/Time	e: 2/22/05 9:35	-
Order #:	SB24003	
Initials:	· Cle	

#### Sample Receipt Checklist

Temperature of container/cooler?	YES	No	0,6 0
Shipping container/cooler in good condition?	203	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Notpresent
Custody Seals intact on sample bottles?	Yes	No	Not present,
Chain of custody present?	(es)	No	
Sample Instructions complete on Chain of Custody?	Xes	No	
Chain of Custody signed when relinquished and received?	Xes	No	
Chain of custody agrees with sample label(s) no label	X	No	wittenorlid
Container labels legible and intact?	1000	No	nla
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	res	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Ass	No	
Sufficient sample amount for indicated test?	Pes	No	
All samples received within sufficient hold time?	AS	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

Variance Documentation:

^ \_ \_\_\_\_

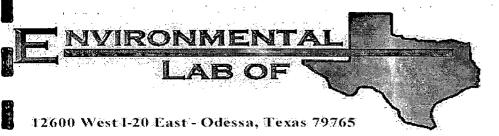
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Contact Person:	_Date/Time:	 Contacted by:	
Regarding:			

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Corrective Action Taken:

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# Analytical Report

# **Prepared for:**

Cindy Crain Larson & Associates, Inc. P.O. Box 50685 Midland, TX 79710

Project: Dynegy Monument Storage Area Project Number: 1-0101 Location: None Given

Lab Order Number: 5E18009

Report Date: 05/23/05

Larson & Associates, Inc.	Project: Dynegy Monument Storage Area	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 1-0101	Reported:
Midland TX, 79710	Project Manager: Cindy Crain	05/23/05 09:51

#### ANALYTICAL REPORT FOR SAMPLES

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Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Spoil	5E18009-01	Soil	05/17/05 15:36	05/18/05 09:42

Organics by GC

		Environn	nental L	ab of T	Texas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Spoil (5E18009-01) Soil		-							
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EE51809	05/18/05	05/20/05	EPA 8015M	
Diesel Range Organics >C12-C35	68.3	10.0	11	н	n	H	n	"	
Total Hydrocarbon C6-C35	68.3	10.0	*1	11	. "	н	и	If	
Surrogate: 1-Chlorooctane		93.4 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		80.8 %	70-1	130	"	"	"	"	

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 2 of 6

Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710

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#### General Chemistry Parameters by EPA / Standard Methods

**Environmental Lab of Texas** 

10	Analyte Spoil (5E18009-01) Soil	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Chloride	314	20.0	mg/kg	40	EE52004	05/19/05	05/19/05	EPA 300:0	
	% Moisture	14.0	0.1	%	1	EE51817	05/18/05	05/19/05	% calculation	

Environmental Lab of Texas

## Organics by GC - Quality Control Environmental Lab of Texas

		·····				· · · ·				
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
	Result			Level		/ONEC	Linus	KFD		notes
Batch EE51809 - Solvent Extraction	(GC)									
Blank (EE51809-BLK1)				Prepared:	05/18/05	Analyzed	: 05/20/05			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	н							
Total Hydrocarbon C6-C35	ND	10.0	n							
Surrogate: 1-Chlorooctane	41.2		mg/kg	50.0		82.4	70-130			
Surrogate: 1-Chlorooctadecane	37.9		"	50.0		75.8	70-130			
LCS (EE51809-BS1)				Prepared:	05/18/05	Analyzed	: 05/20/05			
Gasoline Range Organics C6-C12	438	10.0	mg/kg wet	500		87.6	75-125			
Diesel Range Organics >C12-C35	493	10.0	"	500		98.6	75-125			
Total Hydrocarbon C6-C35	931	10.0	**	1000		93.1	75-125			
Surrogate: I-Chlorooctane	42.7		mg/kg	50.0		85.4	70-130			
Surrogate: 1-Chlorooctadecane	35.2		"	50.0		70.4	70-130			
Calibration Check (EE51809-CCV1)				Prepared:	05/18/05	Analyzed	: 05/20/05			
Gasoline Range Organics C6-C12	483		mg/kg	500		96.6	80-120		·	
Diesel Range Organics >C12-C35	506		н	500		101	80-120			
Total Hydrocarbon C6-C35	989		"	1000		98.9	80-120			
Surrogate: 1-Chlorooctane	54.2	· · · · · · · · · · · · · · · · · · ·	"	50.0		108	70-130			
Surrogate: 1-Chlorooctadecane	42.6		"	50.0		85.2	70-130			
Matrix Spike (EE51809-MS1)	So	urce: 5E180	04-22	Prepared:	: 05/18/05	Analyzed	: 05/20/05			
Gasoline Range Organics C6-C12	583	10.0	mg/kg dry	543	34.6	101	75-125			
Diesel Range Organics >C12-C35	734	10.0	"	543	141	109	75-125			
Total Hydrocarbon C6-C35	1320	10.0	"	1090	176	105	75-125			
Surrogate: 1-Chlorooctane	47.5		mg/kg	50.0	-	95.0	70-130			
Surrogate: 1-Chlorooctadecane	36.3		"	50.0		72.6	70-130			
Matrix Spike Dup (EE51809-MSD1)	So	urce: 5E180	04-22	Prepared	: 05/18/05	Analyzed	: 05/20/05			
Gasoline Range Organics C6-C12	569	10.0	mg/kg dry	543	34.6	98.4	75-125	2.43	20	
Diesel Range Organics >C12-C35	736	. 10.0	*	543	141	110	75-125	0.272	20	
Total Hydrocarbon C6-C35	1300	10.0	n	1090	176	103	75-125	1.53	20	
Surrogate: 1-Chlorooctane	45.7		mg/kg	50.0		91.4	70-130			
Surrogate: 1-Chlorooctadecane	36.1		"	50.0		72. <b>2</b>	70-130			

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General Chemis		neters by Environm				iods - Q	uality (	Contro	l	
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE51817 - General Preparation	n (Prep)	-								
Blank (EE51817-BLK1)				Prepared	& Analyze	ed: 05/18/	05			
% Moisture	ND	0.1	%							
Duplicate (EE51817-DUP1)	So	urce: 5E1700	8-01	Prepared	& Analyze	ed: 05/18/	05			
% Moisture	9.4	0.1	%		9.1			3.24	20	
Batch EE52004 - Water Extraction										
Blank (EE52004-BLK1)				Prepared	& Analyz	ed: 05/19/	05	•		
Chloride	ND	0.500	mg/kg							
LCS (EE52004-BS1)				Prepared	& Analyz	ed: 05/19/	05			
Chloride	10.4		mg/L	10.0		104	80-120			
Calibration Check (EE52004-CCV1)				Prepared	& Analyz	ed: 05/19/	05			
Chloride	10.4		mg/L	10.0		104	80-120			
Duplicate (EE52004-DUP1)	So	urce: 5E1801	13-02	Prepared						
Chloride	633	25.0	mg/kg	-	655			3.42	20	

Environmental Lab of Texas

Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710

#### **Notes and Definitions**

موريغور د	DET	Analyte DETECTED
-	ND	Analyte NOT DETECTED at or above the reporting limit
	NR	Not Reported
	dry	Sample results reported on a dry weight basis
	RPD	Relative Percent Difference
4	LCS	Laboratory Control Spike
	MS	Matrix Spike
110	Dup	Duplicate

Report Approved By: <u>Kalandk Jwal</u> Date: <u>5-23-05</u>

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director James L. Hawkins, Chemist/Geologist Sandra Sanchez, Lab Tech.

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If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

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# **Environmental Lab of Texas** Variance / Corrective Action Report - Sample Log-In

	Client:	anson
	Date/Time: _	5/18/05 10:00
ſ	Order #:	6E18009
	Initials:	CR

### Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	6.0 C
Shipping container/cooler in good condition?	res	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Fes	No	
Sample Instructions complete on Chain of Custody?	(es)	No	
Chain of Custody signed when relinquished and received?	(PES)	No	
Chain of custody agrees with sample label(s)	Yes	No	none
Container labels legible and intact?	Yes	No	na
Sample Matrix and properties same as on chain of custody?	YES	No	
Samples in proper container/bottle?	(TES)	No	
Samples properly preserved?	(es)	No	
Sample bottles intact?	Fes	No	
Preservations documented on Chain of Custody?	(ES)	No	
Containers documented on Chain of Custody?	Xes,	No	
Sufficient sample amount for indicated test?	Tes	No	
All samples received within sufficient hold time?	(Es	No	
VOC samples have zero headspace?	B	No	Not Applicable

# Other observations: Should be 4.0°c - was recorded at 6.0°c.

No label-written on lid,

Variance	Documentation:

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Contact Person: -\_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Regarding: 

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Corrective Action Taken:

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FCUSTODY RECORD	SS, INC. Fax: 432-687-0456 Consultants 432-687-0901	507 N. Marienfeld, Ste. 202 • Midland, TX 79701	(I.E., FILTERED, UNRILFERED, PRESERVED, UNRILFERED, GRAB, COMPOSITE)								e) DATE:		Circle)	BUS AIRBILL #: LIPS OTHER		LAB (IO BE RELUKNED IO ECEIPT)	PROJECT MANAGER QA/QC COORDINATOR	
CHAIN-OF-	A arson & ssociates, Inc.	507 N. Marienfe	NUMBER (LAB USE ONLY)	SHIB009-0							RECEIVED BY: (Signature)	)	SAMPLE SHIPPED BY: (Circle)	FEDEX FAMD DEI WEDED	WHITE RECEIVING LAB	Š	PINK - PROJECT MANAGER GOLD - QA/QC COORDINAT	SAMPLE TYPE:
PARAMETERS/METHOD NUMBER		· · · · · · · · · · · · · · · · · · ·									DATE-5//8/03	TIME:	DATE: 05-18-05	TIME: 0942				
PARAMETERS/N	2p. WS1.	1.01 08	4D HJL	7 7							(Slanature)	5 Res	ature)	menum	IUKNAK	RECEIVED BY: (Signature)	TIME	LA CONTACT PEPSON:
	PU-7 Social Hear	s ot co	NUMBER							· · ·	RELINCTICHED BY	( when he	RECEIVED BY: (Signature)	gene n	· · ·	RECEIVE	DATE:	
SITE MANAGER:	Circly Cr PROJECT NAME: MOTUMONT	#0	SAMPLE IDENTIFICATION	Spoil			·				DATE-5/17/25	TIME: 1536	DATE: 5/18/65	TIME: 0942	· · ; ': ·		STATE: ZIP: DUONE. ZIP:	
		1   LAB. PO #	OTHER SOU	7								Aller .	(Signature)			RATORY:		ć.
CLIENT NAME:	PROJECT NO. I-010	PAGE / OF	3W11 3140	10							CAMPER RV. ISimplified	JANNEL UNIT	RETINOUISHEDTBY	X	COMMENTS:	RECEIVING LABORATORY:	ADDRESS: CITY:	SAMPLE CONDITION WHEN RECEIVED:

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S. R. T.

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