

1R - 445

# REPORTS

DATE:

1/30/2004

January 30, 2004

Mr. Paul Sheeley  
New Mexico Oil Conservation Division – District I  
1625 North French Drive  
Hobbs, New Mexico 88240

**Re: Pipeline Spill Investigation Report, Dynegy Midstream Services, L.P., Unit Letter H (SE/4, NE/4), Section 30, Township 22 South, Range 38 East, Lea County, New Mexico**

Dear Mr. Sheeley:

Dynegy Midstream Services, L.P. (Dynegy) has retained Larson and Associates Inc. (LA) to investigate potential impacts to soil from a historic natural gas liquids spill that occurred from a pipeline leak in the southeast quarter (SE/4) of the northeast quarter (NE/4), Section 30, Township 22 South, Range 38 East, Lea County, New Mexico (Site #06). The spill did not involve a reportable quantity of gas or liquid. A Release Notification and Corrective Action form (C-141) was filed only at the request of the New Mexico Oil Conservation Division (NMOCD). The leak was repaired.

On December 12, 2001, LA submitted a Pipeline Spill Investigation Report to the NMOCD, detailing results of an initial investigation at Site #06. The report stated that impacted soil would be excavated to a depth of approximately seven (7) feet below ground surface (bgs), and blended to reduce the total petroleum hydrocarbon (TPH) concentration below the NMOCD Recommended Remediation Action Level (RRAL). The work plan was approved by the NMOCD in a letter dated December 12, 2001. This report details the final investigation and remediation conducted at Site #6. Figure 1 presents a site location and topographic map. Appendix A presents a copy of the form C-141.

#### **Current Investigation**

On August 21, 2003, LA personnel collected a soil sample at Site #6 by hand auger methods. The hand auger soil sample was collected using a stainless steel hand auger, from the surface to a depth of approximately one (1) foot bgs, where caliche was encountered, preventing further advancement of the hand auger.

The soil sample was placed in a clean glass sample jar, labeled, chilled in an ice chest, and delivered under chain-of-custody control to Environmental Lab of Texas I, Ltd. (ELOT), located in Odessa, Texas. A duplicate sample was collected in a clean glass sample jar for headspace analysis. The headspace jar was filled approximately  $\frac{3}{4}$  full, and covered with a layer of aluminum foil before the cap was replaced. The headspace sample was 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. After calibrating the

instrument to 99.9 ppm, 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).

The samples were analyzed for TPH by method SW-846-8015, including gasoline range (GRO) and diesel range organics (DRO) and chlorides by EPA method SW-846-9253. The sample was not analyzed for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) since the PID reading was below 100 ppm. The NMOCD allows a PID of less than 100 ppm to substitute for a BTEX laboratory analysis. Table 1, below, presents a summary of the laboratory results and PID reading. Figure 2 shows the hand auger boring location. Appendix B presents the laboratory analyses and chain-of-custody documentation.

**Table 1: Summary of Headspace and Laboratory Analyses of Soil from Soil Boring**  
**Dynegy Midstream Services, L.P., Spill Site #06**  
**SE/4, NE/4, Section 30, Township 22 South, Range 38 East**  
**Lea County, New Mexico**

Sample Date	Soil Boring	Sample Depth (feet bgs)	GRO C6-C12 (mg/kg)	DRO >C12-C35 (mg/kg)	TPH C6-C35 (mg/kg)	Chloride (mg/kg)	PID (ppm)
<b>RRAL</b>					<b>1000</b>		
8/21/2003	HB-1	0-1	<10.0	<10.0	<20.0	<20.0	0.1

Based on published literature (1961), groundwater occurs at approximately 145 feet bgs. No domestic wells were observed within ½ mile of the site. The NMOCD has established soil remediation action levels (RRALs) for benzene, BTEX and TPH resulting from spills of natural gas liquids (“Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993”).

The following RRAL’s have been assigned based on NMOCD criteria:

**Benzene**                    **10 mg/kg**  
**Total BTEX**            **50 mg/kg**  
**TPH**                        **1000 mg/kg**

Referring to Table 1, the TPH and chloride concentrations were below the test method detection limit in the sample from the surface to one (1) foot bgs.

On October 23, 2003, the soil at Site #6 was excavated to a depth of seven (7) feet bgs and a soil sample was collected in a clean glass sample jar and delivered to ELOT for laboratory analysis of TPH and chloride. A duplicate sample was also collected for headspace analysis, as described above. Table 2, below, presents a summary of laboratory analyses of soil from the excavation, and

Mr. Paul Sheeley  
January 30, 2004  
Page 2

PID readings. Figure 2 shows the sample location and TPH concentration. Appendix B presents laboratory data and chain-of-custody documentation.

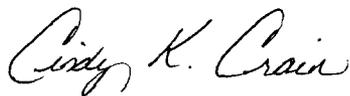
**Table 2: Summary of Headspace and Laboratory Analyses of Soil Samples  
Dynegy Midstream Services, L.P., Spill Site #06  
SE/4, NE/4, Section 30, Township 22 South, Range 38 East  
Lea County, New Mexico**

Sample Date	Soil Sample	Sample Depth (feet bgs)	GRO C6-C12 (mg/kg)	DRO >C12-C35 (mg/kg)	TPH C6-C35 (mg/kg)	Chloride (mg/kg)	PID (ppm)
<b>RRAL</b>					<b>1000</b>		
10/23/2003	SS-1	7	<10.0	36.4	36.4	70.9	0.7

Referring to Table 2, the TPH concentration was below the RRAL. The NMOCD does not have an RRAL for chloride. The sample was not analyzed for BTEX since the PID reading was below 100 ppm.

All soil removed from the excavation was blended and returned to the hole. As the TPH concentration at a depth of seven (7) feet bgs was below the RRAL, Dynegy requests that Site #6 be closed. Please contact Mr. Cal Wrangham with Dynegy at (432) 688-0555 or myself at (432) 687-0901 if you have questions. We may also be contacted by e-mail at [Cal.Wrangham@Dynegy.com](mailto:Cal.Wrangham@Dynegy.com), or [Cindy@Laenvironmental.com](mailto:Cindy@Laenvironmental.com).

Sincerely,  
**Larson & Associates, Inc.**

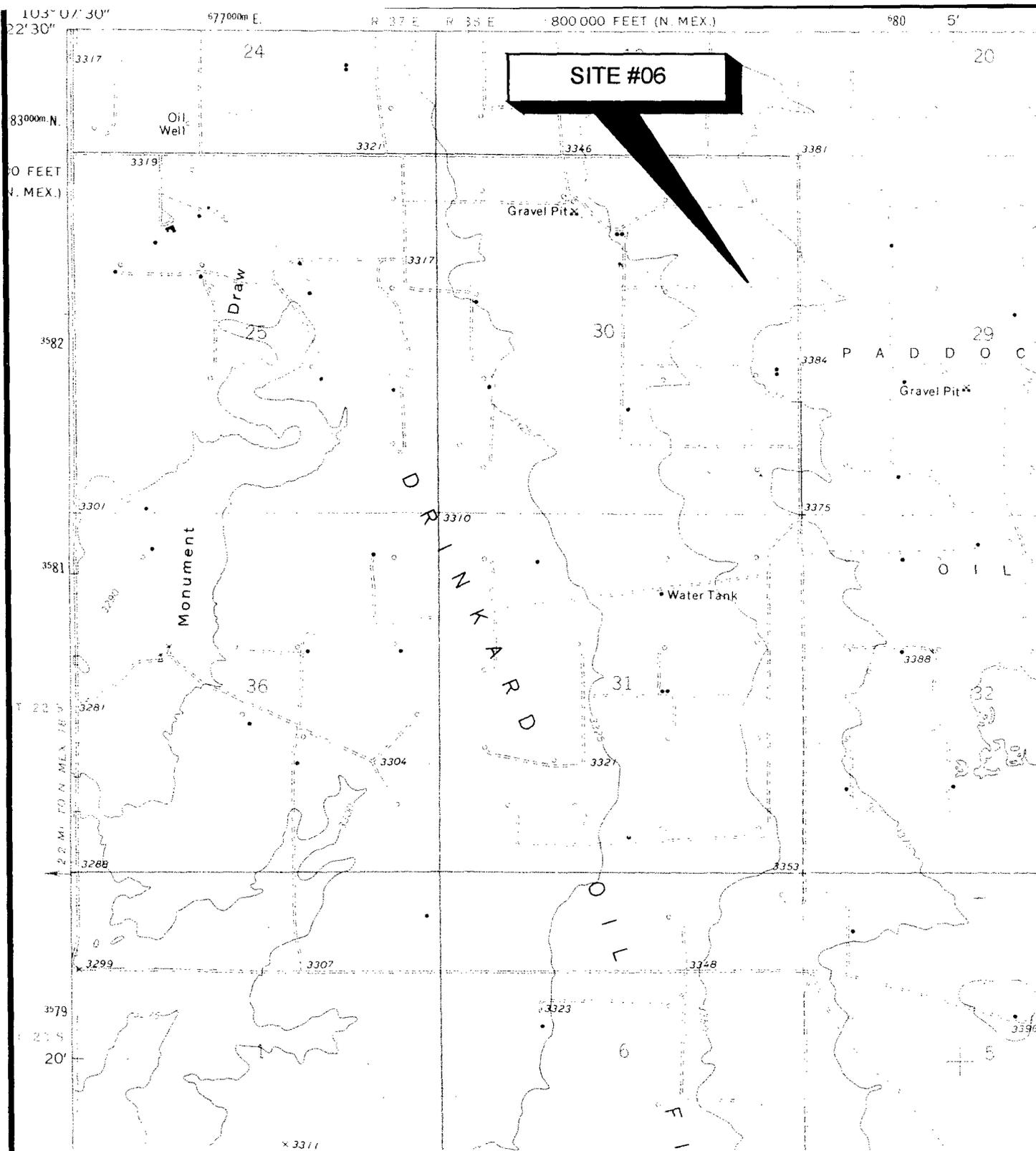


Cindy K. Crain, CPG

Encl.

cc: Mr. Dave Harris - Dynegy  
Mr. Cal Wrangham - Dynegy  
Mr. Roger Holland- Dynegy

**FIGURES**



**SITE #06**

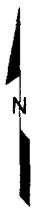
**FIGURE #1**

LEA COUNTY, NEW MEXICO  
**DYNEGY MIDSTREAM SERVICES, L.P.**  
 SITE #06  
 SE/4, NE/4, SECTION 30, T-22-S, R-38-E

**TOPOGRAPHIC MAP**

**L**arson & Associates, Inc.  
 Environmental Consultants

TAKEN FROM U.S.G.S.  
 EUNICE SE, TEX. - N. MEX. 1979  
 7.5' QUADRANGLES



SCALE: 1"=2000'

DATE:  
 8/21/03  
 NAME:  
 FILE:  
 0-0100-06

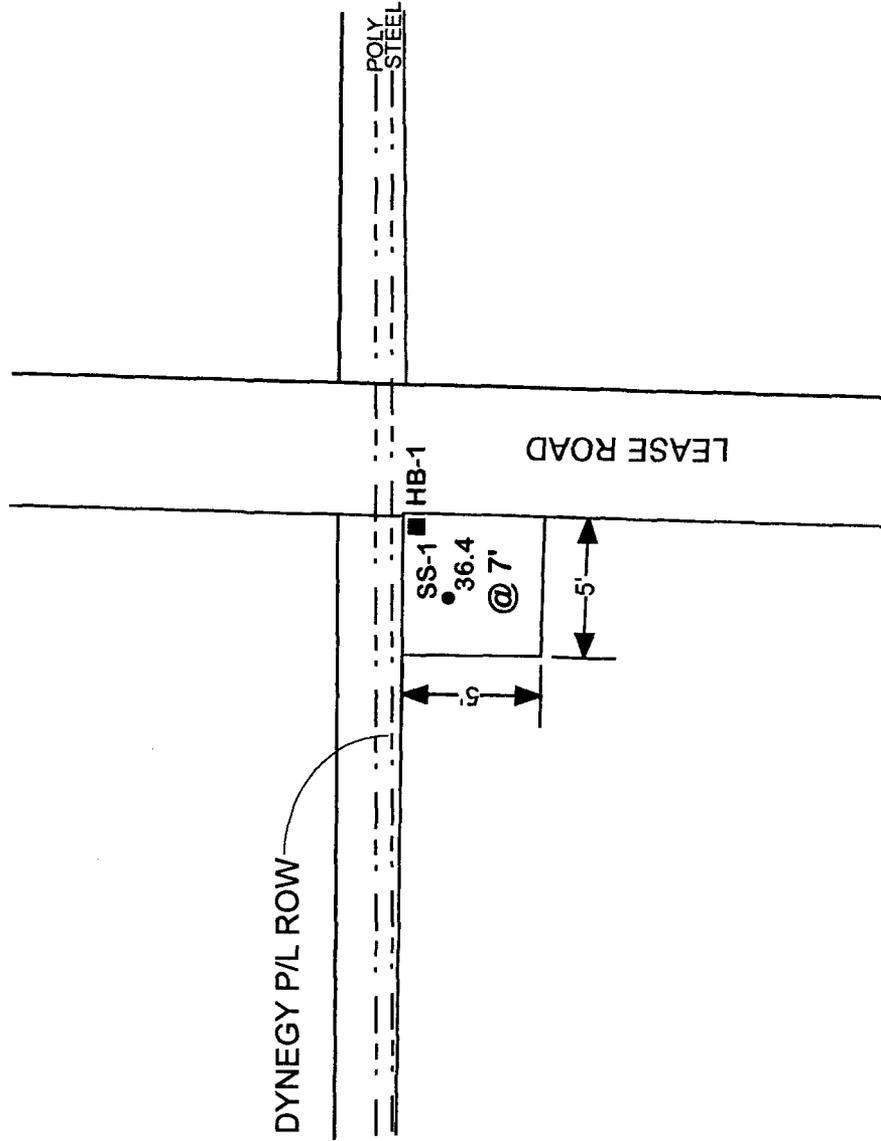


FIGURE #2

LEA COUNTY, NEW MEXICO  
 DYNEGE MIDSTREAM SERVICES, L.P.  
 SITE #06  
 SE1/4, NE1/4, SECTION 30, T-22-S, R-38-E

SITE DETAILS

DATE: 11/04/03  
 NAME:  
 FILE:



**LEGEND**  
 HB-1 ■ HAND AUGER SOIL BORING LOCATION (8/21/03)  
 SS-1 ● SAMPLE LOCATION and  
 TPH CONCENTRATION, 10/23/03



**APPENDIX A**

**Release Notification and Corrective Action Form (C-141)**



**APPENDIX B**

**Laboratory Reports**

# ANALYTICAL REPORT

## Prepared for:

JOHN STEWART  
LARSON AND ASSOCIATES, INC.  
P.O. BOX 50685  
MIDLAND, TX 79710

Project: Dynegy

PO#:

Order#: G0307284

Report Date: 08/25/2003

### Certificates

US EPA Laboratory Code TX00158

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

LARSON AND ASSOCIATES, INC.  
P.O. BOX 50685  
MIDLAND, TX 79710  
915-687-0456

Order#: G0307284  
Project: 0-0100-06  
Project Name: Dynegy  
Location: None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0307284-01	0-0100-06 0-1	SOIL	8/21/03 9:55	8/21/03 17:30	4 oz glass	ice
<u>Lab Testing:</u>		Rejected: No	Temp:	1.0 C		
8015M Chloride						

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

JOHN STEWART  
 LARSON AND ASSOCIATES, INC.  
 P.O. BOX 50685  
 MIDLAND, TX 79710

Order#: G0307284  
 Project: 0-0100-06  
 Project Name: Dynegy  
 Location: None Given

Lab ID: 0307284-01  
 Sample ID: 0-0100-06 0-1

**8015M**

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor		
		8/23/03	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	125%	70	130
1-Chlorooctadecane	123%	70	130

Approval: Celey D. Keene 08/25/03  
 Raland K. Tuttle, Lab Director, QA Officer      Date  
 Celey D. Keene, Org. Tech. Director  
 Jeanne McMurrey, Inorg. Tech. Director  
 Sandra Biezugbe, Lab Tech.  
 Sara Molina, Lab Tech.

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

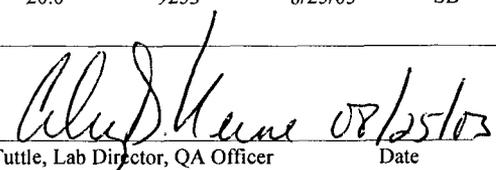
JOHN STEWART  
LARSON AND ASSOCIATES, INC.  
P.O. BOX 50685  
MIDLAND, TX 79710

Order#: G0307284  
Project: 0-0100-06  
Project Name: Dynegy  
Location: None Given

Lab ID: 0307284-01  
Sample ID: 0-0100-06 0-1

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	< 20.0	mg/kg	1	20.0	9253	8/25/03	SB

Approval: 

Raland K. Tuttle, Lab Director, QA Officer  
Celey D. Keene, Org. Tech. Director  
Jeanne McMurrey, Inorg. Tech. Director  
Sandra Biezugbe, Lab Tech.  
Sara Molina, Lab Tech.

Date  
08/25/03

RL = Reporting Limit    N/A = Not Applicable

Page 1 of 1

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

8015M

Order#: G0307284

<i>BLANK</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0006605-02			<10.0		
<i>CONTROL</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0006605-03		952	964	101.3%	
<i>CONTROL DUP</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0006605-04		952	979	102.8%	1.5%
<i>SRM</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0006605-05		1000	942	94.2%	

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

### Test Parameters

Order#: G0307284

<b>BLANK</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0006608-01			< 20		
<b>MS</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0307280-01	0	500	478	95.6%	
<b>MSD</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0307280-01	0	500	496	99.2%	3.7%
<b>SRM</b>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0006608-04		5000	4960	99.2%	



# ANALYTICAL REPORT

## Prepared for:

JOHN STEWART  
LARSON AND ASSOCIATES, INC.  
P.O. BOX 50685  
MIDLAND, TX 79710

**Project:** Dynergy Site #06

**PO#:**

**Order#:** G0307767

**Report Date:** 10/27/2003

### Certificates

US EPA Laboratory Code TX00158

# ENVIRONMENTAL LAB OF TEXAS

## SAMPLE WORK LIST

LARSON AND ASSOCIATES, INC.  
P.O. BOX 50685  
MIDLAND, TX 79710  
915-687-0456

Order#: G0307767  
Project: 0-0100-06  
Project Name: Dynergy Site #06  
Location: Lea County

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0307767-01	Soil SS-1	SOIL	10/23/03	10/23/03 15:15	4 oz glass	Ice
	<u>Lab Testing:</u> 8015M Chloride	Rejected: No		Temp: 4.5 C		

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

JOHN STEWART  
 LARSON AND ASSOCIATES, INC.  
 P.O. BOX 50685  
 MIDLAND, TX 79710

Order#: G0307767  
 Project: 0-0100-06  
 Project Name: Dynergy Site #06  
 Location: Lea County

Lab ID: 0307767-01  
 Sample ID: Soil SS-1

**8015M**

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
Blank	Prepared	Analyzed	Amount	Factor		
		10/23/03	1	1	JLH	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	36.4	10.0
TOTAL, C6-C35	36.4	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	95%	70	130
1-Chlorooctadecane	103%	70	130

Approval: *Celey D. Keene* 10/27/03

Raland K. Tuttle, Lab Director, QA Officer  
 Celey D. Keene, Org. Tech. Director  
 Jeanne McMurrey, Inorg. Tech. Director  
 Sandra Biezugbe, Lab Tech.  
 Sara Molina, Lab Tech.

Date

# ENVIRONMENTAL LAB OF TEXAS

## ANALYTICAL REPORT

JOHN STEWART  
LARSON AND ASSOCIATES, INC.  
P.O. BOX 50685  
MIDLAND, TX 79710

Order#: G0307767  
Project: 0-0100-06  
Project Name: Dynergy Site #06  
Location: Lea County

Lab ID: 0307767-01  
Sample ID: Soil SS-1

### Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	70.9	mg/kg	1	20	9253	10/25/03	SB

Approval: *Aly D. Keene* 10/27/03

Raland K. Tuttle, Lab Director, QA Officer  
Celey D. Keene, Org. Tech. Director  
Jeanne McMurrey, Inorg. Tech. Director  
Sandra Biezugbe, Lab Tech.  
Sara Molina, Lab Tech.

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

8015M

Order#: G0307767

<i>BLANK</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0007225-02			<10.0		
<i>CONTROL</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0007225-03		952	877	92.1%	
<i>CONTROL DUP</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0007225-04		952	840	88.2%	4.3%
<i>SRM</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0007225-05		1000	997	99.7%	

# ENVIRONMENTAL LAB OF TEXAS

## QUALITY CONTROL REPORT

### Test Parameters

Order#: G0307767

<i>BLANK</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0007243-01			<20.0		
<i>MS</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0307768-01	0	500	496	99.2%	
<i>MSD</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0307768-01	0	500	496	99.2%	0.0%
<i>SRM</i>	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0007243-04		5000	4960	99.2%	

