# 1R- 412

# REPORTS

# DATE:



# E.O.T.T. ENERGY CORPORATION

#### SITE INVESTIGATION

CLAY OSBORN JALMAT #1 Ref. # 2000-10606

SW<sup>1</sup>/4 SW<sup>1</sup>/4 UL-M Section 7 T25S R37E ~<sup>1</sup>/<sub>2</sub> mile Northwest of Jal Lea County, New Mexico Latitude: 32°08'25"N Longitude: 103°12'38"W

December 8, 2001

Prepared by

Environmental Plus, Inc. 2100 Avenue O P.O. Box 1558 Eunice, New Mexico 88231 Tele 505•394•3481 FAX 505•394•2601



#### Table of Contents

#### **1.0 INTRODUCTION**

This site is located in Unit Letter M, in the SW of the SW of Section 7 T25S R37E, approximately mile northwest of Jal, Lea County New Mexico at Latitude 32°08'25"N and Longitude 103°12'38"W. The property is owned by Clay and Gerry Osborn who live in the ranch headquarters approximately 1 mile southeast of the site. A topographical map is included in Attachment I. The leak is historical and the crude oil release and recovery volumes unknown. Photographs are included as Attachment IV.

#### 2.0 ENVIRONMENTAL MEDIA CHARACTERIZATION

Chemical parameters of the soil and ground water were characterized consistent with the characterization and remediation/abatement goals and objectives set forth in the New Mexico Oil Conservation Division (NMOCD) approved "General Work Plan for Remediation of E.O.T.T. Pipeline Spills, Leaks and Releases in New Mexico, July 2000" and the NMOCD guidelines published in the following documents;

- Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)
- Unlined Surface Impoundment Closure Guidelines (February 1993)

Acceptable thresholds for contaminants/constituents of concern (CoCs), i.e., TPH, Benzene, and the sum of Benzene, Toluene, Ethyl Benzene, and total Xylene (BTEX), will be determined based on the NMOCD Ranking Criteria as follows;

- Depth to Ground water, i.e., distance from the lower most acceptable concentration to the ground water.
- Wellhead Protection Area, i.e., distance from fresh water supply wells.
- Distance to Surface Water Body, i.e., horizontal distance to all down gradient surface water bodies.

#### 2.1 GEOLOGICAL DESCRIPTION

The United States Geological Survey (USGS) Ground-Water Report 6, "Geology and Ground-Water Conditions in Southern Lea County, New Mexico," A. Nicholson and A. Clebsch, 1961, describes the near surface geology of southern Lea County as an intergrade of the Quaternary Alluvium (QA) sediments, i.e., fine to medium sand, with the mostly eroded Cenozoic Ogallala (CO) formation. During the investigation a yellowish to tan silty clay interbed was identified at ~55 feet below ground surface ('bgs) and supports a 3-foot thick zone of saturation. Typically, the QA and CO formations in the area are capped by a thick interbed of caliche and was encountered at 5-7'bgs.

#### 2.2 ECOLOGICAL DESCRIPTION

The area is typical of the Upper Chihuahuan Desert Biome consisting primarily of hummocky sand hills covered with Harvard Shin Oak (Querqus harvardi) interspersed with Honey Mesquite (Prosopis glandulosa) along with typical desert grasses and weeds. Mammals represented, include Orrd's and Merriam's Kangaroo

Rat, Deer Mouse, White Throated Wood Rat, Cottontail Rabbit, Black Tailed Jackrabbit, and the Mule Deer. Reptiles, Amphibians, and Birds are numerous and typical of area. A survey of Listed, Threatened, or Endangered species was not conducted.

#### 2.3 AREA GROUND WATER

A temporary monitor well was installed at the Borehole #5 location to delineate ground water level and possible contamination. The unconfined ground water aquifer occurs at the site at 52.4'bgs and is consistent with information provided by the New Mexico Tech Geoinformation website,

(<u>www.geoinfo.nmt.edu/.esrimap</u>), the New Mexico Office of the State Engineer, and other information available for the site. Copies of the State Engineer's Average Depth to Ground Water Reports for Range 36E and 37E in Township 25 are included in Attachment II. According to the USGS, the ground water elevation decreases generally to the southeast.

#### 2.4 AREA WATER WELLS

The only water well within 1000 feet of the site is a windmill well bore currently not in use located 872 horizontal feet northeast of the site and is transverse gradient to the site.

#### 2.5 AREA SURFACE WATER BODIES

There are no permanent or intermittent surface water bodies within 1000 horizontal feet of the site.

#### 3.0 NMOCD SITE RANKING

Based on the proximity of the site to protectable area water wells, surface water bodies, and depth to ground water, the site has an NMOCD ranking score of 40 points with the soil remedial goals highlighted below in the Site Ranking Matrix.

1. Gro	ound Water	2. Wellh	nead Protection Area	3. Distance to Surface Water Body
If Depth to points If Depth to feet: 10 point	GW <50 feet: 20 GW 50 to 99	If <1000' from from private of points	m water source, or;<200' domestic water source: 20	<200 horizontal feet: 20 points 200-100 horizontal feet: 10 points
If Depth to points	GW >100 feet: 0	If >1000' from from private of points	m water source, or; >200' domestic water source: 0	>1000 horizontal feet: 0 points
Ground water	Score = 20	Wellbead Prote	ction Area Score= 20	Surface Water Score= 0
Site Rank $(1+2+3) = 20 + 20 + 0 =$			0 points	
Total S	ite Ranking So	ore and Ac	ceptable Remedial G	oal Concentrations
Parameter	>19	10-19		0-9
Benzene <sup>1</sup>	10 рр	<b>m</b> 10 ppm		10 ppm
BTEX	50 рр	m	50 ppm	50 ppm
ТРН	100 pp	m	1000 ppm	\$000 ppm

#### 4.0 SUBSURFACE SOIL INVESTIGATION

Strategically located boreholes were sampled discretely at 5' vertical intervals using a hollow stem auger and stainless steel sample probe with a vinyl sleeve. All samples were jarred immediately and then decanted into a zip lock bag for Volatile Organic Constituent (VOC) Headspace analysis using a calibrated Photoionization Detector (PID). Sampling equipment was decontaminated routinely between sampling iterations. The site sample location map is included in Attachment I. The spill area perimeter defines the horizontal extent of CoC contamination. Vertical contamination persists to 45'bgs at BH5, 20'bgs at BH2, 10'bgs at BH8, and 5'bgs at BH7. Estimated contaminated volume is 1,479 yd<sup>3</sup>. The original analytical reports are provided and summarized in Attachment III. The data is illustrated below.





#### 5.0 GROUND WATER INVESTIGATION

Soil data from BH5 indicated an increasing CoC gradient and justified the ground water investigation. A temporary monitor well was advance, installed, developed, and sampled in the area of BH5. Concentrations of Benzene, Toluene, and m,p,&o-Xylene were detected above the instrument detection limit of 1-µg/L but an order of magnitude below the New Mexico Water Quality Control Commission

(WQCC) standard for Benzene and 2 orders of magnitude below the Toluene and Xylene WQCC standard. Elevated concentrations of Arsenic, Chromium, Lead, and Mercury were also detected with Mercury in excess of the WQCC standard of 0.002 mg/L at 0.0120 mg/L. Samples were collected and analyzed from the Clay Osborn Pond Well located approximately 800 feet southeast of the Jalmat 22A and 22B sites and is considered an "unimpacted reference" with non-detections of the above metals. The pH of the reference Pond Well is 7.0 SU while the Jalmat #1 monitor well is 6.8 SU. The lower pH could be due to the carbon dioxide  $(CO_2)$ released during the natural attenuation of the soluble hydrocarbon source term in the ground water. Trace amounts of the detected metals occur naturally in the subsurface and tend to adsorb onto the surface of the iron coated clay interbed granules at pH = 7.0. When the pH is <7.0, the tendency is for the adsorbed trace metals to desorb into solution and therefore become detectable. Also, the total metals analyses were performed on unfiltered samples. The Chloride and Total Dissolved Solids (TDS) parameters are also elevated above the levels found in the reference Pond Well and suggests a ground water impact from oil and gas production, handling, and transportation activities occurring up-gradient of the site. It should be acknowledged that the EOTT waste stream does not include detectable metals, chloride, or constituents that contribute to TDS.

ATTACHMENT I: SITE MAPS



CLAY OSBORN JALMAT #1



# ATTACHMENT II: AVERAGE DEPTH TO GROUND WATER REPORTS AND WELL MAP

CLAY OSBORN JALMAT #1



CLAY OSBORN JALMAT #1

#### New Mexico Office of the State Engineer

Page 1 of 1

Township: 255	Range. 36E	Sections: 12.13.1.	2,11,14.23,24
NAD27 X	Y	Zone:	Search Radius:
County: Ba	sin:	• Numi	er: Sutříx:
Owner Name: (First)	(La	st) 6 All	← Non-Domestic ← Domestic
Well / Surfa	ce Data Report	Avg Dep	th to Water Report
	Wate	er Column Report	
	Clear Form	WATERS Menu	Help

Bsn	Tws	Rng	Sec	Zone	x	r	Wells	(Depth Min	Water Max	in Feet) Avg

No Records found, try again

#### New Mexico Office of the State Engineer

Page 1 of 1



Wa	iter Column Report		
Clear Form	WATERS Menu	Help	
a the second of any other			

AVERAGE DEPTH OF WATER REPORT 12/29/2001

								(Depth	Water	in	Feet)
Bsn	TWS	Rng	Sec	%one	×	Y	Walls	Min	Max		Avg
CP -	255	328	19				9	217	r.3		44
CP	258	3.43	22				ň	23	60		$\frac{2}{2} \mathcal{E}_{i}$

Record County .5

http://164.64.214.10/awdProd/awd.html?email\_address-enviplus1@aol.com&tws-25S&r... 12/29/2001

Ļ

#### ATTACHMENT III: ORIGINAL ANALYTICAL REPORTS AND SUMMARIES

CLAY OSBORN JALMAT #1

1

1 1

				Е.О. Л	almat #1 Do	y rıpel elineati	ine Ja on Da	ta ta						
Borchole	Sampling Interval (FT. BGS <sup>1</sup> )	SAMPLE ID#	Date Taken	Lithology	HEADSPACE VOC <sup>2</sup> (ppm)	GRU <sup>3</sup> mg/Kg	DRO <sup>4</sup> mg/Kg	<sup>д</sup> у/дш	BTEX mg/Kg	Benzene mg/Kg	Tolucne mg/Kg	Ehtyl Benzene mg/Kg	m.p- Xylene mg/Kg	o-Xylene mg/Kg
An	9 5	EJMGP1-02 EJMGP1-05 EJMGP1-10	6/21/2000 6/21/2000 6/21/2000	Blow Sind Blow Sind Blow Sand	4.1. 12 01	10 10 10	10 10	8 & 8	0.5 05 05	0100 0100	0.100	0.100	0.100 0.100 0.100	0.100
A State States	رینہ <b>3</b>	EIMGP1-15	6/21/2000	Blow Sand	13	10 10	<b>00</b> 10	<b>8</b> 8	05.05	0100	0.100	0.178	0.100	<b>010</b> 0
	מע ו	EIMGP2-05	6/21/2000	Blow Sand	34.0	9	482	492	0.74	0.100	0.100	0.151	0.255	0.134
14	10	EJMGP2-10	6/21/2000	Blow Sand	170.0	249	2922	3171	9.497	0.100	1.470	0.797	4.000	3.130
	15	EJMGP2-15	6/21/2000	Blow Sand	127.0	93	1395	1488	7.799	0.100	1.160	0.619	3.720	2.200
	20	EJMGP2-20	6/21/2000	Blow Sand	21.9	10	112	122	0.52	0.100	0.120	0.100	().1())	0.100
	1. 2. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	EIMGP3-02	6/21/200	Blow Sand	<b>30.4</b>	0	10.25	. QZ	0549	0000	0.149	0.100	0100	0.100
		EIMGP3-05	6/21/2000	Blow Fand	00	10		8 7	0.5 0.50	0,100	0.100	0100	0.100	0.100
	<b>b</b>	EMGP3-15	6/21/2000	Blow Sand		9	<b>9</b>	\$ 8	2.5	0100	0.100	0.100 0.100	010 0	0.100
	2	EJMGP4-02	6/21/2000	Blow Sand	0.0	10	28	38	U.5	0.100	0.100	0.100	0.100	0.100
-	ŝ	EJMGP4-05	6/21/2000	Blow Sand	0.0	10	10	20	0.5	0.100	0.100	0.100	0.100	0.100
4	10	EJMGP4-10	6/21/2000	Blow Sand	0.0	10	10	20	0.56	0.100	0.160	0.100	0.100	0.100
	15	EJMGP4-15	6/21/2000	Blow Sand	0.0	10	10	20	0.5	0.100	0.100	0.100	0.100	0.100
00 ppm Isobut	ylenc calibratic	m gas = 101 ppm												
ogs – below gru	ound surface													
VOC-Volatile	Organic Conta	minants/Constitu	ients											
<b>3RO-Gasoline</b>	: Range Organi	cs												
<b>DRO-Diesel R</b> ¢	ange Organics													
TPH-T'otal Peti	roleum Hydroc	arbon = GRO+L	JRO.											
30lded values a	tre in excess of	the New Mexico	Oil Conservatic	on Division guid	leline threshold for	the param	cter							
talicized value:	s are < the inst	rument detection	limit.											
4/A Not Analy	yzed													
eported detect	ion limits are c	onsidered "de mir	nimus" values a	nd are included	in the GRO/DRC	CELLS pure	ć summati	ons.						

14

CLAY OSBORN JALMAT #1

: 1

- -- ----

t i

> : }

> > l

| |-|

]

Sampling (FT. BGS <sup>1</sup> )         SAMPLE ID#         Date Taken         Lithology           Porchole         Interval         SAMPLE ID#         Date Taken         Lithology           (FT. BGS <sup>1</sup> )         EIMGP5.05         Sand         Sand         Sand           1         EIMGP5.05         EIMGP5.05         Sand         Sand           1         EIMGP5.05         EIMGP5.05         Sand         Sand           2         EIMGP5.05         EIMGP5.05         Sand         Sand           2         EIMGP5.05         Sand         Sand         Sand           2         EIMGP5.05         Sand         Sand         Sand           30         EIMGP5.05         Sand         Sand         Sand           4         EIMGP5.05         Sand         Sand         Sand           4         EIMGP5.05         Sand         Sand         Sand           5         EIMGP7.05         Sand         Sand         Sand           6         EIMGP7.05         Sand         Sand         Sand           6         EIMGP7.05         Sand         Sand         Sand           7         EIMGP7.05         Sand         Sand         Sand <t< th=""><th>HEADSPACE sy VOC<sup>2</sup> (ppm)</th><th>GRO<sup>3</sup> DR( mg/kg mg/l 20 20 10 10 117 10 117 10 10 10 117 20 20 10 10 10 10 10 10 10 10 10 10 10 10 10</th><th>7<sup>4</sup> TPH<sup>5</sup> Kg mg/Kg 200 2005 2005 2006 2005 2005 2005 2005</th><th>BTFX I mg/Kg (45 (45 (45) (416 (416 (416 (416 (416 (416) (45) (45) (45) (45)</th><th>Senzene Te mg/Kg m 0.000 0 0.000 0 0.000 0 0.000 1 0.000 0 0.000 1 0.000 0 0.000 0 0.0100 0 0.000 0 0.0000 0 0.000 0 0.0000 0 0.00000000</th><th>Bulance Eine Bulance Bernard Brito (100 (100 (100 (100 (100 (100 (100 (10</th><th>yl m.p. Kg mg/Kg b/ 0100 00 0100 00 0100 00 1100 00 1100 00 1100 00 0100 00 0100 00 0100 00 0100 00 0100 00 0100 00 0100 00 0100</th><th>o-Nylene mg/Kg 0.100 0.100 0.100 8.850 2.500 2.500 2.2800 0.100 0.100 0.100 0.100 0.100</th></t<>	HEADSPACE sy VOC <sup>2</sup> (ppm)	GRO <sup>3</sup> DR( mg/kg mg/l 20 20 10 10 117 10 117 10 10 10 117 20 20 10 10 10 10 10 10 10 10 10 10 10 10 10	7 <sup>4</sup> TPH <sup>5</sup> Kg mg/Kg 200 2005 2005 2006 2005 2005 2005 2005	BTFX I mg/Kg (45 (45 (45) (416 (416 (416 (416 (416 (416) (45) (45) (45) (45)	Senzene Te mg/Kg m 0.000 0 0.000 0 0.000 0 0.000 1 0.000 0 0.000 1 0.000 0 0.000 0 0.0100 0 0.000 0 0.0000 0 0.000 0 0.0000 0 0.00000000	Bulance Eine Bulance Bernard Brito (100 (100 (100 (100 (100 (100 (100 (10	yl m.p. Kg mg/Kg b/ 0100 00 0100 00 0100 00 1100 00 1100 00 1100 00 0100 00 0100 00 0100 00 0100 00 0100 00 0100 00 0100 00 0100	o-Nylene mg/Kg 0.100 0.100 0.100 8.850 2.500 2.500 2.2800 0.100 0.100 0.100 0.100 0.100
Borehole         Interval         SAMPLE ID#         Date Taken         Lithology           (FT. BGS)         2         EIMCP5-05         Sand         Sand           (FT. BGS)         10         EIMCP5-05         Sand         Sand         Sand           (FT. BGS)         10         EIMCP5-05         Sand	gy         VOC:2           (ppm)         0.0           1         0.0           1         0.0           1         1           500.0         500.0           200.0         0.0           0.0         0.0	GKU DK mg/kg mg/ 10 10 10 10 10 11 11 11 11 11 11 10 10		mg/kg 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	mg/kg m mg/kg m 0.100 0 0.100 0 0.0100 0 0.000 0 0.0000 0 0.00000000	ucine Bena g/Kg mg/l 1100 010 1100 010 1100 010 1245 046 500 1245 046 500 1245 046 500 1245 046 500 1245 046 500 1245 046 500 120 010 1100 010 010 010	cne Xylene Kg mg/Kg 00 0100 00 0100 00 0100 25 000 00 14100 00 80400 00 80400 00 0100 00 0100 00 0100 00 0100 00 0100	
2     FINGES-02     Send       10     EJMGPS-10     Send       11     EJMGPS-10     Send       12     EJMGPS-10     Send       13     EJMGPS-10     Send       14     EJMGPS-10     Send       15     EJMGPS-20     Send       20     EJMGPS-30     Send       30     EJMGP6-05     Sand       31     EJMGP6-10     Sand       3     EJMGP6-13     Sand       4     BMGP7-10     Sand       5     EJMGP8-05     Sand       6     EJMGP8-05	00 1 1 1 1 1 1 1 1 1 1 1 1 1	20 10 10 10 10 10 10 10 11 11 1	2000 2000 2000 2000 2000 2000 2000 200	0.5 0.5 0.5 0.5 3.092 3.093 3.7219 3.7219 10.6 1.805 1.805 1.805 0.553 0.553 0.553 0.553 0.553 0.553 0.5536	0100 0100 0000000000000000000000000000	1100 010 1100 010 1100 010 1100 010 1245 045 1245 045 1245 045 1245 045 1245 045 1245 045 1200 010 1100 0110 1100 0110	00 0100 00 0100 00 0100 00 0000 00 11700 00 11700 00 11700 00 11700 00 11700 00 01735 00 0.153	0.100 0.100 0.100 0.100 0.09% 0.9% 0.28500 0.28500 0.28500 0.28500 0.28500 0.100 0.100 0.100
Finderson     Einderson     Saud       10     Eindersin     Saud       15     Eindersin     Saud       20     Eindersin     Saud       21     Eindersin     Saud       22     Eindersin     Saud       39     Eindersin     Saud       40     Eindersin     Saud       41     Eindersin     Saud       42     Eindersin     Saud       43     Eindersin     Saud       44     Eindersin     Saud       45     Eindersin     Saud       46     Eindersin     Saud       47     Eindersin     Saud       48     Eindersin     Saud       5     Eindersin     Saud       5     Eindersin     Saud       5     Eindersin     Saud       6     Eindersin     Saud       7     Eindersin     Saud       8     Eindersin     Saud       8     Eindersin     Saud       9     Eindersin     Saud       10     Eindersin     Saud       11     Eindersin     Saud       12     Eindersin     Saud       13     Eindersin     Saud       14 <t< td=""><td>17 17 1800 41800 5000 5000 2000 2000 0.0 0.0 0.0 0.0 0.0 0.0 0.</td><td>10 10 20 10 10 10 10 10 10 10 10 10 10 10 10 10</td><td>2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2</td><td>0.5 0.5 0.92 0.45 0.45 0.45 0.45 0.45 0.5530 0.5530 0.5530 0.553000 0.5530000000000</td><td>0,100 0,100 0,100 0,100 0,100 0,100 0,100 0,100 0,100 0,100 0,100 0,100 0,100 0,000 0,000000</td><td>X100 010 X100 010 X100 500 X040 500 X040 500 X040 500 X040 500 X040 010 X070 010 X010 0110 X100 0110 X100 0110</td><td>00 0100 0100 0100 00 0100 00 00 00 00 00</td><td>0.100 4.400 4.400 0.996 5.720 5.720 2.600 2.2800 0.282 0.451 0.451 0.451 0.451 0.100 0.100 0.100</td></t<>	17 17 1800 41800 5000 5000 2000 2000 0.0 0.0 0.0 0.0 0.0 0.0 0.	10 10 20 10 10 10 10 10 10 10 10 10 10 10 10 10	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0.5 0.5 0.92 0.45 0.45 0.45 0.45 0.45 0.5530 0.5530 0.5530 0.553000 0.5530000000000	0,100 0,100 0,100 0,100 0,100 0,100 0,100 0,100 0,100 0,100 0,100 0,100 0,100 0,000 0,000000	X100 010 X100 010 X100 500 X040 500 X040 500 X040 500 X040 500 X040 010 X070 010 X010 0110 X100 0110 X100 0110	00 0100 0100 0100 00 0100 00 00 00 00 00	0.100 4.400 4.400 0.996 5.720 5.720 2.600 2.2800 0.282 0.451 0.451 0.451 0.451 0.100 0.100 0.100
10         EJMGPS-10         Sad           15         EJMGPS-15         Sad           15         EJMGPS-15         Sad           20         EJMGPS-15         Sad           21         EJMGPS-15         Sad           22         EJMGPS-15         Sad           45         EJMGPS-15         Sad           22         EJMGPS-15         Sad           23         EJMGPS-15         Sad           45         EJMGP-05         Sad           2         EJMGP-05         Sad           2         EJMGP-05         Sad           34         EJMGP-05         Sad           45         EJMGP-05         Sad           5         EJMGP-05         Sad           5         EJMGP-05         Sad           5         EJMGP-05         Sad           5         EJMGP-05         Sad           6         EJMGP-05         Sad           7         IJ         EJMGP-05         Sad           7         IJ         EJMGP-05         Sad           8         EJMGP-05         Sad         Sad           8         IJ         EJMGP-05         Sad <td>17 6080 4160 5000 2000 2000 2000 000 000 210 510 2000 210 2000 200</td> <td>10 10 102 102 102 117 117 117 117 117 117 117 11</td> <td>× 688 888 89 2 × × × × × × × × × × × × × × × × × ×</td> <td>0.5 20.92 3.493 5.728 57.28 20.65 10.65 20.45 11.895 0.553 0.550 0.5530 0.5530 0.5530 0.5530 0.5530 0.5530 0.5530 0.5530 0.5530 0.5530000000000</td> <td>0,000 (000 (000 (000 (000 (000 (000 (00</td> <td>A100         A100           1340         \$00           1245         \$00           1245         \$00           2300         \$102           2300         \$550           8300         \$555           8100</td> <td>00 01100 22 1.700 00 25 000 00 80 400 00 80 400 00 80 400 00 01 110 0 0.153 0 0.153 0 0.153</td> <td>4400 4400 0.996 8.850 8.850 25.500 22.800 0.100 0.100 0.100 0.100 0.100</td>	17 6080 4160 5000 2000 2000 2000 000 000 210 510 2000 210 2000 200	10 10 102 102 102 117 117 117 117 117 117 117 11	× 688 888 89 2 × × × × × × × × × × × × × × × × × ×	0.5 20.92 3.493 5.728 57.28 20.65 10.65 20.45 11.895 0.553 0.550 0.5530 0.5530 0.5530 0.5530 0.5530 0.5530 0.5530 0.5530 0.5530 0.5530000000000	0,000 (000 (000 (000 (000 (000 (000 (00	A100         A100           1340         \$00           1245         \$00           1245         \$00           2300         \$102           2300         \$550           8300         \$555           8100	00 01100 22 1.700 00 25 000 00 80 400 00 80 400 00 80 400 00 01 110 0 0.153 0 0.153 0 0.153	4400 4400 0.996 8.850 8.850 25.500 22.800 0.100 0.100 0.100 0.100 0.100
I:         EIMGPS-IS         Sand           20         EJMGPS-2D         Sand           21         EJMGPS-3D         Sand           32         EJMGPS-3D         Sand           33         EJMGPS-3D         Sand           34         EJMGPS-3D         Sand           35         EJMGPS-3D         Sand           36         EJMGPS-3D         Sand           45         EJMGPS-4D         Sand           45         EJMGPS-4D         Sand           45         EJMGP0-05         Sand           5         EJMGP0-10         Sand           6         5         EJMGP0-15         Sand           7         EJMGP0-15         Sand           7         EJMGP702         Sand           6         EJMGP713         Sand           7         EJMGP713         Sand           2         EJMGP725         Sand           2         EJMGP725         Sand           2         EJMGP725         Sand           8         EJMGP725         Sand           8         EJMGP223         Sand           9         EJMGP203         Sand           1	6001) 418/0 500.0 5000 2000 2000 0.0 0.0 0.0 0.0 0.0 0.0 0.	10,22 294 11,22 294 11,123 298 11,177 201 11,177 201 21,183 201 21,183 201 21,183 201 21,193 201 201 10 10 10 10 10 10 10 10 10 10 10 10 10 1		20.92 3.493 5.725 5.725 20.65 180.6 180.6 20.65 0.553 0.553 0.553 0.553 0.553 0.553 0.553	0,100 4,000	(100 0.110 0.100 0	00 9000 00 7000 00 7000 00 70000 00 70000 00 70000 00 0.735 00 0.153 00 0.153	4400 0.996 8.850 8.850 24.800 0.100 0.100 0.100 0.100 0.100
F         EJMGPS-20         Sant           EJMGPS-30         EJMGPS-30         Sant           Si         EJMGPS-40         Sant           A         EJMGPS-40         Sant           A         EJMGPS-40         Sant           A         EJMGPS-40         Sant           A         EJMGP6-05         Sant           Sant         EJMGP0-15         Sant           A         EJMGP702         Sant           A         EJMGP703         Sant           A         EJMGP703         Sant           B         EJMGP703         Sant           B <t< td=""><td>4180 5000 4000 4000 2000 2000 0.0 0.0 0.0 0.0 0.0 0.0 0.</td><td>104 220 1123 348 1177 465 1177 465 1177 465 1177 465 1177 465 1177 465 1177 465 1177 465 1177 10 10 10 10 10 10 10 10 10 10 10 10 10 1</td><td>5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5</td><td>3,493 57,25 20,45 180. 180. 180. 21,805 1.895 0.553 0.553 0.553 0.553 0.553 0.553 0.553</td><td>0,000 0,000 0,000 0,000 0,000 0,000 0,000 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,000000</td><td>1245 0.45 2300 102 2300 5.46 5.100 5.46 8.100 5.46 8.100 5.5 2.979 0.39 1.100 0.110 1.100 0.110</td><td>00 11700 00 14100 00 14100 00 80400 00 80400 00 80400 00 1110 0 0.735 0 0.153</td><td>0.282 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100</td></t<>	4180 5000 4000 4000 2000 2000 0.0 0.0 0.0 0.0 0.0 0.0 0.	104 220 1123 348 1177 465 1177 465 1177 465 1177 465 1177 465 1177 465 1177 465 1177 465 1177 10 10 10 10 10 10 10 10 10 10 10 10 10 1	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	3,493 57,25 20,45 180. 180. 180. 21,805 1.895 0.553 0.553 0.553 0.553 0.553 0.553 0.553	0,000 0,000 0,000 0,000 0,000 0,000 0,000 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,000000	1245 0.45 2300 102 2300 5.46 5.100 5.46 8.100 5.46 8.100 5.5 2.979 0.39 1.100 0.110 1.100 0.110	00 11700 00 14100 00 14100 00 80400 00 80400 00 80400 00 1110 0 0.735 0 0.153	0.282 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100
F     EJMGPS-30     EMGPS-30     Sad       30     EJMGPS-30     Sad       35     EJMGPS-40     Sad       45     EJMGPS-45     Sad       45     EJMGPS-45     Sad       45     EJMGPS-45     Sad       45     EJMGPS-45     Sad       6     5     EJMGPS-45     Sad       6     5     EJMGP6-05     Sad       7     EJMGP6-15     Sad       7     EJMGP7-15     Sad       7     EJMGP7-15     Sad       7     EJMGP7-15     Sad       8     10     EJMGP7-15     Sad       2     EJMGP8-05     Sad       2     EJMGP8-05     Sad       2     EJMGP8-15     Sad       2     EJMGP8-20     Sad	500.0 40000 40000 20000 5000 0.0 0.0 0.0 0.0 0.0 10.0 0.0 0.0 0.0	1123 348 1177 345 1177 345 1117 345 1117 345 2183 340 117 345 50 340 1		57,23 20,45 180. 180. 180. 2146 1.895 0.553 0.553 0.553 0.553 0.553 0.553 0.553 0.553	0100 12 0100 2 0100 13 0100 10 0100 0 0100 0 0100 0 0100 0 0100 0 0100 0 0100 0 0100 0 0100 0 0100 0 00100 0 000 0 000 0 000 0 000 0 00 0 00 0 00 0	2300 102 5100 549 5100 549 8300 293 8100 566 8100 0.13 1100 0.110 1100 0.110	00 25 000 00 14 100 00 80 400 00 80 400 00 80 400 00 70 900 00 70 900 00 0.735 0 0.153 0 0.153	8,850 5,720 5,720 26,500 24,800 0,248,800 0,451 0,451 0,451 0,451 0,100 0,100 0,100
<ul> <li>EINGPS-R</li> <li>EINGP-R</li> <li>EINGPR-R</li> <li>EING</li></ul>	4000 4000 2000 5000 5000 510 6000 100 6000 6000 600	1177 1117 1113 1113 2113 2113 2013 500 500 10 10 10 10 10 10 10 10 10 10 10 10 1		20,45 180. 180. 181.6 2146 1.895 0.553 0.553 0.553 0.553 0.553 0.553 0.553 0.553 0.553 0.553 0.553 0.553	2,100 0,100 0,100 0,00 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100 0,0100	<b>5.100</b> 5.40 <b>5.100</b> 2055 <b>8.300</b> 2055 <b>8.100</b> 2056 <b>8.100</b> 2056 <b>9.100</b> 0.10 0.100 0.110 0.100 0.110	00 14 100 00 80 400 00 70 900 00 80 400 00 90 50 600 0 0.735 0 0.153 0 0.100	\$5720 26,500 22,800 34,800 0,245 0,451 0,100 0,100 0,100 0,100
<ul> <li>EIMCPS-35</li> <li>EIMCPS-35</li> <li>EIMCPS-45</li> <li>EIMCPS-45</li> <li>EIMCPS-45</li> <li>EIMCPS-45</li> <li>Sand</li> <li>Sand&lt;</li></ul>	2000 2000 5000 0.0 0.0 0.0 0.0 0.0 100 0.0 0.0 0.0	1113 401 21135 610 21135 510 20135 510 50 93 50 93 50 93 50 86 86 86 86 86 86 86 86 86 86 86 86 86 8		100 141.6 2146 1.895 1.895 0.553 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	0100 - 10000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1	5.100 37.9 8.300 29.3 8.100 5668 9.100 0.3 1.100 0.10 1.100 0.10	000 80.400 00 70900 00 86.600 0 0.735 0 0.735 0 0.153 0 0.100	26,500 22,800 34,800 0,282 0,451 0,100 0,100 0,100 0,100
(6)         RJMCPS-40         Said           (5)         EJMCPS-45         Said           (6)         5         EJMCPS-45         Said           (6)         5         EJMCPS-45         Said           (6)         5         EJMCPS-45         Said           (6)         5         EJMCP6-05         Said           (10)         EJMCP6-15         Said         Said           (15)         EJMCP105         Said         Said           (16)         EJMCP105         Said         Said           (16)         EJMCP105         Said         Said           (16)         EJMCP125         Said         Said           (16)         EJMCP125         Said         Said           (16)         EJMCP125         Said         Said           (16)         EJMCP2128         Said         Said           (16)         EJMCP315         Said         Said           (17)         EJMCP315         Said         Said           (18)         EJMCP8-10         Said         Said           (19)         EJMCP8-10         Said         Said           (10)         EJMCP8-10         Said         Said </td <td>2000 5000 0.0 0.0 0.0 0.0 510 510 510 510 500 500 600 600 600 1000</td> <td>2183 510 2489 772 50 93 50 93 50 93 50 93 10 10 10 10 10 10 10 10 10 10 10 10</td> <td>8 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2</td> <td>141.6 22-186 1.895 0.553 0.553 0.5 867 867 867 805</td> <td>0,100 (1900) (19</td> <td>8.300 2555 8.100 256 9.79 0.39 0.100 0.13 0.100 0.10 0.10 0.10 0.10</td> <td>00 700 00 00 00 00 00 00 00 00 00 00 00</td> <td>22,800 34,800 0.282 0.451 0.100 0.100 0.100</td>	2000 5000 0.0 0.0 0.0 0.0 510 510 510 510 500 500 600 600 600 1000	2183 510 2489 772 50 93 50 93 50 93 50 93 10 10 10 10 10 10 10 10 10 10 10 10	8 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	141.6 22-186 1.895 0.553 0.553 0.5 867 867 867 805	0,100 (1900) (19	8.300 2555 8.100 256 9.79 0.39 0.100 0.13 0.100 0.10 0.10 0.10 0.10	00 700 00 00 00 00 00 00 00 00 00 00 00	22,800 34,800 0.282 0.451 0.100 0.100 0.100
45         EjiMaCP5.45         Sand           2         EjiMaCP6.02         Sand           6         5         EjiMaCP6.05         Sand           10         EjiMaCP6.15         Sand         Sand           15         EjiMaCP6.15         Sand         Sand           2         EjiMaCP6.15         Sand         Sand           2         EjiMaCP6.15         Sand         Sand           3         EjiMaCP1.15         Sand         Sand           4         10         EjiMaCP1.15         Sand           2         EjiMaCP1.13         Sand         Sand           2         EjiMaCP7.25         Sand         Sand           2         EjiMaCP7.25         Sand         Sand           2         EjiMaCP8.05         Sand         Sand           3         EjiMaCP8.05         Sand         Sand           5         EjiMaCP8.05         Sand         Sand           6         EjiMaCP8.05         Sand         Sand           2         EjiMaCP8.05         Sand         Sand           2         EjiMaCP8.05         Sand         Sand           2         EjiMaCP8.05         Sand         S	5000 0.0 0.0 0.0 0.0 0.0 1000 6000 1000 1	1489 50 50 50 10 10 10 10 10 10 10 10 10 10 10 10 10	5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	212.19 2.486 1.805 0.553 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	86,000 38,000 38,000 00 00 00 00 00 00 00 00 00 00 00 00	8,100 5666 1979 0.39 1,100 0.13 1,100 0.10 1,100 0.10	00 86600 0 0.735 4 1.110 0 0.153 0 0.100	34.800 0.282 0.451 0.100 0.100 0.100
2         EJMGP6-02         Sand           5         5         EJMGP6-05         Sand           10         EJMGP6-05         Sand         Sand           15         EJMGP7-05         Sand         Sand           2         EJMGP7-05         Sand         Sand           2         EJMGP7-05         Sand         Sand           3         EJMGP7-05         Sand         Sand           4         EJMGP7-05         Sand         Sand           2         EJMGP7-05         Sand         Sand           2         EJMGP7-21         Sand         Sand           2         EJMGP7-21         Sand         Sand           2         EJMGP7-21         Sand         Sand           2         EJMGP8-05         Sand         Sand           3         10         EJMGP8-05         Sand           2         EJMGP8-05         Sand         Sand <td>0.0 0.0 0.0 0.0 0.0 <b>510</b> <b>510</b> <b>100</b> <b>600</b> <b>600</b> <b>600</b></td> <td>50 53 10 10 10 10 10 10 10 10 10 10 10 10 10 1</td> <td>28888<b>8</b>88</td> <td>2.486 1.895 0.553 0.5 <b>0.5</b> 0.5 0.5 0.5</td> <td>0.100 0 0.100 0 0.100 0 0.100 0 0.100 0 0.100 0</td> <td>0.379 0.39 0.100 0.13 0.100 0.10 0.100 0.10</td> <td>0 0.735 4 1.110 0 0.153 0 0.100</td> <td>0.282 0.451 0.100 0.100 0.100</td>	0.0 0.0 0.0 0.0 0.0 <b>510</b> <b>510</b> <b>100</b> <b>600</b> <b>600</b> <b>600</b>	50 53 10 10 10 10 10 10 10 10 10 10 10 10 10 1	28888 <b>8</b> 88	2.486 1.895 0.553 0.5 <b>0.5</b> 0.5 0.5 0.5	0.100 0 0.100 0 0.100 0 0.100 0 0.100 0 0.100 0	0.379 0.39 0.100 0.13 0.100 0.10 0.100 0.10	0 0.735 4 1.110 0 0.153 0 0.100	0.282 0.451 0.100 0.100 0.100
6         5         EJMGP6-05         Sand           10         EJMGP6-10         Sand         Is           15         EJMGP702         Sand         Sand           2         BJMGP702         Sand         Sand           4         EJMGP702         Sand         Sand           4         EJMGP702         Sand         Sand           4         EJMGP703         Sand         Sand           7         EJMGP703         Sand         Sand           2         EJMGP731         Sand         Sand           22         EJMGP8-02         Sand         Sand           23         EJMGP8-02         Sand         Sand           3         10         EJMGP8-02         Sand           3         EJMGP8-02         Sand         Sand           4         EJMGP8-02         Sand         Sand           2         EJMGP8-03         Sand         Sand           2         EJMGP8-03         Sand         Sand           2         EJMGP8-03         Sand         Sand           2         EJMGP8-03         Sand         Sand           2         EJMGP9-03         Sand         San	0.0 0.0 0.0 0.0 <b>510</b> <b>510</b> <b>100</b> <b>600</b> <b>600</b> <b>600</b> <b>100</b> 0	10 10 10 10 10 10 10 10 10 10 10 10 10 1	<u>2222</u> 22	1.895 0.553 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	0.100 0. 0.100 0. 0.100 0. 0.100 0. 0.100 0.	0.130 0.13 0.100 0.10 0.100 0.10	4 1.110 0 0.153 0 0.100	0.451 0.100 0.100 0.100
10         EJMGF6-10         Sand           15         EJMGF0-15         Sand           2         BJMGF702         Sand           5         BJMGF702         Sand           6         EJMGF705         Sand           7         H5         EJMGF705         Sand           7         H5         EJMGF705         Sand           7         H5         EJMGF719         Sand           20         EJMGF735         Sand         Sand           22         EJMGF735         Sand         Sand           23         EJMGF8-05         Sand         Sand           8         10         EJMGF8-05         Sand           23         EJMGF8-15         Sand         Sand           20         EJMGF8-15         Sand         Sand           20         EJMGF8-15         Sand         Sand           20         EJMGF9-15         Sand         Sand           20         EJMGF9-15         Sand         Sand           20         EJMGF9-15         Sand         Sand	0.0 0.0 510 510 510 100 100 600 600 1000	10 10 10 10 10 20 202 80 10 10 10 71	28 28 28 28 28	0.553 0.5 0.5 0.5 0.5 0.536	0.100 0 0.100 0 0.100 0 0.100 0	0.100 0.10 0.100 0.10	0 0.153 0 0.100	0.100 0.100 <b>0.100</b>
I5         EJMGP6-15         Sand           2         BJMGP702         Sand           3         BJMGP702         Sand           4         BJMGP702         Sand           5         EJMGP703         Sand           4         BJMGP702         Sand           2         EJMGP703         Sand           22         EJMGP733         Sand           23         EJMGP733         Sand           24         BJMGP733         Sand           25         EJMGP733         Sand           26         EJMGP8-02         Sand           27         EJMGP8-05         Sand           28         IJU         EJMGP8-05         Sand           20         EJMGP8-05         Sand         Sand           20         EJMGP8-05         Sand         Sand           29         EJMGP8-05         Sand         Sand           20         EJMGP8-05         Sand         Sand           20         EJMGP8-05         Sand         Sand	0.0 510 6000 1010 3000 600 600	10 10 10 86 302 804 302 804 10 10 10 71 10 71	20 20 1106 20 81	0.5 0.5 48.7 48.7 0.5 0.536	0.100 0 0.100 0 0.100 3	0.100 0.10	0.100	0.100 <b>0.100</b>
2         BJMGPT/02         Said           5         EJMGP7.05         Said           6         EJMGP7.05         Said           7         10         EJMGP7.05         Said           20         EJMGP7.19         Said         Said           20         EJMGP7.33         Said         Said           22         EJMGP7.34         Said         Said           23         EJMGP8.02         Said         Said           8         10         EJMGP8.05         Said           15         EJMGP8.10         Said         Said           20         EJMGP8.15         Said         Said           20         EJMGP8.15         Said         Said           21         EJMGP8.15         Said         Said           20         EJMGP8.15         Said         Said           21         EJMGP8.15         Said         Said           20         EJMGP8.15         Said         Said	510 6000 1800 3000 600 610	9 22 11 11 11 11 11 11 11 11 11 11 11	96 1106 20 81	0.5 48.7 0.5 0.536	0,100 0	V100 010		0.100 12.100
5         EJMGPTAB         Sand           7         10         EMGPTAB         Sand           15         EJMGPTAB         Sand         Sand           20         EJMGPTAB         Sand         Sand           20         EJMGPTAB         Sand         Sand           22         EJMGPTAB         Sand         Sand           23         EJMGPTAB         Sand         Sand           24         EJMGP2B         Sand         Sand           2         EJMGP8-02         Sand         Sand           2         EJMGP8-05         Sand         Sand           2         EJMGP8-10         Sand         Sand           20         EJMGP9-15         Sand         Sand           20         EJMGP9-05         Sand         Sand           2         EJMGP9-05         Sand         Sand	0000 1100 3000 000 000 1000 1000	202 804 10 10 10 71 10 10	1106 20 81	46.7 0.5 0.536	0100	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	0.000	12.100
T         TMC7-10         Sand           15         RINGP7.13         Sand           20         RINGP7.21         Sand           21         EINGP7.21         Sand           22         EINGP7.21         Sand           23         EINGP7.21         Sand           24         EINGP7.21         Sand           25         EINGP0.2         Sand           8         10         EJMGP8.10         Sand           15         EJMGP8.10         Sand           20         EJMGP8.20         Sand           21         EJMGP8.10         Sand           23         EJMGP8.10         Sand           24         EJMGP8.20         Sand           25         EJMGP8.20         Sand           26         EJMGP8.20         Sand           27         EJMGP8.20         Sand	100 3000 00 00 100.0	0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	20 81	0.536		.280	0 28.700	
15         FJING(7115)         Said           20         RIMGPT.20         Said           21         RIMGPT.20         Said           22         EJMGPT.20         Said           23         EJMGPT.20         Said           24         EJMGP7.20         Said           25         EJMGP8-02         Said           6         EJMGP8-05         Said           8         10         EJMGP8-10         Said           20         EJMGP8-15         Said           20         EJMGP8-02         Said           31         EJMGP8-15         Said           32         EJMGP8-02         Said	300.0 0.0 0.0 100.0	10 71 10	<b>81</b>	0.536	0100 010	010 010	0.000	0.100
23         RinGPT 20         Sand           23         EjMGFP 25         Sand           2         EjMGFP 25         Sand           2         EjMGFP 25         Sand           3         EjMGFP 26         Sand           4         EjMGFP 26         Sand           8         10         EjMGF9-10         Sand           15         EjMGF9-15         Sand           20         EjMGF9-02         Sand           3         HMGF9-15         Sand           3         EjMGF9-02         Sand	00 0.0 100.0	10		and the second sec	0.100 0.	<b>136</b> 010	0-100	0,100
23         EJMGE/125         Sand           2         EJMGP8-02         Sand           5         EJMGP8-05         Sand           8         10         EJMGP8-10         Sand           15         EJMGP8-10         Sand         Sand           20         EJMGP8-10         Sand         Sand           24         EJMGP8-10         Sand         Sand           26         EJMGP8-02         Sand         Sand           20         EJMGP8-02         Sand         Sand           27         EJMGP8-02         Sand         Sand           28         EJMGP9-02         Sand         Sand	0.0 100.0		a and a second	10.2 March	0.100 0.	010 010	0.00	<b>00100</b>
2 EJMGP8-02 Sand 5 EJMGP8-05 Sand 8 10 EJMGP8-10 Sand 15 EJMGP8-15 Sand 20 EJMGP8-15 Sand 20 EJMGP8-20 Sand 4 EJMGP8-05 Sand	100.0	10 10	QZ	0.829	0.100	100 010	0 0.383	0.146
5 EJMGP8-05 Sand 8 10 EJMGP8-10 Sand 15 EJMGP8-15 Sand 20 EJMGP8-20 Sand 2 EJMGP8-20 Sand 3 AMD 2 EJMGP8-20 Sand 3 AMD 2		741 1154	6 12287	0.682	0.100 0.	0.100 0.100	0 0.134	0.248
8 10 EJMGP8-10 Sand 15 EJMGP8-15 Sand 20 EJMGP8-20 Sand 3 AMG 3 AM	800.0	2411 6298	8008	144.4	0.100 13	3.100 18.80	00 88.700	23.700
15 EJMGP8-15 Sand 20 EJMGP8-20 Sand 2 EJMGP9-02 Sand 3 AMM	40.0	10 , 158	168	1.075	0.100 0.	0.13	7 0.528	0.210
20 EJMGP8-20 Sand 2 EJMGP9-02 Sand 3 AMGP9-05 Sand	7.3	10 10	20	3.073	0.100 0.	0.381 0.30	6 1.390	0.896
2 ElMGP9-02 Sand Sand	5.0	10 10	20	3.645	0.100 0.	456 0.37	9 1.690	1.020
ElMCP905	0.0	01 01	20	8.716	0.100 2	440 > 0.86	6 3.350	1.960
	00	10 10	20	0.51	0.000.	110 010	0.0100	0.100
10 EpkGP9-10 Sand	00	10 10	8	05	0.100 0.	100 0.10	0.100	0.100
100 ppm [sobutylene calibration gas = 101 ppm	NO VI	N N	20	6.0	0.100~~0	100 0.10	0.100	0.100
bgs – below ground surface								
VOC-Volatile Organic Contaminants/Constituents								
DRO-Diesel Range Organics								
TPH-Total Petroleum Hydrocarbon = $GRO+DRO$ .		-						
policied values are in excess of the row preside OII Conservation Division guide. Italicized values are $\leq$ the instrument detection limit.	n guideline infresnoid	tor the paramete	1					·
N/A Not Analyzed								
Reported detection limits are considered "de minimus" values and are included in	luded in the GRO/DF	tO and BTEX s	ummations.					

CLAY OSBORN JALMAT #1

1

-----

: 1 1



E.O.T.T. Energy Pipeline Clay Osborn Jalmat #1 Monitor Well & Pond Well Ground Water Data

Parameter	Units	Clay Osbo Moni	orn Jalmat #1 tor Well	New Mexico Water Quality Control Commission Standards	Backgrou Chy Os Ri	nd Concentrations born Pond Monitor diamore Well
		EM171001MW	EIM1102401MW1	20 NMAC 6.2.3103		ETNMMW102401
		7/10/2001	10/24/2001		7/10/2001	10/24/2001
ГРН <sup>1</sup> (GRO) <sup>2</sup>	mg/L	<0.25		no standard	<0.25	
TPH (DRO) <sup>3</sup>	mg/L	<0.02		no standard	<0.02	
TPH (DRO+GRO)	mg/L	<0.25		no standard	<0.25	
Benzene	µg/L	1.1	<1	10.0	<1.00	<1
Tohuene	µg/L	1.3	<1	750.0	<1.00	<1
Ethyl Benzene	µg/L	<1	<1	750.0	<1.00	<1
m. p-XYLENE	ugit.	2.2	<1		<1.00	<1
-XYLENE	µg/L	1.6	<1		<1.00	<1
Total Xylene*	μg/L	3.88	<1	620.00	<1.00	<1
Naphthalene	µg/L	0.061			<0.05	
Acenaphthylene	μg/Ľ	<0.05			<0.05	
Acenaphthene	µg/L	<0.05			<0.05	
Fluorene	µg/L	<0.05			<0.05	
Phenanthrane	µg/L	<0.05			<0.05	
Anthracene	μgrL	<0.05			<0.05	
Fhiomanthene	hair	<0.05			<0.05	
Pyrene	pg/L	<0.05			<0.05	
Senzo[ajanthracene	HBIT HE	<0.05			<0.05	•
Chrysene Rame affelfittemethene	Hg/L Ng/L	<0.05			<0.05	
Benzolojinuoranusena Benzoli bifuoranthena	hair	~0.05			-0.05	
Benzolajowene	hgrc	~0.05		0700	~0.05	
Indeno[12.3.od]oviene	ugit	<0.05		0.700	~0.05	
Dihentala hlanthracene	ue/L	*0.05			-0.05	
Benzala h. Roervlene	ue/L	<0.05			<0.05	
PAH's: Total naphthalene plus	μg/L	0.061		30.000	< 0.05	
Ahminum (Al)	me/L	16.20		50	76	
Antimany (Sb)	me/l.		0.013	0.0	7.5	0.0
Arsenic (As)	me/L	0.01	<0.02	0.1	<0.05	<0.02
Barium (Ba)	mg/L	0.259	0.033	1.0	0.2	0.1
Beryllium (Be)	mg/L		<0.001	0.0		<0.001
Baran (B)	mg/L	1.370		0.8	0.4	
Cadmium (Cd)	mg/L	<0.005	<0.002	0.0	<0.005	<0.002
Chromium (Cr)	mg/L	0.015	<0.005	0.1	<0.01	<0.005
Cobalt (Co)	mg/L	<0.02		0.1	<0.02	
Copper (Cu)	mg/L	<0.02		1.0	<0.02	
Iron (Fe)	mg/L	9.84		1.0	5.1	
Lead (Pb)	mg/L	0.002	<0.01	Q.1	<0.02	<0.01
Magnesium (Mg)	mg/L	145.00			61.7	
Manganese (Mn)	mg/L	0.544		0.2	0.1	
Mercury (Hg)	mg/L	0.01	<0.0002	0.0	<0.0002	<0.0002
Malybdenum (Mo)	mg/L	<0.02		1.0	<0.02	
	mg/L	<0.02	<0.01	0.2	<0.02	<0.01
Potasuum (K)	mg/L	14.200	.0.03		7.3	0.00
Selection (Sa)	mgrL moll	-0.002	<0.02	0.1	×0.05	×0.02
	mgrt-	20.002	-0.002	0.0	0.0	-0.002
Zinc (Zn)	mell.	0.033		10.0	<b>~</b> 0.01	
Calcium (Ca)	me/I.	379.00			188.0	
Socium (Na)	mg/L	949,000			83.1	
Nitrate/Nitrite - N	mg/L	0.11		10.0	0.7	
Fluoride (F)	mg/L	1.900		1.6	1.7	
Chloride (Cl)	mg/L	2040.00	1940.00	250.0	239.0	4.26 (? decimal)
Sulfate (SOc)	mø/L	638.000		600.0	325.0	•
Total Allealinity	mg/L	280.00			290.0	
Total Disclored Solids (TDS)	mg/L	4590.000	4790.000	1000.0	1280.0	297.0
Conductivity (micromhos/cm)	umhos/cm	5500.00	6500.00		1500.0	610.0
pH	รบ	G.800	6.800	6.0 - 9.0	7.0	7.0
-				-		
1TPH - Total Petroleum Hydrocarb	an					

<sup>2</sup>GRO - Gasoline Range Organics C<sub>6</sub>-C<sub>10</sub>

<sup>3</sup>DRO - Diesel Range Organics C<sub>10</sub>-C<sub>26</sub>

Total Kylene - Sum of the m, p, and o - Kylene values. NA - Not Analyzed

.

#### ATTACHMENT IV: PHOTOGRAPHS



#### ATTACHMENT V: SITE INFORMATION AND METRICS FORM

Site Information and MetricsSITE: Clay Osborn Jalmat #1Assigned Site Reference # 2000-10606Company: EOTT Energy PipelineCompany Street Address: 5805 E. Highway 80, Midland, Texas 79701Company Mailing Address: P.O. Box 1660Company City, State, Zip: Midland, Texas 79702Company Representative: Wayne BrunetteCompany Representative: Telephone: 915.553.7557Company Representative: Telephone: 915.553.7557Company Telephone: 915.684.3479Fluid volume released (bbls) =?>25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas)5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)Leak, Spill, or Pit (LSP) Name: Clay Osborn Jalmat #1 Source of contamination: Pipe Line Land Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry Osborn LSP Dimensions: affected area = 177' X 65' LSP Area = 5,553 ft² Latitude: 32° 08 ' 25 "N Longitude: 103° 12 ' 38"WElevation above mean sea level: ~3,152'amsl					
SITE: Clay Osborn Jalmat #1       [Assigned Site Reference # 2000-10606         Company: EOTT Energy Pipeline       [Company Street Address: 5805 E. Highway 80, Midland, Texas 79701         Company Street Address: 5805 E. Highway 80, Midland, Texas 79701       [Company Company Representative: Wayne Brunette         Company Representative: Wayne Brunette       [Company Representative Telephone: 915.553.7557         Company Telephone: 915.684.3479       Fax: 915.684.3456         Fluid volume released (bbls) =?       >25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days.         (Also applies to unauthorized releases >500 mcf Natural Gas)       5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)         Leak, Spill, or Pit (LSP) Name: Clay Osborn Jalmat #1       Source of contamination: Pipe Line         Land Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry Osborn       LSP Dimensions: affected area = 177' X 65'         LSP Dimensions: affected area = 177' X 65'       LSP Area = 5,553 ft <sup>2</sup> Latitude: 32° 08 ' 25 "N       Longitude: 103° 12 ' 38"W         Elevation above mean sea level: ~3,152'amsl					
Company: EO11 Energy Pipeline Company Street Address: 5805 E. Highway 80, Midland, Texas 79701 Company Mailing Address: P.O. Box 1660 Company City, State, Zip: Midland, Texas 79702 Company Representative: Wayne Brunette Company Representative: Telephone: 915.553.7557 Company Telephone: 915.684.3479 Fax: 915.684.3456 Fluid volume released (bbls) =? >25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas) 5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas) Leak, Spill, or Pit (LSP) Name: Clay Osborn Jalmat #1 Source of contamination: Pipe Line Land Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry Osborn LSP Dimensions: affected area = 177' X 65' LSP Area = 5,553 ft <sup>2</sup> Latitude: 32° 08 ' 25 "N Longitude: 103° 12 ' 38"W Elevation above mean sea level: ~3,152'amsl					
Company Street Address: 5805 E. Highway 80, Midland, Texas 79701 Company Mailing Address: P.O. Box 1660 Company City, State, Zip: Midland, Texas 79702 Company Representative: Wayne Brunette Company Representative Telephone: 915.553.7557 Company Telephone: 915.684.3479 Fax: 915.684.3456 Fluid volume released (bbls) =? >25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas) 5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas) Leak, Spill, or Pit (LSP) Name: Clay Osborn Jalmat #1 Source of contamination: Pipe Line Land Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry Osborn LSP Dimensions: affected area = 177' X 65' LSP Area = 5,553 ft <sup>2</sup> Latitude: 32° 08 ' 25 "N Longitude: 103° 12 ' 38"W Elevation above mean sea level: ~3,152'amsl					
Company Mailing Address: P.O. Box 1660 Company City, State, Zip: Midland, Texas 79702 Company Representative: Wayne Brunette Company Representative Telephone: 915.553.7557 Company Telephone: 915.684.3479 Fax: 915.684.3456 Fluid volume released (bbls) =? >25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas) 5-25 bbls: Submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas) 5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas) Leak, Spill, or Pit (LSP) Name: Clay Osborn Jalmat #1 Source of contamination: Pipe Line Land Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry Osborn LSP Dimensions: affected area = 177' X 65' LSP Area = 5,553 ft <sup>2</sup> Latitude: 32° 08 ' 25 ''N Longitude: 103° 12 ' 38''W Elevation above mean sea level: ~3,152'amsl					
Company City, State, Zip: Midland, Texas 79702 Company Representative: Wayne Brunette Company Representative Telephone: 915.553.7557 Company Telephone: 915.684.3479 Fax: 915.684.3456 Fluid volume released (bbls) =? >25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas) 5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas) Leak, Spill, or Pit (LSP) Name: Clay Osborn Jalmat #1 Source of contamination: Pipe Line Land Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry Osborn LSP Dimensions: affected area = 177' X 65' LSP Area = 5,553 ft <sup>2</sup> Latitude: 32° 08 ' 25 "N Longitude: 103° 12 ' 38"W Elevation above mean sea level: ~3,152'amsl					
Company Representative: Wayne Brunette Company Representative Telephone: 915.553.7557 Company Telephone: 915.684.3479 Fax: 915.684.3456 Fluid volume released (bbls) =? >25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas) 5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas) Leak, Spill, or Pit (LSP) Name: Clay Osborn Jalmat #1 Source of contamination: Pipe Line Land Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry Osborn LSP Dimensions: affected area = 177' X 65' LSP Area = 5,553 ft <sup>2</sup> Latitude: 32° 08 ' 25 "N Longitude: 103° 12 ' 38"W Elevation above mean sea level: ~3,152'amsl					
Company Representative Telephone: 915.553.7557 Company Telephone: 915.684.3479 Fax: 915.684.3456 Fluid volume released (bbls) =? >25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas) 5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas) Leak, Spill, or Pit (LSP) Name: Clay Osborn Jalmat #1 Source of contamination: Pipe Line Land Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry Osborn LSP Dimensions: affected area = 177' X 65' LSP Area = 5,553 ft <sup>2</sup> Latitude: 32° 08 ' 25 "N Longitude: 103° 12 ' 38"W Elevation above mean sea level: ~3,152'amsl					
Company Telephone: 915.684.3479 Fax: 915.684.3456 Fluid volume released (bbls) =? >25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas) 5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas) Leak, Spill, or Pit (LSP) Name: Clay Osborn Jalmat #1 Source of contamination: Pipe Line Land Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry Osborn LSP Dimensions: affected area = 177' X 65' LSP Area = 5,553 ft <sup>2</sup> Latitude: 32° 08 ' 25 "N Longitude: 103° 12 ' 38"W Elevation above mean sea level: ~3,152'amsl					
Fluid volume released (bbls) =? >25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas) 5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas) Leak, Spill, or Pit (LSP) Name: Clay Osborn Jalmat #1 Source of contamination: Pipe Line Land Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry Osborn LSP Dimensions: affected area = 177' X 65' LSP Area = 5,553 ft <sup>2</sup> Latitude: 32° 08 ' 25 "N Longitude: 103° 12 ' 38"W Elevation above mean sea level: ~3,152'amsl					
<ul> <li>&gt;25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases &gt;500 mcf Natural Gas)</li> <li>5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)</li> <li>Leak, Spill, or Pit (LSP) Name: Clay Osborn Jalmat #1</li> <li>Source of contamination: Pipe Line</li> <li>Land Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry Osborn</li> <li>LSP Dimensions: affected area = 177' X 65'</li> <li>LSP Area = 5,553 ft<sup>2</sup></li> <li>Latitude: 32° 08 ' 25 "N</li> <li>Longitude: 103° 12 ' 38"W</li> <li>Elevation above mean sea level: ~3,152'amsl</li> </ul>					
(Also applies to unauthorized releases >500 mcf Natural Gas) 5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas) Leak, Spill, or Pit (LSP) Name: Clay Osborn Jalmat #1 Source of contamination: Pipe Line Land Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry Osborn LSP Dimensions: affected area = 177' X 65' LSP Area = 5,553 ft <sup>2</sup> Latitude: 32° 08 ' 25 "N Longitude: 103° 12 ' 38"W Elevation above mean sea level: ~3,152'amsl					
5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas) Leak, Spill, or Pit (LSP) Name: Clay Osborn Jalmat #1 Source of contamination: Pipe Line Land Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry Osborn LSP Dimensions: affected area = 177' X 65' LSP Area = 5,553 ft <sup>2</sup> Latitude: 32° 08 ' 25 "N Longitude: 103° 12 ' 38"W Elevation above mean sea level: ~3,152'amsl					
Natural Gas)         Leak, Spill, or Pit (LSP) Name: Clay Osborn Jalmat #1         Source of contamination: Pipe Line         Land Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry Osborn         LSP Dimensions: affected area = 177' X 65'         LSP Area = 5,553 ft <sup>2</sup> Latitude: 32° 08 ' 25 "N         Longitude: 103° 12 ' 38"W         Elevation above mean sea level: ~3,152'amsl					
Leak, Spill, or Pit (LSP) Name: Clay Osborn Jalmat #1Source of contamination: Pipe LineLand Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry OsbornLSP Dimensions: affected area = 177' X 65'LSP Area = 5,553 ft²Latitude: 32° 08 ' 25 "NLongitude: 103° 12 ' 38"WElevation above mean sea level: ~3,152'amsl					
Source of contamination: Pipe LineLand Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry OsbornLSP Dimensions: affected area = 177' X 65'LSP Area = 5,553 ft²Latitude: 32° 08 ' 25 "NLongitude: 103° 12 ' 38"WElevation above mean sea level: ~3,152'amsl					
Land Owner, i.e., BLM, ST, Fee, Other: Clay and Gerry OsbornLSP Dimensions: affected area = 177' X 65'LSP Area = 5,553 ft²Latitude: 32° 08 ' 25 "NLongitude: 103° 12 ' 38"WElevation above mean sea level: ~3,152'amsl					
LSP Dimensions: affected area = 177' X 65' LSP Area = 5,553 ft <sup>2</sup> Latitude: 32° 08 ' 25 "N Longitude: 103° 12 ' 38"W Elevation above mean sea level: ~3,152'amsl					
LSP Area =       5,553 ft <sup>2</sup> Latitude:       32° 08 ' 25 "N         Longitude:       103° 12 ' 38"W         Elevation above mean sea level: ~3,152'amsl					
Latitude:32° 08 ' 25 "NLongitude:103° 12 ' 38"WElevation above mean sea level:~3,152'amsl					
Longitude: 103° 12 ' 38"W Elevation above mean sea level: ~3,152'amsl					
Elevation above mean sea level: ~3,152'amsl					
Location - Unit or : SW of SW UL-M					
Location-Unit or : SW of SW UL-M					
Location- Section = 7					
Location- Township = 258					
Location-Range = 37E					
Surface water body within 1000 ' radius of site: None					
Domestic water wells within 1000' radius of site: None					
Agricultural water wells within 1000' radius of site: 872' northeast Old windmill bore not in use.					
Public water supply wells within 1000' radius of site: None					
Depth from land surface to ground water (DG): ~52.4					
Depth of contamination (DC): 45'bgs					
Depth to ground water $(DG - DC = DtGW)$ 7.4 ' bgs					
1 Ground Water 2 Wallhood Protection Area 3. Distance to Surfac					
1. Ground water 2. weinlead Protection Area Water Body					
If Depth to GW <50 feet: 20 <200 horizontal feet: 20					
points					
If Depth to GW 50 to 99 feet: If <1000' from water source, or;<200' from 200-100 horizontal feet:					
10 points private domestic water source: 20 points points					
If Depth to Gw >100 feet: 0 If >1000 from water source, or; >200' >1000 horizontal feet: 0					
Ground mater Score = 20 Wellhead Destaction Area Score = 20 Surface Water Score = 0					
Site Rank $(1+2+3) = 20 + 20 + 0 = 40$ point:					
Total Site Danking Soore and Assentable Concentrations					
Total Site Kanking Score and Acceptable Concentrations					
Benzene <sup>1</sup> 10 ppm 10 ppm 10 ppm					
BTEX <sup>1</sup> 50 ppm 50 ppm 50 ppm					
TPH         100 ppm         5000 ppm					
1100 ppm field VOC headspace measurement may be substituted for lab analysis					



LinkEnergy

Link Energy Limited Partnership P.O. Box 4666 Houston, Texas 77210-4666 www.linkenergy.com

March 30, 2004

Mr. William Olson Mr. Ed Martin New Mexico Oil Conservation Division Environmental Bureau 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: Link Energy – Annual Monitoring Data 15 Sites in Lea County, New Mexico

Dear Mr. Olson and Mr. Martin:

Link Energy, LP is an operator of crude oil pipelines and terminal facilities in the state of New Mexico. Link Energy actively monitors certain historical release sites exhibiting groundwater impacts, consistent with assessments and work plans developed in consultation with the New Mexico Oil Conservation Division (NMOCD). Our environmental consultant is in the process of completing the Annual Monitoring Reports for the sites listed below. We anticipate submitting the Annual Monitoring Reports by the end of April. In lieu of the final reports, Link Energy hereby submits annual monitoring data for the following sites:

Clay Osborn 6" Shell North Clay Osborn #1 Jalmat Clay Osborn #22A Jalmat CS Cayler Gathering Hobbs Jct Mainline Hugh Gathering Junction 34 Line to Lea Kimbrough Sweet 8" Line Lamunyon Sump Livingston Ridge to Hugh Lovington Deep 6" Mescalero Ridge Station Monument 6" South Mattix Sump Vacuum 10" to Jal Section 12, Township 25 South, Range 37 East, Lea County Section 7, Township 25 South, Range 37 East, Lea County Section 18, Township 25 South, Range 37 East, Lea County Section 6, Township 17 South, Range 37 East, Lea County Section 26, Township 18 South, Range 37 East, Lea County Section 11/12, Township 21 South, Range 37 East, Lea County Section 21, Township 20 South, Range 37 East, Lea County Section 3, Township 18 South, Range 37 East, Lea County Section 3, Township 18 South, Range 37 East, Lea County Section 28, Township 23 South, Range 37 East, Lea County Section 3, Township 21 South, Range 37 East, Lea County Section 6, Township 17 South, Range 37 East, Lea County Section 17, Township 19 South, Range 37 East, Lea County Section 5, Township 20 South, Range 37 East, Lea County Section 5, Township 24 South, Range 37 East, Lea County Section 15, Township 19 South, Range 37 East, Lea County Section 20, Township 19 South, Range 37 East, Lea County

EPI prepared these documents and has vouched for their accuracy and completeness, and on behalf of Link Energy, I have personally reviewed the documents and interviewed EPI in order to verify the accuracy and completeness of these documents. It is based upon these inquiries



and reviews that Link Energy submits the enclosed annual monitoring data for the above 15 facilities.

If you have any questions or require further information, please contact me at (713) 993-5352.

Sincerely,

Cores for Jeffrey P. Dann am

Jeffrey P. Dann, C.P.G. Environmental Specialist Link Energy

CC: Frank Hernandez, Link Energy Chris Williams, NMOCD, Hobbs, NM

Enclosures

File: c/jeff files/NMOCD-AnnMonitReptCovLtr-03

Make the connection"



Allers Reserver Orern

STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES

28 April 2004

Mr. Ed Martin NM Energy, Minerals, and Natural Resources Department New Mexico Oil Conservation Division – Environmental Bureau 1220 South St. Francis Drive Santa Fe, NM 87505

MAY 0 5 2004

Re: Annual Monitoring Report Link Energy Clay Osborn Jalmat #1 #2000-10606 UL-P Section 7 T25S R36E, Lea County, New Mexico Landowner: Clay and Gerry Osborn

Dear Mr. Martin,

Environmental Plus, Inc. (EPI), on behalf of Mr. Frank Hernandez, Link Energy, submits for your consideration this *Annual Monitoring Report* for the above-referenced site. Based on data collected during the past year, Link Energy recommends that the groundwater monitoring well network be sealed and the groundwater investigation at this site be terminated. In addition, Link Energy is recommending that a remediation plan be developed to address the impacted soils identified during site delineation activities.

Should you have any questions or comments please call Mr. Ben Miller or myself at EPI's offices, or at 505-390-2088 or 505-390-7306 respectively. Mr. Hernandez may be contacted through Link's Midland office at 915-638-3799 or 505-631-3095.

All official correspondence should be addressed to:

Mr. Frank Hernandez Link Energy P.O. Box 1660 5805 East Highway 80 Midland, Texas 79703

Sincerely,

ENVIRONMENTAL PLUS, INC.

Ineso

Iain Olness, P.G. Hydrogeologist

cc: Larry W. Johnson, NMOCD – Hobbs District Office Frank Hernandez, Link Energy – Midland Jeff Dann, Link Energy – Houston Sherry Miller, EPI President Ben Miller, EPI Vice President and General Manager

 P.O. Box 1558
 •••
 2100 Avenue O
 •••
 Eunice, New Mexico 88231

 Telephone 505•394•3481
 •••
 FAX 505•394•2601

# LinkEnergy

# **ANNUAL MONITORING REPORT**

CLAY OSBORN JALMAT #1 LINK REF: 2000-10606

 $\left[ \right]$ 

[

SW<sup>4</sup> OF THE SW<sup>4</sup> OF SECTION 7, TOWNSHIP 25 SOUTH, RANGE 36 EAST LEA COUNTY, NEW MEXICO

~1.88 MILES NORTHWEST (309°) OF JAL, LEA COUNTY, NEW MEXICO LATITUDE: N32° 08' 25" LONGITUDE: W103° 12' 38"

APRIL 21, 2004

**PREPARED BY:** 



· / ⁄

#### **TABLE OF CONTENTS**

I.	Background	.1
II.	Field Activities	.1
III.	Groundwater Elevation and PSH Thickness	.2
IV.	PSH Recovery	.2
V.	Groundwater Sampling	.2
VI.	Groundwater Analytical Results	.2
VII.	Recommendations	.2

#### **FIGURES**

( Jenned E.

:

; ----

1

Figure 1	Area Map
Figure 2	Site Location Map
Figure 3	Site Map
Figure 4	TPH and BTEX Concentrations in Groundwater Monitoring Well MW from 07/10/01 through 10/06/03, Link Energy Clay Osborn Jalmat #1, Lea County, New Mexico.
Figure 5	Hydrograph for Groundwater Monitoring Well MW, Link Energy Clay Osborn Jalmat #1, Lea County, New Mexico, from 07/10/01 through 10/06/03.
<b>TABLES</b>	
Table 1	Relative Groundwater Elevations and Phase Separated Hydrocarbon Thicknesses

Table 2Summary of Groundwater Analytical Results

#### **APPENDIX**

Appendix A Groundwater Laboratory Analytical Results and Chain-of-Custody Forms

#### I. Background

The "Clay Osborn Jalmat #1" (2000-10606) release site is located approximately 1.9 miles northwest of Jal in Lea County, New Mexico, at an elevation of approximately 3,145 feet above mean sea level (reference Figures 1 and 2). The site is located in the southwest quarter of the southwest quarter of section 7, range 37 east, township 25 south. There are no residences or surface water bodies within a 1,000-foot radius of the leak site. The release is historical with no information available regarding the volume released or recovered. The release covered approximately 5,550 square feet of pipeline right-of-way and pasture land owned by Clay and Gerry Osborn (reference Figure 3).

Initial investigative activities, completed between June 21 and 26, 2000, consisted of advancing 9 soil borings to depths ranging from 15 to 45 feet below ground surface (BGS). During the advancement of the soil borings, samples were collected at five foot intervals. The samples were split with a portion being immediately placed in laboratory provided containers and placed on ice in a cooler for later transport to an independent laboratory. The remainder of the sample was placed in zip lock bag for field analysis of organic vapors utilizing an Ultra Rae photoionization detector (PID) equipped with a 10.6 electron volt (eV) lamp. The investigation delineated subsurface contamination present above the New Mexico Oil Conservation Division (NMOCD) remedial thresholds (*Site Investigation and Remediation Proposal* dated December 8, 2001).

Soil boring SB-5 was advanced until groundwater was encountered and completed as a temporary groundwater monitoring well. Analytical results indicated the presence of low levels of hydrocarbons and elevated levels of chloride and total dissolved solids (TDS) present in the groundwater. In addition, elevated concentrations of arsenic, chromium, lead and mercury were detected, with mercury concentrations reported in excess of the New Mexico Water Quality Control Commission (NMWQCC) Groundwater Standards of 0.002 milligrams per liter.

Based on this information, a permanent groundwater monitoring well was installed and monitored on a quarterly basis. Analytical results for the samples collected from the groundwater monitoring well were below the laboratory method detection limits (MDL) for all analytes for all sampling events, including mercury, arsenic and chromium. The only exception was the presence of chlorides and TDS, which were reported above the NMWQCC Groundwater Standards of 250 milligrams per liter (mg/L) and 1,000 mg/L, respectively.

#### **II. Field Activities**

The groundwater monitoring well was sampled on February 19, September 2 and October 6, 2003. The samples were submitted to an independent laboratory for the quantification of benzene, toluene, ethylbenzene and total xylenes (BTEX). In addition, the groundwater samples collected on September 2, 2003 were submitted for quantification of total petroleum hydrocarbons as gasoline (TPH as gasoline), total petroleum hydrocarbons as diesel (TPH as diesel), chlorides and TDS.

#### III. Groundwater Elevation and PSH Thickness

The groundwater monitoring well was gauged prior to bailing to determine the depth to groundwater and the thickness of any PSH. Measurements of groundwater levels during this phase of the investigation indicate that water levels have increased slightly. PSH have not been detected in the groundwater monitoring well since it was installed. A summary of groundwater elevations is included in Table 1.

#### IV. PSH Recovery

PSH have not been detected in the groundwater monitoring well since it was installed.

#### V. Groundwater Sampling

The groundwater monitoring well network was sampled on February 19, September 2 and October 6, 2003. The samples were submitted to an independent laboratory for the quantification BTEX via EPA Method 8260b. In addition, the groundwater samples collected on September 2, 2003 were submitted for quantification of TPH as gasoline and TPH as diesel via EPA Method 8015 modified, chlorides via EPA Method 325.2 & 9251 and TDS via EPA Method 160.1. The wells were purged a minimum of three well volumes or dry and samples collected utilizing dedicated or disposable sample bailers. Samples were then placed on ice and shipped to an independent laboratory under chain-of-custody for analyses.

#### VI. Groundwater Analytical Results

Analytical results for the samples collected on February 19, September 2 and October 6, 2003, were below the laboratory method detection limits (MDL) for BTEX and TPH.

A summary of groundwater analytical results is included as Table 2 and copies of the analytical results for samples collected on February 19, September 2 and October 6, 2003, are included as Appendix A.

#### VII. Recommendations

Based on field monitoring and analytical results collected during the past year and analyzed in conjunction with data collected during the initial investigation, the following recommendations are made:

- 1) Due to the fact that no contaminants have been detected in the on-site groundwater monitoring well since July 2001, it is recommended that the groundwater monitoring well be sealed and the groundwater investigation at this site be terminated. Link Energy requests that the NMOCD issue a "*No Further Action*" letter regarding the groundwater conditions at the site based on the groundwater monitoring results.
- 2) It is recommended that a remedial action plan be developed to address the impacted soils identified during site delineation activities.

## **FIGURES**

Г







ļ





## **TABLES**

#### TABLE 1

#### **RELATIVE GROUNDWATER ELEVATIONS AND PHASE SEPARATED HYDROCARBON THICKNESSES**

#### Clay Osborn Jalmat #1 - Ref #2000-10606

Monitor Well	Date Gauged	Relative Top of Casing Elevation (feet)*	Depth to PSH Below Top of Casing (feet)	Depth to Water Below Top of Casing (feet)	Corrected Relative Groundwater Elevation (feet)**	Phase Separated Hydrocarbon Thickness (feet)
Temporary Well	10-Jul-01	3,145		52.33	3,092.67	
MW	24-Oct-01 23-Jan-02 16-Apr-02	3,145				
	8-Jul-02 5-Oct-02 19-Feb-03		  	52.80 52.91 52.76	3,092.20 3,092.09 3,092.24	
	2-Sep-03 6-Oct-03			53.19 53.19	3,091.81 3,091.81	

\* = Top of casing elevation set from USGS Topographical map

\*\* Corrected Groundwater Elevation = Top of Casing Elevation - (Depth to Water Below Top of Casing - (SG)(PSH Thickness)

--= Not detected

If cell is blank, the well was not gauged

2
TABLE

ł

.

. .

;

Γ

. ]

.

.

.

# Summary of Groundwater Analytical Results

# Clay Osborn #1 - Ref #2000-10606

Monitor Well Location	Date	Benzene	Toluene	Ethyl- benzene	m.p- Xylenes	o-Xylene	Total Xylenes	Chloride	Total Dissolved Solids	TPH as Gasoline	TPH as Diesel	Total TPH	Mercury	Arsenic	(Jromium
		(Hg/L)	(IIg/L)	(1/m)	(1/211)	(Jug/L)	(J12/L)	(mg/L)	(mg/L)	(mg/L)	(mg/l.)	(mg/L)	('1/8m)	(Ing/l.)	(cnc.1.)
Temporary Well	10-Jul-01	1.13	1.28	⊽	2.24	1.64	3.88	2,040	4,590	<0.25	<0.02	<0.27	0.012	0.0106	0.015
MM	24-0ct-01	Ŷ	ŗ	1>	l>	<1	\$	1,940	4,790	<0.5	<0.5	~10	<0.0002	<0.02	300.05
	23-Jan-02	⊽	₽	₽	۲	<1	⊲2	1,630	4,620						
•	16-Apr-02	⊽	4	Þ	4	۲	₽								
	8-Jul-02	1>	₽	Þ	١>	۱>	5	1,880	4,330						
	5-Oct-02	₽	₽	₽	Þ	₽	2								
	19-Feb-03	1>	<۱>	۶	4	₽	₹2								
	2-Sep-03	1>	l>	1>	Þ	1>	<2	1,790	4,010	<0.5	<0.5	<1.0			
	6-0ct-03	<1	<1	Þ	Þ	₽	<2								
NMOCD Remi	edial Thresholds	10	750	750			620	250	1,000				0.002	0.1	0.05
Bolded values are	in excess of the NMC	DCD Remediativ	on Thresholds o	r Other Standa	rds for Domest	ic Water Supply									

Bolded values are in excess of the NMOCD Keme If cell is blank, that parameter was not analyzed

# **APPENDICES**

,

ŀ

.

## **APPENDIX A**

## **GROUNDWATER ANALYTICAL RESULTS**

.

### AND

### **CHAIN-OF-CUSTODY FORMS**

			·			351 220 (51	2 Montopolis 19 N. Padre Isl 2) 385-5886	Drive, A and Dr., (	ustin, TX Corpus C K (512) 3	78744 hristi, T 85-7411	& N 78408	~
Client: Environmental Plus, Inc. Attn: Pat McCasland						Report#/Lab 11 Project ID: 206	<b>D#:</b> 139822 00-10606	Repo	rt Date: (	03/03/03		R (*******
Address: 2100 Ave. O						Sample Name:	WEJM121903	٨W				
Eunice	NM 88231					Sample Matrix	: water					
Phone: (505) 394-3481 FAX: (505)	394-2601					Date Received: Date Samuled:	02/26/2003	Time: Time:	14:15 03:00			
PEPORT OF ANAL VSIS									C aure	1.1		_
Parameter	Result	Units	ROL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Oual <sup>7</sup>	Prec.2	Recov.3	CCV <sup>4</sup>	LCS <sup>4</sup>	
Volatile organics-8260b/BTEX	-		, 1		02/28/03	8260b		1	;	1	1	- <u></u>
Benzene	₽	J/gu	-	∣⊽	02/28/03	8260b	!	2	71.1	87.5	20	
Ethylbenzene	7	Π/βη		$\overline{\mathbf{v}}$	02/28/03	8260b	1	2.8	98.6	101.9	107.5	
m,p-Xylenes	7	µg/L	Ι	$\overline{\mathbf{v}}$	02/28/03	8260b	ł	2.1	101.1	102.6	1.11.1	
o-Xylene	V	hg/L	1	⊽	02/28/03	8260b	!	1.2	108.5	101.7	109	
Toluene	<1	hg/L	1	₽	02/28/03	8260b	•	-	93.6	84.3	85.5	
This analytical report is respectfully submitted by Anal have been carefully reviewed and, to the best of my kno have been carefully reviewed and, to the best of my kno are consistent with AnalySys, Inc., S Quality Assurance. Copyright 2000, AnalySys, Inc., Austin, TX. All right publication may be reproduced or transmitted in any for Rei Repress written consent of AnalySys, Inc. Rei Rei Rei Rei Rei Rei Rei Rei Rei Rei	ySys, Inc. The e wledge, the anal Quality Control fs reserved. No m or by any me spectfully Sut Richard Laste	raclosed results yrical results i Program. © ans without the ornitted, r	1. Qual of the r recover express (RQL), typical), dilution associat recover than ad	ity assurance du elative percent ( ed from a spike ed at the percer typicstly at or y demote USEP, s. 7. Data Qu ed method blam ed method blam ted method blam visory limit. M	tra is for the sa (4) a sumple. (4) recovery at (%) recovery at (%) recovery at (%) recovery at (%) S1 = MS (%) S1 = MS (%) S1 = MS = Matrix interf	mple batch which inclut between duplicate measu 4. Calibration Verificatio i of analyte from a know i of analyte from a know Less than ("<") values re Less than ("<") values re Less than ("<") values re analyte potentially prese and/or MSD recovery es and/or MSD and PI èrence.	led this sample. rements. 3. Recc n (CCV) and Labo n standard or matr n standard or matr in the anal flect nominal qua the tween the PQ ceeed advisory lim ceeed advisory lim S recoveries exce	2. Precision very (Reco pratory Con ix. 5. Rep ix. 5. Rep its. 2. Rep its. 22 =Pc ed advisory	a (PREC) is v.) is the per trrol Sample corting Quar odd. 6. Me dDL. B = 8. digestion limits. P =	the absolution of the the the tension of the the theory of theory of the theory of the theory of the	te value te value alts are mits mits ers cted in cted in cted in igher	

**Report Date: 03/03/03** 

Page#: ]

<b>Gracy Sys</b>				3512 Mouto 2209 N. Pad (512) 385-51	oolis Drive, Austin, TX 78744 & e Island Dr., Corpus Christi, TN 78408 186 • FAX (512) 385-7411
Client: Environmental Plus, Inc. Attn: Pat McCasland	P1 Sa	roject ID: 2000 Imple Name: W	-10606 'EJM121903MW		Report#/Lab ID#: 139822 Sample Matrix: water
REPORT OF SURROGATE RECOVERY					
Surrogate Compound	Method	Recovery	<b>Recovery Limit</b>	Data Qualifiers	
1,2-Dichloroethane-d4	8260b	105	80-120	-	
Toluene-d8	8260b	110	88-110	1	

. ]

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

----

Ì

ished By Sample Received By Date Time Name Affiliation Date Time Time
Date Time Name Amilation By West Date Amilation Date Date
Under Time Name Amilation Date Time
14.15 Alelonie Junghary ASI 226/03 14.15
SI.F. EOLORE IST Dreventermonth

Chary Sys						35. 22( (51	12 Montopolis 19 N. Padre Isl 2) 385-5886	Drive, A and Dr., FA3	ustin, TX Corpus C  K (512) 3	78744 <i>b</i> hristi, T3 85-7411	2 78408	~ I
Client: Environmental Plus, Inc. Attn: Pat McCasland						Report#/Lab 1 Project 1D: 20	D#: 146884 00-10606	Repo	rt Date: (	60/11/60		
Address: 2100 Ave. O Eunice	NM 88231					Sample Name: Sample Matrix	WECOJMI920	3MW				
Phome: (505) 304-3481 FAY. (50	1096-208130					Date Received:	09/04/2003	Time:	10:30			
REPORT OF ANALYSIS	1007-1-10 (00						OUALITY	ASSUR	NCE D	VIA <sup>1</sup>		1
Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>	
Total dissolved solids	4010	, ng/L	- :	l≏ ¦	60/80/60	160.1		1.17	-NA-	-74-	-VN-	(
LPH by GC (as diesel) LPH by GC (as diesel-ext)	 9 1	- mg/L	<u>.</u> 1	205. I	£0/60/60	8015 mod. 3510		<del>.</del> 1		122.9	98.7	
TPH by GC (as gasoline)	<0.5	mg/L	0.5	<0.5	20/60/60	8015 mod.	1	5.2	97.5	121.1	100.1	
Chloride	1790	mg/L	25	<25	60/80/60	325.2&9251	1 1	2.44	81.96	107.27	97.39	
Volatile organics-8260b/BTEX	1		1		60/60/60	8260b	1	1	-		1	<b>-</b>
Benzene	7	hg/L	_	⊽	60/60/60	8260b		3.8	89.6	100.3	91.2	
Ethylbenzene	V	μg/L	-	v	\$0/60/60	8260b	I	3.4	113.4	115.5	118.4	
n,p-Xylenes	⊽	hg/L	-1	$\overline{\mathbf{v}}$	60/60/60	8260b	1	4.8	111.7	6.111	115.5	·
o-Xylene	V	μg/L	-	⊽	60/60/60	8260b	ł	5.8	113	113.8	117.1	
ſoluene	⊽	μg/L	1	⊽	60/60/60	8260b		6.1	92.1	105.4	98.4	
This analytical report is respectfully submitted by A have been carefully reviewed and, to the best of my are consistent with AnalySys, Inc.'s Quality Assura Copyright 2000, AnalySys, Inc., Austin, TX. All r publication may be reproduced or transmitted in any express written consent of AnalySys, Inc.	unalySys, Inc. The unevoledge, the ana unecQuality Contro rights reserved. No y form or by any m Respectfully Su Respectfully Su Richard Laste	enclosed results enclosed results i Program. © part of this cans without the bmitted, fatt.	1. Qual of the r recover express express express association association than ad	ity assurance d elative percent ( ed from a spike ed as the percent ty denote USEP s. 7. Data Qu s. 7. Data Qu s. 7. vet et de dutat vet exceted adviat visory limit. Mi	ata is for the sa % of ifference 1 % and the sample. d sample. t % braceovery above the Prace A procedures. a liffers are J = M k(s). S1 = MS intert = = Matrix intert	mple batch which inclu- mple batch which inclu- between duplicate measu 4. Calibration Verification r of analyte from a know r of analyte from a know r of analyte from Limit Less than ("<") values re Less than ("<") values re and/or MSD recovery c and/or MSD and PI ference.	and this sample. Tements. 3. Reconnection on (CCV) and Labo in standard or matr (PQL) of the anal (PQL) of the anal (PQL) of the anal (PQL	2. Precision very (Reco ratory Con rix. 5. Rep rix. 5. Rep ritation lim that the N ults. 22 = PC ed advisory	(PREC) is (PREC) is the per- bar of Sample orting Quan od. 6. Met- its adjusted fILL. $B = A$ fILL. $B = A$ fimits. $P = f$	the absolution cent (%) of (LCS) result initation Lin thod numbe for any require analyte detect precision bi	e value analyte his are nits nits tres tres tres tres tres tres tres tr	

-

]

Report Date: 09/10/03

Page#: 1

S E
ហ
÷

3512 Montopolis Drive, Austin, TX 78744 & 2209 N. Padre Island Dr., Corpus Christl, TX 78408 (512) 385-7411 (512) 385-5886 • FAX (512) 385-7411 Demontrial ob 10m-146884

. |

1

Γ

• \_\_]

\_]

Report#/Lab 1D#: 146884 Sample Matrix: water Sample Name: WECOJMI9203MW Project ID: 2000-10606 Environmental Plus, Inc. Pat McCasland

# **REPORT OF SURROGATE RECOVERY**

Client: Attn:

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1-Chlorooctane	8015 mod.	76.7	50-150	1
p-Terphenyl	8015 mod.	87.5	50-150	
1,2-Dichloroethane-d4	8260b	95.6	80-120 <sup>-</sup>	2 2 1
Toluene-d8	8260b	110	88-110	ł

Data Qualificers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

Page#: 2

ł

· · · · · · · · · · · · ·

!

• <b>U</b> inC. 444-5896 s Requested (1)		Comments					botted to ASI's normal reporting I default to Princity Pollutants (	T=۵.5°c		ate Time	03 1030	standard terms.
4221 Freidrich Lane, S (512)				×			hed of choice and all data will be rep thed to this chain-of-custody. ASI will		sample Received By	Affiliation D	ASI 9/4	sampler to AnalySys, Inc.'s
): East Exergut Viery 80 State I. Zip 292 Kernander	5 <i>199</i> Fax	te (Lab only)	146884 × ×	*			 ses will be conducted using ASI's me fied on this chain-of-custody or aited			Name /	Manie Hunderford	stitutes apreement by buyer/
I to (if dii en mpany Name dress <i>SYOS</i> y <i>PDLiallan</i> TN: <i>Elan k</i>	one / 15 . 63 F Frad By Bla	rs Soil Water Wa:	×	×			 documentation, all analy	procedures.		Time		alvtical testing COL
	b mgr.): Sampler: 22	Time No. of Sampled Containe	10:30 4	1 25:00			 ustody and/or attached of the sum	be supplied for all GC	shed By	Date	Rus 9.2.03	Jucke Inc for an
: East router entry & Ave O State N. A.Zip	t be confirmed with la #: <i>Occo- 106 e 6</i>	le No. Uate tification Sampled	92034W 9.2.03	72 azzer 2-2-03			sted otherwise on this Chain-of-or	on. Specific compound lists must	Sample Relinqui	Affiliation	Ewernachiewal	decribed complet to Ana
Send Ref. s To: Company Name 2 Address 2/20 City Ecurice	Phone <u>Cort</u> Phone <u>Cort</u> Phone Phon	Client Sampl Description/Iden	we Ce Jall.	LECO JMIS			(1)Unices specifically requer	ASI's HSL list at ASI's option		Name	Fred lay El-	Tradering of shove

ł

L

ļ

Ì

Crucy Sys				)		351 220 (51	2 Montopolis 9 N. Padre Isli 2) 385-5886	Drive, Au ind Dr., G • FAX	ustin, TX Corpus Cl ( (512) 3	78744 ( hristi, T) 85-7411	& X 78408
Client: Environmental Plus, Inc. Attn: Pat McCasland						Report#/Lab II Project ID: 200	<b>)#:</b> 147949 00-10606	Repor	rt Date:	10/13/03	
Address: 2100 Ave. O		<u>-</u>				Sample Name:	WLE10603JM1	ΜW			
Eunice	NM 88231					Sample Matrix:	: water				
<b>Phone:</b> (505) 394-3481 <b>FAX:</b> (505)	394-2601	<u> </u>				Date Received: Date Sampled:	10/09/2003 10/06/2003	Time: Time:	10:30 09:00		
REPORT OF ANALYSIS		]					OUALITY /	ASSURA	NNCE D/	ATA <sup>1</sup>	
Parameter	Result	Units	rql <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual 7	Prec.2	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	1		:		10/09/03	8260b(5030/5035)		1		1	1
Benzene	I∨	hg/L	1	⊽	10/09/03	8260b		3.5	87.8	90.3	86.9
Ethylbenzene	v	hg/L	1	⊽	10/09/03	8260b	:	0.2	108	111	110.9
m,p-Xylenes	⊽	µg/L	1	⊽	10/09/03	8260b	ł	0.1	109.7	114.3	111.8
o-Xylene	<b>!</b> ⊽	hg/L	-	⊽	10/09/03	8260b	;	0	116	119.5	117.8
Toluene	<1	µg/L	1	7	10/09/03	8260b	1	4.2	93.6	98.7	92.2
This analytical report is respectfully submitted by Anathave been carefully reviewed and, to the best of my kno have been carefully reviewed and, to the best of my kno are consistent with AnalySys, Inc.'s Quality Assurance. Copyright 2000, AnalySys, Inc., Austin, TX. All right publication may be reproduced or transmitted in any for express written consent of AnalySys, Inc. Rei	ySys, Inc. The evolution of the evolutio	mclosed results hydroad results I Program. © part of this printed, fatted, r	1. Qual of the r recover express typicall dilutior recover than ad	lity assurance d elative percent ( red from a spike eed as the percent , typically at or y denote USEP is. 7. Data Qu is. 7. Data Qu ted method blan ted method blan ted method blan visory limit. M	ata is for the si (%) difference (%) at ample. above the Pra above the Pra alifiers are J = hk(s). S1 =MS hk(s). S1 =MS int: S3	mple batch which includ between duplicate measu 4. Calibration Verification y of analyte from a know, ctical Quantitation Limit Less than ("<") values re analyte potentially prese and/or MSD recovery ex- and/or MSD and PL ference.	ed this sample. rements. 3. Reco n (CCV) and Labo a standard or mani- (PQL) of the anal- flect nominal quan- flect nominal quan- the PQ second advisory lim S recoveries excee	2. Precision very (Recor- ratory Com ratory Com ratory (Recor- ratory (Recor- ratory) L and the M tits. S2 = Po its. S2 = Po d advisory	1 (PREC) is 1 (PREC) is 1 (PREC) is 1 (PO) 1 (PO)	the absolution of the control of the	te value fe value flaatyte mits ers ers s) S) igher

ł

i ì

1

I

F-1

Report Date: 10/13/03

-

I

ļ

1

Page#: ]

Client:       Environmental Plus, Inc.       Project ID:       2000-10606       Report#/Lab ID#:       14794         ktu:       Pat McCasland       Sample Name:       WLE10603JM1MW       Report#/Lab ID#:       14794         ktu:       Pat McCasland       Method       Reovery       Name:       NLE10603JM1MW       Sample Matrix: water         EFORT OF SURROGATE RECOVERY       Method       Recovery       Recovery Limit       Data Qualifiers       Sample Matrix: water         2-Dichloroethane-d4       8260b       113       80-120            2-Dichloroethane-d4       8260b       97.5       88-110            at Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limit.	Client:Environmental Plus, Inc.Chient:Pat McCaslandAttn:Pat McCaslandCorrectionSample Name: WLE10603JMIMWEPORT OF SURROGATE RECOVERYRene: WLE10603JMIMWLePORT OF SURROGATE RECOVERYMethodRecoveryLing800120Int2-Dichloroethane-d48260b97.5Surbustere-d8800-120IntAnomeMethodRecovery LimitDichloroethane-d48260b97.5Surbustere-d8800-120IntAnomeMat AnalyticAnomeMat Analytic	1 manual of 10# 147040
EPORT OF SURROGATE RECOVERY       urrogate Compound     Method     Recovery     Limit     Data Qualifiers       2-Dichloroethane-d4     8260b     113     80-120        2-Dichloroethane-d4     8260b     97.5     88-110        at Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.	EPORT OF SURROGATE RECOVERY         urrogate Compound       Method       Recovery       Imit       Data Qualifiers         2-Dichloroethane-d4       8260b       113       80-120          0luene-d8       8260b       97.5       88-110          ata Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.	Sample Matrix: water
urrogate Compound     Method     Recovery     Imit     Data Qualifiers       2-Dichloroethane-d4     8260b     113     80-120        2-Dichloroethane-d4     8260b     97.5     88-110        ala Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.	urrogate Compound     Method     Recovery     Limit     Data Qualifiers       2-Dichloroethane-d4     8260b     113     80-120        0luene-d8     88-110         ata Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.     97.5     88-110	
2-Dichloroethane-d4 8260b 113 80-120 oluene-d8 8260b 97.5 88-110 Ia Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.	2-Dichloroethane-d4 8260b 113 80-120 oluene-d8 8260b 97.5 88-110 Ita Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.	
olucne-d8 88-110 lia Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.	olucne-d8 88-110 Ita Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.	
la Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.	ta Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.	

.  . .

Page#: 2

<b>J T T T T T T T T T T</b>	Analyses Requested (1) - case attach explanatory information as required	Comments				data will be reported to ASI's normal reportiny ustody, ASI will default to Priority Pollutants (	ved By $T = x_1 v_c$	Date Time	05:01 50/9/01
21 Fre	Pite	14 / / /				sing ASI's method of choice and all stody or attached to this chain-of-cu	Sample Receiv	Affiliation	And A. A. A. S.
int): ie Link Eirege Hury 80 State TX	L. Hernarde	Waste (Lab only)	147949			analyses will be conducted u specified on this chain-of-cu		Name	Multonie from
Bill to (if diff Company Nam Address Stor City Mudlan	ATTN: <u>Fran</u> Phone <u>25-5</u>	lo. of Soil Water	X R			ached documentation, all dytical parameter lists are all GC procedures.		e Time	section lecting
121 Plus	<u>یجر جمع محرما</u> with lab mgr.): مره Sampler	Date Time N ampled Sampled Co	2.6-3 9:00			 Chain-of-custody and/or att actables, unless specific and I lists must be supplied for a	elinquished By	n Dat	antal Dies
To: E. E. Windowen	<u><u><u></u><u></u><u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u></u></u>	nple No. lentification St	3JULIUU 4			quested otherwise on this of CCMS volatiles and extra option. Specific compound	Sample Re	Amilatio	Ereina ku
Send Repuls	ATTN: <u>201</u> Phone <u>565</u> . <u>39</u> Rush Status (m Project Name/F	Client San Description/Id	WLE1060			(1)Unless specifically re limits (MDL/PQL). Por ASI's HSL list at ASI's o		Name	The line of about







## NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON Governor Joanna Prukop Cabinet Secretary Mark E. Fesmire, P.E. Director Oil Conservation Division

July 8, 2004

Mr. Jimmy Bryant Link Energy P.O. Box 1660 Midland, TX 79703

JUL 1 3 2004

Dear Mr. Bryant:

The New Mexico Oil Conservation Division has received Link's "Annual Monitoring Report Link Energy Clay Osborn Jalmat #1 #2000-10606" report dated April 28, 2004. The NMOCD file number for this site is 1R-0412.

Before we can act on your request for termination of groundwater monitoring, we need some additional information. Please send me the results of the soil sampling taken at the time of the original investigation at this site. The sampling would have taken place during your advancement of 9 soil borings between June 21, 2000 and June 26, 2000. Your report, noted above, says that soil samples were taken every 5 feet. NMOCD needs to see the laboratory results taken on these samples showing concentrations at each 5-foot depth.

If you have any questions, contact me at (505) 476-3492 or emartin@state.nm.us

NEW MEXICO OIL CONSERVATION DIVISION

Martin

Edwin E. Martin, Environmental Bureau

cc: Larry W. Johnson, NMOCD, Hobbs Jeff Dann, Link Energy, Houston Pat McCasland, EPI





MAY 1 8 2004

04 May 2004

Mr. Ed Martin NM Energy, Minerals, and Natural Resources Department New Mexico Oil Conservation Division – Environmental Bureau 1220 South St. Francis Drive Santa Fe, NM 87505

Re: Plains All American (formerly Link Energy, LLC) Groundwater Monitoring Sites Summary of Groundwater Sampling Recommendations

Dear Mr. Martin,

Environmental Plus, Inc. (EPI), on behalf of Plains All American (formerly Link Energy, LLC) is submitting the following list of Plains All American groundwater monitoring/remediation sites managed by EPI and the groundwater sampling frequency recommendations.

Site Name	Reference Number	Monitoring Wells	Sampling Frequency	PSH Recovery Frequency	
Clay Osborn 6" Shell North	2000-10615	All Wells	Recommend sampling monitoring well netwo	be terminated and ork be sealed	
Clay Osborn Jalmat #1	2000-10606	MW-1	Recommend sampling monitoring well be sea	be terminated and led	
Clay Osborn #22A	2000-10614	MW-1	Recommend sampling be terminated and monitoring well be sealed		
CS Cayler Gathering	2002-10250	MW-1	Quarterly if no PSH detected	Automated	
		MW-2, MW-6, MW-10, MW-11, & MW-12	Quarterly	Semi-monthly (absorbent socks) and automated system	
Denton Station	2003-00338	MW-8, MW-9, MW-13, & MW-14	Annually	Not Applicable	
		MW-15 & MW-16	Do not sample unless PSH detected in MW-12 and/or MW-14	Not Applicable	
Hobbs Junction Mainline	2003 00017	MW-1, MW-2, MW-3, MW-4, MW-5, MW-6 and MW-12	Quarterly if no PSH detected	Automated	
	2003-00017	MW-7, MW-8, MW-9, MW-10, MW-11 and MW-13 and irrigation well	Quarterly	Not Applicable	
Hugh Gathering 090402	2002-10235	MW-1 thru MW-5	Quarterly if no PSH detected	Automated	
Junction JC-T 34 Line to Lea	2002-10286	MW-1 thru MW-3	Quarterly	Semi-monthly (absorbent socks)	

.

نو لتتكلي `

P.O. Box 1558

TELEPHONE 505+394+3481

2100 AVENCE O

...

•••• EUNICE, NEW MEXICO 88231 FAX 505•394•2601 Mr. Ed Martin 04 May 2004





Site Name	Reference Number	Monitoring Wells	Sampling Frequency	PSH Recovery Frequency	
Kimbrough Sweet ?" Line	2000 10757	EMW, SMW and NWMW	Semi-annually	Not Applicable	
Kindlough Sweet 8 Ente	2000-10737	CMW	Quarterly if no PSH present	Automated	
Lamunyon Sump	2000-10409	MW-1	Recommend sampling be terminated and monitoring well be sealed		
		MW-1, MW-2, MW-3, MW-11 and MW-12	Quarterly if no PSH present	Semi-monthly	
Lea Station	2003-00339	MW-9, MW-10 and MW-13	Annually	Not Applicable	
		MW-4 thru MW-8	Recommend sampling be terminated and monitoring wells be gauged quarterly		
		RW-1 and RW-2	Not Sampled	Absorbent socks	
Livingston Ridge to Hugh – Bob McCasland	2001-11043	NMW, EMW, SMW, WMW, NWMW and CMW	Quarterly	Semi-monthly	
Lovington Deep 6"	2002-10312	MW-1 thru MW-5	Quarterly if no PSH present	Weekly	
Mescalero Ridge Station	2001-10971	MW-1	One additional sampling event. If analytical results indicate no impacts, recommend closure.	Not Applicable	
South Mattix Sump	2000-10410	MW-1	Quarterly	Not Applicable	
Vacuum 10" to Jal	2002-10248	MRW-1 thru MRW-5 and RW-1	Semi-annually	Monthly	

EPI, on behalf of Plains All American would like to request formal approval of the sampling recommendations for the above-referenced sites. Should you have any questions or concerns regarding these recommendations, please feel free to contact EPI at (505) 394-3481.

Sincerely,

·ENVIRONMENTAL PLUS, INC.

res

Iain Olness, P.G. Hydrogeologist

cc: Larry W. Johnson, NMOCD – Hobbs District Office Jimmy Bryant, Plains All American – Midland Jeff Dann, Plains All American – Houston Sherry Miller, EPI President Ben Miller, EPI Vice President and General Manager