



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

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**BILL RICHARDSON**

Governor

**Joanna Prukop**

Cabinet Secretary

**Mark E. Fesmire, P.E.**

Director

**Oil Conservation Division**

**BASS ENTERPRISES PRODUCTION COMPANY**

901 North Canal, Suite 704

Carlsbad, NM 88220

April 3, 2006

**APPROVAL OF FINAL REPORT C-141 - POKER LAKE UNIT 147 (30-015-31177)**

The NMOCD District 2 Office has completed a review of the Remedial Action Final Report submitted by The S.M. Stoller Corporation on behalf of Bass Enterprises Production Company. The attached Final Report C-141 has been approved and the violation case number CLB0535031026 has been closed.

Thank you for your prompt attention to this matter and your efforts in protecting the environment.

A handwritten signature in black ink, appearing to read "Chris Beadle".

Chris Beadle

Artesia OCD District Office

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

### Release Notification and Corrective Action

#### OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Bass Enterprises	Contact	Mike Waygood
Address	901 A Canal Suite 204 Carlsbad	Telephone No.	505-887-7329
Facility Name	Poker Lake Unit #147	Facility Type	Tank Battery
Surface Owner	BLM	Mineral Owner	
		Lease No.	

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	5	25S	31E					Eddy

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

#### NATURE OF RELEASE

Type of Release	Oil	Volume of Release	unknown	Volume Recovered	0
Source of Release	Stock Tank	Date and Hour of Occurrence		Date and Hour of Discovery	12/13/05
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? A letter of violation was issued to Bass from the OCD # 1480534741526 on 12/14/05			
By Whom?		Date and Hour			
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\* n/a

Describe Cause of Problem and Remedial Action Taken.\* The stock tank on the west end of the tank battery overflowed impacting soils around the tank.

Describe Area Affected and Cleanup Action Taken.\* Soils around the stock tank were affected which was an area that measured about 6 feet by 10 feet and about 1.5 feet deep. These soils were excavated and hauled to CRI. The area was then backfilled with caliche.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Mike Waygood		OIL CONSERVATION DIVISION	
Printed Name: MIKE WAYGOOD		TIM GUM by MB	
Title: A.P.S.		Approved by District Supervisor:	@
E-mail Address: MWAYGOOD@UTDIELDS.COM		Approval Date: 4/3/06	Expiration Date:
Date: 3-13-06	Phone: 887-7329	Conditions of Approval:	Attached <input type="checkbox"/>

\* Attach Additional Sheets If Necessary



*established 1959*

March 8, 2006

Chris Beadle  
New Mexico EMNRD  
Oil Conservation Division  
1301 W. Grand  
Artesia, NM 88210


**RECEIVED**  
MAR 15 2006  
**OCD-ARTEZIA**

**RE: Transmittal of Remedial Action Final Report for Poker Lake Unit No. 147.**

Attached for your review are the Remedial Action Final Reports for Poker Lake Unit No. 147. Stoller is pleased to submit this report on behalf of Bass Enterprises Production Company. The report recommends that no further actions be required at this time with regard to hydrocarbon contamination.

If you have any questions regarding the report, please do not hesitate to contact Christy Box at (505) 885-0172 or Harry Bolton at (303) 546-4300.

Regards,



Donald L. George  
Assistant Vice President

cc: Mike Waygood, Bass Enterprises Production Company  
Terry Gregston, BLM

**Bass Enterprises Production Company**

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**Remedial Action Final Report  
Poker Lake Unit No. 147**

**March 3, 2006**

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*Stoller*

Submitted by  
The S.M. Stoller Corporation  
314 W. Mermod, Suite 102  
Carlsbad, New Mexico 88220  
(505) 885-0172

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## **Executive Summary**

The New Mexico Oil Conservation Division, District 2 Office, issued a letter of violation to Bass Enterprises Production Company for a spill at Poker Lake Unit No. 147. The S.M. Stoller Corporation and Mesquite Services, Inc. conducted remediation activities beginning February 1, 2006. Contaminated soils were excavated, verification soil samples were collected for laboratory analysis, and the excavations were backfilled. Contaminated materials were transported offsite to Controlled Recovery, Inc. Laboratory analysis of soil samples confirmed field-screening methods. The areas impacted by crude oil spills have been remediated in compliance with Division guidelines. No further remedial actions are recommended for the site.

## **Introduction**

A New Mexico Oil Conservation Division (NMOCD), District 2 Office, letter of violation dated December 16, 2005, was issued to Bass Enterprises Production Company (Bass) regarding the Poker Lake Unit No. 147 site (Attachment A). NMOCD had identified surface leaks/spills during a routine site inspection. Specifically, the stock tank on the west end of the tank battery had overflowed, impacting soils inside the berm. NMOCD did not require a remediation work plan for this release prior to commencing cleanup activities.

Stoller reviewed the ranking criteria for this site to determine the recommended remediation action levels stated in the NMOCD "Guidelines For Remediation of Leaks, Spills, and Releases," and determined the total ranking score to be between 0-9. Depth to groundwater is greater than 100 feet. The site is not within the limits of a wellhead protection area. The distance to the nearest surface water body is greater than 1,000 horizontal feet. Therefore, remediation action levels are 10 ppm benzene, 50 ppm BTEX, and 5,000 ppm.

## **Site Location and Description**

Poker Lake Unit No. 147, unit letter B, is located in section 5, township 25 south, range 31 east in Eddy County, New Mexico. The site contains a wellhead, oil/water separators, a tank battery, and related piping. The tank battery has two crude stock tanks and a produced water storage tank within the bermed area. Figure 1 is a sketch of the site showing the physical features and contamination zones addressed by the remedial action (Attachment B).

## **Response to Release**

Bass contracted The S.M. Stoller Corporation (Stoller) and Mesquite Services, Inc. (Mesquite) to provide remedial services in response to the above referenced NMOCD letter of violation.

Stoller inspected the site on January 30, 2006, in advance of remedial activities. Stoller provided environmental oversight for Mesquite during cleanup operations that commenced on Wednesday, February 1, 2006 and finished on Thursday afternoon, February 2, 2006.

Upon arrival to the site Stoller identified the following four small areas in need of remediation:

1. The area immediately north of and adjacent to the west stock tank (as specified by NMOCD letter of violation)
2. The area between the east stock tank and the produced water tank
3. Immediately underneath the crude manifold catch basin
4. Immediately underneath the produced water manifold catch basin

These areas are shown on Figure 1. Only the small spills underneath the manifold catch basins were located outside the bermed area of the tank battery. Oily surface stains identified the contaminated area between the east stock tank and the produced water tank.

## Methods of Remediation

Stoller provided supervision of the remedial activities and directed Mesquite personnel as to the location and size of excavations. All excavations were dug by hand due to the presence of pipe runs or other obstructions. Some portions of the excavation between the east stock tank and the produced water tank were dug with a backhoe. Visual observations of soil staining and hydrocarbon odors guided initial work. Stoller used a photoionization detector (PID) to screen impacted soils and verify the extent of contamination. The PID was calibrated and a benzene response factor used to adjust the instrument so readings more accurately reflected benzene concentrations.

Headspace samples were collected periodically as soil removal progressed. When contaminated areas were cleared of highly stained soils and headspace analysis indicated volatiles were less than 100 ppm, soil removal was stopped. Composite samples were collected from the shallow excavations for final headspace analysis and laboratory confirmation samples were collected to verify field-screening methods.

The spills beneath the manifold catch basins were very small. Soil staining extended no more than six inches below the surface at each location. The crude manifold excavation measured about four feet square. The produced water manifold excavation measured about two feet square. About 10 cubic feet of soil was removed from these locations. The excavations were backfilled with caliche following PID analysis indicating soil vapor headspace measurements were less than 100 ppm. Soil contamination in these locations was considered incidental and no samples for laboratory analysis were collected.

The finished excavation on the north side of the westernmost stock tank measured 6 feet by 10 feet by 1.5 feet deep. About three cubic yards of soil were excavated. Following

headspace analysis a composite sample was collected from the excavation for laboratory analysis. The excavation was backfilled with caliche after confirmation sampling.

The finished excavation between the produced water tank and the east stock tank was also dug to about 1.5 feet deep. It measured about 17 feet long and about 6 feet wide. About five cubic yards of contaminated soil were removed from the excavation. Following headspace analysis a composite sample was collected from the excavation for laboratory analysis. The excavation was backfilled with caliche after confirmation sampling.

## Sample Analysis

Headspace testing results were documented on the Headspace Testing for Volatiles form and are included as Attachment C. Contaminated soils were excavated from all excavations to the extent that soil vapor measurements were less than 100 ppm. Two composite samples were collected (one each) from the larger excavations to verify remaining BTEX and TPH levels.

Confirmation samples were transported by Stoller and relinquished under chain-of-custody to Cardinal Laboratories in Hobbs, New Mexico, for analysis. Chain-of-custody forms are included as Attachment D. The samples were analyzed for BTEX by method 8260 and TPH by method 8015 M. Laboratory results verify field screening results. Attachment E includes copies of the laboratory certificates. As shown in Table 1, benzene and BTEX are less than 10 ppm and 50 ppm respectively. TPH was analyzed to be less than 467 ppm in the excavation by the produced water tank. The sample from the excavation at the west stock tank indicated a residual level of TPH less than 1,620 ppm.

**Table 1**  
**Laboratory Analytical Results of Hydrocarbon Analysis**

Sample Name	Headspace Analysis (ppm)	Benzene (ppm)	Total BTEX (ppm)	TPH GRO (ppm)	TPH DRO (ppm)
PLU147PWTC10	78	ND	ND	ND	487
PLU147WT11	60	ND	ND	ND	1620

Note: ND = Not Detected above the method detection limit.

## Contaminated Soil Disposition

Mesquite transported contaminated soils excavated at the Poker Lake Unit No. 147 site to Controlled Recovery, Inc. for treatment and final disposition as exempt waste. A Copy of the waste acceptance document is included as Attachment F and indicates about 8 cubic yards of contaminated soil were removed from the site.




## Conclusions and Recommendations

Poker Lake Unit No. 147 has been remediated to the extent required by NMOCD Guidelines in regards to the spill identified in the Letter of Violation dated December 16, 2005. Additional surface leaks/spills have been remediated which were not previously identified by NMOCD, yet required remedial action. All excavations have been backfilled and no grading or revegetating is necessary. TPH. Laboratory analysis confirms cleanup goals have been achieved. No further remedial actions are currently recommended for this site.

Depth to groundwater is greater than 100 feet. The site is not within the limits of a wellhead protection area. The distance to the nearest surface water body is greater than 1,000 horizontal feet. Therefore, remediation action levels are 10 ppm benzene, 50 ppm total BTEX, and 5,000 ppm TPH. Laboratory analysis confirms cleanup goals have been achieved. No further remedial actions are currently recommended for this site.

March 3, 2006

## Attachment A – NMOCD Letter of Violation

T2/22/05 13:45 FAX 432 687 0329	BEPCO	+ CARLSBAD	003
 <b>NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT</b>			
<b>BILL RICHARDSON</b> Governor Joanna Prukop Cabinet Secretary	<b>Mark E. Fesmire, P.E.</b> Director Oil Conservation Division		
<i>Field Inspection Report</i> <i>"Basis of the Department's Oil Conservation"</i>			
16-Dec-05		<div style="border: 1px solid black; padding: 5px; display: inline-block;"><b>BEPCO - WID PRODUCTION</b> DEC 22 2005 <b>RECEIVED</b></div>	
<b>BASS ENTERPRISES PRODUCTION CO</b> PO BOX 2760 MIDLAND TX 79702		<b>LETTER OF VIOLATION - Inspection</b>	
Dear Operator:			
<p>The following inspection(s) indicate that the well, equipment, location or operational status of the well(s) failed to meet standards of the New Mexico Oil Conservation Division as described in the detail section below. To comply with standards imposed by Rules and Regulations of the Division, corrective action must be taken immediately and the situation brought into compliance. The detail section indicates preliminary findings and/or probable nature of the violation. This determination is based on an inspection of your well or facility by an inspector employed by the Oil Conservation Division on the date(s) indicated.</p> <p>Please notify the proper district office of the Division, in writing, of the date corrective actions are scheduled to be made so that arrangements can be made to reinspect the well and/or facility.</p>			
<b>INSPECTION DETAIL SECTION</b>			
<b>POKER LAKE UNIT No.147</b>		<b>B-5-25S-31E</b>	<b>30-015-31177-00-00</b>
<b>Inspection Date:</b>	<b>Type Inspection</b>	<b>Inspector</b>	<b>Violation?</b>
12/13/2005	Routine/Periodic	Chris Beadle	Yes
	Violations		No
	Surface Leaks/Spills		
<b>Comments on Inspection:</b>	Stock tank on west end of tank battery has overflowed impacting soils inside berm.		
Remediation is required. All soil remediation activities that occur on location must comply with the soil remediation guidelines in OCD publication "Guidelines For Remediation of Leaks, Spills, and Releases". This document may be found on the NMOCD web site: <a href="http://www.enmrd.state.nm.us/oed">www.enmrd.state.nm.us/oed</a> , under Publications> Environmental Handbook> Miscellaneous Guidelines> Remediation of Leaks, Spills and Releases.			
Notify NMOCD District 2 Office 24 hours prior to taking samples where results of the samples may be submitted to the OCD.			
Remediation work plan is not required. Site remediation must be completed prior to January 17, 2006. Notify NMOCD District 2 Office when remediation on location is completed.			
<small>Oil Conservation Division • 1301 W. Grand • Artesia, New Mexico 88210 Phone: 505-748-1283 • Fax: 505-748-5720 • <a href="http://www.enmrd.state.nm.us">http://www.enmrd.state.nm.us</a></small>			
<b>STOLLER</b> <b>314 W MOUNTAIN ST 102</b>			
12/22/05 THU 12:41 [TX/RX NO 7210] 003			

March 3, 2006

12/22/05 13:46 FAX 432 687 0329


BEPCO

→ CARLSBAD

004

In the event that a satisfactory response is not received to this letter of direction by the "Corrective Action Due By" date shown above, further enforcement will occur. Such enforcement may include this office applying to the Division for an order summoning you to a hearing before a Division Examiner in Santa Fe to show cause why you should not be ordered to permanently plug and abandon this well. Such a hearing may result in imposition of CIVIL PENALTIES for your violation of OCD rules.

Sincerely,



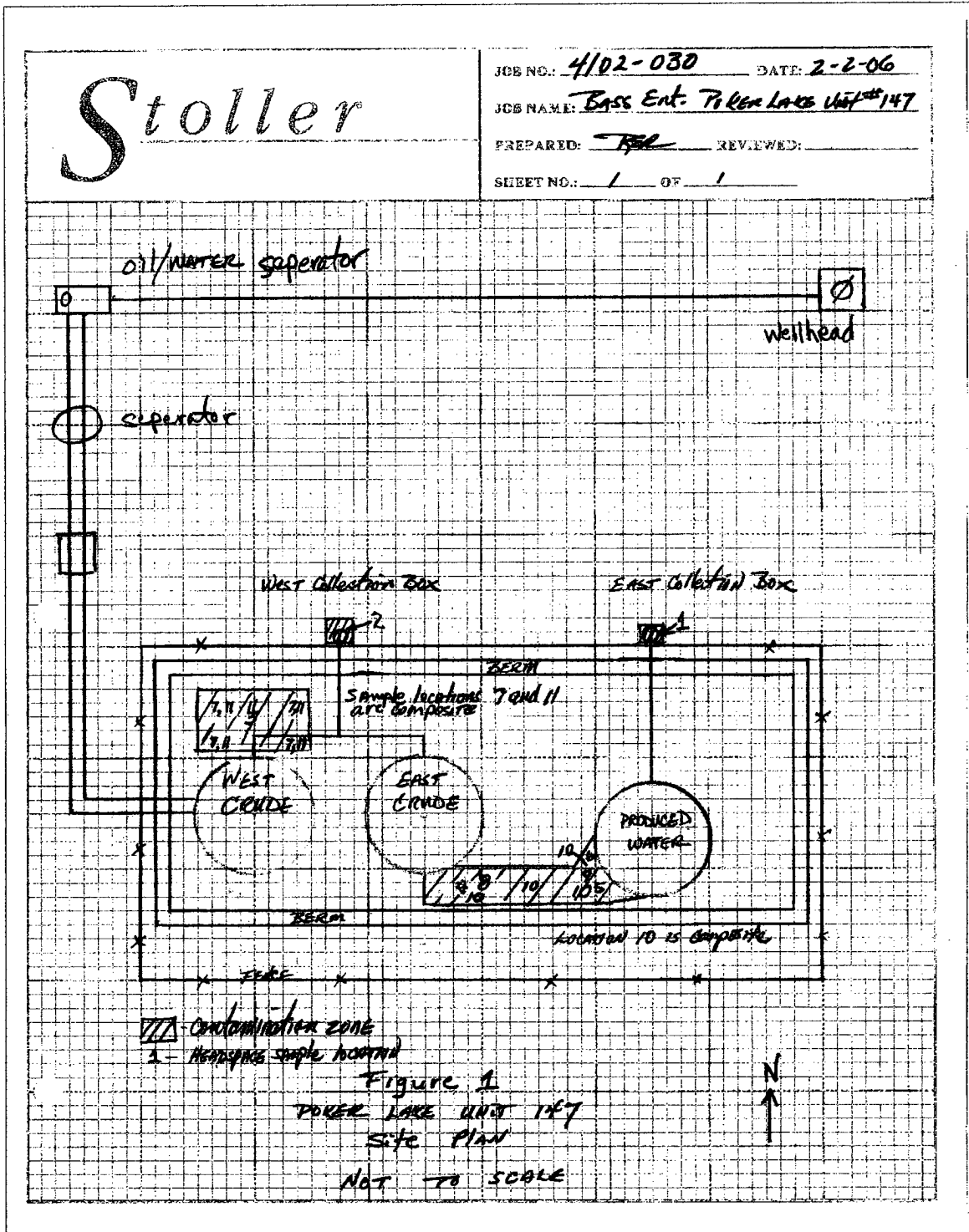
Artesia OCD District Office

Note: Information in Detail Section comes directly from field inspector data entries - not all blanks will contain data.  
\*Significant Non-Compliance events are reported directly to the EPA, Region VI Dallas, Texas.

Oil Conservation Division • 1301 W. Grand • Artesia, New Mexico 88210  
Phone: 505-748-1283 • Fax: 505-748-9720 • <http://www.oilandwater.nm.gov>

12/22/05 THU 12:41 [TX/RX NO 7210] 004

Attachment B – Figure 1



## Attachment C – Headspace Testing for Volatiles

# Stoller

Page 1 of 1

### HEADSPACE TESTING FOR VOLATILES

Project Name: BACS Ext. PLU 147 Engineer: R. RUPP

Project No.: 4102-030 Date: 2-2-06

Instrument Type: GAS ALERT MICRO 5 Calibration Date: 1-30-06

Serial No.: SK105026128 Calibration Gas Type/Concentration: 100ppm Isobutane

Photoionization Bulb Power (eV): 10 Room Temperature (°F): 75

Sample Number	Sampling Location PLU 147-	Sample Depth (ft.)	Sample Matrix	Peak Instrument Reading (ppm)	Collection Time	Comments
#1	PLU 147-MCB1	0.5'	Soil	88 ppm	1100	East Box (Pondhead/road)
#2	PLU 147-MCB2	0.5'	Soil	68 ppm	1108	West Box (Cattle)
#3	PLU 147-NT	0.25'	Soil	341 ppm	1115	North side west cattle tank
#4	PWT	0.3'	Soil	+1000 ppm	1150	11' West of PWT
#5	PWT	0.3'	Soil	450 ppm	1152	2' West PWT
#6	PWT	0.3'	Soil	580 ppm	1154	1' West PWT
#7	WTC	0.25'	Soil	400 ppm	1156	Composite around concrete
#8	PWT	1.0'	Soil	30 ppm	1300	10' West of PWT
#9	PWT	1.0'	Soil	87 ppm	1304	1.5' West of PWT
#10	PWTC	1.5'	Soil	98 ppm	1355	1.5' Composite of Excavation
#11	WTC	1.5'	Soil	60 ppm	1405	1.5' Composite of concrete

# Attachment D – Sample Chain-of-Custody

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

**ANALYSIS REQUEST**

Page 1 of 1

**COMPANY INFORMATION**

Company Name: **STOLLER LABORATORIES, INC.**  
 2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

Project Manager: **Don George**  
 Address: **314 West Marmon St, Suite 102**  
 City: **Carlsbad** State: **NM** Zip: **88220**  
 Phone #: **505 885 0122**  
 Fax #: **505 885 0122**

Project #: **4402** Project Name: **Project Name**  
 Project Location: **PUU #147**

**LAB I.D.**

Sample I.D.

1. **PUU47PNTC10**

2. **PUU47PNT11**

LAB I.D.	Sample I.D.	MATRIX		PRES.		SAMPLING		DATE	TIME
		GROUNDWATER	WASTEWATER	SLUDGE	OTHER	ICE / COOL	OTHER		
1	PUU47PNTC10							02-02-06	1355
2	PUU47PNT11							02-02-06	1405

**RECEIVED BY:** *Don George* **RECEIVED BY: (Lab Staff)** *Don George*

**DELIVERED BY: (Circle One)** *Don George* **CHECKED BY:** *Don George*

**SAMPLER - UPS - BUS - OTHER:** *Don George*

**REMARKS:**

*704 MEXICANOS*

*BTX 8020*

## Attachment E – Cardinal Laboratories Analytical Report

Rx Date/Time FEB-09-2006(THU) 09:31

P. 003



PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603  
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBBS, NM 88240

ANALYTICAL RESULTS FOR  
S.M. STOLLER CORPORATION  
ATTN: DON GEORGE  
314 WEST MERMOD ST., SUITE 102  
CARLSBAD, NM 88220  
FAX TO:

Receiving Date: 02/02/06  
Reporting Date: 02/08/06  
Project Number: 4102  
Project Name: NOT GIVEN  
Project Location: PLU #147

Sampling Date: 02/02/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: HM  
Analyzed By: BC

LAB NUMBER	SAMPLE ID	GRO (C <sub>8</sub> -C <sub>10</sub> ) (mg/Kg)	DRO (C <sub>10</sub> -C <sub>28</sub> ) (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:		02/08/06	02/08/06	02/03/06	02/03/06	02/03/06	02/03/06
H10899-1	PLU147PWT10	<10.0	487	<0.005	<0.005	<0.005	<0.015
H10899-2	PLU147WT11	<10.0	1620	<0.005	<0.005	<0.005	<0.015
Quality Control		774	794	0.098	0.098	0.094	0.282
True Value QC		800	800	0.100	0.100	0.100	0.300
% Recovery		96.7	99.3	98.3	97.5	94.4	93.8
Relative Percent Difference		8.6	0.9	7.3	6.2	2.3	1.0

METHODS: TPH GRO & DRO - EPA SW-846 8015 M; BTEX - SW-846 8260.

Burgess A. O'Connell, Ph. D.

Date 2/8/06

H10899.XLS

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analysis. As claims, including those for negligence and any other cause whatsoever that be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the appropriate service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of data, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services rendered by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

## Attachment F – Waste Acceptance Document

FEB-08-2006 WED 01:33 PM	FAX NO.	P. 09
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**CONTROLLED RECOVERY, INC.**  
P.O. Box 388 • Hobbs, New Mexico 88241-0388  
(505) 393-1079  
www.crrhobbs.com

Bill to \_\_\_\_\_  
Address \_\_\_\_\_

Company/Generator Bass  
Lease Name Poker Lake 50 and Poker Lake 147  
Trucking Company Mesquite Vehicle Number 1001 3 Driver (Print) Lovie  
Date 2-2-06 Time 3:35 a.m. / p.m.

**Type of Material**

<input type="checkbox"/> Exempt	<input type="checkbox"/> Tank Bottoms	<input type="checkbox"/> Fluids
<input type="checkbox"/> Non-Exempt	<input type="checkbox"/> C117	<input type="checkbox"/> Other Material
<input type="checkbox"/> C138	<input type="checkbox"/> Soils	List Description Below

**DESCRIPTION**

Cent. Soil

Volume of Material ☐ Bbls. 10 Yards ☐ Gallons  
☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

This statement applicable to exempt waste only.  
I represent and warrant that the wastes are: generated from oil and gas exploration and production operations; exempt from Resource Conservation and Recovery Act (RCRA) Subtitle C Regulations; and not mixed with non-exempt wastes.

Agent [Signature]  
CRR Representative [Signature]

**TANK BOTTOMS**

	Feet	Inches	BBLS Received	BS&W	%
1st Gauge					
2nd Gauge					
Received					

WHS - CRR      CRR - CRR Accounting      PRR - CRR Plant

80112  
Gold - Transporter  
The PRR Shop