



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

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 50 (30-015-23283)

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 CLB0535030898 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 N. Canal Suite 204 Carlsbad	Telephone No.	505-887-7329
Facility Name	Pikes Lake Unit #050	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
#	4	25S	31E	660 FTL		1980 FSL		Eddy

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release	Produced fluids and Oil	Volume of Release	unknown	Volume Recovered	0
Source of Release	Water tank + Manifold Catch Basin	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 received from ODC # 14B0534740358 on 12/13/05			
By Whom?		Date and Hour			
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. n/a			

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

Describe Cause of Problem and Remedial Action Taken.* The shut-off-valve at the manifold catch basin was not closing properly, therefore fluids were leaking and overflowing the basin. The valve was replaced. The water tank had overflowed causing produced fluids to run out on the ground. A fiberglass cover was put on the tank to prevent it from overflowing.

Describe Area Affected and Cleanup Action Taken.* The soils underneath the catch basin of about a 20 foot diameter and 8 foot deep were impacted. The soils on the southeast side of the water tank of about 1/2 cubic yard were impacted. These soils were excavated and hauled to CRI. The excavated areas were then backfilled.

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		Approved by District Supervisor: TIM GUM by MB @	
Title: A.P.S.		Approval Date: 4/3/06	Expiration Date:
E-mail Address: MWAYGOOD@WTD FIELDS.COM		Conditions of Approval:	
Date: 3-13-06 Phone: 887-7329		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
DOB-ARTEZIA

RE: Transmittal of Remedial Action Final Report for Poker Lake Unit No. 050.

Attached for your review are the Remedial Action Final Reports for Poker Lake Unit No. 050. 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. However, the report also states that if chloride contamination is present below the surface of the active pad and remediation is necessary it will be remediated, as required by NMOCD and BLM guidelines, during normal site restoration activities when the well location is permanently abandoned.

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

**Remedial Action Final Report
Poker Lake Unit No. 050**

March 3, 2006

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. 050. The S.M. Stoller Corporation and Mesquite Services, Inc. conducted remediation activities beginning January 31, 2006. Contaminated soils were excavated, verification samples collected for laboratory analysis, and the excavations backfilled. Contaminated materials were transported offsite to Controlled Recovery, Inc. Laboratory analysis of soil samples confirmed field-screening methods. Areas impacted by crude oil spills have been remediated in compliance with Division guidelines.

All highly contaminated/saturated soils were removed to the maximum extent practicable. Unsaturated hydrocarbon contaminated soils left in place have concentrations that do not pose a threat to human health or the environment. Therefore, no further remedial actions of hydrocarbon impacted soils are recommended for the site.

One chloride sample was collected below ground surface within the bermed area near the produced water tank. This sample confirmed the presence of chloride contamination below the surface of the pad. No subsurface remedial actions are recommended for chlorides at this time. However, these soils should be remediated, as required by NMOCD guidelines, during normal site restoration activities when the well location is permanently abandoned.

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. 050 site (Attachment A). NMOCD had identified surface leaks/spills during a routine site inspection. Specifically, produced fluids had impacted soils at the blow-down line, at the water tank within the bermed area, and at the crude manifold catch basin. NMOCD did not require a remediation work plan for this release. Stoller reviewed the ranking criteria for this site to determine the recommended remediation action levels and determined the total ranking score to be between 0-9.

Site Location and Description

Poker Lake Unit No. 050, unit number 2, is located in section 4, township 25 south, range 31 east in Eddy County, New Mexico. The site contains a wellhead, oil/water separator, tank battery, and related piping. The tank battery has three crude oil 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 Enterprises 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 Tuesday, January 31, 2006 and finished on Wednesday afternoon, February 1, 2006.

Upon arrival to the site Stoller identified the three areas in need of remediation, as specified by the NMOCD letter of violation:

1. The area north of the well at the end of the blow-down line (Excavation 1)
2. At the crude oil, truck-loading manifold catch basin (Excavation 2)
3. On the southeast side of the produced water storage tank inside the berm (Excavation 3)

Excavations and sample locations are identified on Figure 1.

Methods of Remediation

Stoller provided supervision of the remedial activities and directed Mesquite personnel as to the location and size of each excavation. Excavations 1 and 2 were dug with a backhoe and excavation 3 was dug by hand. Visual observations of soil staining and hydrocarbon odors guided initial work during removal of highly contaminated/saturated soils. Stoller used a photoionization detector (PID) to screen impacted soils and assess the extent of contamination. The PID was calibrated and a benzene response factor was used to adjust the instrument so readings more accurately reflected benzene concentrations.

Headspace samples were collected periodically as highly stained soil removal progressed. Soil removal stopped when headspace analysis indicated volatiles were either less than 100 ppm or soils were removed to the maximum extent practicable. Confirmation samples were collected from the sidewalls and bottoms of the excavations final headspace and for offsite laboratory analysis.

Excavation 1, north of the wellhead at the end of the blow-down line, was heavily impacted by the release of produced fluids. Free liquids were ponded at the end of the line and additional fluids were drained from the line during remediation. All free liquids were adsorbed by highly contaminated soils and transported offsite. Soil staining extended to 5.5 feet below the ground surface, terminating in extremely hard caliche bedrock. The backhoe encountered refusal on the bedrock surface.

Due to the configuration of the bedrock, digging on the east sidewall and bottom was accomplished as far as practicable. The finished excavation measured about 16 feet wide,

15 feet long, and averaged 5 feet deep. About 40 cubic yards of contaminated soil was removed from Excavation 1. As presented on the Headspace Testing for Volatiles forms dated 1-31-06 (Attachment C), the blow-down line excavation confirmation samples (numbers 2 and 5) had PID readings of 612 and 690 ppm respectively. These samples were collected from the base of the east wall of the excavation and the center bottom. The caliche bedrock surface prohibited collection of adequate soil to eliminate headspace in 4-ounce sample jars. Loose soils in these locations were collected as the best alternative to representative samples of the bedrock.

Laboratory analytical results of these confirmation samples reflect higher than recommended BTEX and TPH levels from these locations. However, the extremely hard nature of the caliche layer made it impossible to excavate further. Excavation 1 was backfilled with clean silty sand excavated from a knoll on the edge of the site. A composite sample (PLU50BDL6) of the contaminated soil stockpile was collected for waste documentation purposes.

Excavation 2, at the crude oil, truck-loading manifold catch basin, had a surface stain about 20 feet in diameter, centered under the box. This stain was likely the result of liquids overflowing from the catch basin. No free liquids were present. Soft caliche was encountered about 2.5 feet below the surface. Around the perimeter of the excavation staining extended vertically to about 1 foot below the surface. From that depth contamination generally tapered toward the center of the excavation. Strong odors and staining were evident to about 5 feet below the surface in the center of the excavation. The caliche hardened at 5 feet but did not prevent the backhoe from excavating deeper. Moderate hydrocarbon odors continued to a depth of 8 feet below the surface although no staining was evident. The final excavation measured about 20 feet in diameter at the surface. It was roughly conical, tapering to depth at 8 feet below the surface. About 36 cubic yards of contaminated soil were removed from the excavation.

Confirmation soil samples were collected from the sidewalls and bottom of the excavation. The depth and configuration of the excavation prevented safe entry for sampling. Therefore, the backhoe bucket was used to collect the sample from the bottom of the excavation. This compromised the quality of the confirmation sample because the sample included material that had sloughed into the bottom of the excavation. The maximum headspace reading from this sample was 806 ppm. The corresponding confirmation sample sent to an offsite laboratory for analysis (PLU50MCB12) had a total BTEX level of less than 108 ppm, slightly in excess of the recommended cleanup level. Excavation 2 was backfilled immediately following confirmation sampling because the shape and depth of the open excavation posed a safety hazard. Caliche rock scraped from the west edge of the surface pad was used for fill. Fill material was compacted into the excavation with the backhoe to provide a firm surface for vehicle traffic. A composite sample (PLU50MCB15) of the contaminated soil stockpile was collected for waste documentation purposes.

Excavation 3 consisted of hand digging on the southeast side of the produced water storage tank. About ½ cubic yard of oil and brine stained soil was removed from this location. The maximum depth of soil removal was about three inches. Initial headspace testing from this excavation indicated almost no volatiles. A confirmation sample was collected for TPH analysis following soil removal. The sample, collected from what was initially the most highly stained area, was sent to an offsite laboratory. Analytical results of the sample (PLU50SWT13) had a TPH concentration of 5,864 ppm.

A second confirmation sample was sent to the laboratory from this area and analyzed for chlorides (PLU50SWT16). This excavation required no backfilling, being so shallow and within the berm of the active tank battery. Laboratory results are presented in the following section.

Sample Analysis

Headspace testing results were documented on the Headspace Testing for Volatiles form and are included as Attachment C. Contaminated soils were removed from all excavations until soil vapor measurements were less than 100 ppm or to the maximum extent practicable. Headspace sample prefix designations are BDL (blow-down line) for Excavation 1, MCB (manifold catch basin) for Excavation 2, and SWT (salt-water tank) for Excavation 3.

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, TPH by method 8015 M, and chlorides by method 4500-CL⁻B. Laboratory results verify field-screening results. Attachment E includes copies of the laboratory certificates.

Benzene is less than the recommended remediation action level (10 ppm) in all samples analyzed. TPH and BTEX results exceeded 5,000 ppm and 50 ppm in samples from the bottom (PLU50BDL5) and east sidewall (PLU50BDL2) of Excavation 1.

Total BTEX exceeded 50 ppm in the sample collected from the bottom of Excavation 2 (PLU50MCB12) that contained sloughed material. In addition the soil stockpile sample from Excavation 2 (PLU50MCB15) also exceeded both total BTEX (50 ppm) and TPH (5,000 ppm) guideline levels.

As stated earlier, the TPH result for Excavation 3 slightly exceeded 5,000 ppm. The chloride sample from Excavation 3 was analyzed and had a chloride concentration of 4,894 ppm.

Table 1 presents a summary of laboratory analytical results for hydrocarbon samples including two samples collected for landfill waste documentation.

Table 1
Laboratory Analytical Results of Hydrocarbon Analysis

Sample Name	Headspace Analysis (ppm)	Benzene (ppm)	Total BTEX (ppm)	TPH GRO (ppm)	TPH DRO (ppm)
PLU50BDL1	85	na	na	314	2650
*PLU50BDL2	612	1.05	61.17	1430	8310
PLU50BDL3	60	na	na	29.6	754
PLU50BDL4	47	na	na	141	1760
*PLU50BDL5	690	2.20	163.26	1120	8180
PLU50BDL6	Samples collected for landfill waste acceptance				
PLU50MCB4	42	na	na	<10	<10
PLU50MCB5	20	na	na	<10	10.5
PLU50MCB6	84	na	na	<10	500
PLU50MCB11	50	na	na	<10	124
**PLU50MCB12	806	0.168	107.56	1200	3300
PLU50MCB15	Samples collected for landfill waste acceptance				
PLU50SWT13	47	na	na	564	5300

Note: na = not applicable

* Sample collected at point of refusal on top caliche layer (equipment could not penetrate further)

** Sample collected from bottom of excavation and contained sloughed material

Contaminated Soil Disposition

Mesquite transported contaminated soils excavated at Poker Lake Unit No. 050 to Controlled Recovery, Inc. for treatment and final disposition as exempt waste. Copies of the waste acceptance documents are included as Attachment F and indicate about 70 cubic yards of contaminated soil were removed from the site.

Corrective Actions Taken by Bass Enterprises

During remediation activities Stoller notified Bass Enterprises that the sources of hydrocarbon and chloride contamination had not been fully mitigated. Bass Enterprises made the following facility improvements in an effort to prevent future releases:

- Re-plumbing the blow-down line through the recovery system, eliminating potential releases at the location of Excavation 1
- Installing new valves at the truck loading manifold catch basins (both crude and produced water), ensuring the valves do not leak during truck on-loading
- Upgrading the down-pipe into the produced water tank
- Installing a cover over the open-topped tank to prevent chloride contamination as a result of wind (cover ordered at time of remediation)

Conclusions and Recommendations

As stated in the NMOCD "Guidelines For Remediation of Leaks, Spills, and Releases," a total ranking score of 0 –9 is applicable to this site. Therefore, the recommended remediation action levels are 10 ppm benzene, 50 ppm total BTEX, and 5,000 ppm TPH.

Laboratory analysis confirms cleanup goals have largely been achieved. Those samples where analytical results for hydrocarbons exceed recommended remediation levels represent locations at which contaminated soils have been removed to the maximum extent practicable.

Based on the following, it is recommended that natural attenuation be allowed to continue and that no further remedial actions are recommended for subsurface hydrocarbon contamination at this site:

- All highly contaminated and saturated soils have been removed from the site
- Bass Enterprises has mitigated all sources that were known to have caused spills and leaks of production fluids in the past, thus minimizing the likelihood of future releases
- Residual hydrocarbons left in place have been covered with clean backfill material and do not pose a threat to human health or the environment
- There is no threat to groundwater because only residual levels of hydrocarbon remain at depth and the thickness of the backfill material (5-8 feet) will act as an infiltration barrier preventing further downward migration


There were no visible signs of chloride spills or contamination outside of the perimeter of the active production pad and no remedial actions are recommend at this time. The one sample analyzed for chlorides near the produced water tank confirmed that chlorides have contaminated soils beneath the pad. Therefore the following recommendations are made:

- Whenever produced water leaks or spill onto surface of the pad impacted soils should be removed and replaced with clean material to prevent further downward migration or runoff of chloride contamination.
- When the Poker Lake Unit 050 site is abandoned and site restoration activities are undertaken, the pad and underlying soils should be retested for chlorides and remediated as required by regulatory guidelines.

March 3, 2006

Attachment A – NMOCD Letter of Violation

12/22/05 13:44 FAX 432 687 9329 BEPCO - CARLSBAD 0001

 **NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT** *Fax to Carlsbad and file 100W5*

BILL RICHARDSON
Governor
Joanna Pralop
Cabinet Secretary

Mark E. Fendra, P.E.
Director
Oil Conservation Division

When Inspection Occurs
"Preserve the Integrity of the Subterranean"

16-Dec-05

BASS ENTERPRISES PRODUCTION CO
PO BOX 2760
MIDLAND TX 79702

BEPCO - WID PRODUCTION
DEC 22 2005
RECEIVED

LETTER OF VIOLATION - Inspection

Dear Operator:

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.

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.

INSPECTION DETAIL SECTION

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

12/22/05 THU 12:41 [TX/RX NO 72101] 0001

12/22/05 13:45 FAX 432 687 0328

BEPCO

+ CARLSBAD

002

POKER LAKE UNIT No.050

2-4-255-31E

30-015-23283-00-00

Inspection Date	Type Inspection	Inspector	Violation?	*Significant Non-Compliance?	Corrective Action Due By:	Inspection No.
12/13/2005	Routine/Periodic	Chris Beadle	Yes	No	1/17/2006	ICLB0534740358

Comments on Inspection:

Well has had a release of natural gas on this location. Iron sulfide residues extend over 300 feet north/south of wellhead at an average width of 45 feet. Vegetation in the pasture to the south of wellhead and east of the tank battery has been impacted. Area of visible impact by iron sulfide is indicative of a release 50 MCF or more of natural gas. Submit C-141 for this release.

Produced fluids have impacted soils north of well from blow-down line. Produced fluids have impacted soils at truck loading manifold where the catch basin has been allowed to fill to overflowing. Water tank has had a recent release, impacting soils on southeast side of tank battery inside berm.

Remediation is required for blow-down line, water tank and catch basin areas. 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 NMOC District 2 Office web site: www.enmrd.state.nm.us/oed_under/Publications/Environmental_Handbook/Miscellaneous_Guidelines/Remediation_of_Leaks,_Spills_and_Releases.

Notify NMOC 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 NMOC District 2 Office when remediation on location is completed.

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,



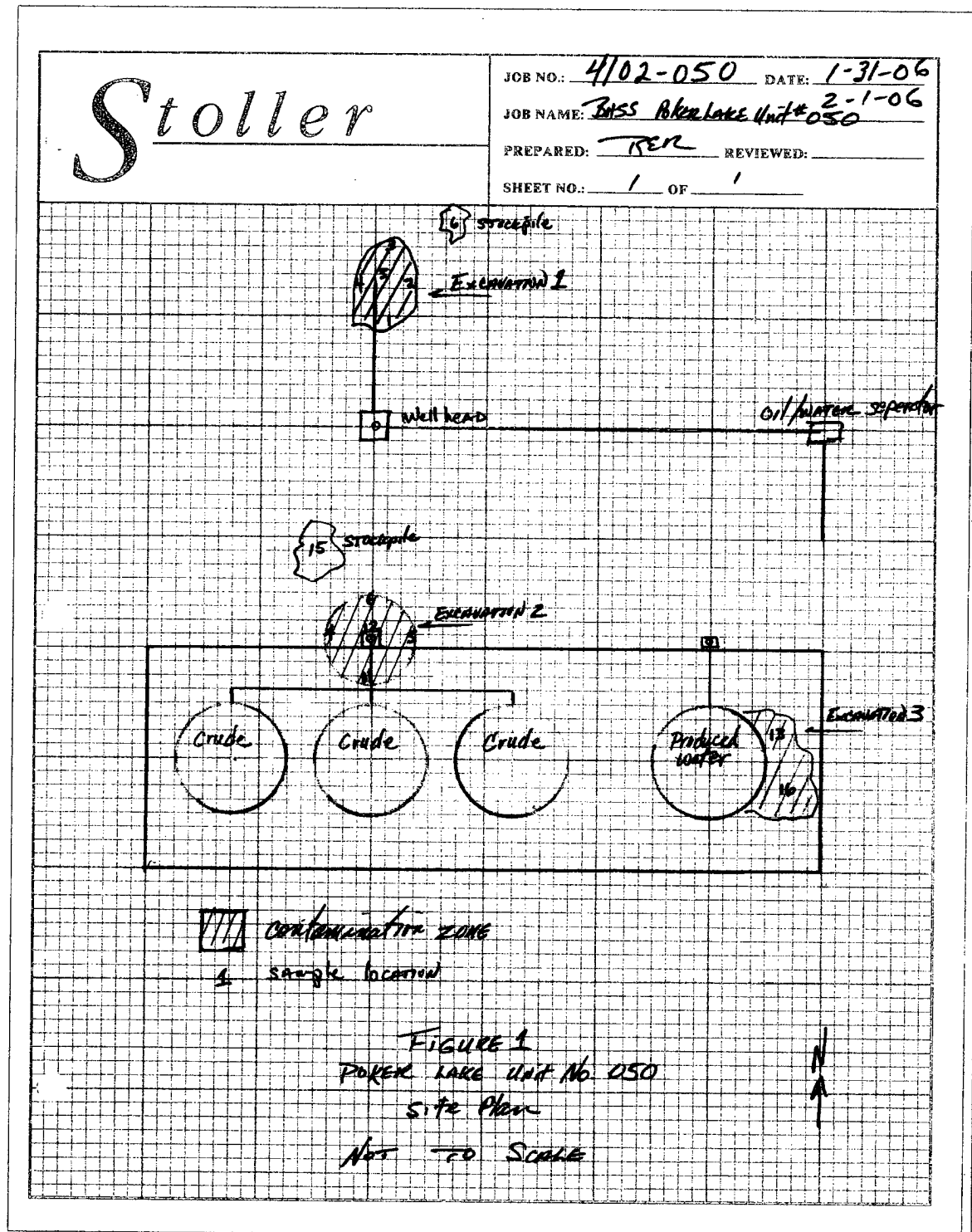
Chris Beadle
Artesia OCD District Office

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.enmrd.state.nm.us>

12/22/05 THU 12:41 [TX/RX NO 72101] 002

Attachment B – Figure 1 Site Sketch



Attachment C – Headspace Testing for Volatiles

Stoller

Page 1 of 2

HEADSPACE TESTING FOR VOLATILES

Project Name: BASS ENT. PLU 50 & 117 Engineer: R. Rupp

Project No.: 4102-050 Date: 1-31-06

Instrument Type: GAx Alert Micro 5 Calibration Date: 1-30-06

Serial No.: SK 105-026128 Calibration Gas Type/Concentration: 100 ppm Isobutylene

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

Sample Number	Sampling Location	Sample Depth (FT-)	Sample Matrix	Peak Instrument Reading (ppm)	Comments
BLOW DOWN	LAND		EXCAVATION		
BDL STRIKE STIPPLE	NA		Soil	115 ppm	gunk from strike site @ 1050
BDL SW EXC.	3'		Soil	69	1056
BDL ESN EXC.	3'		Soil	70	@ 1057
BDL NSW EXC.	3'		Soil	150	@ 1058
BDL NSW EXC.	3'		Soil	130	@ 1059
BDL Bottom EXC.	4'		Soil	520	1100
BDL Bottom EXC.	4'		Soil	830	1102
BDL Bottom EXC.	5.5'		Soil	400	on bedrock caliche - reference @ 1143
BDL Bottom EXC.	5.5'		Soil	702.0	on bedrock caliche - reference @ 1145
BDL NSW EXC.	3'		Soil	70.0	@ 1146
MCB	Surface	0'	Soil	off scale	after hard excavating - need more excavating
SWT #1	East	0'	Surface	8.0	after hard excavating @ section tank
SWT #2	SE	0'	Surface	10.0	after hard excavating @ section tank

Stoller

Page 2 of 2

HEADSPACE TESTING FOR VOLATILES

Project Name: BASS ENT PLU 50 Engineer: R. Rupp

Project No.: 4102-050 Date: 1-31-06

Instrument Type: Gas Alert Max 5 Calibration Date: 1-30-06

Serial No.: SK 105-026128 Calibration Gas Type/Concentration: 100 ppm Isobutylene

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

[illegible]

Stoller

Page 1 of 1

HEADSPACE TESTING FOR VOLATILES

Project Name: Bass Ent. PLU 50 Engineer: R. Rugg

Project No.: 4102-050 Date: 2-1-06

Instrument Type: Gas Mat M505 Calibration Date: 1-30-06

Serial No.: _____ Calibration Gas Type/Concentration: 100 ppm Isobutylene

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

REFERENCE FACTOR FOR BENZENE

Sample Number	Sampling Location	Sample Depth (FT.)	Sample Matrix	Peak Instrument Reading (ppm)	Collection Time	Comments
#1	MCB	Surface	Soil	714 ppm	0853	red with sand & gravel
#2	MCB	NW 1/5	Soil	346 ppm	0920	Red silty sand - moderate color
#3	MCB-SW	2'	Soil	760 ppm	0941	
#4	MCB-NW	2'	Red silty	42 ppm	0943	
#5	MCB-SW	2'	Soil	20 ppm	0945	
#6	MCB-NW	2'	Soil	84 ppm	0947	
#7	MCB-CB	2.5'	Top Coliche	745 ppm	0950	Top Coliche sample
#8	MCB-SW	2.5'	Red silty sand	532 ppm	1038	
#9	MCB-CB	5.0'	Top Coliche	676 ppm	1040	
#10	MCB-SW	3.0'	Red silty sand	250 ppm	1104	
#11	MCB-SW	3.0'	Red hard silty sand	50 ppm	1135	5' from NW 1/4 & under tank.
#12	MCB-CB	8.0'	Dark brown soil	806 ppm	1137	stop excavation - bottom
#13	SW 1/4	0.5'	dk brn soil	47 ppm	1210	
#14	SW 1/4	0.5'	dk brn soil	19 ppm	1215	
#15	SW 1/4	0.5'	soil mixed	777 ppm		combined soils for CRI @ 1225
#16	SW 1/4	0.5'	soil	—	1325	chloride composite sample

Attachment E – Cardinal Laboratories Analytical Report

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

P. 006



PHONE (325) 873-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (806) 393-2326 • 101 E. MARLAND • NOBLES, NM 88240

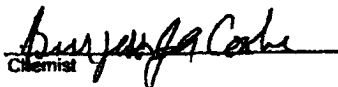
ANALYTICAL RESULTS FOR
S.M. STOLLER CORPORATION
ATTN: DON GEORGE
314 WEST MERMOD ST., SUITE 102
CARLSBAD, NM 88220
FAX TO:

Receiving Date: 02/02/06
Reporting Date: 02/07/06
Project Number: 4102
Project Name: NOT GIVEN
Project Location: PLU #50

Sampling Date: 01/31/06
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: HM
Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		02/03/06	02/03/06	02/03/06	02/03/06
H10700-5	PLU50MCB12	0.168	4.10	3.29	100
H10700-6	PLU50MCB15	0.318	7.20	2.32	79.7
H10700-10	PLU50BDL2	1.05	5.08	0.656	84.4
H10700-13	PLU50BDL5	2.20	25.8	0.46	128
H10700-14	PLU50BDL8	0.336	6.14	1.28	25.4
Quality Control		0.096	0.098	0.094	0.282
True Value QC		0.100	0.100	0.100	0.300
% Recovery		96.3	97.5	94.4	93.9
Relative Percent Difference		7.3	6.2	2.3	1.0

METHOD: EPA SW-846 8260


Chemist

Date

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. No claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the analytical service. Cardinal shall be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates, or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated remedies or otherwise.

Rx Date/Time

FEB-09-2006(THU) 09:31

P.007



PHONE (525) 873-7001 • 2111 BEECHWOOD • ARLINE, TX 79803
PHONE (805) 283-2328 • 101 E. MARLAND • HOBBS, 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 #50

Sampling Date: 01/31/06
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: HM
Analyzed By: BC

LAB NUMBER	SAMPLE ID	GRO	DRO
		(C ₆ -C ₁₀) (mg/Kg)	(C ₁₀ -C ₂₈) (mg/Kg)
ANALYSIS DATE:		02/08/06	02/08/06
H10700-1	PLU50MCB4	<10.0	<10.0
H10700-2	PLU50MCB5	<10.0	10.5
H10700-3	PLU50MCB6	<10.0	500
H10700-4	PLU50MCB11	<10.0	124
H10700-5	PLU50MCB12	1200	3300
H10700-6	PLU50MCB15	1440	4520
H10700-8	PLU50SWT13	584	8300
H10700-9	PLU50BDL1	314	2850
H10700-10	PLU50BDL2	1430	6310
H10700-11	PLU50BDL3	29.6	745
H10700-12	PLU50BDL4	141	1760
H10700-13	PLU50BDL6	1120	8180
H10700-14	PLU50BDL8	472	5880
Quality Control		786	751
True Value QC		800	800
% Recovery		99.5	93.9
Relative Percent Difference		6.0	3.8

METHOD: SW-846 8015 M

Burton J. Cooke
Chemist

2/8/06
Date

H10700A.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 services. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and accepted by Cardinal within sixty (60) days after completion of the applicable service. If, no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, 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.

Rx Date/Time

FEB-09-2006(THU) 09:31

P. 008



PHONE (325) 873-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 293-2326 • 101 E. MARLAND • MOORE, NM 88240

ANALYTICAL RESULTS FOR
S.M. STOLLER CORPORATION
ATTN: DON GEORGE
314 WEST MERMUD 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 #50

Analysis Date: 02/03/06
Sampling Date: 02/01/06
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: HM
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl (mg/Kg)
H10700-7	PLU50SWT16	4894
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		0.0

METHOD: Standard Methods 4500-ClB

NOTE: Analysis performed on a 1:4 w/v aqueous extract

Chemist

02-08-06
Date

H10700

Attachment F – Waste Acceptance Document

FEB-08-2006 WED 01:30 PM	FAX NO.	P. 03
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CONTROLLED RECOVERY, INC.
P.O. Box 388 • Hobbs, New Mexico 88241-0388
(505) 393-1079
www.crihobbs.com

Bill to _____
Address _____

Company/Generator BASS
Lease Name Poker Lake 50
Trucking Company Mesquite Vehicle Number W3074 Driver (Print) Jim
Date 1-31-06 Time 1720 B.M. (initials)

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. ☒ Yard 10 ☐ 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]
(Signature) _____

CRI Representative [Signature]
(Signature) _____

TANK BOTTOMS

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

White - CRI Canary - CRI Accounting Pink - CRI Plant

79870
Gold - Transporter
The Paper Shop #7987

FEB-08-2006 WED 01:31 PM

FAX NO.

P. 04

CONTROLLED RECOVERY, INC.

P.O. Box 388 • Hobbs, New Mexico 88241-0388
(505) 393-1079
www.crihobbs.com

Bill to _____
Address _____

Company/Generator Bass

Lease Name Poker Lake 50

Trucking Company Mesquite Vehicle Number MSDT-4 Driver (Print) Jim

Date 1-26-06 Time 3:53 a.m. / p.m.

Type of Material

- ☐ Exempt ☐ Tank Bottoms ☐ Fluids
☐ Non-Exempt C117 ☐ Other Material
C138 ☐ Soils List Description Below

DESCRIPTION

Cont Soil

Volume of Material ☐ Bbls. ☒ Yards 28 ☐ 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]
(Signature)

CRI Representative [Signature]
(Signature)

TANK BOTTOMS

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

White - CRI

Canary - CRI Accounting

Pink - CRI Plant

79904

Gold - Transporter

The Green Sheet #7921

FEB-08-2006 WED 01:31 PM

FAX NO.

P. 05

CONTROLLED RECOVERY, INC.

P.O. Box 388 • Hobbs, New Mexico 88241-0388
(505) 393-1079
www.crihobbs.com

Bill to _____
Address _____
Company/Generator Bass
Lease Name Poker Lake 50
Trucking Company Morgan Vehicle Number 1307-4 Driver (Print) Jim
Date 1-31-06 Time 5:15 a.m. / (p.m.)

Type of Material

- ☐ Exempt ☐ Tank Bottoms ☐ Fluids
☐ Non-Exempt C117 ☐ Other Material
C138 ☐ Soils List Description Below

DESCRIPTION

Cont. Soil

Volume of Material ☐ Bbls. ☒ Yard 12 ☐ 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]
(Signature)

CRI Representative [Signature]
(Signature)

TANK BOTTOMS

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

Wells - CR

Company - CRI Accounting

Pink - CRI Plant

79910

Gold - Transporter

The Gold Stamp #79910

FEB-08-2006 WED 01:32 PM

FAX NO.

P. 07

CONTROLLED RECOVERY, INC.

P.O. Box 388 • Hobbs, New Mexico 88241-0388
(505) 393-1078
www.crihobbs.com

Bill to _____
Address _____
Company/Generator Bass
Lease Name Poker Lake 50
Trucking Company Mozguita Vehicle Number MSDT-4 Driver (Print) Jim
Date 2/1/06 Time 2:45 a.m. ☒ p.m.

Type of Material

- ☐ Exempt ☐ Tank Bottoms ☐ Fluids
☐ Non-Exempt C117 ☐ Other Material
C138 ☐ Solids List Description Below

DESCRIPTION

Cont. Soil

Volume of Material ☐ Bbls. 10 ☐ 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]
CRI Representative [Signature]

TANK BOTTOMS

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

White - CRI

Grey - CRI Accounting

Pink - CRI Plant

Gold - Transporter

79995
The Print Shop

FEB-08-2006 WED 01:34 PM

FAX NO.

P. 11

CONTROLLED RECOVERY, INC.

P.O. Box 388 • Hobbs, New Mexico 88241-0388
(505) 393-1079
www.crihobbs.com

Bill to _____
Address _____
Company/Generator Bass
Lease Name Poker Lake 50
Trucking Company Mogevite Vehicle Number MSD7-03 Driver (Print) Loewie
Date 2-2-06 Time 9:30 a.m. / p.m.

Type of Material

- ☐ Exempt ☐ Tank Bottoms ☐ Fluids
☐ Non-Exempt ☐ C117 ☐ Other Material
☐ C138 ☐ Soils List Description Below

DESCRIPTION

Cont. Soil

Volume of Material ☐ Bbls. ☒ Yard 12 ☐ 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]
(Signature)

CRI Representative [Signature]
(Signature)

TANK BOTTOMS

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

White - CRI

Grey - CRI Accounting

Pink - CRI Plant

80048

Gold - Transporter

One Print Shop #1027

FEB-08-2006 WED 01:33 PM

FAX NO.

P. 10

CONTROLLED RECOVERY, INC.

P.O. Box 388 • Hobbs, New Mexico 88241-0388

(505) 383-1079

www.crihobbs.com

Bill to _____
Address _____
Company/Generator Bass
Lease Name Poker Lake 50
Trucking Company Mosquito Vehicle Number MSDT-3 Driver (Print) Lovie
Date 2-7-06 Time 11:40 a.m. p.m.

Type of Material

- ☐ Exempt ☐ Tank Bottoms ☐ Fluids
☐ Non-Exempt ☐ C117 ☐ Other Material
☐ C138 ☐ Soils ☐ List Description Below

DESCRIPTIONCont.

Volume of Material ☐ Bbls. ☒ Yard 12 ☐ Gallons
☐ Wash Out ☐ Cell 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]

CRI Representative [Signature]

TANK BOTTOMS

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

Weir - CRI

Gentry - CRI Accounting

Pelt - CRI Plant

80066

Gold - Transporter

One Print Shop #720