

**BC Operating, Inc.  
South Langlie Jal Unit #11  
Unit N, Section 8, Township 25S, Range 37E  
Lea County, New Mexico**

**Closure Report**

**August 10, 2009**



**Prepared for:**

***BC Operating, Inc.  
PO Box 50820  
Midland, Texas 79710***

**Prepared by:**

***Safety & Environmental Solutions, Inc.  
703 East Clinton Street  
Hobbs, New Mexico 88240  
(575) 397-0510***

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**I. Company Contacts**

Name	Company	Telephone	E-mail
Jason Wacker	BC Operating, Inc.	432-682-6226	<a href="mailto:jwacker@blackoakres.com">jwacker@blackoakres.com</a>
Brian Cuellar	SESI	575-390-7066	<a href="mailto:bcuellar@sesi-nm.com">bcuellar@sesi-nm.com</a>

**II. Background**

Safety and Environmental Solutions, Inc. (SESI) was engaged by BC Operating, Inc. to perform remediation services at the South Langlie Jal Unit #11. This is an active well site located in Unit N, Section 8, Township 25 South, Range 37 East. On February 4, 2009, a release occurred from a rupture in a 2-3/8" steel flowline for well #11. Approximately 20 barrels of lease oil was released with no recovery.

**III. Surface and Ground Water**

According to the database provided by the U.S. Geological Survey (USGS) online database, the average depth of water in this area is 49'.

**IV. Soils**

The surface soils in the area are predominantly sand and sandy loam.

**V. Characterization**

The target cleanup levels are reached by the application of the "Unlined Surface Impoundment Closure Guidelines New Mexico Oil Conservation Division (NMOCD) – February, 1993 to this site is 100 parts per million (ppm) Total Petroleum Hydrocarbons (TPH). Application of the New Mexico Oil Conservation Division's ranking criteria for contaminated soils at this site is presented below:

<b>Depth to Ground Water:</b>			
(Vertical distance from contaminants to seasonal high water elevation of groundwater)	Less than 50 feet	20 points	<b>X</b>
	50 feet to 99 feet	10 points	
	>100 feet	0 points	
<b>Wellhead Protection Area:</b>			
(Less than 200 feet from a private domestic water source; or less than 1000 feet from all other water sources)	Yes	20 points	
	No	0 points	<b>X</b>
<b>Distance to Surface Water:</b>			
(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet	20 points	
	200 feet to 1000 feet	10 points	
	>1000 feet	0 points	<b>X</b>
<b>RANKING SCORE (TOTAL POINTS)</b>			<b>20</b>

## VI. Work Performed

On June 5, 2009, SESI was onsite to map the area. The area was mapped using a Trimble Geo XM GPS. The affected area is 30 feet x 40 feet.

On June 25, 2009 SESI was onsite to delineate the area. The area was delineated utilizing a hand auger. A total of four (4) auger holes were installed to depths ranging from 6" to 3'.

Samples were retrieved from all auger holes, and were properly preserved and transported under Chain of Custody to Hall Environmental Analysis Laboratory of Albuquerque, New Mexico for analysis. The samples were analyzed for Total Petroleum Hydrocarbons (EPA Method 418.1), BTEX (EPA Method 8021B), and Chlorides (EPA Method 300.0).

The results of the analysis were as follows:

Sample ID	Chloride (mg/kg)	TPH (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)
AH #1-6"	590	ND	ND	ND	ND	ND
AH #1-1'	550	29	ND	ND	ND	ND
AH #1-2'	91	62	ND	ND	ND	ND
AH #1-3'	250	97	ND	ND	ND	ND
AH #2-6"	29	170	ND	ND	ND	ND
AH #2-1'	120	190	ND	ND	ND	ND
AH #2-2'	260	130	ND	ND	ND	ND
AH #3-6"	76	280	ND	ND	ND	ND
AH #3-1'	74	2300	ND	ND	ND	ND
AH #3-2'	56	450	ND	ND	ND	ND
AH #4-6"	260	220	ND	ND	ND	ND
AH #4-1'	110	970	ND	ND	ND	ND
AH #4-2'	130	480	ND	ND	ND	ND

On July 15, 2009, SESI was onsite with Watson Construction to continue delineation of the affected area. Two (2) test trenches were installed within the affected area. Historic hydrocarbon staining was encountered at a depth of 4-5 feet below ground surface. The vertical extent of the contamination was unable to be determined at this time due to reaching the vertical extent of the backhoe at a depth of 15 feet.

On July 21, 2009, SESI was onsite with Eco-Enviro Drilling to further delineate the release utilizing an auger rig. A total of three (3) boreholes were installed within the affected area. Samples were collected at intervals of five (5) feet. A hard rock layer was encountered at borehole #2 at 30' bgl and was unable to penetrate. All the boreholes were plugged to surface with bentonite and hydrated. The grab samples that were collected were transported under chain of custody to Cardinal Laboratories of Hobbs New Mexico, for analysis. In compliance to the New Mexico Oil Conservation Division (NMOCD) set of required sampling conditions, the samples were analyzed for Chlorides (EPA Method 4500-Cl<sup>-</sup>B), Total Petroleum Hydrocarbons (EPA Method 8015), and Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) (EPA Method SWA-846 8021 B).

The results were as follows:

Sample ID	Chlorides (mg/kg)	GRO (C6 – C10) (mg/kg)	DRO (C10 – C28) (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl Benzene (mg/kg)	Xylenes (mg/kg)
<b>Analysis Date:</b>	<b>7/21/09</b>	<b>7/21/09</b>	<b>7/21/09</b>	<b>7/21/09</b>	<b>7/21/09</b>	<b>7/21/09</b>	<b>7/21/09</b>
BH#1 8' BGL	2560	<10.0	1210	<0.050	<0.050	0.191	0.365
BH#1 13' BGL	352	<10.0	66.7	<0.050	<0.050	<0.050	<0.300
BH#1 18' BGL	144	<10.0	<10.0	<0.050	<0.050	<0.050	<0.300
BH#2 9' BGL	1060	548	8030	0.054	1.56	5.36	8.51
BH#2 14' BGL	144	784	8510	<0.050	0.403	5.08	6.58
BH#2 19' BGL	96	665	7860	<0.050	0.421	6.03	9.43
BH#2 24' BGL	<16	311	2510	<0.050	<0.050	10.1	10.7
BH#2 29' BGL	80	341	4830	<0.050	0.157	2.30	3.87
BH#2 30' BGL	464	524	8420	<0.050	0.241	1.83	4.99
BH#3 6' BGL	3080	2410	6580	0.181	2.42	8.05	18.0
BH#3 11' BGL	384	<10.0	643	<0.050	<0.050	0.223	0.820
BH#3 16' BGL	464	<10.0	84.1	<0.050	<0.050	<0.050	<0.300
BH#3 21' BGL	400	<10.0	<10.0	<0.050	<0.050	<0.050	<0.300

The affected area was excavated to a depth of 10' bgl. The excavated soils were transported to Sundance Services, a New Mexico Oil Conservation Division (NMOCD) approved facility for disposal. The area was then backfilled to a depth of 4' bgl with like soils creating a slight doming effect. A 20 mil geo-membrane liner was then installed to prevent any further migration of the historic contamination. The area was then backfilled to surface with like soils and contoured to grade.

## VII. Action Plan

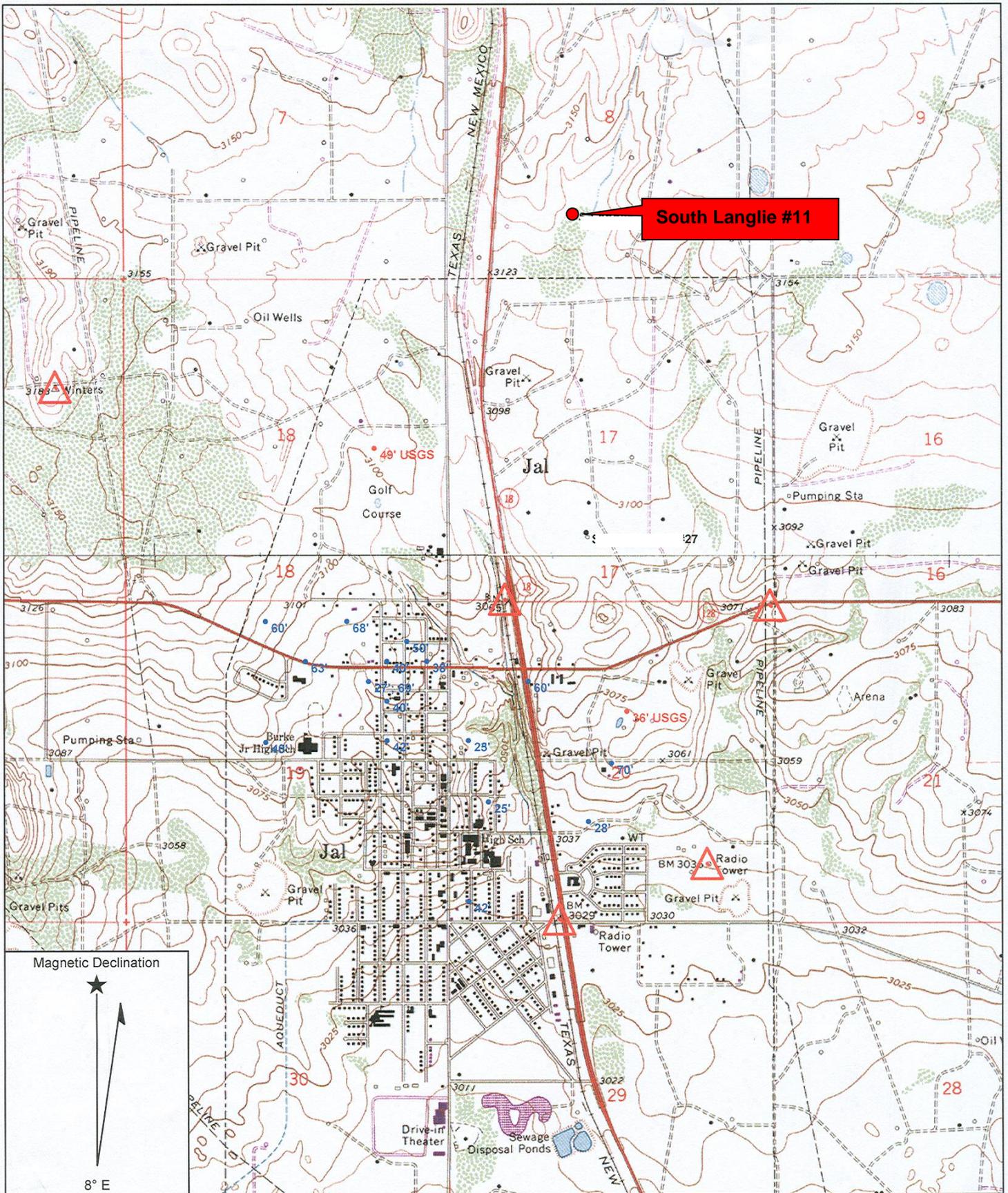
It is requested at this time that the spill report is closed with no further action required.

## VIII. Figures & Appendices

- Figure 1 – Vicinity Map
- Figure 2 – Site Plan
- Appendix A – Analytical Results
- Appendix B—Site Photos
- Appendix C –C-141

# **Figure 1**

## **Vicinity Map**

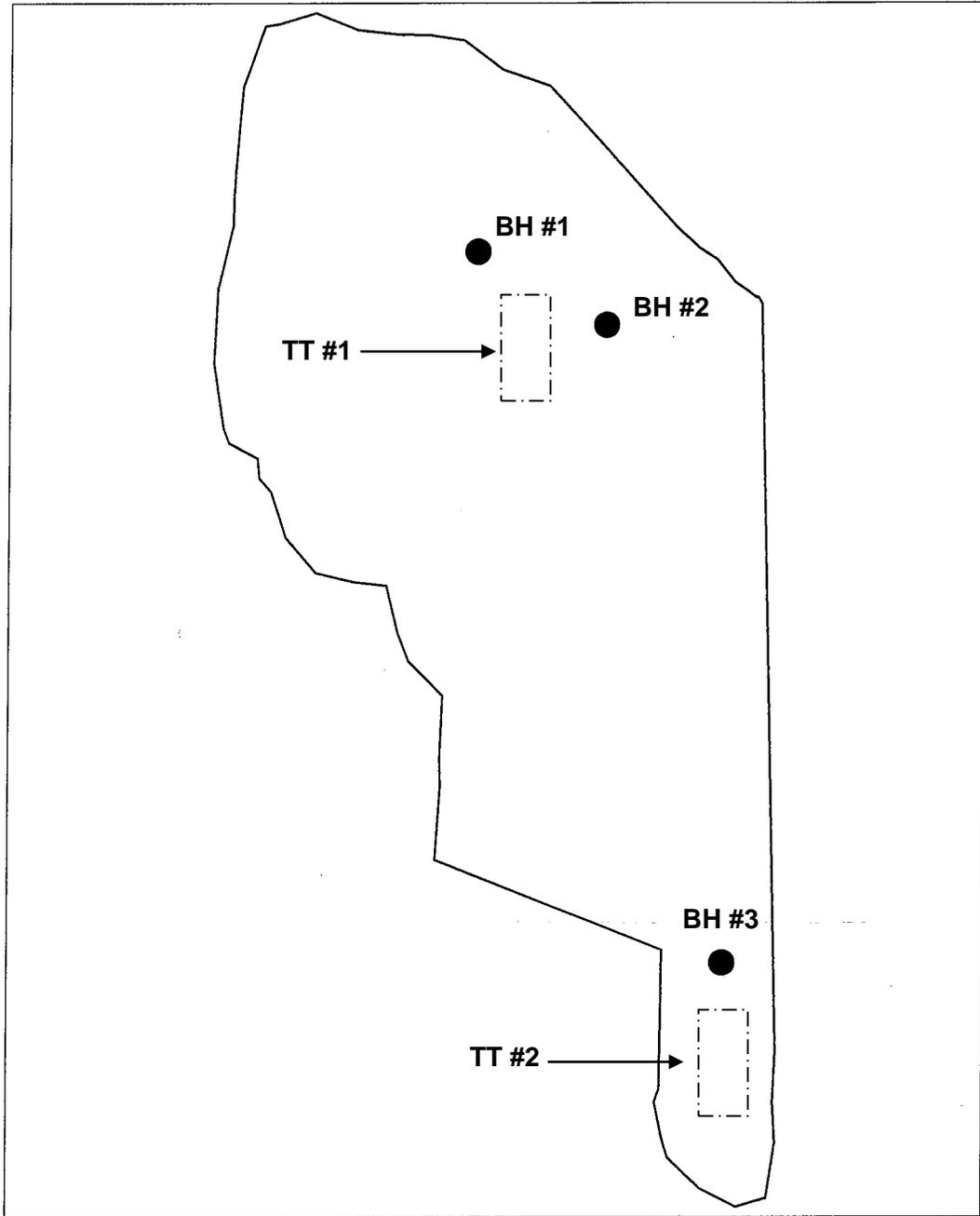


**South Langlie #11**

Name: JAL  
 Date: 6/5/2009  
 Scale: 1 inch equals 2000 feet

Location: 13 0670693 E 3555513 N NAD83

## **Figure 2 Site Plan**



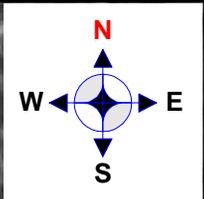
# South Langlie #11

Lat/Long  
WGS 1984



BCO-09-001.SSF  
8/10/2009





**BH#1**



**BH#2**

**BH#3**

# **Appendix A**

## **Analytical Results**

# **Appendix B Site Photos**



Excavated area facing northeast



Excavated area facing south



Excavated area facing north



Excavated area facing east



Excavated area facing east



Floor bottom



Excavated area facing southwest



Excavation Backfilled to 4' bgl Facing SE



Excavation Backfilled to 4' bgl Facing SE



20 mil Cap Facing SE



20 mil Cap Facing South



Backfilled to Grade Facing NE



Backfilled to Grade Facing East



Backfilled to Grade Facing East

# **Appendix C**

## **C-141**

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 BC Operating, Inc	Contact Tami Parker
Address P O Box 50820, Midland, TX 79710	Telephone No. (432) 684-9696 ext 218
Facility Name South Langlie Jal Unit #11	Facility Type Flowline
Surface Owner Clay Osbourne	Mineral Owner _____ Lease No. 27321

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	8	25S	37E	990'	South	2310'	West	Lea

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

#### NATURE OF RELEASE

Type of Release: Lease Oil	Volume of Release 20 bbls	Volume Recovered 0 bbls
Source of Release Flowline for well #11	Date and Hour of Occurrence 2/4/09	Date and Hour of Discovery 2/4/09
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
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.\*

Describe Cause of Problem and Remedial Action Taken.\*  
Rupture in 2-3/8" steel flowline. Pipe worn out over time.

Describe Area Affected and Cleanup Action Taken.\*  
30' x 40' affected area. Haul off contaminated soil and back fill w/ soil off lease to clean up location of spill.

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: <i>Tami Parker</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Tami Parker	Approved by District Supervisor:	
Title: Regulatory Analyst	Approval Date:	Expiration Date:
E-mail Address: tparker@blackoakres.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 2/13/09	Phone: (432) 684-9696 x 218	

\* Attach Additional Sheets If Necessary