

**BC Operating, Inc.
South Langlie Jal Unit #27
Section 17, Township 25 South, Range 37 East
Lea County, New Mexico**

Closure Report

February 23, 2010



Prepared for:

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

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 |
|--------------|--------------|--------------|--|
| Gary Stevens | BC operating | 432-894-7113 | g.stevens2@att.net |
| Bob Allen | SESI | 575-397-0510 | ballen@sesi-nm.com |

II. Background

Safety and Environmental Solutions, Inc. (SESI) was engaged by BC Operating Inc. to perform a site assessment at the South Langlie Jal Unit #27. This is an active well site located in Unit N, Section 17, Township 25 South, Range 37 East. On June 2, 2009 a release occurred from a rupture from a 2-3/8" steel flowline for well #27. Approximately 14 barrels of lease oil and 42 barrels of water were released.

III. Surface and Ground Water

According the database provided by the U.S. Geological Survey (USGS) online database, the average depth of water in this area is 60'.

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:

| Depth to Ground Water: | | | |
|--|-----------------------|-----------|----|
| (Vertical distance from contaminants to seasonal high water elevation of groundwater) | Less than 50 feet | 20 points | X |
| | 50 feet to 99 feet | 10 points | |
| | >100 feet | 0 points | |
| Wellhead Protection Area: | | | |
| (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 | X |
| Distance to Surface Water: | | | |
| (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 | X |
| RANKING SCORE (TOTAL POINTS) | | | 20 |

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 approximately 1670 square feet.

On June 25, 2009 SESI was onsite to delineate the area utilizing a hand auger. Auger refusal was encountered due to the hard rock layer.

On July 14, 2009, SESI was onsite with Watson Construction to attempt to delineate the affected area. Three (3) test trenches were installed within the affected area. 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 20, 2009 SESI was onsite with Eco- Enviro Drilling to further delineate the release utilizing and auger style drill rig. Two (2) boreholes were installed at a depth of 29 feet, within the affected area. Samples were collected at intervals of five (5) feet to a depth of 29' bgl, in which a hard rock layer was encountered. The auger rig was unable to penetrate the rock layer. The boreholes were then plugged to surface with bentonite and hydrated.

Grab samples 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⁻ B), Total Petroleum Hydrocarbons (EPA Method 418.1), and Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) (EPA Method SWA-846 8021 B).

The results were as follows:

| Sample ID | Chlorides (mg/kg) | TPH (mg/kg) | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl Benzene (mg/kg) | Xylenes (mg/kg) |
|-----------------------|------------------------------|------------------------|----------------------------|----------------------------|----------------------------------|----------------------------|
| Analysis Date: | 7/21/09 | 7/21/09 | 7/21/09 | 7/21/09 | 7/21/09 | 7/21/09 |
| BH#1 7' BGL | 928 | <100 | <0.050 | <0.050 | <0.050 | <0.300 |
| BH#1 12' BGL | 1310 | <100 | <0.050 | <0.050 | <0.050 | <0.300 |
| BH#1 17' BGL | 800 | - | - | - | - | - |
| BH#1 22' BGL | 1700 | - | - | - | - | - |
| BH#1 27' BGL | 1920 | - | - | - | - | - |
| BH#1 29' BGL | 768 | - | - | - | - | - |
| BH#2 7' BGL | 2920 | 6180 | <0.050 | <0.050 | <0.050 | 0.593 |
| BH#2 12' BGL | 2880 | <100 | <0.050 | <0.050 | <0.050 | <0.300 |
| BH#2 17' BGL | 3360 | - | - | - | - | - |
| BH#2 22' BGL | 3520 | - | - | - | - | - |
| BH#2 27' BGL | 2640 | - | - | - | - | - |
| BH#2 29' BGL | 2200 | - | - | - | - | - |

On November 13-30, 2009 SESI was onsite with Gandy's Construction to begin excavation of the affected area. The affected area was excavated to a depth of 10' to 12' bgl. The excavated soils were transported to Sundance Services, a New Mexico Oil Conservation Division (NMOCD) approved facility for disposal. A three point composite sample was collected from each of the four walls of the excavation to determine horizontal extent.

The samples 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⁻ B).

The results were as follows:

| Sample ID | Chlorides (mg/kg) |
|-----------------------|--------------------------|
| Analysis Date: | 11/18/09 |
| West Wall | <16 |
| South Wall | 96 |
| North Wall | 32 |
| East Wall | 32 |

As a result of the analytical results, the horizontal extent was determined and 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

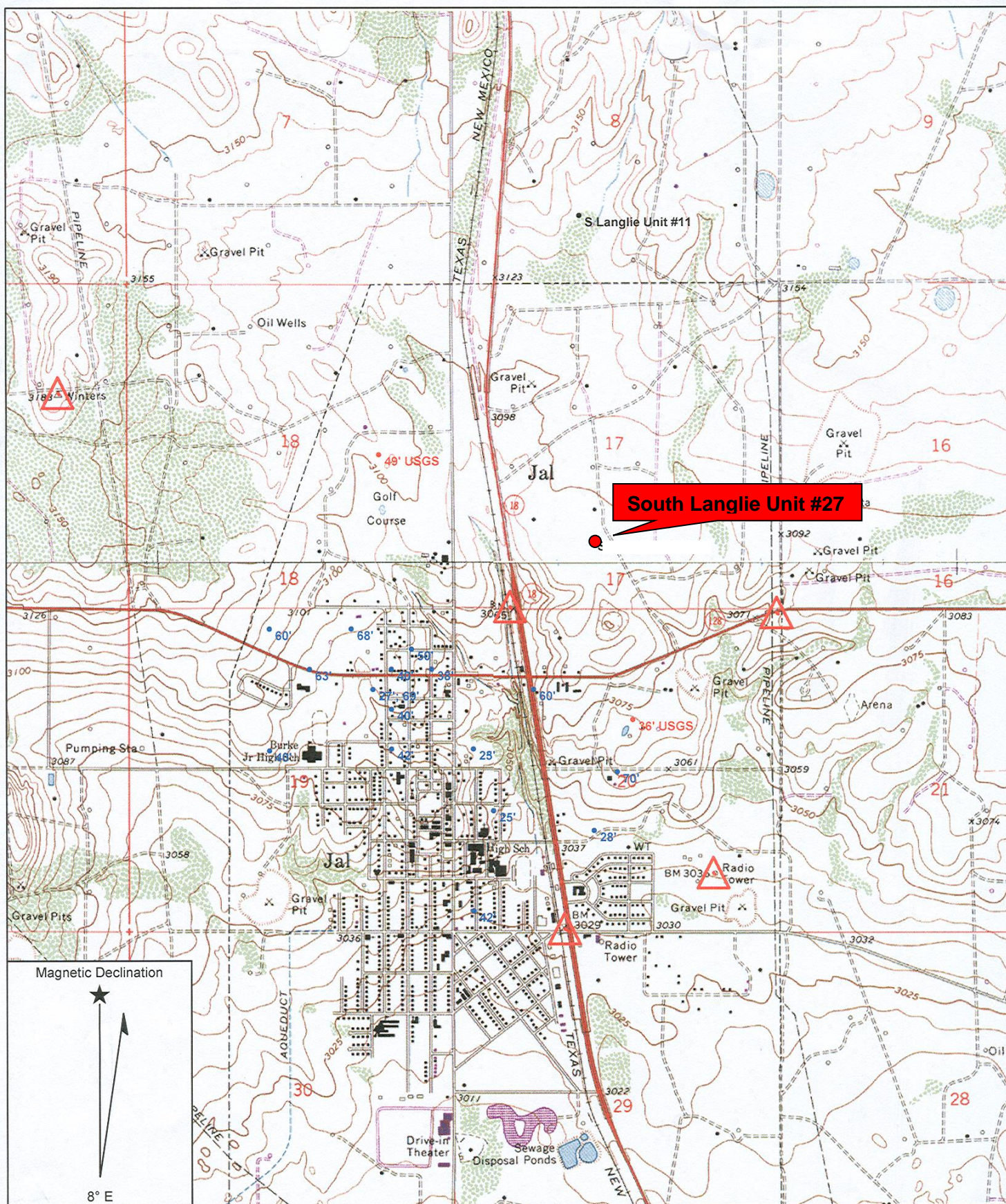
It is requested at this time that the spill report is closed with no further action required.

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

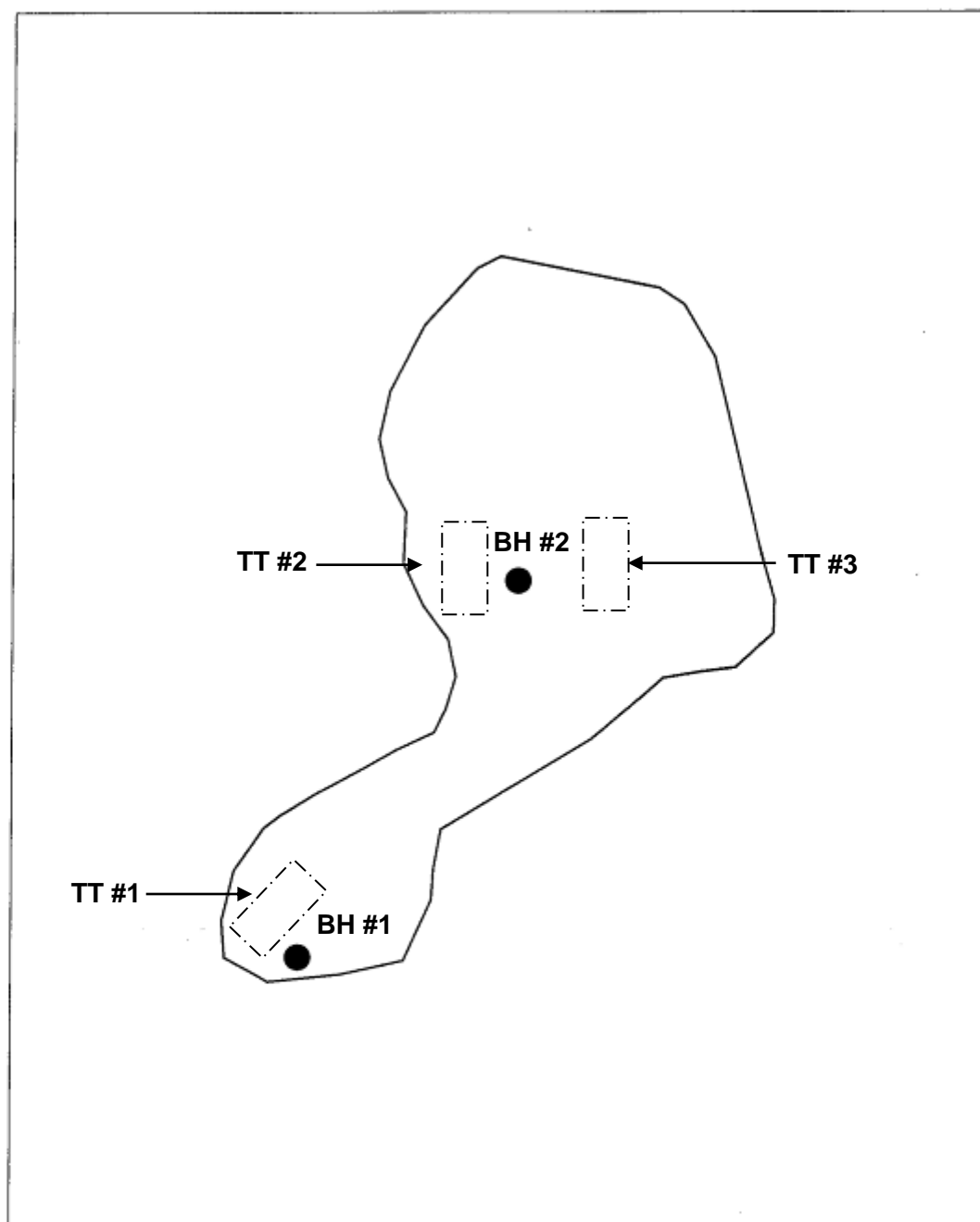


Name: JAL
 Date: 6/5/2009
 Scale: 1 inch equals 2000 feet

Location: 13 0670693 E 3555513 N NAD83

Figure 2

Site Plan



South Langlie #27

Lat/Long
WGS 1984



Scale 1:200
0 0.004
Miles

BCO-09-002 site plan.cor

GPS Pathfinder[®] Office
 **Trimble**[™]

Appendix A

Analytical Results

Appendix B

Site Photos



Lease Sign



Affected Area Facing North



Excavated Area Facing South



Excavated Area Facing SW



Excavated Area Facing SW



Excavated Area Facing East



Excavated Area Facing West



Borehole #1



Borehole #2

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 #27 | Facility Type Flowline |
| Surface Owner Clay Osbourne | Mineral Owner |
| Lease No. 27321 | |

LOCATION OF RELEASE

API#

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|-------------|---------|----------|-------|---------------|------------------|---------------|----------------|--------|
| N | 17 | 25S | 37E | 990' | South | 2310' | West | Lea |

Latitude _____ Longitude _____

NATURE OF RELEASE

| | | |
|--|--|--------------------------------------|
| Type of Release: Lease Oil, Produced Water | Volume of Release 14-Oil 42-Wtr | Volume Recovered 0 bbls |
| Source of Release Flowline for well #27 | Date and Hour of Occurrence 6/2/09 | Date and Hour of Discovery 6/2/09 |
| Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required | If YES, To Whom? Larry Johnson, Hobbs District Office | |
| By Whom? Tami Parker | Date and Hour 6/3/09 8:10 AM | |
| 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. | | |
| Describe Area Affected and Cleanup Action Taken.* 17' x 60' area affected. Crew will 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. | | |

OIL CONSERVATION DIVISION

Signature: *Tami Parker*

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 ☐

Date: 6/3/09 Phone: (432) 684-9696 x 218

* Attach Additional Sheets If Necessary