New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor

Jon Goldstein
Cabinet Secretary
Jim Noel
Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division

June 11, 2010

Stevens & Johnson Operating Co.
PO Box 2249
Wichita Falls, TX 76307-2249

Re: Remediation Work Closure
Denton Field 'Horse Pen' 1RP#2558
Site Location: Sec 12 T15S R37E
Closure Dated: February 26, 2010

The referenced remediation work submitted to New Mexico Oil Conservation Division (OCD) by Safety & Environmental Solutions, Inc. (SES) for Stevens & Johnson Operating Co. is **hereby accepted for record.**

Please be advised that OCD acceptance of this action does not relieve Stevens & Johnson Operating Co. liability should their operations fail to adequately investigate and remediate contaminants that threaten ground water, surface water, human health or the environment. Additionally, OCD acceptance does not relieve Stevens & Johnson Operating Co. of responsibility for compliance with any other federal, state, or local laws and/or regulations.

If you have any questions or need assistance call: (505) 393-6161, ext. 111, or email: larry.johnson@state.nm.us

Sincerely,

Larry Johnson
NMOCD District 1 Environmental Engineer

RECEIVED

JUN 11 2010

HOBBSOCD

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 Stephens & Johnson Operating Co.	Contact Bob Gilmore
Address P O Box 2249	Telephone No. 940-723-2166
Facility Name Denton North Wolfcamp Unit	Facility Type Water Supply Line

Surface Owner Darr Angel	Mineral Owner Unknown	Lease No.

HORSEPEN SITE

LOCATION OF RELEASE

30 025 05203

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	12	T15S	R37E	2222	North	440	West	Lea

Latitude 033° 02' 24.4" N Longitude 103° 09' 36.3" W

NATURE OF RELEASE

Type of Release Salt Water	Volume of Release Unknown NA	Volume Recovered Unknown NA
Source of Release Salt Water Supply Line	Date and Hour of Occurrence NA	Date and Hour of Discovery NA
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse	

If a Watercourse was Impacted, Describe Fully *

Describe Cause of Problem and Remedial Action Taken *
Leak was from water supply line which developed several years ago Leak was repaired and returned to service

Describe Area Affected and Cleanup Action Taken *
SESI environmental consultants determined vertical and horizontal extent of contamination Contaminated soil was dug out and replaced under OCD procedures

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:	OIL CONSERVATION DIVISION	
Printed Name: Bob Gilmore	Approved by District Supervisor:	
Title: Engineer	Approval Date:	Expiration Date:
E-mail Address: bgilmore@sjoc.net	Conditions of Approval:	~~Attached~~ ☐
Date: 5-3-10 Phone:940-723-2166		IRP 10-6-2558

* Attach Additional Sheets If Necessary

nLWJ1016256531
pLWJ1016259632

P.O. Box 1613
703 E. Clinton Street
Hobbs, New Mexico 88240
575/397-0510
Fax 575/393-4388
www.sesi-nm.com

Safety & Environmental Solutions, Inc.

May 5, 2010

Mr. Larry Johnson
Environmental Engineer
New Mexico Oil Conservation Division
1625 French Drive
Hobbs, New Mexico 88240

Mr. Larry Johnson:

This letter is a request for closure at the Stevens and Johnson (Horsepen). All of the delineation activities completed for the subject area are listed below in chronological order.

Safety & Environmental Solutions, Inc. (SESI) was engaged by Stephens & Johnson Operating Company to perform a site assessment located in Section 12, Township 15 South, and Range 37 East in Lea County, New Mexico. The area was impacted by the spillage of an undetermined amount of produced water from an injection line associated with production in the area. This remediation has been active since September 2003; however this site has been dormant for several years.

Surface and Ground Water

The nearest groundwater of record with the New Mexico State Engineer's Office is in Section 12 of 15 South, 37 East. According to measurements taken January 10, 1996, the depth to water in this well is 52.48 feet.

Soils

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

Work Performed

<u>September 23, 2003:</u>

This site has a very hard caliche or rock layer approximately 3' below the surface.
A larger rig will be necessary to conduct additional investigation. SESI drilled 3 boreholes. Borehole #1 was drilled to 38 inches at which point a hard layer was encountered which caused auger refusal. A sample was retrieved from that depth. Borehole #2 was drilled 5 feet at which point a hard layer was again encountered which caused auger refusal. Borehole #3 was drilled 2.5 feet at which point auger refusal was experienced again. A sample was retrieved from that depth.

All samples were properly packaged, preserved and sent under chain of custody to Cardinal Laboratories in Hobbs, New Mexico for analysis. The samples were analyzed for Chlorides (EPA method 4500-Cl^-B).

The results of the analysis are as follows:

Date	Sample ID	Cl^- (mg/kg)
9/23/03	BH #1 38"	2,399
9/23/03	BH #2 5'	2,239
9/23/03	BH #3 2.5'	2,159

The results of this analysis only indicated that the chloride levels immediately above this layer and were unable to reach the extent of contamination, if any, in or below the hard layer. The chloride contamination above the hard layer was very consistent which may have indicated little or no penetration of the hard layer.

January 16, 2004:

SESI drilled Borehole #4 to the west of Borehole #1. The Borehole was drilled to a depth of 22 feet when a hard layer was encountered, which caused auger refusal. Grab samples were retrieved at 5', 15', and 20'. The samples were properly preserved and sent under Chain of Custody for analysis. The samples were analyzed for Chlorides (EPA Method 4500-Cl^-B).

The results of the analysis are as follows:

Date	Sample ID	Cl^- (mg/kg)
1/16/04	BH #4 5'	2,623
1/16/04	BH #4 15'	2,815
1/16/04	BH #4 20'	1,935

In light of the declining trend in the chloride levels SESI proposed to follow the Work Plan dated May 8, 2003. The work plan stated that the top 4' to 5' of contaminated soil be removed and taken to an NMOCD approved disposal facility. The bottom and sided of the excavation will be sampled at the final excavation depths and sent under Chain of Custody to Cardinal Laboratories for analysis. The samples will be analyzed for Chlorides (EPA Method 4500-Cl^-B). The analytical results will document the level of Chlorides left in place. After the excavation is complete, a 40 mil plastic liner will be installed in the bottom of the excavation to prevent surface waters or future spills from coming into contact with the chloride left in place under the liner. Clean soil will be used to backfill the excavation and the site returned to natural grade. The location would be reseeded with native grasses.

May 12, 2009:

SESI was onsite to retrieve samples. Samples were retrieved 0 to 6 inches in depth throughout the bottom and sides of the excavation. All samples were transported under Chain of Custody to Ana-Lab of Kilgore, Texas for analysis. The samples were analyzed for Chlorides (EPA Method 300.00).

The results of the analysis are as follows:

Date	Sample ID	Cl⁻ (mg/kg)
5/12/09	#1	1,240
5/12/09	#2	380
5/12/09	#3	399
5/12/09	#4	11,800
5/12/09	#5	3,980
5/12/09	#6	292
5/12/09	#7	539
5/12/09	#8	334
5/12/09	#9	6.25
5/12/09	#10	5,690
5/12/09	#11	81.3
5/12/09	#12	2,580
5/12/09	SW #1	1,630
5/12/09	SW #2	7,680
5/12/09	SW #3	7,390
5/12/09	EW #1	8,330
5/12/09	EW #2	11,600
5/12/09	NW	15,500

The results of this analysis only indicated that the chloride levels were unable to reach the extent of contamination. The site was scheduled to be delineated for vertical extent using an air rig. Samples were to be retrieved in five (5) foot intervals. The samples would be collected and properly preserved and transported along with Chain of Custody to Cardinal Laboratories, of Hobbs, New Mexico, for testing. Laboratory samples will be analyzed for Chlorides (EPA method 300.00).

January 18-19, 2010:

SESI was onsite with Eco Enviro Drilling to delineate the affected area. An air rotary rig with a 10' split core barrel was utilized to determine the vertical extent of the chloride contamination. A total of five (5) boreholes were installed with in the affected area. Samples were retrieved in five (5) foot intervals. The samples collected were properly preserved and transported along with Chain of Custody to Cardinal Laboratories, of Hobbs, New Mexico, for analysis. Laboratory samples were analyzed for Chlorides (EPA method 300.00).

The results of the analysis are as follows:

Date	Sample ID	Cl⁻ (mg/kg)
1/18/10	BH#1. 5'	<16
1/18/10	BH#1. 10'	64
1/18/10	BH#1. 15'	160
1/18/10	BH#2. 5'	<16
1/18/10	BH#2. 10'	<16
1/18/10	BH#2. 15'	<16
1/18/10	BH#3. 2'	288
1/18/10	BH#3. 7'	1,620
1/18/10	BH#3. 12'	1,140
1/18/10	BH#3. 17'	480
1/18/10	BH#3. 22'	288

1/19/10	BH#4. Surface	96
1/19/10	BH#4. 5'	624
1/19/10	BH#4. 10'	1,200
1/19/10	BH#4. 15'	224
1/19/10	BH#4. 20'	400
1/19/10	BH#5. Surface	16
1/19/10	BH#5. 10'	2,000
1/19/10	BH#5. 15'	864
1/19/10	BH#5. 20'	496

April 5, 2010:

SESI is onsite with Watson Construction to begin excavation of the area. Sample trenches were installed on the east and north end of the excavation to determine the horizontal extent of the chloride contamination. The test trench outside the north end of the excavation indicated that chloride contamination had migrated and additional 15' to 20' north of the excavation. The top soil outside both the north and east end of the excavation did not appear to be affected. Samples collected from the top soil indicated that soil was unaffected; therefore the top 1' of soil will be segregated as clean soil. The rest of the area will be excavated to 4' bgl and stockpiled for disposal.

Samples were taken from side walls and transported to Cardinal Laboratories in Hobbs, New Mexico to be analyzed for Chlorides (EPA Method 4500B).

The results of the analysis are as follows:

Date	Sample ID	Cl (mg/kg)
4/5/10	East Wall #1	48
4/5/10	East Wall #2	80
4/5/10	East Wall #3	48
4/5/10	North Wall #1	48
4/5/10	North Wall #2	176
4/5/10	North Wall #3	160
4/5/10	South Wall	128

In an approved work plan from Larry Johnson of NMOCD it was requested that the area would be excavated to a depth of four (4) feet below grade surface and to the west wall by the flow lines.

Approximately 3,230 yards of contaminated soils were excavated and transported to an NMOCD approve disposal facility.

Upon completion of excavation the location the area a 20,800 square foot 40-mil liner was installed to prevent future migration. The excavated area was then backfilled with approximately 4,932 yards of soils from an offsite facility. The area was then contoured to its natural grade.

Conclusion

Remedial actions at this site have all been performed with the approval of, and in accordance with all New Mexico Oil Conservation Division (NMOCD) requirements. It is requested that the location be re-seeded to the landowner's specifications and that no further action will be required.

Please contact me should you have questions or require further information.

Thank you for your attention in this matter.

Sincerely,

Bob Allen CSP, REM
President

ba/sr

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

June 16, 2003

Stevens & Johnson Operating Co.
PO Box 2249
Wichita Falls, TX 76307-2249

Re: Remediation Work Plan
Denton Field 'Horse Pin'
Site Location: Sec 12 T15S R37E
Plan Submittal Dated: May 8, 2003

The referenced Work Plan submitted to New Mexico Oil Conservation Division (OCD) by Safety & Environmental Solutions, Inc. (SES) for Stevens & Johnson Operating Co. is **hereby approved** with the following conditions:

- OCD will be given 48 hour notice prior to sampling events to witness and/or split samples
- Drilling to and sampling of groundwater will be prudent if deep chloride contamination is encountered above 250 mg/L or 250 ppm in boring samples
- Provide convex soft soil/sand pad under plastic barrier, pad top to protect from puncture
- Increase plastic liner from 20 mil to 30 mil thickness

Please be advised that OCD approval of this plan does not relieve Stevens & Johnson Operating Co. liability should their operations fail to adequately investigate and remediate contaminants that threaten ground water, surface water, human health or the environment. Additionally, OCD approval does not relieve Stevens & Johnson Operating Co. of responsibility for compliance with any other federal, state, or local laws and/or regulations.

If you have any questions or need assistance call: (505) 393-6161, ext. 111, or email: lwjohnson@state.nm.us or Paul Sheeley at: ext. 113, email: psheeley@state.nm.us

Sincerely,

Larry Johnson-Environmental Engineer

Cc: Roger Anderson - Environmental Bureau Chief
Chris Williams - District I Supervisor
Bill Olson - Hydrologist
Paul Sheeley - Environmental Engineer
Bob Allen – Safety & Environmental Solutions, Inc.