UIC-I - ____5_____

GENERAL CORRESPONDENCE

YEAR(S):

2007 - Present

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, August 18, 2017 9:28 AM
To: 'Philana Thompson'
Cc: Griswold, Jim, EMNRD
Subject: RE: 2017 2nd Quarter Reports UICI-5-0 & NM1-9
Attachments: Lab.pdf; QAPP Final 6-30-17.pdf; 60-521-15-05727 Environmental Laboratory Services 0815.pdf

Philana:

The New Mexico Oil Conservation Division (OCD) has completed its review of the above subject submittal. OCD is writing to ensure Agua Moss understands the content required under the recently issued discharge permit for future submittals.

OCD observations and/or requirements are:

1) OCD observed that copies of the continuous monitoring charts were not included with the submittal per Permit Condition 2.H.1.e. Does Agua Moss have UIC Class I Well chart records from Q2? In accordance with the recently issued discharge permit, future quarterly reports shall include:

   2.H. REPORTING:
   1. Quarterly Reports: The Permittee shall submit quarterly reports pursuant to 20.6.2.5208A NMAC to OCD's Environmental Bureau no later than 45 days following the end of each calendar quarter. The quarterly reports shall include the following:
   a. Physical, chemical and other relevant characteristics of injection fluids;
   b. Monthly average, maximum and minimum values for injection pressure, flow rate and volume, and annular pressure with any exceedances identified;
   c. Results of monitoring prescribed under Section 20.6.2.5207B NMAC with any exceedances of Permit Condition 2.A;
   d. Piezometer and monitor well information from Permit Condition 2.A.1; and
   e. Continuous monitoring chart(s) and information from Permit Condition 3.C.

2) OCD observed issues with sample container preservatives for inorganic constituents (see attachment). Sample containers from the lab are typically pre-preserved. Agua Moss may want to check with the lab to ensure receipt of sample containers with proper preservatives based on the constituents of concern to be analyzed. OCD attaches its Quality Assurance Project Plan (QAPP) to assist Agua Moss with meeting environmental lab sampling requirements of the OCD. OCD also attaches its GSD Environmental Lab Contract with analytical methods for additional environmental lab information background.

3) In accordance with the recently issued discharge permit, future environmental well sampling shall include:

The Permittee shall analyze the injected fluids quarterly for the constituents identified in the Quarterly Monitoring List (below) to demonstrate that the injected fluids do not exhibit the characteristic of toxicity using the Toxicity Characteristic Leaching Procedure, EPA SW-846
Test Method 1311 (see Table 1, 40 CFR 261.24(b)).

QUARTERLY MONITORING LIST

EPA HW No.	Contaminant	SW-846 Methods	Regulatory Level (mg/L)
D004	Arsenic	1311	5.0
D005	Barium	1311	100.0
D018	Benzene	8021B	0.5
D006	Cadmium	1311	1.0
D019	Carbon tetrachloride	8021B 8260B	0.5
D020	Chlordane	8081A	0.03
D021	Chlorobenzene	8021B 8260B	100.0
D022	Chloroform	8021B 8260B	6.0
D007	Chromium	1311	5.0
D023	o-Cresol	8270D	200.0
D024	m-Cresol	8270D	200.0
D025	p-Cresol	8270D	200.0
D026	Cresol	8270D	200.0
D027	1,4-Dichlorobenzene	8021B 8121 8260B 8270D	7.5
D028	1,2-Dichloroethane	8021B 8260B	0.5
D029	1,1-Dichloroethylene	8021B 8260B	0.7
D030	2,4-Dinitrotoluene	8091 8270D	0.13
D032	Hexachlorobenzene	8121	0.13
D033	Hexachlorobutadiene	8021B 8121 8260B	0.5
D034	Hexachloroethane	8121	3.0
D008	Lead	1311	5.0
D009	Mercury	7470A 7471B	0.2
D035	Methyl ethyl ketone	8015B 8260B	200.0
D036	Nitrobenzene	8091 8270D	2.0
D037	Pentrachlorophenol	8041	100.0
D038	Pyridine	8260B 8270D	5.0

D010	Selenium	1311	1.0
D011	Silver	1311	5.0
D039	Tetrachloroethylene	8260B	0.7
D040	Trichloroethylene	8021B 8260B	0.5
D041	2,4,5-Trichlorophenol	8270D	400.0
D042	2,4,6-Trichlorophenol	8041A 8270D	2.0
D043	Vinyl chloride	8021B 8260B	0.2

If o-, m-, and p-cresol concentrations cannot be differentiated, then the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/L.
If the quantitation limit is greater than the regulatory level, then the quantitation limit becomes the regulatory level.
If metals (dissolved), the EPA 1311 TCLP Laboratory Method is required with the exception of Mercury (total).

Please contact me if you have questions or wish to communicate on the above.

Thank you.

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us
"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD **and see "Publications")**

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Wednesday, August 9, 2017 4:22 PM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>; Jones, Brad A., EMNRD <brad.a.jones@state.nm.us>
Subject: 2017 2nd Quarter Reports UICI-5-0 & NM1-9

Thank you,
Philana
--
Philana Thompson
Regulatory Compliance
Merrion Oil & Gas Corp
cell 505-486-1171
fax 505-324-5300

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, August 4, 2017 12:03 PM
To: 'Ryan Davis'
Cc: Philana Thompson; Jeff Davis; Shacie Murray; Ryan Merrion; Griswold, Jim, EMNRD; Perrin, Charlie, EMNRD; Brancard, Bill, EMNRD; Sanchez, Daniel J., EMNRD
Subject: UICI-005 UIC Class I (NH) SUNCO Well No. 1 (API# 30-045-28653) Disposal Well Agua Moss, LLC: VARIANCE/WAIVER FOR MONITOR WELL REQUIREMENT

Mr. Davis:

The New Mexico Oil Conservation Division (OCD) has completed its review of the Merrion Oil and Gas (MOG) request for a variance or waiver for the monitoring well requirement at the above subject facility in the recently issued OCD Discharge Permit (UICI-005).

OCD hereby **denies** the request on the grounds that the monitor well(s) serves to verify that the Underground Source of Drinking Water (USDW) is not impacted from operations from the above subject facility (i.e., 20.6.2.5207(B)3 NMAC).

OCD imposed this specific Discharge Permit requirement at all Underground Injection Control (UIC) Class I (Non-hazardous) Disposal Well Facilities in New Mexico where USDWs are present and have operated for a substantial period of time to ensure the protection of USDWs. While UIC Program Injection Wells are initially constructed to protect USDWs, there is no guarantee over time that various subsurface well construction problems will not develop.

Please contact me if you have questions. Thank you.

Respectfully,

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us
"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD and see "Publications")

From: Ryan Davis [mailto:rdavis@merrion.bz]
Sent: Sunday, July 16, 2017 10:48 AM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: Philana Thompson <pthompson@merrion.bz>; Jeff Davis <jdaguamoss@hotmail.com>; Shacie Murray <shacie@merrion.bz>; Ryan Merrion <ryan@merrion.bz>
Subject: Sunco SWD

Carl,

In reviewing the renewal of the UICI 5 Permit for Sunco WDW-1, Agua Moss would like to request a variance or waiver for the monitoring well requirement. We believe that the current monitoring practices in place are adequate for

protecting the ground water resource in the vicinity of our operations. The injection interval is isolated with the long string casing and cemented to surface. The injection is performed through plastic lined tubing under a permanent packer. The integrity of the casing, packer, and tubing are ensured by the continuous monitoring of the annular pressure. These pressures are reviewed daily as part of the facility walk through procedure. The ground water has an additional surface casing string cemented to surface. The braden head is monitored daily to ensure there is no communication between the long string casing and surface casing. We believe the monitoring of the annular and braden head pressures are the best methods to identify and or prevent ground water containment from our underground injection operations.

In terms of a possible surface release, we believe that we have adequate measures in place to prevent a surface release. All the liquid waste is stored in steel tanks in a closed loop system and all of the tanks are within a secondary containment. Every tank in the tank battery is equipped with external tank gauge lines and the level in each tank is monitored daily. The tubing pressure and injection pressures are also monitoring during the injection phase, a variance between the two pressures would indicate an injection line integrity issue.

The additional cost burden of installation and maintenance of a monitoring does not seem to create any additional protection of ground water for our operations. We believe that we would be able to identify possible ground water contamination with the current monitoring practices before it would be seen in a monitoring well. We would like the NMOCD to consider granting Agua Moss a variance from the ground water monitoring well requirement in the new permit based on the protective practices currently in use.

If you have any questions, concerns or need more information please let me know.

Thanks,

Ryan Davis

Operations Manager

MERRION OIL & GAS

(W) 505-215-3292

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, June 6, 2017 9:55 AM
To: 'pthompson@merrion.bz'; Denton, Scott (Scott.Denton@HollyFrontier.com); Schmaltz, Randy (Randy.Schmaltz@wnr.com)
Cc: Sanchez, Daniel J., EMNRD; Griswold, Jim, EMNRD; Perrin, Charlie, EMNRD; Podany, Raymond, EMNRD
Subject: New Mexico Oil Conservation Division Annual UIC Class I (Non-hazardous) Disposal Well Fall-Off Test Due on or Before September 30, 2017

Ladies and Gentlemen:

Re: Agua Moss, LLC (UICI-5) San Juan Co.; HollyFrontier Navajo Refining LLC (UICI-8-1,2&3) Eddy Co.; Western Refining Southwest, Inc. (UICI-11) San Juan Co.

The New Mexico Oil Conservation Division (OCD) is writing to remind Operators with the above subject disposal wells to please complete your annual Discharge Permit Fall-Off Tests on or before September 30, 2017.

Please contact me if you have questions. Thank you.

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us
"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD **and see "Publications")**

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, May 20, 2016 11:32 AM
To: 'Robinson, Kelly'
Cc: Griswold, Jim, EMNRD; Tsinnajinnie, Leona, NMENV; Schmaltz, Randy; Hains, Allen; Krakow, Matt
Subject: RE: Bloomfield Bulk Terminal (GW-001) 2015 GW Remediation and Monitoring Annual Report Submitted April 2016 Class I (NH) Waste Disposal Inquiry

Kelly:

Good morning. The New Mexico Oil Conservation Division (OCD) is in receipt of Western's response to OCD's May 17, 2016 inquiry below based on OCD's review of the above subject report and subsequent inquiry.

OCD requests that Western include all waste disposal facility information including the UIC Class I (NH) Disposal Well Effluent disposition derived from the Bulk Terminal in the applicable appendices of the above subject type of report from now on when applicable. Western did indicate in the text of the report that effluent was taken to a "Class I Permitted Facility", but the facility was not listed in the referenced appendices of the report.

In accordance with OCD's internal UIC Program audit process, OCD is following up with Agua Moss, LLC to confirm receipt of Western's oilfield exempt waste. Agua Moss, LLC is subject to OCD Audits during OCD well inspections, and/or for any OCD requests for disposal related documentation associated with its OCD UIC Permitted Class I (NH) disposal well.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
Environmental Engineer
Oil Conservation Division- Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
Phone: (505) 476-3490
Main Phone: (505) 476-3440
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: www.emnrd.state.nm.us/ocd
Why not prevent pollution, minimize waste, reduce operation costs, and move forward with the rest of the Nation? To see how, go to "Publications" and "Pollution Prevention" on the OCD Website.

From: Robinson, Kelly [mailto:Kelly.Robinson@wnr.com]
Sent: Friday, May 20, 2016 10:27 AM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Tsinnajinnie, Leona, NMENV <Leona.Tsinnajinnie@state.nm.us>; Schmaltz, Randy <Randy.Schmaltz@wnr.com>; Hains, Allen <Allen.Hains@wnr.com>; Krakow, Matt <Matt.Krakow@wnr.com>
Subject: RE: Bloomfield Bulk Terminal (GW-001) 2015 GW Remediation and Monitoring Annual Report Submitted April 2016 Class I (NH) Waste Disposal Inquiry

Good Morning Sir,

Randy is out of town this week at a Conference, and therefore he has asked that I response to your document request below regarding the off-site disposal of the non-hazardous waste water generated at the Western Refining Bloomfield Terminal.

As it was stated in the 2015 Groundwater Remediation and Monitoring Report, subsequent to the plug and abandonment of the Western Refining Class I injection well, non-hazardous treated wastewater was disposed of off-site at a Class I permitted facility. This water was profiled and sent to the Agua Moss Class I well located in Aztec, New Mexico. Prior to initiating off-site disposal, Western requested approval from NMOCD to dispose of the treated wastewater at the Agua Moss Class I injection well via an e-mail submitted on October 21, 2015. The request for approval included a copy of the analytical report for a sample of the water collected in July 2015 for NMOCD's review. Western received NMOCD approval via e-mail on October 21, 2015. A copy of the e-mail correspondence with NMOCD and the Western signed C-138 associated with the profile for the material is attached for reference.

A total of 714 loads of non-hazardous treated water was shipped to Agua Moss for disposal in 2015. Each load was shipped on a non-hazardous manifest. A copy of the manifest template used for each shipment and a summary of the each load shipped off-site (including date, time, and total volume) is attached for reference.

If you have any questions or need any additional information regarding this topic, please let us know at your convenience.

Thank you so much for your time, and have a great weekend!

Kelly R. Robinson | Environmental Manager - Logistics
Western Refining | 111 County Road 4990 | Bloomfield, NM87413
(o) 505-632-4166 | (c) 505-801-5616 | (e) kelly.robinson@wnr.com

From: "Chavez, Carl J, EMNRD" <CarlJ.Chavez@state.nm.us>
Date: May 17, 2016 at 12:00:28 PM CDT
To: "Schmaltz, Randy (Randy.Schmaltz@wnr.com)" <Randy.Schmaltz@wnr.com>
Cc: "Griswold, Jim, EMNRD" <Jim.Griswold@state.nm.us>, "Tsinnajinnie, Leona, NMENV" <Leona.Tsinnajinnie@state.nm.us>
Subject: Bloomfield Bulk Terminal (GW-001) 2015 GW Remediation and Monitoring Annual Report Submitted April 2016 Class I (NH) Waste Disposal Inquiry

---

Randy:

Good morning. From the above subject report, it is not clear where the Class I (NH) Disposal Well fluids were taken? OCD is aware of the plugged and abandoned Class I (NH) Disposal Well (see description below) in 2015.

Please provide OCD with more details on the facility where the Class I (NH) Disposal Well Effluent was and is being disposed after September 22, 2015, any C-138 manifests or documentation of the disposal events, disposal volumes, any testing, etc. to OCD by COB this Friday, May 20, 2016.

Thank you.

****

2.4 Waste Disposal
Western Refining indefinitely suspended refining operations at the facility on November 23, 2009. The crude unloading and product loading racks, storage tanks and other supporting equipment remain in operation. Recovered water from on-site remediation activities and facility operations is treated through

the on-site WWTS. Treated water is then disposed of through the on-site Class I non-hazardous injection well or sent off-site to a Class 1 non-hazardous injection well for disposal.
All operational waste generated is properly characterized and disposed of off-site. Additional information regarding waste disposal activities is provided in Section 3.5.

3.5 Waste Disposal
Western Refining indefinitely suspended refining operations at the Bloomfield Facility on November 23, 2009. The crude unloading and product loading racks, storage tanks and other supporting equipment remain in operation. Recovered water from on-site remediation activities and facility operations is treated through the on-site WWTS. Treated water is then disposed of through a Class I non-hazardous injection well. Due to mechanical issues, the on-site Class I injection well was shut down on September 22, 2015 and was plugged and abandoned in October 2015. It is anticipated that a replacement well will be installed. During the interim period, wastewater that has been processed through the WWTS is being transported for off-site disposal at a permitted commercial Class I non-hazardous injection well.
All operational waste generated is properly characterized and disposed of off-site. A summary of such wastes for 2015 is provided in Appendix E (see attachment).

Carl J. Chavez, CHMM
Environmental Engineer
Oil Conservation Division- Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
Phone: (505) 476-3490
Main Phone: (505) 476-3440
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: www.emnrd.state.nm.us/ocd
Why not prevent pollution, minimize waste, reduce operation costs, and move forward with the rest of the Nation? To see how, go to “Publications” and “Pollution Prevention” on the OCD Website.

10/21/15 MK

Krakow, Matt

From: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Sent: Wednesday, October 21, 2015 1:17 PM
To: Krakow, Matt
Cc: Robinson, Kelly; Schmaltz, Randy; Aguamossghiggins@hotmail.com; pthompson@marrion.bz; ryandavis@marrion.bz; shacie@marrion.bz
Subject: RE: Treated Waste Water Disposal

Matt:

Looks good. Thanks.

Carl J. Chavez, CHMM
Environmental Engineer
Oil Conservation Division- Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
Phone: (505) 476-3490
Main Phone: (505) 476-3440
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: www.emnrd.state.nm.us/ocd
Why not prevent pollution, minimize waste, reduce operation costs, and move forward with the rest of the Nation? To see how, go to "Publications" and "Pollution Prevention" on the OCD Website.

From: Krakow, Matt [mailto:Matt.Krakow@wnr.com]
Sent: Wednesday, October 21, 2015 12:35 PM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: Robinson, Kelly <Kelly.Robinson@wnr.com>; Schmaltz, Randy <Randy.Schmaltz@wnr.com>; Aguamossghiggins@hotmail.com; pthompson@marrion.bz; ryandavis@marrion.bz; shacie@marrion.bz
Subject: Treated Waste Water Disposal

Hi Carl,

Western Refining is making notification to NMOCD of plans to dispose of treated non-hazardous waste water from Bloomfield Terminal at the Agua Moss Class I injection well. Western is in the process of submitting a C-138 and analytical of the waste for acceptance at Agua Moss, LLC in Aztec ,NM. Analytical from the waste water is attached. If you have any questions please let us know.

THANKS,
MATTHEW KRAKOW
Environmental Coordinator

Western Refining Southwest Inc.
111 County Road 4990
Bloomfield, NM 87413

P: 505-632-4169

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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

162115 MK

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Western Refining Southwest, Inc. 50 CR 4990, Bloomfield, NM, 87413

2. Originating Site:
Western Refining Southwest, Inc. Bloomfield Terminal – NESE27, T29N, R11W, San Juan County, NM

3. Location of Material (Street Address, City, State or ULSTR):
Same as originating site

4. Source and Description of Waste:
Treated non-hazardous water from the Bloomfield Terminal.

Estimated Volume _____ bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Matthew Krakow, representative or authorized agent for Western Refining Southwest, Inc. do hereby
PRINT & SIGN NAME COMPANY NAME

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, N/A, representative for N/A do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: TBD

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Agua Moss Permit # UICI-005

Address of Facility: 345 Rd 350 Aztec, NM 87410

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____
Surface Waste Management Facility Authorized Agent

10215MK

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 06, 2015

Kelly Robinson
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4166
FAX (505) 632-3911

RE: Injection Well 7-1-15 OrderNo.: 1507094

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/2/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1507094**
Date Reported: **8/6/2015**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Injection Well
Project: Injection Well 7-1-15 **Collection Date:** 7/1/2015 9:00:00 AM
Lab ID: 1507094-001 **Matrix:** AQUEOUS **Received Date:** 7/2/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	480	50		mg/L	100	7/2/2015 5:18:55 PM	R27295
Sulfate	65	5.0		mg/L	10	7/2/2015 5:06:31 PM	R27295
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **JRR**	
Conductivity	2000	0.010		µmhos/cm	1	7/6/2015 11:31:17 AM	R27329
SM2320B: ALKALINITY						Analyst: **JRR**	
Bicarbonate (As CaCO3)	274.6	20.00		mg/L CaCO3	1	7/6/2015 11:31:17 AM	R27329
Carbonate (As CaCO3)	ND	2.000		mg/L CaCO3	1	7/6/2015 11:31:17 AM	R27329
Total Alkalinity (as CaCO3)	274.6	20.00		mg/L CaCO3	1	7/6/2015 11:31:17 AM	R27329
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	1220	40.0	*	mg/L	1	7/8/2015 5:09:00 PM	20129
SM4500-H+B: PH						Analyst: **JRR**	
pH	7.45	1.68	H	pH units	1	7/6/2015 11:31:17 AM	R27329
EPA METHOD 7470: MERCURY						Analyst: **JLF**	
Mercury	ND	0.0010		mg/L	5	7/8/2015 4:47:51 PM	20158
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **MED**	
Arsenic	ND	0.020		mg/L	1	7/9/2015 10:51:23 AM	20102
Barium	0.27	0.020		mg/L	1	7/9/2015 10:51:23 AM	20102
Cadmium	ND	0.0020		mg/L	1	7/16/2015 12:13:28 PM	20102
Calcium	120	5.0		mg/L	5	7/9/2015 1:02:36 PM	20102
Chromium	ND	0.0060		mg/L	1	7/14/2015 3:52:06 PM	20102
Lead	ND	0.0050		mg/L	1	7/9/2015 10:51:23 AM	20102
Magnesium	28	1.0		mg/L	1	7/9/2015 10:51:23 AM	20102
Potassium	7.7	1.0		mg/L	1	7/9/2015 10:51:23 AM	20102
Selenium	ND	0.050		mg/L	1	7/16/2015 12:13:28 PM	20102
Silver	ND	0.0050		mg/L	1	7/16/2015 12:13:28 PM	20102
Sodium	280	5.0		mg/L	5	7/9/2015 1:02:36 PM	20102
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Acenaphthylene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Aniline	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Anthracene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Azobenzene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Benz(a)anthracene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Benzo(a)pyrene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Benzo(b)fluoranthene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Benzo(g,h,i)perylene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Project: Injection Well 7-1-15
Lab ID: 1507094-001 **Matrix:** AQUEOUS

Client Sample ID: Injection Well
Collection Date: 7/1/2015 9:00:00 AM
Received Date: 7/2/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Benzo(k)fluoranthene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Benzoic acid	ND	20		µg/L	1	7/10/2015 1:30:30 PM	20095
Benzyl alcohol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Bis(2-chloroethyl)ether	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
4-Bromophenyl phenyl ether	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Butyl benzyl phthalate	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Carbazole	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
4-Chloro-3-methylphenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
4-Chloroaniline	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2-Chloronaphthalene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2-Chlorophenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Chrysene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Di-n-butyl phthalate	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Di-n-octyl phthalate	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Dibenz(a,h)anthracene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Dibenzofuran	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
1,2-Dichlorobenzene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
1,3-Dichlorobenzene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
1,4-Dichlorobenzene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
3,3'-Dichlorobenzidine	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Diethyl phthalate	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Dimethyl phthalate	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2,4-Dichlorophenol	ND	20		µg/L	1	7/10/2015 1:30:30 PM	20095
2,4-Dimethylphenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	7/10/2015 1:30:30 PM	20095
2,4-Dinitrophenol	ND	20		µg/L	1	7/10/2015 1:30:30 PM	20095
2,4-Dinitrotoluene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2,6-Dinitrotoluene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Fluoranthene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Fluorene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Hexachlorobenzene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Hexachlorobutadiene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Hexachlorocyclopentadiene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Hexachloroethane	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc. **Client Sample ID:** Injection Well
Project: Injection Well 7-1-15 **Collection Date:** 7/1/2015 9:00:00 AM
Lab ID: 1507094-001 **Matrix:** AQUEOUS **Received Date:** 7/2/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Isophorone	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
1-Methylnaphthalene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2-Methylnaphthalene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2-Methylphenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
3+4-Methylphenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
N-Nitrosodimethylamine	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
N-Nitrosodiphenylamine	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Naphthalene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2-Nitroaniline	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
3-Nitroaniline	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
4-Nitroaniline	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Nitrobenzene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2-Nitrophenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
4-Nitrophenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Pentachlorophenol	ND	20		µg/L	1	7/10/2015 1:30:30 PM	20095
Phenanthrene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Phenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Pyrene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Pyridine	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
1,2,4-Trichlorobenzene	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2,4,5-Trichlorophenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
2,4,6-Trichlorophenol	ND	10		µg/L	1	7/10/2015 1:30:30 PM	20095
Surr: 2-Fluorophenol	66.2	14.9-111		%REC	1	7/10/2015 1:30:30 PM	20095
Surr: Phenol-d5	64.1	11.3-108		%REC	1	7/10/2015 1:30:30 PM	20095
Surr: 2,4,6-Tribromophenol	75.7	15.7-154		%REC	1	7/10/2015 1:30:30 PM	20095
Surr: Nitrobenzene-d5	84.6	47.8-106		%REC	1	7/10/2015 1:30:30 PM	20095
Surr: 2-Fluorobiphenyl	63.7	21.3-123		%REC	1	7/10/2015 1:30:30 PM	20095
Surr: 4-Terphenyl-d14	51.4	14.3-135		%REC	1	7/10/2015 1:30:30 PM	20095
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
Benzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Toluene	1.5	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Ethylbenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Naphthalene	ND	2.0		µg/L	1	7/9/2015 8:19:52 PM	R27397

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Project: Injection Well 7-1-15
Lab ID: 1507094-001 **Matrix:** AQUEOUS

Client Sample ID: Injection Well
Collection Date: 7/1/2015 9:00:00 AM
Received Date: 7/2/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
1-Methylnaphthalene	ND	4.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
2-Methylnaphthalene	ND	4.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Acetone	72	10		µg/L	1	7/9/2015 8:19:52 PM	R27397
Bromobenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Bromodichloromethane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Bromoform	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Bromomethane	ND	3.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
2-Butanone	11	10		µg/L	1	7/9/2015 8:19:52 PM	R27397
Carbon disulfide	ND	10		µg/L	1	7/9/2015 8:19:52 PM	R27397
Carbon Tetrachloride	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Chlorobenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Chloroethane	ND	2.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Chloroform	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Chloromethane	ND	3.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
2-Chlorotoluene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
4-Chlorotoluene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
cis-1,2-DCE	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Dibromochloromethane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Dibromomethane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,1-Dichloroethane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,1-Dichloroethene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,2-Dichloropropane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,3-Dichloropropane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
2,2-Dichloropropane	ND	2.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,1-Dichloropropene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Hexachlorobutadiene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
2-Hexanone	ND	10		µg/L	1	7/9/2015 8:19:52 PM	R27397
Isopropylbenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
4-Isopropyltoluene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
4-Methyl-2-pentanone	ND	10		µg/L	1	7/9/2015 8:19:52 PM	R27397
Methylene Chloride	ND	3.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
n-Butylbenzene	ND	3.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
n-Propylbenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Project: Injection Well 7-1-15
Lab ID: 1507094-001 **Matrix:** AQUEOUS

Client Sample ID: Injection Well
Collection Date: 7/1/2015 9:00:00 AM
Received Date: 7/2/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BCN**	
sec-Butylbenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Styrene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
tert-Butylbenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
trans-1,2-DCE	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Trichlorofluoromethane	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Vinyl chloride	ND	1.0		µg/L	1	7/9/2015 8:19:52 PM	R27397
Xylenes, Total	ND	1.5		µg/L	1	7/9/2015 8:19:52 PM	R27397
Surr: 1,2-Dichloroethane-d4	96.9	70-130		%REC	1	7/9/2015 8:19:52 PM	R27397
Surr: 4-Bromofluorobenzene	90.8	70-130		%REC	1	7/9/2015 8:19:52 PM	R27397
Surr: Dibromofluoromethane	103	70-130		%REC	1	7/9/2015 8:19:52 PM	R27397
Surr: Toluene-d8	95.5	70-130		%REC	1	7/9/2015 8:19:52 PM	R27397

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	150707035
Address:	4901 HAWKINS NE SUITE D	**Project Name:**	1507094
	ALBUQUERQUE, NM 87109		
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	150707035-001	**Sampling Date**	7/1/2015	**Date/Time Received**	7/7/2015 11:00 AM
Client Sample ID	1507094-001E / INJECTION WELL			**Sampling Time**	9:00 AM
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/L	1	7/15/2015	CRW	SW846 CH7	
Flashpoint	>200	°F		7/15/2015	KFG	EPA 1010	
pH	7.36	pH Units		7/8/2015	KMC	SM 4500pH-B	
Reactive sulfide	ND	mg/L	1	7/15/2015	HSW	SW846 CH7	

Authorized Signature

John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

Certifications held by Anatek Labs ID: EPA ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87693; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C585
Certifications held by Anatek Labs WA: EPA:WA00159; ID:WA00159; WA:C585 MT Cert0095 FL(NELAP) E871099

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 150707035
Project Name: 1507094

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Reactive sulfide	0.816	mg/L	0.907	90.0	70-130	7/15/2015	7/15/2015
Cyanide (reactive)	0.486	mg/L	0.5	97.2	80-120	7/15/2015	7/15/2015

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
150707035-001A	Reactive sulfide	ND	0.816	mg/L	0.907	90.0	70-130	7/15/2015	7/15/2015
150707035-001	Cyanide (reactive)	ND	0.462	mg/L	0.5	92.4	80-120	7/15/2015	7/15/2015

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide (reactive)	0.454	mg/L	0.5	90.8	1.7	0-25	7/15/2015	7/15/2015

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide (reactive)	ND	mg/L	1	7/15/2015	7/15/2015
Reactive sulfide	ND	mg/L	1	7/15/2015	7/15/2015

AR Acceptable Range
ND Not Detected
PQL Practical Quantitation Limit
RPD Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507094**

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R27295**	RunNo: **27295**
Prep Date:	Analysis Date: **7/2/2015**	SeqNo: **817819** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R27295**	RunNo: **27295**
Prep Date:	Analysis Date: **7/2/2015**	SeqNo: **817820** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.0	0.50	5.000	0	99.0	90	110			
Sulfate	10	0.50	10.00	0	103	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507094**

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID **100ng LCS**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R27397**	RunNo: **27397**
Prep Date:	Analysis Date: **7/9/2015**	SeqNo: **822125** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.9	70	130			
Toluene	17	1.0	20.00	0	87.2	70	130			
Chlorobenzene	17	1.0	20.00	0	85.5	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	95.4	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	84.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.4	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27397**	RunNo: **27397**
Prep Date:	Analysis Date: **7/9/2015**	SeqNo: **822418** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

WO#: **1507094**

Hall Environmental Analysis Laboratory, Inc.

06-Aug-15

Client: Western Refining Southwest, Inc.
Project: Injection Well 7-1-15

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R27397**	RunNo: **27397**	
Prep Date:	Analysis Date: **7/9/2015**	SeqNo: **822418**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507094**

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R27397**	RunNo: **27397**
Prep Date:	Analysis Date: **7/9/2015**	SeqNo: **822418** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

WO#: **1507094**

Hall Environmental Analysis Laboratory, Inc.

06-Aug-15

Client: Western Refining Southwest, Inc.
Project: Injection Well 7-1-15

Sample ID **mb-20095**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **20095**	RunNo: **27414**	
Prep Date: **7/6/2015**	Analysis Date: **7/10/2015**	SeqNo: **822558**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3'-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507094**

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID **mb-20095**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **20095**	RunNo: **27414**
Prep Date: **7/6/2015**	Analysis Date: **7/10/2015**	SeqNo: **822558** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	140		200.0		69.6	14.9	111			
Surr: Phenol-d5	150		200.0		74.2	11.3	108			
Surr: 2,4,6-Tribromophenol	150		200.0		75.2	15.7	154			
Surr: Nitrobenzene-d5	75		100.0		75.0	47.8	106			
Surr: 2-Fluorobiphenyl	76		100.0		75.9	21.3	123			
Surr: 4-Terphenyl-d14	52		100.0		52.2	14.3	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

WO#: **1507094**

Hall Environmental Analysis Laboratory, Inc.

06-Aug-15

Client: Western Refining Southwest, Inc.
Project: Injection Well 7-1-15

Sample ID **lcs-20095** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **20095** RunNo: **27414**
Prep Date: **7/6/2015** Analysis Date: **7/10/2015** SeqNo: **822559** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	51	10	100.0	0	51.2	47.8	99.7			
4-Chloro-3-methylphenol	110	10	200.0	0	56.2	58.1	103			S
2-Chlorophenol	73	10	200.0	0	36.7	49.5	96.8			S
1,4-Dichlorobenzene	34	10	100.0	0	33.8	40.4	89.4			S
2,4-Dinitrotoluene	42	10	100.0	0	41.8	38.6	91.3			
N-Nitrosodi-n-propylamine	51	10	100.0	0	51.1	53.9	95.6			S
4-Nitrophenol	93	10	200.0	0	46.3	26.4	108			
Pentachlorophenol	98	20	200.0	0	49.1	36.5	86.6			
Phenol	85	10	200.0	0	42.7	29.3	108			
Pyrene	56	10	100.0	0	56.2	45.7	100			
1,2,4-Trichlorobenzene	43	10	100.0	0	42.9	39.3	94.5			
Surr: 2-Fluorophenol	67		200.0		33.4	14.9	111			
Surr: Phenol-d5	86		200.0		43.0	11.3	108			
Surr: 2,4,6-Tribromophenol	120		200.0		62.3	15.7	154			
Surr: Nitrobenzene-d5	47		100.0		46.6	47.8	106			S
Surr: 2-Fluorobiphenyl	53		100.0		53.0	21.3	123			
Surr: 4-Terphenyl-d14	44		100.0		44.1	14.3	135			

Sample ID **lcsd-20095** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **20095** RunNo: **27414**
Prep Date: **7/6/2015** Analysis Date: **7/10/2015** SeqNo: **822560** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	76	10	100.0	0	76.1	47.8	99.7	39.1	28.2	R
4-Chloro-3-methylphenol	160	10	200.0	0	81.3	58.1	103	36.4	24.4	R
2-Chlorophenol	150	10	200.0	0	76.8	49.5	96.8	70.6	28.1	R
1,4-Dichlorobenzene	72	10	100.0	0	72.5	40.4	89.4	72.9	31.2	R
2,4-Dinitrotoluene	55	10	100.0	0	54.6	38.6	91.3	26.4	44.4	
N-Nitrosodi-n-propylamine	76	10	100.0	0	76.4	53.9	95.6	39.6	24.2	R
4-Nitrophenol	130	10	200.0	0	63.8	26.4	108	31.8	36.6	
Pentachlorophenol	130	20	200.0	0	65.8	36.5	86.6	29.1	29.5	
Phenol	160	10	200.0	0	77.8	29.3	108	58.2	30	R
Pyrene	69	10	100.0	0	69.3	45.7	100	20.8	31	
1,2,4-Trichlorobenzene	86	10	100.0	0	85.7	39.3	94.5	66.6	24	R
Surr: 2-Fluorophenol	140		200.0		70.6	14.9	111	0	0	
Surr: Phenol-d5	160		200.0		79.2	11.3	108	0	0	
Surr: 2,4,6-Tribromophenol	160		200.0		82.0	15.7	154	0	0	
Surr: Nitrobenzene-d5	80		100.0		79.5	47.8	106	0	0	
Surr: 2-Fluorobiphenyl	77		100.0		77.3	21.3	123	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507094**

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID **lcsd-20095** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **LCSS02** Batch ID: **20095** RunNo: **27414**

Prep Date: **7/6/2015** Analysis Date: **7/10/2015** SeqNo: **822560** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	51		100.0		51.2	14.3	135	0	0	

Sample ID **mb-20218** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **PBW** Batch ID: **20218** RunNo: **27531**

Prep Date: **7/13/2015** Analysis Date: **7/15/2015** SeqNo: **826536** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	90		200.0		45.0	14.9	111			
Surr: Phenol-d5	75		200.0		37.3	11.3	108			
Surr: 2,4,6-Tribromophenol	140		200.0		69.6	15.7	154			
Surr: Nitrobenzene-d5	64		100.0		64.4	47.8	106			
Surr: 2-Fluorobiphenyl	61		100.0		61.2	21.3	123			
Surr: 4-Terphenyl-d14	45		100.0		45.2	14.3	135			

Sample ID **lcs-20218** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **LCSW** Batch ID: **20218** RunNo: **27531**

Prep Date: **7/13/2015** Analysis Date: **7/15/2015** SeqNo: **826537** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	110		200.0		53.4	14.9	111			
Surr: Phenol-d5	82		200.0		41.0	11.3	108			
Surr: 2,4,6-Tribromophenol	150		200.0		74.7	15.7	154			
Surr: Nitrobenzene-d5	74		100.0		74.2	47.8	106			
Surr: 2-Fluorobiphenyl	74		100.0		73.5	21.3	123			
Surr: 4-Terphenyl-d14	44		100.0		44.2	14.3	135			

Sample ID **lcsd-20218** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **LCSS02** Batch ID: **20218** RunNo: **27531**

Prep Date: **7/13/2015** Analysis Date: **7/15/2015** SeqNo: **826538** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	100		200.0		52.2	14.9	111	0	0	
Surr: Phenol-d5	84		200.0		41.8	11.3	108	0	0	
Surr: 2,4,6-Tribromophenol	150		200.0		75.7	15.7	154	0	0	
Surr: Nitrobenzene-d5	76		100.0		76.0	47.8	106	0	0	
Surr: 2-Fluorobiphenyl	69		100.0		68.5	21.3	123	0	0	
Surr: 4-Terphenyl-d14	46		100.0		45.5	14.3	135	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- D Sample Diluted Due to Matrix
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507094**

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID **1507094-001b dup**	SampType: **DUP**	TestCode: **SM2510B: Specific Conductance**	
Client ID: **Injection Well**	Batch ID: **R27329**	RunNo: **27329**	
Prep Date:	Analysis Date: **7/6/2015**	SeqNo: **819171**	Units: **µmhos/cm**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	2000	0.010						0.0491	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507094**

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID	**MB-20158**	SampType:	**MBLK**	TestCode:	**EPA Method 7470: Mercury**					
Client ID:	**PBW**	Batch ID:	**20158**	RunNo:	**27365**					
Prep Date:	**7/8/2015**	Analysis Date:	**7/8/2015**	SeqNo:	**820590**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-20158**	SampType:	**LCS**	TestCode:	**EPA Method 7470: Mercury**					
Client ID:	**LCSW**	Batch ID:	**20158**	RunNo:	**27365**					
Prep Date:	**7/8/2015**	Analysis Date:	**7/8/2015**	SeqNo:	**820591**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	102	80	120			

Sample ID	**1507094-001DMS**	SampType:	**MS**	TestCode:	**EPA Method 7470: Mercury**					
Client ID:	**Injection Well**	Batch ID:	**20158**	RunNo:	**27365**					
Prep Date:	**7/8/2015**	Analysis Date:	**7/8/2015**	SeqNo:	**820635**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0059	0.0010	0.005000	0	118	75	125			

Sample ID	**1507094-001DMSD**	SampType:	**MSD**	TestCode:	**EPA Method 7470: Mercury**					
Client ID:	**Injection Well**	Batch ID:	**20158**	RunNo:	**27365**					
Prep Date:	**7/8/2015**	Analysis Date:	**7/8/2015**	SeqNo:	**820638**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0058	0.0010	0.005000	0	116	75	125	1.62	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- D Sample Diluted Due to Matrix
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

WO#: **1507094**

Hall Environmental Analysis Laboratory, Inc.

06-Aug-15

Client: Western Refining Southwest, Inc.
Project: Injection Well 7-1-15

Sample ID **MB-20102** SampType: **MBLK** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **PBW** Batch ID: **20102** RunNo: **27378**
Prep Date: **7/6/2015** Analysis Date: **7/9/2015** SeqNo: **821352** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Calcium	ND	1.0								
Lead	ND	0.0050								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID **LCS-20102** SampType: **LCS** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **LCSW** Batch ID: **20102** RunNo: **27378**
Prep Date: **7/6/2015** Analysis Date: **7/9/2015** SeqNo: **821353** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.52	0.020	0.5000	0	103	80	120			
Barium	0.49	0.020	0.5000	0	98.5	80	120			
Calcium	51	1.0	50.00	0	102	80	120			
Lead	0.50	0.0050	0.5000	0	100	80	120			
Magnesium	50	1.0	50.00	0	101	80	120			
Potassium	48	1.0	50.00	0	96.8	80	120			
Sodium	49	1.0	50.00	0	98.9	80	120			

Sample ID **MB-20102** SampType: **MBLK** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **PBW** Batch ID: **20102** RunNo: **27491**
Prep Date: **7/6/2015** Analysis Date: **7/14/2015** SeqNo: **824974** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	0.0060								

Sample ID **LCS-20102** SampType: **LCS** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **LCSW** Batch ID: **20102** RunNo: **27491**
Prep Date: **7/6/2015** Analysis Date: **7/14/2015** SeqNo: **824975** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.49	0.0060	0.5000	0	98.5	80	120			

Sample ID **MB-20102** SampType: **MBLK** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **PBW** Batch ID: **20102** RunNo: **27540**
Prep Date: **7/6/2015** Analysis Date: **7/16/2015** SeqNo: **826932** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507094**

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID **MB-20102**	SampType: **MBLK**	TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **PBW**	Batch ID: **20102**	RunNo: **27540**
Prep Date: **7/6/2015**	Analysis Date: **7/16/2015**	SeqNo: **826932** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	0.0020								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID **LCS-20102**	SampType: **LCS**	TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **LCSW**	Batch ID: **20102**	RunNo: **27540**
Prep Date: **7/6/2015**	Analysis Date: **7/16/2015**	SeqNo: **826933** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.50	0.0020	0.5000	0	101	80	120			
Selenium	0.50	0.050	0.5000	0	99.7	80	120			
Silver	0.10	0.0050	0.1000	0	105	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- D Sample Diluted Due to Matrix
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1507094**

06-Aug-15

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-1-15

Sample ID **1507094-001b dup** SampType: **DUP** TestCode: **SM4500-H+B: pH**

Client ID: **Injection Well** Batch ID: **R27329** RunNo: **27329**

Prep Date: Analysis Date: **7/6/2015** SeqNo: **819204** Units: **pH units**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.46	1.68								H

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- D Sample Diluted Due to Matrix
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

WO#: **1507094**

Hall Environmental Analysis Laboratory, Inc.

06-Aug-15

Client: Western Refining Southwest, Inc.
Project: Injection Well 7-1-15

Sample ID **mb-1**	SampType: **MBLK**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R27329**	RunNo: **27329**							
Prep Date:	Analysis Date: **7/6/2015**	SeqNo: **819128**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID **lcs-1**	SampType: **LCS**	TestCode: **SM2320B: Alkalinity**							
Client ID: **LCSW**	Batch ID: **R27329**	RunNo: **27329**							
Prep Date:	Analysis Date: **7/6/2015**	SeqNo: **819129**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	78.36	20.00	80.00	0	98.0	90	110			

Sample ID **mb-2**	SampType: **MBLK**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R27329**	RunNo: **27329**							
Prep Date:	Analysis Date: **7/6/2015**	SeqNo: **819152**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID **lcs-2**	SampType: **LCS**	TestCode: **SM2320B: Alkalinity**							
Client ID: **LCSW**	Batch ID: **R27329**	RunNo: **27329**							
Prep Date:	Analysis Date: **7/6/2015**	SeqNo: **819153**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.44	20.00	80.00	0	99.3	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

WO#: **1507094**

Hall Environmental Analysis Laboratory, Inc.

06-Aug-15

Client: Western Refining Southwest, Inc.
Project: Injection Well 7-1-15

Sample ID **MB-20129**	SampType: **MBLK**			TestCode: **SM2540C MOD: Total Dissolved Solids**						
Client ID: **PBW**	Batch ID: **20129**			RunNo: **27360**						
Prep Date: **7/7/2015**	Analysis Date: **7/8/2015**			SeqNo: **820297**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID **LCS-20129**	SampType: **LCS**			TestCode: **SM2540C MOD: Total Dissolved Solids**						
Client ID: **LCSW**	Batch ID: **20129**			RunNo: **27360**						
Prep Date: **7/7/2015**	Analysis Date: **7/8/2015**			SeqNo: **820298**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Southw Work Order Number: 1507094 RcptNo: 1

Received by/date: AT 07/02/15

Logged By: Anne Thorne 7/2/2015 7:00:00 AM

Completed By: Anne Thorne 7/2/2015

Reviewed By: CS 07/02/15

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Courier		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 2 2 (<2 or >12 unless noted)

Adjusted? —

Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining

Mailing Address: #50 CR 4990
Bloomfield, NM 87413

Phone #: 505-632-4135

email or Fax#:

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name:
Injection Well 7-1-15

Project #:
P.O.# 12610939

Project Manager:

Sampler: Bob
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.6

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1507094	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	~~TPH (Method 418.1)~~ → TDS	~~EDB (Method 504.1)~~ Back up	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals Ca, Mg, Na, K	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Ignitability	Reactivity, Corrosivity	Fe, pH SO_4, Alk, Cl	Sulfides	Air Bubbles (Y or N)
7-1-15	9:00	H_2O	injection well	5-VOA	HCl	-001										X						
				1-liter	amber	-001											X					
				1-500ml	—	-001												X				
				1-500ml	—	-001				X										X		
				1-125ml	H_2SO_4	-001					X											
				1-500ml	HNO_3	-001							X									
				1-500ml	NaOH	-001													X			
				1-500ml	Zn Acetate	-001															X	

Date:	Time:	Relinquished by:	Received by:	Date	Time
7-1-15	1215	Robert Bracken	Christy Walker	7/1/15	1215
7/1/15	1810	Christy Walker		07/02/15	0700

Remarks:

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NMD089416416

Manifest Document No.: BLM -

2. Page 1 of 1

3. Generator's Name and Mailing Address
WESTERN REFINING SOUTHWEST, INC.
50 CR 4990
BLOOMFIELD, NM 87413
4. Generator's Phone (888) 658 - 8006

5. Transporter 1 Company Name | 6. US EPA ID Number | A. State Transporter's ID | B. Transporter 1 Phone

7. Transporter 2 Company Name | 8. US EPA ID Number | C. State Transporter's ID | D. Transporter 2 Phone

9. Designated Facility Name and Site Address
AGUA MOSS CLASS I WELL
#345 CR 350
FARMINGTON, NM 87401
10. US EPA ID Number | E. State Facility's ID | F. Facility's Phone (505) 334 - 6186

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. NON-HAZARDOUS, NON-D.O.T REGULATED LIQUID (TREATED WATER) - NON-EXEMPT WATER	1	TRUCK		BBL
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

GENERATOR

16. **GENERATOR'S CERTIFICATION:** I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name | Signature | Date: Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Date: Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name | Signature | Date: Month Day Year

NON-HAZARDOUS WASTE

RETURN COMPLETED COPY TO WESTERN REFINING

Transportation Tracker for Treated Water Shippments

Manifest No.	Transporter	Quantity (bbls)	Date Shipped	Time Shipped
BLM - 1	D-TRIX	140	10-26-15	910AM
BLM - 2	D-Trix	130	10-26-15	9:50
BLM - 3	D-Trix	140	10-26-15	11:20
BLM - 4	D-Trix	130	10-26-15	11:45
BLM - 5	D-Trix	130	10-26-15	1:17 PM
BLM - 6	D-Trix	140	10-26-15	1:50
BLM - 7	D-Trix	130	10-26-15	2:57
BLM - 8	D-Trix	140	10-26-15	3:55
BLM - 9	D-Trix	130	10-26-15	4:21 PM
BLM - 10	D-trix	130	10-27-15	6:30 AM
BLM - 11	D-Trix	140	10-27-15	7:00 AM
BLM - 12	D-trix	130	10-27-15	8:35 AM
BLM - 13	D-Trix	140	10-27-15	9:13 AM
BLM - 14	D-trix	130	10-27-15	10:25AM
BLM - 15	D-Trix	140	10-27-15	11:00AM
BLM - 16	D-trix	130	10-27-15	12:15 PM
BLM - 17	D-Trix	140	10-27-15	12:50PM
BLM - 18	D-trix	130	10-27-15	2:00 PM
BLM - 19	D-Trix	140	10-27-15	2:50 PM
BLM - 20	D-trix	130	10-27-15	3:45 PM
BLM - 21	D-trix	130	10-28-15	6:40 AM
BLM - 22	D-Trix	140	10-28-15	7:15
BLM - 23	D-trix	130	10-28-15	8:30 AM
BLM - 24	D-Trix	140	10-28-15	9:15
BLM - 25	D-trix	130	10-28-15	10:20AM
BLM - 26	D-Trix	140	10-28-15	11:00 AM
BLM - 27	D-trix	130	10-28-15	12:05 PM
BLM - 28	D-Trix	140	10-28-15	12:55 PM
BLM - 29	D-trix	130	10-28-15	2:00 PM
BLM - 30	D-Trix	140	10-28-15	3:00 PM
BLM - 31	D-trix	130	10-28-15	3:55 PM
BLM - 32	D-Trix	140	10-28-15	
BLM - 33	D-trix	130	10-29-15	6:40 AM
BLM - 34	D-Trix	140	10-29-15	7:35 AM

Return Completed Sheet to HSER

Treated Water Shippment Tracker to Agua Moss Class I Well

Manifest No.	Transporter	Quantity (bbl)	Date	Time
BLM-35	D-trix	130	10-29-15	8:35
BLM-36	D-Trix	140	10-29-15	9:40
BLM-37	D-trix	130	10-29-15	10:20
BLM-38	D-Trix	140	10-29-15	11:30
BLM-39	D-trix	130	10-29-15	12:05
BLM-40	D-Trix	140	10-29-15	1:30
BLM-41	D-trix	130	10-29-15	2:05
BLM-42	D-Trix	140	10-29-15	3:15
BLM-43	D-trix	130	10-29-15	4:10
BLM-44	D-trix	130	10-30-15	6:20
BLM-45	D-Trix	140	10-30-15	6:55
BLM-46	D-trix	130	10-30-15	8:20
BLM-47	D-Trix	140	10-30-15	8:55
BLM-48	D-trix	130	10-30-15	10:00
BLM-49	D-Trix	140	10-30-15	10:50
BLM-50	D-trix	130	10-30-15	11:35
BLM-51	D-Trix	140	10-30-15	12:45
BLM-52	D-trix	130	10-30-15	1:20
BLM-53	D-Trix	140	10-30-15	2:30
BLM-54	D-trix	130	10-30-15	3:15
BLM-55	D-trix	130	10-31-15	6:25
BLM-56	D-Trix	140	10-31-15	7:00
BLM-57	D-trix	130	10-31-15	9:25
BLM-58	D-Trix	140	10-31-15	10:50
BLM-59	D-trix	130	10-31-15	11:35
BLM-60	D-Trix	140	10-31-15	12:45
BLM-61	D-trix	130	10-31-15	1:15
BLM-62	D-Trix	140	10-31-15	2:30
BLM-63	D-trix	130	10-31-15	3:10
BLM-64	D-trix	130	~~11-2-15~~	6:50AM
BLM-65	D-Trix	140	11-2-15	7:50
BLM-66	D-trix	130	11-2-15	8:40
BLM-67	D-Trix	140	11-2-15	9:40
BLM-68	D-trix	130	11-2-15	10:20
BLM-69	D-Trix	140	11-2-15	11:25
BLM-70	D-trix	130	11-2-15	12:00

Treated Water Shippment Tracker to Agua Moss Class I Well

Manifest No.	Transporter	Quantity (bbl)	Date	Time
BLM-71	D-Trix	140	11-2-15	1:20
BLM-72	D-trix	130	11-2-15	2:50
BLM-73	D-Trix	140	11-2-15	3:00
BLM-74	D-trix	130	11-2-15	5:40
BLM-75	D-Trix	120	11-3-15	6:43
BLM-76	D-Trix	140	11-3-15	7:15
BLM-77	D-Trix	120	11-3-15	8:13
BLM-78	D-Trix	140	11-3-15	8:55
BLM-79	D-Trix	120	11-3-15	9:41
BLM-80	D-Trix	140	11-3-15	10:45
BLM-81	D-Trix	120	11-3-15	11:13
BLM-82	D-Trix	140	11-3-15	12:35
BLM-83	D-Trix	120	11-3-15	1:00
BLM-84	D-trix	130	11-4-15	7:10 Am
BLM-85	D-Trix	140	11-4-15	8:05
BLM-86	D-trix	130	11-4-15	9:00
BLM-87	D-Trix	140	11-4-15	10:00
BLM-88	D-trix	130	11-4-15	10:40
BLM-89	D-Trix	140	11-4-15	11:55
BLM-90	D-trix	130	11-4-15	12:30
BLM-91	D-Trix	140	11-4-15	1:50
BLM-92	D-trix	130	11-4-15	2:20
BLM-93	D-Trix	140	11-4-15	3:40
BLM-94	D-trix	130	11-4-15	4:10
BLM-95	D-trix	130	11-5-15	6:30
BLM-96	D-trix	130	11-5-15	8:20
BLM-97	D-Trix	140	11-5-15	8:55
BLM-98	D-trix	130	11-5-15	10:10
BLM-99	D-Trix	140	11-5-15	11:35
BLM-100	D-trix	130	11-5-15	12:35
BLM-101	D-Trix	140	11-5-15	1:30
BLM-102	D-trix	130	11-5-15	2:20

Treated Water Shippment Tracker to Agua Moss Class I Well

Manifest No.	Transporter	Quantity (bbl)	Date	Time
BLM-103	D-Trix	120	11-10-15	8:14
BLM-104	D-Trix	140	11-10-15	9:25
BLM-105	D-Trix	120	11-10-15	9:54
BLM-106	D-Trix	140	11-10-15	11:15
BLM-107	D-Trix	120	11-10-15	11:47
BLM-108	D-Trix	140	11-10-15	1:00
BLM-109	D-Trix	120	11-10-15	1:36
BLM-110	D-Trix	140	11-10-15	3:00
BLM-111	D-Trix	120	11-10-15	3:30
BLM-112	D-Trix	120	11-11-15	6:38
BLM-113	D-Trix	140	11-11-15	7:25
BLM-114	D-Trix	120	11-11-15	8:10
BLM-115	D-Trix	130	11-11-15	8:35
BLM-116	D-Trix	140	11-11-15	9:25
BLM-117	D-Trix	120	11-11-15	9:55
BLM-118	D-Trix	130	11-11-15	10:25
BLM-119	D-Trix	140	11-11-15	11:20
BLM-120	D-Trix	120	11-11-15	11:45
BLM-121	D-Trix	130	11-11-15	12:10
BLM-122	D-Trix	140	11-11-15	1:10
BLM-123	D-Trix	130	11-11-15	1:58
BLM-124	D-Trix	140	11-11-15	3:25
BLM-125	D-Trix	130	11-11-15	4:00
BLM-126	D-Trix	120	11-12-15	6:38
BLM-127	D-Trix	140	11-12-15	7:10
BLM-128	D-Trix	120	11-12-15	8:15
BLM-129	D-Trix	140	11-12-15	9:05
BLM-130	D-Trix	120	11-12-15	9:47
BLM-131	D-Trix	140	11-12-15	10:50
BLM-132	D-Trix	120	11-12-15	11:43
BLM-133	D-trix	130	11-12-15	12:40
BLM-134	D-Trix	140	11-12-15	1:25

Treated Water Shipment Tracker to Agua Moss Claas 1 Well

Manifest NO.	Transporter	Quantity (bbl)	Date	Time
BLM-103	D-Trix	140	11-5-15	3:35
BLM-104	D-Trix	130	11-5-15	4:15
BLM-105	D-Trix	130	11-6-15	6:20
BLM-106	D-Trix	140	11-6-15	6:55
BLM-107	D-Trix	130	11-6-15	8:25
BLM-108	D-Trix	140	11-6-15	9:05
BLM=109	D-Trix	130	11-6-15	10:10
BLM-110	D-Trix	140	11-6-15	11:00
BLM-111	D-Trix	140	11-6-15	12:50
BLM-112	D-Trix	140	11-6-15	3:45
BLM-113	D-Trix	140	11-6-15	6:45
BLM-114	D-Trix	130	11-7-15	9:00 Am
BLM-115	D-Trix	140	11-7-15	9:30
BLM-116	D-Trix	130	11-7-15	10:50
BLM-117	D-Trix	140	11-7-15	11:30
BLM-118	D Trix	140	11-7-15	1:35
BLM-119	D-Trix	130	11-7-15	2:50
BLM-120	D-Trix	140	11-7-15	3:50
BLM-121	D-Trix	120	11-9-15	6:47
BLM-122	D-Trix	140	11-9-15	7:30
BLM-123	D-Trix	120	11-9-15	8:27
BLM-124	D-Trix	140	11-9-15	9:25
BLM-125	D-Trix	120	11-9-15	9:57
BLM-126	D-Trix	140	11-9-15	11:27
BLM-127	D-Trix	120	11-9-15	11:57
BLM-128	D-Trix	120	11-9-15	1:30
BLM-129	D-Trix	120	11-9-15	3:07
BLM-130	D-Trix	120	11-9-15	4:30
BLM-131	D-Trix	120	11-10-15	6:39
BLM-132	D-Trix	140	11-10-15	7:15
BLM-133				
BLM-134				
BLM-135				
BLM-136				
BLM-137				
BLM-138				
BLM-139				
BLM-140				
BLM-141				

Treated Water Shippment Tracker to Agua Moss Class I Well

Manifest No.	Transporter	Quantity (bbl)	Date	Time
BLM-135	D-Trix	140	11-12-15	3:15
BLM-136	D-Trix	140	11-13-15	6:55
BLM-137	D-TRIX	130	11-13-15	7:35
BLM-138	D-trix	140	11-13-15	8:40
BLM-139	D-Trix	140	11-13-15	9:20
BLM-140	D-TRIX	130	11-13-15	9:55
BLM-141	D-trix	120	11-13-15	10:50
BLM-142	D-Trix	140	11-13-15	11:25
BLM-143	D-TRIX	130	11-13-15	1205
BLM-144	D-trix	120	11-13-15	12:45
BLM-145	D-TRIX	130	11-13-15	1:45
BLM-146	D-Trix	140	11-13-15	2:45
BLM-147	D-trix	120	11-13-15	3:30
BLM-148	D-trix	120	11-14-15	6:45
BLM-149	D-TRIX	130	11-14-15	7:10
BLM-150	D-Trix	140	11-14-15	7:50
BLM-151	D-trix	120	11-14-15	8:30
BLM-152	D-TRIX	130	11-14-15	9:00
BLM-153	D-Trix	140	11-14-15	9:35
BLM-154	D-trix	120	11-14-15	10:20
BLM-155	D-TRIX	130	11-14-15	10:40
BLM-156	D-Trix	140	11-14-15	11:20
BLM-157	D-trix	120	11-14-15	12:00
BLM-158	D-TRIX	130	11-14-15	12:30
BLM-159	D-Trix	140	11-14-15	1:05
BLM-160	D-trix	120	11-14-15	1140
BLM-161	D-TRIX	130	11-14-15	210
BLM-162	D-Trix	140	11-14-15	2:55
BLM-163	D-trix	120	11-14-15	3:30
BLM-164	D-TRIX	130	11-14-15	4:00
BLM-165	D-Trix	120	11-16-15	6:38
BLM-166	D-Trix	130	11-16-15	7:05

Bloomfield Terminal Non-Hazardous Waste Manifest Tracker

Manifest No.	Transporter	Quantity (bbl)	Date	Time
BLM-167	D'Trix	140	11/16/15	7:45
BLM-168	D'Trix	120	11-16-15	8:14
BLM-169	D'Trix	130	11-16-15	9:00
BLM-170	D'Trix	140	11-16-15	9:35
BLM-171	D'Trix	120	11-16-15	10:08
BLM-172	D'Trix	130	11-16-15	10:40
BLM-173	D'Trix	140	11-16-15	11:20
BLM-174	D'Trix	120	11-16-15	11:59
BLM-176	D'Trix	130	11-16-15	12:25
BLM-177	D'Trix	140	11-16-15	1:05
BLM-178	D'Trix	120	11-16-15	1:36
BLM-179	D'Trix	130	11-16-15	2:00
BLM-180	D'Trix	140	11-16-15	2:45
BLM-181	D'Trix	120	11-16-15	3:12
BLM-182	D'Trix	130	11-16-15	3:40
BLM-183	D'Trix	130	11-17-15	6:05
BLM-184	D'Trix	120	11-17-15	6:34
BLM-185	D'Trix	140	11-17-15	7:00
BLM-186	D'Trix	130	11-17-15	7:45
BLM-187	D'Trix	120	11-17-15	8:33
BLM-188	D'Trix	140	11-17-15	9:00
BLM-189	D'Trix	130	11-17-15	9:25
BLM-190	D'Trix	120	11-17-15	9:56
BLM-191	D'Trix	140	11-17-15	10:40
BLM-192	D'Trix	130	11-17-15	11:05
BLM-193	D'Trix	120	11-17-15	11:32
BLM-194	D'Trix	140	11-17-15	12:15
BLM-195	D'Trix	130	11-17-15	12:45
BLM-196	D'Trix	120	11-17-15	1:15
BLM-197	D'Trix	140	11-17-15	2:20
BLM-198	D'Trix	130	11-17-15	2:50
BLM-199	D'Trix	120	11-17-15	2:51
BLM-200	D'Trix	140	11-17-15	3:40

Bloomfield Terminal Non-Hazardous Waste Manifest Tracker

Manifest No.	Transport	Quantity	Date	Time
BLM-201	D-Trix	130	11-17-15	4:10
BLM-202	D-Trix	130	11-18-15	6:10
BLM-203	D-TRIX	130	11-18-15	6:30
BLM-204	D-trix	140	11-18-15	7:10
BLM-205	D-Trix	130	11-18-15	7:40
BLM-206	D-TRIX	130	11-18-15	805
BLM-207	D-trix	140	11-18-15	8:50
BLM-208	D-Trix	130	11-18-15	9:15
BLM-209	D-TRIX	130	11-18-15	9:40
BLM-210	D-trix	140	11-18-15	10:45
BLM-211	D-Trix	130	11-18-15	11:10
BLM-212	D-TRIX	130	11-18-15	11:35
BLM-213	D-trix	140	11-18-15	12:30
BLM-214	D-Trix	130	11-18-15	1:00
BLM-215	D-TRIX	130	11-18-15	1:30
BLM-216	D-Trix	120	11-18-15	1:56
BLM-217	D-Trix	130	11-18-15	2:45
BLM-218	D-TRIX	130	11-18-15	445
BLM-219	D-Trix	130	11-19-15	6:10
BLM-220	D-trix	140	11-19-15	6:45
BLM-221	D-TRIX	130	11-19-15	7:05
BLM-222	D-Trix	130	11-19-15	7:55
BLM-223	D-trix	140	11-19-15	8:35
BLM-224	D-TRIX	130	11-18-15	850
BLM-225	D-Trix	130	11-19-15	9:20
BLM-226	D-trix	140	11-19-15	10:20
BLM-227	D-TRIX	130	11-19-15	10:40
BLM-228	D-Trix	130	11-19-15	11:10
BLM-229	D-trix	140	11-19-15	12:05
BLM-230	D-TRIX	130	11-19-15	12:30
BLM-231	D-Trix	130	11-19-15	12:50
BLM-232	D-trix	140	11-19-15	1:45
BLM-233	D-TRIX	130	11-19-15	2:10
BLM-234	D-Trix	130	11-19-15	2:40
BLM-235	D-trix	140	11-19-15	3:35
BLM-236	D-TRIX	130	11-18-15	400
BLM-237	D-trix	140	11-20-15	5:05
BLM-238	D-Trix	130	11-20-15	6:10
BLM-239	D-TRIX	130	11-20-15	6:30
BLM-240	D-Trix	130	11-20-15	7:35
BLM-241	D-trix	140	11-20-15	8:00

Bloomfield Terminal Non-Hazardous Waste Manifest Tracker

Manifest No.	Transport	Quantity	Date	Time
BLM-242	D-TRIX	130	11-20-15	8:20
BLM-243	D-Trix	130	11-20-15	9:00
BLM-244	D-trix	140	11-20-15	9:30
BLM-245	D-TRIX	130	11-20-15	10:00
BLM-246	D-Trix	130	11-20-15	10:25
BLM-247	D-trix	140	11-20-15	11:00
BLM-248	D-TRIX	130	11-20-15	11:25
BLM-249	D-Trix	130	11-20-15	11:55
BLM-250	D-trix	140	11-20-15	12:35
BLM-251	D-TRIX	130	11-20-15	1:00
BLM-252	D-Trix	130	11-20-15	1:25
BLM-253	D-trix	140	11-20-15	2:05
BLM-254	D-TRIX	130	11-20-15	2:30
BLM-255	D-Trix	130	11-20-15	2:55
BLM-256	D-trix	140	11-20-15	3:35
BLM-257	D-TRIX	130	11-20-15	4:05
BLM-258	D-Trix	130	11-21-15	6:15
BLM-259	D-TRIX	130	11-21-15	6:35
BLM-260	D-trix	140	11-21-15	7:10
BLM-261	D-Trix	130	11-21-15	7:45
BLM-262	D-TRIX	130	11-21-15	10:00
BLM-263	D-trix	140	11-21-15	11:05
BLM-264	D-Trix	130	11-21-15	11:30
BLM-265	D-TRIX	130	11-21-15	11:50
BLM-266	D-trix	140	11-21-15	12:40
BLM-267	D-Trix	130	11-21-15	1:05
BLM-268	D-TRIX	130	11-21-15	1:25
BLM-269	D-trix	140	11-21-15	2:20
BLM-270	D-Trix	130	11-21-15	2:45
BLM-271	D-TRIX	130	11-21-15	3:05
BLM-272	D-trix	140	11-21-15	3:55
BLM-273	D-trix	130	11-22-15	7:30
BLM-274	D-TRIX	130	11-22-15	7:55
BLM-275	D-Trix	120	11-22-15	8:21
BLM-276	D-trix	130	11-22-15	9:00
BLM-277	D-TRIX	130	11-22-15	9:25
BLM-278	D-Trix	120	11-22-15	~~11:42~~ 11:51
BLM-279	D-trix	130	11-22-15	10:30
BLM-280	D-TRIX	130	11-22-15	10:50
BLM-281	D-Trix	120	11-22-15	11:14
BLM-282	D-trix	130	11-22-15	11:30

Bloomfield Terminal Non-Hazardous Waste Manifest Tracker

Manifest No.	Transport	Quantity	Date	Time
BLM-283	D-TRIX	130	11-22-15	12:10
BLM-284	D-Trix	120	11-22-15	12:37
BLM-285	D-trix	130	11-22-15	1:20
BLM-286	D-TRIX	130	11-22-15	1:40
BLM-287	D-Trix	120	11-22-15	2:06
BLM-288	D-trix	130	11-22-15	2:50
BLM-289	D-TRIX	130	11-22-15	3:10
BLM-290	D-Trix	140	11-23-15	6:20
BLM-291	D-TRIX	130	11-23-15	6:50
BLM-292	D-Trix	130	11-23-15	7:12
BLM-293	D-Trix	140	11-23-15	8:10
BLM-294	D-Trix	130	11-23-15	8:39
BLM-295	D-TRIX	130	11-23-15	9:00
BLM-296	D-Trix	140	11-23-15	9:50
BLM-297	D-Trix	130	11-23-15	10:12
BLM-298	D-TRIX	130	11-23-15	10:30
BLM-299	D-Trix	140	11-23-15	11:25
BLM-300	D-Trix	130	11-23-15	11:49
BLM-301	D-TRIX	130	11-23-15	12:10
BLM-302	D-Trix	140	11-23-15	1:00
BLM-303	D-Trix	130	11-23-15	1:22
BLM-304	D-TRIX	130	11-23-15	1:50
BLM-305	D-Trix	140	11-23-15	2:35
BLM-306	D-Trix	130	11-23-15	3:00
BLM-307	D-TRIX	130	11-23-15	3:20
BLM-308	D-Trix	140	11-24-15	6:15
BLM-309	D-TRIX	130	11-24-15	6:45
BLM-310	DrTrix	140	11-24-15	7:55
BLM-311	D-Trix	130	11-24-15	8:28
BLM-312	D-Trix	140	11-24-15	9:25
BLM-313	D-Trix	130	11-24-15	10:06
BLM-314	D-TRIX	130	11-24-15	10:35
BLM-315	D-Trix	140	11-24-15	11:00
BLM-316	D-Trix	130	11-24-15	4:42
BLM-317	D-TRIX	130	11-24-15	12:05
BLM-318	D-Trix	140	11-24-15	12:35
BLM-319	D-Trix	130	11-24-15	1:17
BLM-320	D-TRIX	130	11-24-15	1:40
BLM-321	D-Trix	140	11-24-15	2:00
BLM-322	D-Trix	130	11-24-15	2:55
BLM-323	D-TRIX	130	11-24-15	3:15

Bloomfield Terminal Non-Hazardous Waste Manifest Tracker

Manifest No.	Transport	Quantity	Date	Time
BLM-324	D-Trix	140	11-24-15	3:55
BLM-325	D-Trix	140	11-25-15	6:10
BLM-326	D-TRIX	130	11-25-15	6:35
BLM-327	D-trix	130	11-25-15	7:00
BLM-328	D-Trix	140	11-25-15	7:45
BLM-329	D-TRIX	130	11-25-15	8:05
BLM-330	D-trix	130	11-25-15	8:30
BLM-331	D-Trix	140	11-25-15	9:15
BLM-332	D-TRIX	130	11-25-15	9:40
BLM-333	D-trix	130	11-25-15	10:05
BLM-334	D-Trix	140	11-25-15	10:50
BLM-335	D-TRIX	130	11-25-15	11:15
BLM-336	D-trix	130	11-25-15	11:40
BLM-337	D-Trix	140	11-25-15	12:30
BLM-338	D-TRIX	130	11-25-15	12:45
BLM-339	D-Trix	120	11-25-15	1:05
BLM-340	D-trix	130	11-25-15	1:25
BLM-341	D-TRIX	130	11-25-15	2:15
BLM-342	D-Trix	120	11-25-15	2:37
BLM-343	D-Trix	140	11-25-15	3:00
BLM-344	D-trix	130	11-25-15	3:25
BLM-345	D-TRIX	130	11-25-15	3:45
BLM-346	D-TRIX	130	11-27-15	6:05
BLM-347	D-Trix	140	11-27-15	6:35
BLM-348	D-TRIX	130	11-27-15	7:55
BLM-349	D-Trix	140	11-27-15	8:25
BLM-350	D-TRIX	130	11-27-15	9:20
BLM-351	D-Trix	140	11-27-15	10:00
BLM-352	D-TRIX	130	11-27-15	10:50
BLM-353	D-Trix	140	11-27-15	11:35
BLM-354	D-Trix	130	11-27-15	12:00
BLM-355	D-TRIX	130	11-27-15	12:25
BLM-356	D-Trix	120	11-27-15	12:48
BLM-357	D-Trix	140	11-27-15	1:15
BLM-358	D-Trix	130	11-27-15	1:40
BLM-359	D-TRIX	130	11-27-15	2:00
BLM-360	D-Trix	120	11-27-15	2:27
BLM-361	D-Trix	140	11-27-15	2:55
BLM-362	D-TRIX	130	11-27-15	3:25
BLM-363	D-TRIX	130	11-28-15	0618
BLM-364	D-Trix	140	11-28-15	6:40

Bloomfield Terminal Non-Hazardous Waste Manifest Tracker

Manifest No.	Transporter	Quantity (bbl)	Date	Time
BLM- 365	D'Trix	120	11-28-15	7:22
BLM- 366	D'Trix	130	11-28-15	750
BLM- 367	D'Trix	140	11-28-15	8:30
BLM- 368	D'Trix	120	11-28-15	8:56
BLM- 369	D'Trix	130	11-28-15	9:25
BLM- 370	D'Trix	140	11-28-15	10:00
BLM- 371	D'Trix	120	11-28-15	10:28
BLM- 372	D'Trix	130	11-28-15	10:55
BLM- 373	D'Trix	140	11-28-15	11:35
BLM- 374	D'Trix	120	11-28-15	12:00
BLM- 375	D'Trix	130	11-28-15	12:20
BLM- 376	D'Trix	140	11-28-15	1:05
BLM- 377	D'Trix	120	11-28-15	1:31
BLM- 378	D'Trix	130	11-28-15	1:55
BLM- 379	D'Trix	140	11-28-15	2:40
BLM- 380	D'Trix	120	11-28-15	3:08
BLM- 381	D'Trix	130	11-28-15	3:35
BLM- 382	D'Trix	120	11-29-15	6:07
BLM- 383	D'Trix	130	11-29-15	6:25
BLM- 384	D'Trix	140	11-29-15	7:20
BLM- 385	D'Trix	120	11-29-15	7:50
BLM- 386	D'Trix	130	11-29-15	810
BLM- 387	D'Trix	140	11-29-15	9:15
BLM- 388	D'Trix	120	11-29-15	9:38
BLM- 389	D'Trix	130	11-29-15	10:00
BLM- 390	D'Trix	140	11-29-15	11:00
BLM- 391	D'Trix	120	11-29-15	11:23
BLM- 392	D'Trix	130	11-29-15	11:45
BLM- 393	D'Trix	140	11-29-15	12:50
BLM- 394	D'Trix	120	11-29-15	1:13

Bloomfield Terminal Non-Hazardous Waste Manifest Tracker

Manifest No.	Transporter	Quantity (bbl)	Date	Time
BLM- 395	D'Trix	130	11-29-15	1:35
BLM- 396	D'Trix	140	11-29-15	2:35
BLM- 397	D'Trix	130	11-29-15	3:05
BLM- 398	D'Trix	130	11-30-15	6:15
BLM- 399	D'Trix	140	11-30-15	6:45
BLM- 400	D'Trix	120	11-30-15	7:14
BLM- 401	D'Trix	130	11-30-15	8:00
BLM- 402	D'Trix	140	11-30-15	8:25
BLM- 403	D'Trix	120	11-30-15	8:53
BLM- 404	D'Trix	130	11-30-15	9:25
BLM- 405	D'Trix	140	11-30-15	10:05
BLM- 406	D'Trix	120	11-30-15	10:33
BLM- 407	D'Trix	130	11-30-15	10:55
BLM- 408	D'Trix	140	11-30-15	11:35
BLM- 409	D'Trix	120	11-30-15	11:57
BLM- 410	D'Trix	130	11-30-15	12:20
BLM- 411	D'Trix	140	11-30-15	1:00
BLM- 412	D'Trix	120	11-30-15	1:28
BLM- 413	D'Trix	130	11-30-15	1:50
BLM- 414	D'Trix	140	11-30-15	2:30
BLM- 415	D'Trix	120	11-30-15	2:58
BLM- 416	D'Trix	130	11-30-15	3:20
BLM- 417	D'Trix	140	11-30-15	4:05
BLM- 418	D'Trix	140	12-1-15	6:25
BLM- 419	D'Trix	130	12-1-15	7:05
BLM- 420	D'Trix	140	12-1-15	8:05
BLM- 421	D'Trix	130	12-1-15	9:00
BLM- 422	D'Trix	140	12-1-15	9:45
BLM- 423	D'Trix	130	12-1-15	10:23
BLM- 424	D'Trix	130	12-1-15	11:00

Bloomfield Terminal Non-Hazardous Waste Manifest Tracker

Manifest No.	Transport	Quantity	Date	Time
BLM-425	D-Trix	140	12-1-15	11:30
BLM-426	D-Trix	130	12-1-15	12:15
BLM-427	D-Trix	120	12-1-15	12:31
BLM-428	D-Trix	130	12-1-15	12:55
BLM-429	D-Trix	140	12-1-15	1:20
BLM-430	D-Trix	130	12-1-15	1:50
BLM-431	D-Trix	130	12-1-15	2:20
BLM-432	D-Trix	140	12-1-15	2:55
BLM-433	D-Trix	130	12-1-15	3:30
BLM-434	D-Trix	130	12-1-15	3:55
BLM-435	D-Trix	140	12-2-15	6:40
BLM-436	D-Trix	130	12-2-15	7:00
BLM-437	D-Trix	130	12-2-15	7:30
BLM-438	D-Trix	140	12-2-15	8:15
BLM-439	D-Trix	130	12-2-15	9:00
BLM-440	D-Trix	130	12-2-15	9:30
BLM-441	D-Trix	140	12-2-15	10:00
BLM-442	D-Trix	130	12-2-15	10:25
BLM-443	D-Trix	130	12-2-15	11:00
BLM-444	D-Trix	140	12-2-15	11:35
BLM-445	D-Trix	130	12-2-15	12:00
BLM-446	D-Trix	140	12-2-15	1:10
BLM-447	D-Trix	120	12-2-15	1:25
BLM-448	D-Trix	130	12-2-15	2:00
BLM-449	D-Trix	140	12-2-15	2:40
BLM-450	D-Trix	120	12-2-15	3:20
BLM-451	D-Trix	130	12-2-15	3:45
BLM-452	D-Trix	130	12-3-15	0630
BLM-453	D-Trix	120	12-3-15	7:05
BLM-454	D-Trix	130	12-3-15	8:00
BLM-455	D-Trix	120	12-3-15	8:25
BLM-456	D-Trix	130	12-3-15	9:25
BLM-457	D-Trix	120	12-3-15	10:20
BLM-458	D-Trix	130	12-3-15	10:50
BLM-459	D-Trix	120	12-3-15	12:00
BLM-460	D-Trix	130	12-3-15	12:25
BLM-461	D-Trix	120	12-3-15	1:45
BLM-462	D-Trix	130	12-3-15	2:10
BLM-463	D-Trix	120	12-3-15	3:25
BLM-464	D-Trix	130	12-3-15	4:00

Bloomfield Terminal Non-Hazardous Waste Manifest Tracker

Manifest No.	Transport	Quantity	Date	Time
BLM-465	D-Trix	130	12-4-15	0635
BLM-466	D-Trix	129	12-4-15	7:05
BLM-467	D-Trix	130	12-4-15	8:00
BLM-468	D-Trix	120	12-4-15	8:50
BLM-469	D-Trix	130	12-4-15	9:25
BLM-470	D-Trix	120	12-4-15	10:35
BLM-471	D-Trix	130	12-4-15	11:00
BLM-472	D-Trix	120	12-4-15	12:20
BLM-473	D-Trix	130	12-4-15	12:45
BLM-474	D-Trix	140	12-4-15	1:30
BLM-475	D-Trix	120	12-4-15	2:00
BLM-476	D-Trix	140	12-4-15	3:10
BLM-477	D-Trix	120	12-4-15	3:50
BLM-478	D-Trix	130	12-7-15	7:20
BLM-479	D-Trix	140	12-7-15	7:50
BLM-480	D-Trix	140	12-7-15	9:25
BLM-481	D-Trix	140	12-7-15	11:00
BLM-482	D-Trix	140	12-7-15	12:30
BLM-483	D-Trix	120	12-7-15	1:00
BLM-484	D-Trix	140	12-7-15	2:00
BLM-485	D-Trix	120	12-7-15	2:35
BLM-486	D-Trix	120	12-7-15	4:10
BLM-487	D-Trix	120	12-8-15	6:35
BLM-488	D-Trix	140	12-8-15	7:10
BLM-489	D-Trix	120	12-8-15	8:20
BLM-490	D-Trix	140	12-8-15	8:55
BLM-491	D-Trix	120	12-8-15	9:55
BLM-492	D-Trix	140	12-8-15	10:30
BLM-493	D-Trix	120	12-8-15	11:25
BLM-494	D-Trix	140	12-8-15	12:05
BLM-495	D-Trix	120	12-8-15	12:55
BLM-496	D-Trix	140	12-8-15	1:40
BLM-497	D-Trix	120	12-8-15	2:25
BLM-498	D-Trix	140	12-8-15	3:15
BLM-499	D-Trix	120	12-8-15	4:00
BLM-500	D-Trix	140	12-9-15	6:30
BLM-501	D-Trix	120	12-9-15	7:00
BLM-502	D-Trix	140	12-9-15	8:10
BLM-503	D-Trix	120	12-9-15	8:40
BLM-504	D-Trix	140	12-9-15	9:50
BLM-505	D-Trix	120	12-9-15	10:30

Bloomfield Terminal Non-Hazardous Waste Manifest Tracker

Manifest No.	Transport	Quantity	Date	Time
BLM- 506	D-Trix	140	12-9-15	10:55
BLM- 507	D-Trix	120	12-9-15	11:00
BLM- 508	D-Trix	140	12-9-15	12:55
BLM- 509	D-Trix	120	12-9-15	2:04
BLM- 510	D-Trix	140	12-9-15	2:40
BLM- 511	D-Trix	120	12-9-15	3:50
BLM- 512	D-Trix	120	12-10-15	6:40
BLM- 513	D-Trix	140	12-10-15	7:10
BLM- 514	D-Trix	120	12-10-15	8:10
BLM- 515	D-Trix	140	12-10-15	8:45
BLM- 516	D-Trix	120	12-10-15	9:35
BLM- 517	D-Trix	140	12-10-15	10:20
BLM- 518	D-Trix	120	12-10-15	11:10
BLM- 519	D-Trix	120	12-10-15	12:40
BLM- 520	D-Trix	140	12-10-15	2:10
BLM- 521	D-Trix	120	12-10-15	2:40
BLM- 522	D-Trix	140	12-10-15	3:45
BLM- 523	D-Trix	120	12-10-15	4:10
BLM- 524	D-Trix	120	12-11-15	6:40
BLM- 525	D-Trix	120	12-11-15	8:10
BLM- 526	D-Trix	120	12-11-15	9:40
BLM- 527	D-Trix	120	12-11-15	11:15
BLM- 528	D-Trix	120	12-11-15	12:45
BLM- 529	D-Trix	120	12-11-15	2:15
BLM- 530	D-Trix	120	12-11-15	3:45
BLM- 531	D-Trix	120	12-14-15	6:40
BLM- 532	D-Trix	130	12-14-15	7:10
BLM- 533	D-Trix	120	12-14-15	8:15
BLM- 534	D-Trix	130	12-14-15	8:50
BLM- 535	D-Trix	120	12-14-15	9:50
BLM- 536	D-Trix	130	12-14-15	10:25
BLM- 537	D-Trix	140	12-14-15	10:50
BLM- 538	D-Trix	120	12-14-15	11:15
BLM- 539	D-Trix	140	12-14-15	12:20
BLM- 540	D-Trix	120	12-14-15	12:50
BLM- 541	D-Trix	140	12-14-15	1:55
BLM- 542	D-Trix	120	12-14-15	2:25
BLM- 543	D-Trix	140	12-14-15	3:35
BLM- 544	D-Trix	120	12-14-15	4:00
BLM- 545	D-Trix	140	12-15-15	6:40
BLM- 546	D-Trix	130	12-15-15	7:05

Bloomfield Terminal Non-Hazardous Waste Manifest Tracker

Manifest No.	Transport	Quantity	Date	Time
BLM- 547	D-Trix	140	12-15-15	8:10
BLM- 548	D-Trix	130	12-15-15	8:40
BLM- 549	D-Trix	140	12-15-15	9:45
BLM- 550	D-Trix	130	12-15-15	10:15
BLM- 551	D-Trix	140	12-15-15	11:25
BLM- 552	D-Trix	130	12-15-15	11:50
BLM- 553	D-Trix	140	12-15-15	1:15
BLM- 554	D-Trix	130	12-15-15	1:40
BLM- 555	D-Trix	140	12-15-15	2:50
BLM- 556	D-Trix	130	12-15-15	3:20
BLM- 557	D-Trix	130	12-16-15	635
BLM- 558	D-Trix	140	12-16-15	7:05
BLM- 559	D-Trix	130	12-16-15	8:00
BLM- 560	D-Trix	140	12-16-15	8:50
BLM- 561	D-Trix	130	12-16-15	9:55
BLM- 562	D-Trix	140	12-16-15	11:10
BLM- 563	D-Trix	130	12-16-15	11:30
BLM- 564	D-Trix	140	12-16-15	12:40
BLM- 565	D-Trix	130	12-16-15	105
BLM- 566	D-Trix	140	12-16-15	2:10
BLM- 567	D-Trix	130	12-16-15	235
BLM- 568	D-Trix	140	12-16-15	3:45
BLM- 569	D-Trix	130	12-16-15	4:10
BLM- 570	D-Trix	130	12-17-15	6:35
BLM- 571	D-Trix	140	12-17-15	7:05
BLM- 572	D-Trix	130	12-17-15	8:31
BLM- 573	D-Trix	140	12-17-15	9:05
BLM- 574	D-Trix	130	12-17-15	10:02
BLM- 575	D-Trix	140	12-17-15	10:50
BLM- 576	D-Trix	130	12-17-15	11:30
BLM- 577	D-Trix	140	12-17-15	12:20
BLM- 578	D-Trix	130	12-17-15	12:56
BLM- 579	D-Trix	130	12-17-15	2:25
BLM- 580	D-Trix	140	12-17-15	2:55
BLM- 581	D-Trix	130	12-17-15	3:51
BLM- 582	D-Trix	130	12-18-15	6:50
BLM- 583	D-Trix	140	12-18-15	7:50
BLM- 584	D-Trix	130	12-18-15	8:25
BLM- 585	D-Trix	140	12-18-15	9:35
BLM- 586	D-Trix	130	12-18-15	10:20
BLM- 587	D-Trix	140	12-18-15	11:25

Bloomfield Terminal Non-Hazardous Waste Manifest Tracker

Manifest No.	Transport	Quantity	Date	Time
BLM- 588	D-Trix	130	12-18-15	11:47
BLM- 589	D-Trix	140	12-18-15	1:10
BLM- 590	D-Trix	140	12-18-15	2:45
BLM- 591	D-Trix	130	12-21-15	6:49
BLM- 592	D-Trix	130	12-21-15	7:20
BLM- 593	D-Trix	130	12-21-15	8:16
BLM- 594	D-Trix	130	12-21-15	8:50
BLM- 595	D-Trix	130	12-21-15	9:45
BLM- 596	D-Trix	130	12-21-15	10:15
BLM- 597	D-Trix	130	12-21-15	11:04
BLM- 598	D-Trix	130	12-21-15	11:40
BLM- 599	D-Trix	130	12-21-15	12:36
BLM- 600	D-Trix	130	12-21-15	1:00
BLM- 601	D-Trix	130	12-21-15	1157
BLM- 602	D-Trix	130	12-21-15	2:35
BLM- 603	D-Trix	130	12-21-15	3:25
BLM- 604	D-Trix	140	12-22-15	6:50
BLM- 605	D-Trix	130	12-22-15	7:15
BLM- 606	D-Trix	130	12-22-15	8:45
BLM- 607	D-Trix	130	12-22-15	10:20
BLM- 608	D-Trix	130	12-22-15	11:55
BLM- 609	D-Trix	120	12-22-15	1235
BLM- 610	D-Trix	130	12-22-15	1:25
BLM- 611	D-Trix	120	12-22-15	2:10
BLM- ~~612~~ 612	D-Trix	130	12-22-15	3:00
BLM- 613	D-Trix	120	12-22-15	3:45
BLM- 614	D-Trix	130	12-23-15	6:45
BLM- 615	D-Trix	130	12-23-15	7:15
BLM- 616	D-Trix	130	12-23-15	8:15
BLM- 617	D-Trix	130	12-23-15	8:55
BLM- 618	D-Trix	130	12-23-15	9:40
BLM- 619	D-Trix	130	12-23-15	10:30
BLM- 620	D-Trix	130	12-23-15	11:10
BLM- 621	D-Trix	130	12-23-15	11:50
BLM- 622	D-Trix	130	12-23-15	12:40
BLM- 623	D-Trix	130	12-23-15	1:25
BLM- 624	D-Trix	130	12-23-15	2:10
BLM- 625	D-Trix	130	12-23-15	2:33
BLM- 626	D-Trix	130	12-23-15	3:10
BLM- 627	D-Trix	130	12-23-15	3:40
BLM- 628	D-Trix	130	12-24-15	645

Bloomfield Terminal Non-Hazardous Waste Manifest Tracker

Manifest No.	Transport	Quantity	Date	Time
BLM- 629	D-Trix	130	12-24-15	7:10
BLM- 630	D-Trix	130	12-24-15	9:00
BLM- 631	D-Trix	130	12-24-15	9:25
BLM- 632	D-Trix	130	12-24-15	10:20
BLM- 633	D-Trix	130	12-24-15	11:20
BLM- 634	D-Trix	130	12-24-15	12:15
BLM- 635	D-Trix	130	12-24-15	12:45
BLM- 636	D-Trix	130	12-24-15	155
BLM- 637	D-Trix	130	12-24-15	2:15
BLM- 638	D-Trix	130	12-24-15	3:30
BLM- 639	D-Trix	130	12-24-15	3:55
BLM- 640	D-Trix	130	12-28-15	7:00
BLM- 641	D-Trix	130	12-28-15	8:50
BLM- 642	D-Trix	130	12-28-15	10:30
BLM- 643	D-Trix	140	12-28-15	10:55
BLM- 644	D-Trix	130	12-28-15	12:00
BLM- 645	D-Trix	140	12-28-15	12:35
BLM- 646	D-Trix	130	12-28-15	1:25
BLM- 647	D-Trix	140	12-28-15	2:15
BLM- 648	D-Trix	130	12-28-15	2:55
BLM- 649	D-Trix	140	12-28-15	3:45
BLM- 650	D-Trix	130	12-29-15	6:40
BLM- 651	D-Trix	140	12-29-15	7:15
BLM- 652	D-Trix	130	12-29-15	8:15
BLM- 653	D-Trix	140	12-29-15	9:00
BLM- 654	D-Trix	130	12-29-15	9:40
BLM- 655	D-Trix	140	12-29-15	10:40
BLM- 656	D-Trix	130	12-29-15	11:10
BLM- 657	D-Trix	140	12-29-15	12:20
BLM- 658	D-Trix	130	12-29-15	12:50
BLM- 659	D-Trix	140	12-29-15	1:50
BLM- 660	D-Trix	130	12-29-15	2:20
BLM- 661	D-Trix	140	12-29-15	3:25
BLM- 662	D-Trix	130	12-29-15	3:45
BLM- 663	D-Trix	140	12-30-15	7:45
BLM- 664	D-Trix	130	12-30-15	8:15
BLM- 665	D-Trix	140	12-30-15	9:20
BLM- 666	D-Trix	130	12-30-15	9:45
BLM- 667	D-Trix	140	12-30-15	10:55
BLM- 668	D-Trix	130	12-30-15	11:15
BLM- 669	D-Trix	140	12-30-15	12:30

Bloomfield Terminal Non-Hazardous Waste Manifest Tracker

Manifest No.	Transport	Quantity	Date	Time
BLM-670	D-Trix	130	12-30-15	12:50
BLM-671	D-Trix	140	12-30-15	2:00
BLM-672	D-Trix	130	12-30-15	2:30
BLM-673	D-Trix	140	12-30-15	3:40
BLM-674	D-Trix	130	12-30-15	4:10
BLM-675	D-Trix	130	12-31-15	7:02
BLM-676	D-Trix	140	12-31-15	7:45
BLM-677	D-Trix	130	12-31-15	8:32
BLM-678	D-Trix	140	12-31-15	9:40
BLM-679	D-Trix	130	12-31-15	10:06
BLM-680	D-Trix	140	12-31-15	10:55
BLM-681	D-Trix	130	12-31-15	11:52
BLM-682	D-Trix	140	12-31-15	12:05
BLM-683	D-Trix	130	12-31-15	1:30
BLM-684	D-Trix	140	12-31-15	3:02
BLM-685	D-Trix	130	12-31-15	3:30
BLM-686	D-Trix	130	1-1-16	6:47
BLM-687	D-Trix	140	1-1-16	8:00
BLM-688	D-Trix	130	1-1-16	9:11
BLM-689	D-Trix	140	1-1-16	9:50
BLM-690	D-Trix	130	1-1-16	10:33
BLM-691	D-Trix	140	1-1-16	11:35
BLM-692	D-Trix	130	1-1-16	12:02
BLM-693	D-Trix	140	1-1-16	1:15
BLM-694	D-Trix	130	1-1-16	1:41
BLM-695	D-Trix	140	1-1-16	3:00
BLM-696	D-Trix	130	1-1-16	3:26
BLM-697	D-Trix	130	1-4-16	7:20am
BLM-698	D-Trix	140	1-4-16	8:10
BLM-699	D-Trix	130	1-4-16	8:55
BLM-700	D-Trix	140	1-4-16	9:45
BLM-701	D-Trix	130	1-4-16	10:25
BLM-702	D-Trix	140	1-4-16	11:25
BLM-703	D-Trix	130	1-4-16	12:00pm
BLM-704	D-Trix	140	1-4-16	1:00
BLM-705	D-Trix	130	1-4-16	1:40
BLM-706	D-Trix	140	1-4-16	2:50
BLM-707	D-Trix	130	1-4-16	3:15
BLM-708	D-Trix	130	1-5-16	6:50
BLM-709	D-Trix	140	1-5-16	7:20
BLM-710	D-Trix	130	1-5-16	8:30

Chavez, Carl J, EMNRD

From: Philana Thompson <pthompson@merrion.bz>
Sent: Monday, January 26, 2015 8:38 AM
To: Chavez, Carl J, EMNRD
Subject: Re: Agua Moss LLC UIC Class I (NH) Disposal Well Status of OCD DP Amendment Letter
Attachments: Chart Changing Procedure and Verification 2015.pdf

Carl,

Agua Moss has addressed the items below:

#1 Well sign has been placed at the well head
#3 Continuous Chart Recorder Process (See Attached)
#4 RCRA testing was done 4th Quarter and will continue to be part of the quarterly testing. The 4th quarter report will be filed once the results are in.

Still working on:
#2 the C-138 process

Ryan Davis would like to schedule a meeting along with Jim and Brad as well, to discuss the C-138 process along with the NM1-9.

Philana

On Fri, Jan 9, 2015 at 11:50 AM, Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us> wrote:

Philana:

Hi. FYI, Jim G. and I discussed the amendment letter this morning. An OCD letter will be sent soon.

Are you working on the inspection letter items? Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Department

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Drive, Santa Fe, New Mexico 87505

O: (505) 476-3490

E-mail: CarlJ.Chavez@State.NM.US

Web: http://www.emnrd.state.nm.us/ocd/

"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental

--
Philana Thompson
Regulatory Compliance
Merrion Oil & Gas Corp
cell 505-486-1171
office 505-324-5336

Agua Moss, LLC.

Chart Changing Procedure and Verification

- Charts will be changed on the first day of **EVERY** month. **NO EXCEPTIONS**.
- Valves to chart recorder will be closed and all pressure bled of recorder.
- Pull old chart off recorder– **Sign** and **Date**.
- Attach chart to this form and file by month in order.
- Record date, time, and location on new chart and index to first day.
- Check ink pen's condition and change if needed.
- Install new chart with proper torque on thumb nut.
- Zero ink pens – Adjust if needed.
- Replace Battery every 4 months – Date battery.
- Slowly open valves to recorder and adjust damping valves if needed.
- Compare annular and well pressure gauges to recorder.
- Recorder will be calibrated by-annual.

Chart Change performed by:

Signature: _____

Print: _____

Date: _____

Adjustment or Repairs Required(Explain):

_____

_____

_____

_____

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey
Division Director
Oil Conservation Division

DECEMBER 10, 2014

Mr. Jeff Davis
Manager/Owner
Agua Moss, L.L.C.
P.O. Box 600
Farmington, New Mexico 87499

RE: Class I Non-Hazardous Waste Injection Well (UICI-005) SUNCO Disposal Well No. 1 API# 30-045-28653: Facility Inspection on December 2, 2014, San Juan County, New Mexico

Mr. Davis,

The New Mexico Oil Conservation Division (OCD) conducted a facility inspection and meeting at Merrion Oil and Gas Corporation's Office in Farmington on Tuesday, December 2, 2014. You attended the meeting and participated in the OCD inspection of the facility. Some topics discussed during the meeting are:

1) Continuous Chart Recorder and Annulus Pressure Anomalies: OCD thinks it may be a chart replacement issue with zeroing in the chart pen and turning off the diaphragm before changing the chart to remove air in the pen.

2) Quarterly Monitoring: OCD informed the operator that characteristically hazardous testing (e.g., corrosivity, ignitability and reactivity) must be conducted on a quarterly basis to ensure that the injected fluids are not hazardous in compliance with Federal UIC Regulations.

3) Fall-Off Test (FOT): The next FOT is scheduled for April 2015. The operator has added another pump in order to increase the injection rate during the FOT. The operator was encouraged to fill its tanks with ample fluid volume to achieve a pseudo steady-state injection rate during the FOT. A recommendation by OCD Aztec DO Staff was to also monitor the Bradenhead pressure(s) during the FOT.

4) Modification of the Discharge Permit: OCD indicated based on the number of changes, i.e., removal of expansion tank 3G, remove FOT in 3F, and add MIT before FOT in 3E, etc. to the permit, it would likely issue a modification to the permit that expires on June 1, 2017.

Field inspection and meeting observations are as follows:

1) Well Sign: The operator must ensure that a well sign with required well information is posted on the tank that encapsulates the wellhead.

2) C-138 Forms: Few forms have been required by the operator from waste generators delivering fluids for disposal. Some forms were incomplete and lacked characteristically hazardous testing results for operator to verify received fluids are non-hazardous. The operator appears to need to

reevaluate the C-138 Form generator submittal process to account for generator waste site-specific changes and time period to require new C-138 Forms with analytical data, etc.

3) Continuous Chart Recorder: The chart recorder should be recalibrated at least every 6 months or semi-annually. A protocol for changing charts should be developed to help eliminate apparent anomalous annulus pressure anomalies observed in past charts, i.e., turn off air manifold to de-pressurize pens before changing chart; align new chart with pen at chart zero line, etc. If the anomalous annulus pressure fluctuations continue to be observed, OCD may require additional measures to verify that the fluctuations are not well integrity related.

4) Quarterly Monitoring: The operator currently is not required under the State permit to conduct characteristically hazardous monitoring. The operator was informed that in order to immediately satisfy the Federal Underground Injection Control (UIC) Regulations that it must begin monitoring for characteristically hazardous constituents, i.e., ignitability, corrosivity, and reactivity. In addition, for C-138 Forms above in Item 2, the operator shall ensure that generators also provide the analysis as required by the operator for disposal into its UIC Class I (non-hazardous) Disposal Well.

OCD requirements based on the meeting and facility inspection are:

1) OCD requires a well sign to be installed on the tank encapsulating the wellhead within 60 days from the date of this letter.

2) OCD requires a C-138 Form (form) or equivalent protocol for the operator to receive and evaluate waste generator submitted forms for approval or rejection to ensure that only oilfield exempt and oilfield non-exempt (non-hazardous) waste fluids are injected into the UIC Class I (non-hazardous) disposal well within 30-days from the date of this letter.

3) OCD requires a "Continuous Chart Recorder Change" Protocol be developed by the operator and submitted to OCD within 30-days from the date of this letter. The protocol should also address chart recorder calibration frequency by a third party and record retention.

4) OCD requires in addition to the current quarterly environmental monitoring schedule to include characteristically hazardous monitoring on a quarterly basis from now on.

If you have any questions, please do not hesitate to contact me at (505) 476-3490, mail at the address below, or email at CarlJ.Chavez@state.nm.us. Thank you for your cooperation.

Respectfully,

Carl Chávez
Environmental Bureau

cc: Jim Griswold, Environmental Bureau Chief
OCD Aztec District Office

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, December 03, 2013 8:38 AM
To: pthompson@merrion.bz
Cc: Sanchez, Daniel J., EMNRD; VonGonten, Glenn, EMNRD; Kuehling, Monica, EMNRD; Dawson, Scott, EMNRD
Subject: FW: UICI-5 FOT Deadline Completion by COB Today!
Attachments: UICI-5 FOT Deadline Completion by COB Today!

Philana:

The New Mexico Oil Conservation Division (OCD) has not received a Sundry Notice for the Fall-Off Test (FOT) that was delayed until December 2013. The OCD also needs a Sundry Notice for the MIT listed below.

The OCD requests to know Agua Moss LLC's schedule for conducting the FOT? Specifically, OCD should be contacted in advance of installation of the bottom hole gauges and at the time before pump shut-off and FOT Monitoring begins. In the case of this well, OCD requires a standard annulus pressure MIT in advance of the FOT based on the continuous annulus pressure charts and anomalous pressure readings observed in the last Annual Report. The pressure readings were greater than +/- 100%, which is considered a failure of the MIT for the well. The MIT required here will determine whether there is an MIT problem with the well.

Please notify me and Monica Kuehling of the Aztec District Office for the above in order to possibly witness the FOT work and MIT.

Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Drive, Santa Fe, New Mexico 87505
Office: (505) 476-3490
E-mail: CarlJ.Chavez@State.NM.US
Website: http://www.emnrd.state.nm.us/ocd/
"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, October 31, 2013 8:26 AM
To: 'Philana Thompson'
Cc: Dawson, Scott, EMNRD; Sanchez, Daniel J., EMNRD; VonGonten, Glenn, EMNRD
Subject: RE: FW: Agua Moss, LLC Sunco Facility (UICI-005) Discharge Permit Modification Communique

Mrs. Thompson:

Good morning. The New Mexico Oil Conservation Division (OCD) has been in communication with Agua Moss, LLC (operator) regarding the above subject facility and possible modifications to the OCD Discharge Permit (DP).

OCD has reviewed the operator's July 2013 request to modify Section 3.G. External Expansion Tank requirement (with continuous chart recorder (2-pin) of well surface injection and annulus pressures). In addition, OCD indicated based on closure of the OCD Surface Waste Management Facility Permit, upon which the UICI-005 DP Section 2.A (Quarterly Monitoring Requirements for Class I Non-Hazardous Waste Injection Wells) relied and referenced for hazardous injection fluid monitoring, was also being considered by the OCD for modification of the DP.

Therefore, under DP Section 1.G (Modifications and Terminations), and for communication purposes, OCD is considering issuance of the following DP modifications:

Section 2.A:

The Permittee shall analyze the injected fluids quarterly for the following characteristics:

- General water chemistry (Method 40 CFR 136.3) to include: cation/anion balance, bromide, calcium, potassium, magnesium, sodium, bicarbonate, carbonate, chloride, fluoride, sulfate, specific conductivity, temperature, total dissolved solids (TDS), Eh and pH
- Aromatic and halogenated volatile hydrocarbons scan by EPA Method 8260C GC/MS
- Semi-volatile Organics scan by EPA Method 8270B GC/MS (including 1 and 2-methylnaphthalene)
- Heavy metals scan by EPA Method 6010 ICP (including Arsenic and Mercury by EPA Methods 7060 and 7470 AA)
- EPA RCRA Characteristics for Ignitability, Corrosivity and Reactivity (40 CFR part 261 Subpart C Sections 261.21 – 261.23, July 1, 1992).

Section 3.G.:

OCD received the original monthly charts (discernible versions) submitted for the Annual Report reflecting the well injection and annulus pressures. OCD is awaiting some addition chart recorder information from the operator in order to complete its determination on the operator's proposal to replace Section 3G with a continuous chart recorder system.

Please respond with any comments or questions on the above modifications to the DP on or before COB next Thursday, November 8, 2013.

Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Drive, Santa Fe, New Mexico 87505
Office: (505) 476-3490
E-mail: CarlJ.Chavez@State.NM.US
Website: http://www.emnrd.state.nm.us/ocd/
"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Tuesday, October 29, 2013 5:09 PM
To: Chavez, Carl J, EMNRD
Subject: Re: FW: Agua Moss, LLC.Report Review Letter (UICI-005)

no problem, still working on the other items. including pictures

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Tuesday, October 29, 2013 4:21 PM
To: Chavez, Carl J, EMNRD
Subject: Re: FW: Agua Moss, LLC.Report Review Letter (UICI-005)

a. The OCD requests the original charts with discernible pressure graphs (similar to those in the AR) to verify that the annulus pressure has been stable. I checked with the front desk and she said you should receive them tomorrow morning, they were sent fedex and to your attention.

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Tuesday, October 22, 2013 12:49 PM

To: Chavez, Carl J, EMNRD
Subject: Re: FW: Agua Moss, LLC.Report Review Letter (UICI-005)

They are pulling all the charts at the main office and are going to call me, I will then pick them up and overnight them to you. I just called and they have them just about all pulled and copied (we wanted to make copies for our records) and I should be able to have them mailed out tomorrow.

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Thursday, October 17, 2013 4:13 PM
To: Chavez, Carl J, EMNRD
Subject: Re: FW: Agua Moss, LLC.Report Review Letter (UICI-005)

Agua Moss, LLC rejects the proposal in regards to item #5. Copies of the original charts were sent and the Annulus pressure is not discernible on the copies and therefore were not clear to the NMOCD in the reports. Agua Moss, LLC will send the original charts along with a clear picture of the chart recorder.

Agua Moss, LLC will also be changing the pin color for future charts so that it is easier to see.

Thank you,

Chavez, Carl J, EMNRD

Subject: UICI-5
Location: Phone Call

Start: Thu 10/17/2013 1:30 PM
End: Thu 10/17/2013 2:00 PM

Recurrence: (none)

Meeting Status: Meeting organizer

Organizer: Chavez, Carl J, EMNRD
Required Attendees: pthompson@merrion.bz

Agenda Items Discussed Today:

1) WQCC Permit Section 3G Expansion Tank installation for Annulus Pressure Monitoring:
    a. Operator (Philana Thompson) indicated that the monthly continuous monitor charts (2-pen) previously submitted to the OCD contained two recorded pen pressures present, but the annulus pressure was not discernible in the electronic copies provided in the Annual Report (AR). The operator indicated that the annulus pressure has been stable at around 100 psig to date.
    b. The Operator will reply to the OCD's e-mail communique with rejection of the proposed continuous annulus monitoring device pen plot on the charts. A color photo of the continuous chart recorder will be sent by Philana to the OCD today that shows that the two chart recorder pens on the chart recorder are actually continuously monitoring the injection and the annulus pressures simultaneously. OCD recommended different pen colors that may assist OCD in the review of future chart submittals in the AR.
    c. The OCD requests the original charts with discernible pressure graphs (similar to those in the AR) to verify that the annulus pressure has been stable.
2) MITs:
    a. EPA 5-Yr. MIT: The MIT is required at least every 5-years (see WQCC permit Section 3D(1)).
    b. OCD is considering the use of the Standard Annulus Pressure Test to satisfy the above if the packer is set within 20 feet of the upper perforated injection interval.
    c. No MIT of the well was performed during the Federal FY 2013.
3) Miscellaneous:
    a. The operator is working on other submittals that are outstanding to send to OCD, i.e., requested environmental information from tank replacement, etc.

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Wednesday, October 09, 2013 4:57 PM
To: Chavez, Carl J, EMNRD
Subject: Re: Agua Moss LLC UICI-005 Deadline to install Expansion Tank per Sec. 3G of DP Today!

carl i am out of the office until 10/16/13, i have been in and out due to illness. I will contact Jeff Davis to see if he received the letter and how they are planning to address these items.

I will have a response for you by 10/17/2013

Thanks Philana

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, July 09, 2013 1:27 PM
To: 'Philana Thompson'
Subject: RE: Agua Moss Class I (NH) Disposal Well Permit (UICI-005) Review Meeting Summary (Santa Fe) from 6/26/2013

Philana:

Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Drive, Santa Fe, New Mexico 87505
Office: (505) 476-3490
E-mail: CarlJ.Chavez@State.NM.US
Website: http://www.emnrd.state.nm.us/ocd/
"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Tuesday, July 09, 2013 1:12 PM
To: Chavez, Carl J, EMNRD
Cc: Dawson, Scott, EMNRD; Sanchez, Daniel J., EMNRD; VonGonten, Glenn, EMNRD; Perrin, Charlie, EMNRD
Subject: Re: Agua Moss Class I (NH) Disposal Well Permit (UICI-005) Review Meeting Summary (Santa Fe) from 6/26/2013

Carl,
thank you for the timely response. I also after doing some digging noted that Key was supposed to have installed the expansion tank and even submitted some type of design in the annual report in 2011. I apologize for the oversight and lack of understanding. We will get started on that ASAP.

Philana

On Tue, Jul 9, 2013 at 12:27 PM, Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us> wrote:

Philana:

Good afternoon.

It appears Agua Moss LLC is not in compliance with its OCD Discharge Permit (UICI-005) (permit) Section 3G External Expansion Tank Provision.

Please provide a work plan with work schedule for expansion tank installation to the OCD for review and approval within 30 days of receipt of this e-mail. Agua Moss LLC's work schedule shall ensure that the unit is installed within 90-days of receipt of this e-mail or by COB October 9, 2013 in order to comply with the terms and conditions of the permit.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Department

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Drive, Santa Fe, New Mexico 87505

Office: (505) 476-3490

E-mail: CarlJ.Chavez@State.NM.US

Website: http://www.emnrd.state.nm.us/ocd/

"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Monday, July 08, 2013 4:54 PM
To: Chavez, Carl J, EMNRD
Subject: Re: Agua Moss Class I (NH) Disposal Well Permit (UICI-005) Review Meeting Summary (Santa Fe) from 6/26/2013

Carl,

I am still working on entering all the data into the spreadsheet from the start of when we took over, I hope to have it completed by Wednesday. Since I am still working on the spreadsheet I have not had a chance to work on the facility tank placement, which I will begin as soon as i have entered and sent you the correct updated data sheet.

I also have a question in regards to the expansion tank requirement? When we took over Key did not have an expansion tank, they had been utilizing a chart system that measures the annular & tubular pressure. The charts i provided that have the red line (injection pressure) also have a blue line, and in reviewing the blue line on the charts appears to have never fluctuated.

I spoke with Ryan and he is still working on the FOT, and hopes to have it completed by Monday July 15th. We still plan on having it completed by the regulatory deadline, he is just reviewing all the data Key has on FOT.

With the Holiday last week falling right in the middle it threw off both mine and Ryan's schedule.

Thanks Philana

On Fri, Jun 28, 2013 at 8:30 AM, Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us> wrote:

Philana:

Good morning. Please find below the OCD discharge permit (permit) meeting summary from the above subject meeting in Santa Fe.

1) Since Agua Moss is currently working to close the OCD Surface Waste Management Facility (NM1-009), Agua Moss will submit a Modification Request (Sec. 1G) to remove all references to “NM1-009” in the permit. In addition, OCD will need to modify Sec. 2A to include all Underground Injection Control (UIC) analytical monitoring requirements in the permit, which were removed due to the adjacent NM1-009 facility pond wastewater effluent monitoring requirements before disposal into the well.

2) The Annual Report was hand delivered a hardcopy on 6/26 the day of the meeting. Agua Moss will submit an electronic version to the OCD on or before COB on 7/8. OCD will review it and respond soon. Agua Moss is working to obtain an OCD FTP website user and password to begin sending OCD electronic documents via the FTP website from now on.

3) The Quarterly Report (QR) that was due on 3/1 was not submitted. Agua Moss will submit an electronic version to the OCD on or before COB 7/8. Sections 3G and 3H information shall be included in the QR. Carl sent via e-mail on 6/27 a sample QR table of tracking data from another facility to the operator to consider for its QRs.

4) A Modification Request to remove old tanks and expand the number of new tanks will be submitted to the OCD on or before COB 7/8.

5) The upcoming Fall-Off Test (FOT) is scheduled for completion on or before 9/1/2013 by the operator's in-house engineer. OCD requested that he contact OCD SF and OCD Aztec in advance for notification to witness the FOT and for any questions. A C-103 outlining the work shall be submitted to OCD SF with copy to OCD Aztec for OCD approval. OCD Aztec visitation is preferred during the time of bottom hole gauge installation and on the day and time that the pseudo-steady state injection is shut-off to monitor formation pressure before and after shut-off.

6) The Mechanical Integrity Test (MIT) schedule with the exception of the Annual Bradenhead Test has changed to the EPA 5-Year MIT. The operator's last MIT was performed in 2012 with pressure up on the annulus fluid for 30 minutes. The OCD EPA 5-Year MIT Method and Requirements may change the current method on conducting MITs. The OCD general requirement for UIC Class I (NH) Disposal Wells to meet the EPA 5-Year MIT requirement that a plug be set within 20 feet of casing shoe and/or top of the perforated interval in order to test the casing down to the permitted injection interval(s) while protecting the USDW(s).

Therefore, the operator should evaluate past MITs conducted on the well to determine when the last EPA 5-Year MIT was conducted on the well with proof of MIT information. The operator shall propose a date with MIT procedure consistent with the above for conducting the next EPA 5-Year MIT. The OCD may consider an alternate MIT method for approval, if proposed.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Department

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Drive, Santa Fe, New Mexico 87505

Office: (505) 476-3490

E-mail: CarlJ.Chavez@State.NM.US

Website: http://www.emnrd.state.nm.us/ocd/

"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental

--
Philana Thompson

Regulatory Compliance

Merrion Oil & Gas Corp

cell 505-486-1171

office 505-324-5336

--
Philana Thompson
Regulatory Compliance
Merrion Oil & Gas Corp
cell 505-486-1171
office 505-324-5336

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, June 28, 2013 8:30 AM
To: pthompson@merrion.bz
Cc: Sanchez, Daniel J., EMNRD; VonGonten, Glenn, EMNRD; Kuehling, Monica, EMNRD
Subject: Agua Moss Class I (NH) Disposal Well Permit (UICI-005) Review Meeting Summary (Santa Fe) from 6/26/2013

Philana:

Good morning. Please find below the OCD discharge permit (permit) meeting summary from the above subject meeting in Santa Fe.

1) Since Agua Moss is currently working to close the OCD Surface Waste Management Facility (NM1-009), Agua Moss will submit a Modification Request (Sec. 1G) to remove all references to "NM1-009" in the permit. In addition, OCD will need to modify Sec. 2A to include all Underground Injection Control (UIC) analytical monitoring requirements in the permit, which were removed due to the adjacent NM1-009 facility pond wastewater effluent monitoring requirements before disposal into the well.

2) The Annual Report was hand delivered a hardcopy on 6/26 the day of the meeting. Agua Moss will submit an electronic version to the OCD on or before COB on 7/8. OCD will review it and respond soon. Agua Moss is working to obtain an OCD FTP website user and password to begin sending OCD electronic documents via the FTP website from now on.

3) The Quarterly Report (QR) that was due on 3/1 was not submitted. Agua Moss will submit an electronic version to the OCD on or before COB 7/8. Sections 3G and 3H information shall be included in the QR. Carl sent via e-mail on 6/27 a sample QR table of tracking data from another facility to the operator to consider for its QRs.

4) A Modification Request to remove old tanks and expand the number of new tanks will be submitted to the OCD on or before COB 7/8.

5) The upcoming Fall-Off Test (FOT) is scheduled for completion on or before 9/1/2013 by the operator's in-house engineer. OCD requested that he contact OCD SF and OCD Aztec in advance for notification to witness the FOT and for any questions. A C-103 outlining the work shall be submitted to OCD SF with copy to OCD Aztec for OCD approval. OCD Aztec visitation is preferred during the time of bottom hole gauge installation and on the day and time that the pseudo-steady state injection is shut-off to monitor formation pressure before and after shut-off.

6) The Mechanical Integrity Test (MIT) schedule with the exception of the Annual Bradenhead Test has changed to the EPA 5-Year MIT. The operator's last MIT was performed in 2012 with pressure up on the annulus fluid for 30 minutes. The OCD EPA 5-Year MIT Method and Requirements may change the current method on conducting MITs. The OCD general requirement for UIC Class I (NH) Disposal Wells to meet the EPA 5-Year MIT requirement that a plug be set within 20 feet of casing shoe and/or top of the perforated interval in order to test the casing down to the permitted injection interval(s) while protecting the USDW(s).

Therefore, the operator should evaluate past MITs conducted on the well to determine when the last EPA 5-Year MIT was conducted on the well with proof of MIT information. The operator shall propose a date with MIT procedure consistent with the above for conducting the next EPA 5-Year MIT. The OCD may consider an alternate MIT method for approval, if proposed.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Drive, Santa Fe, New Mexico 87505
Office: (505) 476-3490
E-mail: CarlJ.Chavez@State.NM.US
Website: http://www.emnrd.state.nm.us/ocd/
"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, August 01, 2012 11:01 AM
To: pthompson@merrion.bz
Cc: VonGonten, Glenn, EMNRD; Perrin, Charlie, EMNRD
Subject: UICI-005 SUNCO Well No. 1 Discharge Permit Renewal (San Juan County) Agua Moss, L.L.C.

Ms. Thompson:

Good morning.

On June 25, 2012, the New Mexico Oil Conservation Division (OCD) mailed Mr. Jeff Davis (Agua Moss, L.L.C.) the discharge permit (DP) for review and comment within 30 days of receipt.

To date, the OCD has not received any comment(s) on the DP.

Please reply to this message and indicate the tentative date for receipt of any final comments on the DP. The OCD has a few items that may require revision(s), i.e., Fall-Off Test frequency and MIT type with frequency. However, any OCD revision(s) to the DP will be sent to Agua Moss, L.L.C. for comment before finalizing the DP.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Drive, Santa Fe, New Mexico 87505
Office: (505) 476-3490
E-mail: CarlJ.Chavez@State.NM.US
Website: http://www.emnrd.state.nm.us/ocd/
"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, March 15, 2012 4:57 PM
To: 'Philana Thompson'
Subject: UICI-005 Application for DP Renewal Communication

Philana:

Good afternoon.

The OCD needs the following to complete its application review process:

1) USGS 7.5 Minute Quadrangle Map of Faility with Disposal Well (Scale: 1:24,000)

2) Facility Description w/ Revised Facility Diagram

3) Public Notice Draft Update (in Spanish and English): Note the notice should clarify the injection interval, max. surface injection pressure, etc. and address the acrobat reader files sent to you with the regulations that need to be satisfied in the notice.

4 Contingency Plans for Well and Facility (web search for "environmental contingency plan" may bring up a good example of the elements for your facility plan?)

Thank you for your time this afternoon. Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/
"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, January 24, 2012 8:03 AM
To: VonGonten, Glenn, EMNRD; Philana Thompson
Cc: Sanchez, Daniel J., EMNRD
Subject: RE: Jamie

Philana:

Good morning. The permit requires training of personnel, but does not stipulate certified trainers. The training should be conducted by a company operator familiar with the daily injection well operations, monitoring, sampling, well testing, etc. (basically everything pertaining to the well and its safe operation, and to ensure compliance with applicable state and federal regulations, etc.). For example, the quarterly sampling must performed with acceptable quality assurance and control, i.e., chain-of-custody, data quality objectives, laboratory sampling, analytical testing, etc.

Where operators lack expertise, i.e., Fall-Off Testing, well mechanical integrity testing, a downhole consultant may be hired to meet the intent of the Underground Injection Control (UIC) Regulations, approved test plan, etc.

Records of all training should be maintained and made available to the OCD upon request.

It is important to note that the OCD does not provide supervision or direction to operators due to liability issues. The operator must have trained personnel who can satisfactorily meet the UIC Program requirements and supervise well operations when and where necessary to ensure compliance with the UIC Program.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/
"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

From: VonGonten, Glenn, EMNRD
Sent: Monday, January 23, 2012 3:28 PM
To: Philana Thompson
Cc: Chavez, Carl J, EMNRD; Sanchez, Daniel J., EMNRD
Subject: RE: Jamie

Philana,

Neither Daniel Sanchez nor I know who is authorized. Carl will be in tomorrow. Please direct your question to him

Glenn

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Monday, January 23, 2012 3:15 PM
To: VonGonten, Glenn, EMNRD
Subject: FW: Jamie

Glenn,
It looks like Carl is out could you possibly answer my question below?

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Monday, January 23, 2012 3:14 PM
To: 'Chavez, Carl J, EMNRD'
Subject: RE: Jamie

I have another question ☺

A requirement is that the facility people have the required training. Who is certified in New Mexico to conduct the required Class I training?

Thanks Philana

Philana Thompson
Merrion Oil & Gas Corporation
Regulatory Compliance Specialist
505-324-5336 office
505-486-1171 cell
505-324-5350 fax

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Thursday, January 19, 2012 6:47 AM
To: Philana Thompson
Cc: VonGonten, Glenn, EMNRD
Subject: RE: Jamie

Philana:

Good morning.

For the OCD UIC Program Website (click here)

For the UIC Fall-Off Test Guidance (click here)

For the OCD UIC Program Manual (click here)

Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/
"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Wednesday, January 18, 2012 5:24 PM
To: Chavez, Carl J, EMNRD
Cc: VonGonten, Glenn, EMNRD
Subject: RE: Jamie

Carl,
Well after reading the entire 40 CFR I have a clear understanding of what is required for the fall off test. I will proceed with drafting a letter to the NMOCD (Jami) for a reprieve on conducting annual tests.

Thanks for your assistance once again ☺

Philana

Philana Thompson
Merrion Oil & Gas Corporation
Regulatory Compliance Specialist
505-324-5336 office
505-486-1171 cell
505-324-5350 fax

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Wednesday, January 18, 2012 4:11 PM
To: Philana Thompson
Cc: VonGonten, Glenn, EMNRD
Subject: RE: Jamie

Philana:

Good afternoon.

The well in question is an EPA Underground Injection Control (UIC) Class I (Non-Hazardous) Oilfield Exempt & Non-Exempt Waste Disposal Well.

The New Mexico Environment Department (NMED) is responsible for permitting EPA UIC Class I (Hazardous) Disposal Wells in New Mexico. While OCD handles all Oil, Gas & Geothermal EPA UIC Program Wells in NM, it is the NMED that handles all other EPA UIC Wells in NM. There are currently no UIC Class I Hazardous Disposal Wells in New Mexico.

Per your note below stating in your conversation with OCD Director Bailey regarding the MIT and Fall-Off Test (FOT) Schedule, she requested that you compose a letter requesting this. I would mention that all OCD UIC Class I (Non-Hazardous) Disposal Wells undergo an annual "Annulus Pressure" MIT, which is quickly performed without any entrance into the well and it is a 30 minutes test that checks for any tubing and/or casing leaks measured from pressure up on the annulus. The FOT Schedule for your well apparently based on your note below summarizing discussions with the OCD Director will need to be determined after receipt and consideration of your letter relative to the OCD UIC Program.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/
"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Wednesday, January 18, 2012 3:28 PM
To: Chavez, Carl J, EMNRD
Cc: VonGonten, Glenn, EMNRD
Subject: RE: Jamie

Carl & Glenn,
And if I am reading what the permit states correctly is that this is a Class I Non-Hazardous oil field waste disposal well, the EPA criteria for a Class I non hazardous well is a bit different than a hazardous. For example the fall off test and MIT would be required every five years. Unless I am missing any documentation in regards to a change in this wells Class I non-hazardous classification to a hazardous???

Thanks for your help,

Philana

Philana Thompson
Merrion Oil & Gas Corporation
Regulatory Compliance Specialist
505-324-5336 office
505-486-1171 cell
505-324-5350 fax

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Wednesday, January 18, 2012 2:43 PM
To: 'Chavez, Carl J, EMNRD'
Subject: RE: Jamie

Carl,
I spoke with Jami and based on our conversation the approval that was given to Wayne for Key was for a reprieve from doing the fall-off test in 2011 only. She has advised that if we want to be granted the fall off test on a five year rotation that we will need to compose a letter requesting such.

My question or I should say what I need clarification on is if this well is classified as a Class I non-hazardous waste??? I am trying to get some clarification on some rules that I am reading on the EPA CFR

Thanks Philana

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Wednesday, January 18, 2012 1:55 PM
To: Philana Thompson
Subject: RE: Jamie

Philana:

I recommend that you call her number (see below) as it is provided on the OCD Web page:

Director's Office
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Jami Bailey - Division Director (505) 476-3460

Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/
"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Wednesday, January 18, 2012 1:40 PM
To: Chavez, Carl J, EMNRD
Subject: Jamie

Carl,
What is Jamie's email address?

Thanks Philana

Philana Thompson
Merrion Oil & Gas Corporation
Regulatory Compliance Specialist
505-324-5336 office
505-486-1171 cell
505-324-5350 fax

Chavez, Carl J, EMNRD

From: Perrin, Charlie, EMNRD
Sent: Tuesday, July 27, 2010 3:52 PM
To: Putman, HC; wayne price; Chavez, Carl J, EMNRD; Kuehling, Monica, EMNRD
Cc: Sanchez, Daniel J., EMNRD; Allen, Neil; Altomare, Mikal, EMNRD; VonGonten, Glenn, EMNRD; Jones, William V., EMNRD; Jones, Brad A., EMNRD; Griswold, Jim, EMNRD; Molleur, Loren
Subject: RE: Key UIC-5 wellhead work

This is what we needed, Thanks

-----Original Message-----
From: Putman, HC [mailto:HPutman01@keyenergy.com]
Sent: Tuesday, July 27, 2010 2:37 PM
To: Perrin, Charlie, EMNRD; wayne price; Chavez, Carl J, EMNRD; Kuehling, Monica, EMNRD
Cc: Sanchez, Daniel J., EMNRD; Allen, Neil; Altomare, Mikal, EMNRD; VonGonten, Glenn, EMNRD; Jones, William V., EMNRD; Jones, Brad A., EMNRD; Griswold, Jim, EMNRD; Molleur, Loren
Subject: RE: Key UIC-5 wellhead work

Mr. Perrin
We did not open or break the seal on the well head or change the stile or pressure ratings of the valve, Key wanted to change the master valve so that we could be sure that the integrity of the well will be an optimum level.
The procedure that was preformed on the well was to set a plug in the profile nipple at the bottom of the tubing, and then bled the pressure on the tubing off. Then the lines where disconnected from the pump and the master valve was changed by WSI, we also added a second master valve on top of the original for a back up. We then reconnected the pump line and went back into the tubing and equalized the well and pulled the plug, and put the well back on line. We had no leaks or fluid on the ground, I have spoken to Kelly Roberts at Aztec OCD this morning and he did not feel that we needed to do anything further, but he did ask me to check with you to be sure.
Thank you for your time if you have any questions please don't hesitate to call me.

HC Putman
Key Energy Services
5651 US HWY 64
Farmington, NM 87401
505-566-5352 Direct, 505-327-0416 Office
505-320-4207 Cell, 505-327-6023 Fax

-----Original Message-----
From: Perrin, Charlie, EMNRD [mailto:charlie.perrin@state.nm.us]
Sent: Tuesday, July 27, 2010 7:57 AM
To: wayne price; Chavez, Carl J, EMNRD; Kuehling, Monica, EMNRD
Cc: Sanchez, Daniel J., EMNRD; Putman, HC; Allen, Neil; Altomare, Mikal, EMNRD; VonGonten, Glenn, EMNRD; Jones, William V., EMNRD; Jones, Brad A., EMNRD; Griswold, Jim, EMNRD; Molleur, Loren
Subject: RE: Key UIC-5 wellhead work

Wayne,

Will the seal at the well head be broken? If yes will require a MIT.
Are you going to a higher pressure rated valves and nipples? If so from what to what?

Thanks
Charlie

-----Original Message-----
From: wayne price [mailto:wayneprice77@earthlink.net]

Sent: Thursday, July 22, 2010 6:03 PM
To: Chavez, Carl J, EMNRD; Kuehling, Monica, EMNRD
Cc: Perrin, Charlie, EMNRD; Sanchez, Daniel J., EMNRD; HC Putman; Neil Allen; Altomare, Mikal, EMNRD; VonGonten, Glenn, EMNRD; Jones, William V., EMNRD; Jones, Brad A., EMNRD; Griswold, Jim, EMNRD; lmolleur@keyenergy.com
Subject: Key UIC-5 wellhead work

Hi Carl, Key has decided to add additional valves on the wellhead for safety reasons, and check the other valves. We will not be unseating the packard.
The Aztec District usually doesn't require a C-103 on this type of maintenance. However, we will give you a full report.

Ladies and Gentlemen:

As promised, Key is ramping up its' safety and and environmental
awareness program. When I was up in Farmington last week, HC Putman
the Area Manager and I discussed this issue. The well has what's called a flapper valve installed downhole. Supposedly when you pull the tubing this valve will shut and prevent hi pressure fluid from blowing out at the surface. Most workover units are required to have blow-out preventers, but we all know what happened in the gulf. HC wants to make sure if for some reason something happens, we will have good surface valves to shut the well in. Obvisously BP didn't.

Thank you:

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, January 22, 2009 9:14 AM
To: 'Gibson, Dan'
Cc: Perrin, Charlie, EMNRD; Kuehling, Monica, EMNRD; Price, Wayne, EMNRD; Jones, William V., EMNRD
Subject: FW: Key-Sunco disposal well
Attachments: Carl.tif

Dan:

Please note that on January 17, 2008 (see "Minor Modification" below), the OCD approved a "Minor Modification" to the permit allowing an injection pressure of 2,400 psig (see attachment). You may resume operations. The OCD is expecting a response from Key to recent comments on the Fall-Off Test performed during the Summer of 2008. The OCD expects that Key will have an opportunity to evaluate the maturity of this injection well and may need to consider options such as drilling a replacement well, etc.?

---Original Message----
From: Chavez, Carl J, EMNRD [mailto: CarlJ .Chavez©state. nm. us]
Sent: Thursday, January 17, 2008 1:48 PM
To: Patterson, Bob
Cc: Philliber, Mark; EverQuest@nts-online.net; Jones, William V., EMNRD; Price, Wayne, EMNRD; Perrin, Charlie, EMNRD
Subject: Minor Modification to UIC-CLI-005 (1-005) Discharge Plan

Dear Mr. Patterson:

Re: Class I Injection Well Discharge Permit SUNCO Disposal Well #1 UIC-CLI-005 (1-005)
Class I Non-Hazardous Oil Field Waste Disposal Well
SUNCO Disposal Well #1, API No. 30-045-28653
1595 FNL and 1005 FWL UL: E Section 2, T 29 N, R 12 W
San Juan County, New Mexico

The New Mexico Oil Conservation Division (NMOCD) hereby approves this 'Minor Modification" to Key Energy Services, LLC.'s current Discharge Plan with the following conditions:

1) The additional corrective actions under Section 20(B) is hereby changed from February 15, 2008 to June 21, 2008.

2) The daily rate of injection volume under Section 22(C) shall not exceed 4,000 bbl. per day of injected wastes into the Point Lookout Formation, which is considered to be in a "fractured flow" condition. The operator shall not increase growth in the existing Fracture(s).

3) The maximum injection pressure under Section 22(D) is hereby increased from 1580 psig to 2,400 psig.

The NMOCD will attach this "Minor Modification" to the current Discharge Plan. Thank you for your cooperation in this matter. Please contact me if you have questions.

Note: Please be advised that NMOCD approval of this plan does not relieve Key Energy Services, LLC. of responsibility should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, and human health

or the environment. In addition, NMOCD approval does not relieve Key Energy Services, LLC. of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Kuehling, Monica, EMNRD
Sent: Thursday, January 22, 2009 7:48 AM
To: Chavez, Carl J, EMNRD
Subject: Key-Sunco disposal well

Good morning Carl,

This is just to show that an e-mail was sent in January of last year giving Key the ability to inject up to 2400 lbs.

Have a great day

Monica

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, January 22, 2009 8:21 AM
To: 'Gibson, Dan'
Cc: Jones, William V., EMNRD; Price, Wayne, EMNRD; Perrin, Charlie, EMNRD; Kuehling, Monica, EMNRD
Subject: Key Energy Services, LLC Key- Sunco Trucking Company Well No. 1 (UICI-005)

KEY ENERGY SERVICES, LLC.	Key-SUNCO TRUCKING COMPANY Well #1 CLASS I (GW-235)	30-045-28653	-2-29 N-12 W	I-5	San Juan

Dan:

Re: Injection Pressure Problem

Inspector Kuehling (OCD-Aztec) contacted OCD Santa Fe during an inspection on 1/20/2009, and after noticing the shut-in injection pressure of the above well was at about 1875 psig.

Per our telephone conversation yesterday, Key Energy Services, LLC (Key) has voluntarily shut-in the well to determine the cause of the pressure problem. The well is permitted for a maximum surface injection pressure of 1580 psig. However, the well shut-in pressure range is currently from 1800 – 1875 psig. It is the OCD's understanding that Key operates the injection well during the evening hours.

Please notify the OCD to discuss the cause of the problem when determined, and in advance of start-up of injection operations. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, September 03, 2008 7:52 AM
To: Powell, Brandon, EMNRD; Roberts, Kelly G, EMNRD
Cc: Jones, Brad A., EMNRD
Subject: FW: Key Energy Services, LLC. Odor Complaint (UICI- 5) San Juan County

FYI.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Jones, Brad A., EMNRD
Sent: Wednesday, September 03, 2008 7:00 AM
To: Chavez, Carl J, EMNRD
Subject: RE: Key Energy Services, LLC. Odor Complaint (UICI- 5) San Juan County

Carl,

Just for clarification... Fluids evacuated from the pond are being injected into the well. The frac tanks are to contain any water that they accept during the evaporation pond repair. This way they do not have to shutdown for the repair. Thanks for handling the complaint.

Brad A. Jones
Environmental Engineer
Environmental Bureau
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505
E-mail: brad.a.jones@state.nm.us
Office: (505) 476-3487
Fax: (505) 476-3462

From: Chavez, Carl J, EMNRD
Sent: Tuesday, September 02, 2008 11:31 AM
To: Chavez, Carl J, EMNRD
Cc: Jones, Brad A., EMNRD
Subject: Key Energy Services, LLC. Odor Complaint (UICI- 5) San Juan County

Re: Ms. Nelson called on 8/25/2008 at 8:43 a.m. and left a message on my answering machine complaining of a

foul odor.

Contacted Ms. Gail Nelson (505-334-7251) complainant today around 10:30 to discuss actions by Key to address odor complaints from ponds at the surface waste management facility, which includes a UIC Class I Well permitted by OCD under "UICI-5." According to Brad Jones, Key will dewater the pond and skimmer pond within the next 2 weeks and remove the sludge (source of odor). An oxidizer will be installed or applied to address future odor problems. Fluids will be evacuated from the ponds directly into frac holding tanks on location. Expected time period for completion is 4 weeks.

Ms. Nelson will tell other neighbors and provide my phone number in the event they wish to complain. She will inform them of what I told her today. She was also encouraged to contact Key to complain when odors are bad and to keep records of when foul odors are noticed. Also, if the odor is still present after 4 weeks, the OCD wants to know.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, September 02, 2008 11:31 AM
To: Chavez, Carl J, EMNRD
Cc: Jones, Brad A., EMNRD
Subject: Key Energy Services, LLC. Odor Complaint (UICI- 5) San Juan County

Re: Ms. Nelson called on 8/25/2008 at 8:43 a.m. and left a message on my answering machine complaining of a foul odor.

Contacted Ms. Gail Nelson (505-334-7251) complainant today around 10:30 to discuss actions by Key to address odor complaints from ponds at the surface waste management facility, which includes a UIC Class I Well permitted by OCD under "UICI-5." According to Brad Jones, Key will dewater the pond and skimmer pond within the next 2 weeks and remove the sludge (source of odor). An oxidizer will be installed or applied to address future odor problems. Fluids will be evacuated from the ponds directly into frac holding tanks on location. Expected time period for completion is 4 weeks.

Ms. Nelson will tell other neighbors and provide my phone number in the event they wish to complain. She will inform them of what I told her today. She was also encouraged to contact Key to complain when odors are bad and to keep records of when foul odors are noticed. Also, if the odor is still present after 4 weeks, the OCD wants to know.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, April 25, 2008 3:51 PM
To: 'Philliber, Mark'
Cc: Price, Wayne, EMNRD; Patterson, Bob; Sanchez, Daniel J., EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Thanks Mark.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Friday, April 25, 2008 3:33 PM
To: Chavez, Carl J, EMNRD
Cc: Price, Wayne, EMNRD; Patterson, Bob
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Carl,

We sent a check to OCD on 2-19-08. Our records show that the check never cleared the bank. We will be reissuing another check next week and will send it directly to your attention with a return receipt and signature requested. We will also send the proposed language to you next week.

Thank you,

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Friday, April 25, 2008 1:07 PM
To: Philliber, Mark; Patterson, Bob
Cc: Sanchez, Daniel J., EMNRD; Price, Wayne, EMNRD; Jones, William V., EMNRD
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Mark:

The OCD's last correspondence with Key Energy Services, Inc. on the above referenced well was on February 15, 2008 (see messages below). The OCD has yet to receive the proposed language that Mr. Price requested nor the final fee on the OCD discharge permit. Please send the final fee as requested along with your proposed language to the discharge permit for completion of the OCD discharge permit.

Based on my recollection, Key was going to arrange an OCD hearing associated with the 2 wells within the 1-mile AOR so Key and the well owner(s) could attend and provide testimony as to whether well work is required? The OCD granted an extension of the corrective action in a "Minor Modification" to the permit via e-mail. The OCD does not believe that submittal of the discharge permit fee is a function of Key's agreement with the permit, since you are currently operating under the old permit. (Expiration 8/26/06). Please send the final permit fee to the OCD within 15 days of receipt of this e-mail message along with the preferred language in the permit that Mr. Price or the OCD requested so we may work to resolve Key's concerns and to receive a final signature on the permit. The OCD may modify the permit based on the hearing, etc. and this should not delay Key from signing the permit and moving forward in good faith with the OCD to resolve the corrective action items in the new permit.

Please respond to the above message to let us know the status of Key's response or its position relative to Mr. Price's request of February 15, 2008. The OCD reserves to right consider Compliance & Enforcement Action(s) against Key Energy Services, Inc. if we do not receive the final fee and the signed permit within 15 days of this message.

Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Price, Wayne, EMNRD
Sent: Friday, February 15, 2008 10:48 AM
To: Chavez, Carl J, EMNRD
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

---

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Friday, February 15, 2008 10:32 AM
To: Price, Wayne, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Thank you, Wayne. We will provide a proposal as soon as possible.

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Price, Wayne, EMNRD [mailto:wayne.price@state.nm.us]
Sent: Friday, February 15, 2008 11:23 AM
To: Philliber, Mark
Cc: Perrin, Charlie, EMNRD; Chavez, Carl J, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Hi Mark, please propose language that you feel meets your needs and ensures protection of the environment. At this point and time OCD encourages Key to maintain the Class I status. We feel by doing so it will actually provide better protection to the environment. Once we receive your proposal we will communicate with the district office and my staff including the engineering bureau for a good path forward.

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Friday, February 15, 2008 9:57 AM
To: Price, Wayne, EMNRD
Cc: Chavez, Carl J, EMNRD; Molleur, Loren; Patterson, Bob; Gibson, Dan
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Good morning, Wayne,

Our review of the Attachment to the Discharge Permit containing the Discharge Permit Approval Conditions indicates in item 26. that by signing this document, Key Energy "accepts this permit and agrees to comply with all submitted commitments, including these terms and conditions contained here." As mentioned during our meeting with yourself and Carl, we do not agree with all of the conditions contained in the document, specifically item 20. B. regarding the BP wells. Until this condition is resolved, we do not feel it is appropriate for us to sign the document indicating our agreement with this condition.

Your office should receive the permit fee early next week.

Thank you, Wayne.

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Friday, February 15, 2008 10:31 AM
To: Philliber, Mark
Cc: Price, Wayne, EMNRD; Patterson, Bob
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Mr. Philliber:

Good morning. In accordance with the letter requesting your signature and remittance of the final fee, the OCD needs to receive a signed version of the discharge permit with fee of $4,500.00 check made payable to the "Water Quality Management Fund" within 14 days of this message.

Please contact my Supervisor Mr. Wayne Price at (505) 476-3490 if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm

(Pollution Prevention Guidance is under "Publications")

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Tuesday, February 05, 2008 3:57 PM
To: Chavez, Carl J, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Carl,

Since we have not yet quite resolved the permit condition regarding the requirement for corrective action on the BP wells, we did not feel it was appropriate for us to sign the permit and submit the fee as this would imply that we agreed with all of the conditions in the permit, as the paragraph just above the signature lines begins with "Conditions accepted by:".

Thank you,

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Monday, January 28, 2008 3:14 PM
To: Philliber, Mark
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Oops!!! The UIC Class I Well fee is $4,500.00. and not $1,700.00. Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Chavez, Carl J, EMNRD
Sent: Monday, January 28, 2008 2:07 PM
To: 'Philliber, Mark'
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Mark:

OCD records show that Key has not signed and remitted the discharge plan with the $1,700 fee or check payable to the "Water Quality Management Fund." Could you please give me an update on when I will received the final signed DP with the final flat fee? Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Friday, January 18, 2008 2:55 PM
To: Chavez, Carl J, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Thank you, Carl, we appreciate it.

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Blackberry

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Thursday, January 17, 2008 1:48 PM
To: Patterson, Bob
Cc: Philliber, Mark; EverQuest@nts-online.net; Jones, William V., EMNRD; Price, Wayne, EMNRD; Perrin, Charlie, EMNRD
Subject: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Dear Mr. Patterson:

Re: Class I Injection Well Discharge Permit SUNCO Disposal Well #1 UIC-CLI-005 (I-005)
Class I Non-Hazardous Oil Field Waste Disposal Well
SUNCO Disposal Well #1, API No. 30-045-28653
1595 FNL and 1005 FWL UL: E Section 2, T 29 N, R 12 W
San Juan County, New Mexico

The New Mexico Oil Conservation Division (NMOCD) hereby approves this "Minor Modification" to Key Energy Services, LLC.'s current Discharge Plan with the following conditions:

1) The additional corrective actions under Section 20(B) is hereby changed from February 15, 2008 to June 21, 2008.

2) The daily rate of injection volume under Section 22(C) shall not exceed 4,000 bbl. per day of injected wastes into the Point Lookout Formation, which is considered to be in a "fractured flow" condition. The operator shall not increase growth in the existing Fracture(s).

3) The maximum injection pressure under Section 22(D) is hereby increased from 1580 psig to 2,400 psig.

The NMOCD will attach this "Minor Modification" to the current Discharge Plan. Thank you for your cooperation in this matter. Please contact me if you have questions.

Note: Please be advised that NMOCD approval of this plan does not relieve Key Energy Services, LLC. of responsibility should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, and human health or the environment. In addition, NMOCD approval does not relieve Key Energy Services, LLC. of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

This inbound email has been scanned by the MessageLabs Email Security System.

Confidentiality Notice: This e-mail, including all attachments is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited unless specifically provided under the New Mexico Inspection of Public Records Act. If you are not the intended recipient, please contact the sender and destroy all copies of this message. -- This email has been scanned by the Sybari - Antigen Email System.

This inbound email has been scanned by the MessageLabs Email Security System.

Chavez, Carl J, EMNRD

From: Philliber, Mark [mphilliber@keyenergy.com]
Sent: Monday, May 05, 2008 3:15 PM
To: Chavez, Carl J, EMNRD
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Carl,

As we discussed earlier on the phone, please see below the messages between Wayne and ourselves, including the last one from Wayne asking us to provide language for review by himself and others within OCD as the next step in this process. At the end of his message, he indicated that after receiving the proposed language, communications will be held "with the district office and my staff including the engineering bureau for a good path forward."

Thank you,

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Price, Wayne, EMNRD [mailto:wayne.price@state.nm.us]
Sent: Friday, February 15, 2008 11:23 AM
To: Philliber, Mark
Cc: Perrin, Charlie, EMNRD; Chavez, Carl J, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Hi Mark, please propose language that you feel meets your needs and ensures protection of the environment. At this point and time OCD encourages Key to maintain the Class I status. We feel by doing so it will actually provide better protection to the environment. Once we receive your proposal we will communicate with the district office and my staff including the engineering bureau for a good path forward.

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Friday, February 15, 2008 9:57 AM
To: Price, Wayne, EMNRD
Cc: Chavez, Carl J, EMNRD; Molleur, Loren; Patterson, Bob; Gibson, Dan
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Good morning, Wayne,

Our review of the Attachment to the Discharge Permit containing the Discharge Permit Approval Conditions indicates in item 26. that by signing this document, Key Energy "accepts this permit and agrees to comply with all submitted commitments, including these terms and conditions contained here." As mentioned during our meeting with yourself and Carl, we do not agree with all of the conditions contained in the document, specifically item 20. B. regarding the BP wells. Until this condition is resolved, we do not feel it is appropriate for us to sign the document indicating our agreement with this condition.

Your office should receive the permit fee early next week.

Thank you, Wayne.

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Friday, February 15, 2008 10:31 AM
To: Philliber, Mark
Cc: Price, Wayne, EMNRD; Patterson, Bob
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Mr. Philliber:

Good morning. In accordance with the letter requesting your signature and remittance of the final fee, the OCD needs to receive a signed version of the discharge permit with fee of $4,500.00 check made payable to the "Water Quality Management Fund" within 14 days of this message.

Please contact my Supervisor Mr. Wayne Price at (505) 476-3490 if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Tuesday, February 05, 2008 3:57 PM
To: Chavez, Carl J, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Carl,

Since we have not yet quite resolved the permit condition regarding the requirement for corrective action on the BP wells, we did not feel it was appropriate for us to sign the permit and submit the fee as this would imply that we agreed with all of the conditions in the permit, as the paragraph just above the signature lines begins with "Conditions accepted by:".

Thank you,

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.

6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Monday, January 28, 2008 3:14 PM
To: Philliber, Mark
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Oops!!! The UIC Class I Well fee is $4,500.00. and not $1,700.00. Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Chavez, Carl J, EMNRD
Sent: Monday, January 28, 2008 2:07 PM
To: 'Philliber, Mark'
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Mark:

OCD records show that Key has not signed and remitted the discharge plan with the $1,700 fee or check payable to the "Water Quality Management Fund." Could you please give me an update on when I will received the final signed DP with the final flat fee? Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Friday, January 18, 2008 2:55 PM
To: Chavez, Carl J, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Thank you, Carl, we appreciate it.

Mark Philliber
SWD Compliance Coordinator

Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Blackberry

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Thursday, January 17, 2008 1:48 PM
To: Patterson, Bob
Cc: Philliber, Mark; EverQuest@nts-online.net; Jones, William V., EMNRD; Price, Wayne, EMNRD; Perrin, Charlie, EMNRD
Subject: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Dear Mr. Patterson:

Re: Class I Injection Well Discharge Permit SUNCO Disposal Well #1 UIC-CLI-005 (I-005)
Class I Non-Hazardous Oil Field Waste Disposal Well
SUNCO Disposal Well #1, API No. 30-045-28653
1595 FNL and 1005 FWL UL: E Section 2, T 29 N, R 12 W
San Juan County, New Mexico

The New Mexico Oil Conservation Division (NMOCD) hereby approves this "Minor Modification" to Key Energy Services, LLC.'s current
Discharge Plan with the following conditions:

1) The additional corrective actions under Section 20(B) is hereby changed from February 15, 2008 to June 21, 2008.

2) The daily rate of injection volume under Section 22(C) shall not exceed 4,000 bbl. per day of injected wastes into the Point Lookout
Formation, which is considered to be in a "fractured flow" condition. The operator shall not increase growth in the existing
Fracture(s).

3) The maximum injection pressure under Section 22(D) is hereby increased from 1580 psig to 2,400 psig.

The NMOCD will attach this "Minor Modification" to the current Discharge Plan. Thank you for your cooperation in this matter. Please contact
me if you have questions.

Note: Please be advised that NMOCD approval of this plan does not relieve Key Energy Services, LLC. of responsibility should their
operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, and human health
or the environment. In addition, NMOCD approval does not relieve Key Energy Services, LLC. of responsibility for compliance with
any other federal, state, or local laws and/or regulations.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

Chavez, Carl J, EMNRD

From: Philliber, Mark [mphilliber@keyenergy.com]
Sent: Monday, May 05, 2008 3:06 PM
To: Price, Wayne, EMNRD
Cc: Chavez, Carl J, EMNRD
Subject: Proposed language for SUNCO Disposal Well #1 Discharge Permit Approval Conditions

Wayne,

We have worked to find the best way to address Item 20 B. in the Discharge Permit Approval Conditions. We believe the most appropriate language for this item would be the following:

Required Monitoring Action:

For the Allen "A" Well No. 1 (API No. 30-045-08851) operated by BP America Production Company and located 790 feet from the North line and 790 feet from the West line of Section 1, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico, and the Cornell "C" Well No. 1 (API No. 30-045-13902) operated by BP America Production Company and located 990 feet from the North line and 990 feet from the West line of Section 11, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico, Key Energy Services, LLC proposes that the fluid levels within these two wells be monitored on a regular basis, i.e. – monthly, quarterly, or another frequency, to detect any future significant increase in these levels that might indicate an influx of fluids from the SUNCO Disposal Well #1 operations or from another source, or whether the increase is due to an existing mechanical problem within the wellbore due to casing or other problems. If an increase in wellbore fluid levels is detected, Key Energy Services, LLC will work with BP America Production Company to determine the source of the increase. If the cause is determined to be the result of the operation of the SUNCO Disposal Well #1, Key Energy Services, LLC will take the appropriate action to ensure that its operations cease having an impact on the fluid levels within the BP America Production Company well(s).

Please let us know if this language is acceptable for this Permit Approval Condition.

Thank you,

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

Chavez, Carl J, EMNRD

From: Phillber, Mark [mphilliber@keyenergy.com]
Sent: Friday, April 25, 2008 3:33 PM
To: Chavez, Carl J, EMNRD
Cc: Price, Wayne, EMNRD; Patterson, Bob
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Carl,

We sent a check to OCD on 2-19-08. Our records show that the check never cleared the bank. We will be reissuing another check next week and will send it directly to your attention with a return receipt and signature requested. We will also send the proposed language to you next week.

Thank you,

Mark Phillber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Friday, April 25, 2008 1:07 PM
To: Phillber, Mark; Patterson, Bob
Cc: Sanchez, Daniel J., EMNRD; Price, Wayne, EMNRD; Jones, William V., EMNRD
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Mark:

The OCD's last correspondence with Key Energy Services, Inc. on the above referenced well was on February 15, 2008 (see messages below). The OCD has yet to receive the proposed language that Mr. Price requested nor the final fee on the OCD discharge permit. Please send the final fee as requested along with your proposed language to the discharge permit for completion of the OCD discharge permit.

Based on my recollection, Key was going to arrange an OCD hearing associated with the 2 wells within the 1-mile AOR so Key and the well owner(s) could attend and provide testimony as to whether well work is required? The OCD granted an extension of the corrective action in a "Minor Modification" to the permit via e-mail. The OCD does not believe that submittal of the discharge permit fee is a function of Key's agreement with the permit, since you are currently operating under the old permit. (Expiration 8/26/06). Please send the final permit fee to the OCD within 15 days of receipt of this e-mail message along with the preferred language in the permit that Mr. Price or the OCD requested so we may work to resolve Key's concerns and to receive a final signature on the permit. The OCD may modify the permit based on the hearing, etc. and this should not delay Key from signing the permit and moving forward in good faith with the OCD to resolve the corrective action items in the new permit.

Please respond to the above message to let us know the status of Key's response or its position relative to Mr. Price's request of February 15, 2008. The OCD reserves to right consider Compliance & Enforcement Action(s) against Key Energy Services, Inc. if we do not receive the final fee and the signed permit within 15 days of this message.

Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Price, Wayne, EMNRD
Sent: Friday, February 15, 2008 10:48 AM
To: Chavez, Carl J, EMNRD
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

---

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Friday, February 15, 2008 10:32 AM
To: Price, Wayne, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Thank you, Wayne. We will provide a proposal as soon as possible.

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Price, Wayne, EMNRD [mailto:wayne.price@state.nm.us]
Sent: Friday, February 15, 2008 11:23 AM
To: Philliber, Mark
Cc: Perrin, Charlie, EMNRD; Chavez, Carl J, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Hi Mark, please propose language that you feel meets your needs and ensures protection of the environment. At this point and time OCD encourages Key to maintain the Class I status. We feel by doing so it will actually provide better protection to the environment. Once we receive your proposal we will communicate with the district office and my staff including the engineering bureau for a good path forward.

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Friday, February 15, 2008 9:57 AM
To: Price, Wayne, EMNRD
Cc: Chavez, Carl J, EMNRD; Molleur, Loren; Patterson, Bob; Gibson, Dan
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Good morning, Wayne,

Our review of the Attachment to the Discharge Permit containing the Discharge Permit Approval Conditions indicates in item 26. that by signing this document, Key Energy "accepts this permit and

agrees to comply with all submitted commitments, including these terms and conditions contained here." As mentioned during our meeting with yourself and Carl, we do not agree with all of the conditions contained in the document, specifically item 20. B. regarding the BP wells. Until this condition is resolved, we do not feel it is appropriate for us to sign the document indicating our agreement with this condition.

Your office should receive the permit fee early next week.

Thank you, Wayne.

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Friday, February 15, 2008 10:31 AM
To: Philliber, Mark
Cc: Price, Wayne, EMNRD; Patterson, Bob
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Mr. Philliber:

Good morning. In accordance with the letter requesting your signature and remittance of the final fee, the OCD needs to receive a signed version of the discharge permit with fee of $4,500.00 check made payable to the "Water Quality Management Fund" within 14 days of this message.

Please contact my Supervisor Mr. Wayne Price at (505) 476-3490 if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Tuesday, February 05, 2008 3:57 PM
To: Chavez, Carl J, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Carl,

Since we have not yet quite resolved the permit condition regarding the requirement for corrective action on the BP wells, we did not feel it was appropriate for us to sign the permit and submit the fee as this would imply that we agreed with all of the conditions in the permit, as the paragraph just above the signature lines begins with "Conditions accepted by:".

Thank you,

Mark Phillibe
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Monday, January 28, 2008 3:14 PM
To: Philliber, Mark
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Oops!!! The UIC Class I Well fee is $4,500.00. and not $1,700.00. Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Chavez, Carl J, EMNRD
Sent: Monday, January 28, 2008 2:07 PM
To: 'Philliber, Mark'
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Mark:

OCD records show that Key has not signed and remitted the discharge plan with the $1,700 fee or check payable to the "Water Quality Management Fund." Could you please give me an update on when I will received the final signed DP with the final flat fee? Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Friday, January 18, 2008 2:55 PM
To: Chavez, Carl J, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Thank you, Carl, we appreciate it.

Mark Phillibe
SWD Compliance Coordinator

Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Blackberry

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Thursday, January 17, 2008 1:48 PM
To: Patterson, Bob
Cc: Philliber, Mark; EverQuest@nts-online.net; Jones, William V., EMNRD; Price, Wayne, EMNRD; Perrin, Charlie, EMNRD
Subject: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Dear Mr. Patterson:

Re: Class I Injection Well Discharge Permit SUNCO Disposal Well #1 UIC-CLI-005 (I-005)
Class I Non-Hazardous Oil Field Waste Disposal Well
SUNCO Disposal Well #1, API No. 30-045-28653
1595 FNL and 1005 FWL UL: E Section 2, T 29 N, R 12 W
San Juan County, New Mexico

The New Mexico Oil Conservation Division (NMOCD) hereby approves this "Minor Modification" to Key Energy Services, LLC.'s current Discharge Plan with the following conditions:

1) The additional corrective actions under Section 20(B) is hereby changed from February 15, 2008 to June 21, 2008.

2) The daily rate of injection volume under Section 22(C) shall not exceed 4,000 bbl. per day of injected wastes into the Point Lookout Formation, which is considered to be in a "fractured flow" condition. The operator shall not increase growth in the existing Fracture(s).

3) The maximum injection pressure under Section 22(D) is hereby increased from 1580 psig to 2,400 psig.

The NMOCD will attach this "Minor Modification" to the current Discharge Plan. Thank you for your cooperation in this matter. Please contact me if you have questions.

Note: Please be advised that NMOCD approval of this plan does not relieve Key Energy Services, LLC. of responsibility should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, and human health or the environment. In addition, NMOCD approval does not relieve Key Energy Services, LLC. of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm

(Pollution Prevention Guidance is under "Publications")

Confidentiality Notice: This e-mail, including all attachments is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited unless specifically provided under the New Mexico Inspection of Public Records Act. If you are not the intended recipient, please contact the sender and destroy all copies of this message. -- This email has been scanned by the Sybari - Antigen Email System.

This inbound email has been scanned by the MessageLabs Email Security System.

Confidentiality Notice: This e-mail, including all attachments is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited unless specifically provided under the New Mexico Inspection of Public Records Act. If you are not the intended recipient, please contact the sender and destroy all copies of this message. -- This email has been scanned by the Sybari - Antigen Email System.

This inbound email has been scanned by the MessageLabs Email Security System.

Confidentiality Notice: This e-mail, including all attachments is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited unless specifically provided under the New Mexico Inspection of Public Records Act. If you are not the intended recipient, please contact the sender and destroy all copies of this message. -- This email has been scanned by the Sybari - Antigen Email System.

This inbound email has been scanned by the MessageLabs Email Security System.

Confidentiality Notice: This e-mail, including all attachments is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited unless specifically provided under the New Mexico Inspection of Public Records Act. If you are not the intended recipient, please contact the sender and destroy all copies of this message. -- This email has been scanned by the Sybari - Antigen Email System.

This inbound email has been scanned by the MessageLabs Email Security System.

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, August 14, 2007 1:20 PM
To: 'EverQuest@nts-online.net'; Jones, William V., EMNRD
Cc: Ezeanyim, Richard, EMNRD; Price, Wayne, EMNRD; Loren Molleur; Phil Woods
Subject: RE: Sunco Step-Rate Test

Mr. Duffey:

Please note that we are awaiting the testing information in its entirety before we set the max. allowable injection pressure as mentioned in the last sentence of my note below, "I am going to stipulate a maximum injection pressure of 1580 psig, unless the Fall-Off Test data and the rest of the data package that Mr. Duffey is sending the OCD supports a higher injection pressure."

Upon receipt of your digital data on the SRT, the OCD will forward the info. to the EPA to analyze it through pressure-transient methods (PTA). In addition, we expect a copy of your analysis of the SRT using PTA. In the interim, could you please send the OCD the following:

1) Tubing size.
2) Plastic coated, if so, the type of plastic coating with the roughness factor of the coating?
3) Depth of tubing.
4) How long has the tubing been in place? How long has tubing and coating been in the well?
5) Injection rate vs. Time plot for the history of the well.

In order for your estimated allowable injection pressure to be raised above 1580 psig, you need to show that the measured friction is equivalent to what the friction factor charts and calculations show. Currently, this would mean a total friction loss of about 1220 psig.

There is some concern about the permanent tubing size that will be used in the well based on your SRT pressure of 2800 psi. There would be no concern about tubing changes in the well if Key is limited to 1580 psig as the OCD has calculated from submitted SRT data to date. However, if friction is allowed to boost the pressure to Key's desired pressure limit, and Key enlarges the tubing size in the well at any time during operations, Key could potentially damage the reservoir.

I hope this helps you to understand the OCD's concerns. The OCD is considering issuing a final DP permit with the 1580 psig maximum allowable pressure in order to complete the permit process. In addition, the DP will approve the application renewal contingent on corrective actions to a couple of BP wells. If at a later date, Key can justify a higher maximum injection rate through SRT and friction data or analysis, the OCD will consider amending the maximum allowable pressure under a minor modification to the permit if the data warrants. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Terry M. Duffey [mailto:EverQuest@nts-online.net]
Sent: Tuesday, August 14, 2007 11:29 AM
To: Chavez, Carl J, EMNRD; Jones, William V., EMNRD
Cc: Ezeanyim, Richard, EMNRD; Price, Wayne, EMNRD; Loren Molleur; Phil Woods

Subject: RE: Sunco Step-Rate Test

Key Energy Services, LLC went to a great deal of expense to run the recent step-rate test. This included the placement of bottomhole pressure recording device at the top perforation to get accurate information ***at the point of injection*** into the Point Lookout disposal zone. The purpose of placing the bomb on bottom was to eliminate the need to calculate frictional losses in the tubulars and across the perforations.

Your recommendation completely disregards the actual measured data when you arrive at a maximum surface injection pressure of 1573 psi. In other words, you are completely disregarding the frictional losses in the system (approximately 1250 psi at the inflection point). The formation is **NOT** impacted by these frictional losses as they are exerted counter to the direction of flow as illustrated in the formula below:

Bottom Hole Injection Pressure = Well Head Injection Pressure + Hydrostatic Head – **Pipe Friction – Perforation Friction**

The bottom hole point is truly the only place that matters since that is where the "fracture" is taking place when the "breakover" point is seen during a SRT. Based on the actual measured data the surface injection pressure at the inflection point is approximately 2800 psi. To use your methodology would be discounting the actual bottom hole data gathered during the SRT – I don't think Key Energy would be getting much for their $20,000 investment in the step-rate test if this is the direction you want to take in this important matter. Please feel free to call me at 432-978-1126 if you wish to discuss this further.

Terry M. Duffey
EverQuest Energy Corporation – Dominating World Oil - One Well at a Time.
PO Box 10079
Midland, Texas 79702
432-686-9790
432-682-3821 Fax
EverQuest@nts-online.net

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Monday, August 13, 2007 3:01 PM
To: Jones, William V., EMNRD; EverQuest@nts-online.net
Cc: Ezeanyim, Richard, EMNRD; Price, Wayne, EMNRD
Subject: RE: Sunco Step-Rate Test

Will:

Thanks for the engineering review of data submitted by Key to date. It appears based on paragraph 3 of your message below that the maximum allowable injection pressure is 1580 psig. Receipt of the fall-off test data should confirm this. You mentioned to me that there appears to be a significant friction pressure on the well and you are unsure of whether the well is obstructed or the formation itself is responsible for the friction pressure on this well. There would be a concern that if the friction obstruction is in the tubing and the tubing could potentially fail. I presume that the well was gauged before the SRT and Fall-Off Tests were performed; consequently, I would suspect that the significant friction pressure is from the formation itself and not from an obstruction(s) in the tubing?

Anyway, I am going to stipulate a maximum injection pressure of 1580 psig, unless the Fall-Off Test data and the rest of the data package that Mr. Duffey is sending the OCD supports a higher injection pressure. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Jones, William V., EMNRD
Sent: Monday, August 13, 2007 2:37 PM
To: Chavez, Carl J, EMNRD
Cc: Ezeanyim, Richard, EMNRD; Price, Wayne, EMNRD
Subject: RE: Sunco Step-Rate Test

Hello Carl:

The surface pressures in this test are dominated by friction. I don't know the casing size, tubing size, type of coating, or age of tubing/coating, but sometimes the operator can install the largest tubing possible and/or new plastic coated tubing to reduce friction.

If the bottom hole break is extrapolated to the surface pressure and that used as the allowable, then any improvement in friction between surface and bottom hole would result in the formation being exposed to higher pressures than fracture pressures and could cause problems. Because this SRT and the previous one run on this well were dominated by friction, I recommend that the bottomhole fracturing pressure point be extrapolated to a surface pressure by only using a static water gradient (0.433). In this manner:

....the 3470 psi bottom hole break divided by the top perf depth of 4380 gives a gradient of 0.7922. Subtract 0.433 from this = 0.3592 surface pressure gradient. So 0.3592 times the top perf depth gives a maximum surface injection pressure of 1573 psi. In addition, this number corresponds with the ISIP numbers seen earlier on this well.

One way to incorporate an allowable "friction" pressure added to this surface pressure is for the operator to show the OCD a common set of friction charts for plastic coated tubing of this size, at this depth, and under these injection rates. That "number" could be added to the 1573 to give the operator some leeway for friction effects. Keep in mind that we normally subtract 50 psi from any breakpoint as a safety.

Before doing the friction calculation, this Step Rate Test should be analysed using PTA methods. Points below the shown break should be examined and points above should be examined. The analysis should look for evidence of linear flow both above and below the 3470 psi bottom hole "break". This analysis would determine if the breakpoint shown represents the first fracturing of the formation. The operator could ask the consultants analyzing the falloff test to check this PTA also. We can also attempt to do this with our software - or allow the EPA in Dallas to do it for us.

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Monday, August 13, 2007 3:01 PM
To: Jones, William V., EMNRD; 'EverQuest@nts-online.net'
Cc: Ezeanyim, Richard, EMNRD; Price, Wayne, EMNRD
Subject: RE: Sunco Step-Rate Test

Will:

Thanks for the engineering review of data submitted by Key to date. It appears based on paragraph 3 of your message below that the maximum allowable injection pressure is 1580 psig. Receipt of the fall-off test data should confirm this. You mentioned to me that there appears to be a significant friction pressure on the well and you are unsure of whether the well is obstructed or the formation itself is responsible for the friction pressure on this well. There would be a concern that if the friction obstruction is in the tubing and the tubing could potentially fail. I presume that the well was gauged before the SRT and Fall-Off Tests were performed; consequently, I would suspect that the significant friction pressure is from the formation itself and not from an obstruction(s) in the tubing?

Anyway, I am going to stipulate a maximum injection pressure of 1580 psig, unless the Fall-Off Test data and the rest of the data package that Mr. Duffey is sending the OCD supports a higher injection pressure. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Jones, William V., EMNRD
Sent: Monday, August 13, 2007 2:37 PM
To: Chavez, Carl J, EMNRD
Cc: Ezeanyim, Richard, EMNRD; Price, Wayne, EMNRD
Subject: RE: Sunco Step-Rate Test

Hello Carl:

The surface pressures in this test are dominated by friction. I don't know the casing size, tubing size, type of coating, or age of tubing/coating, but sometimes the operator can install the largest tubing possible and/or new plastic coated tubing to reduce friction.

If the bottom hole break is extrapolated to the surface pressure and that used as the allowable, then any improvement in friction between surface and bottom hole would result in the formation being exposed to higher pressures than fracture pressures and could cause problems. Because this SRT and the previous one run on this well were dominated by friction, I recommend that the bottomhole fracturing pressure point be extrapolated to a surface pressure by only using a static water gradient (0.433). In this manner:

....the 3470 psi bottom hole break divided by the top perf depth of 4380 gives a gradient of 0.7922. Subtract 0.433 from this = 0.3592 surface pressure gradient. So 0.3592 times the top perf depth gives a maximum surface injection pressure of 1573 psi. In addition, this number corresponds with the ISIP numbers seen earlier on this well.

One way to incorporate an allowable "friction" pressure added to this surface pressure is for the operator to show the OCD a common set of friction charts for plastic coated tubing of this size, at this depth, and under these injection rates. That "number" could be added to the 1573 to give the operator some leeway for friction effects. Keep in mind that we normally subtract 50 psi from any breakpoint as a safety.

Before doing the friction calculation, this Step Rate Test should be analysed using PTA methods. Points below the shown break should be examined and points above should be examined. The analysis should look for evidence of linear flow both above and below the 3470 psi bottom hole "break". This analysis would determine if the breakpoint shown represents the first fracturing of the formation. The operator could ask the consultants analyzing the falloff test to check this PTA also. We can also attempt to do this with our software - or allow the EPA in Dallas to do it for us.

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

Chavez, Carl J, EMNRD

From: Jones, William V., EMNRD
Sent: Monday, August 13, 2007 2:37 PM
To: Chavez, Carl J, EMNRD
Cc: Ezeanyim, Richard, EMNRD; Price, Wayne, EMNRD
Subject: RE: Sunco Step-Rate Test

Hello Carl:

The surface pressures in this test are dominated by friction. I don't know the casing size, tubing size, type of coating, or age of tubing/coating, but sometimes the operator can install the largest tubing possible and/or new plastic coated tubing to reduce friction.

If the bottom hole break is extrapolated to the surface pressure and that used as the allowable, then any improvement in friction between surface and bottom hole would result in the formation being exposed to higher pressures than fracture pressures and could cause problems. Because this SRT and the previous one run on this well were dominated by friction, I recommend that the bottomhole fracturing pressure point be extrapolated to a surface pressure by only using a static water gradient (0.433). In this manner:

....the 3470 psi bottom hole break divided by the top perf depth of 4380 gives a gradient of 0.7922. Subtract 0.433 from this = 0.3592 surface pressure gradient. So 0.3592 times the top perf depth gives a maximum surface injection pressure of 1573 psi. In addition, this number corresponds with the ISIP numbers seen earlier on this well.

One way to incorporate an allowable "friction" pressure added to this surface pressure is for the operator to show the OCD a common set of friction charts for plastic coated tubing of this size, at this depth, and under these injection rates. That "number" could be added to the 1573 to give the operator some leeway for friction effects. Keep in mind that we normally subtract 50 psi from any breakpoint as a safety.

Before doing the friction calculation, this Step Rate Test should be analysed using PTA methods. Points below the shown break should be examined and points above should be examined. The analysis should look for evidence of linear flow both above and below the 3470 psi bottom hole "break". This analysis would determine if the breakpoint shown represents the first fracturing of the formation. The operator could ask the consultants analyzing the falloff test to check this PTA also. We can also attempt to do this with our software - or allow the EPA in Dallas to do it for us.

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

charges for supervision, designation of EOG Resources, Inc. as operator of the well and a 200% charge for risk involved in drilling said well. Said area is located approximately 8 miles northwest of Artesia, New Mexico.

Given under the Seal of the State of New Mexico Oil Conservation Commission at Santa Fe, New Mexico on this 8th day of August, 2007.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Mark E. Fesmire, P. E.
Division Director

S E A L

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, August 09, 2007 12:42 PM
To: 'EverQuest@nts-online.net'; Jones, William V., EMNRD
Cc: Bob Patterson; Phil Woods; Loren Molleur; Tom.Boyce@bp.com; rfuller@keyenergy.com; Price, Wayne, EMNRD
Subject: RE: Sunco SWD (I-005)

Mr. Duffey:

The OCD is in receipt of your message below. We are currently considering your recommendations outlined below. We request that you expedite the results of the Step-Rate Test and Well Fall-Off Test via e-mail and the Internet ASAP so we may stipulate the maximum injection pressure into the final permit. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Terry M. Duffey [mailto:EverQuest@nts-online.net]
Sent: Thursday, August 09, 2007 1:38 PM
To: Jones, William V., EMNRD; Chavez, Carl J, EMNRD
Cc: Bob Patterson; Phil Woods; Loren Molleur; Tom.Boyce@bp.com; rfuller@keyenergy.com
Subject: Sunco SWD

I am awaiting the tearsheets and Publication Affidavits from the newspapers. I will forward these to you in order to complete our notification requirements related to this Discharge Permit RENEWAL application process. As far as we can tell this will complete our side of the application process according to 20.6.2.3108.

As you know, we are aware of the emails from Tom Boyce at BP America expressing their concern about the lack of cement across the Point Lookout disposal zone in their two wells located approximately 1-mile from the Sunco SWD. We have met with Tom Boyce in this regard to talk about the remedial options available. We will continue to do so until a mutually agreeable solution is reached. In the meantime we will continue the approval process of our DP Renewal application.

We know that your bureau is concerned about the uncemented nature of these two wells inside the AOR. We respectfully ask that you consider the fact that, by BP's own admission, *"...these two wells have NOT been affected by the SWD to date"*. While remedial cementing is certainly possible in theory we hate to start down this road of appearing to solve a problem that does not exist at this point in time or may never present itself in the future.

We also know that it is up to your discretion to require corrective actions be taken as a condition of approval to inject. Please bear in mind that injection has taken place since 1993 in the Sunco well where millions and millions of barrels have already been injected with no problem of communication in any surrounding AOR wells. The recent results of the step-rate test should also give you some confidence in the strength of the formation we are injecting into.

As an alternative we would recommend that the two BP wells be outfitted with pressure equipment to monitor for water breakthrough, etc. Continued injection into the Sunco well could then be contingent on the reporting of

acceptable pressures in these two wellbores. Key Energy would be happy to work with BP America to implement this type of surveillance.

Finally, the liability problems associated with "fixing" these wells presents a tricky legal problems, etc. We hate to start down that road if we can agree on a better alternative. Obviously working inside 1960-vintage wellbores can be problematical. The chance of losing this type well due to mechanical conditions of older wellbores is a very real consideration at this point in their life. Avoiding these circumstances would be in our best interest at this point in time.

We respectfully ask that you consider all of these points before making a decision. We will be happy to meet with you and BP America to arrive at a mutually agreeable solution.

Terry M. Duffey
EverQuest Energy Corporation – Dominating World Oil - One Well at a Time.
PO Box 10079
Midland, Texas 79702
432-686-9790
432-682-3821 Fax
EverQuest@nts-online.net

Chavez, Carl J, EMNRD

From: Boyce, Tom [Tom.Boyce@bp.com]
Sent: Thursday, July 26, 2007 8:53 AM
To: Chavez, Carl J, EMNRD
Subject: RE: Key Energy Discharge plan permit renewal (UIC-CLI-005-3 I-005)

Carl:

The producing wells we are concerned about are:

Allen A1 30-045-08851
Cornell C1 30-045-13092

Tom Boyce
Production Engineer
BP America San Juan South Producing Asset

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Thursday, July 26, 2007 7:57 AM
To: Boyce, Tom
Subject: RE: Key Energy Discharge plan permit renewal (UIC-CLI-005-3 I-005)

Mr. Boyce:

Could you please provide the API#s for the wells. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Boyce, Tom [mailto:Tom.Boyce@bp.com]
Sent: Wednesday, July 25, 2007 5:12 PM
To: Chavez, Carl J, EMNRD; Perkins, James M; Burns-Morton, Julie D; Hawkins, James W; Mosher, Scott L; Schlotterback, Larry N.; Stansel, John H; Schroeder, Charlotte Y
Subject: Key Energy Discharge plan permit renewal (UIC-CLI-005-3 I-005)

Carl:

We are aware of Key Energy's application to renew their Class I injection permit into the Pt Lookout formation via the SUNCO SWD 1 well located in Sec 2, T29N, R12W. BP America operates two producing Dakota gas wells located approximately one mile from the SUNCO SWD 1. These wells are not cemented across the Pt. Lookout based on calculated cement fillup volumes. We have not been affected by the water disposal to date, but have concern that the wells are not isolated across the injection interval and may be affected by continued injection. These wells are producing at economic rates, and we expect a number of years of remaining life. We would request that the commission consider the condition of these wellbores in their review of Key's application.

Thank you for your attention.

Tom Boyce
Production Engineer
San Juan South Asset Team

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, July 24, 2007 3:22 PM
To: 'EverQuest@nts-online.net'
Cc: Jones, William V., EMNRD; Price, Wayne, EMNRD
Subject: RE: Step Rate Questions

Terry:

Hi. Thanks for the update. After Key and the OCD complete the 30 day public notice process, we work to finalize the final permit considering any comments or oversight. If Key and the OCD do not receive any public comments, it is possible that the OCD may approve the discharge plan renewal with corrective action(s) to any well within the 1 mile AOR from Key's injection well that lack cement in the injection interval and formation that Key is injecting into. The corrective action(s) shall prevent adverse impacts to any oil and gas producing AOR wells and fluid migration upward into underground sources of drinking water. The OCD hopes to have a final discharge plan permit in the mail the Key within 60 days of the administratively complete letter dated June 7, 2007. I highly recommend that you submit the results of the step-rate test and fall-off test ASAP so we may finalize the maximum injection pressure in the discharge plan.

I believe you have met with BP that has at least 1 well within the 1 mile AOR where corrective action(s) was discussed to seal off the interval of concern. I spoke with Mr. Tom Boyce of BP today and he indicated via a verbal comment that there is at least one of their wells within the 1 mile AOR that is not properly sealed. Any corrective action solution(s) that you discussed and reached resolution on would be appreciated for the OCD to consider for the corrective action(s) portion of the approval. Unfortunately, the condition for approval on the Key well will have a condition with a potential date for corrective action completion that will need to be satisfied for the renewal discharge plan to remain in place. Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Terry M. Duffey [mailto:EverQuest@nts-online.net]
Sent: Tuesday, July 24, 2007 3:38 PM
To: Chavez, Carl J, EMNRD
Subject: RE: Step Rate Questions

We ran the falloff test for 3-days. We then flowed the well back to the pit for 2 days prior to beginning the SRT. We shut the well back in for 1-hr before the SRT was begun last Saturday morning. The wellhead pressure was stable at 850 psi before we began the first pumping step at 0.5 bpm. Kelly Roberts from the Aztec district office witnessed the testing. Once again, just like the December 1993 test, we saw no pressure breakover throughout our 0.50 bpm increments up to 7.0 bpm. This makes three tests in the Point Lookout formation (two in this well and one in the McGrath well one mile north) that show the formation is very porous and resilient under injection pressure stress. It is simply a great formation for injection – and the tests prove it. I will be putting together the full report over the next several weeks and will get it to you.

We have published the two public notices as required. I am awaiting the tear sheets and affidavits from the publishers. They will be forwarded to you soon thereafter.

What is the next step in the approval process?

Terry M. Duffey
EverQuest Energy Corporation – Dominating World Oil - One Well at a Time.
PO Box 10079
Midland, Texas 79702
432-686-9790
432-682-3821 Fax
EverQuest@nts-online.net

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Tuesday, July 24, 2007 11:39 AM
To: EverQuest@nts-online.net
Subject: FW: Step Rate Questions

Terry:

FYI. We're thinking that the formation may be over pressured, but we'll see what your tests show. Thanks.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Jones, William V., EMNRD
Sent: Tuesday, July 17, 2007 4:46 PM
To: Perrin, Charlie, EMNRD
Cc: Price, Wayne, EMNRD; Ezeanyim, Richard, EMNRD; Chavez, Carl J, EMNRD
Subject: RE: Step Rate Questions

Hey Charlie:
Carl is no esta acqui. - I'll copy Wayneski on this.

I think we told Terry to work with you in Aztec on the Step Rate test design but to be sure and get two or three points under the current allowable injection pressure before cranking the pumps up. He may have to backflow the well into some transports to get the pressure down before starting his test - or just extend the falloff period.

As I remember this the previous SRTs started possibly too high and encountered no obvious breakover but had lots of tubing friction and while interpreting the test, the operator was given the assumption that this friction would always be there - so they got a high injection pressure limit. Another way to interpret these types of tests is to take the bottom hole fracture pressure and subtract the 0.433 static water gradient. In otherwords, immediate shutdown pressure has no friction but shows the strength of the formation.

If they will start this test at a low pressure, it will be much more believable. The test should be run only as high as a reasonable level - could assume about 0.8 surface gradient maximum (without friction).

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

From: Perrin, Charlie, EMNRD
Sent: Tuesday, July 17, 2007 3:21 PM
To: Jones, William V., EMNRD
Cc: Catanach, David, EMNRD; Ezeanyim, Richard, EMNRD; Chavez, Carl J, EMNRD
Subject: RE: Step Rate Questions

Will

I called you because Terry with Key said you and Carl were the folks he had been talking with regarding the fall off and step rate test.

He left the office at noon and said he will keep trying to contact you or Carl.

FYI He is currently doing the fall off test and wants to know if he can begin the step rate test when the well has dropped off to 1000#s or if he has to continue the fall off or flow back until he can get two points under the .2psi/foot requirement,

He is going to continue trying to call you, and/or Carl,

Thanks|
Charlie

From: Jones, William V., EMNRD
Sent: Tuesday, July 17, 2007 2:56 PM
To: Perrin, Charlie, EMNRD
Cc: Catanach, David, EMNRD; Ezeanyim, Richard, EMNRD
Subject: Step Rate Questions

Hey Charlie:
have been trying to call you and the line is always busy. you left a message with a question about a step rate test.

David Catanach is still processing Step Rate Test related permits - if he can't be reached, give me a call,

Regards,

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

Email System.

Chavez, Carl J, EMNRD

From: Jones, William V., EMNRD
Sent: Tuesday, July 17, 2007 4:46 PM
To: Perrin, Charlie, EMNRD
Cc: Price, Wayne, EMNRD; Ezeanyim, Richard, EMNRD; Chavez, Carl J, EMNRD
Subject: RE: Step Rate Questions

Hey Charlie:
Carl is no esta acqui. - I'll copy Wayneski on this.

I think we told Terry to work with you in Aztec on the Step Rate test design but to be sure and get two or three points under the current allowable injection pressure before cranking the pumps up. He may have to backflow the well into some transports to get the pressure down before starting his test - or just extend the falloff period.

As I remember this the previous SRTs started possibly too high and encountered no obvious breakover but had lots of tubing friction and while interpreting the test, the operator was given the assumption that this friction would always be there - so they got a high injection pressure limit. Another way to interpret these types of tests is to take the bottom hole fracture pressure and subtract the 0.433 static water gradient. In otherwords, immediate shutdown pressure has no friction but shows the strength of the formation.

If they will start this test at a low pressure, it will be much more believable. The test should be run only as high as a reasonable level - could assume about 0.8 surface gradient maximum (without friction).

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

From: Perrin, Charlie, EMNRD
Sent: Tuesday, July 17, 2007 3:21 PM
To: Jones, William V., EMNRD
Cc: Catanach, David, EMNRD; Ezeanyim, Richard, EMNRD; Chavez, Carl J, EMNRD
Subject: RE: Step Rate Questions

Will

I called you because Terry with Key said you and Carl were the folks he had been talking with regarding the fall off and step rate test.

He left the office at noon and said he will keep trying to contact you or Carl.

FYI He is currently doing the fall off test and wants to know if he can begin the step rate test when the well has dropped off to 1000#s or if he has to continue the fall off or flow back until he can get two points under the .2psi/foot requirement,

He is going to continue trying to call you, and/or Carl,

Thanks|
Charlie

From: Jones, William V., EMNRD
Sent: Tuesday, July 17, 2007 2:56 PM
To: Perrin, Charlie, EMNRD
Cc: Catanach, David, EMNRD; Ezeanyim, Richard, EMNRD
Subject: Step Rate Questions

Hey Charlie:
have been trying to call you and the line is always busy. you left a message with a question about a step rate test.

David Catanach is still processing Step Rate Test related permits - if he can't be reached, give me a call,

Regards,

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, June 27, 2007 3:09 PM
To: 'EverQuest@nts-online.net'
Subject: Key Energy Class I Well Administratively Complete Letter (UICL I-005)

Terry M. Duffey
EverQuest Energy Corporation
PO Box 10079
Midland, Texas 79702
432-686-9790
432-682-3821 Fax
EverQuest@nts-online.net

Please note that the administratively complete letter was mailed to the wrong address and this message is to inform you that the New Mexico Oil Conservation Division (NMOCD) deemed the application administratively complete on June 7, 2007 (please refer to website at http://www.emnrd.state.nm.us/ocd/ENV-DraftPublicEtc.htm Key Energy Services, LLC. This marks the beginning of the public notice period. I hope to complete a final permit within 60 days of the above date.

Could you please provide the Key Energy Services, LLC contact information for the above Class I Well, since Mr. Mike Talovich does not appear to be employed by Key Energy Services, LLC. Also, please contact me if you have questions. Thank you.

Chavez, Carl J, EMNRD

From: Baker, W [WBaker@keyenergy.com]
Sent: Friday, February 09, 2007 12:46 PM
To: Chavez, Carl J, EMNRD
Subject: RE: Key Energy, Inc. Bonds

Mr. Chavez:

Thanks for the information. I will read through this today and get started on it Monday. I appreciate all the help you have provided on this matter. Thank you again and have a good weekend.

WA

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Friday, February 09, 2007 12:17 PM
To: Baker, W
Cc: Price, Wayne, EMNRD
Subject: Key Energy, Inc. Bonds

Mr. Baker:

As we know, Key Energy, Inc. (Key) is in the process of a name change, which includes the name on its Oil Conservation Division Bonds. Based on our telephone conversation this morning, please find attached a copy of the bond in the amount of $17,800 for the Key Four Corners, Inc. Class I Well that the OCD is requiring a Rider for- as part of Key's name change request. We have requested that Key provide a new estimate for plugging the Class I Well and that reflects the new name that Key is seeking with the OCD.

In addition, we notice that the expiration date of Key's Discharge Plan (I-005) expired on August 26, 2006. Consequently, Key needs to renew its application and certain applicable information (i.e., new AOR of 1/2 mile for any new wells penetrating the Class I injection interval) as part of the Discharge Plan renewal. The Renewal will require a $100 filing fee. Upon an OCD determination of "Administratively Complete," the OCD and Key will be required to follow new WQCC Public Notice requirements (see applicable attachments). Please be aware that as part of the renewal application, Key will need to address the "Administratively Complete" language in the WQCC Public Notice regulations. Upon finalization of the Discharge Plan, the OCD will mail 2 copies (one for signature and return with final fee payment of $4,500) to Key. Checks will need to be made out to "Water Quality Management Fund" with a reference to the permit number, i.e., I-005.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/
(Pollution Prevention Guidance is under "Publications")

Chavez, Carl J, EMNRD

From: Terry M. Duffey [EverQuest@nts-online.net]
Sent: Thursday, April 05, 2007 2:37 PM
To: Chavez, Carl J, EMNRD
Cc: W. A. Baker
Subject: Key Energy - Sunco SWD
Attachments: Key Energy - Sunco SWD - AOR.pdf

Response to your earlier email:
Note the attachment of four pdf-format documents

It seems like your suspicion on two of the wells inside the AOR may be well-founded...

Allen A #1 (API# 088514) refer to completion document that was extracted from the original SWD submission in 1996. It shows 300 sx of cement pumped after setting 4.50" casing at 6785'. Assuming a cement yield of 1.3 cf/sack would fill 1712' inside the 7.875" x 4.500" annulus. Calculated TOC would be around 5000'. This is ~600' below the injection interval of 4350-4460'. Incidentally this well lies at the outer edge of the 1-mile radius of review. No casing problems have been reported to the OCD as far as imaged documents on their website.

Cornell C #1 (API# 13092) refer to the three completion documents retrieved from the OCD website. Once again they show 300 sx of cement pumped after setting 4.50" casing at 6604'. Using the same cement assumptions puts the calculated TOC around 4900', or ~500' below the injection interval of the Sunco SWD well subject to this application renewal. A document filed by BP America one year ago references a suspected casing leak in the well. No subsequent follow-up filing to report on the anticipated well intervention were found on the OCD image website.

If we need to investigate these two wells further we will do so. Please let us know how we should proceed. As you can see, both of the wellbores were completed in 1961. They are old and probably very marginal wells.

FYI these two wells were obviously included in the original application in 1996 as well as the first renewal in 2001. As a result, we did not focus on these two wells to any great degree. These are the only two wells in the AOR that penetrate the injection interval 4350-4460' that had such a small volume of cement pumped during the production casing operation. Calculated cement on the other wells is more than adequate to cover the injection interval.

Terry M. Duffey
EverQuest Energy Corporation – Dominating World Oil - One Well at a Time.
PO Box 10079
Midland, Texas 79702
432-686-9790
432-682-3821 Fax
EverQuest@nts-online.net

THE SANTA FE
NEW MEXICAN
Founded 1849

VICL-5

NM ENERGY MINERAL NA
OFFICE OF SECRETARY A
1220 S ST FRANCIS DR
SANTA FE NM 87505

ALTERNATE ACCOUNT: 56673
AD NUMBER: 00218289 ACCOUNT: 00002202
LEGAL NO: 81128 P.O. #: 52100-3956
309 LINES 4 TIME(S) 580.92
AFFIDAVIT: 6.00
TAX: 44.75
TOTAL: 631.67

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO
COUNTY OF SANTA FE

I, T. Valencia, being first duly sworn declare and say that I am Legal Advertising Representative of THE SANTA FE NEW MEXICAN, a daily newspaper published in the English language, and having a general circulation in the Counties of Santa Fe and Los Alamos, State of New Mexico and being a newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 on Session Laws of 1937; that the publication # 81128 a copy of which is hereto attached was published in said newspaper 4 day(s) between 06/12/2007 and 07/03/2007 and that the notice was published in the newspaper proper and not in any supplement; the first date of publication being on the 12nd day of June, 2007 and that the undersigned has personal knowledge of the matter and things set forth in this affidavit.

/S/_____
LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 3rd day of July, 2007

Notary Pamela Anne Beach

Commission Expires: May 31, 2011

OFFICIAL SEAL
Pamela Anne Beach
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 5-31-11

NOTICE OF PUBLICATION

STATE OF NEW MEXICO ENERGY,

MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

Notice is hereby given that pusuant to New Mexico Water Quality Control Commission Regulations (20.6.2.3106 NMAC), the following discharge permit application(s) has been submited to the Director of the New Mexico Oil Conservation Division ("NMOCD"), 1220 S. Saint Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 467-3440

(I-005) Key Energy Services, LLC., Mike Talovich P.O. Box 900 Farmington, New Mexico 87499 has submitted a new application for their Class I Injection Well Discharge Permit (UIC-CLI-005) for SUNCO Disposal Well # 1 located in the SW/4, NW/4 of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico. The injection is located approximately 6 miles southwest of Aztec at the inersection of CR-350 and CR-3773. Oil field exempt non-hazardous waste will be disposed into the Point Lookout Formation at an injection interval from 4,380 ft. to 4,480 ft. below ground surface at adaily rate of 2,000 to 4,000 barrels per day and at a maximum injection pressure of 1500 psig. Groundwater most likely to be affected by a spill, leak, or accidental discharge ia at a depth from 75 to 120 ft. below ground surface, with a totoal dissolved solids concentration of 450 mg/L. The discharge plan addresses well construction, operation, monitoring of the well, associated surface facilities, and provides a contingency plan in the eventof accidental spills, leaks, and other accidental discharges in order to protect fresh water.

The NMOCD has determined that the application is administratively complete and has prepared a draft permit. The NMOCD will accept comments and statements of interest regarding this application and will create a facility-specific mailing list for persons who wish to receive future notices. Persons interested in obtaining further information, submitting coments or requesting to be on a facility-specific mailing listfor future notices may contact the Environmental Bureau Chief of the Oil Conservation Division at the address given above. The administrative completeness determiation and draft permit may be viewed at the above address between 8:00 a.m. and 4:00 p.m. Monday through Friday, or may also be viewed at the NMOCD web site http://www.emnrd.state.nm.us/ocd/. Persons interested in obtaininga copy of the application and draft permit may contact the NMOCD at the address given above. Prior to ruling on any proposed discharge permit or major modification, the Director shall allow a period of at least thirty (30) days after the date of publication of this notice, during which interested persons may submit coments or request that NMOCD hold a public hearing. Requests for a public hearing shall set forth the reasons why a hearing should be held. Ahearing will be held if the Director determines that there is significant public interest.

If no public hearing is held the Director will approve of disapprove the proposed permit based on information available, including all comments received. If a public hearing is held the Director will approve of disapprove the proposed permit based on information submited at the hearing.

Para obtener mas informacion sobre esta solicitud en espanol, sirvase comunicarse por favor: New Mexico Energy, Minerals, and Natural Resourcees Department (Depto. Del Energia, Minerals y Recursos Maturales de Nuevo Mexico), Oil Conservation Division (Depto. Conservacion Del Petroleo) 1220 South Saint Francis Drive, Santa Fe, New Mexico . (Contacto: Dorothy Phillips, 505-476-3461

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico on this 7th day of June 2007

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

S E A L

Mark Fesmire, Director

Legal #81128
Pub. June 12, 19, 26 & July 3, 2007

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey
Division Director
Oil Conservation Division

SEPTEMBER 11, 2013

Ms. Philana Thompson
Agua Moss, LLC
P.O. BOX 600
Farmington, New Mexico 87499

RE: Agua Moss, LLC Discharge Permit (UICI-005) Review of Annual Report, Quarterly Reports and Fall-Off Test Plan for SUNCO Disposal Well No. 1 in San Juan County, New Mexico

Dear Ms. Thompson:

The Oil Conservation Division (OCD) is in receipt of the above subject reports and plan on July 15, 2013. OCD notices that some information required in the Annual Report was absent or lacking, but some information was later discovered in the Fall-Off Test (FOT) Plan (Plan). The OCD notices that the facility already has an approved Plan and if the operator uses it, a schedule for the planned FOT is all that is required by the OCD.

Based on the reports and Plan, OCD comments/recommendations and/or requirements are provided below.

OCD Annual Report Comments/Recommendations:

1) The OCD UIC Director has determined that the quarterly monitoring "general chemistry" parameters required under the current discharge permit shall continue. Any associated quarterly monitoring requirements under the Surface Waste Management Facility (SWMF) Permit (NM1-009) shall cease upon termination of the SWMF Permit.

2) The operator shall contact the OCD Representative regarding the OCD NM1-009 Permit to discuss landfarm and pond closure requirements. Landfarm and pond reports and/or information were submitted in the Annual Report, but are not regulated under the UICI-005 Permit. These units, if they remain in use, may be required to be handled under the applicable oil and gas regulations.

3) In the future, the UICI-005 Discharge Permit (Quarterly Monitoring) requires waste fluids to be sampled quarterly, i.e., typically in December, March, June and September. OCD notices that the operator submitted 3 months (Sept., Oct. and Dec. 2012) of general chemistry analytical lab monitoring data.

4) The Area of Review (AOR) update summary required by Section 2(I) of the Permit was missing from the report. OCD requests that the operator provide a summary of its findings with identification (typically of table of well information with distance from injection well) of any wells within one mile from the injection well that lack cement in the disposal interval(s) and/or are producing from the injection zone(s).

   OCD notices from the FOT Plan that the MCGRATH No. 4 SWD Well is the only well identified to be completed in the Point Lookout Formation, but it is greater than the 1-mile AOR for the injection well.

5) The "Records of the expansion tank monitoring pressure, fluid removals and/or additions indicating the well MIT conditions" Section 3(G) was missing. The operator requested on July 31, 2013 an exemption from installing an expansion tank, and to utilize the current 2-pin continuous recording chart recorder. One pin is set to monitor the tubing PSI and the other pin is set to monitor the casing and tubing annulus (annulus).

   OCD requires the operator to propose within 30-days of receipt of this letter a work plan and schedule to address Section 3(G) of the Permit. OCD observes from submitted charts that the current monitoring system appears to only monitor the surface injection pressure to ensure that it does not exceed the maximum permitted surface injection pressure limit. There does not appear to be a second graph line on the chart representing a constant or near constant 100 psi pressure on the annulus. OCD could approve a continuous monitoring system that also monitors the annulus pressure. This would serve to alert the operator of a well Mechanical Integrity Test (MIT) problem.

6) The OCD requires calibration certificates from gauges and chart recorders (Continuous Monitoring and/or before Mechanical Integrity Tests) to be recalibrated at least every 6-months with documentation of the calibration, pass/fail information, chart or gauge record information (i.e., clock setting, spring weight, serial no., and chart type) included in the final reports. Charts shall include: well test type, date and time, well API#, witness signature(s), pass/fail, start vs. end pressure, etc. OCD shall receive the original charts with information.

OCD Quarterly Reports Comments/Recommendations:

1) Same as "Annual Reports Comments/Recommendations" in No. 1 above.

2) Same as "Annual Reports Comments/Recommendations" in No. 3 above.

OCD Fall-Off Test Comments/Recommendations:

1) The OCD requires adherence to "Section III: Developing a Test Plan" of its "UIC Well Class I FOT Guidance" (Guidance) dated December 3, 2007. Section III requires that Sections V – IX of the Guidance be addressed in the Plan. It does not appear that the operator has addressed all of the sections. The operator shall identify any deviation from the Guidance so that the OCD may consider any alternate proposals by the operator. Section IX should be adequately addressed in the final FOT report submitted to the OCD.

2) The OCD approved an extension request on July 16, 2013 to run the FOT in December of 2013 instead of in September; therefore, the FOT schedule for December is requested.

3) The OCD recommends a coil tube cleanout of the well and perforated zone be conducted prior to running the FOT to ensure that bore-hole problems do not adversely affect the FOT results.

4) The OCD recommends that the operator evaluate past FOTs for an acceptable pseudo-steady flow rate needed to stress the injection zone during the FOT. The operator is currently proposing to inject at a rate of about 87.5 gpm.

5) Section V.4 (b): The OCD is concerned about the language essentially, "lowering the injection rate if well conditions merit or storage of fluid is lacking". The operator must achieve and maintain a pseudo steady-state injection rate with enough pressure build-up to determine injection zone characteristics. Guidance suggests that a log-log derivative plot should be performed during the test to determine when a radial flow condition has been achieved in order to shut-off injection during the FOT.

6) Section V.5(b): The OCD shall be notified (Monica Kuehling at E-mail: monica.kuehling@state.nm.us) at least 72 hours in advance of installing the bottom hole pressure gauge(s) so that OCD may witness the installation. In addition, similarly, OCD should be notified at least 24 hours in advance of injection shut-off so that OCD may monitor formation pressure(s), etc. at the point of injection-shut-off and commencement of Fall-Off Test (FOT) monitoring. The determination of minimum injection period should be determined during the injection by a "Hall Plot" or evaluated from historical FOTs run on the well.

7) Section V.11: The operator shall monitor its continuous monitoring system throughout injection to ensure that the injection pressure does not exceed the maximum surface injection pressure permitted by the OCD.

8) Section V.13 appears to address gauge monitoring; however, the monitoring of both surface and bottom hole pressures during the FOT is recommended in the event either or monitoring during the FOT fails, the FOT may continue.

9) Section V.14: The memory capacity of the gauge should allow for a 10-day total recording time interval unless a shorter test time is sufficient based on prior testing or appropriate test design calculations. Larger time increments may be used to obtain data later in the test when the rate of pressure decline is less. The recording frequency of the gauges and overall length of test should be set based on results of previous tests or test design calculations.

10) The OCD requires the operator to provide an updated hydrogeologic scenario of the geology, i.e., injection zone bounded fault system, etc. identified from historical FOTs. The general geologic information is good, but more details on the injection zone and structural features that affect the well and support the site-specific details of the well and formation from historical FOTs.

If you have any questions, please do not hesitate to contact me by phone at (505) 476-3490, mail at the address below, or email at CarlJ.Chavez@state.nm.us. Thank you.

Sincerely,

Carl J. Chávez
Environmental Engineer

CJC/cjc

Attachments

cc: Mr. Daniel Sanchez, OCD Santa Fe
OCD Aztec District Office

Chavez, Carl J, EMNRD

From: Philana Thompson <pthompson@merrion.bz>
Sent: Wednesday, July 31, 2013 2:10 PM
To: Chavez, Carl J, EMNRD
Cc: VonGonten, Glenn, EMNRD
Subject: Sunco Facility

Expansion Tank: Exception Request

For safety and environmental concerns Agua Moss, LLC would like to request an exemption from installing an expansion tank on the facility. We would like to continue to utilize the current process which is monitoring using a 2 pin continuous recording chart recorder. One is set to monitor the tubing PSI, the other is set to monitor the casing and tubing annulus. The charts are provided in the quarterly and annual reports.

--
Philana Thompson
Regulatory Compliance
Merrion Oil & Gas Corp
cell 505-486-1171
office 505-324-5336

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, July 16, 2013 3:57 PM
To: 'jeff davis'
Cc: Sanchez, Daniel J., EMNRD
Subject: RE: Formal Request for Extension of Fall Off Test

Jeff:

Good afternoon. Your request for extension (see below) is hereby approved.

I have just located the Fall-Off Test Plan on the OCD FTP Site that was submitted by Agua Moss LLC.

Thank you.

OCD Environmental Engineers:

Carl Chavez (505) 476-3490
- Discharge Permits, National Pollutant Discharge Elimination System (NPDES); Point-of-Contact; Refineries; and Underground Injection Control Program QA/QC Officer

Jim Griswold (505) 476-3465
- Hydrologist and Groundwater Remediations

Edward J. Hansen (505) 476-3489
- Hydrologist; Groundwater Remediations; and Risk-Based Data Management System (RBDMS)

Brad Jones (505) 476-3487
- Hydrostatic Testing; Pits/Ponds; Produced Water; and Surface Waste Management Facilities

Leonard Lowe (505) 476-3492
- C- 133 Processing (Produced Water Authorization Applications); Discharge Permits and Facility Inspections

Glenn von Gonten (505) 476-3488
- Hydrologist and Groundwater Remediations

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Drive, Santa Fe, New Mexico 87505
Office: (505) 476-3490
E-mail: CarlJ.Chavez@State.NM.US
Website: http://www.emnrd.state.nm.us/ocd/
"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental

From: jeff davis [mailto:jdaguamoss@hotmail.com]
Sent: Tuesday, July 16, 2013 10:34 AM
To: Chavez, Carl J, EMNRD
Subject: Formal Request for Extension of Fall Off Test

Mr. Chavez,

Upon review of the Fall Off Test (FOT) requirements for the Sunco #1 SWD, I would like to request an extension. The main concern is the interval of continuous injection needed to perform the FOT. The facility's filtering capacity is not adequate for this interval of continuous injection and the storage situation is not ideal. We would like to put the money toward installation of permanent facilities versus temporary facilities just to perform this FOT. Being that we just received the approval for the site modification we would like to be able to modify the facility prior to performing the required FOT. This would ensure the needed capability to perform the FOT along with eliminating cost duplication on our side. Taking over this facility, closing the pond, annual report submission and site modification make for a pretty full plate. All this being taking into account along with the economics of the project itself, I belief we could ensure a good FOT if we were able to postpone the FOT 3 months. The current required FOT completion date in September 1st, 2013. We would like to propose having the FOT completed by December 1st, 2013.

Respectfully,

Jeffrey O. Davis
Manager
Agua Moss, LLC
505.330.1617 (cell)

From: CarlJ.Chavez@state.nm.us
To: jdaguamoss@hotmail.com
Subject:
Date: Tue, 16 Jul 2013 14:55:40 +0000

OCD Environmental Engineers:

Carl Chavez (505) 476-3490

- Discharge Permits, National Pollutant Discharge Elimination System (NPDES); Point-of-Contact; Refineries; and Underground Injection Control Program QA/QC Officer

Jim Griswold (505) 476-3465

- Hydrologist and Groundwater Remediations

Edward J. Hansen (505) 476-3489

- Hydrologist; Groundwater Remediations; and Risk-Based Data Management System (RBDMS)

July 2010
Fall-off Test (FOT) Results and Report

Key Energy Services, LLC
Sunco SWD #1 – Class I Non-Hazardous Oil Waste Disposal Well – Permit# UIC-CLI-005
API# 30-045-28653
1595 FNL and 1005 FWL
Unit Letter E, Section 2, T29N, R12W
San Juan County, NM

A fall-off test was successfully completed on this well in accordance with the approved test plan on-file with the OCD Environmental Bureau. The well injection rate was kept virtually constant at 4515 bbl/day for a 102-hour period leading up to the time of shut-in on July 13, 2010. The fall-off pressures were measured with downhole gauges set at mid-perfs (4405') for 72-hours.

*All of the following references are relative to the **NMOCD UIC Class I Well Fall-Off Test Guidance** document dated 12/3/2007*

Section VIII – Evaluation of Test Results

1-7. A professional engineer with ***Pro Well Testing & Wireline*** in Midland, Texas interpreted the results of the test using ***Kappa*** PTA software. The results of his interpretation are attached. The various attachments to the report address Section VIII.1-7 of the Guidance Document.

8. The **Tefteller, Inc.** tabular listing of Time, Pressure and Temperature shows that the bottom hole temperature during the fall-off time decreased by only 3 degrees during the 72-hour test. This temperature variation has only a minimal impact on the pressure analysis results.

9. The log-log plot of the derivative data indicates two parallel boundaries were seen between 10-20 hours into the test period at 648 and 1520 feet from the wellbore. We do not have sufficient subsurface geological data to determine the extent or shape of the injection zone surrounding the well. More than likely, the radial flow is limited in some particular direction. It is also possible that the boundaries could be due to the geometry of the induced fracture performed when the well was initially completed. The derivate curve shape indicates that this "boundary" is not restricting injection into the remainder of the formation volume affected by this well. A similar boundary was seen in previous tests.

Section IX – Report Components

1. See above
2. See above
3. Wellbore sketch attached to previous reports is unchanged
4. Copy of electric well log – previously submitted
5. Copy of porosity well log – previously submitted
6. No PVT data necessary, injected fluid is fresh–to-slightly saline water. No significant hydrocarbons present that would alter the density, compressibility and/or viscosity of the fluid.
7. The Key Energy internal *Daily Injection Reports* were used to determine the appropriate injection history to use for the analysis. A summary of those reports since the 2009 FOT is attached. There was essentially no injection into the well between June 24-29. Beginning on June 30 to July 13 there was a total of 26,047 bbls injected intermittently over a 141-hour period, for an average injection rate of 185 bbl/hour (the equivalent of 4440 bbl/day for a continuous 24-hour day). A CONSTANT injection rate of 4515 bbl/day for 102 continuous hours took place

before the well was shut-in for the FOT on July 13th. For PTA purposes, this injection rate/volume was significantly long to justify using the average injection rate from the pre-conditioning period (4515 bpd) to calculate the reservoir parameters.

8. The Sunco SWD #1 has injected approximately 13.88 million barrels into the Point Lookout formation from 1994 through June 2010. The Conoco Phillips McGrath #4 SWD, located approximately 1 mile north, is also actively injecting into the same formation. Cumulative injection at this location is 15.4 million barrels through May 2009.
9. Micro-Smart Systems Model SP2000 gauges, SN 281, pressure range 0-5000 psig, last date of calibration 11/21/2009, recommended annual calibration frequency, certificate of calibration and accuracy verification is available upon request.
10. Refer to the Discharge Permit renewal documentation submitted to the OCD in 2007. A copy of the *Area of Review* table included with that submission is attached.
11. Geological information should have accompanied the original permit application in 1994 by the original well operator. No geological data was transferred to successive owners since that time. Key Energy has not made a geological analysis of the Point Lookout formation in the vicinity of this disposal well.
12. The Conoco Phillips McGrath #4 SWD, located approximately 1 mile north, is also actively injecting into the Point Lookout formation. This is a private facility. As far as we know this well was active during our test period. Although both wells are disposing into the same interval we have no reason to believe any interference between the two wells exists. In the future, if the OCD wishes this well to be monitored during our annual FOT they should initiate the request with Conoco Phillips under their regulatory authority.
13. a-c. Injection Preconditioning; 7:00 AM, July 9th to 1:00 PM July 13, 2010 – injection fluid is mixture of waters trucked into facility from various locations. No change in water analysis that have been previously submitted to OCD.
    Begin Fall-off period: 1:00 PM, July 13, 2010
    End Fall-off period: 1:00 PM, July 16, 2010
    d. Final bottomhole injection pressure: T=1473.00 minutes elapsed was 4011.5 psig, 88.1 degrees F
    e. Total shut-in time 72-hours: T=1473.00 to T=5797.00
    f. Final static bottomhole pressure and temperature at end of fall-off period: T=5797.00 minutes elapsed 3574 psig, 85 degrees F
14. A wing valve located on the on the well's Christmas tree was closed to begin the FOT
15. The key to PTA interpretation is to correctly model the reservoir in the first place. The reservoir model that best fit the test data is a *Homogeneous Reservoir with a Finite Conductivity Fracture and Two Parallel Boundaries*. The log-log derivative pressure match using this model is excellent. Furthermore, the calculated reservoir parameters are quite reasonable considering that the well was initially hydraulically fractured and has exhibited very good injectivity since injection began in 1994. The PTA software internally calculates the results automatically.

July 2010
Fall-off Test (FOT) Results and Report

Key Energy Services, LLC
Sunco SWD #1 – Class I Non-Hazardous Oil Waste Disposal Well – Permit# UIC-CLI-005
API# 30-045-28653
1595 FNL and 1005 FWL
Unit Letter E, Section 2, T29N, R12W
San Juan County, NM

All equations are imbedded in the software and are congruent with professional reservoir engineering pressure transient analysis principals.

16. The log-log plot of the derivative data indicates two parallel boundaries were seen between 10-20 hours into the test period at 648 and 1520 feet from the wellbore. We do not have sufficient subsurface geological data to determine the extent or shape of the injection zone surrounding the well. More than likely, the radial flow is limited in some particular direction. The derivate curve shape indicates that "boundary" is not restricting injection into the remainder of the formation volume affected by this well.
17. As seen in the log-log derivative plot, the test was dominated by radial flow. The reservoir appears to be quite homogeneous as there are no anomalous pressure diversions seen in the pressure data – other than the increase in slope seen in the derivative data seen between 10-20 hours after shut-in (see #16 above).
18. See ***Pro Well Testing & Wireline*** report for graphs
19. The ***Pro*** test results for 2007, 2008 and 2009 are also attached. The reservoir pressure derived from the pressure transient analysis of these successive FOT are amazingly close; showing essentially NO building of reservoir pressure during this 3-4 year period. This reservoir has ideal properties for continued injection into the foreseeable future. The table below compares various reservoir parameters derived from each test. These tests exhibit very good consistency and the interpretive model used in each analysis honors the hydraulic fracture completion of the well. The negative skin values illustrate that the original fracture is still open. The half-length of 600-700 feet is realistic for a 100,000 lb sand frac in a sand zone 110 feet thick.

Parameter	2010 Results	2009 Results	2008 Results	2007 Results
Reservoir pressure	3231psig	3242 psig	3176 psig	3258 psig
Permeability	13.6 md	10.2 md	20.7 md	17.5 md
Skin	-7.18	-7.23	-6.79	-6.93
Fracture half-length	893 ft	926 ft	596 ft	688 ft
Boundary	648 and 1520 ft	755 ft	987 ft	None seen
Radius of Investigation	1450 ft	1250 ft	1760 ft	1620 ft

20. The raw test data will be kept on file for a period of 3-years and will be made available to the OCD upon written request.

2010 Fall-Off Test

Key Energy Services, LLC
Sunco SWD #1
San Juan County, NM
API# 30-045-28653

Prior to Fall-Off Test Period	There was essentially no injection into the well between June 24 and June 29 (6 days) During the period from June 30 to July 13 there was a total of 26,047 bbls injected intermittently over a 141-hour period, for an average injection rate of 185 bbl/hour (the equivalent of 4440 bbl/day for a continuous 24-hour day)
Pre-Test Conditioning Period:	102-hours of continuous injection Began injection at 7 AM, July 9, 2010 End injection at 1 PM, July 13, 2010 19,185 bbls injected over a 102-hour period Average stabilized injection rate 4515 bbl/day
Fall-Off Test Period:	72-hours shut-in Began test at 1 PM, July 13, 2010 Conclude test at 1 PM, July 16, 2010
Bomb positioned at mid-perf	4405'
BH Injection Temperature	88.1 degrees F
BH Shut-in Temperature	85.0 degrees F
Surface Shut-in Temp	93.7 degrees F
Perforated Interval	4350-4460'
Average porosity	13%

The well was fracture stimulated w/ 100,000 lbs of 20/40 sand during the initial completion in 1993
No workover or stimulation since 2007 Fall-Off test
The facility only operates during day light hours (no injection between 6 PM and 7 AM) - an average day entails 6-9 hours of injection.

Key Energy - Sunco SWD
2010 Fall-Off Test

Event Log

Time *Minutes*	BHP *psig*	BHT *degree F*	Remarks
0.00	0.0	123.7	Rigging up lubricator and wireline assembly
19.25	289.5	106.0	Open master valve - equalize with tubing pressure
19.50	2279.9	105.6	Lubricator pressure equalized
19.75	2278.4	105.1	Record wellhead injection pressure
23.00	2309.8	97.7	Begin trip downhole with pressure bombs
			NOTE: Did NOT interrupt constant 96+ hour period of pre-conditioning injection
39.00	4011.3	85.8	Suspended bombs at mid-perfs (4405')
			Begin recording BH Injection Pressure for 24-hours...
1473.00	4011.5	88.1	Final BH Injection Pressure reading
1474.00	4004.6	88.1	Shut down injection - begin 72-hr falloff period
5797.00	3573.7	85.0	End 72-hour fall-off period
5797.25			Begin to POOH to 4000' to record hydrostatic pressure
5807.75	3454.9	112.8	Final hydrostatic pressure at 4000'
5808.00			Begin to POOH to 3000' to record hydrostatic pressure
5820.00	3015.5	103.2	Final hydrostatic pressure at 3000'
5820.25			Begin to POOH to 2000' to record hydrostatic pressure
5832.00	2576.4	88.5	Final hydrostatic pressure at 2000'
5833.00			Begin to POOH to 1000' to record hydrostatic pressure
5844.00	2138.2	71.6	Final hydrostatic pressure at 1000'
5844.25			Begin to POOH to surface to record hydrostatic pressure
5858.50	1708.1	88.3	Final hydrostatic pressure at surface
5866.00	0.0	93.6	Close master valve-bleed pressure to atmospheric in lubricator
5866.25	0.0	93.7	Retrieve pressure bombs, rig down, move off well

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey
Division Director
Oil Conservation Division

SEPTEMBER 11, 2013

Ms. Philana Thompson
Agua Moss, LLC
P.O. BOX 600
Farmington, New Mexico 87499

RE: Agua Moss, LLC Discharge Permit (UICI-005) Review of Annual Report, Quarterly Reports and Fall-Off Test Plan for SUNCO Disposal Well No. 1 in San Juan County, New Mexico

Dear Ms. Thompson:

The Oil Conservation Division (OCD) is in receipt of the above subject reports and plan on July 15, 2013. OCD notices that some information required in the Annual Report was absent or lacking, but some information was later discovered in the Fall-Off Test (FOT) Plan (Plan). The OCD notices that the facility already has an approved Plan and if the operator uses it, a schedule for the planned FOT is all that is required by the OCD.

Based on the reports and Plan, OCD comments/recommendations and/or requirements are provided below.

OCD Annual Report Comments/Recommendations:

1) The OCD UIC Director has determined that the quarterly monitoring "general chemistry" parameters required under the current discharge permit shall continue. Any associated quarterly monitoring requirements under the Surface Waste Management Facility (SWMF) Permit (NM1-009) shall cease upon termination of the SWMF Permit.

2) The operator shall contact the OCD Representative regarding the OCD NM1-009 Permit to discuss landfarm and pond closure requirements. Landfarm and pond reports and/or information were submitted in the Annual Report, but are not regulated under the UICI-005 Permit. These units, if they remain in use, may be required to be handled under the applicable oil and gas regulations.

3) In the future, the UICI-005 Discharge Permit (Quarterly Monitoring) requires waste fluids to be sampled quarterly, i.e., typically in December, March, June and September. OCD notices that the operator submitted 3 months (Sept., Oct. and Dec. 2012) of general chemistry analytical lab monitoring data.

4) The Area of Review (AOR) update summary required by Section 2(I) of the Permit was missing from the report. OCD requests that the operator provide a summary of its findings with identification (typically of table of well information with distance from injection well) of any wells within one mile from the injection well that lack cement in the disposal interval(s) and/or are producing from the injection zone(s).

   OCD notices from the FOT Plan that the MCGRATH No. 4 SWD Well is the only well identified to be completed in the Point Lookout Formation, but it is greater than the 1-mile AOR for the injection well.

5) The "Records of the expansion tank monitoring pressure, fluid removals and/or additions indicating the well MIT conditions" Section 3(G) was missing. The operator requested on July 31, 2013 an exemption from installing an expansion tank, and to utilize the current 2-pin continuous recording chart recorder. One pin is set to monitor the tubing PSI and the other pin is set to monitor the casing and tubing annulus (annulus).

   OCD requires the operator to propose within 30-days of receipt of this letter a work plan and schedule to address Section 3(G) of the Permit. OCD observes from submitted charts that the current monitoring system appears to only monitor the surface injection pressure to ensure that it does not exceed the maximum permitted surface injection pressure limit. There does not appear to be a second graph line on the chart representing a constant or near constant 100 psi pressure on the annulus. OCD could approve a continuous monitoring system that also monitors the annulus pressure. This would serve to alert the operator of a well Mechanical Integrity Test (MIT) problem.

6) The OCD requires calibration certificates from gauges and chart recorders (Continuous Monitoring and/or before Mechanical Integrity Tests) to be recalibrated at least every 6-months with documentation of the calibration, pass/fail information, chart or gauge record information (i.e., clock setting, spring weight, serial no., and chart type) included in the final reports. Charts shall include: well test type, date and time, well API#, witness signature(s), pass/fail, start vs. end pressure, etc. OCD shall receive the original charts with information.

OCD Quarterly Reports Comments/Recommendations:

1) Same as "Annual Reports Comments/Recommendations" in No. 1 above.

2) Same as "Annual Reports Comments/Recommendations" in No. 3 above.

OCD Fall-Off Test Comments/Recommendations:

1) The OCD requires adherence to "Section III: Developing a Test Plan" of its "UIC Well Class I FOT Guidance" (Guidance) dated December 3, 2007. Section III requires that Sections V – IX of the Guidance be addressed in the Plan. It does not appear that the operator has addressed all of the sections. The operator shall identify any deviation from the Guidance so that the OCD may consider any alternate proposals by the operator. Section IX should be adequately addressed in the final FOT report submitted to the OCD.

2) The OCD approved an extension request on July 16, 2013 to run the FOT in December of 2013 instead of in September; therefore, the FOT schedule for December is requested.

3) The OCD recommends a coil tube cleanout of the well and perforated zone be conducted prior to running the FOT to ensure that bore-hole problems do not adversely affect the FOT results.

4) The OCD recommends that the operator evaluate past FOTs for an acceptable pseudo-steady flow rate needed to stress the injection zone during the FOT. The operator is currently proposing to inject at a rate of about 87.5 gpm.

5) Section V.4 (b): The OCD is concerned about the language essentially, "lowering the injection rate if well conditions merit or storage of fluid is lacking". The operator must achieve and maintain a pseudo steady-state injection rate with enough pressure build-up to determine injection zone characteristics. Guidance suggests that a log-log derivative plot should be performed during the test to determine when a radial flow condition has been achieved in order to shut-off injection during the FOT.

6) Section V.5(b): The OCD shall be notified (Monica Kuehling at E-mail: monica.kuehling@state.nm.us) at least 72 hours in advance of installing the bottom hole pressure gauge(s) so that OCD may witness the installation. In addition, similarly, OCD should be notified at least 24 hours in advance of injection shut-off so that OCD may monitor formation pressure(s), etc. at the point of injection-shut-off and commencement of Fall-Off Test (FOT) monitoring. The determination of minimum injection period should be determined during the injection by a "Hall Plot" or evaluated from historical FOTs run on the well.

7) Section V.11: The operator shall monitor its continuous monitoring system throughout injection to ensure that the injection pressure does not exceed the maximum surface injection pressure permitted by the OCD.

8) Section V.13 appears to address gauge monitoring; however, the monitoring of both surface and bottom hole pressures during the FOT is recommended in the event either or monitoring during the FOT fails, the FOT may continue.

9) Section V.14: The memory capacity of the gauge should allow for a 10-day total recording time interval unless a shorter test time is sufficient based on prior testing or appropriate test design calculations. Larger time increments may be used to obtain data later in the test when the rate of pressure decline is less. The recording frequency of the gauges and overall length of test should be set based on results of previous tests or test design calculations.

10) The OCD requires the operator to provide an updated hydrogeologic scenario of the geology, i.e., injection zone bounded fault system, etc. identified from historical FOTs. The general geologic information is good, but more details on the injection zone and structural features that affect the well and support the site-specific details of the well and formation from historical FOTs.

If you have any questions, please do not hesitate to contact me by phone at (505) 476-3490, mail at the address below, or email at CarlJ.Chavez@state.nm.us. Thank you.

Sincerely,

Carl J. Chávez
Environmental Engineer

CJC/cjc

Attachments

cc: Mr. Daniel Sanchez, OCD Santa Fe
OCD Aztec District Office

Chavez, Carl J, EMNRD

From: Philana Thompson <pthompson@merrion.bz>
Sent: Wednesday, July 31, 2013 2:10 PM
To: Chavez, Carl J, EMNRD
Cc: VonGonten, Glenn, EMNRD
Subject: Sunco Facility

Expansion Tank: Exception Request

For safety and environmental concerns Agua Moss, LLC would like to request an exemption from installing an expansion tank on the facility. We would like to continue to utilize the current process which is monitoring using a 2 pin continuous recording chart recorder. One is set to monitor the tubing PSI, the other is set to monitor the casing and tubing annulus. The charts are provided in the quarterly and annual reports.

--
Philana Thompson
Regulatory Compliance
Merrion Oil & Gas Corp
cell 505-486-1171
office 505-324-5336

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, July 16, 2013 3:57 PM
To: 'jeff davis'
Cc: Sanchez, Daniel J., EMNRD
Subject: RE: Formal Request for Extension of Fall Off Test

Jeff:

Good afternoon. Your request for extension (see below) is hereby approved.

I have just located the Fall-Off Test Plan on the OCD FTP Site that was submitted by Agua Moss LLC.

Thank you.

OCD Environmental Engineers:

Carl Chavez (505) 476-3490
- Discharge Permits, National Pollutant Discharge Elimination System (NPDES); Point-of-Contact; Refineries; and Underground Injection Control Program QA/QC Officer

Jim Griswold (505) 476-3465
- Hydrologist and Groundwater Remediations

Edward J. Hansen (505) 476-3489
- Hydrologist; Groundwater Remediations; and Risk-Based Data Management System (RBDMS)

Brad Jones (505) 476-3487
- Hydrostatic Testing; Pits/Ponds; Produced Water; and Surface Waste Management Facilities

Leonard Lowe (505) 476-3492
- C- 133 Processing (Produced Water Authorization Applications); Discharge Permits and Facility Inspections

Glenn von Gonten (505) 476-3488
- Hydrologist and Groundwater Remediations

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Drive, Santa Fe, New Mexico 87505
Office: (505) 476-3490
E-mail: CarlJ.Chavez@State.NM.US
Website: http://www.emnrd.state.nm.us/ocd/
"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental

From: jeff davis [mailto:jdaguamoss@hotmail.com]
Sent: Tuesday, July 16, 2013 10:34 AM
To: Chavez, Carl J, EMNRD
Subject: Formal Request for Extension of Fall Off Test

Mr. Chavez,

Upon review of the Fall Off Test (FOT) requirements for the Sunco #1 SWD, I would like to request an extension. The main concern is the interval of continuous injection needed to perform the FOT. The facility's filtering capacity is not adequate for this interval of continuous injection and the storage situation is not ideal. We would like to put the money toward installation of permanent facilities versus temporary facilities just to perform this FOT. Being that we just received the approval for the site modification we would like to be able to modify the facility prior to performing the required FOT. This would ensure the needed capability to perform the FOT along with eliminating cost duplication on our side. Taking over this facility, closing the pond, annual report submission and site modification make for a pretty full plate. All this being taking into account along with the economics of the project itself, I belief we could ensure a good FOT if we were able to postpone the FOT 3 months. The current required FOT completion date in September 1st, 2013. We would like to propose having the FOT completed by December 1st, 2013.

Respectfully,

Jeffrey O. Davis
Manager
Agua Moss, LLC
505.330.1617 (cell)

From: CarlJ.Chavez@state.nm.us
To: jdaguamoss@hotmail.com
Subject:
Date: Tue, 16 Jul 2013 14:55:40 +0000

OCD Environmental Engineers:

Carl Chavez (505) 476-3490

- Discharge Permits, National Pollutant Discharge Elimination System (NPDES); Point-of-Contact; Refineries; and Underground Injection Control Program QA/QC Officer

Jim Griswold (505) 476-3465

- Hydrologist and Groundwater Remediations

Edward J. Hansen (505) 476-3489

- Hydrologist; Groundwater Remediations; and Risk-Based Data Management System (RBDMS)

July 2010
Fall-off Test (FOT) Results and Report

Key Energy Services, LLC
Sunco SWD #1 – Class I Non-Hazardous Oil Waste Disposal Well – Permit# UIC-CLI-005
API# 30-045-28653
1595 FNL and 1005 FWL
Unit Letter E, Section 2, T29N, R12W
San Juan County, NM

A fall-off test was successfully completed on this well in accordance with the approved test plan on-file with the OCD Environmental Bureau. The well injection rate was kept virtually constant at 4515 bbl/day for a 102-hour period leading up to the time of shut-in on July 13, 2010. The fall-off pressures were measured with downhole gauges set at mid-perfs (4405') for 72-hours.

*All of the following references are relative to the **NMOCD UIC Class I Well Fall-Off Test Guidance** document dated 12/3/2007*

Section VIII – Evaluation of Test Results

1-7. A professional engineer with ***Pro Well Testing & Wireline*** in Midland, Texas interpreted the results of the test using ***Kappa*** PTA software. The results of his interpretation are attached. The various attachments to the report address Section VIII.1-7 of the Guidance Document.

8. The **Tefteller, Inc.** tabular listing of Time, Pressure and Temperature shows that the bottom hole temperature during the fall-off time decreased by only 3 degrees during the 72-hour test. This temperature variation has only a minimal impact on the pressure analysis results.

9. The log-log plot of the derivative data indicates two parallel boundaries were seen between 10-20 hours into the test period at 648 and 1520 feet from the wellbore. We do not have sufficient subsurface geological data to determine the extent or shape of the injection zone surrounding the well. More than likely, the radial flow is limited in some particular direction. It is also possible that the boundaries could be due to the geometry of the induced fracture performed when the well was initially completed. The derivate curve shape indicates that this "boundary" is not restricting injection into the remainder of the formation volume affected by this well. A similar boundary was seen in previous tests.

Section IX – Report Components

1. See above
2. See above
3. Wellbore sketch attached to previous reports is unchanged
4. Copy of electric well log – previously submitted
5. Copy of porosity well log – previously submitted
6. No PVT data necessary, injected fluid is fresh–to-slightly saline water. No significant hydrocarbons present that would alter the density, compressibility and/or viscosity of the fluid.
7. The Key Energy internal *Daily Injection Reports* were used to determine the appropriate injection history to use for the analysis. A summary of those reports since the 2009 FOT is attached. There was essentially no injection into the well between June 24-29. Beginning on June 30 to July 13 there was a total of 26,047 bbls injected intermittently over a 141-hour period, for an average injection rate of 185 bbl/hour (the equivalent of 4440 bbl/day for a continuous 24-hour day). A CONSTANT injection rate of 4515 bbl/day for 102 continuous hours took place

before the well was shut-in for the FOT on July 13th. For PTA purposes, this injection rate/volume was significantly long to justify using the average injection rate from the pre-conditioning period (4515 bpd) to calculate the reservoir parameters.

8. The Sunco SWD #1 has injected approximately 13.88 million barrels into the Point Lookout formation from 1994 through June 2010. The Conoco Phillips McGrath #4 SWD, located approximately 1 mile north, is also actively injecting into the same formation. Cumulative injection at this location is 15.4 million barrels through May 2009.
9. Micro-Smart Systems Model SP2000 gauges, SN 281, pressure range 0-5000 psig, last date of calibration 11/21/2009, recommended annual calibration frequency, certificate of calibration and accuracy verification is available upon request.
10. Refer to the Discharge Permit renewal documentation submitted to the OCD in 2007. A copy of the *Area of Review* table included with that submission is attached.
11. Geological information should have accompanied the original permit application in 1994 by the original well operator. No geological data was transferred to successive owners since that time. Key Energy has not made a geological analysis of the Point Lookout formation in the vicinity of this disposal well.
12. The Conoco Phillips McGrath #4 SWD, located approximately 1 mile north, is also actively injecting into the Point Lookout formation. This is a private facility. As far as we know this well was active during our test period. Although both wells are disposing into the same interval we have no reason to believe any interference between the two wells exists. In the future, if the OCD wishes this well to be monitored during our annual FOT they should initiate the request with Conoco Phillips under their regulatory authority.
13. a-c. Injection Preconditioning; 7:00 AM, July 9th to 1:00 PM July 13, 2010 – injection fluid is mixture of waters trucked into facility from various locations. No change in water analysis that have been previously submitted to OCD.
    Begin Fall-off period: 1:00 PM, July 13, 2010
    End Fall-off period: 1:00 PM, July 16, 2010
    d. Final bottomhole injection pressure: T=1473.00 minutes elapsed was 4011.5 psig, 88.1 degrees F
    e. Total shut-in time 72-hours: T=1473.00 to T=5797.00
    f. Final static bottomhole pressure and temperature at end of fall-off period: T=5797.00 minutes elapsed 3574 psig, 85 degrees F
14. A wing valve located on the on the well's Christmas tree was closed to begin the FOT
15. The key to PTA interpretation is to correctly model the reservoir in the first place. The reservoir model that best fit the test data is a *Homogeneous Reservoir with a Finite Conductivity Fracture and Two Parallel Boundaries*. The log-log derivative pressure match using this model is excellent. Furthermore, the calculated reservoir parameters are quite reasonable considering that the well was initially hydraulically fractured and has exhibited very good injectivity since injection began in 1994. The PTA software internally calculates the results automatically.

July 2010
Fall-off Test (FOT) Results and Report

Key Energy Services, LLC
Sunco SWD #1 – Class I Non-Hazardous Oil Waste Disposal Well – Permit# UIC-CLI-005
API# 30-045-28653
1595 FNL and 1005 FWL
Unit Letter E, Section 2, T29N, R12W
San Juan County, NM

All equations are imbedded in the software and are congruent with professional reservoir engineering pressure transient analysis principals.

16. The log-log plot of the derivative data indicates two parallel boundaries were seen between 10-20 hours into the test period at 648 and 1520 feet from the wellbore. We do not have sufficient subsurface geological data to determine the extent or shape of the injection zone surrounding the well. More than likely, the radial flow is limited in some particular direction. The derivate curve shape indicates that "boundary" is not restricting injection into the remainder of the formation volume affected by this well.
17. As seen in the log-log derivative plot, the test was dominated by radial flow. The reservoir appears to be quite homogeneous as there are no anomalous pressure diversions seen in the pressure data – other than the increase in slope seen in the derivative data seen between 10-20 hours after shut-in (see #16 above).
18. See ***Pro Well Testing & Wireline*** report for graphs
19. The ***Pro*** test results for 2007, 2008 and 2009 are also attached. The reservoir pressure derived from the pressure transient analysis of these successive FOT are amazingly close; showing essentially NO building of reservoir pressure during this 3-4 year period. This reservoir has ideal properties for continued injection into the foreseeable future. The table below compares various reservoir parameters derived from each test. These tests exhibit very good consistency and the interpretive model used in each analysis honors the hydraulic fracture completion of the well. The negative skin values illustrate that the original fracture is still open. The half-length of 600-700 feet is realistic for a 100,000 lb sand frac in a sand zone 110 feet thick.

Parameter	2010 Results	2009 Results	2008 Results	2007 Results
Reservoir pressure	3231psig	3242 psig	3176 psig	3258 psig
Permeability	13.6 md	10.2 md	20.7 md	17.5 md
Skin	-7.18	-7.23	-6.79	-6.93
Fracture half-length	893 ft	926 ft	596 ft	688 ft
Boundary	648 and 1520 ft	755 ft	987 ft	None seen
Radius of Investigation	1450 ft	1250 ft	1760 ft	1620 ft

20. The raw test data will be kept on file for a period of 3-years and will be made available to the OCD upon written request.

2010 Fall-Off Test

Key Energy Services, LLC
Sunco SWD #1
San Juan County, NM
API# 30-045-28653

Prior to Fall-Off Test Period	There was essentially no injection into the well between June 24 and June 29 (6 days) During the period from June 30 to July 13 there was a total of 26,047 bbls injected intermittently over a 141-hour period, for an average injection rate of 185 bbl/hour (the equivalent of 4440 bbl/day for a continuous 24-hour day)
Pre-Test Conditioning Period:	102-hours of continuous injection Began injection at 7 AM, July 9, 2010 End injection at 1 PM, July 13, 2010 19,185 bbls injected over a 102-hour period Average stabilized injection rate 4515 bbl/day
Fall-Off Test Period:	72-hours shut-in Began test at 1 PM, July 13, 2010 Conclude test at 1 PM, July 16, 2010
Bomb positioned at mid-perf	4405'
BH Injection Temperature	88.1 degrees F
BH Shut-in Temperature	85.0 degrees F
Surface Shut-in Temp	93.7 degrees F
Perforated Interval	4350-4460'
Average porosity	13%

The well was fracture stimulated w/ 100,000 lbs of 20/40 sand during the initial completion in 1993
No workover or stimulation since 2007 Fall-Off test
The facility only operates during day light hours (no injection between 6 PM and 7 AM) - an average day entails 6-9 hours of injection.

Key Energy - Sunco SWD
2010 Fall-Off Test

Event Log

Time *Minutes*	BHP *psig*	BHT *degree F*	Remarks
0.00	0.0	123.7	Rigging up lubricator and wireline assembly
19.25	289.5	106.0	Open master valve - equalize with tubing pressure
19.50	2279.9	105.6	Lubricator pressure equalized
19.75	2278.4	105.1	Record wellhead injection pressure
23.00	2309.8	97.7	Begin trip downhole with pressure bombs
			NOTE: Did NOT interrupt constant 96+ hour period of pre-conditioning injection
39.00	4011.3	85.8	Suspended bombs at mid-perfs (4405')
			Begin recording BH Injection Pressure for 24-hours...
1473.00	4011.5	88.1	Final BH Injection Pressure reading
1474.00	4004.6	88.1	Shut down injection - begin 72-hr falloff period
5797.00	3573.7	85.0	End 72-hour fall-off period
5797.25			Begin to POOH to 4000' to record hydrostatic pressure
5807.75	3454.9	112.8	Final hydrostatic pressure at 4000'
5808.00			Begin to POOH to 3000' to record hydrostatic pressure
5820.00	3015.5	103.2	Final hydrostatic pressure at 3000'
5820.25			Begin to POOH to 2000' to record hydrostatic pressure
5832.00	2576.4	88.5	Final hydrostatic pressure at 2000'
5833.00			Begin to POOH to 1000' to record hydrostatic pressure
5844.00	2138.2	71.6	Final hydrostatic pressure at 1000'
5844.25			Begin to POOH to surface to record hydrostatic pressure
5858.50	1708.1	88.3	Final hydrostatic pressure at surface
5866.00	0.0	93.6	Close master valve-bleed pressure to atmospheric in lubricator
5866.25	0.0	93.7	Retrieve pressure bombs, rig down, move off well

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, August 01, 2012 11:01 AM
To: pthompson@merrion.bz
Cc: VonGonten, Glenn, EMNRD; Perrin, Charlie, EMNRD
Subject: UICI-005 SUNCO Well No. 1 Discharge Permit Renewal (San Juan County) Agua Moss, L.L.C.

Ms. Thompson:

Good morning.

On June 25, 2012, the New Mexico Oil Conservation Division (OCD) mailed Mr. Jeff Davis (Agua Moss, L.L.C.) the discharge permit (DP) for review and comment within 30 days of receipt.

To date, the OCD has not received any comment(s) on the DP.

Please reply to this message and indicate the tentative date for receipt of any final comments on the DP. The OCD has a few items that may require revision(s), i.e., Fall-Off Test frequency and MIT type with frequency. However, any OCD revision(s) to the DP will be sent to Agua Moss, L.L.C. for comment before finalizing the DP.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Drive, Santa Fe, New Mexico 87505
Office: (505) 476-3490
E-mail: CarlJ.Chavez@State.NM.US
Website: http://www.emnrd.state.nm.us/ocd/
"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, March 15, 2012 4:57 PM
To: 'Philana Thompson'
Subject: UICI-005 Application for DP Renewal Communication

Philana:

Good afternoon.

The OCD needs the following to complete its application review process:

1) USGS 7.5 Minute Quadrangle Map of Faility with Disposal Well (Scale: 1:24,000)

2) Facility Description w/ Revised Facility Diagram

3) Public Notice Draft Update (in Spanish and English): Note the notice should clarify the injection interval, max. surface injection pressure, etc. and address the acrobat reader files sent to you with the regulations that need to be satisfied in the notice.

4 Contingency Plans for Well and Facility (web search for "environmental contingency plan" may bring up a good example of the elements for your facility plan?)

Thank you for your time this afternoon. Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/
"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, January 24, 2012 8:03 AM
To: VonGonten, Glenn, EMNRD; Philana Thompson
Cc: Sanchez, Daniel J., EMNRD
Subject: RE: Jamie

Philana:

Good morning. The permit requires training of personnel, but does not stipulate certified trainers. The training should be conducted by a company operator familiar with the daily injection well operations, monitoring, sampling, well testing, etc. (basically everything pertaining to the well and its safe operation, and to ensure compliance with applicable state and federal regulations, etc.). For example, the quarterly sampling must performed with acceptable quality assurance and control, i.e., chain-of-custody, data quality objectives, laboratory sampling, analytical testing, etc.

Where operators lack expertise, i.e., Fall-Off Testing, well mechanical integrity testing, a downhole consultant may be hired to meet the intent of the Underground Injection Control (UIC) Regulations, approved test plan, etc.

Records of all training should be maintained and made available to the OCD upon request.

It is important to note that the OCD does not provide supervision or direction to operators due to liability issues. The operator must have trained personnel who can satisfactorily meet the UIC Program requirements and supervise well operations when and where necessary to ensure compliance with the UIC Program.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/
"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

From: VonGonten, Glenn, EMNRD
Sent: Monday, January 23, 2012 3:28 PM
To: Philana Thompson
Cc: Chavez, Carl J, EMNRD; Sanchez, Daniel J., EMNRD
Subject: RE: Jamie

Philana,

Neither Daniel Sanchez nor I know who is authorized. Carl will be in tomorrow. Please direct your question to him

Glenn

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Monday, January 23, 2012 3:15 PM
To: VonGonten, Glenn, EMNRD
Subject: FW: Jamie

Glenn,
It looks like Carl is out could you possibly answer my question below?

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Monday, January 23, 2012 3:14 PM
To: 'Chavez, Carl J, EMNRD'
Subject: RE: Jamie

I have another question ☺

A requirement is that the facility people have the required training. Who is certified in New Mexico to conduct the required Class I training?

Thanks Philana

Philana Thompson
Merrion Oil & Gas Corporation
Regulatory Compliance Specialist
505-324-5336 office
505-486-1171 cell
505-324-5350 fax

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Thursday, January 19, 2012 6:47 AM
To: Philana Thompson
Cc: VonGonten, Glenn, EMNRD
Subject: RE: Jamie

Philana:

Good morning.

For the OCD UIC Program Website (click here)

For the UIC Fall-Off Test Guidance (click here)

For the OCD UIC Program Manual (click here)

Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/
"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Wednesday, January 18, 2012 5:24 PM
To: Chavez, Carl J, EMNRD
Cc: VonGonten, Glenn, EMNRD
Subject: RE: Jamie

Carl,
Well after reading the entire 40 CFR I have a clear understanding of what is required for the fall off test. I will proceed with drafting a letter to the NMOCD (Jami) for a reprieve on conducting annual tests.

Thanks for your assistance once again ☺

Philana

Philana Thompson
Merrion Oil & Gas Corporation
Regulatory Compliance Specialist
505-324-5336 office
505-486-1171 cell
505-324-5350 fax

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Wednesday, January 18, 2012 4:11 PM
To: Philana Thompson
Cc: VonGonten, Glenn, EMNRD
Subject: RE: Jamie

Philana:

Good afternoon.

The well in question is an EPA Underground Injection Control (UIC) Class I (Non-Hazardous) Oilfield Exempt & Non-Exempt Waste Disposal Well.

The New Mexico Environment Department (NMED) is responsible for permitting EPA UIC Class I (Hazardous) Disposal Wells in New Mexico. While OCD handles all Oil, Gas & Geothermal EPA UIC Program Wells in NM, it is the NMED that handles all other EPA UIC Wells in NM. There are currently no UIC Class I Hazardous Disposal Wells in New Mexico.

Per your note below stating in your conversation with OCD Director Bailey regarding the MIT and Fall-Off Test (FOT) Schedule, she requested that you compose a letter requesting this. I would mention that all OCD UIC Class I (Non-Hazardous) Disposal Wells undergo an annual "Annulus Pressure" MIT, which is quickly performed without any entrance into the well and it is a 30 minutes test that checks for any tubing and/or casing leaks measured from pressure up on the annulus. The FOT Schedule for your well apparently based on your note below summarizing discussions with the OCD Director will need to be determined after receipt and consideration of your letter relative to the OCD UIC Program.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/
"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Wednesday, January 18, 2012 3:28 PM
To: Chavez, Carl J, EMNRD
Cc: VonGonten, Glenn, EMNRD
Subject: RE: Jamie

Carl & Glenn,
And if I am reading what the permit states correctly is that this is a Class I Non-Hazardous oil field waste disposal well, the EPA criteria for a Class I non hazardous well is a bit different than a hazardous. For example the fall off test and MIT would be required every five years. Unless I am missing any documentation in regards to a change in this wells Class I non-hazardous classification to a hazardous???

Thanks for your help,

Philana

Philana Thompson
Merrion Oil & Gas Corporation
Regulatory Compliance Specialist
505-324-5336 office
505-486-1171 cell
505-324-5350 fax

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Wednesday, January 18, 2012 2:43 PM
To: 'Chavez, Carl J, EMNRD'
Subject: RE: Jamie

Carl,
I spoke with Jami and based on our conversation the approval that was given to Wayne for Key was for a reprieve from doing the fall-off test in 2011 only. She has advised that if we want to be granted the fall off test on a five year rotation that we will need to compose a letter requesting such.

My question or I should say what I need clarification on is if this well is classified as a Class I non-hazardous waste??? I am trying to get some clarification on some rules that I am reading on the EPA CFR

Thanks Philana

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Wednesday, January 18, 2012 1:55 PM
To: Philana Thompson
Subject: RE: Jamie

Philana:

I recommend that you call her number (see below) as it is provided on the OCD Web page:

Director's Office
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Jami Bailey - Division Director (505) 476-3460

Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/
"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

From: Philana Thompson [mailto:pthompson@merrion.bz]
Sent: Wednesday, January 18, 2012 1:40 PM
To: Chavez, Carl J, EMNRD
Subject: Jamie

Carl,
What is Jamie's email address?

Thanks Philana

Philana Thompson
Merrion Oil & Gas Corporation
Regulatory Compliance Specialist
505-324-5336 office
505-486-1171 cell
505-324-5350 fax

Chavez, Carl J, EMNRD

From: Perrin, Charlie, EMNRD
Sent: Tuesday, July 27, 2010 3:52 PM
To: Putman, HC; wayne price; Chavez, Carl J, EMNRD; Kuehling, Monica, EMNRD
Cc: Sanchez, Daniel J., EMNRD; Allen, Neil; Altomare, Mikal, EMNRD; VonGonten, Glenn, EMNRD; Jones, William V., EMNRD; Jones, Brad A., EMNRD; Griswold, Jim, EMNRD; Molleur, Loren
Subject: RE: Key UIC-5 wellhead work

This is what we needed, Thanks

-----Original Message-----
From: Putman, HC [mailto:HPutman01@keyenergy.com]
Sent: Tuesday, July 27, 2010 2:37 PM
To: Perrin, Charlie, EMNRD; wayne price; Chavez, Carl J, EMNRD; Kuehling, Monica, EMNRD
Cc: Sanchez, Daniel J., EMNRD; Allen, Neil; Altomare, Mikal, EMNRD; VonGonten, Glenn, EMNRD; Jones, William V., EMNRD; Jones, Brad A., EMNRD; Griswold, Jim, EMNRD; Molleur, Loren
Subject: RE: Key UIC-5 wellhead work

Mr. Perrin
We did not open or break the seal on the well head or change the stile or pressure ratings of the valve, Key wanted to change the master valve so that we could be sure that the integrity of the well will be an optimum level.
The procedure that was preformed on the well was to set a plug in the profile nipple at the bottom of the tubing, and then bled the pressure on the tubing off. Then the lines where disconnected from the pump and the master valve was changed by WSI, we also added a second master valve on top of the original for a back up. We then reconnected the pump line and went back into the tubing and equalized the well and pulled the plug, and put the well back on line. We had no leaks or fluid on the ground, I have spoken to Kelly Roberts at Aztec OCD this morning and he did not feel that we needed to do anything further, but he did ask me to check with you to be sure.
Thank you for your time if you have any questions please don't hesitate to call me.

HC Putman
Key Energy Services
5651 US HWY 64
Farmington, NM 87401
505-566-5352 Direct, 505-327-0416 Office
505-320-4207 Cell, 505-327-6023 Fax

-----Original Message-----
From: Perrin, Charlie, EMNRD [mailto:charlie.perrin@state.nm.us]
Sent: Tuesday, July 27, 2010 7:57 AM
To: wayne price; Chavez, Carl J, EMNRD; Kuehling, Monica, EMNRD
Cc: Sanchez, Daniel J., EMNRD; Putman, HC; Allen, Neil; Altomare, Mikal, EMNRD; VonGonten, Glenn, EMNRD; Jones, William V., EMNRD; Jones, Brad A., EMNRD; Griswold, Jim, EMNRD; Molleur, Loren
Subject: RE: Key UIC-5 wellhead work

Wayne,

Will the seal at the well head be broken? If yes will require a MIT.
Are you going to a higher pressure rated valves and nipples? If so from what to what?

Thanks
Charlie

-----Original Message-----
From: wayne price [mailto:wayneprice77@earthlink.net]

Sent: Thursday, July 22, 2010 6:03 PM
To: Chavez, Carl J, EMNRD; Kuehling, Monica, EMNRD
Cc: Perrin, Charlie, EMNRD; Sanchez, Daniel J., EMNRD; HC Putman; Neil Allen; Altomare, Mikal, EMNRD; VonGonten, Glenn, EMNRD; Jones, William V., EMNRD; Jones, Brad A., EMNRD; Griswold, Jim, EMNRD; lmolleur@keyenergy.com
Subject: Key UIC-5 wellhead work

Hi Carl, Key has decided to add additional valves on the wellhead for safety reasons, and check the other valves. We will not be unseating the packard.
The Aztec District usually doesn't require a C-103 on this type of maintenance. However, we will give you a full report.

Ladies and Gentlemen:

As promised, Key is ramping up its' safety and and environmental
awareness program. When I was up in Farmington last week, HC Putman
the Area Manager and I discussed this issue. The well has what's called a flapper valve installed downhole. Supposedly when you pull the tubing this valve will shut and prevent hi pressure fluid from blowing out at the surface. Most workover units are required to have blow-out preventers, but we all know what happened in the gulf. HC wants to make sure if for some reason something happens, we will have good surface valves to shut the well in. Obvisously BP didn't.

Thank you:

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, January 22, 2009 9:14 AM
To: 'Gibson, Dan'
Cc: Perrin, Charlie, EMNRD; Kuehling, Monica, EMNRD; Price, Wayne, EMNRD; Jones, William V., EMNRD
Subject: FW: Key-Sunco disposal well
Attachments: Carl.tif

Dan:

Please note that on January 17, 2008 (see "Minor Modification" below), the OCD approved a "Minor Modification" to the permit allowing an injection pressure of 2,400 psig (see attachment). You may resume operations. The OCD is expecting a response from Key to recent comments on the Fall-Off Test performed during the Summer of 2008. The OCD expects that Key will have an opportunity to evaluate the maturity of this injection well and may need to consider options such as drilling a replacement well, etc.?

---Original Message----
From: Chavez, Carl J, EMNRD [mailto: CarlJ .Chavez©state. nm. us]
Sent: Thursday, January 17, 2008 1:48 PM
To: Patterson, Bob
Cc: Phillíber, Mark; EverQuest@nts-online.net; Jones, William V., EMNRD; Price, Wayne, EMNRD; Perrin, Charlie, EMNRD
Subject: Minor Modification to UIC-CLI-005 (1-005) Discharge Plan

Dear Mr. Patterson:

Re: Class I Injection Well Discharge Permit SUNCO Disposal Well #1 UIC-CLI-005 (1-005)
Class I Non-Hazardous Oil Field Waste Disposal Well
SUNCO Disposal Well #1, API No. 30-045-28653
1595 FNL and 1005 FWL UL: E Section 2, T 29 N, R 12 W
San Juan County, New Mexico

The New Mexico Oil Conservation Division (NMOCD) hereby approves this 'Minor Modification" to Key Energy Services, LLC.'s current Discharge Plan with the following conditions:

1) The additional corrective actions under Section 20(B) is hereby changed from February 15, 2008 to June 21, 2008.

2) The daily rate of injection volume under Section 22(C) shall not exceed 4,000 bbl. per day of injected wastes into the Point Lookout Formation, which is considered to be in a "fractured flow" condition. The operator shall not increase growth in the existing Fracture(s).

3) The maximum injection pressure under Section 22(D) is hereby increased from 1580 psig to 2,400 psig.

The NMOCD will attach this "Minor Modification" to the current Discharge Plan. Thank you for your cooperation in this matter. Please contact me if you have questions.

Note: Please be advised that NMOCD approval of this plan does not relieve Key Energy Services, LLC. of responsibility should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, and human health

or the environment. In addition, NMOCD approval does not relieve Key Energy Services, LLC. of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Kuehling, Monica, EMNRD
Sent: Thursday, January 22, 2009 7:48 AM
To: Chavez, Carl J, EMNRD
Subject: Key-Sunco disposal well

Good morning Carl,

This is just to show that an e-mail was sent in January of last year giving Key the ability to inject up to 2400 lbs.

Have a great day

Monica

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, January 22, 2009 8:21 AM
To: 'Gibson, Dan'
Cc: Jones, William V., EMNRD; Price, Wayne, EMNRD; Perrin, Charlie, EMNRD; Kuehling, Monica, EMNRD
Subject: Key Energy Services, LLC Key- Sunco Trucking Company Well No. 1 (UICI-005)

KEY ENERGY SERVICES, LLC.	Key-SUNCO TRUCKING COMPANY Well #1 CLASS I (GW-235)	30-045-28653	-2-29 N-12 W	I-5	San Juan

Dan:

Re: Injection Pressure Problem

Inspector Kuehling (OCD-Aztec) contacted OCD Santa Fe during an inspection on 1/20/2009, and after noticing the shut-in injection pressure of the above well was at about 1875 psig.

Per our telephone conversation yesterday, Key Energy Services, LLC (Key) has voluntarily shut-in the well to determine the cause of the pressure problem. The well is permitted for a maximum surface injection pressure of 1580 psig. However, the well shut-in pressure range is currently from 1800 – 1875 psig. It is the OCD's understanding that Key operates the injection well during the evening hours.

Please notify the OCD to discuss the cause of the problem when determined, and in advance of start-up of injection operations. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, September 03, 2008 7:52 AM
To: Powell, Brandon, EMNRD; Roberts, Kelly G, EMNRD
Cc: Jones, Brad A., EMNRD
Subject: FW: Key Energy Services, LLC. Odor Complaint (UICI- 5) San Juan County

FYI.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Jones, Brad A., EMNRD
Sent: Wednesday, September 03, 2008 7:00 AM
To: Chavez, Carl J, EMNRD
Subject: RE: Key Energy Services, LLC. Odor Complaint (UICI- 5) San Juan County

Carl,

Just for clarification... Fluids evacuated from the pond are being injected into the well. The frac tanks are to contain any water that they accept during the evaporation pond repair. This way they do not have to shutdown for the repair. Thanks for handling the complaint.

Brad A. Jones
Environmental Engineer
Environmental Bureau
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505
E-mail: brad.a.jones@state.nm.us
Office: (505) 476-3487
Fax: (505) 476-3462

From: Chavez, Carl J, EMNRD
Sent: Tuesday, September 02, 2008 11:31 AM
To: Chavez, Carl J, EMNRD
Cc: Jones, Brad A., EMNRD
Subject: Key Energy Services, LLC. Odor Complaint (UICI- 5) San Juan County

Re: Ms. Nelson called on 8/25/2008 at 8:43 a.m. and left a message on my answering machine complaining of a

foul odor.

Contacted Ms. Gail Nelson (505-334-7251) complainant today around 10:30 to discuss actions by Key to address odor complaints from ponds at the surface waste management facility, which includes a UIC Class I Well permitted by OCD under "UICI-5." According to Brad Jones, Key will dewater the pond and skimmer pond within the next 2 weeks and remove the sludge (source of odor). An oxidizer will be installed or applied to address future odor problems. Fluids will be evacuated from the ponds directly into frac holding tanks on location. Expected time period for completion is 4 weeks.

Ms. Nelson will tell other neighbors and provide my phone number in the event they wish to complain. She will inform them of what I told her today. She was also encouraged to contact Key to complain when odors are bad and to keep records of when foul odors are noticed. Also, if the odor is still present after 4 weeks, the OCD wants to know.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, September 02, 2008 11:31 AM
To: Chavez, Carl J, EMNRD
Cc: Jones, Brad A., EMNRD
Subject: Key Energy Services, LLC. Odor Complaint (UICI- 5) San Juan County

Re: Ms. Nelson called on 8/25/2008 at 8:43 a.m. and left a message on my answering machine complaining of a foul odor.

Contacted Ms. Gail Nelson (505-334-7251) complainant today around 10:30 to discuss actions by Key to address odor complaints from ponds at the surface waste management facility, which includes a UIC Class I Well permitted by OCD under "UICI-5." According to Brad Jones, Key will dewater the pond and skimmer pond within the next 2 weeks and remove the sludge (source of odor). An oxidizer will be installed or applied to address future odor problems. Fluids will be evacuated from the ponds directly into frac holding tanks on location. Expected time period for completion is 4 weeks.

Ms. Nelson will tell other neighbors and provide my phone number in the event they wish to complain. She will inform them of what I told her today. She was also encouraged to contact Key to complain when odors are bad and to keep records of when foul odors are noticed. Also, if the odor is still present after 4 weeks, the OCD wants to know.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, April 25, 2008 3:51 PM
To: 'Philliber, Mark'
Cc: Price, Wayne, EMNRD; Patterson, Bob; Sanchez, Daniel J., EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Thanks Mark.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Friday, April 25, 2008 3:33 PM
To: Chavez, Carl J, EMNRD
Cc: Price, Wayne, EMNRD; Patterson, Bob
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Carl,

We sent a check to OCD on 2-19-08. Our records show that the check never cleared the bank. We will be reissuing another check next week and will send it directly to your attention with a return receipt and signature requested. We will also send the proposed language to you next week.

Thank you,

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Friday, April 25, 2008 1:07 PM
To: Philliber, Mark; Patterson, Bob
Cc: Sanchez, Daniel J., EMNRD; Price, Wayne, EMNRD; Jones, William V., EMNRD
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Mark:

The OCD's last correspondence with Key Energy Services, Inc. on the above referenced well was on February 15, 2008 (see messages below). The OCD has yet to receive the proposed language that Mr. Price requested nor the final fee on the OCD discharge permit. Please send the final fee as requested along with your proposed language to the discharge permit for completion of the OCD discharge permit.

Based on my recollection, Key was going to arrange an OCD hearing associated with the 2 wells within the 1-mile AOR so Key and the well owner(s) could attend and provide testimony as to whether well work is required? The OCD granted an extension of the corrective action in a "Minor Modification" to the permit via e-mail. The OCD does not believe that submittal of the discharge permit fee is a function of Key's agreement with the permit, since you are currently operating under the old permit. (Expiration 8/26/06). Please send the final permit fee to the OCD within 15 days of receipt of this e-mail message along with the preferred language in the permit that Mr. Price or the OCD requested so we may work to resolve Key's concerns and to receive a final signature on the permit. The OCD may modify the permit based on the hearing, etc. and this should not delay Key from signing the permit and moving forward in good faith with the OCD to resolve the corrective action items in the new permit.

Please respond to the above message to let us know the status of Key's response or its position relative to Mr. Price's request of February 15, 2008. The OCD reserves to right consider Compliance & Enforcement Action(s) against Key Energy Services, Inc. if we do not receive the final fee and the signed permit within 15 days of this message.

Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Price, Wayne, EMNRD
Sent: Friday, February 15, 2008 10:48 AM
To: Chavez, Carl J, EMNRD
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

---

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Friday, February 15, 2008 10:32 AM
To: Price, Wayne, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Thank you, Wayne. We will provide a proposal as soon as possible.

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Price, Wayne, EMNRD [mailto:wayne.price@state.nm.us]
Sent: Friday, February 15, 2008 11:23 AM
To: Philliber, Mark
Cc: Perrin, Charlie, EMNRD; Chavez, Carl J, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Hi Mark, please propose language that you feel meets your needs and ensures protection of the environment. At this point and time OCD encourages Key to maintain the Class I status. We feel by doing so it will actually provide better protection to the environment. Once we receive your proposal we will communicate with the district office and my staff including the engineering bureau for a good path forward.

From: Phillliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Friday, February 15, 2008 9:57 AM
To: Price, Wayne, EMNRD
Cc: Chavez, Carl J, EMNRD; Molleur, Loren; Patterson, Bob; Gibson, Dan
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Good morning, Wayne,

Our review of the Attachment to the Discharge Permit containing the Discharge Permit Approval Conditions indicates in item 26. that by signing this document, Key Energy "accepts this permit and agrees to comply with all submitted commitments, including these terms and conditions contained here." As mentioned during our meeting with yourself and Carl, we do not agree with all of the conditions contained in the document, specifically item 20. B. regarding the BP wells. Until this condition is resolved, we do not feel it is appropriate for us to sign the document indicating our agreement with this condition.

Your office should receive the permit fee early next week.

Thank you, Wayne.

Mark Phillliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Friday, February 15, 2008 10:31 AM
To: Phillliber, Mark
Cc: Price, Wayne, EMNRD; Patterson, Bob
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Mr. Phillliber:

Good morning. In accordance with the letter requesting your signature and remittance of the final fee, the OCD needs to receive a signed version of the discharge permit with fee of $4,500.00 check made payable to the "Water Quality Management Fund" within 14 days of this message.

Please contact my Supervisor Mr. Wayne Price at (505) 476-3490 if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm

(Pollution Prevention Guidance is under "Publications")

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Tuesday, February 05, 2008 3:57 PM
To: Chavez, Carl J, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Carl,

Since we have not yet quite resolved the permit condition regarding the requirement for corrective action on the BP wells, we did not feel it was appropriate for us to sign the permit and submit the fee as this would imply that we agreed with all of the conditions in the permit, as the paragraph just above the signature lines begins with "Conditions accepted by:".

Thank you,

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Monday, January 28, 2008 3:14 PM
To: Philliber, Mark
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Oops!!! The UIC Class I Well fee is $4,500.00. and not $1,700.00. Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Chavez, Carl J, EMNRD
Sent: Monday, January 28, 2008 2:07 PM
To: 'Philliber, Mark'
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Mark:

OCD records show that Key has not signed and remitted the discharge plan with the $1,700 fee or check payable to the "Water Quality Management Fund." Could you please give me an update on when I will received the final signed DP with the final flat fee? Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Phillliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Friday, January 18, 2008 2:55 PM
To: Chavez, Carl J, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Thank you, Carl, we appreciate it.

Mark Phillliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Blackberry

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Thursday, January 17, 2008 1:48 PM
To: Patterson, Bob
Cc: Phillliber, Mark; EverQuest@nts-online.net; Jones, William V., EMNRD; Price, Wayne, EMNRD; Perrin, Charlie, EMNRD
Subject: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Dear Mr. Patterson:

Re: Class I Injection Well Discharge Permit SUNCO Disposal Well #1 UIC-CLI-005 (I-005)
Class I Non-Hazardous Oil Field Waste Disposal Well
SUNCO Disposal Well #1, API No. 30-045-28653
1595 FNL and 1005 FWL UL: E Section 2, T 29 N, R 12 W
San Juan County, New Mexico

The New Mexico Oil Conservation Division (NMOCD) hereby approves this "Minor Modification" to Key Energy Services, LLC.'s current Discharge Plan with the following conditions:

1) The additional corrective actions under Section 20(B) is hereby changed from February 15, 2008 to June 21, 2008.

2) The daily rate of injection volume under Section 22(C) shall not exceed 4,000 bbl. per day of injected wastes into the Point Lookout Formation, which is considered to be in a "fractured flow" condition. The operator shall not increase growth in the existing Fracture(s).

3) The maximum injection pressure under Section 22(D) is hereby increased from 1580 psig to 2,400 psig.

The NMOCD will attach this "Minor Modification" to the current Discharge Plan. Thank you for your cooperation in this matter. Please contact me if you have questions.

Note: Please be advised that NMOCD approval of this plan does not relieve Key Energy Services, LLC. of responsibility should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, and human health or the environment. In addition, NMOCD approval does not relieve Key Energy Services, LLC. of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

This inbound email has been scanned by the MessageLabs Email Security System.

Confidentiality Notice: This e-mail, including all attachments is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited unless specifically provided under the New Mexico Inspection of Public Records Act. If you are not the intended recipient, please contact the sender and destroy all copies of this message. -- This email has been scanned by the Sybari - Antigen Email System.

This inbound email has been scanned by the MessageLabs Email Security System.

Chavez, Carl J, EMNRD

From: Philliber, Mark [mphilliber@keyenergy.com]
Sent: Monday, May 05, 2008 3:15 PM
To: Chavez, Carl J, EMNRD
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Carl,

As we discussed earlier on the phone, please see below the messages between Wayne and ourselves, including the last one from Wayne asking us to provide language for review by himself and others within OCD as the next step in this process. At the end of his message, he indicated that after receiving the proposed language, communications will be held "with the district office and my staff including the engineering bureau for a good path forward."

Thank you,

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Price, Wayne, EMNRD [mailto:wayne.price@state.nm.us]
Sent: Friday, February 15, 2008 11:23 AM
To: Philliber, Mark
Cc: Perrin, Charlie, EMNRD; Chavez, Carl J, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Hi Mark, please propose language that you feel meets your needs and ensures protection of the environment. At this point and time OCD encourages Key to maintain the Class I status. We feel by doing so it will actually provide better protection to the environment. Once we receive your proposal we will communicate with the district office and my staff including the engineering bureau for a good path forward.

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Friday, February 15, 2008 9:57 AM
To: Price, Wayne, EMNRD
Cc: Chavez, Carl J, EMNRD; Molleur, Loren; Patterson, Bob; Gibson, Dan
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Good morning, Wayne,

Our review of the Attachment to the Discharge Permit containing the Discharge Permit Approval Conditions indicates in item 26. that by signing this document, Key Energy "accepts this permit and agrees to comply with all submitted commitments, including these terms and conditions contained here." As mentioned during our meeting with yourself and Carl, we do not agree with all of the conditions contained in the document, specifically item 20. B. regarding the BP wells. Until this condition is resolved, we do not feel it is appropriate for us to sign the document indicating our agreement with this condition.

Your office should receive the permit fee early next week.

Thank you, Wayne.

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Friday, February 15, 2008 10:31 AM
To: Philliber, Mark
Cc: Price, Wayne, EMNRD; Patterson, Bob
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Mr. Philliber:

Good morning. In accordance with the letter requesting your signature and remittance of the final fee, the OCD needs to receive a signed version of the discharge permit with fee of $4,500.00 check made payable to the "Water Quality Management Fund" within 14 days of this message.

Please contact my Supervisor Mr. Wayne Price at (505) 476-3490 if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Tuesday, February 05, 2008 3:57 PM
To: Chavez, Carl J, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Carl,

Since we have not yet quite resolved the permit condition regarding the requirement for corrective action on the BP wells, we did not feel it was appropriate for us to sign the permit and submit the fee as this would imply that we agreed with all of the conditions in the permit, as the paragraph just above the signature lines begins with "Conditions accepted by:".

Thank you,

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.

6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Monday, January 28, 2008 3:14 PM
To: Philliber, Mark
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Oops!!! The UIC Class I Well fee is $4,500.00. and not $1,700.00. Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Chavez, Carl J, EMNRD
Sent: Monday, January 28, 2008 2:07 PM
To: 'Philliber, Mark'
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Mark:

OCD records show that Key has not signed and remitted the discharge plan with the $1,700 fee or check payable to the "Water Quality Management Fund." Could you please give me an update on when I will received the final signed DP with the final flat fee? Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Friday, January 18, 2008 2:55 PM
To: Chavez, Carl J, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Thank you, Carl, we appreciate it.

Mark Philliber
SWD Compliance Coordinator

Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Blackberry

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Thursday, January 17, 2008 1:48 PM
To: Patterson, Bob
Cc: Philliber, Mark; EverQuest@nts-online.net; Jones, William V., EMNRD; Price, Wayne, EMNRD; Perrin, Charlie, EMNRD
Subject: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Dear Mr. Patterson:

Re: Class I Injection Well Discharge Permit SUNCO Disposal Well #1 UIC-CLI-005 (I-005)
Class I Non-Hazardous Oil Field Waste Disposal Well
SUNCO Disposal Well #1, API No. 30-045-28653
1595 FNL and 1005 FWL UL: E Section 2, T 29 N, R 12 W
San Juan County, New Mexico

The New Mexico Oil Conservation Division (NMOCD) hereby approves this "Minor Modification" to Key Energy Services, LLC.'s current
Discharge Plan with the following conditions:

1) The additional corrective actions under Section 20(B) is hereby changed from February 15, 2008 to June 21, 2008.

2) The daily rate of injection volume under Section 22(C) shall not exceed 4,000 bbl. per day of injected wastes into the Point Lookout
Formation, which is considered to be in a "fractured flow" condition. The operator shall not increase growth in the existing
Fracture(s).

3) The maximum injection pressure under Section 22(D) is hereby increased from 1580 psig to 2,400 psig.

The NMOCD will attach this "Minor Modification" to the current Discharge Plan. Thank you for your cooperation in this matter. Please contact
me if you have questions.

Note: Please be advised that NMOCD approval of this plan does not relieve Key Energy Services, LLC. of responsibility should their
operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, and human health
or the environment. In addition, NMOCD approval does not relieve Key Energy Services, LLC. of responsibility for compliance with
any other federal, state, or local laws and/or regulations.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

Chavez, Carl J, EMNRD

From: Philliber, Mark [mphilliber@keyenergy.com]
Sent: Monday, May 05, 2008 3:06 PM
To: Price, Wayne, EMNRD
Cc: Chavez, Carl J, EMNRD
Subject: Proposed language for SUNCO Disposal Well #1 Discharge Permit Approval Conditions

Wayne,

We have worked to find the best way to address Item 20 B. in the Discharge Permit Approval Conditions. We believe the most appropriate language for this item would be the following:

Required Monitoring Action:

For the Allen "A" Well No. 1 (API No. 30-045-08851) operated by BP America Production Company and located 790 feet from the North line and 790 feet from the West line of Section 1, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico, and the Cornell "C" Well No. 1 (API No. 30-045-13902) operated by BP America Production Company and located 990 feet from the North line and 990 feet from the West line of Section 11, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico, Key Energy Services, LLC proposes that the fluid levels within these two wells be monitored on a regular basis, i.e. – monthly, quarterly, or another frequency, to detect any future significant increase in these levels that might indicate an influx of fluids from the SUNCO Disposal Well #1 operations or from another source, or whether the increase is due to an existing mechanical problem within the wellbore due to casing or other problems. If an increase in wellbore fluid levels is detected, Key Energy Services, LLC will work with BP America Production Company to determine the source of the increase. If the cause is determined to be the result of the operation of the SUNCO Disposal Well #1, Key Energy Services, LLC will take the appropriate action to ensure that its operations cease having an impact on the fluid levels within the BP America Production Company well(s).

Please let us know if this language is acceptable for this Permit Approval Condition.

Thank you,

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

Chavez, Carl J, EMNRD

From: Phillíber, Mark [mphilliber@keyenergy.com]
Sent: Friday, April 25, 2008 3:33 PM
To: Chavez, Carl J, EMNRD
Cc: Price, Wayne, EMNRD; Patterson, Bob
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Carl,

We sent a check to OCD on 2-19-08. Our records show that the check never cleared the bank. We will be reissuing another check next week and will send it directly to your attention with a return receipt and signature requested. We will also send the proposed language to you next week.

Thank you,

Mark Phillíber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Friday, April 25, 2008 1:07 PM
To: Phillíber, Mark; Patterson, Bob
Cc: Sanchez, Daniel J., EMNRD; Price, Wayne, EMNRD; Jones, William V., EMNRD
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Mark:

The OCD's last correspondence with Key Energy Services, Inc. on the above referenced well was on February 15, 2008 (see messages below). The OCD has yet to receive the proposed language that Mr. Price requested nor the final fee on the OCD discharge permit. Please send the final fee as requested along with your proposed language to the discharge permit for completion of the OCD discharge permit.

Based on my recollection, Key was going to arrange an OCD hearing associated with the 2 wells within the 1-mile AOR so Key and the well owner(s) could attend and provide testimony as to whether well work is required? The OCD granted an extension of the corrective action in a "Minor Modification" to the permit via e-mail. The OCD does not believe that submittal of the discharge permit fee is a function of Key's agreement with the permit, since you are currently operating under the old permit. (Expiration 8/26/06). Please send the final permit fee to the OCD within 15 days of receipt of this e-mail message along with the preferred language in the permit that Mr. Price or the OCD requested so we may work to resolve Key's concerns and to receive a final signature on the permit. The OCD may modify the permit based on the hearing, etc. and this should not delay Key from signing the permit and moving forward in good faith with the OCD to resolve the corrective action items in the new permit.

Please respond to the above message to let us know the status of Key's response or its position relative to Mr. Price's request of February 15, 2008. The OCD reserves to right consider Compliance & Enforcement Action(s) against Key Energy Services, Inc. if we do not receive the final fee and the signed permit within 15 days of this message.

Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Price, Wayne, EMNRD
Sent: Friday, February 15, 2008 10:48 AM
To: Chavez, Carl J, EMNRD
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

---

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Friday, February 15, 2008 10:32 AM
To: Price, Wayne, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Thank you, Wayne. We will provide a proposal as soon as possible.

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Price, Wayne, EMNRD [mailto:wayne.price@state.nm.us]
Sent: Friday, February 15, 2008 11:23 AM
To: Philliber, Mark
Cc: Perrin, Charlie, EMNRD; Chavez, Carl J, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Hi Mark, please propose language that you feel meets your needs and ensures protection of the environment. At this point and time OCD encourages Key to maintain the Class I status. We feel by doing so it will actually provide better protection to the environment. Once we receive your proposal we will communicate with the district office and my staff including the engineering bureau for a good path forward.

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Friday, February 15, 2008 9:57 AM
To: Price, Wayne, EMNRD
Cc: Chavez, Carl J, EMNRD; Molleur, Loren; Patterson, Bob; Gibson, Dan
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Good morning, Wayne,

Our review of the Attachment to the Discharge Permit containing the Discharge Permit Approval Conditions indicates in item 26. that by signing this document, Key Energy "accepts this permit and

agrees to comply with all submitted commitments, including these terms and conditions contained here." As mentioned during our meeting with yourself and Carl, we do not agree with all of the conditions contained in the document, specifically item 20. B. regarding the BP wells. Until this condition is resolved, we do not feel it is appropriate for us to sign the document indicating our agreement with this condition.

Your office should receive the permit fee early next week.

Thank you, Wayne.

Mark Philliber
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Friday, February 15, 2008 10:31 AM
To: Philliber, Mark
Cc: Price, Wayne, EMNRD; Patterson, Bob
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Mr. Philliber:

Good morning. In accordance with the letter requesting your signature and remittance of the final fee, the OCD needs to receive a signed version of the discharge permit with fee of $4,500.00 check made payable to the "Water Quality Management Fund" within 14 days of this message.

Please contact my Supervisor Mr. Wayne Price at (505) 476-3490 if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Tuesday, February 05, 2008 3:57 PM
To: Chavez, Carl J, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Carl,

Since we have not yet quite resolved the permit condition regarding the requirement for corrective action on the BP wells, we did not feel it was appropriate for us to sign the permit and submit the fee as this would imply that we agreed with all of the conditions in the permit, as the paragraph just above the signature lines begins with "Conditions accepted by:".

Thank you,

Mark Phillibe
SWD Compliance Coordinator
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Cell

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Monday, January 28, 2008 3:14 PM
To: Philliber, Mark
Subject: FW: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Oops!!! The UIC Class I Well fee is $4,500.00. and not $1,700.00. Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Chavez, Carl J, EMNRD
Sent: Monday, January 28, 2008 2:07 PM
To: 'Philliber, Mark'
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Mark:

OCD records show that Key has not signed and remitted the discharge plan with the $1,700 fee or check payable to the "Water Quality Management Fund." Could you please give me an update on when I will received the final signed DP with the final flat fee? Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Philliber, Mark [mailto:mphilliber@keyenergy.com]
Sent: Friday, January 18, 2008 2:55 PM
To: Chavez, Carl J, EMNRD
Subject: RE: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Thank you, Carl, we appreciate it.

Mark Philliber
SWD Compliance Coordinator

Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705
(432) 571-7203 Office
(432) 770-5064 Blackberry

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Thursday, January 17, 2008 1:48 PM
To: Patterson, Bob
Cc: Philliber, Mark; EverQuest@nts-online.net; Jones, William V., EMNRD; Price, Wayne, EMNRD; Perrin, Charlie, EMNRD
Subject: Minor Modification to UIC-CLI-005 (I-005) Discharge Plan

Dear Mr. Patterson:

Re: Class I Injection Well Discharge Permit SUNCO Disposal Well #1 UIC-CLI-005 (I-005)
Class I Non-Hazardous Oil Field Waste Disposal Well
SUNCO Disposal Well #1, API No. 30-045-28653
1595 FNL and 1005 FWL UL: E Section 2, T 29 N, R 12 W
San Juan County, New Mexico

The New Mexico Oil Conservation Division (NMOCD) hereby approves this "Minor Modification" to Key Energy Services, LLC.'s current Discharge Plan with the following conditions:

1) The additional corrective actions under Section 20(B) is hereby changed from February 15, 2008 to June 21, 2008.

2) The daily rate of injection volume under Section 22(C) shall not exceed 4,000 bbl. per day of injected wastes into the Point Lookout Formation, which is considered to be in a "fractured flow" condition. The operator shall not increase growth in the existing Fracture(s).

3) The maximum injection pressure under Section 22(D) is hereby increased from 1580 psig to 2,400 psig.

The NMOCD will attach this "Minor Modification" to the current Discharge Plan. Thank you for your cooperation in this matter. Please contact me if you have questions.

Note: Please be advised that NMOCD approval of this plan does not relieve Key Energy Services, LLC. of responsibility should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, and human health or the environment. In addition, NMOCD approval does not relieve Key Energy Services, LLC. of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm

(Pollution Prevention Guidance is under "Publications")

Confidentiality Notice: This e-mail, including all attachments is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited unless specifically provided under the New Mexico Inspection of Public Records Act. If you are not the intended recipient, please contact the sender and destroy all copies of this message. -- This email has been scanned by the Sybari - Antigen Email System.

This inbound email has been scanned by the MessageLabs Email Security System.

Confidentiality Notice: This e-mail, including all attachments is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited unless specifically provided under the New Mexico Inspection of Public Records Act. If you are not the intended recipient, please contact the sender and destroy all copies of this message. -- This email has been scanned by the Sybari - Antigen Email System.

This inbound email has been scanned by the MessageLabs Email Security System.

Confidentiality Notice: This e-mail, including all attachments is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited unless specifically provided under the New Mexico Inspection of Public Records Act. If you are not the intended recipient, please contact the sender and destroy all copies of this message. -- This email has been scanned by the Sybari - Antigen Email System.

This inbound email has been scanned by the MessageLabs Email Security System.

Confidentiality Notice: This e-mail, including all attachments is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited unless specifically provided under the New Mexico Inspection of Public Records Act. If you are not the intended recipient, please contact the sender and destroy all copies of this message. -- This email has been scanned by the Sybari - Antigen Email System.

This inbound email has been scanned by the MessageLabs Email Security System.

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, August 14, 2007 1:20 PM
To: 'EverQuest@nts-online.net'; Jones, William V., EMNRD
Cc: Ezeanyim, Richard, EMNRD; Price, Wayne, EMNRD; Loren Molleur; Phil Woods
Subject: RE: Sunco Step-Rate Test

Mr. Duffey:

Please note that we are awaiting the testing information in its entirety before we set the max. allowable injection pressure as mentioned in the last sentence of my note below, "I am going to stipulate a maximum injection pressure of 1580 psig, unless the Fall-Off Test data and the rest of the data package that Mr. Duffey is sending the OCD supports a higher injection pressure."

Upon receipt of your digital data on the SRT, the OCD will forward the info. to the EPA to analyze it through pressure-transient methods (PTA). In addition, we expect a copy of your analysis of the SRT using PTA. In the interim, could you please send the OCD the following:

1) Tubing size.
2) Plastic coated, if so, the type of plastic coating with the roughness factor of the coating?
3) Depth of tubing.
4) How long has the tubing been in place? How long has tubing and coating been in the well?
5) Injection rate vs. Time plot for the history of the well.

In order for your estimated allowable injection pressure to be raised above 1580 psig, you need to show that the measured friction is equivalent to what the friction factor charts and calculations show. Currently, this would mean a total friction loss of about 1220 psig.

There is some concern about the permanent tubing size that will be used in the well based on your SRT pressure of 2800 psi. There would be no concern about tubing changes in the well if Key is limited to 1580 psig as the OCD has calculated from submitted SRT data to date. However, if friction is allowed to boost the pressure to Key's desired pressure limit, and Key enlarges the tubing size in the well at any time during operations, Key could potentially damage the reservoir.

I hope this helps you to understand the OCD's concerns. The OCD is considering issuing a final DP permit with the 1580 psig maximum allowable pressure in order to complete the permit process. In addition, the DP will approve the application renewal contingent on corrective actions to a couple of BP wells. If at a later date, Key can justify a higher maximum injection rate through SRT and friction data or analysis, the OCD will consider amending the maximum allowable pressure under a minor modification to the permit if the data warrants. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Terry M. Duffey [mailto:EverQuest@nts-online.net]
Sent: Tuesday, August 14, 2007 11:29 AM
To: Chavez, Carl J, EMNRD; Jones, William V., EMNRD
Cc: Ezeanyim, Richard, EMNRD; Price, Wayne, EMNRD; Loren Molleur; Phil Woods

Subject: RE: Sunco Step-Rate Test

Key Energy Services, LLC went to a great deal of expense to run the recent step-rate test. This included the placement of bottomhole pressure recording device at the top perforation to get accurate information ***at the point of injection*** into the Point Lookout disposal zone. The purpose of placing the bomb on bottom was to eliminate the need to calculate frictional losses in the tubulars and across the perforations.

Your recommendation completely disregards the actual measured data when you arrive at a maximum surface injection pressure of 1573 psi. In other words, you are completely disregarding the frictional losses in the system (approximately 1250 psi at the inflection point). The formation is **NOT** impacted by these frictional losses as they are exerted counter to the direction of flow as illustrated in the formula below:

Bottom Hole Injection Pressure = Well Head Injection Pressure + Hydrostatic Head – **Pipe Friction – Perforation Friction**

The bottom hole point is truly the only place that matters since that is where the "fracture" is taking place when the "breakover" point is seen during a SRT. Based on the actual measured data the surface injection pressure at the inflection point is approximately 2800 psi. To use your methodology would be discounting the actual bottom hole data gathered during the SRT – I don't think Key Energy would be getting much for their $20,000 investment in the step-rate test if this is the direction you want to take in this important matter. Please feel free to call me at 432-978-1126 if you wish to discuss this further.

Terry M. Duffey
EverQuest Energy Corporation – Dominating World Oil - One Well at a Time.
PO Box 10079
Midland, Texas 79702
432-686-9790
432-682-3821 Fax
EverQuest@nts-online.net

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Monday, August 13, 2007 3:01 PM
To: Jones, William V., EMNRD; EverQuest@nts-online.net
Cc: Ezeanyim, Richard, EMNRD; Price, Wayne, EMNRD
Subject: RE: Sunco Step-Rate Test

Will:

Thanks for the engineering review of data submitted by Key to date. It appears based on paragraph 3 of your message below that the maximum allowable injection pressure is 1580 psig. Receipt of the fall-off test data should confirm this. You mentioned to me that there appears to be a significant friction pressure on the well and you are unsure of whether the well is obstructed or the formation itself is responsible for the friction pressure on this well. There would be a concern that if the friction obstruction is in the tubing and the tubing could potentially fail. I presume that the well was gauged before the SRT and Fall-Off Tests were performed; consequently, I would suspect that the significant friction pressure is from the formation itself and not from an obstruction(s) in the tubing?

Anyway, I am going to stipulate a maximum injection pressure of 1580 psig, unless the Fall-Off Test data and the rest of the data package that Mr. Duffey is sending the OCD supports a higher injection pressure. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Jones, William V., EMNRD
Sent: Monday, August 13, 2007 2:37 PM
To: Chavez, Carl J, EMNRD
Cc: Ezeanyim, Richard, EMNRD; Price, Wayne, EMNRD
Subject: RE: Sunco Step-Rate Test

Hello Carl:

The surface pressures in this test are dominated by friction. I don't know the casing size, tubing size, type of coating, or age of tubing/coating, but sometimes the operator can install the largest tubing possible and/or new plastic coated tubing to reduce friction.

If the bottom hole break is extrapolated to the surface pressure and that used as the allowable, then any improvement in friction between surface and bottom hole would result in the formation being exposed to higher pressures than fracture pressures and could cause problems. Because this SRT and the previous one run on this well were dominated by friction, I recommend that the bottomhole fracturing pressure point be extrapolated to a surface pressure by only using a static water gradient (0.433). In this manner:

....the 3470 psi bottom hole break divided by the top perf depth of 4380 gives a gradient of 0.7922. Subtract 0.433 from this = 0.3592 surface pressure gradient. So 0.3592 times the top perf depth gives a maximum surface injection pressure of 1573 psi. In addition, this number corresponds with the ISIP numbers seen earlier on this well.

One way to incorporate an allowable "friction" pressure added to this surface pressure is for the operator to show the OCD a common set of friction charts for plastic coated tubing of this size, at this depth, and under these injection rates. That "number" could be added to the 1573 to give the operator some leeway for friction effects. Keep in mind that we normally subtract 50 psi from any breakpoint as a safety.

Before doing the friction calculation, this Step Rate Test should be analysed using PTA methods. Points below the shown break should be examined and points above should be examined. The analysis should look for evidence of linear flow both above and below the 3470 psi bottom hole "break". This analysis would determine if the breakpoint shown represents the first fracturing of the formation. The operator could ask the consultants analyzing the falloff test to check this PTA also. We can also attempt to do this with our software - or allow the EPA in Dallas to do it for us.

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Monday, August 13, 2007 3:01 PM
To: Jones, William V., EMNRD; 'EverQuest@nts-online.net'
Cc: Ezeanyim, Richard, EMNRD; Price, Wayne, EMNRD
Subject: RE: Sunco Step-Rate Test

Will:

Thanks for the engineering review of data submitted by Key to date. It appears based on paragraph 3 of your message below that the maximum allowable injection pressure is 1580 psig. Receipt of the fall-off test data should confirm this. You mentioned to me that there appears to be a significant friction pressure on the well and you are unsure of whether the well is obstructed or the formation itself is responsible for the friction pressure on this well. There would be a concern that if the friction obstruction is in the tubing and the tubing could potentially fail. I presume that the well was gauged before the SRT and Fall-Off Tests were performed; consequently, I would suspect that the significant friction pressure is from the formation itself and not from an obstruction(s) in the tubing?

Anyway, I am going to stipulate a maximum injection pressure of 1580 psig, unless the Fall-Off Test data and the rest of the data package that Mr. Duffey is sending the OCD supports a higher injection pressure. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Jones, William V., EMNRD
Sent: Monday, August 13, 2007 2:37 PM
To: Chavez, Carl J, EMNRD
Cc: Ezeanyim, Richard, EMNRD; Price, Wayne, EMNRD
Subject: RE: Sunco Step-Rate Test

Hello Carl:

The surface pressures in this test are dominated by friction. I don't know the casing size, tubing size, type of coating, or age of tubing/coating, but sometimes the operator can install the largest tubing possible and/or new plastic coated tubing to reduce friction.

If the bottom hole break is extrapolated to the surface pressure and that used as the allowable, then any improvement in friction between surface and bottom hole would result in the formation being exposed to higher pressures than fracture pressures and could cause problems. Because this SRT and the previous one run on this well were dominated by friction, I recommend that the bottomhole fracturing pressure point be extrapolated to a surface pressure by only using a static water gradient (0.433). In this manner:

....the 3470 psi bottom hole break divided by the top perf depth of 4380 gives a gradient of 0.7922. Subtract 0.433 from this = 0.3592 surface pressure gradient. So 0.3592 times the top perf depth gives a maximum surface injection pressure of 1573 psi. In addition, this number corresponds with the ISIP numbers seen earlier on this well.

One way to incorporate an allowable "friction" pressure added to this surface pressure is for the operator to show the OCD a common set of friction charts for plastic coated tubing of this size, at this depth, and under these injection rates. That "number" could be added to the 1573 to give the operator some leeway for friction effects. Keep in mind that we normally subtract 50 psi from any breakpoint as a safety.

Before doing the friction calculation, this Step Rate Test should be analysed using PTA methods. Points below the shown break should be examined and points above should be examined. The analysis should look for evidence of linear flow both above and below the 3470 psi bottom hole "break". This analysis would determine if the breakpoint shown represents the first fracturing of the formation. The operator could ask the consultants analyzing the falloff test to check this PTA also. We can also attempt to do this with our software - or allow the EPA in Dallas to do it for us.

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

Chavez, Carl J, EMNRD

From: Jones, William V., EMNRD
Sent: Monday, August 13, 2007 2:37 PM
To: Chavez, Carl J, EMNRD
Cc: Ezeanyim, Richard, EMNRD; Price, Wayne, EMNRD
Subject: RE: Sunco Step-Rate Test

Hello Carl:

The surface pressures in this test are dominated by friction. I don't know the casing size, tubing size, type of coating, or age of tubing/coating, but sometimes the operator can install the largest tubing possible and/or new plastic coated tubing to reduce friction.

If the bottom hole break is extrapolated to the surface pressure and that used as the allowable, then any improvement in friction between surface and bottom hole would result in the formation being exposed to higher pressures than fracture pressures and could cause problems. Because this SRT and the previous one run on this well were dominated by friction, I recommend that the bottomhole fracturing pressure point be extrapolated to a surface pressure by only using a static water gradient (0.433). In this manner:

....the 3470 psi bottom hole break divided by the top perf depth of 4380 gives a gradient of 0.7922. Subtract 0.433 from this = 0.3592 surface pressure gradient. So 0.3592 times the top perf depth gives a maximum surface injection pressure of 1573 psi. In addition, this number corresponds with the ISIP numbers seen earlier on this well.

One way to incorporate an allowable "friction" pressure added to this surface pressure is for the operator to show the OCD a common set of friction charts for plastic coated tubing of this size, at this depth, and under these injection rates. That "number" could be added to the 1573 to give the operator some leeway for friction effects. Keep in mind that we normally subtract 50 psi from any breakpoint as a safety.

Before doing the friction calculation, this Step Rate Test should be analysed using PTA methods. Points below the shown break should be examined and points above should be examined. The analysis should look for evidence of linear flow both above and below the 3470 psi bottom hole "break". This analysis would determine if the breakpoint shown represents the first fracturing of the formation. The operator could ask the consultants analyzing the falloff test to check this PTA also. We can also attempt to do this with our software - or allow the EPA in Dallas to do it for us.

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

charges for supervision, designation of EOG Resources, Inc. as operator of the well and a 200% charge for risk involved in drilling said well. Said area is located approximately 8 miles northwest of Artesia, New Mexico.

Given under the Seal of the State of New Mexico Oil Conservation Commission at Santa Fe, New Mexico on this 8th day of August, 2007.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Mark E. Fesmire, P. E.
Division Director

S E A L

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, August 09, 2007 12:42 PM
To: 'EverQuest@nts-online.net'; Jones, William V., EMNRD
Cc: Bob Patterson; Phil Woods; Loren Molleur; Tom.Boyce@bp.com; rfuller@keyenergy.com; Price, Wayne, EMNRD
Subject: RE: Sunco SWD (I-005)

Mr. Duffey:

The OCD is in receipt of your message below. We are currently considering your recommendations outlined below. We request that you expedite the results of the Step-Rate Test and Well Fall-Off Test via e-mail and the Internet ASAP so we may stipulate the maximum injection pressure into the final permit. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Terry M. Duffey [mailto:EverQuest@nts-online.net]
Sent: Thursday, August 09, 2007 1:38 PM
To: Jones, William V., EMNRD; Chavez, Carl J, EMNRD
Cc: Bob Patterson; Phil Woods; Loren Molleur; Tom.Boyce@bp.com; rfuller@keyenergy.com
Subject: Sunco SWD

I am awaiting the tearsheets and Publication Affidavits from the newspapers. I will forward these to you in order to complete our notification requirements related to this Discharge Permit RENEWAL application process. As far as we can tell this will complete our side of the application process according to 20.6.2.3108.

As you know, we are aware of the emails from Tom Boyce at BP America expressing their concern about the lack of cement across the Point Lookout disposal zone in their two wells located approximately 1-mile from the Sunco SWD. We have met with Tom Boyce in this regard to talk about the remedial options available. We will continue to do so until a mutually agreeable solution is reached. In the meantime we will continue the approval process of our DP Renewal application.

We know that your bureau is concerned about the uncemented nature of these two wells inside the AOR. We respectfully ask that you consider the fact that, by BP's own admission, *"...these two wells have NOT been affected by the SWD to date"*. While remedial cementing is certainly possible in theory we hate to start down this road of appearing to solve a problem that does not exist at this point in time or may never present itself in the future.

We also know that it is up to your discretion to require corrective actions be taken as a condition of approval to inject. Please bear in mind that injection has taken place since 1993 in the Sunco well where millions and millions of barrels have already been injected with no problem of communication in any surrounding AOR wells. The recent results of the step-rate test should also give you some confidence in the strength of the formation we are injecting into.

As an alternative we would recommend that the two BP wells be outfitted with pressure equipment to monitor for water breakthrough, etc. Continued injection into the Sunco well could then be contingent on the reporting of

acceptable pressures in these two wellbores. Key Energy would be happy to work with BP America to implement this type of surveillance.

Finally, the liability problems associated with "fixing" these wells presents a tricky legal problems, etc. We hate to start down that road if we can agree on a better alternative. Obviously working inside 1960-vintage wellbores can be problematical. The chance of losing this type well due to mechanical conditions of older wellbores is a very real consideration at this point in their life. Avoiding these circumstances would be in our best interest at this point in time.

We respectfully ask that you consider all of these points before making a decision. We will be happy to meet with you and BP America to arrive at a mutually agreeable solution.

Terry M. Duffey
EverQuest Energy Corporation – Dominating World Oil - One Well at a Time.
PO Box 10079
Midland, Texas 79702
432-686-9790
432-682-3821 Fax
EverQuest@nts-online.net

Chavez, Carl J, EMNRD

From: Boyce, Tom [Tom.Boyce@bp.com]
Sent: Thursday, July 26, 2007 8:53 AM
To: Chavez, Carl J, EMNRD
Subject: RE: Key Energy Discharge plan permit renewal (UIC-CLI-005-3 I-005)

Carl:

The producing wells we are concerned about are:

Allen A1 30-045-08851
Cornell C1 30-045-13092

Tom Boyce
Production Engineer
BP America San Juan South Producing Asset

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Thursday, July 26, 2007 7:57 AM
To: Boyce, Tom
Subject: RE: Key Energy Discharge plan permit renewal (UIC-CLI-005-3 I-005)

Mr. Boyce:

Could you please provide the API#s for the wells. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Boyce, Tom [mailto:Tom.Boyce@bp.com]
Sent: Wednesday, July 25, 2007 5:12 PM
To: Chavez, Carl J, EMNRD; Perkins, James M; Burns-Morton, Julie D; Hawkins, James W; Mosher, Scott L; Schlotterback, Larry N.; Stansel, John H; Schroeder, Charlotte Y
Subject: Key Energy Discharge plan permit renewal (UIC-CLI-005-3 I-005)

Carl:

We are aware of Key Energy's application to renew their Class I injection permit into the Pt Lookout formation via the SUNCO SWD 1 well located in Sec 2, T29N, R12W. BP America operates two producing Dakota gas wells located approximately one mile from the SUNCO SWD 1. These wells are not cemented across the Pt. Lookout based on calculated cement fillup volumes. We have not been affected by the water disposal to date, but have concern that the wells are not isolated across the injection interval and may be affected by continued injection. These wells are producing at economic rates, and we expect a number of years of remaining life. We would request that the commission consider the condition of these wellbores in their review of Key's application.

Thank you for your attention.

Tom Boyce
Production Engineer
San Juan South Asset Team

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, July 24, 2007 3:22 PM
To: 'EverQuest@nts-online.net'
Cc: Jones, William V., EMNRD; Price, Wayne, EMNRD
Subject: RE: Step Rate Questions

Terry:

Hi. Thanks for the update. After Key and the OCD complete the 30 day public notice process, we work to finalize the final permit considering any comments or oversight. If Key and the OCD do not receive any public comments, it is possible that the OCD may approve the discharge plan renewal with corrective action(s) to any well within the 1 mile AOR from Key's injection well that lack cement in the injection interval and formation that Key is injecting into. The corrective action(s) shall prevent adverse impacts to any oil and gas producing AOR wells and fluid migration upward into underground sources of drinking water. The OCD hopes to have a final discharge plan permit in the mail the Key within 60 days of the administratively complete letter dated June 7, 2007. I highly recommend that you submit the results of the step-rate test and fall-off test ASAP so we may finalize the maximum injection pressure in the discharge plan.

I believe you have met with BP that has at least 1 well within the 1 mile AOR where corrective action(s) was discussed to seal off the interval of concern. I spoke with Mr. Tom Boyce of BP today and he indicated via a verbal comment that there is at least one of their wells within the 1 mile AOR that is not properly sealed. Any corrective action solution(s) that you discussed and reached resolution on would be appreciated for the OCD to consider for the corrective action(s) portion of the approval. Unfortunately, the condition for approval on the Key well will have a condition with a potential date for corrective action completion that will need to be satisfied for the renewal discharge plan to remain in place. Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Terry M. Duffey [mailto:EverQuest@nts-online.net]
Sent: Tuesday, July 24, 2007 3:38 PM
To: Chavez, Carl J, EMNRD
Subject: RE: Step Rate Questions

We ran the falloff test for 3-days. We then flowed the well back to the pit for 2 days prior to beginning the SRT. We shut the well back in for 1-hr before the SRT was begun last Saturday morning. The wellhead pressure was stable at 850 psi before we began the first pumping step at 0.5 bpm. Kelly Roberts from the Aztec district office witnessed the testing. Once again, just like the December 1993 test, we saw no pressure breakover throughout our 0.50 bpm increments up to 7.0 bpm. This makes three tests in the Point Lookout formation (two in this well and one in the McGrath well one mile north) that show the formation is very porous and resilient under injection pressure stress. It is simply a great formation for injection – and the tests prove it. I will be putting together the full report over the next several weeks and will get it to you.

We have published the two public notices as required. I am awaiting the tear sheets and affidavits from the publishers. They will be forwarded to you soon thereafter.

What is the next step in the approval process?

Terry M. Duffey
EverQuest Energy Corporation – Dominating World Oil - One Well at a Time.
PO Box 10079
Midland, Texas 79702
432-686-9790
432-682-3821 Fax
EverQuest@nts-online.net

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Tuesday, July 24, 2007 11:39 AM
To: EverQuest@nts-online.net
Subject: FW: Step Rate Questions

Terry:

FYI. We're thinking that the formation may be over pressured, but we'll see what your tests show. Thanks.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Jones, William V., EMNRD
Sent: Tuesday, July 17, 2007 4:46 PM
To: Perrin, Charlie, EMNRD
Cc: Price, Wayne, EMNRD; Ezeanyim, Richard, EMNRD; Chavez, Carl J, EMNRD
Subject: RE: Step Rate Questions

Hey Charlie:
Carl is no esta acqui. - I'll copy Wayneski on this.

I think we told Terry to work with you in Aztec on the Step Rate test design but to be sure and get two or three points under the current allowable injection pressure before cranking the pumps up. He may have to backflow the well into some transports to get the pressure down before starting his test - or just extend the falloff period.

As I remember this the previous SRTs started possibly too high and encountered no obvious breakover but had lots of tubing friction and while interpreting the test, the operator was given the assumption that this friction would always be there - so they got a high injection pressure limit. Another way to interpret these types of tests is to take the bottom hole fracture pressure and subtract the 0.433 static water gradient. In otherwords, immediate shutdown pressure has no friction but shows the strength of the formation.

If they will start this test at a low pressure, it will be much more believable. The test should be run only as high as a reasonable level - could assume about 0.8 surface gradient maximum (without friction).

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

From: Perrin, Charlie, EMNRD
Sent: Tuesday, July 17, 2007 3:21 PM
To: Jones, William V., EMNRD
Cc: Catanach, David, EMNRD; Ezeanyim, Richard, EMNRD; Chavez, Carl J, EMNRD
Subject: RE: Step Rate Questions

Will

I called you because Terry with Key said you and Carl were the folks he had been talking with regarding the fall off and step rate test.

He left the office at noon and said he will keep trying to contact you or Carl.

FYI He is currently doing the fall off test and wants to know if he can begin the step rate test when the well has dropped off to 1000#s or if he has to continue the fall off or flow back until he can get two points under the .2psi/foot requirement,

He is going to continue trying to call you, and/or Carl,

Thanks|
Charlie

From: Jones, William V., EMNRD
Sent: Tuesday, July 17, 2007 2:56 PM
To: Perrin, Charlie, EMNRD
Cc: Catanach, David, EMNRD; Ezeanyim, Richard, EMNRD
Subject: Step Rate Questions

Hey Charlie:
have been trying to call you and the line is always busy. you left a message with a question about a step rate test.

David Catanach is still processing Step Rate Test related permits - if he can't be reached, give me a call,

Regards,

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

Email System.

Chavez, Carl J, EMNRD

From: Jones, William V., EMNRD
Sent: Tuesday, July 17, 2007 4:46 PM
To: Perrin, Charlie, EMNRD
Cc: Price, Wayne, EMNRD; Ezeanyim, Richard, EMNRD; Chavez, Carl J, EMNRD
Subject: RE: Step Rate Questions

Hey Charlie:
Carl is no esta acqui. - I'll copy Wayneski on this.

I think we told Terry to work with you in Aztec on the Step Rate test design but to be sure and get two or three points under the current allowable injection pressure before cranking the pumps up. He may have to backflow the well into some transports to get the pressure down before starting his test - or just extend the falloff period.

As I remember this the previous SRTs started possibly too high and encountered no obvious breakover but had lots of tubing friction and while interpreting the test, the operator was given the assumption that this friction would always be there - so they got a high injection pressure limit. Another way to interpret these types of tests is to take the bottom hole fracture pressure and subtract the 0.433 static water gradient. In otherwords, immediate shutdown pressure has no friction but shows the strength of the formation.

If they will start this test at a low pressure, it will be much more believable. The test should be run only as high as a reasonable level - could assume about 0.8 surface gradient maximum (without friction).

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

From: Perrin, Charlie, EMNRD
Sent: Tuesday, July 17, 2007 3:21 PM
To: Jones, William V., EMNRD
Cc: Catanach, David, EMNRD; Ezeanyim, Richard, EMNRD; Chavez, Carl J, EMNRD
Subject: RE: Step Rate Questions

Will

I called you because Terry with Key said you and Carl were the folks he had been talking with regarding the fall off and step rate test.

He left the office at noon and said he will keep trying to contact you or Carl.

FYI He is currently doing the fall off test and wants to know if he can begin the step rate test when the well has dropped off to 1000#s or if he has to continue the fall off or flow back until he can get two points under the .2psi/foot requirement,

He is going to continue trying to call you, and/or Carl,

Thanks|
Charlie

From: Jones, William V., EMNRD
Sent: Tuesday, July 17, 2007 2:56 PM
To: Perrin, Charlie, EMNRD
Cc: Catanach, David, EMNRD; Ezeanyim, Richard, EMNRD
Subject: Step Rate Questions

Hey Charlie:
have been trying to call you and the line is always busy. you left a message with a question about a step rate test.

David Catanach is still processing Step Rate Test related permits - if he can't be reached, give me a call,

Regards,

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, June 27, 2007 3:09 PM
To: 'EverQuest@nts-online.net'
Subject: Key Energy Class I Well Administratively Complete Letter (UICL I-005)

Terry M. Duffey
EverQuest Energy Corporation
PO Box 10079
Midland, Texas 79702
432-686-9790
432-682-3821 Fax
EverQuest@nts-online.net

Please note that the administratively complete letter was mailed to the wrong address and this message is to inform you that the New Mexico Oil Conservation Division (NMOCD) deemed the application administratively complete on June 7, 2007 (please refer to website at http://www.emnrd.state.nm.us/ocd/ENV-DraftPublicEtc.htm Key Energy Services, LLC. This marks the beginning of the public notice period. I hope to complete a final permit within 60 days of the above date.

Could you please provide the Key Energy Services, LLC contact information for the above Class I Well, since Mr. Mike Talovich does not appear to be employed by Key Energy Services, LLC. Also, please contact me if you have questions. Thank you.

Chavez, Carl J, EMNRD

From: Baker, W [WBaker@keyenergy.com]
Sent: Friday, February 09, 2007 12:46 PM
To: Chavez, Carl J, EMNRD
Subject: RE: Key Energy, Inc. Bonds

Mr. Chavez:

Thanks for the information. I will read through this today and get started on it Monday. I appreciate all the help you have provided on this matter. Thank you again and have a good weekend.

WA

-----Original Message-----
From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Friday, February 09, 2007 12:17 PM
To: Baker, W
Cc: Price, Wayne, EMNRD
Subject: Key Energy, Inc. Bonds

Mr. Baker:

As we know, Key Energy, Inc. (Key) is in the process of a name change, which includes the name on its Oil Conservation Division Bonds. Based on our telephone conversation this morning, please find attached a copy of the bond in the amount of $17,800 for the Key Four Corners, Inc. Class I Well that the OCD is requiring a Rider for- as part of Key's name change request. We have requested that Key provide a new estimate for plugging the Class I Well and that reflects the new name that Key is seeking with the OCD.

In addition, we notice that the expiration date of Key's Discharge Plan (I-005) expired on August 26, 2006. Consequently, Key needs to renew its application and certain applicable information (i.e., new AOR of 1/2 mile for any new wells penetrating the Class I injection interval) as part of the Discharge Plan renewal. The Renewal will require a $100 filing fee. Upon an OCD determination of "Administratively Complete," the OCD and Key will be required to follow new WQCC Public Notice requirements (see applicable attachments). Please be aware that as part of the renewal application, Key will need to address the "Administratively Complete" language in the WQCC Public Notice regulations. Upon finalization of the Discharge Plan, the OCD will mail 2 copies (one for signature and return with final fee payment of $4,500) to Key. Checks will need to be made out to "Water Quality Management Fund" with a reference to the permit number, i.e., I-005.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/
(Pollution Prevention Guidance is under "Publications")

Chavez, Carl J, EMNRD

From: Terry M. Duffey [EverQuest@nts-online.net]
Sent: Thursday, April 05, 2007 2:37 PM
To: Chavez, Carl J, EMNRD
Cc: W. A. Baker
Subject: Key Energy - Sunco SWD
Attachments: Key Energy - Sunco SWD - AOR.pdf

Response to your earlier email:
Note the attachment of four pdf-format documents

It seems like your suspicion on two of the wells inside the AOR may be well-founded...

Allen A #1 (API# 088514) refer to completion document that was extracted from the original SWD submission in 1996. It shows 300 sx of cement pumped after setting 4.50" casing at 6785'. Assuming a cement yield of 1.3 cf/sack would fill 1712' inside the 7.875" x 4.500" annulus. Calculated TOC would be around 5000'. This is ~600' below the injection interval of 4350-4460'. Incidentally this well lies at the outer edge of the 1-mile radius of review. No casing problems have been reported to the OCD as far as imaged documents on their website.

Cornell C #1 (API# 13092) refer to the three completion documents retrieved from the OCD website. Once again they show 300 sx of cement pumped after setting 4.50" casing at 6604'. Using the same cement assumptions puts the calculated TOC around 4900', or ~500' below the injection interval of the Sunco SWD well subject to this application renewal. A document filed by BP America one year ago references a suspected casing leak in the well. No subsequent follow-up filing to report on the anticipated well intervention were found on the OCD image website.

If we need to investigate these two wells further we will do so. Please let us know how we should proceed. As you can see, both of the wellbores were completed in 1961. They are old and probably very marginal wells.

FYI these two wells were obviously included in the original application in 1996 as well as the first renewal in 2001. As a result, we did not focus on these two wells to any great degree. These are the only two wells in the AOR that penetrate the injection interval 4350-4460' that had such a small volume of cement pumped during the production casing operation. Calculated cement on the other wells is more than adequate to cover the injection interval.

Terry M. Duffey
EverQuest Energy Corporation – Dominating World Oil - One Well at a Time.
PO Box 10079
Midland, Texas 79702
432-686-9790
432-682-3821 Fax
EverQuest@nts-online.net

THE SANTA FE
NEW MEXICAN
Founded 1849

VICL-5

NM ENERGY MINERAL NA
OFFICE OF SECRETARY A
1220 S ST FRANCIS DR
SANTA FE NM 87505

ALTERNATE ACCOUNT: 56673
AD NUMBER: 00218289 ACCOUNT: 00002202
LEGAL NO: 81128 P.O. #: 52100-3956
309 LINES 4 TIME(S) 580.92
AFFIDAVIT: 6.00
TAX: 44.75
TOTAL: 631.67

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO
COUNTY OF SANTA FE

I, T. Valencia, being first duly sworn declare and say that I am Legal Advertising Representative of THE SANTA FE NEW MEXICAN, a daily newspaper published in the English language, and having a general circulation in the Counties of Santa Fe and Los Alamos, State of New Mexico and being a newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 on Session Laws of 1937; that the publication # 81128 a copy of which is hereto attached was published in said newspaper 4 day(s) between 06/12/2007 and 07/03/2007 and that the notice was published in the newspaper proper and not in any supplement; the first date of publication being on the 12nd day of June, 2007 and that the undersigned has personal knowledge of the matter and things set forth in this affidavit.

/S/_____
LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 3rd day of July, 2007

Notary Pamela Anne Beach

Commission Expires: May 31, 2011

OFFICIAL SEAL
Pamela Anne Beach
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 5-31-11

NOTICE OF PUBLICATION

STATE OF NEW MEXICO ENERGY,

MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

Notice is hereby given that pusuant to New Mexico Water Quality Control Commission Regulations (20.6.2.3106 NMAC), the following discharge permit application(s) has been submited to the Director of the New Mexico Oil Conservation Division ("NMOCD"), 1220 S. Saint Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 467-3440

(I-005) Key Energy Services, LLC., Mike Talovich P.O. Box 900 Farmington, New Mexico 87499 has submitted a new application for their Class I Injection Well Discharge Permit (UIC-CLI-005) for SUNCO Disposal Well # 1 located in the SW/4, NW/4 of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico. The injection is located approximately 6 miles southwest of Aztec at the inersection of CR-350 and CR-3773. Oil field exempt non-hazardous waste will be disposed into the Point Lookout Formation at an injection interval from 4,380 ft. to 4,480 ft. below ground surface at adaily rate of 2,000 to 4,000 barrels per day and at a maximum injection pressure of 1500 psig. Groundwater most likely to be affected by a spill, leak, or accidental discharge ia at a depth from 75 to 120 ft. below ground surface, with a totoal dissolved solids concentration of 450 mg/L. The discharge plan addresses well construction, operation, monitoring of the well, associated surface facilities, and provides a contingency plan in the eventof accidental spills, leaks, and other accidental discharges in order to protect fresh water.

The NMOCD has determined that the application is administratively complete and has prepared a draft permit. The NMOCD will accept comments and statements of interest regarding this application and will create a facility-specific mailing list for persons who wish to receive future notices. Persons interested in obtaining further information, submitting coments or requesting to be on a facility-specific mailing listfor future notices may contact the Environmental Bureau Chief of the Oil Conservation Division at the address given above. The administrative completeness determiation and draft permit may be viewed at the above address between 8:00 a.m. and 4:00 p.m. Monday through Friday, or may also be viewed at the NMOCD web site http://www.emnrd.state.nm.us/ocd/. Persons interested in obtaininga copy of the application and draft permit may contact the NMOCD at the address given above. Prior to ruling on any proposed discharge permit or major modification, the Director shall allow a period of at least thirty (30) days after the date of publication of this notice, during which interested persons may submit coments or request that NMOCD hold a public hearing. Requests for a public hearing shall set forth the reasons why a hearing should be held. Ahearing will be held if the Director determines that there is significant public interest.

If no public hearing is held the Director will approve of disapprove the proposed permit based on information available, including all comments received. If a public hearing is held the Director will approve of disapprove the proposed permit based on information submited at the hearing.

Para obtener mas informacion sobre esta solicitud en espanol, sirvase comunicarse por favor: New Mexico Energy, Minerals, and Natural Resourcees Department (Depto. Del Energia, Minerals y Recursos Maturales de Nuevo Mexico), Oil Conservation Division (Depto. Conservacion Del Petroleo) 1220 South Saint Francis Drive, Santa Fe, New Mexico . (Contacto: Dorothy Phillips, 505-476-3461

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico on this 7th day of June 2007

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

SEAL

Mark Fesmire, Director

Legal #81128
Pub. June 12, 19, 26 & July 3, 2007