

UIC - I - ____9__

C-103s

Submit 1 Copy To Appropriate District Office
District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised August 1, 2011

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-045-29002-00
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No. N/A
7. Lease Name or Unit Agreement Name Disposal
8. Well Number: #001
9. OGRID Number: 037218
10. Pool name or Wildcat: Blanco/Mesa Verde

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other - (Disposal Well)
2. Name of Operator San Juan Refining Co. / Western Refining Southwest, Inc. - Bloomfield Refinery
3. Address of Operator
50 Road 4990, Bloomfield, NM, 87413

4. Well Location
Unit Letter I ; 2442 feet from the south line and 1250 feet from the East line
Section 27 Township 29 N Range 11 W NMPM County San Juan

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: Annual MIT, Bradenhead, ☒

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Western Refining Southwest, Inc. - Bloomfield Terminal requests permission to perform the annual MIT and Bradenhead test on the Class I injection well referenced above. The tests will be performed on Thursday, September 18th, 2014. Monica Kuehling has agreed to be here to monitor the tests.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Matthew Krakow TITLE Environmental Coordinator DATE 9-3-14

Type or print name Matthew Krakow E-mail address: matt.krakow@wnr.com PHONE: 505-632-4169

For State Use Only

APPROVED BY: Carol J. Chavez TITLE Environmental Engineer DATE 9/3/14
Conditions of Approval (if any):

Submit 1 Copy To Appropriate District Office
District I - (575) 393-6161
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1220 South St. Francis Dr.
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WELL API NO. 30-045-29002-00
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SUNDRY NOTICES AND REPORTS ON WELLS
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11. Elevation (Show whether DR, RKB, RT, GR, etc.)

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>			
OTHER: Well Stimulation / Acidize Well <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Western Refining Southwest, Inc. - Bloomfield Refinery requests permission to perform well stimulation/acidization procedures on the Class I Injection Well referenced above. The procedures for this project are attached. The procedure will be scheduled pending approval from OCD.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Kelly Robinson TITLE Environmental Supervisor DATE 9/21/2011

Type or print name Kelly Robinson E-mail address: kelly.robinson@wnr.com PHONE: 505-632-4166
For State Use Only

APPROVED BY: David J. Phoney TITLE Environmental Engineer DATE 9/22/2011
Conditions of Approval (if any):

Western Refining Southwest, Inc. – Bloomfield Refinery

Well Clean-Out and Acid Treatment Field Procedure – September 2011

Well: Disposal Well #1

Field: Mesaverde

Location: Bloomfield Refinery
S27, T29N, R11W

API No. : 30-045-29002

PROJECT: Lower injection pressure by pumping 15% HCl acid.

Prior to Job:

A safety meeting will be held for all contractors and facility visitors prior to the start of field activities. Equipment staged on-site for well clean-out and acidizing activities include two 400-bbl frac tanks to be used for flow-back after acid job. An additional frac tank may be used for flow-back during well clean out activities. The tanks will be hard-piped to the injection well piping for flow-back. All field piping will be pressured tested at 4,000 psi to ensure no leaks exist on field equipment prior to commencement of field work.

A water truck will be used for fluid displacement. Hydrants at the Bloomfield Refinery have too much pressure for these field activities. A summary of the activities proposed are as follows:

Phase 1: Clean out and Acid Spot

1. Rig up the coil tubing unit & Halliburton to well head and conduct pressure test on pumps and lines.
2. RIH with 1-¼-inch coil tubing to PBTD at 3520 ft. Clean out if necessary.
3. Pull coiled tubing up to bottom perforation at 3,460 ft KB (bottom perforation) to ensure acid placement is at the perforations.
4. Pump 200 gallons of 15% HCL with inhibitors into well.
5. Pull out coiled tubing and shut well in overnight.

Phase 2: Acid / Ball Off

- Establish an injection rate with water. Pump 4,200 gallons of 15% HCl acid w/ inhibitors and mutual solvent with 300 ea. bio-degradable ball sealers. Pump initial 500-gallons without balls.
- Displace acid to bottom perforation with ~ 24 bbls of 2% KCl water (or disposal water if available).
- Shut well in for ~ 1 hr and let acid treatment "soak".
- Open well through 2-inch line and let well flow back to frac tank. Flow back approximately 400 bbls of fluid.
- After flowback, return well to injection status and monitor rates and pressures.

Materials & Vendors

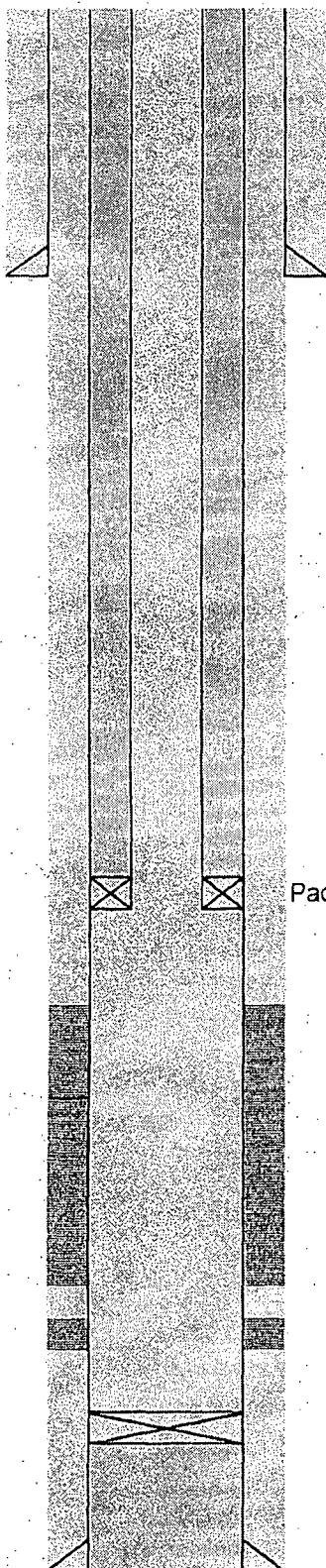
Acid: Halliburton Energy Services

Coil Tubing: Basic Energy Services

WESTERN REFINING DISPOSAL WELL #1

NW, SW SECTION 26, T29N, R11W

NO.: 30-045-29002



8-5/8", 48#/ft, Surface Casing @ 830'
TOC: Surface
Hole Size: 11.0"

Tubing: 2-7/8", Acid Resistant Fluoroline Cement Lined
Wt of Tubing: 6.5 #/ft
Wt of Tubing Lined: 7.55 #/ft
Tubing ID: 2.128"
Tubing Drift ID: 2.000"
Minimum ID @ Packer: ~1.87" estimated

Packer: Unknown Packer Type @ 3221'
Could be a Guiberson or similar model Uni-6

Perforations: 3276' - 3408' 4JSPF 0.5 EHD
Top of the Cliff House Formation: 3276'

Fill was cleaned out of well on 4/20/06
Fill was originally tagged at 3325'

Perforations: 3435' - 3460' 4JSPF 0.5 EHD
Top of the Menefee Formation: 3400'

RBP: 3520'

5-1/2", 15.5#/ft, Production Casing @ 3600'
TOC: Surface
Hole Size: 7-7/8"

SUBSURFACE		HOUSTON, TX SOUTH BEND, IN BATON ROUGE, LA	
FIGURE 1 DISPOSAL WELL #1 WELL SCHEMATIC Western Refining Inc. Bloomfield, NM			
Date:	4/26/2006	Approved By:	rls
Job No.:	70F5830	Checked By:	
Drawn By:	rls	Scale:	N/A

Submit 1 Copy To Appropriate District Office
District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
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811 S. First St., Artesia, NM 88210
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State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised August 1, 2011

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-045-29002-00
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No. N/A
7. Lease Name or Unit Agreement Name Disposal
8. Well Number: #001
9. OGRID Number: 037218
10. Pool name or Wildcat: Blanco/Mesa Verde
11. Elevation (Show whether DR, RKB, RT, GR, etc.)

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other - (Disposal Well)
2. Name of Operator San Juan Refining Co. / Western Refining Southwest, Inc. - Bloomfield Refinery
3. Address of Operator
50 Road 4990, Bloomfield, NM, 87413

4. Well Location
Unit Letter 1 : 2442 feet from the south line and 1250 feet from the east line
Section 27 Township 29 Range 11 NMPM County San Juan

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:
PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐

SUBSEQUENT REPORT OF:
REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: Well Stimulation / Acidize Well ☒

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Western Refining Southwest, Inc. - Bloomfield Refinery requests permission to perform well stimulation/acidization procedures on the Class I Injection Well referenced above. The procedures for this project are attached. The procedure will be scheduled pending approval from OCD.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Kelly Robinson TITLE Environmental Supervisor DATE 9/9/2011

Type or print name Kelly Robinson E-mail address: kelly.robinson@wnr.com PHONE: 505-632-4166
For State Use Only

APPROVED BY: Carl J. Poirier TITLE Environmental Engineer DATE 9/9/2011
Conditions of Approval (if any):

Western Refining Southwest, Inc. – Bloomfield Refinery

Well Clean-Out and Acid Treatment Field Procedure – September 2011

Well:	Disposal Well #1	Field:	Mesaverde
Location:	Bloomfield Refinery S27, T29N, R11W	API No. :	30-045-29002

PROJECT: Lower injection pressure by pumping 15% HCl acid.

Prior to Job:

A safety meeting will be held for all contractors and facility visitors prior to the start of field activities. Equipment staged on-site for well clean-out and acidizing activities include two 400-bbl frac tanks to be used for flow-back after acid job. An additional frac tank may be used for flow-back during well clean out activities. The tanks will be hard-piped to the injection well piping for flow-back. All field piping will be pressured tested at 4,000 psi to ensure no leaks exist on field equipment prior to commencement of field work.

A water truck will be used for fluid displacement. Hydrants at the Bloomfield Refinery have too much pressure for these field activities. A summary of the activities proposed are as follows:

Phase 1: Clean out and Acid Spot

1. Rig up the Sanjel coil tubing unit & Halliburton to well head and conduct press test on pumps and lines.
2. RIH with 1-1/4-inch coil tubing to PBTD at 3520 ft. Clean out if necessary.
3. Pull coiled tubing up to bottom perforation at 3,460 ft KB (bottom perforation) to ensure acid placement is at the perforations.
4. Pump 200 gallons of 15% HCL with inhibitors into well
5. Pull out coiled tubing and shut well in overnight.

Phase 2: Acid / Ball Off

- Establish an injection rate with water. Pump 4,200 gallons of 15% HCl acid w/ inhibitors and mutual solvent with 300 ea. bio-degradable ball sealers. Pump initial 500-gallons without balls.
- Displace acid to bottom perforation with ~ 24 bbls of 2% KCl water (or disposal water if available).
- Shut well in for ~ 1 hr and let acid treatment "soak".
- Open well through 2-inch line and let well flow back to frac tank. Flow back approximately 400 bbls of fluid.
- After flowback, return well to injection status and monitor rates and pressures.

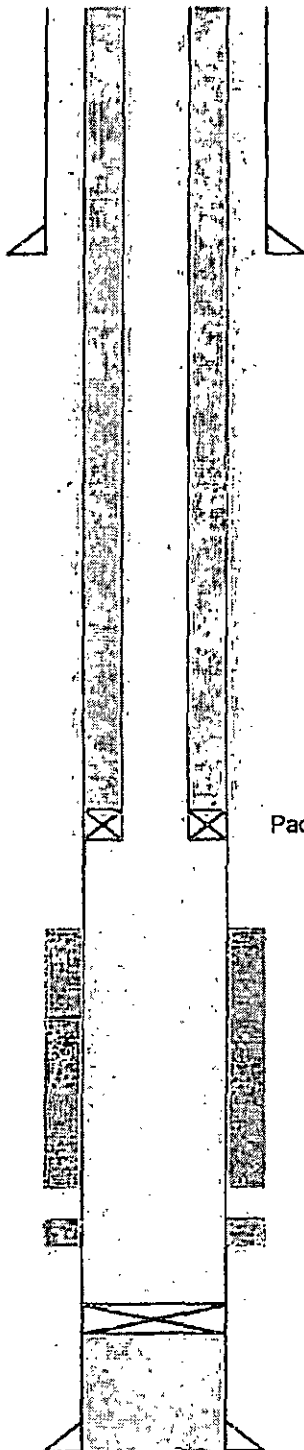
Materials & Vendors

Acid: Halliburton Energy Services
Coil Tubing: Sanjel

WESTERN REFINING DISPOSAL WELL #1
NW, SW SECTION 26, T29N, R11W

NO.: 30-045-29002

SUBSURFACE		HOUSTON, TX SOUTH BEND, IN BATON ROUGE, LA	
FIGURE 1 DISPOSAL WELL #1 WELL SCHEMATIC Western Refining Inc. Bloomfield, NM			
Date:	4/23/2006	Approved By:	rls
Drawn By:	rls	Checked By:	Job No.: 70F5830 Scale: N/A



8-5/8", 48#/ft, Surface Casing @ 830'
 TOC: Surface
 Hole Size: 11.0"

Tubing: 2-7/8", Acid Resistant Fluoroline Cement Lined
 Wt of Tubing: 6.5 #/ft
 Wt of Tubing Lined: 7.55 #/ft
 Tubing ID: 2.128"
 Tubing Drift ID: 2.000"
 Minimum ID @ Packer: ~1.87" estimated

Packer: Unknown Packer Type @ 3221'
 Could be a Guiberson or similar model Uni-6

Perforations: 3276' - 3408' 4JSPF 0.5 EHD
 Top of the Cliff House Formation: 3276'

Fill was cleaned out of well on 4/20/06
 Fill was originally tagged at 3325'

Perforations: 3435' - 3460' 4JSPF 0.5 EHD
 Top of the Menefee Formation: 3400'

RBP: 3520'

5-1/2", 15.5#/ft, Production Casing @ 3600'
 TOC: Surface
 Hole Size: 7-7/8"

RECEIVED OCD

2010 AUG 24 P 1: 06

Carl Chavez
New Mexico Oil Conservation Division
Environmental Bureau
1220 South St. Francis Dr
Santa Fe, NM 87505

Certified Mail: 7007 0220 0004 0187 1463

August 20, 2010

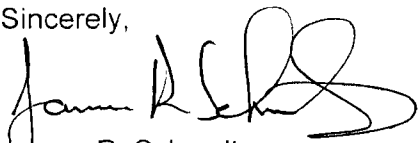
RE: Western Refining Southwest, Inc. – Bloomfield Refinery
Fall-Off Test 2010
Class I Non-Hazardous Injection Well
UICL-9

Mr. Chavez,

Please find enclosed the C-103 application for Bloomfield Refinery's 2010 Fall-Off Test for the Class I Non-Hazardous Injection Well UICL-9. Also included is the Fall-Off Test Plan incorporating your request to install bottom hole gauges at 48 hours before cessation of injection and the Wellbore Diagram.

If you have questions or concerns regarding the 2010 Fall-Off Test Plan, please contact either Randy Schmaltz (505-632-4171) or Cindy Hurtado (505-632-4161).

Sincerely,



James R. Schmaltz
Environmental Manager
Western Refining Southwest, Inc. - Bloomfield Refinery

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
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1301 W. Grand Ave., Artesia, NM 88210
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1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO.
30-045-29002-00

5. Indicate Type of Lease
STATE ☐ FEE ☒

6. State Oil & Gas Lease No.
N/A

7. Lease Name or Unit Agreement Name
Disposal

8. Well Number #001

9. OGRID Number
037218

10. Pool name or Wildcat
Blanco/Mesa Verde

SUNDRY NOTICES AND REPORTS ON WELLS
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PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ OtherX (Disposal)

2. Name of Operator
Western Refining Southwest, Inc. - Bloomfield Refinery

3. Address of Operator
#50 Road 4990 Bloomfield, NM 87413

4. Well Location

Unit Letter I: 2442 feet from the South line and 1250 feet from the East line
Section 27 Township 29 Range 11 NMPM County San Juan

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

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TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: Annual Fall-Off Test
X ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☐

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Bloomfield Refinery requests permission to perform the annual Fall-Off Test on the Class I injection well referenced above. The injection buildup period will begin on August 29, 2010. After 24 hours of stable injection the bottom hole pressure memory gauges will be lowered into the well (two memory gauges) and allowed to stabilize for 48 hours. The well will be shut-in for at least 72 hours.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Cindy Hurtado TITLE Environmental Coordinator DATE 8/20/2010

Type or print name Cindy Hurtado

E-mail address: cindy.hurtado@wnr.com

Telephone No. (505)632-4161

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____
Conditions of Approval (if any): _____

**2010 WELL BUILDUP/FALLOFF TEST PLAN
WESTERN REFINERY
BLOOMFIELD, NM
WASTE DISPOSAL WELL NO. 1**

General Test Operational Consideration

The falloff testing for Western's Waste Disposal Well No. 1 (WDW-1) will be conducted with tandem bottom hole pressure memory gauges. After 24 hours of stable injection the bottom hole pressure memory gauges will be lowered into the well (two memory gauges) and allowed to stabilize for 48 hours. The well will be shut-in for at least 72 hours and the affect of any offset wells will be considered. Before performing the fall-off testing a one mile area of review (AOR) will be conducted to determine the status of any offset wells that may be injecting into or producing from the WDW-1 injection interval. If any are found arrangements will be made with the owners of the wells to monitor those wells during the build-up/fall-off procedure. At the end of the fall-off test, the bottom hole pressure gauges will be pulled from the well making gradient stops every 1000 feet.

The injection buildup period will consist of no less than 72 hours at a constant rate and the pressure fall-off will be maintained for no less than 72 hours. The 72 hour build-up/fall-off period was established when a fall-off test procedure was performed in July, 2006 and is backed by historical data. WDW-1 injects into the Menefee and Cliff House formations. In April, 2006 a build-up/fall-off test was performed after a well cleanout and acid stimulation. The buildup/falloff test produced measurable results with all flow skin, storage and linear flow regimes present. Radial flow was not observed. The flow regimes during previous tests on this well included storage, skin, and infinite acting linear flow. Because of the low permeability of the injection interval, testing was not of sufficient length to establish radial flow.

The WDW-1 is in a confined low permeability sand interval and historically is not capable of producing a bottom hole 100 psi differential pressure drop between the final injection and shut-in pressures. The logs included in Appendix 2 show tight low porosity injection interval that contains no known commercial hydrocarbons. Records show that WDW-1 was hydraulically fractured after it was drilled. The 2006, 2008 and 2009 fall-off test data confirm this with a linear flow regime observed after the end of storage effects.

The memory gauges that will be used are SP-2000 hybrid-quartz gauges provided by Tefteller, Inc. that will have a resolution of 0.01 psi and an accuracy of $\pm 0.05\%$ of full scale. The pressure range of the gauges will be from 0 – 5,000 psi minimum. These are bottom hole memory gauges. The gauges will be lowered to the top of the injection interval at 3250 feet. The recording period will be set to record pressures at a minimum of every 5 minutes and more frequently during the early part of the fall-off test period.

The fluid that will be used for the injection test is the refinery's brine waste water (effluent). A current waste analysis of the fluid will be included in the final report. A summary of the brine waste water is in Table 2.

A crown valve has been installed on WDW-1. The lubricator will be installed onto the crown valve before running into the wellbore with the memory gauges. The well will be shut-in through two inline gate valves, one located at the wellhead and another located in the pump house. The pump house is located about 30 feet from the wellhead.

Background Information

All background information will be included in the final report encompassing a log of the events (Chronology of Field Activity), a over view of the Geology, a current area of review (AOR) update, fall-off analysis including previous injection data (rate and volume history), gauge calibration certificates, bottom hole pressure analysis, well schematic, electric logs, reservoir fluid description, and injection fluid analysis. The procedure to do the fall-off test will also be included in the final report. If necessary an AOR update will be included prior to the build-up/fall-off testing to ascertain the offset injection wells current condition. Historically there has not been any production or injection in the current injection interval within a one mile radius of WDW-1.

Western Refining (formally Giant Refining) conducted a falloff test on WDW-1 using quartz crystal bottom hole memory gauges. The tests followed EPA guidelines and were performed to comply with OCD directives for UIC non-hazardous Class I injection wells. In July of 2006 a build-up/fall-off test was conducted after the well stimulation. The 72 hour build-up portion of the testing was done at a constant injection rate of 70 gallons per minute. The fall-off portion of the testing was terminated after 84 hours. In August 2008, an additional test was conducted with final flowing rate 80 gpm prior to shutting in the well for a fall-off of 189 hours. The WDW-1 had linear flow at the end of these fall-off tests. As a result, the calculated permeability based on radial flow equations are not a reliable estimate of injection zone permeability.

Attachment 1 (Figure 1 from the 2008 fall-off test report) is the well schematic for WDW-1 which is the same as submitted in 2009. Table 1 is a summary of the injection intervals for the well. Table 2 is a summary of the injection fluid analysis. Table 3 is a summary of the formation fluid analysis. A connate water analysis prior to injection was not found in any of the records, therefore the original formation water properties will have to be estimated from offset wells. The majority of the background information can also be found in the permit application that was submitted to the State of New Mexico Oil Conservation Division for the well on September 10, 1992.

Conduct Annulus Pressure Testing

Utilizing the Western monitoring system, an Annulus Pressure Test (APT) will be run at 500 to 600 psi, for a minimum of 30 minutes. Recorded data will be documented in the report.

Conducting the Fall-off Testing

This is the procedure that will be used to perform the fall-off test at Western Refining facility in Bloomfield, NM.

First Three Days

1. Establish a stabilized injection rate (approximately 40 gallons per minute) for a period of three days with plant pumps. The target rate will be designed to be close to the average injection rate from the prior 30 days of operations.

Day Two

2. Move in and rig up (MIRU) a slickline unit and run in hole (RIH) with a gauge ring and tag bottom to determine the top of any fill.
3. Pull out of the hole (POOH) with gauge ring and RIH with tandem memory gauges to 3250 feet.
4. Continue injection into the well for 48 hours to allow the tandem memory gauges to stabilize.
5. Shut down injection and isolate the well by closing wing valve on the wellhead and in pump room.
6. Monitor the bottom hole pressure fall-off for a minimum of three days and up to eight days.

Day Eleven

7. After seven days, POOH with memory tool, making five minute gradient stops at 3250 ft, 3000 ft, 2000 ft, 1000 ft.
8. Rig down slick line unit.
9. Return well to Western Refining.

Evaluation of the Test Results

The fall-off and other analysis will be completed by a geologist and/or qualified engineer. The Reservoir Engineer will utilize the standard transient pressure analysis methods and the results will be reviewed for accuracy by a licensed professional engineer (PE). The fall-off analysis will include the following;

- A log-log plot with a derivative diagnostic plot used to identify flow regimes.
- A wellbore storage portion and infinite acting portion of the plot.
- A linear flow plot with wellbore storage, P^* , and slope.
- An expanded portion of the linear flow plot showing the infinite acting pressure portion (linear flow).
- The height of the injection interval used for the calculations will be 106 feet (average of 27 feet and 185 feet) unless test data indicate a different interval should be used.
- The viscosity of the formation fluid used for the calculations will be based on historical data.
- A summary of all the equations used for the analysis.
- An explanation of any temperature or pressure anomalous.

The injection records one year prior to the testing will be included in the analysis.

Well Data Table 1

	WDW – 1
Tubing	2.875", 7.55 lb/ft, Fluoroline Cement Lined, 3221'
Packer	5.5"x 2.875", Guiberson Tools, Uni-6, ID 1.87", 3221'
Perforations	Top of the Cliff House at 3276' 3276' – 3408', 4SPF 0.5 EHD Top of the Menefee at 3400' 3435' – 3460', 4SPF 0.5 EHD
Protection Casing	5.5", 15.5 lb/ft, 3600'
Cement Top Protection Casing	Surface
PBTD / TD	RBP at 3520', Fill Tagged on 4/20/06 at 3325' & cleaned out
Formation	Cliff House / Menefee

Injected Brine Waste Water Table 2

Chemical	Refinery Waste Water	Refinery Waste Water
Date	March 10, 1998	Sept 27, 2005
Arsenic (mg/L)	0.014	-
Calcium (mg/L)	120	68
Magnesium (mg/L)	39	33
Potassium (mg/L)	27	-
Sodium (mg/L)	920	1659
Chloride (mg/L)	1200	2200
Sulfate (mg/L)	400	708
Alkalinity (CaCO ₃) (mg/L)	330	100
pH (s.u.)	7.7	8.0
Specific Gravity (g/L)	1.00 – 1.01	1.00 – 1.01


Formation Brine Waste Water Table 3

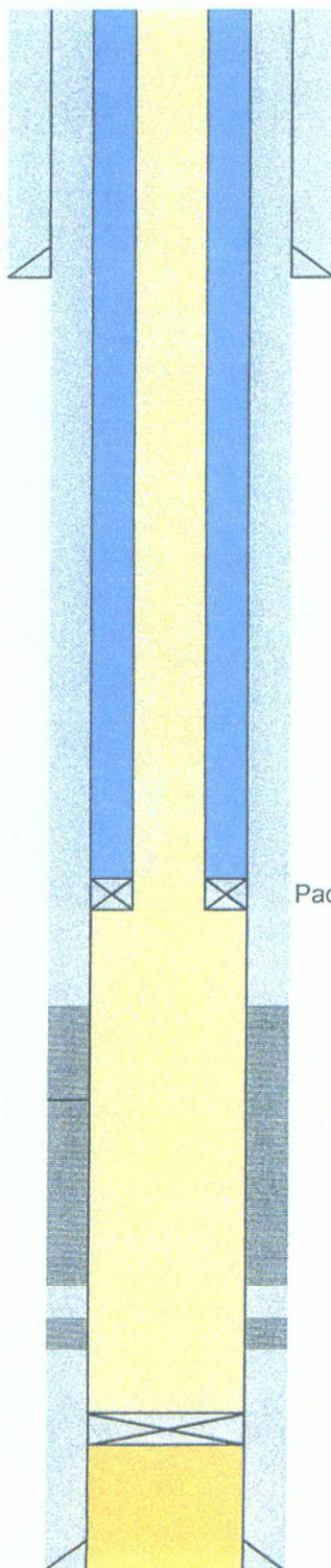
Chemical Date	Formation Water May 22, 1995
Arsenic (mg/L)	0.023
Cadmium (mg/L)	0.003
Calcium (mg/L)	375
Lead (mg/L)	0.063
Magnesium (mg/L)	99
Potassium (mg/L)	69
Selenium (mg/L)	0.006
Sodium (mg/L)	3610
Chloride (mg/L)	5370
Sulfate (mg/L)	1620
Alkalinity (CaCO ₃) (mg/L)	306
pH (s.u.)	8.5
Specific Gravity (g/L)	-

WESTERN REFINING DISPOSAL WELL #1

NW, SW SECTION 26, T29N, R11W

NO.: 30-045-29002

		HOUSTON, TX SOUTH BEND, IN BATON ROUGE, LA			
		FIGURE 1 DISPOSAL WELL #1 WELL SCHEMATIC Western Refining Inc. Bloomfield, NM			
Date:	4/26/2006	Approved By:	rls	Job No.:	70F5830
Drawn By:	rls	Checked By:		Scale:	N/A



8-5/8", 48#/ft, Surface Casing @ 830'
 TOC: Surface
 Hole Size: 11.0"

Tubing: 2-7/8", Acid Resistant Fluoroline Cement Lined
 Wt of Tubing: 6.5 #/ft
 Wt of Tubing Lined: 7.55 #/ft
 Tubing ID: 2.128"
 Tubing Drift ID: 2.000"
 Minimum ID @ Packer: ~1.87" estimated

Packer: Unknown Packer Type @ 3221'
 Could be a Guiberson or similar model Uni-6

Perforations: 3276' - 3408' 4JSPF 0.5 EHD
 Top of the Cliff House Formation: 3276'

Fill was cleaned out of well on 4/20/06
 Fill was originally tagged at 3325'

Perforations: 3435' - 3460' 4JSPF 0.5 EHD
 Top of the Menefee Formation: 3400'

RBP: 3520'

5-1/2", 15.5#/ft, Production Casing @3600'
 TOC: Surface
 Hole Size: 7-7/8"

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
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1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-045-29002-00
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> OtherX (Disposal)		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
2. Name of Operator Western Refining Southwest, Inc. - Bloomfield Refinery		6. State Oil & Gas Lease No. N/A
3. Address of Operator #50 Road 4990 Bloomfield, NM 87413		7. Lease Name or Unit Agreement Name Disposal
4. Well Location Unit Letter <u>L</u> : 2442 feet from the <u>South</u> line and <u>1250</u> feet from the <u>East</u> line Section <u>27</u> Township <u>29</u> Range <u>11</u> NMPM County <u>San Juan</u>		8. Well Number #001
11. Elevation (Show whether DR, RKB, RT, GR, etc.)		9. OGRID Number 037218
Pit or Below-grade Tank Application <input type="checkbox"/> or Closure <input type="checkbox"/>		10. Pool name or Wildcat Blanco/Mesa Verde
Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____		
Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____		

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL. <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: MIT/Bradenhead Test <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Bloomfield Refinery requests permission to perform the annual High Pressure Shutdown Test, Bradenhead Test, and Mechanical Integrity Test on the Class I injection well referenced above on May 19, 2010.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Cindy Hurtado TITLE Environmental Coordinator DATE 5/12/2010

Type or print name Cindy Hurtado E-mail address: cindy.hurtado@wnr.com Telephone No. (505)632-4161
For State Use Only

APPROVED BY: Carl J. Chavez TITLE Environmental Engr. DATE 5/12/2010
Conditions of Approval (if any):

Chavez, Carl J, EMNRD

From: Hurtado, Cindy [Cindy.Hurtado@wnr.com]
Sent: Wednesday, May 12, 2010 9:30 AM
To: Chavez, Carl J, EMNRD; Roberts, Kelly G, EMNRD; Kuehling, Monica, EMNRD
Cc: Schmaltz, Randy; Robinson, Kelly
Attachments: C103-MIT-2010.pdf

Good Morning,

Please find attached Bloomfield Refinery's C103 requesting permission to conduct the annual MIT, Bradenhead Test, and the High Pressure Shut Down Test on our Class I injection well (UICI-009) on May 19, 2010. I have coordinated with Monica Kuehling with Aztec OCD and she is available to witness the event between 8-8:30 AM. Monica is current on her safety training at Bloomfield Refinery. However, any other observers will need to contact me in order to arrange for safety orientation before the testing begins.

Thank You,
Cindy

Cindy Hurtado
Environmental Coordinator
Western Refining Southwest, Inc. - Bloomfield Refinery
cindy.hurtado@wnr.com
505-632-4161

Chavez, Carl J, EMNRD

From: Hurtado, Cindy [Cindy.Hurtado@wnr.com]
Sent: Thursday, September 17, 2009 1:05 PM
To: Chavez, Carl J, EMNRD; Perrin, Charlie, EMNRD; Schmaltz, Randy
Cc: Roberts, Kelly G, EMNRD; Kuehling, Monica, EMNRD; Krakow, Bob
Subject: C-103 Radioactive Tracer Test - MIT
Attachments: C103 Radioactive Tracer Test - MIT.jpg

Good Afternoon Carl and Charlie,

Please find attached the C-103 notification for the Radioactive Tracer Test and annual MIT/Bradenhead Test on our Class I injection well. I have talked to Monica Kuehling and she is available on the morning of September 24, 2009 to observe the annual High Pressure Shut-Off/Bradenhead Test/MIT.

Please be aware that if any other representatives from OCD want to observe the procedures, Western Refining requires all incoming personnel to undergo safety orientation before entering the plant.

Thanks,
Cindy

Cindy Hurtado
Environmental Coordinator
Western Refining Southwest, Inc. - Bloomfield Refinery
cindy.hurtado@wnr.com
505-632-4161

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

Submit 3 Copies To Appropriate District
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State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-045-29002-00
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No. N/A
7. Lease Name or Unit Agreement Name Disposal
8. Well Number #001
9. OGRID Number 037218
10. Pool name or Wildcat Blanco/Mesa Verde

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ OtherX (Disposal)

2. Name of Operator
San Juan Refining Co/Western Refining Southwest, Inc. - Bloomfield Refinery

3. Address of Operator
#50 Road 4990 Bloomfield, NM 87413

4. Well Location
Unit Letter 1 : 2442 feet from the South line and 1250 feet from the East line
Section 27 Township 29 Range 11 NMPM County San Juan

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/> P AND A <input type="checkbox"/>
OTHER: Radioactive Tracer Test/MIT/Bradenhead Test <input checked="" type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>
	OTHER: <input type="checkbox"/>

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

For the 5-year review of the permit and permit renewal, Western Refining Southwest, Inc. - Bloomfield Refinery requests permission to perform a Radioactive Tracer test to assess the mechanical integrity of the cement behind the casing on the Class I injection well referenced above. Two millicuries of Antimony B124 isotope will be used in the test. A Gamma Ray correlation log will be run. This test is tentatively scheduled for September 23, 2009.

Bloomfield Refinery also requests permission to perform the annual High Pressure Shutdown Test, Bradenhead Test, and Mechanical Integrity Test on September 24, 2009.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Cindy Hurtado TITLE Environmental Coordinator DATE 9/17/09

Type or print name Cindy Hurtado E-mail address: cindy.hurtado@wnr.com Telephone No. (505)632-4161

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____
Conditions of Approval (if any): _____

Submit 3 Copies To Appropriate District Office
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6. State Oil & Gas Lease No. N/A
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8. Well Number #001
9. OGRID Number 037218
10. Pool name or Wildcat Blanco/Mesa Verde

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1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> OtherX (Disposal)	
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3. Address of Operator #50 Road 4990 Bloomfield, NM 87413	
4. Well Location Unit Letter <u>1</u> : <u>2442</u> feet from the <u>South</u> line and <u>1250</u> feet from the <u>East</u> line Section <u>27</u> Township <u>29</u> Range <u>11</u> NMPM County <u>San Juan</u>	
11. Elevation (Show whether DR, RKB, RT, GR, etc.)	
Pit or Below-grade Tank Application <input type="checkbox"/> or Closure <input type="checkbox"/>	
Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____	
Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: Radioactive Tracer Test/MIT/Bradenhead Test X <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

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Bloomfield Refinery also requests permission to perform the annual High Pressure Shutdown Test, Bradenhead Test, and Mechanical Integrity Test on September 24, 2009.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐ a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Cindy Hurtado TITLE Environmental Coordinator DATE 9/17/09

Type or print name Cindy Hurtado E-mail address: cindy.hurtado@wnr.com Telephone No. (505)632-4161
For State Use Only

APPROVED BY: Carl J. Chavez TITLE Env. Engr. DATE 9/18/09
Conditions of Approval (if any):

Chavez, Carl J, EMNRD

From: Hurtado, Cindy [Cindy.Hurtado@wnr.com]
Sent: Friday, September 11, 2009 8:52 AM
To: Chavez, Carl J, EMNRD; Schmaltz, Randy; Krakow, Bob
Cc: Roberts, Kelly G, EMNRD; Kuehling, Monica, EMNRD
Subject: RE: UICI-9 WRSW-Bloomfield Refinery Acid Job 9-09
Attachments: Resubmittal C-103 Acid Job 9-09.pdf

Good Morning,

Please find attached the updated C-103 with the correct PBTD of 3520' in the job scope. Please let me know if you require any other corrections.

Thanks,
Cindy

Cindy Hurtado
Environmental Coordinator
Western Refining Southwest, Inc. - Bloomfield Refinery
cindy.hurtado@wnr.com
505-632-4161

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Thursday, September 10, 2009 5:56 PM
To: Hurtado, Cindy
Cc: Roberts, Kelly G, EMNRD; Kuehling, Monica, EMNRD
Subject: RE: UICI-9 WRSW-Bloomfield Refinery Acid Job 9-09

Cindy:

Please resubmit C-103 with updated info. and I will expedite approval and work with OCD Aztec directly. 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) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/oed/index.htm>
(Pollution Prevention Guidance is under "Publications")

From: Hurtado, Cindy [mailto:Cindy.Hurtado@wnr.com]
Sent: Thursday, September 10, 2009 3:56 PM
To: Chavez, Carl J, EMNRD; Kuehling, Monica, EMNRD; Schmaltz, Randy; Krakow, Bob
Subject: RE: UICI-9 WRSW-Bloomfield Refinery Acid Job 9-09

Carl,

Yes, I believe you are correct. Do you want me to adjust the job procedure accordingly?

Thanks,
Cindy

Cindy Hurtado
Environmental Coordinator

Western Refining Southwest, Inc. - Bloomfield Refinery
cindy.hurtado@wnr.com
505-632-4161

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Thursday, September 10, 2009 3:26 PM
To: Hurtado, Cindy; Kuehling, Monica, EMNRD; Schmaltz, Randy; Krakow, Bob
Subject: RE: UICI-9 WRSW-Bloomfield Refinery Acid Job 9-09

Cindy:

In step 3 I think you meant to state "RIH w/ 1-1/4" coil tubing to PBTD at 3520' instead of 3221' KB" right (see well bore diagram below)?

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
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87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-045-29002-00
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No. N/A
7. Lease Name or Unit Agreement Name Disposal
8. Well Number #001
9. OGRID Number 037218
10. Pool name or Wildcat Blanco/Mesa Verde

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH
PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ OtherX (Disposal)

2. Name of Operator

San Juan Refining Co/Western Refining Southwest, Inc. -- Bloomfield Refinery

3. Address of Operator

#50 Road 4990 Bloomfield, NM 87413

4. Well Location

Unit Letter I: 2442 feet from the South line and 1250 feet from the East line

Section 27 Township 29 Range 11 NMPM County San Juan

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☐

PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: Well Stimulation/Acidize Well

X ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ P AND A ☐

CASING/CEMENT JOB ☐

OTHER:

☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Western Refining Southwest, Inc. -- Bloomfield Refinery requests permission to perform well stimulation/acidization procedures on the Class 1 Injection well referenced above. Procedures for this project are attached.
The procedure will be scheduled pending approval from OCD.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Cindy Hurtado TITLE Environmental Coordinator DATE 9/11/09

Type or print name Cindy Hurtado

E-mail address: cindy.hurtado@wnr.com

Telephone No. (505)632-4161

For State Use Only

APPROVED BY: Lawrence J. Chisum TITLE Env. Engr DATE 9/11/09

Conditions of Approval (if any):

Western Refining

Procedure

August 18, 2009

Well:	Disposal Well #1	Field:	Mesaverde
Location:	Sec 26, T29N, R11W San Juan Co, New Mexico	Elevation:	
By:	John Thompson	API No:	30-045-29002
		Lease No:	

Project:

Lower injection pressure by pumping 15% HCl acid.

Prior to Job:

Spot 2 ea. 400 bbl frac tanks for flowback after acid job. Spot flowback tank for clean out. Use water truck for displacement. Hydrant on location has too much pressure for standard suction lines to acid truck. Hard line well to tank (s) for flowback.

Clean out and Acid Spot:

1. Hold safety meeting w/ Halliburton, Sanjel and Western Refinery personnel and review procedure.
2. Rig up Sanjel coil tubing unit & Halliburton to well head and pressure test pumps and lines to 4000 psi.
3. RIH w/ 1-1/4" coil tubing to PBTD at 3520' KB. Clean out if necessary.
4. Pull coiled tubing up to bottom perforation at 3,460' KB (bottom perforation).
5. Spot 200 gal of 15% HCL w/ inhibitors.
6. Pull out coiled tubing and shut well in overnight.

Acid / Ball Off:

7. Establish an injection rate with water. Pump 4,000 gal of 15% HCl acid w/ inhibitors and mutual solvent with 300 ea. bio-degradable ball sealers. Pump 1st 500 gal without balls.
8. Displace acid to bottom perforation with ~ 24 bbls of 2% KCl water (or disposal water if available).
9. Shut well in for ~ 1 hr and let acid treatment "soak". Rig down and release Halliburton.
10. Open well through 2" line and let well flow back to frac tank. Flow back approximately 400 bbls of fluid.
11. After flowback, return well to injection status and monitor rates and pressures.

Materials & Vendors

Acid: Halliburton Energy Services
Coil Tubing: Sanjel
Frac Tank: M&R Trucking
Roustabouts: Englehart
Engineering/Supervision: Walsh Engineering

Submit 3 Copies To Appropriate District Office
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Energy, Minerals and Natural Resources

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OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-045-29002-00
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No. N/A
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8. Well Number #001
9. OGRID Number 037218
10. Pool name or Wildcat Blanco/Mesa Verde

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(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> OtherX (Disposal)
2. Name of Operator San Juan Refining Co/Western Refining Southwest, Inc. - Bloomfield Refinery
3. Address of Operator #50 Road 4990 Bloomfield, NM 87413
4. Well Location Unit Letter <u>I</u> ; 2442 feet from the <u>South</u> line and <u>1250</u> feet from the <u>East</u> line Section <u>27</u> Township <u>29</u> Range <u>11</u> NMPM County <u>San Juan</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.)

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____
Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

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PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

SUBSEQUENT REPORT OF:
REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: Well Stimulation/Acidize Well
☒

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Western Refining Southwest, Inc. - Bloomfield Refinery requests permission to perform well stimulation/acidization procedures on the Class I Injection well referenced above. Procedures for this project are attached.
The procedure will be scheduled pending approval from OCD.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been ☒ constructed or closed according to NMOC guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Cindy Hurtado TITLE Environmental Coordinator DATE 6/29/09

Type or print name Cindy Hurtado E-mail address: cindy.hurtado@wnr.com Telephone No. (505)632-4161
For State Use Only

APPROVED BY: Carol J. Chavez TITLE Environmental Engineer DATE 6/29/09
Conditions of Approval (if any):

Western Refining

Procedure

May 12, 2009

Well:	Disposal Well #1	Field:	Mesaverde
Location:	Sec 26, T29N, R11W	Elevation:	
	San Juan Co, New Mexico	API No:	30-045-29002
By:	John Thompson	Lease No:	

Project:

Lower injection pressure by pumping 15% HCl acid.

Prior to Job:

Spot 2 ea. 400 bbl frac tanks (only 1 will be needed if displacement water is available from refinery). Hard line well to 1 tank (for flowback).

Acid Job:

1. Hold safety meeting w/ Halliburton and Western Refinery personnel and review procedure.
2. Rig up Halliburton to well head and pressure test pumps and lines to 4000 psi.
3. Pump 3,500 gal of 15% HCl acid w/ inhibitors and mutual solvent with 250 ea. bio-degradable ball sealers
4. Displace acid to bottom perforation with ~ 24 bbls of 2% KCl water (or disposal water if available).
5. Shut well in for ~ 1 hr and let acid treatment "soak". Rig down and release Halliburton.
6. Open well through 2" line and let well flow back to frac tank. Flow back approximately 400 bbls of fluid.
7. After flowback, return well to injection status and monitor rates and pressures.

Materials & Vendors

Acid: Halliburton Energy Services
Frac Tank: M&R Trucking
Roustabouts: Englehart
Engineering/Supervision: Walsh Engineering

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Monday, June 29, 2009 11:51 AM
To: 'Hurtado, Cindy'
Cc: Kuehling, Monica, EMNRD
Subject: RE: UICI-009 UIC Class I (non-haz.) Disposal Well
Attachments: C-103 Well Stimulation 6-29-09.pdf

Cindy:

Please find attached an OCD signed and approved C-103.

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/index.htm>
(Pollution Prevention Guidance is under "Publications")

From: Hurtado, Cindy [<mailto:Cindy.Hurtado@wnr.com>]
Sent: Monday, June 29, 2009 11:18 AM
To: Chavez, Carl J, EMNRD; Kuehling, Monica, EMNRD
Cc: Schmaltz, Randy; Krakow, Bob
Subject: UICI-009 UIC Class I (non-haz.) Disposal Well

Good morning Carl,

Please find attached the updated C-103 Notice and the job scope for the acidization procedure that we previously discussed with you. I sincerely apologize for inadvertently filling out the notice incorrectly. We will schedule the job after your approval has been received. We will be sure to coordinate with Monica Kuehling and Kelly Roberts of the Aztec District office with scheduling and safety training.

Thanks,
Cindy

Cindy Hurtado
Environmental Coordinator
Western Refining Southwest, Inc. - Bloomfield Refinery
cindy.hurtado@wnr.com
505-632-4161

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

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1361 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-045-29002-00
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No. N/A
7. Lease Name or Unit Agreement Name Disposal
8. Well Number #001
9. OGRID Number 037218
10. Pool name or Wildcat Blanco/Mesa Verde
11. Elevation (Show whether DR, RKB, RT, GR, etc.)
Pit or Below-grade Tank Application <input type="checkbox"/> or Closure <input type="checkbox"/>
Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____
Pit Liner Thickness: _____ mit Below-Grade Tank: Volume _____ bbls: Construction Material _____

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> OtherX (Disposal)
2. Name of Operator San Juan Refining Co/Western Refining Southwest, Inc. - Bloomfield Refinery
3. Address of Operator #50 Road 4990 Bloomfield, NM 87413
4. Well Location Unit Letter <u>1</u> : 2442 feet from the <u>South</u> line and <u>1250</u> feet from the <u>East</u> line Section <u>27</u> Township <u>29</u> Range <u>11</u> NMPM County <u>San Juan</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.)
Pit or Below-grade Tank Application <input type="checkbox"/> or Closure <input type="checkbox"/>
Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____
Pit Liner Thickness: _____ mit Below-Grade Tank: Volume _____ bbls: Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO: PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> CHANGE PLANS <input type="checkbox"/> PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPL <input type="checkbox"/> OTHER: Well Stimulation/Acidize Well <input checked="" type="checkbox"/>	SUBSEQUENT REPORT OF: REMEDIAL WORK <input type="checkbox"/> ALTERING CASING <input type="checkbox"/> COMMENCE DRILLING OPNS <input type="checkbox"/> P AND A <input type="checkbox"/> CASING/CEMENT JOB <input type="checkbox"/> OTHER: <input type="checkbox"/>
---	--

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Western Refining Southwest, Inc. - Bloomfield Refinery requests permission to perform well stimulation/acidization procedures on the Class I Injection well referenced above. Procedures for this project are attached. The procedure will be scheduled pending approval from OCD.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Cindy Hurtado TITLE Environmental Coordinator DATE 6/29/09

Type or print name Cindy Hurtado E-mail address: cindy.hurtado@wnr.com Telephone No. (505)632-4161
For State Use Only

APPROVED BY: Lawrence J. Chavez TITLE Environmental Engineer DATE 6/29/09
Conditions of Approval (if any):

Western Refining

Procedure

May 12, 2009

Well:	Disposal Well #1	Field:	Mesaverde
Location:	Sec 26, T29N, R11W San Juan Co, New Mexico	Elevation:	
By:	John Thompson	API No:	30-045-29002
		Lease No:	

Project:

Lower injection pressure by pumping 15% HCl acid.

Prior to Job:

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6. Open well through 2" line and let well flow back to frac tank. Flow back approximately 400 bbls of fluid.
7. After flowback, return well to injection status and monitor rates and pressures.

Materials & Vendors

Acid: Halliburton Energy Services
Frac Tank: M&R Trucking
Roustabouts: Englehart
Engineering/Supervision: Walsh Engineering

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, May 13, 2009 3:22 PM
To: 'Hurtado, Cindy'
Subject: C-103 Signed 4/16/09

Cindy:

Hi. I looked over your recent C-103 Form for down-hole clean-out.

I notice you did not check of "Notice of Intention to" perform remedial work.

I think you know a follow-up final form identifying the final work completed is required and should be submitted for the "Subsequent Report of" section.

You did not provide details on the down-hole remedial work steps that would actually be performed on the well. .

Could you please resend the C-103 form with detailed information on what is actually being performed down-hole during the remedial work, i.e., pull tubing, bail fill from BOH, cleanout to what depth? What are you doing to packer and tubing (replacement?), size of final tubing, etc.

More steps are needed to understand what steps you will be performing. Please contact me if you have questions.
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) 476-3490
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")



BLOOMFIELD REFINERY

WNR
LISTED
NYSE

RECEIVED

2009 APR 21 AM 11 26

Jim Griswold
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Certified Mail: 7007 0220 0004 0187 0756

April 16, 2009

RE: Bloomfield Refinery UIC Class I Well
API# 30-0-45-29002
Disposal Well #1
Unit I, Section 27, Township 20, Range 11

Dear Mr. Griswold,

Please find enclosed the C-103 notification for well maintenance work (down-hole clean-out) that will be conducted on Bloomfield Refinery's Class I Injection Well. This work is tentatively scheduled for 4-22-09 but will occur no later than 4-30-09.

If you need additional information, please contact Randy Schmaltz (505-632-4171), Bob Krakow (505-632-4135), or myself (505-632-4161).

Sincerely,

A handwritten signature in cursive script that reads 'Cindy Hurtado'.

Cindy Hurtado
Environmental Coordinator
Bloomfield Refinery – Western Refining

Cc: Randy Schmaltz – Environmental Manager – Bloomfield Refinery
Brandon Powell – NMOCD Aztec District Office

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
June 19, 2008

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO.
30-045-290002-00

5. Indicate Type of Lease
STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

8. Well Number #001

9. OGRID Number
037218

10. Pool name or Wildcat

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ OtherX

2. Name of Operator

Western Refining Southwest, Inc. - Bloomfield Refinery

3. Address of Operator

#50 Road 4990 Bloomfield, NM 87413

4. Well Location

Unit Letter I : 2442 feet from the South line and 1250 feet from the East line

Section 24 Township 29 Range 11 NMPM County San Juan

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

This Class I Injection Well operated by Western Refining Southwest, Inc. - Bloomfield Refinery is permitted by New Mexico OCD Discharge Permit Disposal Well UICL-9. EPA ID# NMD089416416

Well Maintenance (Down-Hole Clean Out) will be conducted starting approximately on 4-22-09 or no later than 4-30-09.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE

Cindy Hurtado

TITLE

Environmental Coordinator

DATE

4-16-09

Type or print name

Cindy Hurtado

E-mail address:

Cindy.hurtado@wnr.com

PHONE:

505-632-4161

For State Use Only

APPROVED BY:

TITLE

DATE

Conditions of Approval (if any):