

August 16, 2011

**Via Hand Delivery**

Jami Bailey, Director  
Oil Conservation Division  
New Mexico Energy, Minerals and  
Natural Resources Department  
1220 South Saint Francis Drive  
Santa Fe, New Mexico 87505

*Case 14732*

RECEIVED OGD  
2011 AUG 16 P 14:02

**Re: Application of Southwest Royalties, Inc. for Approval of a  
Remediation Plan, New Mexico.**

Dear Ms. Bailey:

Enclosed is the application of Southwest Royalties, Inc. in the above-referenced case as well as a copy of a legal advertisement. Southwest Royalties requests that this matter be placed on the docket for the September 15, 2011 Examiner hearings.

Sincerely,

*Ocean Munds-Dry*  
Ocean Munds-Dry  
for Holland & Hart LLP

STATE OF NEW MEXICO  
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES  
OIL CONSERVATION DIVISION

RECEIVED OOD  
2011 AUG 16 P 4: 12

IN THE MATTER OF THE APPLICATION OF SOUTHWEST ROYALTIES, INC.  
FOR APPROVAL OF A REMEDIATION PLAN PURSUANT TO 19.15.29.11  
NMAC FOR THE ARCO FEDERAL WELL NO. 1 TANK BATTERY, EDDY  
COUNTY, NEW MEXICO.

CASE NO. 14732

APPLICATION

SOUTHWEST ROYALTIES, INC., ("Southwest Royalties") through its undersigned attorneys, hereby makes application to the Oil Conservation Division for approval of a Remediation Plan pursuant to 19.15.29.11 NMAC to address a release of produced water at the ARCO Federal Well No. 1 Tank Battery (API No. 30-015-20631), located in Section 17, Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico and in support of this application states:

1. Southwest Royalties is the designated operator of the ARCO Federal Well No. 1. The well and the associated tank battery are located on federal lands and the Bureau of Land Management is the surface owner.
2. Southwest Royalties has reached an agreement with the BLM to remove salt-impacted soil from around the tank battery which was mainly caused by a produced water disposal pit that was active in the 1970's. Additionally, Southwest Royalties will address a recent minor spill. As part of the agreement with the BLM, Southwest Royalties plans to bury the salt-impacted soil in a deep trench near the tank battery. The BLM has approved Southwest Royalties' plans and has ordered an approved action to be completed by September 1, 2011.

3. In February and March, 2011, Southwest Royalties submitted information and plans to the Oil Conservation Division. On June 13, 2011, Southwest Royalties submitted the remediation plan negotiated with the BLM to the OCD. See Exhibit A.

4. On June 17, 2011, the Division responded to Southwest Royalties and stated that Southwest Royalties "is prohibited from disposing of oil field waste, including remediation waste (contaminated soil) in a pit by 19.15.34.11...except as authorized by other OCD rules." See Exhibit B.

5. On June 20, 2011, Southwest Royalties submitted a voluntary corrective action pursuant to Part 29 of the Division rules. See Exhibit C.

6. On June 25, 2011, the Division responded that the proposed remediation plan is denied because Southwest Royalties is not allowed to "dispose of contaminated soil in a pit." See Exhibit D.

7. Accordingly, Southwest Royalties requests approval of its proposed remediation plan pursuant to 19.15.29.11 NMAC.

8. Division rule 19.15.34.11 NMAC "applies to persons engaged in transporting produced water, drilling fluids or other liquid oil field waste or having them transported or in disposing of produced water or oil field waste within New Mexico" and states that "oil field waste" shall not be disposed of in a pit, "except as authorized by....19.15.29 NMAC..."

9. Southwest Royalties' proposed plan pursuant to Rule 29 protects the environment. Further, Southwest Royalties is obligated to complete a surface remedy to restore vegetation and habitat by the surface management agency.

10. Approval of this application will protect public health and the environment and is in the best interest of conservation, the prevention of waste and the protection of correlative rights.

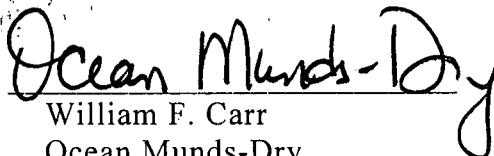
11. Southwest Royalties has given notice to the BLM of this application.

WHEREFORE, Southwest Royalties, Inc. requests that this application be set for hearing before an Examiner of the Oil Conservation Division on September 15, 2011 and, after notice and hearing as required by law, that the application be approved.

Respectfully Submitted,

HOLLAND & HART LLP

By:



William F. Carr  
Ocean Munds-Dry  
Post Office Box 2208  
Santa Fe, New Mexico 87504  
Telephone: (505) 988-4421

ATTORNEYS FOR SOUTHWEST ROYALTIES, INC.

CASE 14732:

**Application of Southwest Royalties for Approval of a Remediation Plan Pursuant to 19.15.29.11 NMAC for the Arco Federal Well No. 1 Tank Battery, Eddy County, New Mexico.** Applicant, in the above-styled cause seeks approval of a remediation plan to address a release of produced water at the ARCO Federal Well No. 1, Section 17, Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico. Said area is located approximately 1 mile north of Loco Hills, New Mexico.

10 Aug 2011  
ARCO Federal Well No. 1  
Eddy County, NM

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10 Aug 2011  
ARCO Federal Well No. 1  
Eddy County, NM

# R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

June 13, 2011

Mr. Mike Bratcher  
NMOCD Artesia District 2  
Artesia, New Mexico  
Via E-Mail

RE: Southwest Royalties Arco Federal Battery  
T17S, R30E, Section 17, Unit K

Dear Mike:

Representatives of the BLM, Southwest Royalties and Hicks Consultants met at the BLM office on Thursday, June 9. The attached document summarizes the results of our meeting and provides some background information not previously submitted to you. This submission honors our commitment to inform NMOCD of the actions at this site. We will begin implementing the remedy next week, including re-seeding of the site, in order to take advantage of any monsoon rains.

The surface remedy of the historic produced water pit includes construction of a burial trench to accept impacted soil. We will install a liner over the soil in the trench to effectively eliminate the potential for upward migration of salt into the root zone. Clean material excavated from the trench will be used to restore the site in preparation for seeding.

Although we have not received any response to our submissions of February 2, 2011 and March 1, 2011 (Attachments 2 and 3), we believe that the NMOCD memorandum of May 10, 2011 regarding "Revised OCD Discharge Plan Permit Requirements" makes clear that NMOCD policies and actions will comply with the language of New Mexico Rules and Regulations. As outlined in our March 1 letter, we believe the language of NMOCD Rules is clear and we can proceed with the proposed remedy. In the absence of an NMOCD response to this letter, we will proceed next week with this remedy that we developed with input from BLM

Sincerely,  
R.T. Hicks Consultants, Ltd.



Randall Hicks  
Principal

Copy: Terry Gregston, Bureau of Land Management, Carlsbad District  
Luis Gonzalez, Southwest Royalties



# R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

June 13, 2011

US Bureau of Land Management  
Terry Gregston  
Jim Amos  
620 E. Green Street  
Carlsbad, NM 88220

Re: Surface Remedy for Arco Federal Battery, Southwest Royalties  
T17S, R30E, Section 17, Unit K

Ms. Gregston and Mr. Amos,

Thank you both for meeting with us on the above-referenced project. The surface remedy developed by putting all of our heads together is simple and straight-forward. Below is the step-by-step protocol, which we believe is consistent with our agreements at the meeting.

- I. Pre-Construction
  - a. Stake location of burial trench for one-call before June 15
  - b. Stake location of proposed excavation footprint, which is based upon the "likely extent of impact" shown in Figure 1
  - c. Call BLM after staking to allow for inspection
  - d. Conduct one-call on June 15
- II. Proposed Construction June 20-24
  - a. Remove caliche from road "turn out" and place on west side of lease road to allow for excavation/removal of part of lease road within excavation footprint
  - b. Stockpile any residual caliche from turn out
  - c. Remove the 0.5-foot layer of caliche from excavation footprint to a stockpile
  - d. Excavate the burial trench to accommodate 30,000 cubic feet of compacted salt impacted soil (see Figure 2). The trench will be about 12-feet deep, 100 feet long and about 26 feet wide. One end of the trench will have a steep ramp to provide an escape route for any small wildlife.
  - e. Excavation of the burial trench will create two stockpiles
    - i. sandy loam on the northeast side of the trench and
    - ii. caliche on the south side of the trench
  - f. Fence the trench for safety when construction ceases each day
  - g. Excavate and remove to the trench the top 1-foot of the footprint while testing the soil (titration) to determine the horizontal extent of impacted soil.
  - h. Repeat excavation and field sampling at 2 and 4 feet below grade within the original 1-foot excavation. There should be about 30,000 cubic feet of impacted soil (>1,500 mg/kg) removed from the excavation footprint (see Figure 2) and placed in the Burial Trench. Hard caliche will not be excavated from the footprint; although in most locations the caliche horizon is below 4-feet deep (see Figure 3).
  - i. Call BLM about 24 hours before excavation of footprint is complete.

- j. Collect four samples from edges of excavation for submission to the laboratory to demonstrate capture of horizontal extent of salt-impaired soil.
  - k. Place about 1-foot of caliche gravel from the burial trench stockpile over the caliche surface exposed in the excavation footprint (see Figure 3). Placing clean gravel above the impacted caliche can create a capillary break, minimizing any upward migration of salt.
  - l. Place the clean sandy-loam from the burial trench stockpile into the footprint excavation - mixing in organic material (e.g. rotted hay). If more soil is required to fill the excavation footprint to natural grade, find some nearby dunes with mesquite and **no oak**, and take that topsoil - mesquite roots and all - and place it in the excavation.
  - m. Put a liner over the impacted soil in the burial trench then cover the liner with at least 4-feet of soil - mix in organic matter if practical.
  - n. Install perimeter fence to prevent intrusion by grazers.
- III. Post construction
- a. Seed the excavation footprint, burial trench footprint and other areas disturbed by installation of the remedy with BLM-recommended mixture
  - b. Pray for rain
  - c. Monitor re-vegetation
  - d. Kill any mesquite that grows within the fence

We have reserved the days of June 21-24 to install the remedy. Thanks again for your help in moving this project forward.

Sincerely,



Randall Hicks  
Principal

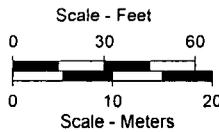
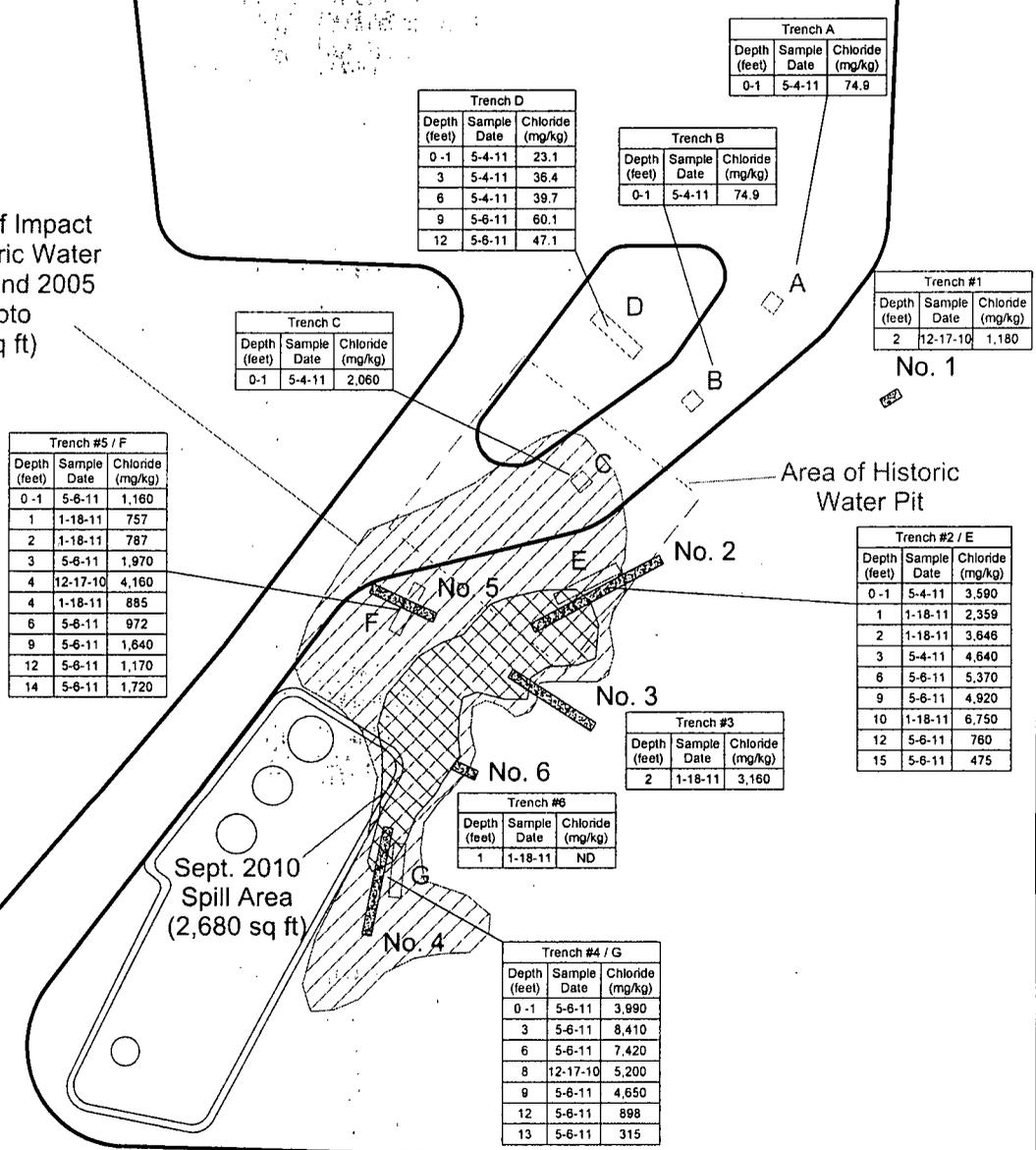
Copy: Luis Gonzales, SW Royalties  
Mike Bratcher, NMOCD District 2

# Figure 1

Southwest Royalties  
 Arco Federal Battery  
 T-17-S, R-30-E, Sec 17 (K)  
 Eddy County, New Mexico



Likely Extent of Impact  
 Based on Historic Water  
 Pit, Site Visit, and 2005  
 Aerial Photo  
 (10,500 sq ft)



# Figure 2

Southwest Royalties  
Arco Federal Battery  
T-17-S, R-30-E, Sec 17 (K)  
Eddy County, New Mexico



Burial Trench: 2,583 sq ft x 12 = 31,000 cu. ft.



No. 1

No. 2

No. 5

No. 3

No. 6

No. 4

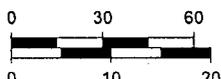
1 Ft Excavation:  $(10,432 - 3,843) \times 1 = 6,589$  cu. ft.

2 Ft Excavation:  $(3,843 - 1,235) \times 2 = 5,214$  cu. ft.

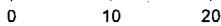
4 Ft Excavation:  $1,235 \times 4 = 4,940$  cu. ft.

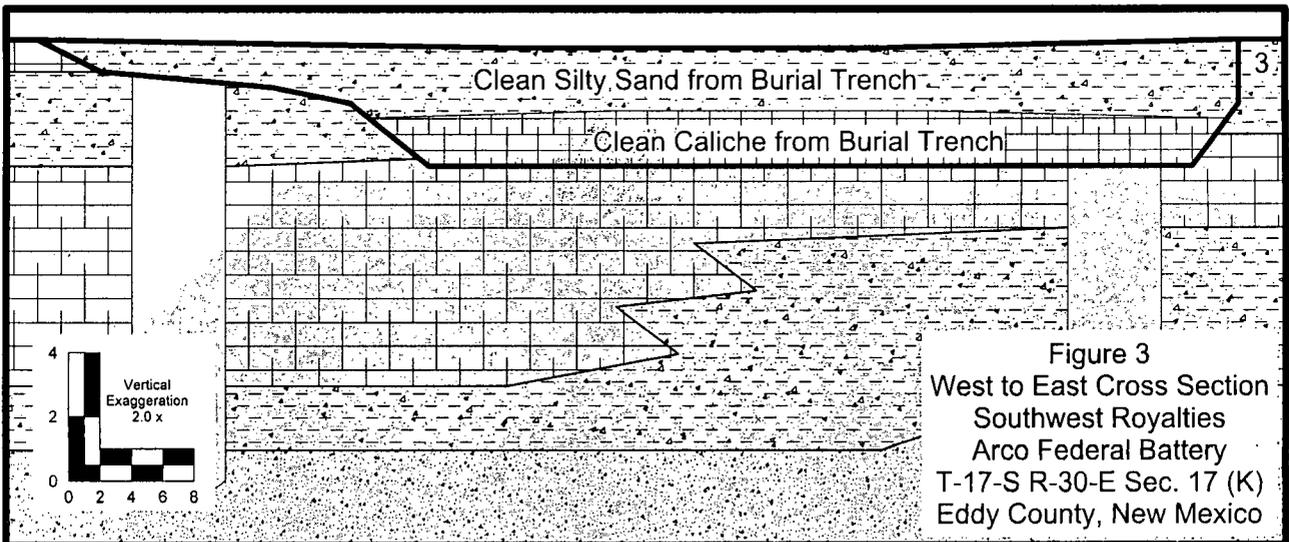
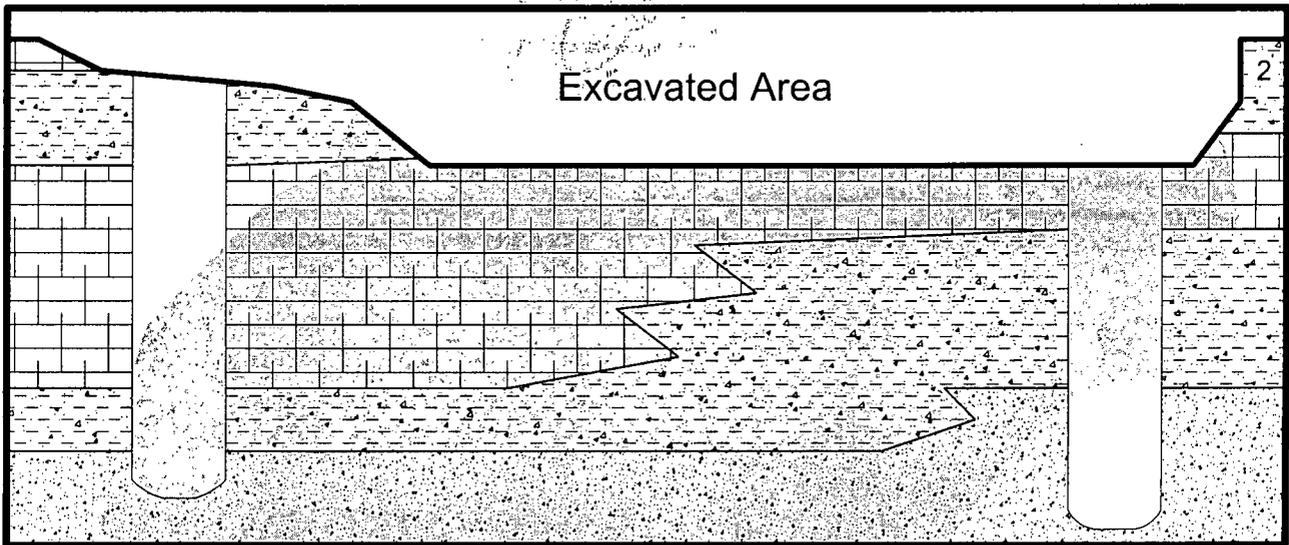
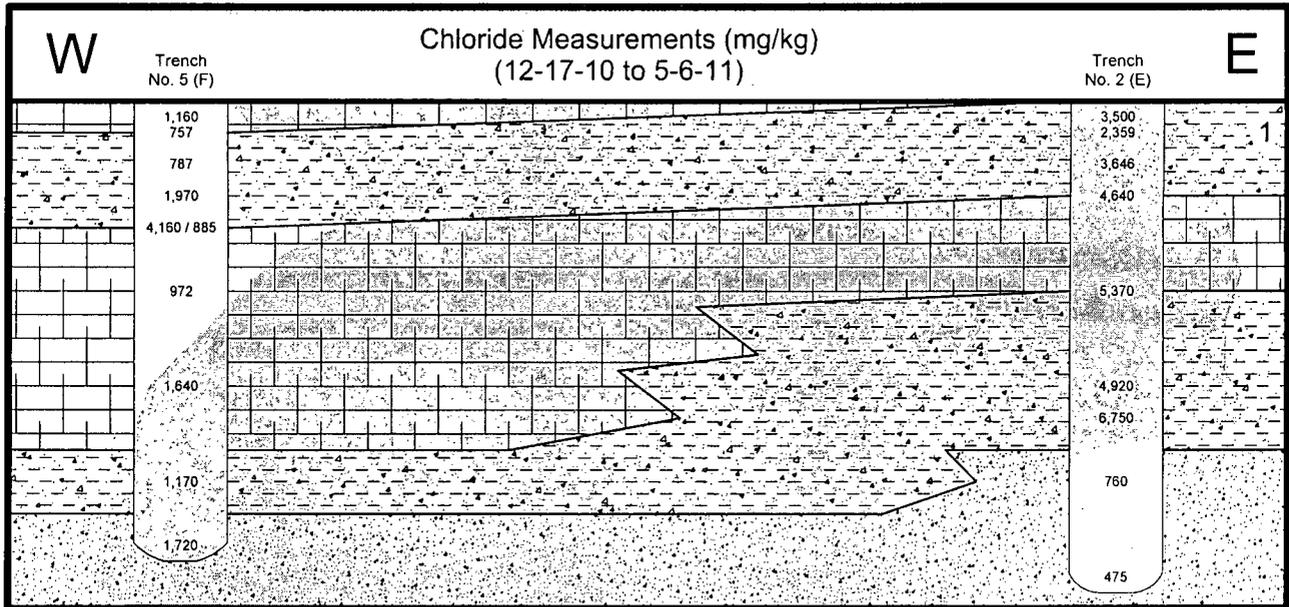
Total Excavation:  $6,589 + 5,214 + 4,940 = 16,743$  cu. ft.

Scale - Feet



Scale - Meters







New Mexico Energy, Minerals and Natural Resources Department

**Susana Martinez**  
Governor

John H. Bemis  
Cabinet Secretary-Designate

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

Jami Bailey  
Division Director  
Oil Conservation Division



JUNE 17, 2011

Mr. Luis Gonzales  
Southwest Royalties  
Six Desta Drive  
Suite 2100  
Midland, TX 79705

**RE: SURFACE REMEDY FOR SOUTHWEST ROYALTIES ARCO FEDERAL NO. 5  
TANK BATTERY, API NO. 30-015-20631,  
UNIT LETTER K, SECTION 17, TOWNSHIP 17 SOUTH, RANGE 30 EAST**

Mr. Gonzales:

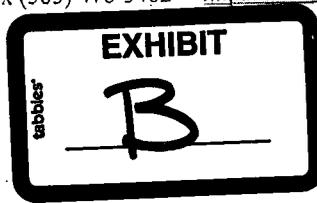
The Oil Conservation Division (OCD) has reviewed the workplans and reports submitted by R.T. Hicks Consultants (RTH) on behalf of Southwest Royalties to address a release of produced water at the Southwest Royalties ARCO Federal No. 5 tank battery, API No. 30-015-20631, located in Unit Letter K, Section 17, Township 17 South, Range 30 East, in Eddy County, New Mexico. Southwest Royalty has generally addressed these plans to the Bureau of Land Management (BLM) because the release was less than the minimum reporting limit of 5 barrels specified in 19.15.29 NMAC. OCD understands that the most recent release of produced water occurred in September 2010 and that the spill may possibly have occurred on top of an older release.

Southwest Royalties has determined that the chlorides contamination at the site extends deeper than 20 feet bgs., and may be as deep as 60 feet bgs. However, Southwest Royalties has determined that there is no protectable ground water in this area of Eddy County. OCD accepts Southwest Royalties' assessment of both the chlorides soil contamination and its conclusion that there is no protectable ground water at this site and no risk to human health. Under 19.15.29.11 NMAC, corrective actions are required for releases that endanger public health or the environment. OCD agrees that the main environmental concern is the timely reestablishment of vegetation at the site.

However, Southwest Royalty is prohibited from disposing of oil field waste, including remediation waste (contaminated soil) in a pit by 19.15.34.11 NMAC (*Disposition of Produced Water and Other Oil Field Waste*), except as authorized by other OCD rules. Part 34.11 states "Except as authorized by 19.15.30 NMAC, 19.15.17 NMAC, 19.15.36 NMAC, 19.15.29 NMAC

Oil Conservation Division \* 1220 South St. Francis Drive  
\* Santa Fe, New Mexico 87505

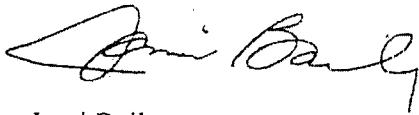
\* Phone: (505) 476-3440 \* Fax (505) 476-3462 \* <http://www.emnrd.state.nm.us>



or 19.15.26.8 NMAC, persons, including transporters, shall not dispose of produced water or other oil field waste: (1) on or below the surface of the ground; **in a pit**; or in a pond, lake, depression or watercourse...." BLM does not have authority to authorize disposal of oil field waste/remediation waste in a pit.

Southwest Royalty's surface remediation proposal far exceeds OCD's corrective action requirements under 19.15.29 NMAC because there is no threat to protectable ground water and the surface impact does not pose a risk to human health. OCD suggests that Southwest Royalty confer with BLM about a surface restoration program that does not involve disposal of oil field waste in a pit. If you have any question, please contact Glenn von Gonten at (505) 476-3488.

Sincerely,



Jami Bailey  
Director

JB/gvg

Cc: Daniel Sanchez, OCD  
Mike Bratcher, OCD District 2  
Terry Gregston, BLM  
Randy Hicks, R.T. Hicks

# R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

June 20, 2011

Mr. Glenn Von Gonten  
NMOCD  
1220 South St. Francis Drive  
Santa Fe, NM 87505  
Via Email

RE: Southwest Royalties Arco Federal Battery  
T17S, R30E, Section 17, Unit K

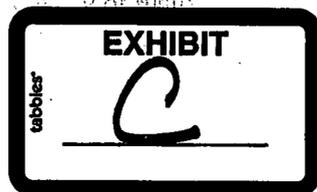
Dear Glenn:

R.T. Hicks Consultants, Ltd. is pleased to submit the attached documents which constitute a voluntary corrective action under Part 29 of NMOCD Rules. As discussed in previous submissions, the Arco Federal Battery site does not meet the reporting requirements of Part 29. However, the proposed action appears to meet the requirement to obtain division approval of a corrective action for releases that endanger "the environment", as outlined below.

**19.15.29.11 CORRECTIVE ACTION:** The responsible person shall complete division-approved corrective action for releases that endanger public health *or the environment*. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.

We ask for an expeditious review of the submission in the hope that Southwest Royalties can implement the proposed voluntary remedy of historic practices prior to the monsoon rains. The surface remedy was developed in a meeting with the surface owner, BLM. Below is the step-by-step protocol, which we believe is consistent with our agreements at the meeting.

- I. Pre-Construction
  - a. Stake location of burial trench for one-call before
  - b. Stake location of proposed excavation footprint, which is based upon the "likely extent of impact" shown in Figure 1
  - c. Call BLM after staking to allow for inspection
  - d. Conduct one-call
- II. Proposed Construction
  - a. Remove caliche from road "turn out" and place on west side of lease road to allow for excavation/removal of part of lease road within excavation footprint
  - b. Stockpile any residual caliche from turn out
  - c. Remove the 0.5-foot layer of caliche from excavation footprint to a stockpile
  - d. Excavate the burial trench to accommodate 30,000 cubic feet of compacted salt impacted soil (see Figure 2). The trench will be about 12-feet deep, 100 feet long and about 26 feet wide. One end of the trench will have a steep ramp to provide an escape route for any small wildlife.
  - e. Excavation of the burial trench will create two stockpiles



- i. sandy loam on the northeast side of the trench and
  - ii. caliche on the south side of the trench
  - f. Fence the trench for safety when construction ceases each day
  - g. Excavate and remove to the trench the top 1-foot of the footprint while testing the soil (titration) to determine the horizontal extent of impacted soil.
  - h. Repeat excavation and field sampling at 2 and 4 feet below grade within the original 1-foot excavation. There should be about 30,000 cubic feet of impacted soil (>1,500 mg/kg) removed from the excavation footprint (see Figure 2) and placed in the Burial Trench. Hard caliche will not be excavated from the footprint; although in most locations the caliche horizon is below 4-feet deep (see Figure 3).
  - i. Call BLM and NMOCD about 24 hours before excavation of footprint is complete to allow for site inspection during sampling.
  - j. Collect four samples from edges of excavation for submission to the laboratory to demonstrate capture of horizontal extent of salt-impacted soil.
  - k. Place about 1-foot of caliche gravel from the burial trench stockpile over the caliche surface exposed in the excavation footprint (see Figure 3). Placing clean gravel above the impacted caliche can create a capillary break, minimizing any upward migration of salt.
  - l. Place clean sandy-loam from the burial trench stockpile into the footprint excavation mixing in organic material (e.g. rotted hay). If more soil is required to meet natural grade, find some nearby dunes with mesquite and **no oak**, and take that topsoil - mesquite roots and all - and place it in excavation.
  - m. Put a liner over the impacted soil in the burial trench then cover the liner with at least 4-feet of soil - mix in organic matter if practical.
  - n. Install perimeter fence to prevent intrusion by grazers.
- III. Post construction
- a. Seed the excavation footprint, burial trench footprint and other areas disturbed by installation of the remedy with BLM-recommended mixture
  - b. Pray for rain
  - c. Monitor re-vegetation
  - d. Kill any mesquite that grows within the fence

Thanks for your help in moving this project forward.

Sincerely,



Randall Hicks  
Principal

Copy: Copy: Terry Gregston, Bureau of Land Management, Carlsbad District  
Luis Gonzalez, Southwest Royalties  
Mike Bratcher, NMOCD Artesia



New Mexico Energy, Minerals and Natural Resources Department

**Susana Martinez**  
Governor

**John H. Bemis**  
Cabinet Secretary-Designate

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

**Jami Bailey**  
Division Director  
Oil Conservation Division



JUNE 25, 2011

Mr. Luis Gonzales  
Southwest Royalties  
Six Desta Drive  
Suite 2100  
Midland, TX 79705

**RE: SURFACE REMEDY FOR SOUTHWEST ROYALTIES ARCO FEDERAL NO. 1  
TANK BATTERY, API NO. 30-015-20631  
UNIT LETTER K, SECTION 17, TOWNSHIP 17 SOUTH, RANGE 30 EAST**

Mr. Gonzales:

The Oil Conservation Division (OCD) has reviewed the proposal submitted by R.T. Hicks Consultants (RTH) on behalf of Southwest Royalties on June 20, 2011 to address a release of produced water at the Southwest Royalties ARCO Federal No. 1 tank battery, API No. 30-015-20631, located in Unit Letter K, Section 17, Township 17 South, Range 30 East, in Eddy County, New Mexico. This is the same proposal that Southwest Royalties had previously submitted to the Bureau of Land Management (BLM). By letter dated June 16, 2011, OCD informed Southwest Royalties that it was prohibited from disposing of remediation waste in a pit by 19.15.34.11 NMAC (*Disposition of Produced Water and Other Oil Field Waste*), except as authorized by other OCD rules.

Southwest Royalties has resubmitted its proposal as a "Remediation Plan" pursuant to 19.15.29.11 NMAC (*Corrective Action*). OCD is not requiring Southwest Royalties to conduct corrective action at this site because there is no protectable water and no threat to human health. Surface remediation for revegetation purposes should be completed pursuant to the surface land management's requirements.

However, OCD will not allow Southwest Royalties to dispose of contaminated soil in a pit and hereby denies Southwest Royalties' proposed surface remedy. OCD again suggests that Southwest Royalties confer with BLM about what surface restoration BLM is requiring.

Oil Conservation Division, Six Desta Drive

\* Santa Fe

\* Phone: (505) 476-3440 \* Fax: (505) 476-3440

[www.enr.state.nm.us](http://www.enr.state.nm.us)

EXHIBIT

D

tabbles

Mr. Gonzales  
June 25, 2011  
Page 2 of 2

If you have any questions, please contact Glenn von Gonten at (505) 476-3488.

Sincerely,



Jami Bailey  
Director

JB/gvg

Cc: Daniel Sanchez, OCD  
Mike Bratcher, OCD District 2  
Terry Gregston, BLM  
Randy Hicks, R.T. Hicks