District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
June 1, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure
Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☐
Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank X

Operator: Range Operating New Mexico, Inc. Telephone: 505-745-3691 e-mail address: ttucker@rangeresources.com
Address: PO Box 300, Loving, NM 88256
Facility or well name: Tarantula 3 Federal No. 2 API #: 30-025-37516 U/L H Sec 3 T25S R37E (Lease No. H-3-25S-37E)
County: Lea Latitude N_____ Longitude W_____ NAD: 1927 ☐ 1983 ☐
Surface Owner: Federal X State Private ☐ Indian ☐

Pit	**Below-grade tank N/A**
Type: Drilling **X** Production ☐ Disposal ☐ Workover ☐ Emergency ☐ Lined X Unlined ☐ Liner type: Synthetic **X** Thickness: 12ml HDPE liner Clay ☐ Pit Volume: 1,500bbl. Approximately	Volume: _N/A bbl Type of fluid: _N/A_____ Construction material: __N/A_____ Double-walled, with leak detection? ☐ If not, explain why not.

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of groundwater.) **No** accurate water well data in Sec. 3 is available, although some vicinity wells show less than 50'. Thus a coring program will be initiated to determine depth to high season groundwater levels.	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) (10 points) (0 points)	20 pts.
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes X No	(20 points) (0 points)	20 pts.
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 points) (0 points)	10 pts.
	Ranking Score (Total Points)		**50 pts.**

If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. Digital Photos shall be submitted for before and after remediation activity. (2) Indicate disposal location: None yet determined (see Closure Plan). Options are ~~solidificaton/insitu~~/haul off to CRI / offsite X If offsite, name of facility: CRI (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No X Yes ☐ If yes, show depth below ground surface _ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments: Additional Comments: Please refer to attached "Closure Plan" information. Digital photos are attached and the location diagram shall be presented in the final report. A groundwater depth investigation in the area of potential insitu disposal shall occur prior to initiating disposal action. New Mexico, OCD shall be notified of the coring results such that the method of disposal can then be determined.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines X, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.
Date: 15 September 2006
Printed Name/Title: Tony Tucker, Production Supervisor Signature _____

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

DIG & HAUL TO DISPOSAL

Approval:
Printed Name/Title L JOHNSON - ENVIRO ENGR Signature _____ Date: 6.13.07

RPT#1430

Mr. Tony Tucker
Production Supervisor
RANGE OPERATING NEW MEXICO, INC.
PO Box 300
Loving, NM 88256

21 September 2006

Mr. Larry Johnson and Mr. Buddy Hill
OIL CONSERVATION DIVISION
1625 N. French Drive
Hobbs, NM 88240

Re: Tarantula 3 Federal No. 1 (API No. 30-025-37516) and No. 2 (API No. 30-025-37452)

Dear Gentlemen:

Range Operating New Mexico, Inc. received a Letter of Violation (LOV) from your office regarding the Tarantula 3 Federal No. 1 (LOV No. iLWHO623660826) and No. 2 (LOV No. iLWHO623661284) earlier this month.

This transmittal serves as notification of intent to comply with the New Mexico Energy, Minerals and Natural Resources Department request to initiate closure of the two aforementioned drilling pits. Due to lack of contractor availability and inclement weather, our response time has been effected.

Attached to this transmittal are the applications for closure of both pits back to back. Range intends to initiate a coring program to discern the type of closure possible for these two pits late next week or early the following depending on the weather. Once this has been achieved, OCD will be contacted to discuss the coring program results and implement a specific closure program. Range intends to have both pits closed by early to mid November 2006.

At the time of this submittal, Range has ordered a new sign for the Tarantula 3 Federal No. 2 correcting the errors.

Thank you for your consideration and patience with the closures.

Sincerely,

Tony Tucker
Production Supervisor

Enclosed: Pit Closure Plans, C-144, Photos

Mr. Tony Tucker
Production Supervisor
RANGE OPERATING NEW MEXICO, INC.
PO Box 300
Loving, NM 88256

21 September 2006

Mr. Larry Johnson
OIL CONSERVATION DIVISION
1625 N. French Drive
Hobbs, NM 88240

Re: Tarantula 3 Federal No. 2 Pit Closure Documents
API No. 30-025-37516
Location: U/L H, Sec 3 T25S R37E of Lea County, New Mexico

Dear Mr. Johnson:

Pursuant to the State of New Mexico regulatory requirements for permanent closure of drilling pits, enclosed herewith is the completed Form C-144, digital photos of existing pit, sample location diagram (final report) and additional information constituting the "Closure Plan" for closure of Range Operating New Mexico, Inc., hereinafter "Range", Tarantula 3 Federal No. 2 drilling pit.

Remediation of the Range, hereinafter "Tarantula 3-2", drilling pit is targeted to begin 30 October 2006 with completion expected by 17 November 2006, permitting weather and the occurrence of unexpected conditions not within the Operator's control do not create delays nor exacerbate the proposed schedule in any way. Range intends to maintain its commitment to environmental health and safety and fully comply with the Regulatory Performa of the State of New Mexico, OCD regarding this disposal action and permanent closure of the Tarantula 3-2 drilling pit.

Potential, temporary contamination from the Tarantula 3-2 drilling pit site, should any exist, resulted solely from oil and gas production activities. Potential contaminates of concern are typical mid to high-level concentrations of brines, typical polymers (such as xanthium gum and starch) and in general, drilling mud and fluids remaining upon completion of said drilling operations.

Area land use is primarily ranching with domestic pasturage combined with oil and gas production activities. The Range Tarantula 3-2 drilling pit is located in a section wherein groundwater depth to surface data has been established by the New Mexico State Engineer's Web site as less than 50feet. Further, in conjunction with their normal online databank, the State of New Mexico, OCD is cross-referencing with a groundwater map titled "Eddy County Depth to Groundwater", produced by Wayne Johnson at Chevron/Texaco, dated 9 February 2005. Although this map does not show elevation definition, it has proven to be generally accurate and can only be further defined by an actual coring program to ascertain the depth of groundwater in a particular place. Consequently, the Tarantula 3-2 area cannot be considered other than a water sensitive designation to ensure compliant environmental performance and ultimately reduction of operator liability.

Since this is the case, Range intends to engage a coring program during the first week of October for the Tarantula 3-2 to discern the type of disposal compliant with Regulatory Performa. Predicated on coring results, Range shall approach OCD with the data and request election of one of the following methods of disposal: (1) *insitu*, (2) solidification or (3) haul off. In conjunction with this approach, Range herewith submits to the OCD details of the closure method for each of the above cited forms, which would be implemented if selected.

Insitu Burial

Insitu disposal shall be engaged pursuant to the approved Form C-144. Range believes compliant environmental performance and reduction of liability pursuant to New Mexico, OCD regulations can be achieved with *insitu* disposal predicated on the evidentiary data heretofore presented. Further, should future Regulatory Performa mandate additional action or should the Operator choose to take additional action, the *insitu* option, in this case, (1) limits the environmental impact in general, (2) allows the Operator/government immediate access to said liability, (3) contains said material within the Operator's lease boundary and (4) in the event evidence of water is discovered during the digging of the *insitu* pit, all actions would cease and the State would be immediately notified that a haul off or solidification was now mandated.

This compliance action shall strictly apply the State of New Mexico, OCD standards, i.e. clean-up levels for the Tarantula 3-2 drilling pit shall meet the less than 100ppm of TPH, ND for BTEX and the less than 250ppm of chlorides, unless approved otherwise and substantiated by background information documented to be higher than the above cited indices.

Insitu Closure Plan Specifics

Prior to commencement of closure activities, the Range contractor will contact One-Call for line spot clearance confirming the State of New Mexico, OCD is in agreement with the proposed "Closure Plan" for removal of approximately 1,000 bbl. of liquid followed by the removal of all fines (drill cuttings) assuming (1) these fines have sufficiently dried allowing for maneuverability of heavy equipment in the pit area or (2) mixing shall occur in order to attain sufficient dryness of said fines prior to deposit into the *insitu* 20 ml HDPE liner, enabling *insitu* burial application to take place and final pit closure.

Environmental health and safety regulations mandate control of pit volumes at all times. Thus, the liquid material was pumped off as needed and properly disposed of during active drilling operations. Water accumulated since this time is either due to liquid material not completely hauled from actual drilling operations or rain. This water will be hauled from the location and properly disposed of pursuant to OCD Regulatory Performa.

- Contractor shall mobilize to the Tarantula 3-2 drilling pit site located on the Doone Ranch in Jal, New Mexico. Personnel and heavy equipment necessary to provide for the initiation and completion of said remediation activities presented above shall be engaged as is appropriate to the mandated exercise.

- No remediation activity shall occur off the existing pad or already disturbed areas as authorized by the APD and approved Best Management Practices (BMP's). Range shall consider weather conditions and necessary equipment positioning to provide a clear area for adequate staging for site control and safety compliance, ensuring operations shall be compliant with New Mexico, OCD Regulatory Performa.

- The Tarantula 3-2 drilling pit is currently lined with a 12ml HDPE liner, which shall be removed by heavy equipment and disposed of with the drilling fines *inistu* pursuant to New Mexico, OCD requirements. *Insitu* actions provide for the encasement of all drilling pit contents in a 20 ml HDPE Liner in a rectangular box like shape and placed vertically the appropriate depth below ground to ensure room for placement of three feet of topsoil.

- Once the burial trench/pit has been dug to sufficient dimensions to ensure proper placement of the pit contents, the track hoe shall begin to deposit pit materials within the secured container until all pit material has been placed within it. This 20ml HDPE liner container shall not be permanently sealed with a 20 ml HDPE cap until after the drilling pit bottom has been sampled and approved for closure by the State of New Mexico, OCD. In the event more material must be harvested to achieve compliance, and said harvest shall increase the volume of the *insitu* material to such a degree that it will threaten the integrity of the container or potentially cause leakage to occur by reason of increased volume, an additional *insitu* 20ml HDPE liner container shall be placed adjacent (when space and terrain permits) to the existing container. Such action will provide for reasonable assurance that no leakage will occur and maintain all contaminates within a specific geographic location within the lease boundary.

- Prior to initiation of backfilling, the Operator shall take appropriate samples of the pit area to ensure compliance with OCD Standards for remediation of possible soil chloride levels greater than 250ppm. However if levels at the bottom of the drilling pit test too high, a background set of samples shall be obtained for testing from the immediate vicinity and compared to those of the pit bottom. Simultaneously, more soil shall be removed from the "hot spots". Once completed, new data acquisition shall occur and sample results determine whether or not compliance has been reached in order to begin backfilling. No backfilling shall begin without authorization by the State of New Mexico, OCD.

- Backfilling of the Tarantula 3-2 drilling pit shall be commensurate with existing topography and terrain relief features (contouring) so as to return it to its "near-as" previous condition, including a contour for moisture accumulation which prevents abnormal or unsustainable water impoundment resulting in erosive actions. Pursuant to the APD, the Tarantula 3-2 site shall be seeded in compliance with BLM seed mixtures and the rancher's need.

- The "Closure Plan" shall include a final report providing lab analysis of the backfill material, digital project photos and evidentiary narrative to support the completed disposition of the reclaimed Tarantula 3-2 drilling pit site.

***Insitu* Solidification Burial**

Should coring results demonstrate Range would elect to use the Certified Kiln Dust (CKD) solidification process, depositing the material into a 20ml HDPE lined pit on location capped with a 20 ml HDPE liner. The process utilized in this disposal method shall be as described above with the exception of the solidification itself prior to initiation of the insitu burial action.

The CKD solidification procedure shall be as follows:

- Three trenches shall be established, two for encapsulation and one to function as a CKD work pit constructed within the original reserve pit immediately adjacent to and between the other two pits.

- **Solidification of Cuttings**

  1. Cuttings will be mixed with a track hoe and the contents lifted and dropped in a stirring fashion. Once the Certified Kiln Dust (CKD) and the pit contents are sufficiently bonded solidification will occur.

  2. The CKD ratio to measured pit contents on the average shall be I yard drill fines to 240 pounds CKD or 1K cy to 240 pounds of drill fines. Should the fines be too dry fresh water will be introduced to initiate the bonding process.

  3. To ensure proper QA/QC, the CKD is precisely weighed before delivery and pit size is set for a predetermined volume of pit contents.

  4. Three representative samples of the pit contents shall be taken prior to initiation of the work and stored in closed containers. Then each stage of mixing shall be sampled prior to transferring the slurry to the deep trench, alternating "closed" then "open" environmentally approved containers to QA/QC solidification.

  5. The contractor shall deliver the properly marked samples within three days to OCD for storage.

Haul Off Disposal

Should coring results demonstrate Range would elect to use the haul off disposal option, all environmental and regulatory Performa shall be as presented in the "Insitu Closure Specifics" with the exception of actually deep burying the material. Rather, it would be transported off to a legal disposal site such as CRI.

- Contractor shall mobilize to Tarantula 3-2 drilling pit site located site located on the Doone Ranch in Jal, New Mexico. Personnel and heavy equipment necessary to provide for the initiation and completion of said remediation activities presented above shall be engaged as is appropriate to the mandated exercise.

- No remediation activity shall occur off the existing pad or already disturbed areas as authorized by the APD and approved Best Management Practices (BMP's). Range shall consider weather conditions and necessary equipment positioning to provide a clear area for adequate staging for site control and safety compliance, ensuring operations shall be compliant with New Mexico, OCD Regulatory Performa.

- The Tarantula 3-2 drilling pit is currently lined with a 12ml HDPE liner, which shall be removed by heavy equipment and disposed of with the drilling fines transported to CRI, Inc. pursuant to New Mexico, OCD requirements.

- Prior to initiation of backfilling, the Operator shall take appropriate samples of the pit area to ensure compliance with OCD Standards for remediation of possible TPH, ND for BTEX and levels of less than 250ppm of chlorides. However if levels at the bottom of the drilling pit test too high, a background set of samples shall be obtained for testing from the immediate vicinity and compared to those of the pit bottom. Simultaneously, more soil shall be removed from the "hot spots". Once completed, new data acquisition shall occur and sample results determine whether or not compliance has been reached in order to begin backfilling.

- ❖ Backfilling of the Tarantula 3-2 drilling pit shall be commensurate with existing topography and terrain relief features (contouring) so as to return it to its "near-as" previous condition, including a contour for prevention of water impoundment.

- ❖ The "Closure Plan" shall include a final report providing lab analysis of the backfill material, digital project photos and evidentiary narrative to support the completed disposition of the Tarantula 3-2 drilling pit site.

Should you have questions, please call 505-745-3691 (office) or 505-200-5344 (cell).

Sincerely,

Tony Tucker
Production Supervisor

cc: State of New Mexico, OCD, Form C-144

RANGE
OPERATING NEW MEXICO, INC.

RANGE OPERATING NEW MEXICO, INC.
PO BOX 300
LOVING, NEW MEXICO 88256

TARANTULA 3 FEDERAL NO. 2
API No.: 30-025-37516
Location: U/L H S3 T25S R37E

Date:	**15 September 2006**
Submitted to:	Mr. Larry Johnson and Mr. Buddy Hill New Mexico Oil Conservation Division Lea County, New Mexico
Purpose:	Transmittal of photographic data in response to LOV No. iLWHO623661284 and pit closure documents.

RANGE
OPERATING NEW MEXICO, INC.

Tarantula 3 Federal #2
H-3 -25S-37E
30-025-37516
Justis Field
LEA CO., NM **NMPM**