2R - 30

# GENERAL CORRESPONDENCE

YEAR(S):
1994 - 1993

RITTER ENVIRONMENTAL & GEOTECHNICAL SERVICES
2900 N. Big Spring, Midland, Texas 79705
Bus: (915) 682-7404 • Metro: (915) 570-6007 • Fax: (915) 682-7440

January 20, 1994

Mr. William Olson
New Mexico EM & NRO
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504

Re: Phillips Petroleum Company, Surface Impoundment Closures
Eddy & Lea Counties, New Mexico

Dear Bill:

We have completed the closure of several surface impoundments located in Lea and Eddy Counties on behalf of Phillips Petroleum Company. Mr. Jeff Carlson with Phillips has asked that I forward a formal copy of the final reports to your office.

REGS and Phillips are pleased with the results of our efforts and trust that you will agree. Your comments are welcome.

If you have any questions, please do not hesitate to call me at your convenience. I will place a follow-up call to make sure you have received the reports.

Sincerely,

Mitchell Ritter

MRR/amc
Enclosure

STATE OF NEW MEXICO
**ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT**

**BRUCE KING**
GOVERNOR

OIL CONSERVATION DIVISION
ARTESIA DISTRICT OFFICE

P.O. DRAWER DD
ARTESIA, NEW MEXICO 88211
(505) 748-1283

May 25, 1993

Mr. Jeff Carlson
Phillips Petroleum Company
4001 Penbrook
Odessa, Texas 79762

RE: **Cabin Lake Field Surface Impoundment Closure**
*Phillips Petroleum Company*
*Sec.2, T.22S, R.30E*
*Eddy County, New Mexico*

Dear Mr. Carlson:

The New Mexico Oil Conservation Division (OCD) has completed a reviewed of the May 13, 1993 "SURFACE IMPOUNDMENT CLOSURE-PHILLIPS PETROLEUM COMPANY CABIN LAKE FIELD OF EDDY COUNTY, NEW MEXICO. SECTION, 2 TWP 22 SOUTH RANGE 30 EAST" which was submitted by Ritter Environmental & Geotechnical Services on behalf of Phillips Petroleum Company.

The above mentioned closure plan is hereby approved with the following conditions:

1. Upon completion of the closure activities the pit area will be mounded to prevent ponding.

2. A closure report will be submitted to the OCD within 60 days of the "post treatment core sampling" event.

3. The OCD will be notified at least 72 hours in advance of all closure activities such that the OCD may have the opportunity to witness the activities and/or split samples.

Please be advised that OCD approval does not relieve Phillips of liability if closure activities determine that contamination exists which is beyond the scope of the closure plan. In addition, OCD approval does not relieve Phillips of liability for compliance with other federal, state or local laws and/or regulations.

If you have any questions, please do not hesitate to contact me at (505) 748-1283.

Sincerely,

Mark Ashley

Mark Ashley
District Geologist
Oil Conservation Division

cc: Mitchell Ritter - Ritter Environmental & Geotechnical Services

# FAX TRANSMITTAL SHEET

## OIL CONSERVATION DIVISION - FAX NO. (505) 827-5741

| | |
|---|---|
| TO: Mark Ashley - OCD Artesia | FR: Bill Olson - Envir. Bureau |
| PAGES w/cover: 3 | DATE: 5/19/93 |

Draft letter for you to use.
If you have any questions, call me.

If there are any problems with this transmission, please call (505) 827-5806.

Draft

May 19, 1993

**CERTIFIED MAIL**
**RETURN RECEIPT NO. _____**

Mr. Jeff Carlson
Phillips Petroleum Company
_____
_____

**RE: CABIN LAKE FIELD SURFACE IMPOUNDMENT CLOSURE**
**PHILLIPS PETROLEUM COMPANY**
**EDDY COUNTY, NEW MEXICO**

Dear Mr. Carlson:

The New Mexico Oil Conservation Division has completed a review of the May 13, 1993 "SURFACE IMPOUNDMENT CLOSURE-PHILLIPS PETROLEUM COMPANY CABIN LAKE FIELD OF EDDY COUNTY, NEW MEXICO. SECTION 2 TWP 22 SOUTH RANGE 30 EAST" which was submitted by Ritter Environmental & Geotechnical Services on behalf of the Phillips Petroleum Company.

The above referenced closure plan **is hereby approved with the following conditions:**

1. Upon completion of the closure activities the pit area will be mounded to prevent ponding.

2. A closure report will be submitted to the OCD within 60 days of the "post treatment core sampling" event.

3. Phillips will notify OCD at least 72 hours in advance of all closure activities such that OCD may have the opportunity to witness the activities and/or split samples.

Please be advised that OCD approval does not relieve Phillips of liability if closure activities determine that contamination exists which is beyond the scope of the closure plan. In addition, OCD approval does not relieve Phillips of responsibility for compliance with other federal, state or local laws and/or regulations.

If you have any questions, please contact me at (505) 827-5885.

Sincerely,

William C. Olson
Hydrogeologist
Environmental Bureau

xc: OCD Artesia Office

RITTER ENVIRONMENTAL & GEOTECHNICAL SERVICES
119 N. Colorado, Suite 201, Midland, Texas 79701
Bus: (915) 682-7404 • Metro: (915) 570-6007 • Fax: (915) 682-7440

May 13, 1993

Mr. Bill Olson
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, new Mexico 87504

Re: Pit Closures, Phillips Petroleum
Lea and Eddy Counties, New Mexico

Dear Bill:

By now you should have received the original request for approval of the pit closures for Phillips Petroleum Company in Lea and Eddy Counties, New Mexico. We inadvertently included the request for approval of our proposal for both areas in the same letter to Jerry Sexton in Hobbs. I have subsequently found out that Artesia District II office will have to approve the Eddy County pit closure. Therefore we have redirected each request to the appropriate district office and both requests will be coming to Santa Fe via each district.

I would appreciate any assistance you may be able to provide in gaining an approval of the closure of the pits. Phillips is ready to start operations as soon as approval has been granted. If there is anything I can do to assist you, please call me at your convenience at (915) 682-7404.

Thank you for your help in the past. You folks are always a pleasure to deal with on each occasion I have had to talk to you.

Sincerley,

Mitchell Ritter

MRR/amc
Enclosures

RITTER ENVIRONMENTAL & GEOTECHNICAL SERVICES
119 N. Colorado, Suite 201, Midland, Texas 79701
Bus: (915) 682-7404 • Metro: (915) 570-6007 • Fax: (915) 682-7440

May 13, 1993

Mr. Mark Ashley
Mr. Mike Williams
New Mexico Oil Conservation Division
P.O. Drawer DD
Artesia, New Mexico 88211

Re: Surface Impoundment Closure - Phillips Petroleum Company
Cabin Lake Field of Eddy County, New Mexico. Section 2, TWP 22 South Range 30 East

Dear Messrs. Ashley and Williams:

I am writing to seek your approval of the closure of an unlined surface impoundment (pit) located at the above referenced facility operated by Phillips Petroleum Company.

In conjunction with Mr. Jeff Carlson, Phillips Petroleum's safety and environmental representative, Ritter Environmental & Geotechnical Services (REGS) would like to present the enclosed proposal and information for your review and approval prior to pit closure.

As this pit is being decommissioned by the operator, Phillips Petroleum Company, it is their desire to adhere to the currently established guidelines for pit (surface impoundment) closure as published by the NMOCD in February 1993 and to address the closure of this pit in a safe and cost effective manner. As an alternative to transporting and landfilling of these wastes (where in only a transfer of the problem occurs) and to long term bioremedial activities that would involve many months and possibly years to accomplish the current remedial guidelines as set forth by the NMOCD, we (REGS) through currently developed solidification techniques propose to treat the waste materials on site by stabilization of the waste through solidification.

We are currently utilizing combinations or separate application of portland cement, kiln dust and/or fly ash to bind the wastes into a hardened monolithic block of concrete type material. Solidification refers to treatment systems which are designed to improve the handling and physical characteristics of such wastes, to decrease the surface area across which the transfer or loss of the waste characteristics can occur, and to limit the solubility of those waste characteristics. This treatment effectively limits the leachate process and .prevents the materials from entering the subsurface soils and groundwater. Stabilization

prevents the materials from entering the subsurface soils and groundwater. Stabilization techniques, such as solidification, have benefits primarily in limiting the solubility of the waste or by detoxifying the waste contaminants, even though the physical characteristics of the waste may or may not appear to be changed. It is intended that the following procedures will be followed in the performance of our services:

I. **Preliminary Site Evaluation** - Includes a visual inspection and sampling of each pit and the surrounding area to determine site specific conditions such as; nearby surface waters, streams, surface soil types and depths, proximity to groundwater supply wells, physical and chemical properties of the contents of each pit and the treatability of those contents.

II. **Treatment/Solidification** - After careful preparation of the site for safe operations the solidification process begins. Solidification begins with the physical addition of the appropriate product(s) in the correct proportions to the type of waste involved. Mechanical mixing methods are utilized to thoroughly blend the waste material and the appropriate solidifying agent(s) with correct proportions of water. At this time, a curing process is allowed to take place for a period of approximately 48 hours. Post treatment core samples will be taken from each pit to determine TCLP parameters for volatile organic compounds (VOC's) such as Benzene and Total BTEX.

III. **Site Reclamation** - After treatment, the site will be reclaimed by placing native soils over the treated area and recontouring the site back to the original grade (if possible).

I have included analytical results of one series of bench tests we have performed on actual pit material from the Cabin Lake field. These tests have generated very pleasing results, wherein we have solidified pit sludge and performed TCLP, BTEX, and TPH analyses on the solidified samples. As you can see, in each case the solidified material renders the levels of BTEX and TPH leachability to acceptable levels in accordance with the NMOCD guidelines.

The series of analyses was run and dated 5-3-93. The series labeled J-1, J-2, and J-3 represent the James Pit in the Cabin Lake field. The analytical results of the treated pit sludge are within current NMOCD guidelines.

In reference to analytical tests currently run, we would like to suggest to the NMOCD an alternative to testing the pit material after treatment. We have determined through past

experience with the solidification process that the TCLP procedure and methodology currently being used for identification of elevated levels of toxic compounds may not be the most appropriate methods for the analysis of actual site conditions post treatment.

We would suggest the adoption of a seven (7) day leachate test in lieu of the TCLP analysis. The seven (7) day leachate test is a non-violent test in which actual sub surface conditions are simulated by submersing the sample to be tested in deionized water for a period of seven (7) days prior to analyses of the water. This test simulates actual saturated groundwater conditions at the site and relates to leachability as opposed to the violent tumbling action the samples are subjected to in the TCLP methodology. Also, the approximately 20 to 1 dilution factor utilized in the TCLP methodology is not utilized in the seven (7) day leachate method.

We have obtained the following results utilizing the seven (7) day leachate test on the same samples previously run for TCLP:

| SAMPLE # | TPH mg/l | BENZENE mg/l | ETHLYBENZENE mg/l | TOLUENE mg/l | XYLENE mg/l |
|---|---|---|---|---|---|
| J-3 (JAMES PIT) | 2.2 | <.004 | <.004 | <.004 | <.004 |

The methodology for the seven (7) day leachate test is as follows and is a part of the accepted methodology utilized by the Texas Water Commission (TWC) for landfill evaluations:

**7-Day Distilled Water Leachate Test**

This test is intended only for dry, solid wastes, i.e., waste materials without any free liquids.

1. Place a 250 gm. (dry weight) representative sample of the waste material in a 1500 ml. Erlenmeyer flask.
2. Add 1 liter of deionized or distilled water into the flask and mechanically stir the material at a low speed for five (5) minutes.
3. Stopper the flask and allow to stand for seven (7) days.
4. At the end of the seven (7) days, filter the supernatant solution through a .45 micron filter, collecting the supernatant into a separate flask.
5. subject the filtered leachate to the appropriate analysis.

Although we feel the above methodology is more appropriate, we will provide TCLP analyses should the above methodology not be approved.

I have included photographs of pit solidification performed in Southeast Montana, northeast of Wyoming and southwest of Wyoming. These pits were solidified with appropriate state agency approval.

We have also included copies of two excerpts from the Superfund Innovative Technology Evaluation program (SITE) funded and directed by the EPA to evaluate new technologies. These excerpts, although not identical to our process, are similar and provide some insight into the feasibility of our work.

We are hereby requesting your approval to apply and utilize the above described technology in the treatment of the surface impoundment referenced at the beginning of this correspondence. Your response should be directed to me at the letterhead address.

Thank you for taking the time to review this proposal. Your comments and assistance will be greatly appreciated.

Sincerely,

Mitchell Ritter

MRR/bk
cc: Mr. Bill Olson/NMOCD - Santa Fe, New Mexico