

State of New Mexico
Energy, Minerals and Natural Resources Department

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Governor

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Jami Bailey, Division Director
Oil Conservation Division



April 8, 2014

Mr. Lee Livingston
Operations Manager
Mack Energy Corporation
P.O. Box 960
Artesia, New Mexico 88210-0960

**RE: Final Approval of the Mack Energy Round Tank
Permanent Pit 1 and 2 Applications
Section 19, Township 15 South, Range 29 East, NMPM, Chaves County**

Dear Mr. Livingston:

The Oil Conservation Division (OCD) received two permanent pit applications (C-144 plus Supplemental Information) from Mack Energy on September 5, 2013. OCD provided Mack with a review of the applications on October 21, 2013 and held a teleconference to discuss deficiencies on November 4, 2013. Mack submitted a revised application from December 2 through December 4, 2013. Mack also submitted revised design drawings (Appendix A) on February 10, 2014. OCD issued Conditional Approval of the application on February 14, 2014. Mack submitted its revised permanent pit application from March 24 through March 28, 2014.

Mack requested exceptions to allow alternative seam testing procedures for an alternative liner, an alternate bottom liner, and to use geonet in the leak detection system. In its Conditions of Approval, OCD specified that Mack must demonstrate that the proposed exceptions protect the environment as effectively as the Rule 17-specified media and methodology. OCD specifically accepted the exception request to use geonet; however, Mack had the burden to demonstrate that the proposed 30-mil LLDPE liner was equally as protective as the 60-mil HDPE. Mack was unable to demonstrate this. OCD independently determined that 30-mil LLDPE is not able to meet the same performance standards as 60-mil HDPE. Further, the more recent proposal to use 30-mil HDPE also fails to match the specifications of 60-mil HDPE and also raises Public Notice issues. Therefore, OCD formally denies Mack's exception request to use an alternative bottom liner, which renders the alternate seaming exception request moot.

Rule 17 requires liner compatibility compliance with EPA SW-846 Method 9090A, or subsequent relevant publication. OCD determined that EPA's SW-846 Method 9090A generally referred to ASTM standards and did not establish standards for liners. OCD also determined that Geosynthetic Institute's (GSI) specifications for manufacturing

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liners (see specifications page at <http://www.geosynthetic-institute.org/>) more closely meet OCD's performance requirements and specify which ASTM methods must be followed. OCD has determined that the GSI Test Methods GM13 and GM17 for HDPE and LLDPE were acceptable and appropriate "*subsequent relevant publications*" to 9090A.

In an effort to expedite the final approval of Mack's application to operate permanent pits, OCD contacted you on April 4, 2014 to explain the results of our research. OCD understands that Mack accepts OCD's determinations and is no longer pursuing its exception requests to use an alternative bottom liner.

OCD has reviewed the revised applications and has determined that final approval is hereby granted with the following conditions:

OCD CONDITIONS:

1. OCD denies Mack requested exceptions to allow an alternate bottom liner and alternative seam testing.
2. OCD approves the use of the proposed geonet.
3. Mack must properly handle and dispose of all waste streams that are generated while treating produced water.
4. Mack must revise the remaining typos and minor revisions to its application. OCD will place pdfs with yellow highlighted comments for Mack's review on its sFTP site.
5. Mack will submit the final revisions to its application within 30 days.
6. Mack may proceed "at risk" at this time while it is preparing the final documents.

On one final issue – please ensure that your consultant does not combine correspondence for your projects with other operator applications.

Please contact Glenn von Gonten at (505) 476-3488 (Glenn.VonGonten@state.nm.us) if you have any questions. OCD would appreciate the opportunity to witness the construction of the permanent pits and the operation of the mobile treatment unit. Thank you for your cooperation in OCD's review of this permanent pit application.

Sincerely,



Jami Bailey
Director

Cc: Scott Dawson, Glenn von Gonten, Mike Bratcher
JB/gvg