

**Jordan Engineering, LLC**

**P.O. Box 92584**

**Albuquerque, New Mexico 87199**

**505.280.2823**

June 4, 2019

Submitted by e-mail

Mr. Jeff McCool  
Vice President, Training and Outreach  
New Mexico Junior College  
1 Thunderbird Circle  
Hobbs, NM 88240

Re: New Mexico Junior College (NMJC)  
Evaluation of Sundance West, Inc.  
Permit Modification-Minor Evaporation Pond Construction Plans  
NM Energy, Minerals, and Natural Resources Department  
EMNRD Contract No. 14-521-0700-0124

Dear Mr. McCool:

Pursuant to the above referenced contract Jordan Engineering, LLC (JE) has completed the review for the Evaluation of Sundance West, Inc. (Sundance West) Mud Management/Liner System, Lea County New Mexico.

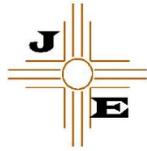
This application requests approval for the reconfiguration of the process area and the elimination of the permitted Stabilization and Solidification Area (SSA). The basic function of the process area has not been changed however Sundance West is proposing to replace the permitted 30-mil polyester base liner system in this area with a 60-mil HDPE liner system. The "Mud Dry Out Area" that is replacing the SSA will be constructed with 12" of compacted subgrade, geosynthetic clay liner, 60-mil HDPE Geomembrane, 175 -mil geocomposite, 24" of select fill (protective cover), and 6" of concrete (serving as a pad for mud dry out. Incorporated into the revised design is a series of leachate collection/observation points (sumps).

The following are JE comments and recommendations for approval of the Sundance West application prepared by Onyx Contractors/Maverick Engineers/Daniel B. Stephens (Engineers).

**Recommended Permit Conditions:**

**Revised Process Area:**

- 1) Prior to operations the Sundance West shall install permanent H<sub>2</sub>S monitors as required in the approved permit application,
- 2) Prior to construction of the concrete and liner installation for the process area the Applicant shall provide a 30-day notice to the Division the intent to construct. Sundance West shall submit to the Division a Construction Quality Assurance (CQA) report with complete as-built construction drawings.



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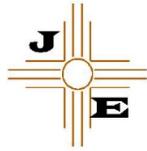
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- 3) Sundance West shall submit a revised Operations Inspection, and Maintenance Plan updating the new configuration of the jet out/process mud dry out areas and proposed sump inspection/testing plan.
- 4) Sundance West shall utilize 4000 psi concrete for all exposed concrete and comply with Walla Engineering LTD structural engineering review dated December 19, 2018 (attached),
- 5) Sundance West shall provide to the Division a CQA plan for the construction of concrete elements of the jet out/process area and mud dry out area (including but not limited to forming, placement, compaction/vibration of concrete, curing and testing of concrete),
- 6) Sundance West shall route all process water through the previously permitted Dissolved Air Flotation unit(s) (DAF) prior to pumping to evaporation ponds.

As a note, the original drawing indicated a stormwater pond. In subsequent revisions Sundance West removed pond a will route all stormwater through the process area for treatment and ultimate disposal in the evaporation ponds.

### **Mud Dry Out Area:**

- 7) Sundance West shall revise Volume II Section 1, Operation, Inspection, and Maintenance Plan in the approved permit to reflect the leachate/observation sumps and pressure testing as required by rule. This plan shall be submitted prior to operations in the area,
- 8) Sundance West shall revise Volume II Section 2, Oil Field Waste Management Plan in the approved permit to reflect operations of the Mud Dry Out Area. This plan shall be submitted prior to operations in the area. No mud dry out material shall be placed or processed within 10-feet of the integral curb surrounding the Mud Dry Out area,
- 9) The leachate/observation monitoring riser pipes shall be 1-foot higher than the maximum anticipated head,
- 10) The placement and material specification shall meet the requirements of the protective cover as required in the approved permit application,
- 11) Prior to construction of the concrete and liner installation for the Mud Dry Out Area the Applicant shall provide a 30-day notice to the Division the intent to construct. Sundance West shall submit to the Division a Construction Quality Assurance (CQA) report with complete as-built construction drawings.
- 12) Sundance West shall provide to the Division a CQA plan for the construction of concrete elements of the Mud Dry Out area (including but not limited to forming, placement, compaction/vibration of concrete, curing and testing of concrete) in addition to repair of potential cracking of the slab,
- 13) Sundance West shall utilize a minimum 4000 psi concrete for all exposed concrete,
- 14) Sundance West shall provide the Division with an updated Closure/Post Closure Estimate with 60 day of operations commencement,
- 15) Sundance shall verify through geotechnical/engineering consultation the proper depths and effectiveness of downgradient vadose monitoring wells pertaining to the depth of the leachate/observations points in both the revised Process and Mud Dry Out areas,



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16) Prior to operations Sundance West shall provide to the Division a new financial assurance estimate and mechanism that incorporates the revised mud dry out area and jet out/oil treatment plant.

Please call me with your questions or comments.

Sincerely,

James W. Jordan, P.E.  
Managing Member