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State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

October 30, 2018

Karin Madsen, Resident Agent
West Ridge Resources, Inc.
P.O. Box 910
East Carbon, Utah 84520-0910

Subject: Culvert Replacement, West Ridge Resources, West Ridge Mine, C/007/0041,
Task #5766

Dear Ms. Madsen:

The Division has reviewed your application. The Division has identified deficiencies that must be addressed before final approval can be granted. The deficiencies are listed as an attachment to this letter.

The deficiencies authors are identified so that your staff can communicate directly with that individual should questions arise. The plans as submitted are denied. Please resubmit the entire application.

If you have any questions, please call me at (801) 538-5325.

Sincerely,

Daron R. Haddock
Coal Program Manager

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Technical Analysis and Findings

Utah Coal Regulatory Program

PID: C0070041
TaskID: 5766
Mine Name: WEST RIDGE MINE
Title: CULVERT REPLACEMENT

Operation Plan

Road System Other Transportation Facilities

Analysis:

The amendment meets the State of Utah R645 requirements for Road Systems and Other Transportation Facilities.

R645-301-527.200: In response to ongoing maintenance issues associated with the DC-8AR culvert, this amendment addresses the complete replacement of DC-8AR with a more appropriately sized culvert. Previously, the DC-8AR consisted of a trio of 6" diameter pipes in parallel. But that configuration resulted in continual plugging and would cause flooding within the vicinity of this culvert every time a heavy rainstorm occurred over the mine. The trio of smaller pipes was removed entirely and replaced with a larger 18" diameter culvert. Included in this amendment is Table 15, which lists all of the culverts within the permit area along with the recommended dimensions to withstand 10yr/6hr and 10yr/24hr rain events. This table recommends that the minimum required diameter of DC-8AR be 11.28 inches to withstand a 10yr/6hr rain event, and 17.16 inches in the case of a 10yr/24hr rain event. The proposed 18" diameter culvert satisfies both of these scenarios.

jeatchel

Hydrologic Diversion Misc. Flows

Analysis:

The amendment does not meet the State of Utah R645 requirements for diversions.

West Ridge Resources, Inc (the Permittee) submitted an amendment to the Division of Oil, Gas and Mining (the Division) on September 28th, 2018. The amendment proposes a revision to the surface drainage plan at the West Ridge Mine.

The Permittee proposes the replacement of disturbed culverts DC-8AR (See Plate 7-2, Mine Site Drainage map). DC-8AR is comprised of 3 culverts. The Permittee wishes to replace the three culverts with one larger 18" culvert.

Plate 7-2, Mine Site Drainage Map depicts the drainage areas that were utilized in calculating the peak runoff and sizing for the various drainage components for the mine site (e.g. culverts, diversions). Table 8A provides the disturbed area acreages that were utilized. Disturbed area DA-8 is 1.52 acres with a hydraulic length of 437.4'. A runoff curve number (CN) of 90 was used for the peak runoff calculation given the imperviousness of the mine site surface within the disturbed area. Table 9, Disturbed Drainage Summary, provides the peak flow calculations for each of the disturbed areas depicted on plate 7-2. The peak flow for DA-8 for the 10-year, 6-hour event is 0.62 cfs (449 gpm).

DC-8AR receives storm-water runoff produced from disturbed area drainages DA-1, DA-2, DA-3, DA-4, DA-4A, DA-5,

DA-6, DA-7 and DA-8. Table 15, Disturbed Culvert Design Summary provides a summary for the mine sites disturbed culverts. The proposed 18" culvert (DC-8AR) is designed to safely convey 23.94 cfs based on a 10-year, 24-hour event. The 10-year, 24-hour design storm utilized for the culvert sizing calculation is more robust than required by the State of Utah R645 rules for a temporary diversion for a miscellaneous flow (i.e. flows that drain a watershed less than one square mile and excluding perennial and intermittent stream flow).

The Permittee must revise Table 10, Drainage Structures. Table 10 currently shows disturbed drainage ditch DD-11 as receiving drainage from disturbed drainage ditch DD-8A. With the removal of DC-8A from the drainage plan, the storm-water runoff from DD-8A will now be routed to DC-8AR prior to reporting to DD-12. As such, the column identifying DD-11 as receiving drainage from DD-8A is not accurate. Similarly, the entry in Table 10 for DD-12 must be revised as it will now receive storm-water runoff from DD-8A and DC-8AR.

Deficiencies Details:

The amendment does not meet the State of Utah R645 requirements for diversions. The following deficiency must be addressed prior to final approval:

R645-301-742.300: The Permittee must revise Table 10, Drainage Structures. Table 10 currently shows disturbed drainage ditch DD-11 as receiving drainage from disturbed drainage ditch DD-8A. With the removal of DC-8A from the drainage plan, the storm-water runoff from DD-8A will now be routed to DC-8AR prior to reporting to DD-12. As such, the column identifying DD-11 as receiving drainage from DD-8A is not accurate. Similarly, the entry in Table 10 for DD-12 must be revised as it will now receive storm-water runoff from DD-8A and DC-8AR.

schriste

Reclamation Plan

Bonding Determination of Amount

Analysis:

The amendment satisfies the State of Utah R645 requirements for Determination of Bonding Amount.

R645-301-830: In response to ongoing maintenance issues associated with the DC-8AR culvert, this amendment addresses the complete replacement of DC-8AR with a more appropriately sized culvert. Previously, the DC-8AR consisted of a trio of 6" diameter pipes in parallel. But that configuration resulted in continual plugging and would cause flooding within the vicinity of this culvert every time a heavy rainstorm occurred over the mine. The trio of smaller pipes was removed entirely and replaced with a larger 18" diameter culvert. This change should not affect the reclamation bond since the amount of labor required to remove one 18" diameter culvert is the same as it would be for three 6" diameter pipes of equal length. The current bond designates over \$138,000 to the removal and reclamation of all culverts.

jeatchel