



GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

January 2, 2019

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

Subject: Conditional Approval of Culvert Replacement, West Ridge Resources, Inc., West Ridge Mine, C/007/0041, Task #5832

Dear Ms. Madsen:

The above-referenced amendment is approved conditioned upon receipt of 2 clean copies prepared for incorporation. Please submit these copies by February 1, 2019. Once we receive these copies, final approval will be granted.

A stamped incorporated copy of the approved plans will also be returned to you at that time, for insertion into your copy of the Mining and Reclamation Plan.

If you have any questions, please call me at (801) 538-5350.

Sincerely,

Steve Christensen
Permit Supervisor

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Technical Analysis and Findings

Utah Coal Regulatory Program

PID: C0070041
TaskID: 5832
Mine Name: WEST RIDGE MINE
Title: CULVERT REPLACEMENT

Operation Plan

Hydrologic Diversion General

Analysis:

The amendment meets 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 proposed a revision to the surface drainage plan at the West Ridge Mine. The Permittee revised the amendment and re-submitted it to the Division on November 15th, 2018.

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).

A deficiency was identified with the previous amendments. The Permittee was directed to

revise Table 10, Drainage Structures. The currently approved Table 10 showed 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 (i.e. storm water from DD-8A and DC-8A no longer reports to DD-11). As such, the column identifying DD-11 as receiving drainage from DC-8AR and DD-8A was not accurate. DD-12 now receives the storm water runoff that used to be conveyed to DD-11 via DD-8A and DC-8A.

The Permittee was directed to revise Table 10, Drainage Structures to accurately identify the linkages for the receiving drainage/conveyance system components (i.e. ditches, culverts). Upon review of Table 10 and Map 7-2, the revisions

have been made.

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