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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

December 6, 2018

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

Subject: Culvert Replacement, West Ridge Resources, Inc., West Ridge Mine,  
C/007/0041, Task #5778

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,

A handwritten signature in black ink that reads "Daron R. Haddock".

Daron R. Haddock  
Coal Program Manager

DRH/sqs  
O:\007041.WR\WG5778 CULVERT\Deficiencies.doc





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## Technical Analysis and Findings

### Utah Coal Regulatory Program

**PID:** C0070041  
**TaskID:** 5778  
**Mine Name:** WEST RIDGE MINE  
**Title:** CULVERT REPLACEMENT

### Operation Plan

#### 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 28<sup>th</sup>, 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 15<sup>th</sup>, 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 amendment (Task #5766). 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 is not accurate. DD-12 now receives the storm water runoff that used to be conveyed to DD-11 via DD-8A and DC-8A.

##### *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. Storm water runoff that was once conveyed by DC-8A to DD-11 now reports to DD-12. The recently submitted Table 10 identifies DD-11 as receiving storm water runoff from DD-8A and DC-8AR. Upon review of Plate 7-2, that does not appear to be the case. DD-12 now receives runoff from DD-8A and DC-8AR. The entry for DD-11 should be revised accordingly (i.e. remove DD-8A and DC-8AR) as only storm water runoff generated from DA-11 appears to report to that diversion.

**schriste**