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TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

July 8, 2013

TO: Internal File

THRU: Daron Haddock, Coal Program Manager *DH*

FROM: Steve Christensen, Environmental Scientist *SCC*

RE: Revision for Pond Cleaning, Genwal Resources, LLC, Crandall Canyon Mine, C/015/0032, Task ID #4372

SUMMARY:

On June 11th, 2013, the Division of Oil, Gas and Mining (the Division) received an amendment to the Crandall Canyon Mine mining and reclamation plan (MRP). The amendment was submitted by Genwal Resources, LLC (the Permittee) in response to a notice of violation (NOV) issued on March 14th, 2013. NOV #10105 was issued for failure to maintain adequate storage capacity within the primary sediment pond located at the Crandall Canyon Mine in Emery County, UT.

In order to abate the NOV, the Permittee was directed to complete the following:

- (1) Decant all water from the sediment pond and remove all accumulated sediment and sludge material.
- (2) Establish a minimum of three sediment clean-out markers within the sediment pond (elevation of 7,769'). The markers must be easily viewed and clearly show the sediment clean-out level.
- (3) Re-establish/verify the 10-year, 240-hour design storm reference marker (elevation of 7,732'). The marker must be easily viewed and clearly show the pond elevation necessary to contain the 10-year, 24-hour design storm event.
- (4) Revise Plate 7-3, Crandall Canyon Mine Genwal Pond (As-built) of the approved MRP to clearly identify the locations of the sediment markers and the 10-year, 24-hour design storm reference marker.
- (5) Revise Appendix 7-4 and Appendix 7-65 of the approved MRP with a narrative that discusses the sediment markers and 10-year, 24-hour design storm event marker. The discussion must include a commitment that clean-out operations will be initiated at the

sediment pond based upon inspection of the sediment markers and that at no time will the water in the sediment pond be allowed to surpass the 10-year, 24-hour design storm event marker. The Sediment Pond Summary of Appendix 7-4 (found on page 36) and the Maintenance Section of Appendix 7-65 (beginning on page 6), would be logical locations for the revisions.

The following deficiencies have been identified that must be addressed prior to final approval:

R645-301-120, -121.200: The Permittee must address the discrepancies found on the cover page of Appendix 7-4, *Crandall Canyon Mine Sedimentation and Drainage Control Plan*. At the bottom of that page, the Permittee has changed the revised date from November 2009 to June of 2005. The cover page for Appendix 7-4 in the approved MRP on file with the Division shows a revised date of September 2010 with Dan Guy's professional engineer certification stamp dated September 14th, 2010. It's unclear why the revised date for Appendix 7-4 was changed and why that date does not match the approved MRP. The revised date should reflect the current amendment being reviewed (i.e. July 2013).

R645-301-120, -121.200: The Permittee must reconcile the pagination of the proposed revisions to Appendix 7-4 with the approved MRP. Based upon a review of the approved MRP, there are pagination discrepancies with the revisions to Appendix 7-4. The submitted page 37 is page 36 in the MRP. In addition, two different versions of page 38 were submitted with the amendment. As a result, it's not possible to determine if the submitted revisions are reconcilable with the approved MRP.

TECHNICAL ANALYSIS:

GENERAL CONTENTS

PERMIT APPLICATION FORMAT AND CONTENTS

Regulatory Reference: 30 CFR 777.11; R645-301-120.

Analysis:

The amendment does not meet the Permit Application Format and Contents requirements of the State of Utah R645 Coal Mining Rules.

Findings:

The amendment does not meet the Permit Application Format and Contents requirements of the State of Utah R645 Coal Mining Rules. The following deficiencies must be addressed prior to final approval:

R645-301-120, -121.200: The Permittee must address the discrepancies found on the cover page of Appendix 7-4, *Crandall Canyon Mine Sedimentation and Drainage Control Plan*. At the bottom of that page, the Permittee has changed the revised date from November 2009 to June of 2005. The cover page for Appendix 7-4 in the approved MRP on file with the Division shows a revised date of September 2010 with Dan Guy's professional engineer certification stamp dated September 14th, 2010. It's unclear why the revised date for Appendix 7-4 was changed and why that date does not match the approved MRP. The revised date should reflect the current amendment being reviewed (i.e. July 2013).

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OPERATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

Siltation Structures: Sedimentation Ponds

The amendment meets the Siltation Structures: Sedimentation Pond requirements of the State of Utah R645 Coal Mining Rules.

Based upon field inspections by Division staff and personal communications with the Permittee, the sediment pond has been cleaned of all the accumulated sediment/sludge material. During the clean-out operations, it was determined that the clay lining thickness of the sediment pond was not the required thickness (10-12"). The Permittee is currently in the process of re-establishing the clay liner in the sediment pond. However; as stated previously, the sediment pond has been cleaned out of accumulated material. Division staff will verify the thickness of the clay liner once it's in place.

The Permittee has submitted a revised Plate 7-3, *Crandall Canyon Mine Sediment Pond (As-Built)*. The plate calls out a typical sediment marker. The Permittee will install three markers within the pond (per NOV #10105). The sediment markers will be painted three different colors to delineate the compliant sediment level, 60% cleanout level (7,769') and the maximum sediment cleanout elevation (7,770'). The marker will be painted green from the bottom of the pond to the 60% cleanout level. From the 60% cleanout level to the maximum sediment cleanout elevation, the marker will be painted yellow. At the maximum sediment cleanout elevation and above, the marker will be painted red. With the painted markers, it will be very easy to inspect the pond and determine if the storage capacity is adequate based upon the design.

The markers will also show the 10-year, 24-hour design storm elevation (7,773.2'). Based upon the typical sediment marker call out on Plate 7-3, the top of the three markers to be established in the sediment pond will be set at an elevation of 7,773.2'.

NOV #10105 also directed the Permittee to revise the text within the MRP to discuss the newly installed sediment markers and they will be utilized in determining when the sediment pond requires cleaning. Additionally, NOV #10105 directed the Permittee to provide a

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commitment that clean-out operations will be initiated based upon inspection of the sediment markers and that at no time will the water level in the pond be allowed to surpass the 10-year, 24-hour event.

On page 38 of Appendix 7-4 and page 7 of Appendix 7-65, the Permittee provides the requested text revisions:

“Clean-out operations will be initiated at the sediment pond based upon inspection of the sediment markers. Cleanout operations will be initiated when the sediment level is between the 60% and maximum level. At no time will the sediment level be allowed to exceed the 100% level as determined by Table 12. The water level of the pond will not be allowed to exceed 7,773.2’ which still allows for a 10 Year 24 hour event.”

Findings:

The amendment meets the Siltation Structures: Sedimentation Pond requirements of the State of Utah R645 Coal Mining Rules.

RECOMMENDATIONS:

The amendment should not be approved at this time. The deficiencies identified above must be addressed prior to final approval.

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