

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

December 7, 2004

OK

TO: Internal File

THRU: Wayne Western, Team Lead *W#W*

FROM: Steve Fluke, Reclamation Hydrogeologist
S#F

RE: Phase I Bond Release – Sowbelly Substation Area, Castle Gate Holding Co.,
Castle Gate Mine, C/007/0004, Task ID #2038

SUMMARY:

The Division of Oil, Gas and Mining (the Division) received a Phase I Bond Release Application on September 21, 2004 from Castle Gate Holding Company for the Castle Gate Mine. The bond release application is for reclamation of the 1.84-acre former substation area of Sowbelly Canyon. This memo addresses the hydrology section of the application. The amendment to the MRP includes the reclamation as-built specifications for the two drainages in the former substation area (SBRD-3 and SBRD-5). The Permittee indicated in the amendment the removal of two culverts (SBRC-2 and SBRC-3) associated with the drainages. In addition, the amendment includes the reclamation as-built specifications for drainages SBRD-6, SBRD-7A, and SBRD-7B, and culvert SBRC-5 that are located outside of the 21.0-acre disturbed area boundary for Sowbelly Canyon. Because of early winter conditions, a site inspection was not performed for this review to verify the drainages were constructed as reported.

The proposed bond release should not be approved at this time. Additional hydrologic information is needed to meet the requirements of the Coal Mining Rules



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TECHNICAL ANALYSIS:

GENERAL CONTENTS

PERMIT APPLICATION FORMAT AND CONTENTS

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

Analysis:

Although culverts SBRC-2 and SBRC-3 were eliminated from the construction of drainages SBRD-5 and SBRD-3, respectively, the culverts are still listed in the text and in Table 3.2-5, Reclamation Hydrology Culvert Design Summary. The reason for eliminating the culverts is given in the Addendum to Appendix 3.2G, p. 16, and in Section 3.2-5(4), p. 3.2-17. In order to eliminate any confusion, the Permittee also needs to indicate in Table 3.2-9, Reclamation As-Built Hydrology Culvert Summary, that culverts SBRC-2 and SBRC-3 were removed from the reclamation design by extending the drainages.

Findings:

The information provided is not clear. Prior to approval, the Permittee must provide the following, in accordance with:

R645-301-121.200: the Permittee needs to indicate in Table 3.2-9, Reclamation As-Built Hydrology Culvert Summary, that culverts SBRC-2 and SBRC-3 were removed from the reclamation design by extending drainages SBRD-5 and SBRD-3, respectively.

MAPS AND PLANS

Regulatory Reference: 30 CFR 777.14; R645-301-140.

Analysis:

Exhibit 3.2-13, Sowbelly Canyon As-Built Topography and Treatment Map, shows the updated drainage configuration for the former substation area including the elimination of culverts SBRC-2 and SBRC-3.

Findings

The information provided meets the requirements for bond release.

RECLAMATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

Analysis:

Hydrologic Reclamation Plan

The reclamation as-built calculations, drawings, and cross-sections for drainages SBRD-3 and SBRD-5 are included in Addendum to Appendix 3.2G. The Division reviewed the as-built calculations and information provided and determined that they were accurate and complete. Furthermore, the cover page of the addendum has been signed and stamped by a Registered Professional Engineer.

However, text in Section 3.2 of the MRP also references rip-rap and channel certification statements in Appendices 3.2C and 3.2H, respectively. To be consistent with the text, the Permittee needs to include the rip-rap and channel certification statements for drainages SBRD-3 and SBR-5 in these appendices.

Findings:

The information provided is not consistent with the text reference documenting drainage in the approved reclamation plan. Prior to approval, the Permittee must provide the following, in accordance with:

R645-301-761: the Permittee needs to include the rip-rap and channel certification statements for drainages SBRD-3 and SBR-5 in Appendices 3.2C and 3.2H.

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MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Analysis:

Final Surface Configuration Maps

Exhibit 3.2-13, Sowbelly Canyon As-Built Topography and Treatment Map, shows the updated drainage configuration for the former substation area including the elimination of culverts SBRC-2 and SBRC-3.

As-built profiles and cross sections are included in the submitted amendment to Appendix 3.3O. However, as-built cross sections and profiles for all reclamation channels are referenced in the text as being provided in Exhibits 3.2-15 and 3.2-16. The as-built cross sections and profiles for drainages SBRD-3 and SBRD-5 should also be provided in Exhibits 3.2-15 and 3.2-16, respectively.

Findings:

The information presented in the Maps, Plans and Cross Section of Reclamation Operations is not adequate to meet the minimum requirements of that section of the regulations. Before approval, the Permittee must provide the following in accordance with:

R645-301-761: The Permittee needs to provide the as-built cross sections and profiles for drainages SBRD-3 and SBRD-5 in Exhibits 3.2-15 and 3.2-16, respectively, as referenced in Section 3.2.

CUMULATIVE HYDROLOGIC IMPACT ASSESSMENT

Regulatory Reference: 30 CFR Sec. 784.14; R645-301-730.

Analysis:

Information provided is adequate to update the Cumulative Hydrologic Impact Assessment if necessary.

Findings:

The information provided meets the requirements for bond release.

RECOMMENDATIONS:

The site is not recommended for Phase I bond release until the deficiencies identified above are addressed and until after a field visit is conducted by the Division to confirm that the Permittee has constructed the drainages as reported in the amendment.