



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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May 15, 2001

TO: Internal Files

FROM: *JCH* Joseph C. Helfrich, Sr. Reclamation Specialist, Biologist, Team Lead

RE: Revisions to Subsidence Monitoring, Castle Gate Holding Co. Castle Gate Mine, C/007/004-AM01A

SUMMARY:

On April 11, 2001, the Division received an amendment to revise the subsidence-monitoring plan as provided for in Chapter three of the current MRP. Mining operations ceased in the areas below the Price River corridor in 1989. A revised subsidence-monitoring plan was implemented in 1992 and continued through October of 2000. This application addresses the conclusion of monitoring the control and subsidence monitoring points located in Bear and Price Canyons. This Technical Memo provides a review of the proposed revisions to the subsidence-monitoring plan.

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

GEOLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR 784.22; R645-301-623, -301-724.

Analysis:

The subsidence-monitoring program is provided for in Volume 1, section 3.1-1 of the current MRP. The program includes spacing, level of accuracy, map references, and reporting obligations for the monitoring points currently located in Bear and Price Canyons. Additional resource information describing the methods and extent of mining is also provided. The proposal includes changes to Section 3.1-1(1) that will include data from 1992 through October of 2000.

TECHNICAL MEMO

Findings:

The information provided in the application and current MRP is adequate to meet the requirements of this section of the regulations.

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

**Mine Workings Maps
Monitoring Sampling Location Maps**

Volume 1, section 3.1-1, page 3.1-8 of the current MRP provides reference to the subsidence-monitoring map, (exhibit 3-21). The map identifies the locations of the monitoring points identified in the application, map labeled Mine No. 3, Proposed Sealing Plan is also provided in this section.

Findings:

The information provided in the application and current MRP is adequate to meet the requirements of this section of the regulations.

OPERATION PLAN

SUBSIDENCE CONTROL PLAN

Regulatory Reference: 30 CFR 784.20, 817.121, 817.122; R645-301-521, -301-525, -301-724.

Analysis:

Subsidence control plan

Subsidence monitoring at the Castle Gate facility has changed several times since 1978. Through 1983 according to the MRP "experience in subsidence monitoring were instructive in indicating that subsidence impacts were not catastrophic; in fact, unnoticeable from a land use stand point, over the majority of the affected surface." In 1992, the permittee revised the subsidence-monitoring program to include three control and five monitoring points located in the Bear and Price Canyons. The objective was to monitor subsidence movement within the Price River corridor. Mining had ceased in 1989 and the permittee continued monitoring under the

original monitoring scheme until 1992. The Price River Corridor was monitored through October of 2000 and the data has been provided with this proposal. The data provided indicate no appreciable subsidence during that period of time.

Findings:

The information provided in the application and current MRP is adequate to meet the requirements of this section of the regulations.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Analysis:

**Mine workings maps
Monitoring and sample location maps**

Volume 1, section 3.1-1, page 3.1-8 of the current MRP provides reference to the subsidence-monitoring map, (exhibit 3-21). The map identifies the locations of the control and monitoring points as well as mine workings.

Findings:

The information provided in the application and current MRP is not adequate to meet the requirements of this section of the regulations. Prior to approval the applicant must provide the following in accordance with:

R645-301-512, The applicant needs to provide the proper certification for exhibit 3-21B, labeled "Proposed subsidence Monitoring Points in Price Canyon."

RECOMMENDATION:

The amendment is not recommended for approval in its present form.