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

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September 28, 2001

Johnny Pappas, Sr. Environmental Engineer
Castle Gate Holding Company
847 Northwest Highway 191
Helper, Utah 84526

Re: Water Monitoring Revisions, Castle Gate Holding Company, Castle Gate Mine, C007/004-AM01C, Outgoing File

Dear Mr. Pappas:

The above-referenced amendment has been reviewed. There is a minor deficiency that must be adequately addressed prior to approval. A copy of our Technical Analysis is enclosed for your information. In order for us to continue to process your application, please respond to this deficiency by October 15, 2001. Since the corrections are minor, it would save time to include clean copies with your next submittal.

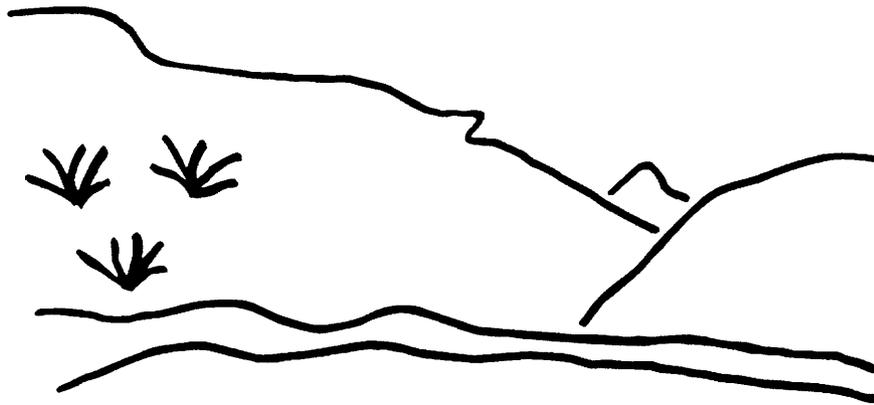
If you have any questions, please call me at (801) 538-5325 or Mike Suflita at (801) 538-5259.

Sincerely,

Daron R. Haddock
Permit Supervisor

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Enclosure:
cc: Price Field Office
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State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Castle Gate Mine
Water Monitoring Revision
C/007/004-AM01C
Technical Analysis
September 28, 2001

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INTRODUCTION

TECHNICAL ANALYSIS

INTRODUCTION

On May 23, 2001 the Division received a request to amend the Mining and Reclamation Plan (MRP) to eliminate three groundwater monitoring points. This is an analysis of the Hydrologic aspects of the proposed amendment. There is one minor deficiency.

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INTRODUCTION

SUMMARY OF OUTSTANDING DEFICIENCIES

SUMMARY OF DEFICIENCIES

The Technical Analysis of the proposed permit changes cannot be completed at this time. Additional information is requested of the permittee to address deficiencies in the proposal. A summary of deficiencies is provided below. Additional comments and concerns may also be found within the analysis and findings made in this Draft Technical Analysis. Upon finalization of this review, any deficiencies will be evaluated for compliance with the regulatory requirements. Such deficiencies may be conditioned to the requirements of the permit issued by the Division, result in denial of the proposed permit changes, or may result in other executive or enforcement action as deemed necessary by the Division at that time to achieve compliance with the Utah Coal Regulatory Program.

Accordingly, the permittee must address those deficiencies as found within this Draft Technical Analysis and provide the following, prior to approval, in accordance with the requirements of:

Regulations

R645-301-121.200, correct the three typographical errors described above..... 7

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SUMMARY OF OUTSTANDING DEFICIENCIES

RECLAMATION PLAN

RECLAMATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR 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.

Minimum Regulatory Requirements:

Hydrologic reclamation plan

The application shall include a plan, with maps and descriptions, indicating how the relevant regulatory requirements will be met. The plan shall be specific to the local hydrologic conditions. It shall contain the steps to be taken during mining and reclamation through bond release to minimize disturbance to the hydrologic balance within the permit and adjacent areas; to prevent material damage outside the permit area; and to meet applicable Federal and State water quality laws and regulations. The plan shall include the measures to be taken to: avoid acid or toxic drainage; prevent, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow; provide water treatment facilities when needed; and control drainage. The plan shall specifically address any potential adverse hydrologic consequences identified in the PHC determination and shall include preventive and remedial measures.

Each application shall contain descriptions, including maps and cross sections, of stream channel diversions and other diversions to be constructed within the proposed permit area to achieve compliance with the performance standards for those structures.

Postmining rehabilitation of sedimentation ponds, diversions, impoundments, and treatment facilities

Before abandoning a permit area or seeking bond release, the operator shall ensure that all temporary structures are removed and reclaimed, and that all permanent sedimentation ponds, diversions, impoundments, and treatment facilities meet the requirements of this Chapter for permanent structures, have been maintained properly and meet the requirements of the approved reclamation plan for permanent structures and impoundments. The operator shall renovate such structures if necessary to meet the requirements of this Chapter and to conform to the approved reclamation plan.

Analysis:

General

There are a some of typographical errors that need correction: 1) In Appendix 7-7, pages 8 through 34, inclusive are not numbered, 2) There is no Table of Contents in Appendix 7-7, and 3) Appendix 7-7, page 2, paragraph 4, has the word "flowing" which should be "following".

Ground-Water Monitoring

The amendment proposes to remove groundwater monitoring points BM-30, BM-31, and BM-32. The water monitoring data for these sites is presented in tabular and graphical form in a new Appendix 7-7, Groundwater Monitoring Analysis and Evaluation BM-30, BM-31, and BM-32. The locations are referenced on a new map, Exhibit 7-3, Drainage Areas Location Map with Water Monitoring Stations and U.P.D.E.S. Discharge Points. Some changes are made to Chapters 3 and 7 in the original MRP.

RECLAMATION PLAN

The MRP requirement, "Groundwater will be sampled for a period of two years after sealing of the mine unless significant changes in quality of the water occurs from previous years of data." is driving this request to delete the monitoring points. Data for each site is presented showing the years 1984 to 2000, 16 years.

Data for BM-30 showed no discernable impact from past mining activities. The flow roughly follows the drought index. The pH remained consistent at about 8, which is alkaline indicating no acid mine drainage. TDS remained consistent at about 4,000mg/l. Other sampled parameters did not vary over the 16-year period.

Data for BM-31 also showed no discernable impact from past mining activities. Sampled parameters did not vary much. TDS was consistent at about 800mg/l. The pH stayed about 7.6, again in the alkaline region. Total iron decreased slightly over the 16-year period.

Data for BM-32 also showed no discernable impact from past mining. TDS varied from 1,500 to 2,000 mg/l while pH remained consistent at about 8. None of the three sites showed marked changes in parameter values during the last two years on monitoring when compared to the previous years. This is shown in Table A, Operational and Post Mining Monitoring Data.

Importantly, all three monitoring points are located outside the mine workings area of influence. From all the data analyzed, there appears to no significant changes in the quality or quantity of groundwater due to mining operations. There are some data inconsistencies which are explained by different persons doing the sampling, apparently at different locations. However, these cannot be corrected and appear to have little influence. The three monitoring points can be removed from the monitoring plan per provisions of the original MRP.

Findings:

Information provided in the proposed amendment is not considered adequate to meet the requirement of this section. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-121.200, correct the three typographical errors described above.

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