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

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Michael O. Leavitt
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September 24, 1998

Gary Gray, Resident Agent
Genwal Resources, inc.
P. O. Box 1420
Huntington, Utah 84528

Re: Deficiencies in Incidental Boundary Change Application, Genwal Resources, Inc., Crandall Canyon Mine, ACT/015/032-IBC98-1, Folder #3, Emery County, Utah.

Dear Mr. Gray:

The Division has completed a review of your application to add 444 acres to the Crandall Canyon Mine permit area as an incidental boundary change. Your application has some deficiencies in it that will need to be corrected before we can approve it. A partial technical analysis is enclosed which discusses the issues that will need to be resolved. Please review it carefully and respond as necessary.

In order for us to keep this in our review loop we will expect a response by no later than October 23, 1998.

If you have any questions, please don't hesitate to call.

Sincerely,

for Daron R. Haddock
Permit Supervisor

tam
Enclosure: Technical Analysis
cc: Steve Demczak
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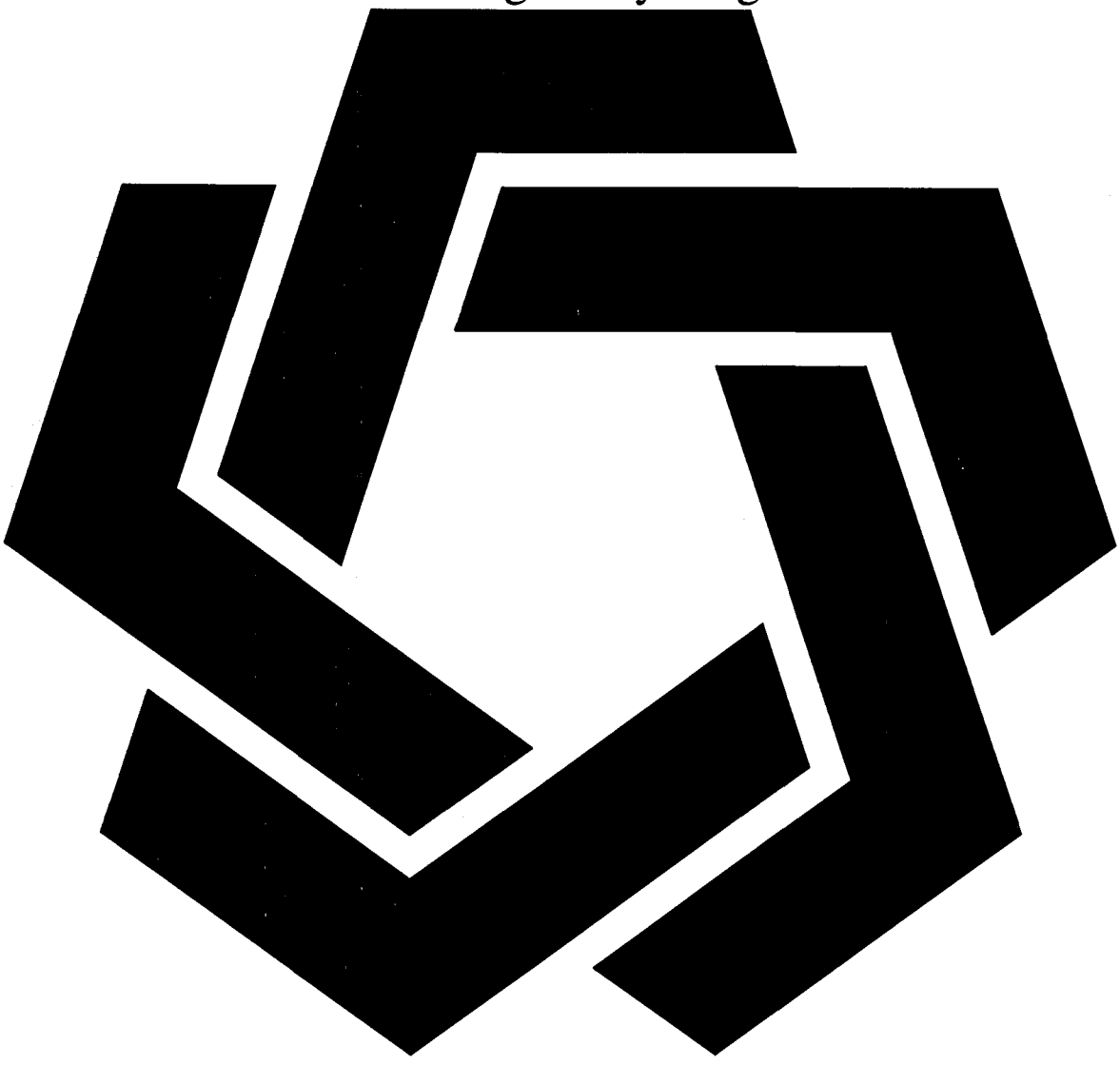
State of Utah
Division of Oil, Gas and Mining
Utah Coal Regulatory Program



Technical Analysis and Findings
Crandall Canyon Mine
ACT/015/032
444 Acre Incidental Boundary Change
September 24, 1998

INTRODUCTION

This Technical Analysis (TA) is written as part of the permit review process. It documents the Findings that the Division has made to date regarding the application for a permit and is the basis for permitting decisions with regard to the application. The TA is broken down into logical section headings which comprise the necessary components of an application. Each section is analyzed and specific findings are then provided which indicate whether or not the application is in compliance with the requirements.

Often the technical review of an application finds that the application contains some deficiencies. The deficiencies are discussed in the body of the TA and are identified by a regulatory reference which describes the minimum requirements. In this Technical Analysis we have summarized the deficiencies at the beginning of the document to aid in responding to them.

It may be that not every topic or regulatory requirement is discussed in this version of the TA. Generally only those sections are analyzed that pertain to a particular permitting action. TA's may have been completed previously and the revised information has not altered the original findings. Those sections that are not discussed in this document are generally considered to be in compliance.

SUMMARY OF DEFICIENCIES

R645-301-112, The application needs to show each name and identifying number, including employer identification number, Federal or State permit number, and MSHA number with date of issuance, under which the person owns or controls, or previously owned or controlled, a coal mining and reclamation operation in the United States within five years preceding the date of the application. The application does not show IPA's interest in the Wellington Preparation Plant.

R645-301-114, The applicant needs to provide right of entry information for the proposed incidental boundary change.

R645-301-724, The applicant should increase water monitoring frequency of selected springs, mentioned above, to establish seasonal variation of springflow. The areas along the IBC has been identified a one of the potential recharge areas that could also identify any water resources following the gradient in the potential recharge area. The applicant should drill and characterize any groundwater and its flow in the Star Point Sandstone Members below the IBC.

R645-301-724, The applicant should evaluate the potential of groundwater recharge to Little Bear Canyon by installing a monitoring well into the Star Point Sandstone in the vicinity of the IBC.

ADMINISTRATIVE INFORMATION

IDENTIFICATION OF INTERESTS

Regulatory Reference: R645-301-112

Analysis:

Some changes have been made to the ownership and control section of the mining and reclamation plan. The applicant is Genwal Resources, Inc., which is jointly owned by Intermountain Power Agency (IPA) and Andalex Resources, Inc. The current plan says Genwal is owned by IPA and Genwal Resources. The amendment says the abandoned mine reclamation fee will be paid by Gary Gray representing Genwal Resources. There are a few changes to the officers and directors.

The application lists affiliated operations, but it does not include the Wellington Preparation Plant where IPA was a joint owner.

Land ownership information for the permit area, the proposed addition, and contiguous areas is in the text of the application and in Plate 1-1. In the future, the applicant intends to submit an amendment for the Mill Fork Lease Tract.

Findings:

Information provided in the proposed amendment is not considered adequate to meet the requirements of this section of the regulations. Prior to final approval, the applicant must supply the following in accordance with:

R645-301-112, The application needs to show each name and identifying number, including employer identification number, Federal or State permit number, and MSHA number with date of issuance, under which the person owns or controls, or previously owned or controlled, a coal mining and reclamation operation in the United States within five years preceding the date of the application. The application does not show IPA's interest in the Wellington Preparation Plant.

VIOLATION INFORMATION

Regulatory Reference: R645-301-113

Analysis:

The application says neither the applicant nor any subsidiary, affiliate, or persons controlled by or under common control with the applicant has had a federal or state mining permit suspended or revoked in the last five years. They have not forfeited a mining bond or similar security deposited in lieu of bond.

There are no unabated cessation orders or air and water quality violation notices received prior to the date of the application by any coal mining and reclamation operation owned or controlled by Genwal or by any person who owns or controls Genwal.

Findings:

Information provided in the proposal is considered adequate to meet the requirements of this section of the regulations.

RIGHT OF ENTRY

Regulatory Reference: R645-301-114

Analysis:

The plan and application contain right of entry information for the current permit area. The application does not show right of entry for the Mill Fork Lease of which the current proposal is a part. Before the Division approves the application, Genwal will need to submit right of entry information for this area.

Findings:

Information provided in the proposal is not considered adequate to meet the requirements of this section of the regulations. Prior to final approval, the applicant must supply the following in accordance with:

R645-301-114, The applicant needs to provide right of entry information for the proposed incidental boundary change.

UNSUITABILITY

Regulatory Reference: R645-301-115

Analysis:

According to the application, the IBC area was evaluated for unsuitability criteria in the Environmental Assessment for the Mill Fork Tract. None of the area that would be included in the lease was considered unsuitable for mining.

It appears there are no man-made features in the area, including roads, buildings, and gas wells. No threatened or endangered species or other wildlife or plant species of special interest are known to inhabit the area, and there is little likelihood of adversely affecting other species since the area will only be first-mined.

Findings:

Information provided in the application is considered adequate to meet the requirements of this section of the regulations.

ENVIRONMENTAL RESOURCE INFORMATION

VEGETATION RESOURCE INFORMATION

Regulatory Reference: R645-301-321

Analysis:

The applicant has updated Plate 3-2, the regional vegetation map. This map shows vegetation types of the entire permit area and the incidental boundary change area. In addition, the applicant has proposed to delete some maps from the current plan. The maps proposed to be deleted overlap, and the updated Plate 3-2 has consolidated information that will make the plan more concise.

The surface of most of the IBC area is a north-facing slope with a conifer vegetation community. Other communities in the area are sagebrush/grass and aspen/conifer.

Findings:

Information provided in the proposal is considered adequate to meet the requirements of this section of the regulations.

FISH AND WILDLIFE INFORMATION

Regulatory Reference: R645-301-322

Analysis:

The application includes a wildlife map, Plate 3-1. This map only shows moose habitat in the area. The text of the application says no raptor nests have been found in the proposed addition to the permit area. While the area may contain a few cliffs, it is not good habitat for any cliff-nesting raptors. Tree-nesting birds generally inhabit areas closer to streams although the area could contain some tree nests that have not been found.

There are no additional details needed for the application; the existing mining and reclamation plan contains the required wildlife information.

Findings:

Information provided in the application is considered adequate to meet the requirements of this section of the regulations.

HYDROLOGIC RESOURCE INFORMATION

Regulatory Reference: R645-100-200, -301-724.

The applicant has supplied hydrologic information in the mine plan, and supplemental information collected in anticipation of acquiring leases south of the existing lease area. Plate 7-12 provided on August 17, 1998 identifies spring monitoring locations that were surveyed between 1985 to 1992. Springflow data has been presented to identify flow levels of some of the springs on and in the vicinity of the ICB. Spring locations are identified in Appendix 14-7. Some do not show related flows.

Water use information is presented in Table 14-2. The most notable use of spring flow is for cattle and wildlife except for Little Bear Spring which lies down gradient of the ICB and is used for municipal purposes.

Water monitoring data was submitted in depict the flow and field parameters for Indian, Crandall Canyon, Mill Fork and Rilda Canyons. Surface water (stream) rights, which consist mostly of stock water rights for the existing permit and adjacent areas, are shown in Table 7-6.

Analysis:

Baseline information-Sampling and analysis

Surveys were establish to locate and quantify some springs and surface waters in the vicinity of the ICB. Flows and field parameters were taken. The applicant has not established seasonal variation on spring flows. Some springs exhibit characteristics that would make good monitoring sites such as Springs SP-64, LB-5 and LB-5a, as well as Little Bear Spring, which has water rights filed on it by Huntington-Cleveland Irrigation Company.

The mining that has been proposed for the ICB is consists of first mining (or development) to gain access to coal reserves in other sections of the mine. Besides access entries the applicant intends to use this area to access the Blind Canyon Seam by ramping up into the seam. Mining or subsiding the IBC potentially could influence the recharge potential of Little Bear Spring, since the current reported hydrologic gradient for the Star Point Sandstone and Blackhawk Formation dips from the ICB area to the spring.

The area in the vicinity of the IBC is a potential recharge sources to Little Bear Spring. Seasonal variation has been established in Little Bear Spring and adjacent streams. A study is currently being initiated with the water users, Forest Service and Genwal Resources, Inc. assess the conductivity of recharge sources to Little Bear Spring via magnetic flux analysis.

The applicant proposes to drill up to the Blind Canyon Seam while developing along the southern edge of the IBC. These drill holes could also identify water resources between the Hiawatha and Blind Canyon Seam.

No plans were mentioned to drill monitoring wells into the Star Point Sandstone below the IBC.

Since mining of the IBC is proposed for developmental only and some baseline information is supplied, it is feasible to proceed with the mining operations and conduct monitoring of springs and surface waters to establish seasonal variation in selected springs.

Groundwater already intercepted in the mine is being discharged. Any additional groundwater intercepted in the area of the IBC would likely be discharged out the portal of the mine. The water users have filed on the water being discharged from the mine. If interception of recharge source does occur it is possible that no water loss to water users will take place.

Findings

The applicant should increase water monitoring frequency of selected springs, mentioned above, to establish seasonal variation of springflow.

The areas along the IBC has been identified a one of the potential recharge areas that could also identify any water resources following the gradient in the potential recharge area. The applicant should drill and characterize any groundwater and its flow in the Star Point Sandstone Members below the IBC.

MAPS, PLANS, AND CROSS-SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

The affected area of the IBC is located south of the current mine plan area. The mine expanded surface operations in Crandall Canyon in anticipation to access additional coal reserves. The reserves will be accessed through portals and entries on property owned by Genwal Resource, Inc.. The entries will extend through the IBC to reach reserves in the permitted area and later in the coal lease area, LBA-11, if Genwal Resources acquires the lease.

The applicant is required to submit maps and plans identifying areas of development and potential areas of impact. Maps and cross-sections need to depict all areas of mining, existing structures, geologic features and other resource information which could incur impacts from mining.

Analysis:

The applicant has submitted Plate 4-4 identifying affected areas and showing the boundary of the IBC. Plate 5-2 identifies the mining projections, drill holes and rock slopes planned for development in the IBC.

Coal resource and geologic information maps illustrating the nature, depth and thickness of coal seams to be mined are provided in Volume 2 of the MRP.

The applicant has provided maps identifying all surface features and gradients. The IBC area is located in rugged mountainous terrain away from man made structures that could be affected by subsidence. Locations of spring monitoring locations are indicated on Plate 7-12 with associated flows

The applicant has provided hydrologic maps identifying springs, streams and monitoring sites. The applicant has provided cross-sections of geologic features and well information.

Mine working are shown in Plate 5-2 for the for existing permit area and the IBC. Plate 4-4 shows the existing surface configuration and land ownership areas and permit area boundaries.

Findings:

The applicant has submitted the required information for this section.

OPERATION PLAN

PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES

Regulatory Reference: R645-301-333

Analysis:

Since the proposal is for first mining only, there should be no subsidence that would affect any wildlife. Even if subsidence did occur, there are no known raptors or other species of high interest that would be affected.

Findings:

Information provided in the application is considered adequate to meet the requirements of this section of the regulations.

MAPS

Regulatory Reference: R645-301-512, 521.130, 521.140

Analysis:

The permittee has submitted underground mine projections for the 444 acres of the IBC. The map

is P.E. certified and meets the requirements of the Coal Rules.

Findings:

Information provided in the proposed IBC amendment is considered adequate to meet the requirements of this section.

COAL RECOVERY

Regulatory Reference: R645-301-522

Analysis

This IBC gives the permittee permission to drive rock tunnels to access the Blind Canyon coal seam. Thus, increasing the life of the mine and extraction of coal.

Finding

The requirements in this section of the regulations are considered adequate in regard to the proposed incidental boundary change - 98A.

SUBSIDENCE CONTROL PLAN

Regulatory Reference R645-301-525

Analysis:

There will be only first mining to drive main entries into this area. Therefore, subsidence becomes very remote. The plan is to gain access to the Blind Canyon coal seam by using rock tunnel in the IBC area.

Findings:

The information provided is considered adequate.

MINING OPERATIONS AND FACILITIES

Regulatory Reference: 30 CFR Sec. 784.2, 784.11; R645-301-231, -301-526, -301-528.

Activities taking place during operational operations include development mining, surface and groundwater monitoring, subsidence monitoring and secondary mining.

Analysis:

The applicant will develop entries from the portal areas in the ICB to access coal reserves in State Lease ML-21568 and the Blind Canyon seam. There are no proposals currently to develop more than the entries shown on Plate 5-2. This will be accomplished by continuous miners excavating a room and pillar design.

The applicant is in the process of designing a water monitoring plan for the lease ICB. Some baseline water monitoring information has been collected. Little Bear Spring lies down gradient from the ICB. The spring is used for municipal water sources. It is currently being monitored and contains a historic record of measured flows. There are spring located between Little Bear Spring and the highest elevation which have been considered for the monitoring plan. Since only developmental mining has been proposed it is unlikely that subsidence will occur. The applicant will submit a monitoring plan in the near future for the federal lease (LBA-11), they intend to acquire. A minimum of two years of seasonal variation data (already collected at Little Bear Spring) will be required.

A subsidence monitoring plan has been proposed for the existing permit area using aerial photography. Subsidence control points already exist in the vicinity of the IBC. The applicant committed to comply with all provisions of the monitoring plan. It is likely that subsidence will not take place with the conditions, first mining only, of the amendment. monitoring

Findings:

The applicant complies with this section.

HYDROLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 701.5, 784.14; R645-100-200, -301-724.

Minimum Regulatory Requirements:

There are no existing structures on the IBC that will sustain adverse impacts from mining. There is a potential that mining could intercept the natural flow of some groundwater. Previous groundwater reviews have theorized that some of the groundwater supplying spring in the vicinity of Little Bear Canyon could follow the geologic gradient. More information is needed to prove the theory.

Analysis:

There are no manmade structures in the IBC. With regard to the theories of groundwater movement and potential recharge to springs. Studies should be conducted to detect and evaluate if groundwater is moving through any members of the Star Point Sandstone to Little Bear Canyon springs.

Findings:

The applicant should evaluate the potential of groundwater recharge to Little Bear Canyon by installing a monitoring well into the Star Point Sandstone in the vicinity of the IBC.