

July 19, 2004

Gary E. Gray, Resident Agent  
West Ridge Resources, Inc.  
P.O. Box 902  
Price, Utah 84501

Re: IBC- Penta Creek Fee Lease , West Ridge Resources, Inc., West Ridge Mine, C/007/041, Task ID #1942, Outgoing File

Dear Mr. Gray:

The above-referenced amendment has been reviewed. There are deficiencies 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 these deficiencies by August 19, 22004.

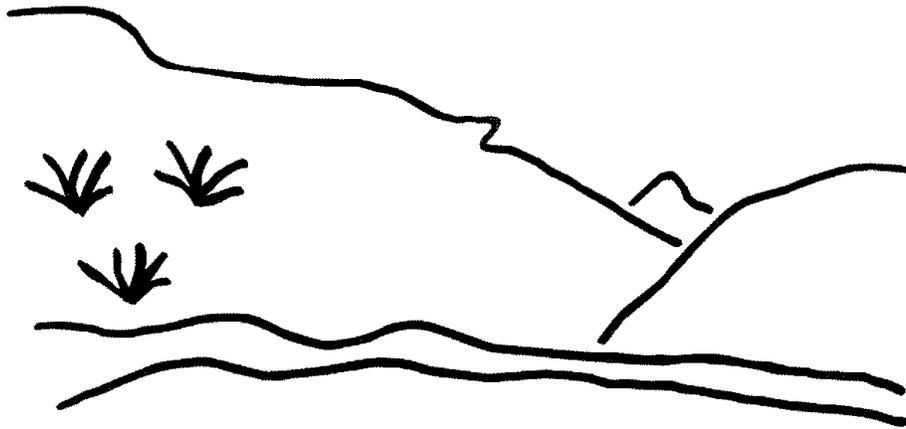
If you have any questions, please call me at (801) 538-5268 or Gregg Galecki at (801) 538-5260.

Sincerely,

Pamela Grubaugh-Littig  
Permit Supervisor

an  
Enclosure  
cc: Price Field Office  
O:\007041.WR\FINAL\DEF1942.DOC

# State of Utah



## Utah Oil Gas and Mining

### Coal Regulatory Program

West Ridge Mine,  
West Ridge Resources, Inc.  
IBC – Penta Creek Fee Lease  
C/007/0041, #1942  
Technical Analysis  
July 16, 2004



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## TECHNICAL ANALYSIS

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# TECHNICAL ANALYSIS

The Division ensures compliance with the Surface Mining Control and Reclamation Act of 1977(SMCRA). When mines submit a Permit Application Package or an amendment to their Mining and Reclamation Plan, the Division reviews the proposal for conformance to the R645-Coal Mining Rules. This Technical Analysis is such a review. Regardless of these analyses, the permittee must comply with the minimum regulatory requirements as established by SMCRA.

Readers of this document must be aware that the regulatory requirements are included by reference. A complete and current copy of these regulations and a copy of the Technical Analysis and Findings Review Guide can be found at <http://ogm.utah.gov/coal>

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 first 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. Once all of the deficiencies have been adequately addressed, the TA will be considered final for the permitting action.

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.

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**TECHNICAL ANALYSIS**

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## INTRODUCTION

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## INTRODUCTION

On June 4, 2004, the Division of Oil, Gas, & Mining (Division) received an Incidental Boundary Change (IBC) for the West Ridge Mine from West Ridge Resources, Inc (WRR). The IBC, comprising of 50.0 acres, is located in the Penta Creek Lease area. The 50.00 acres are located in SE  $\frac{1}{4}$ , SW  $\frac{1}{4}$ , and SW  $\frac{1}{4}$ , NE  $\frac{1}{4}$ , SW  $\frac{1}{4}$  of Section 7, T14S, R14W. The additional 50.0 acres of the Penta Creek Fee Lease IBC constitutes approximately a 1 percent increase of the West Ridge permit area from 4382.55 acres to 4432.55 acres. The additional acreage is for underground mining only and does not affect the disturbed area acreage. No additional surface facilities are proposed. The proposed additional mining will take place beneath 2,000 feet of cover.

Included in the current submittal, WRR has also modified the panel configuration. The proposed additional mining due to the Penta Creek Fee Lease acquisition will lengthen the existing projections of Panels 7 and 8. Surface effects such as subsidence and effects to the hydrologic regime are anticipated to be negligible, however the panel modification moved the subsidence boundary to within 300 to 400 feet of Grassy Trail Reservoir. Concerns have been raised due to the stability of the earthen-dam reservoir. Prior to approval of the application, the Division is requiring addition modifications for incorporation into the existing Mine and Reclamation Plan (MRP).

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## **INTRODUCTION**

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**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 and 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***

- R645-301-114**, Proof of Right of Entry to **(1)** the Penta Creek Fee Lease Area (Township 14 South, Range 14 East, SLBM, Section 7: SE ¼ SW ¼ and NE ¼ SW ¼ ) Appendix 1-14, and **(2)** Federal Lease UTU 78562 Appendix 1-4, needs to be provided as part of the application. **(3)** The cover sheet for Appendix 1-4 needs to be corrected to represent the correct Federal Lease SL 68754. **(4)** A map (such as a County Plat) needs to be provided to the Division that shows Township & Range, Sections and the lot locations. This map is needed to complete the review. Maps in the approved MRP do not contain lot information. .... 10
  
- R645-301-140**, The Surface Ownership map # 5-2 needs to specify the U. S. A. designations. Map 4-2 includes an Archeological denotation and survey. The legend needs to identify the lines, circles and letters and numbers that appear on the map. .... 11
  
- R645-301-320**; the application needs to include a description of the vegetation types located within the proposed IBC and a discussion on the potential impacts from mining. The application also needs to include a current list of threatened, endangered, and sensitive plant species for Carbon County and the current status of those species in the proposed IBC area in order for the Division to make a finding that the information contained in the application meets the requirements of this section of regulations. The list of species for Carbon County has been e-mailed to the applicant. .... 14

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**R645-301-322, -301-333, -301-342, -301-358**, The application needs to indicate whether or not wetlands exist in the proposed IBC area or in Whitmore Canyon. Map 3-1 of the application indicates that a description of the riparian areas for Whitmore Canyon is included in Appendix 3-13. The appendix has not been included in the application or the MRP. .... 22

**R645-301-322**; 1) A current raptor inventory needs to be included in the application. 2) The application needs to include a description of the wildlife located within the proposed IBC and a discussion on the potential impacts from mining. 3) A current list of Threatened, Endangered, and candidate fish and wildlife species for carbon County also needs to be included in the application in order for the Division to make a finding that the information contained in the application meets the requirements of this section of regulations. The list of species for Carbon County has been e-mailed to the applicant. .... 15

**R645-301-411.140**; the application needs to include a letter from the State Historic Preservation Officer. .... 13

**R645-301-523**, state in the IBC application the changes proposed to the mine layout. .... 19

**R645-301-525.213**, modify the mine plan as needed to prevent damage to the Grassy Trail Reservoir. .... 21

**R645-301-525.440**, implement a subsidence control plan that: 1) establishes the angle of draw for Panel 6; 2) establishes the angle of draw for Panel 7 before mining occurs within 1,500 feet of the Grassy Trail Reservoir; and 3) monitors subsidence in and around the Grassy Trail Reservoir. .... 21

**R645-301-725.100**; provide additional geologic and hydrologic information as cited. .... 29

**R645-301-728.400**; update the Probable Hydrologic Consequences Determination section of the M&RP to address potential hydrologic impacts to Grassy Trail Reservoir. .... 17

**R645-521.100**, All maps within the MRP showing the permit boundary need to be updated to include the Penta Creek IBC; only a portion of the maps were submitted in the IBC application. .... 25

**R645-624.100**, Provide the additional geologic information, both in text and on Map 6-1 as outlined above. .... 16

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## GENERAL CONTENTS

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# GENERAL CONTENTS

## IDENTIFICATION OF INTERESTS

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

### **Analysis:**

Minor changes have been made that show the owners of record of all property (surface and subsurface). The additions shown in the application are already contained in the approved MRP.

### **Findings:**

The information provided adequately addresses the minimum requirements of the General Contents – Identification of Interest section of the regulations.

## VIOLATION INFORMATION

Regulatory Reference: 30 CFR 773.15(b); 30 CFR 773.23; 30 CFR 778.14; R645-300-132; R645-301-113

### **Analysis:**

New information has been submitted as part of this application that updates Appendix 1-2 with current Violation information.

### **Findings:**

The information provided adequately addresses the minimum requirements of the General Contents – Violation Information section of the regulations.

## RIGHT OF ENTRY

Regulatory Reference: 30 CFR 778.15; R645-301-114

### **Analysis:**

The application contains information and reference to an additional lease area that will increase the size of the permit area from 4382.55 acres to 4432.55 acres. The referenced area is

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the Penta Creek Fee Lease Area (Township 14 South, Range 14 East, SLBM, Section 7: SE  $\frac{1}{4}$  SW  $\frac{1}{4}$  and NE  $\frac{1}{4}$  SW  $\frac{1}{4}$ ).

No documentation is presented in Appendix 1-14 of the approved MRP, nor in the application, that demonstrates right of entry into this parcel of ground. The approved MRP does show right of entry into the Penta Creek Fee Lease Area (Township 14 South, Range 14 East SLB&M, Section 6: Lot & SE  $\frac{1}{4}$  SW  $\frac{1}{4}$ . Section 7: Lots 1 and 2 NE  $\frac{1}{4}$  NW  $\frac{1}{4}$ , E  $\frac{1}{2}$  SW  $\frac{1}{4}$ , SW  $\frac{1}{4}$  SE  $\frac{1}{4}$ . Section 18: Lots 2 and 3 NW  $\frac{1}{4}$  NE  $\frac{1}{4}$ .)

The submittal included a new cover sheet for Appendix 1-4. This cover sheet indicates that Proof of Federal Lease Assignments for SL 687554 and UTU 78562 will be contained in Appendix 1-4. The information in the approved MRP under Appendix 1-4 shows the lease as SL 68754 not SL 687554. It appears that an extra '5' has been placed on the cover sheet for this lease. No information is contained in the approved MRP or this submittal for Federal Lease UTU 78562.

### Findings:

The information provided does not adequately address the minimum requirements of the General Contents – Right of Entry section of the regulations. Prior to approval information must be provided in accordance with:

**R645-301-114**, Proof of Right of Entry to **(1)** the Penta Creek Fee Lease Area (Township 14 South, Range 14 East, SLBM, Section 7: SE  $\frac{1}{4}$  SW  $\frac{1}{4}$  and NE  $\frac{1}{4}$  SW  $\frac{1}{4}$ ) Appendix 1-14, and **(2)** Federal Lease UTU 78562 Appendix 1-4, needs to be provided as part of the application. **(3)** The cover sheet for Appendix 1-4 needs to be corrected to represent the correct Federal Lease SL 68754. **(4)** A map (such as a County Plat) needs to be provided to the Division that shows Township & Range, Sections and the lot locations. This map is needed to complete the review. Maps in the approved MRP do not contain lot information.

## PUBLIC NOTICE AND COMMENT

Regulatory References: 30 CFR 778.21; 30 CFR 773.13; R645-300-120; R645-301-117.200.

### Analysis:

The permit application has been determined by the Division to be an Incidental Boundary Change. No public notice is required for an IBC.

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### **Findings:**

The information provided adequately addresses the minimum requirements of the General Contents – Public Notice and Comments section of the regulations.

### **MAPS AND PLANS**

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

### **Analysis:**

Land use and Surface ownership maps are identified as maps 4-1 and 5-2. The proposed IBC lies within the Grassy Trail Allotment and the Penta Creek/Magnificent Seven are the surface owners. There are several areas identified as U. S. A. on the surface ownership map that need to be specified. Map 4-2 includes an Archeological denotation and survey. The legend needs to also identify the lines, circles and letters and numbers that appear on the map.

### **Findings:**

The information in the application is not adequate to meet the requirements of the General Contents – Maps and Plans section of the regulations. Prior to approval information must be provided in accordance with:

**R645-301-140,** The Surface Ownership map # 5-2 needs to specify the U. S. A. designations. Map 4-2 includes an Archeological denotation and survey. The legend needs to identify the lines, circles and letters and numbers that appear on the map.

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## ENVIRONMENTAL RESOURCES INFORMATION

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# ENVIRONMENTAL RESOURCE INFORMATION

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

## HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.12; R645-301-411.

### Analysis:

The historic and archeological resource information is provided for on pages 4-2 and 3 of the approved MRP. A letter from the State Historic Preservation Officer needs to be included in the application.

### Findings

The information in the application is not adequate to meet the requirements of the Historic and Archeological Resource Information section of the regulations. Prior to approval the applicant needs to provide the following in accordance with:

**R645-301-411.140;** the application needs to include a letter from the State Historic Preservation Officer.

## VEGETATION RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.19; R645-301-320.

### Analysis:

Vegetation types specific to the IBC are identified on map 3-1, (general vegetation communities), of the application. They include Aspen, Sagebrush\Grass\Herbland, Mountain Brush and Riparian. The application needs to include a description of the vegetation types located within the proposed IBC and a discussion on the potential impacts from mining. The application also needs to include a list of possible threatened, endangered and candidate plant species identified in the U. S. Fish and Wildlife Service current listing for Carbon County. The application has not been updated to include these current listings.

## **Findings**

The information provided is not adequate to meet the requirements of the Vegetation Resource Information section of the regulations. Prior to approval the applicant must provide the following in accordance with:

**R645-301-320**; the application needs to include a description of the vegetation types located within the proposed IBC and a discussion on the potential impacts from mining. The application also needs to include a current list of threatened, endangered, and sensitive plant species for Carbon County and the current status of those species in the proposed IBC area in order for the Division to make a finding that the information contained in the application meets the requirements of this section of regulations. The list of species for Carbon County has been e-mailed to the applicant.

## **FISH AND WILDLIFE RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 784.21; R645-301-322.

### **Analysis:**

The fish and wildlife information is provided in chapter three of the application. Included are Appendix 3-9, which is a letter from the DWR, and a map regarding the Mexican Spotted Owl; map 3-1, the General Vegetation Communities; and map 3-4A, the Raptor Survey map; 3-4B Deer Range, map; 3-4C Elk Range; and 3-4D Antelope Range. The Raptor Survey map does not include a current raptor survey of the proposed IBC area. A current raptor inventory needs to be included in the application. Map 3-4A in the application includes raptor surveys for 1997 and 1998 that did not include the IBC area. The MRP includes a letter from DWR and raptor survey from 2001 that includes the proposed IBC area. The letter requests that the area be surveyed in 2002. According to the information on file at the Division it does not appear as though the survey has been completed. The application needs to include a description of the wildlife located within the proposed IBC and a discussion on the potential impacts from mining. A current list of Threatened, Endangered, and candidate fish and wildlife species for carbon County also needs to be included in the application.

### **Findings:**

The information in the application 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:

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## ENVIRONMENTAL RESOURCES INFORMATION

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**R645-301-322;** 1) A current raptor inventory needs to be included in the application. 2) The application needs to include a description of the wildlife located within the proposed IBC and a discussion on the potential impacts from mining. 3) A current list of Threatened, Endangered, and candidate fish and wildlife species for carbon County also needs to be included in the application in order for the Division to make a finding that the information contained in the application meets the requirements of this section of regulations. The list of species for Carbon County has been e-mailed to the applicant.

## LAND-USE RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.22; R645-301-411.

### Analysis:

A description of the land use is provided for in section 4-1 of the approved MRP. A land use map, 4-1, is included in the application and is reviewed under the maps and plans section of this technical review.

### Findings:

The information in the application is adequate to meet the requirements of the Land-use Resource Information section of the regulations.

## GEOLOGIC RESOURCE INFORMATION

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

### Analysis:

As mining approaches Grassy Trail Creek Reservoir, additional information is requested to evaluate the geology on a more regional scale. Map 6-1 – Regional Geology Map does not provide adequate information concerning mapped faulting on a larger scale. As an example, the Sunnyside fault is described in text but not identified on Map 6-1. Page 6-13 of the MRP indicates Doelling (1973) had inferred some faults in the C Canyon area that are not on the map. Also, Appendix 6-3 indicates a study was conducted to observe fault and jointing patterns. The letter indicates no significant faults were observed in B or C Canyons, but gives no other information relative to jointing or other faults. Specifically, Map 6-1 illustrates two (2) E-W faults in Section 6 T14S, R14E, and a NW-SE trending fault in Sections 19 and 30, T14S R14E. The Division requests that a geology map be provided that is at a larger scale: 1) expanded to

give an indication of a more regional trend; 2) provide any relevant geologic mapping from the neighboring Sunnyside Mine; and 3) provides any updated geologic mapping of faults. Also, if observations indicated structure within the mine is significantly controlled by joint patterns, the information needs to be provided in text. The information is being requested to support an evaluation of potential impacts to Grassy Trail Reservoir.

**Findings:**

The information provided does not adequately address the minimum requirements of the Environmental Resources – Geologic Resource Information section of the regulations. Prior to approval, information must be provided in accordance with:

**R645-624.100**, Provide the additional geologic information, both in text and on Map 6-1 as outlined above.

**HYDROLOGIC RESOURCE INFORMATION**

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

**HYDROLOGIC RESOURCE INFORMATION**

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

**Analysis:**

**Sampling and Analysis**

No additional sampling or analysis needs to be added in the existing water monitoring program. As stated on page 7-3, Sampling and Analysis, of the mine's existing M&RP, "water quality sampling and analyses have been and will be conducted according to the "Standard Methods for the Examination of Water and Waste Water" or EPA methods listed in 40 CFR parts 136 and 434".

**Probable Hydrologic Consequences Determination**

The Probable Hydrologic Consequences Determination (PHC) should be updated to include potential impacts to the Grassy Trail Reservoir, taking into account the revised proximity of Panels 7 and 8, and the stability of the earthen-dam reservoir. Although the mine workings are still not projected to be below or within the angle of draw of the Grassy Trail Reservoir, the potentials impacts to the reservoir need to be specifically addressed. The

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## ENVIRONMENTAL RESOURCES INFORMATION

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reservoir is a water source for Sunnyside City and East Carbon City. Potential effects caused by subsidence such as fracturing outside of the angle of draw, or encountering previously unidentified faults during mining that intersect the reservoir, could provide pathways for water migration and the ultimate drainage of the reservoir.

### **Groundwater Monitoring Plan**

According to Map 7-5, Seep/Spring Survey Map, four seeps or springs have been inventoried within the Penta Creek Fee Lease area as part of the October 1985 inventory. One of these springs, SP-15, is located at the northwest corner of the Penta Creek Fee Lease area and is included in the existing water monitoring program to be sampled quarterly for field and laboratory parameters. No additional spring or seep monitoring is needed to adequately represent the groundwater hydrology potentially affected by the additional mining.

### **Surface-Water Monitoring Plan**

Grassy Trail Creek is located within the northeast portion of the Penta Creek Fee Lease area. This section of Grassy Trail Creek, downstream of the Grassy Trail Reservoir, is perennially flowing due to discharge from the reservoir. Although the creek is within the 50-acre fee lease area, it is not being undermined nor is it within the angle of draw of the mine workings. Stream monitoring site ST-8 is located approximately one mile downstream of the lease area. No additional stream monitoring sites are needed to adequately represent the surface water hydrology potentially affected by the additional mining.

### **Findings:**

The information provided does not adequately address the minimum requirements of the Hydrologic Resource Information section of the regulations. Prior to approval, information must be provided in accordance with:

**R645-301-728.400;** update the Probable Hydrologic Consequences Determination section of the M&RP to address potential hydrologic impacts to Grassy Trail Reservoir.

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**ENVIRONMENTAL RESOURCE INFORMATION**

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## OPERATION PLAN

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# OPERATION PLAN

## MINING OPERATIONS AND FACILITIES

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

The addition of the IBC did not require any changes to the existing facilities or to the disturbed area boundary. However, as part of the IBC, WRR does propose to move the Panel 7 closer to the Grassy Trail Reservoir. The proposed subsidence zone would be 400 feet from the dam. The Division addresses concerns in the subsidence portion of this technical analysis.

The panel layout shown on the approved version of Plate 5-4A differs from those on the proposed version of Plate 5-4A. Specifically, the location of Plate 8 has moved significantly. WRR must mention the changes to the mine layout in the IBC application.

### Findings:

The information provided does not adequately address the minimum requirements of the Operation Plan – Mining and Operations and Facilities section of the regulations. Prior to approval, information must be provided in accordance with:

**R645-301-523**, state in the IBC application the changes proposed to the mine layout.

## COAL RECOVERY

Regulatory Reference: 30 CFR 817.59; R645-301-522.

### Analysis:

The addition of 50.00 acres not only allows WRR to recover the coal in the IBC but also increases recovery within the current permit boundary. If WRR did not recover the coal in the IBC, they would sterilize the coal by blocking future access. If the coal were not recovered, access to it would be blocked on three sides by mined out areas and on the fourth by restrictions on mining under the Grassy Trail Reservoir.

**Findings:**

The information provided adequately addresses the minimum requirements of the Operation Plan – Coal Recovery section of the regulations.

**SUBSIDENCE CONTROL PLAN**

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

**Analysis:**

**Renewable Resources Survey**

The currently approved subsidence survey adequately covers the IBC area. WRR determined that there were renewable resources in the area. Therefore, WRR was required to modify the subsidence control plan as needed to incorporate the area within the IBC.

**Subsidence Control Plan**

WRR proposes to move the outer edge of Panel 7 approximately 200 feet to the northeast. In addition, WRR projects an increase in the subsidence zone. Map 5-7 shows that subsidence will potentially occur within 400 feet of Grassy Trail Reservoir.

The State Office of Dam Safety classifies the Grassy Trial Reservoir as a high-risk dam. Due to the change in the subsidence zone and the potential risk to the reservoir, the Division is requiring WRR to develop a subsidence-monitoring program that will:

- Ground-truth the angle of draw for Panel 6.
- Ground-truth the angle of draw for Panel 7 before mining occurs within 1,500 feet of Grassy Trail Reservoir.
- Commit to monitor the Grassy Trail Reservoir and modify the mine plan as needed to prevent any damage to the reservoir.
- Commit to modify the mine plan as needed to prevent any part of Grassy Trail Reservoir from being within the subsidence zone.

Once the local angle of draw is established, WRR and the Division can evaluate the mine plan to what effect subsidence would have on the Grassy Trail Reservoir. If subsidence has the potential to damage the Grassy Trail Reservoir, the Division will order WRR to modify the mine plan to prevent damage to the structure.

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## OPERATION PLAN

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### **Performance Standards For Subsidence Control**

WRR must maintain the established performance standards for Subsidence Control, including the prevention of material damage to the Grassy Trail Reservoir.

### **Notification**

WRR must meet the notification requirements. The Division will inspect WRR records to ensure that they properly notify specified landowners.

### **Findings:**

The information provided does not adequately meet the minimum requirements of the Operation Plan – Subsidence Control Plan section of the regulations. Prior to approval, the following must be provided in accordance with:

**R645-301-525.440**, implement a subsidence control plan that: 1) establishes the angle of draw for Panel 6; 2) establishes the angle of draw for Panel 7 before mining occurs within 1,500 feet of the Grassy Trail Reservoir; and 3) monitors subsidence in and around the Grassy Trail Reservoir.

**R645-301-525.213**, modify the mine plan as needed to prevent damage to the Grassy Trail Reservoir.

## **FISH AND WILDLIFE INFORMATION**

Regulatory Reference: 30 CFR Sec. 784.21, 817.97; R645-301-322, -301-333, -301-342, -301-358.

### **Analysis:**

#### **Protection and Enhancement Plan**

Pages 3-7 and 8 of the approved MRP describe the protection plan for minimizing impacts to wildlife and livestock as a result of anticipated effects of subsidence. West Ridge Resources has committed to conducting infrared aerial photography every five years in areas of potential subsidence.

#### **Endangered and Threatened Species**

The application does not address potential water depletions from mining operations that may have an affect on endangered fish species identified in pertinent fish recovery programs.

## OPERATION PLAN

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Volumes of water consumed in mining processes in excess of 100-acre feet/year require mitigation with the U. S. Fish and Wildlife Service. The application needs to include calculations of current water depletions from mining activities.

### **Bald and Golden Eagles**

The application needs to include a discussion on the potential impacts from mining on Bald and Golden Eagles. Bald Eagles do not nest in the area but are typically inhabitants during migration. A current raptor survey would identify the status of Golden Eagles in the IBC area.

### **Wetlands and Habitats of Unusually High Value for Fish and Wildlife**

The application needs to indicate whether or not wetlands exist in the proposed IBC area. Map 3-1 of the application indicates that a description of the riparian areas for Whitmore Canyon is included in Appendix 3-13. The appendix has not been included in the application or the MRP.

### **Findings:**

The information in the application does not address the minimum requirements of the Operation Plan – Fish and Wildlife Information section of the regulations. Prior to approval, information must be provided in accordance with:

**R645-301-322, -301-333, -301-342, -301-358**, The application needs to indicate whether or not wetlands exist in the proposed IBC area or in Whitmore Canyon. Map 3-1 of the application indicates that a description of the riparian areas for Whitmore Canyon is included in Appendix 3-13. The appendix has not been included in the application or the MRP.

## **VEGETATION**

Regulatory Reference: R645-301-330, -301-331, -301-332.

### **Analysis:**

The vegetative communities are discussed on page 3-2 of the approved MRP. Additional information is included appendix 3-12. West Ridge Resources has committed to conducting infrared aerial photography every five years in areas of potential subsidence.

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## OPERATION PLAN

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### **Findings:**

The information in the application is adequate to address the minimum requirements of the Operation Plan – Vegetation section of the regulations.

## **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.

### **Groundwater Monitoring**

No additional spring, seep, or well monitoring is needed to adequately represent the groundwater hydrology potentially affected by the additional mining.

### **Surface Water Monitoring**

No additional stream monitoring sites are needed to adequately represent the surface water hydrology potentially affected by the additional mining.

### **Diversions: Perennial and Intermittent Streams**

No new disturbed surface areas are proposed for the 50-acre Penta Creek Fee Lease area.

### **Stream Buffer Zones**

No underground mining within 100 feet of a perennial stream is proposed for the 50-acre Penta Creek Fee Lease area.

### **Findings:**

The Hydrologic Information of the Operation Plan provided in the IBC adequately addresses the minimum requirements 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:**

**Affected Area Maps**

The permit and affected area is illustrated on several maps including Map 5-4A, Mining Projections. The map shows the permit boundary and areas where WRR plan to seek additional permits. The information on the maps is sufficient for the Division to make findings about the IBC application. All maps showing the permit boundary need to be updated to include the Penta Creek IBC. Selected maps have been included in the IBC, however all maps within the plan showing the permit boundary need to be updated as well.

**Mine Workings Maps**

The current and proposed mine working are illustrated on Map 5-4A. The information on the map is sufficient for the Division to make findings about the IBC application.

**Monitoring and Sampling Location Maps**

Plate 7-5, Seep/Spring Survey Map, Plate 7-6, Hydrologic Monitoring Map (Historical Monitoring Locations), and Plate 7-6, Operational Monitoring Locations, have all been updated to include the boundaries of the 50-acre Penta Creek Fee Lease area. No additional hydrologic monitoring or sampling locations are needed to update the maps.

**Subsurface Water Resource Maps**

Plate 7-3, Water Rights, has been updated to include the 50-acre Penta Creek Fee Lease area.

**Surface Water Resource Maps**

Plate 7-3, Water Rights, has been updated to include the 50-acre Penta Creek Fee Lease area.

**Certification Requirements**

Dan Guy, who is a licensed professional engineer certified map 5-4A. The certification requirements for the affected area maps and mine working maps were met.

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## OPERATION PLAN

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### **Findings:**

The information provided does not adequately address the minimum requirements of the Operation Plan – Maps, Plans, and Cross Sections of Mining Operations section of the regulations. Provide information in accordance with the following:

**R645-521.100**, All maps within the MRP showing the permit boundary need to be updated to include the Penta Creek IBC; only a portion of the maps were submitted in the IBC application.

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## RECLAMATION PLAN

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# RECLAMATION PLAN

## GENERAL REQUIREMENTS

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

### Analysis:

Since there is no proposed change in the disturbed areas, no changes were needed for the approved reclamation plan including the requirements for backfilling and grading and restoring the site to the approximate original contours.

### Findings:

The information provided adequately addresses the minimum requirements of the Reclamation Plan – Backfilling and Grading section of the regulations.

## BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

### Analysis:

#### Determination of Bond Amount

No changes within the disturbed area are proposed; the reclamation costs remain constant. Therefore, the Division does not require any adjustment to the bond amount.

### Findings:

The information provided adequately addresses the minimum requirements of the Reclamation Plan – Bonding and Insurance Requirements section of the regulations.

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**CHIA**

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## **CUMULATIVE HYDROLOGIC IMPACT ASSESSMENT (CHIA)**

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

### **Findings:**

The Division will review and possibly update the Book Cliffs Area – III Cumulative Hydrologic Impact Assessment (CHIA) to incorporate the proposed 50-acre Penta Creek Lease area of the West Ridge Mine; specifically addressing the potential impacts to Grassy Trail Reservoir. Additional geologic and hydrologic information, as cited above, are needed prior to the Division making a determination.

**R645-301-725.100**; provide additional geologic and hydrologic information as cited.