

# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

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March 3, 2004

TO: Internal File

THRU: Joe Helfrich, Team Lead

FROM: Wayne H. Western, Environmental Scientist III

RE: South Crandall Lease Amendment , Genwal Resources Inc., Crandall Canyon Mine , Permit C/015/003, Task ID #1826

### **SUMMARY:**

On September 16, 2003, the Division received an application for incorporating the federal lease UTU-78953, which is also known as the South Crandall Lease. The South Crandall Lease is south of the current mining operations. The lease is the only economic coal reserves that can be accessed from the Crandall Canyon Mine. This memo will address the engineering portions of the January 30, 2004 response to the technical analysis.

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**TECHNICAL ANALYSIS:**

**ENVIRONMENTAL RESOURCE INFORMATION**

**PERMIT AREA<sub>[sm:]1</sub>**

Regulatory Requirements: 30 CFR 783.12; R645-301-521.

**Analysis:**

The Permittee states the legal description and acreage for the South Crandall lease (UTU-78953 in Chapter 1 and/or 5 of the MRP.

The total acreage for the mine as well as the number of federal and state acres is given in Chapter 1. In addition, the disturbed area acreages are listed in Chapter 1.

**Findings**

The information in the amendment is considered adequate to meet the minimum requirements of this section of the regulations.

**MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION<sub>[sm:]2</sub>**

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

**Analysis:**

**Affected Area Boundary Maps<sub>[sm:]3</sub>**

From conversations with the Permittee, they do not plan to expand mining operations outside of the proposed permit boundary. Therefore, the permit area is the same as the affected area. The permit boundary is shown on several maps including Plate 1-1.

**Existing Structures and Facilities Maps<sub>[sm:]4</sub>**

The Permittee did not update the existing structures and facilities maps. Plate 1-1, Crandall Canyon Mine Lease Map, shows that the area is mountainous and the only structure that

exists is a U.S.F.S. trail. Plate 4-3, Crandall Canyon Mine Oil & Gas Development, does not show any activity in the South Crandall lease area.

#### **Existing Surface Configuration Maps**<sup>[sm:]5]</sup>

The existing surface configuration is shown on several maps including Plate 1-1, Crandall Canyon Mine Lease Map.

#### **Mine Workings Maps**<sup>[sm:]6]</sup>

In conversations with the Permittee, they told the Division that no mine works exist within the South Crandall lease.

#### **Permit Area Boundary Maps**<sup>[sm:]7]</sup>

The permit boundary is shown on Plate 1-1, Crandall Canyon Mine Lease Map.

#### **Surface and Subsurface Manmade Features Maps**<sup>[sm:]8]</sup>

With the exception of a trail no surface or subsurface manmade features are shown on any maps of the South Crandall lease.

#### **Findings:**

The information provided in the application is considered adequate to meet the minimum requirements of this section of the regulations.

## **OPERATION PLAN**

### **MINING OPERATIONS AND FACILITIES**<sup>[sm:]9]</sup>

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

#### **Analysis:**

The Permittee does not propose to build any new surface structures or facilities related to the development of the South Crandall lease.

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**Findings:**

The information provided in the application is considered adequate to meet the minimum requirements of the regulations.

**EXISTING STRUCTURES<sub>[sm:]10</sub>:**

Regulatory Reference: 30 CFR 784.12; R645-301-526.

**Analysis:**

The Permittee needs to state if there are any existing structures within the South Crandall lease.

**Findings:**

The information in the South Crandall lease amendment is considered adequate to meet the minimum requirements of this section of the regulations.

**RELOCATION OR USE OF PUBLIC ROADS<sub>[sm:]11</sub>**

Regulatory Reference: 30 CFR 784.18; R645-301-521, -301-526.

**Analysis:**

There are no public roads in or near the South Crandall lease. Therefore, the Permittee cannot relocate or use a public road within the South Crandall lease area.

**Findings:**

The information provided in the amendment is adequate to meet the minimum requirements of this section of the regulations.

**COAL RECOVERY<sub>[sm:]12</sub>**

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

### **Analysis:**

Appendix 5-24, Resource and Recovery Protection Plan Approval Letter, was not included in the amendment. The Division uses the R2P2 when evaluating the coal recovery plan. In addition to the approval letter the Permittee needs to state in the amendment what they are doing to maximize coal recovery.

The Permittee plans to mine both seams as shown on Plate 5-2H and Plate5-2 BC. The Permittee has developed a mine plan that is intended to recover as much coal as is economically possible.

### **Findings:**

The information provided in the amendment is not considered adequate to meet the minimum requirements of this section of the regulations. Before, the Division can approve the amendment the Permittee must give the following information in accordance with:

**R645-301-122**, The Permittee will include a copy of the letter from the BLM about the approval of the R2P2.

## **SUBSIDENCE CONTROL PLAN**

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

### **Analysis:**

#### **Renewable Resources Survey**[sm:]13]

The renewable resources in the area consist of grazing, timber and water

#### **Subsidence Control Plan**[sm:]14]

The update subsidence plan includes the following information about the South Crandall lease:

- In most of the South Crandall lease, including the Hiawatha and Blind Canyon seams will be extracted with by longwall methods. Those areas where full extraction is not permitted by the lease agreement are: 1) Areas under Little Bear Stream with less than 600 feet of overburden, 2) areas within 1,000 feet of the southeast corner of the lease in order to protect the Mill Fork Graben and 3) areas within 1,000 feet of the southern boundary of the lease in order to protect the possible water-bearing fracture system.

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- Map 5-2 BC and Map5-2H have been updated to show the area of maximum possible subsidence.
- The subsidence monitoring program for the South Crandall Lease is similar to that of the other areas. The area will have initial survey points established. The area will be aerial surveyed and surface inspections will be done.
- Effects of planned subsidence are anticipated to be a lowering of the surface and temporary tensional fractures at the margins of the subsidence areas.
- Mitigation for any disruption to the Little Bear Spring will be done through construction of a water treatment plant, which will provide replacement water for the spring.

**Performance Standards For Subsidence Control**[sm:]15]

The Permittee is required to keep all performance standards for subsidence controls.

**Notification**[sm:]16]

The Permittee is required to notify the water conservancy district, if any, and all surface owners 6 months before undermining an area. The Division will inspect the Permittee's records to determine if notification was given.

**Findings:**

The information in the South Crandall amendment meets the minimum requirements of this section of the regulations.

**ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES**

Regulatory Reference: 30 CFR Sec. 784.24, 817.150, 817.151; R645-301-521, -301-527, -301-534, -301-732.

**Analysis:**

No new roads or other surface transportation facilities are proposed in this amendment.

**Findings:**

The information contained in the South Crandall lease is considered adequate to meet the minimum requirements of this section of the regulations.

## SPOIL AND WASTE MATERIALS

Regulatory Reference: 30 CFR Sec. 701.5, 784.19, 784.25, 817.71, 817.72, 817.73, 817.74, 817.81, 817.83, 817.84, 817.87, 817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

### Analysis:

No changes to the spoil or waste materials disposal plan are mentioned in the South Crandall lease amendment.

### Findings:

The information contained in the South Crandall lease is considered adequate to meet the minimum requirements of this section of the regulations.

## MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS<sup>[sm:]17</sup>

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

### Analysis:

#### Affected Area Maps<sup>[sm:]18</sup>

From conversations with the Permittee, they do not plan to expand mining operations outside of the proposed permit boundary. Therefore, the permit area is the same as the affected area. The permit boundary is shown on several maps including Plate 1-1.

#### Mining Facilities Maps <sup>[sm:]19</sup>

No new surface mine facilities will be constructed. Therefore, the mine facilities maps will not have to be changed.

#### Mine Workings Maps<sup>[sm:]20</sup>

The Permittee showed the location of the proposed mine workings for the South Crandall lease on Plate 5-2H and Plate 5-2 BC.

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**Certification Requirements**<sup>[sm:]21]</sup>

The maps submitted by the Permittee that require certification for the South Crandall lease amendment have been certified by a registered professional engineer.

**Findings:**

The information contained in the South Crandall lease is considered adequate to meet the minimum requirements of this section of the regulations.

## RECLAMATION PLAN

### APPROXIMATE ORIGINAL CONTOUR RESTORATION<sup>[sm:]22]</sup>

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

**Analysis:**

The backfilling and grading plan will not be affected by the addition of the South Crandall lease. Therefore, there will be no changes to the approximate original contour restoration.

**Findings:**

The information contained in the South Crandall lease is considered adequate to meet the minimum requirements of this section of the regulations.

## BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

**Analysis:**

The backfilling and grading plan will not be affected by the addition of the South Crandall lease.

**Findings:**

The information contained in the South Crandall lease is considered adequate to meet the minimum requirements of this section of the regulations.

**MINE OPENINGS**<sup>[sm:]23]</sup>

Regulatory Reference: 30 CFR Sec. 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

**Analysis:**

No new mine openings will be constructed because of the addition of the South Crandall lease.

**Findings:**

The information contained in the South Crandall lease is considered adequate to meet the minimum requirements of this section of the regulations.

**MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS**<sup>[sm:]24]</sup>

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

**Analysis:**

**Affected Area Boundary Maps** <sup>[sm:]25]</sup>

There are no changes to the Affected Area Boundary maps.

**Bonded Area Map**<sup>[sm:]26]</sup>

There are no changes to the bonded (disturbed) area maps.

**Reclamation Backfilling And Grading Maps** <sup>[sm:]27]</sup>

There are no changes to the backfilling and grading plans. Therefore there is no change to the backfilling and grading maps.

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**Reclamation Facilities Maps**<sup>[sm:]28]</sup>

There are no changes to reclamation facilities maps.

**Final Surface Configuration Maps**<sup>[sm:]29]</sup>

There are no changes to the final surface configuration in the bonded areas.

**Certification Requirements**<sup>[sm:]30]</sup>.

A registered professional engineer certified all reclamation maps that needed certification.

**Findings:**

The information contained in the South Crandall lease is considered adequate to meet the minimum requirements of this section of the regulations.

**BONDING AND INSURANCE REQUIREMENTS**

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

**Analysis:**

**General**<sup>[sm:]31]</sup>

No new surface facilities will be built or any new disturbed areas will be added because of the South Crandall lease addition. Therefore, there will be no change to the bond. The Permittee does not have to change the insurance coverage because of the addition of the South Crandall lease.

**Findings:**

The information contained in the South Crandall lease is considered adequate to meet the minimum requirements of this section of the regulations.

**RECOMMENDATIONS:**

The Division should deny the amendment until all the noted deficiencies have been adequately addressed.

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