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GENWAL™ RESOURCES, INC.

P.O. Box 1077, Price, Utah 84501 794 North "C" Canyon Rd, East Carbon, Utah 84520
Telephone (435) 888-4000 Fax (435) 888-4002

INCOMING
C015/032

July 7, 2004

Utah Coal Program
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, UT 84114-5801

Re: Response to Verbal Comments for South Crandall Lease Revision, Crandall Cyn Mine, C/015/032

Dear Sirs,

GENWAL Resources, Inc. is submitting the response to the verbal comments made on the submittal dated 06/14/2004 of the South Crandall Lease Revision Application.

Call me at 435-564-4015 if you have any questions.

Sincerely

Gary E. Gray
Engineer

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JUL - 7 2004
DIV. OF OIL, GAS & MINING

APPLICATION FOR PERMIT PROCESSING

Permit Change ☐	New Permit ☐	Renewal ☐	Transfer ☐	Exploration ☐	Bond Release ☐	Permit Number: 015/032

Title of Proposal: South Crandall Lease Revision

(Response to verbal comments)

Mine: CRANDALL CANYON MINE

Permittee: **GENWAL Resources, Inc.**

Description, include reason for application and timing required to implement:.

Instructions: *If you answer yes to any of the first 8 questions (gray), submit the application to the Salt Lake Office. Otherwise, you may submit it to your reclamation specialist.*

☐ Yes	☐ No	1. Change in the size of the Permit Area? _____ acres Disturbed Area? _____ acres ☐ increase ☐ decrease.
☐ Yes	☐ No	2. Is the application submitted as a result of a Division Order?
☐ Yes	☐ No	3. Does application include operations outside a previously identified Cumulative Hydrologic Impact Area?
☐ Yes	☐ No	4. Does application include operations in hydrologic basins other than as currently approved?
☐ Yes	☐ No	5. Does application result from cancellation, reduction or increase of insurance or reclamation bond?
☐ Yes	☐ No	6. Does the application require or include public notice/publication?
☐ Yes	☐ No	7. Does the application require or include ownership, control, right-of-entry, or compliance information?
☐ Yes	☐ No	8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
☐ Yes	☐ No	9. Is the application submitted as a result of a Violation?
☐ Yes	☐ No	10. Is the application submitted as a result of other laws or regulations or policies? Explain:
☐ Yes	☐ No	11. Does the application affect the surface landowner or change the post mining land use?
☐ Yes	☐ No	12. Does the application require or include underground design or mine sequence and timing?
☐ Yes	☐ No	13. Does the application require or include collection and reporting of any baseline information?
☐ Yes	☐ No	14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
☐ Yes	☐ No	15. Does application require or include soil removal, storage or placement?
☐ Yes	☐ No	16. Does the application require or include vegetation monitoring, removal or revegetation activities?
☐ Yes	☐ No	17. Does the application require or include construction, modification, or removal of surface facilities?
☐ Yes	☐ No	18. Does the application require or include water monitoring, sediment or drainage control measures?
☐ Yes	☐ No	19. Does the application require or include certified designs, maps, or calculations?
☐ Yes	☐ No	20. Does the application require or include subsidence control or monitoring?
☐ Yes	☐ No	21. Have reclamation costs for bonding been provided for?
☐ Yes	☐ No	22. Does application involve a perennial stream, a stream buffer zone or discharges to a stream?
☐ Yes	☐ No	23. Does the application affect permits issued by other agencies or permits issued to other entities?

☐ **Attach _3_ complete copies of the application.**

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein. (R645-301-123)

Signed - Name - Position - Date

Subscribed and sworn to before me this 7th day of July, 2004

Notary Public

My Commission Expires: 10/02 06

Attest: STATE OF UTAH } ss:
COUNTY OF Carbon }

PETER J. ROGERS
NOTARY PUBLIC - STATE OF UTAH
[illegible] LANE
[illegible] UT 84518
COMM. EXP. 10-2-2006

Received by Oil, Gas & Mining
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DIV. OF OIL, GAS & MINING

ASSIGNED TRACKING NUMBER

Form DOGM - C2 (Last Revised 6/93)

File Folder # 3

Application for Permit Processing
Detailed Schedule of Changes to the MRP

7/7/04

Title of Application: South Crandall Lease Revision (Response to verbal comments)	Permit Number: 015/032
	Mine: CRANDALL CANYON MINE
	Permittee: GENWAL RESOURCES

Provide a detailed listing of all changes to the mining and reclamation plan which will be required as a result of this proposed permit application. Individually list all maps and drawings which are to be added, replaced, or removed from the plan. Include changes of the table of contents, section of the plan, pages, or other information as needed to specifically locate, identify and revise the existing mining and reclamation plan. Include page, section and drawing numbers as part of the description.

			DESCRIPTION OF MAP, TEXT, OR MATERIALS TO BE CHANGED
☐ ADD	☒ REPLACE	☐ REMOVE	App 3-18
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☒ REPLACE	☐ REMOVE	Pg 6-5, 6-9
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☒ REPLACE	☐ REMOVE	Pg 7-12
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Any other specific or special instructions required for insertion of this proposal into the Mining and Reclamation Plan?

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WATER DEPLETION

1. Mining Process Water

   Water lost due to use in mining process - measured as percentage moisture of coal hauled to customer. 2,000,000 tons/yr x 2% = 29.4 acre feet

2. Ventilation Evaporation

   Water lost due to ventilation currents drying out mine water.

   Estimated at 2.5 gallons per million cfm annually.

   Estimated maximum 1,000,000 million cfm at 2.5 gallons = 40 acre feet.

3. Sediment Pond Evaporation

   Water lost to evaporation in sediment pond.

   Estimated to be one acre foot per year.

4. Subsidence Effect on Springs

   Estimated at zero because of no known effects of spring disruption.

5. Direct Use

   Pumped from creek for crusher building use - goes into sediment pond.

   Estimated at 2 acre feet per year in use but is not actually lost. Assume no loss.

6. Alluvial Loss

   None

7. Deep Aquifer Pumpage

   None

8. Mine Discharge

   Genwal has discharged at 500 gpm (approximately 800 acre feet per year) for the past 6 years. This is all old water according to the Mayo age dating studies. This is water that enters the watershed, therefore there is presently a net gain to the watershed of more than 700 acre feet:
   800 - (29.4 + 40 + 1) = 800 ac.ft. added, less 70.4 ac.ft. depleted = 729.6 ac.ft.

bituminous coal with a BTU content ranging from 12,500 to 13,000 BTU, ash content of 6% to 8%, moisture of 3% to 5%, volatile matter from 40% to 44%, fixed carbon from 43% to 46% and sulfur from 0.44% to 0.55%. Forms of Sulfur average 0.016% pyritic sulfur, 0.09% sulfate sulfur, and 0.30% organic sulfur, Appendix 6-2. Locations of samples are at 1st Right Main West, 9th left 1st East, and 1st North 1st Right.

Within the South Crandall lease there is only one drill hole of geologic data, HC-4. This hole was drilled in 1981 and encountered 6'9" of coal in the Blind Canyon, and 5.0' in the Hiawatha, which is marginally mineable with low coal equipment. The coal analysis from this hole is: Blind Canyon 13352 BTU, 0.61% sulfur, 5.46% ash - Hiawatha: 13126 BTU, 0.56% sulfur, 6.3% ash. The location HC-4 is shown on Plates 5-2 (BC) and 5-2 (H).

6.22.2 Coal Seams, Overburden, Stratum Coal Seams

Additional technical information has been submitted to determine the nature, depth and thickness of the coal seams, rider seams, overburden and interburden strata for the permitted mine area based upon drilling completed to date (Appendices 6-1 and 6-5 and Plates 5-2). There is insufficient evidence to support the presence of the Blind Canyon Seam in Crandall Canyon, but it thickens southward to the Mill Fork area, beyond which it again is of little value (Doelling, 1972, p. 189). The old workings can provide information on the lower seam (Hiawatha) and some ground water information but nothing about the other seams. Additional geologic information was submitted by Mr. Wollen, a former operator of the Genwal property, which contained specific lithologic characterizations of the interburden, and the strata immediately above and below the coal seams (Appendices 6-1 and 6-2). Additional geologic information about the South Crandall lease area is found in Appendix 6-6.

Coal Reserves Coal-seam data for lease area SL 062648 indicates that approximately 840,000 tons of coal are in place, of which 400,000 tons are recoverable. Lease area U 54762 contains approximately 2.5 million tons of coal in place, of which approximately 1.5 million tons are recoverable. Approximately 0.5 million tons will be left in place for final retreat, leaving approximately one million tons minable during advance.

In-place tonnage for State Leases ML-215688 and ML-21569 is estimated at 18,000,000 tons, of which 8,000,000 tons are considered recoverable. The Lease #UTU-68082 has an estimated in-place tonnage of 36,000,000 tons, of which 12,000,000 tons are considered recoverable. In the South Crandall lease area the estimated recoverable reserves are 7.63 million tons

All mining within the Crandall Canyon #1 Mine is within the Hiawatha seam. The Blind Canyon seam is present above the Crandall Canyon #1 Mine but is not thick enough to mine. (Coal seam isopachs for this area are shown on Plates 6-4 and 6-5) in the area of the South Crandall Mine (i.e., within the South Crandall lease area) both the Hiawatha and the Blind Canyon seams reach minable thickness. The approved R2P2 for the South Crandall Mine include extraction from both seams. The coal seam thickness isoapchs for the seams in the South Crandall lease area are shown on Plates 5-2(H) and 5-2(BC).

potential of strata immediately above and below the Hiawatha seam, the applicant collected additional roof- and floor-rock samples from three equally spaced locations within the current mine workings (including the state leases and right-of-way areas). Analytical results from these three sets of samples are provided in Appendix 6-2 and are used to further characterize the acid-forming potential of the strata. The laboratory data indicate that neither the underburden or overburden are acid or toxic forming materials.

The characterization of the strata above and below the Blind Canyon Seam can not be done at this time due to no access to unweathered material. In approximately 6 months access to the Blind Canyon seam via the rock tunnel will be available. Samples and analysis will be done then.

6.24.33 Chemical Analysis - Coal

The total sulfur content of the Hiawatha coal has been analyzed at 0.58%, and the acid-base potential determined for the coal is +10.2 tons $CaCO_3$/1000 tons (Appendix 6-2). Under the current operation plan only a small quantity of coal is temporarily stockpiled on-site. The amount of coal remaining at the time of reclamation is likely to be insignificant. Plus, the data show that the coal is non-acid forming and non-toxic.

The characterization of the Blind Canyon Seam can not be done at this time due to no access to unweathered material. In approximately 6 months the rock tunnels from the Hiawatha seam will be completed. Samples and analysis will be done at that time.

6.24.34 Properties of Strata Above and Below Coal

This mine employs standard room and pillar mining operations and longwall technology; however, the stratigraphic sections (Appendix 6-1) and drilling results (Appendix 6-5) do not show any clays or soft rock immediately above or below the coal seam to be mined.

In the South Crandall lease area, where the Blind Canyon seam will be mined, the thickness of the clays and soft rock above and below the coal seam are shown on drill hole HC-4, Appendix 6-6. The engineering properties of these materials will be determined once the rock tunnels are constructed and access is gained to the Blind Canyon seam. Samples and analysis will be done at that time.

6.25 Additional Information

Additional information will be provided if determined necessary by the Division.

6.26 Waiver of Requirements

Not applicable.

Groundwater Development and Mine Dewatering

Water Supply

A few of the seeps or springs inventoried during the spring/seep surveys have been developed for beneficial use. However, this development does not include springs issuing from the Star Point Sandstone. No water wells used for consumption by humans or animals, other than MW-1, are known to exist within the study area of the spring inventory. However, groundwater which reaches the surface water within each watershed does contribute to downstream water users in Huntington Creek who have the water allocated for industry, domestic water supplies, agriculture, and recreation (i.e., cold water fisheries).

Appendix 7-1 contains a listing of groundwater rights (and their associated seeps and springs) in and adjacent to the permit area (within a 1-mile perimeter boundary). This data was obtained from the files of the Utah Division of Water Rights. Locations of these water rights are denoted in Plate 7-14. Appendix 7-1 also shows what groundwater right corresponds to the seeps and springs observed in the field inventories.

Mine Dewatering

An underground water budget (amended August 23, 1994) appears in Appendix 7-21. Based on the water budget, current underground use of water for the mine equipment averages 14.3 gpm throughout the year. Infiltration along the mine floor and sumps totals 10 gpm and evaporation due to mine ventilation equals 50 to 60 gpm. Coal moisture content accounts for 68.5 gpm. The combined approximate total equals 150 gpm. The quantity of mine inflow that is lost to evaporation and infiltration are estimates based on experience at other mines, and the infrequent need to discharge into Crandall Creek. Additional water depletion analysis for Fish and Wildlife Service is provided in Chapter 3.

Although worst-case estimates of mine inflow are greater than the present inflow rate, the actual inflow rate to be encountered is unknown. In order to effectively treat mine inflow an additional sump and pump house will be built in the southeastern corner of Lease ML-21569 (Appendix 7-22). This new sump will be equipped with a Worthington pump capable of pumping 150 gpm at 400 psi. This proposed sump will serve as the primary treatment facility for mine inflow, as well as the active water supply for mining operations. The existing sump will be maintained as a secondary water treatment facility. If discharge is required, water to be discharged will be initially treated in the proposed sump in Lease ML-21569, then pumped to the secondary (presently existing) sump, prior to discharge into Crandall Creek.

In the event mine inflow rates exceed the capacity of these treatment facilities to treat the mine inflow to meet the discharge limit criteria outlined in the NPDES Permit (UPDES Permit No. UT0024368, authorizing two discharge points), GENWAL commits to modifying these treatment facilities and/or constructing additional facilities in order to ensure compliance with the UPDES Permit. Treatment facilities to be considered include enlargement and/or construction of additional underground sumps and/or surface settling ponds. If excessive water volumes are encountered the