FINDING OF NO SIGNIFICANT IMPACT

Genwal Coal Company Inc.
Crandall Cayon Mine

The technical analysis (TA), prepared by the State of Utah, and the environmental assessment (EA), prepared by the Office of Surface Mining (OSM) that precede this "Finding of No Significant Impact" statement, identify certain environmental impacts that would result from the Federal approval of the mining and reclamation plan (MRP) for Genwal Coal Company Inc.'s Crandall Canyon Mine. The 5-year permit application, submitted to the State under its approved permanent program, proposes a total permit area of 80 acres, of which 9.7 acres will be disturbed.

Impacts identified by OSM and the State would appropriately be mitigated by those environmental protection measures detailed in the MRP and proposed conditions attached to the permit.

Based upon the evaluation of impacts given in the TA and EA, I find that no significant impacts to the human environment would result from the proposed mine. Therefore, an Environmental Impact Statement is not required.

Allen D Klein

Administrator
Western Technical Center

11/8/82

Date

ENVIRONMENTAL ASSESSMENT

GENWAL COAL COMPANY's INC.
CRANDALL CANYON MINE
MINING AND RECLAMATION PLAN

Introduction

The Genwal Coal Company Inc. has submitted a 5 year coal mining permit application and mining plan for the Crandall Canyon Mine to the State of Utah, Division of Oil, Gas, and Mining (UDOGM), and to the U.S. Department of the Interior, Office of Surface Mining (OSM).

The proposed new underground mine and related surface facilities are located in Emery County, approximately 13 miles northeast of Huntington, Utah. The Federal lease #SL-062648 contains 80 acres of which 9.7 acres will be disturbed by associated surface disturbances. The facilities under review are located in the SW1/4 of the NW1/4 of Section 5, and the SE1/4 of the NE1/4 of Section 6 in Township 16 South, Range 7 East, SLM. This is within the confines of Crandall Canyon, a 6.1 mile long southwest trending extension from Huntington Canyon.

Crandall Creek parallels the southeastern side of the mine plan area and flows in a northeasterly direction into Huntington Creek. Huntington Creek merges with Ferron Creek and forms the San Rafael River which is a tributary of the Green River. Coal mining activities have taken place in Crandall Canyon but only on a small scale during the early twentieth century. The new proposal includes entering old workings (old Tip Top Mine) and mining two seams of coal. The proposed surface facilities include a temporary trailer office, a power generator and fuel storage area, an open conveyor belt system, two open coal storage stockpiles, two vehicle parking areas, a haul truck loop turnaround and associated sedimentation control structures. Portable toilets will be used and some shop and office areas may be constructed underground at a future date. The operation will employ a project workforce of approximately 12-15 individuals. Due to limited reserves, the life of the project is only five years and the total surface disturbance will be 9.7 acres.

Access to the site has proved to be major factor in its development. Considerable cooperation and planning has been necessary with the U.S. Forest Service who wish to maintain and manage complete access through the site to the upper reaches of the canyon after termination of mining operations. The road has been designated as a Forest Development Road and hence, is not a public road. However, it may be used by the public, although usage is entirely subject to Forest Service discretion.

Purpose and Need for Action

UDOGM has reviewed the Genwall Coal Company's Inc., Crandall Canyon Mine 5 year permit application and has submitted a technical analysis (TA) document to OSM. UDOGM is recommending approval of the application to OSM. Pursuant to 30 CFR 741.4(d), OSM must recommend approval, disapproval, or conditional approval of the mining plan to the Assistant Secretary for Energy and Minerals. Since the life of the mine and permit term are the same in this case, OSM's recommendation for the mine plan will also automatically indicate an approval, disapproval, or conditional approval of the permit application, in accordance with 30 CFR 741.21 (a)(1).

OSM Alternative Actions

Proposed Action-Concurrence with the state documents, conclusions, stipulations, and recommendation of approval of the mining plan.

Alternative No. 1 - Recommendation of approval of the mining plan with stipulations over and above the state documents, conclusions, and stipulations. (The OSM Western Technical Center Staff has reviewed the mining plan application and has determined that no additional stipulations are necessary.)

Alternative No. 2 - Recommendation of disapproval of the mining plan.

Description of the Affected Environment and Applicant's Proposal

Land Features

The proposed mining operation will be located in Crandall Canyon which underlies steeply rising ridges on the eastern flank of the Wasatch Plateau. Crandall Canyon is a west bank tributary of Huntington Creek, one of the major drainages of the Wasatch Plateau, Utah. Elevations in the area range from 7,500 feet in the canyon bottoms to over 10,000 feet on the ridges and plateaus. The canyon is rugged and steep-sided with slopes that are convex and medium in length.

Soils

The area of disturbance is found at an elevation of approximately 7,500-8,000 feet on a southern exposure with slopes ranging from 5-70 percent. The soils have formed from the weathering of sandstone and shale, and are classified as Entisols and Mollisols. The Entisols are shallow and found on the steeper slopes and have a high erosion hazard. The Entisols are classified as poor for the recoverability of topsoil due to the steepness of slope (50-70 percent) and the high percent of large rocks on and in the surface layer (35 to 60 percent). Recovery of topsoil from these areas would be difficult if not impossible. The Mollisols are found on more moderate slopes. They are deep, well drained soils with A horizon ranging from 8-32 inches thick and have an erosion hazard that is moderate to low. These soils in general can produce large amounts of topsoil and subsoil that can be removed, stockpiled and used as a good plant growth medium for relcamation.

Surface facilities for the operation will disturb 9.7 acres. The applicant has proposed a topsoil salvaging and storage plan on those areas with suitable soil. The topsoil is to be replaced on the recontoured site during the final reclamation and abandonment stage of the operation. Appropriate soil amendments would be made to help insure successful revegetation.

Vegetation

Five plant community types will be disturbed by mining activities. These are: mountain shrub/grassland; mixed mountain shrub/conifer/aspen; spruce/fir/aspen/ riparian and, an area impacted by previous coal mining (previously disturbed area). A total of 9.7 acres will be disturbed within the permit area of 83.65 acres. Since the road will be left after mining (USFS request), only 8.5 acres will be reclaimed. Baseline data on cover, and shrub and tree densities where collected in all plant community types.

The applicant has submitted a complete revegetation plan, including soil preparation, species lists and seeding rates, methods of planting and mulching techniques. The species lists contain species that are native to the area, with one or two introduced species included that have proven value to prevent erosion, and which are not highly competitive with the native species. A standard of 1,336 shrubs per acre, as determined by sampling, has been set. Ground cover in the reference area was found to be 24 percent. A separate seed mix has been proposed for slopes of 30 percent or less. Trees will be planted in this area as well. Disturbance in this area will affect the forested communities: riparian; spruce/fir/aspen; and the previously disturbed community, which was most likely forested prior to disturbance. Accordingly, revegetation standards for this area have been set as follows: ground cover, productivity figures and shrub density standards from the reference area will be used. Tree density standards will be 550 trees per acre, as recommended by the U.S. Forest Service.

Hydrology

The Crandall Canyon Mine site is situated within the narrow confines of Crandall Canyon, a 6.1 mile long southwest trending tributary of the extensive Huntington Creek drainage (Wasatch Plateau region, central Utah). Crandall Creek located at the southern boundary of the permit area, is a small perennial stream which flows in a northeasterly direction and enters into Huntington Creek 1.5 miles downstream from the minesite.

The background water quality of Crandall Creek is very good and can be classified as a calcium-magnesium-bicarbonate (Ca Mg HCO_3) type. Total dissolved solids values range between 250-300 milligrams/liter (USGS water records for Crandall Creek gaging station).

Stream flow varies seasonally attaining peak discharge during the spring snowmelt period and a low during the late fall and winter months. Typically, annual flow may range between 0.5 cfs to over 50 cfs.

The perennial base flow of the stream is attributable to springs which discharge to the stream channel predominatly in the upper reaches of the Crandall Creek drainage. The significant springs are located upstream from the mine location.

Springs throughout the area appear to be surfacing primarily above and below the Blackhawk Formation. Most significant springs usually discharge from the North Horn, Castle Gate or the Blackhawk/Star Point (interphase boundary) formations. Field observations in mines located in the San Rafael and Price River Basins have shown only limited amounts of subsurface water in the Blackhawk Formation.

The U.S. Geological Survey has published an open-file report (#81-539) which describes the hydrology of the coal resource areas of the upper Huntington Creek and Cottonwood drainages. Much of the information and conclusions of this report may be applicable to the Crandall Canyon Drainage area.

The report identifies snowmelt as the major source of ground water recharge for the region. Much of this recharge is discharged from springs which issue from water-bearing zones above the Star Point/Blackhawk (interface) aquifer close to the original recharge areas.

Regionally, there are significant springs which discharge from the Blackhawk Formation. These springs are usually associated with major fault patterns. Ground water can move readily through fractures in faulted areas. Several underground mines in the area which are associated with significant fractures or fault systems have intercepted substantial inflows of ground water.

The proposed Crandall Canyon Mine site appears to have a limited recharge area. The site is somewhat isolated from one of the more extensive local recharge areas identified as East Mountain. The Crandall Canyon Mine is located northeast of East Mountain.

Surface recharge to the geologic formations in the mine plan area is also limited by the local dissection on the north, south and east by the respective Blind Canyon, Crandall Canyon and Huntington Canyon drainages. The narrow topped ridge and steep slopes of the canyon drainages tend to limit the amount of direct recharge to the formations.

There are no stream channel diversions planned for this mining project other than one 42-inch culvert in an ephemeral drainage on the minesite. However, the applicant has proposed to provide channel embankment armoring (riprap) for those embankment sections along Crandall Creek where cut and fill slopes may encroach upon the stream channel.

The U.S. Forest Service (USFS) has required that the applicant provide adequate armoring on all stream embankment slopes where necessary to ensure that the 100-year, 24-hour runoff event is safely handled in a nonerosive manner.

Drainage from the disturbed area at the minesite will be directed into a sedimentation pond. The pond is to be constructed just above and adjacent to the Crandall Creek drainage, at the lower southeastern end of the minesite area. The pond is designed to handle the runoff volume for the 10-year, 24-hour precipitation event (2.4 inches, NOAA Atlas). The volume of runoff from the 8.36 acre-feet. The three-year sediment yield was estimated to be approximately 478 tons, 13,000 cubic feet or 0.30 acre-feet.

Discharges from the minesite will be in compliance with all applicable State and Federal water quality standards for effluent limitations. A NPDES discharge permit will be obtained to cover discharges from the sedimentation pond and for any unpredicted ground water inflows which may result in a discharge from the mine. Interception of ground water is not projected by the applicant and hence, no discharges are expected to occur from the mine. Any unpredicted ground-water inflow which might occur during mining operations will be pumped to a settling basin in a section of the old workings. The water will be treated for removal of oil and grease and will not be discharged from the mine until it meets effluent limitations.

No toxic-forming or acid-forming material which would degrade surface and groundwater quality are anticipated.

Fish and Wildlife

Crandall Canyon, by the nature of its steep, rugged topography, and its being a major drainage of the Wasatch Plateau, supports many species of vertebrate wildlife, including species of high interest to Federal and State Agencies. Both ruffed grouse and blue grouse brood and nest in the area of the proposed mine. Black bear, cougar, elk, mule deer and moose are important big game species which inhabit the Crandall Canyon area. Mule deer and elk winter on the high ledges and ridges of the canyon. It is likely that some animals pass through Crandall Canyon to their winter habitat. The mine access road may serve to disrupt big game movements. The applicant feels that the chance of a wildlife-coal truck collision is minimal, given the width of the road and a designated speed of 10 mph (Response to ACR Review, September 1981, page 34). Moose winter in all of the Huntington Canyon drainages, and winter mining activities will impact moose use of the lower 2 km of Crandall Canyon (MRP, Chapter IX, page 52). Crandall Creek, a perennial stream, has been determined not to be a fishery, however, it flows into Huntington Creek, a high quality trout stream.

Threatened or Endangered Species

It is possible that the bald eagle or peregrine falcon could use the area, but only on a transitory basis. A golden eagle nest has been located outside of the permit area, approximately 0.8 km to the northeast and above the old (existing) mine portals. In 1980, this nest fledged one young. Its exact status in 1981 and 1982 is not known. The U.S. Fish & Wildlife Service (USFWS) feels that human disturbance may have caused the eagles to forego or abandon a nesting attempt in 1981.

ANALYSIS OF ENVIRONMENTAL CONSEQUENCES OF THE ALTERNATIVES

Proposed Action

The approval of the Genwal Coal Company's Crandall Canyon Mine, 5-year permit and 5-year life of mine would not significantly affect the quality of the human environment. The State of Utah's proposed stipulations would mitigate several environmental impacts and the mitigation measures that they require are adhered to by the applicant. The environmental impacts identified in the State's TA are presented in the following discussion.

The applicant predicts that little or no subsidence will occur as a result of mining. Crandall Creek will not be affected because mining will proceed away from the Creek. Springs and seeps in the area may be affectd if subsidence does occur. The land use, livestock grazing and wildlife would not be adversely affected should limited subsidence occur.

Soils identified as suitable plant growth material will be salvaged from areas not previously disturbed. After the vegetation is removed, and prior to removal and stockpiling of those soils, a serious erosional problem could occur. The applicant could minimize this hazard by using sound engineering and environmental techniques. After reclamation, there will be an increase in soil erosion until revegetation is completed.

The applicant has submitted a complete revegetation plan including soil preparation, species lists and seeding rates, methods of planting and mulching techniques. The species lists contain species that are native to the area, with the exception of one or two introduced species to be used to help control erosion. The State has asked for additional information, such as a detailed plan for monitoring revegetated areas, and for transects of second year growth for emergence and survival of shrubs, with the above added information, the applicants proposal will properly revegetate the disturbed area when reclamation is complete.

Crandall Creek is the only perennial stream that will be affected by mining activities. One ephemeral drainage will be culverted to bypass the disturbed areas. Due to the limited disturbance (8.7 acres), the surface water quantity would only slightly decrease due to passing all the water from the disturbed area through a sedimentation pond. The 8.7 acres disturbed is a very small portion of the total watershed area.

Significant impacts to the surface water quality may occur due to increased erosion in areas of cut and fill, if the applicant does not comply with the special stipulations for control of erosion. The applicant has been given a variance to the 100 foot buffer zone requirement for the protection of Crandall Canyon because of the limited space in the Canyon for the access-haulroad and other surface facilities.

It is not anticipated that the mine will encounter significant amounts of groundwater. The abandoned mine (Old Tip Top Mine) workings are dry and do not show signs of fractures or flowing. Published data from U.S. Geological Survey (USGS) open file report for the area, suggests that significant groundwater aquifers do not exist in the area of Crandall Canyon. However, to insure that the mine identify significant groundwater inflow into the mine during mining, the State is requiring the applicant to monitor springs in the area, and report significant inflows of water into the mine. Even if the mine does encounter significant amounts of groundwater, the impacts would be isolated and of short duration and would not extend into adjacent areas due to the location of the mine on the end of a narrow ridge, branching easterly off the Wasatch Plateau.

CUMULATIVE HYDROLOGIC IMPACTS

Genwal Coal Company, Inc.
Crandall Canyon Mine
ACT/015/032, Emery County, Utah

As detailed in previous sections of the Technical Analysis Document, the proposed mine would have only minor impacts on water resources. Runoff would be diverted around the disturbed areas and flow in Crandall Creek would not be interrupted; therefore, there would not be any change in surface water quantity. Sedimentation ponds and water treatment would control any effluent from the minesite; therefore, surface water quality would not change. It is not anticipated that the mine would encounter significant amounts of ground water. Even if the mine does encounter significant amounts of ground water, the mine is located near the end of a narrow ridge, so the impacts would be of short duration, isolated and not extend into the adjacent areas.

Based on these considerations, there would be no cumulative hydrologic impacts from the development of the proposed mine.

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Manti-LaSal National Forest
599 West Price River Drive
Price, Utah 84501

2820

January 29, 1982

Office of Surface Mining
Brooks Towers
1020 Fifteenth Street
Denver, Colorado 80202

JIM

FEB 09 1982

Gentlemen:

Attached is the Environmental Assessment for Genwal Coal Company's proposed Crandall Canyon Mine. The "Decision Notice and Finding of No Significant Impact" document, which is the instrument of Forest Service concurrence for the project, will be transmitted when the final proposal has been completed, reviewed, and accepted.

If any questions arise pertaining to the project, please feel free to contact either Ira Hatch or William Boley at the Forest Supervisor's Office.

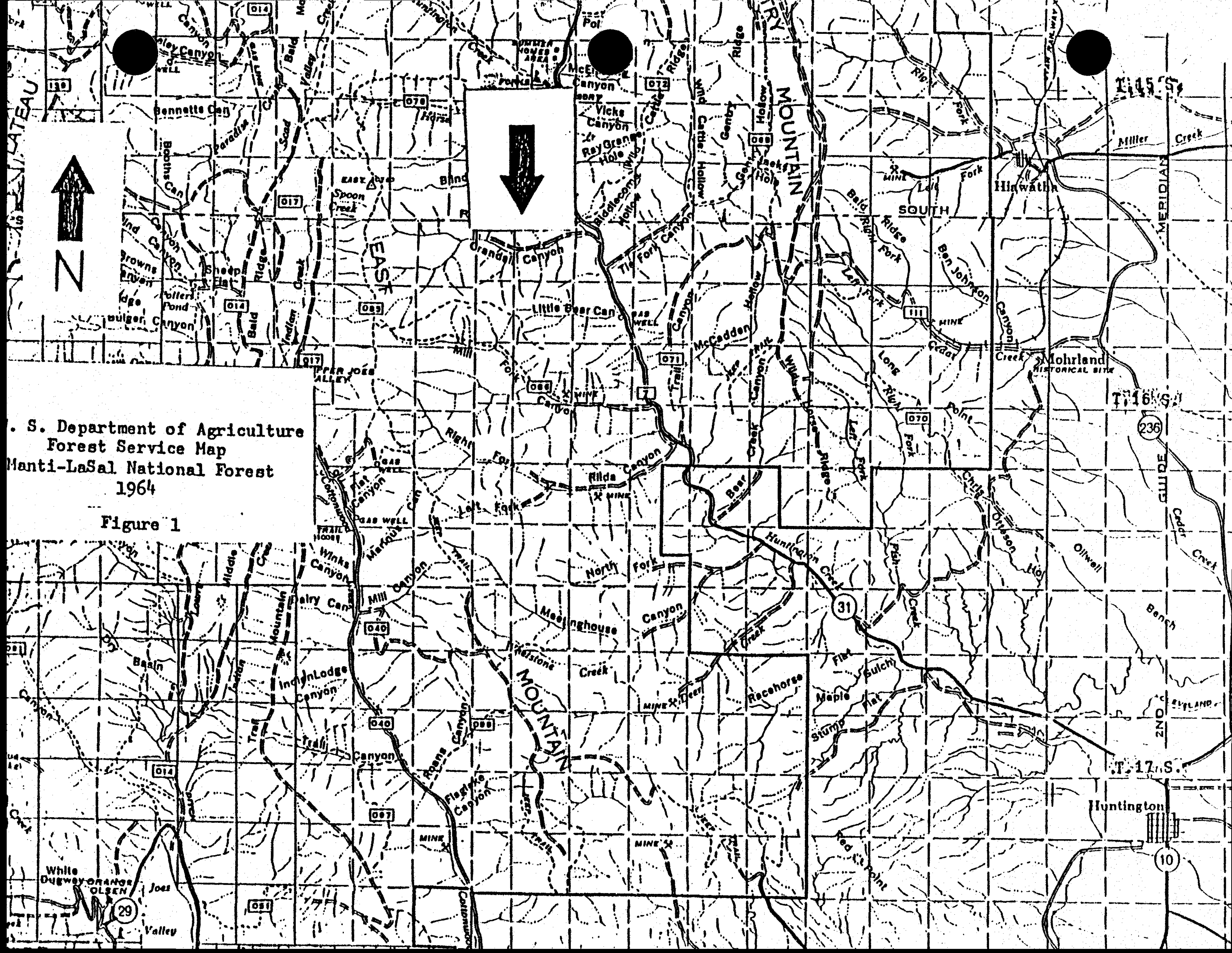
Reed C. Christensen

REED C. CHRISTENSEN
Forest Supervisor

Enclosure

cc: D-3
DOGM
RO
Congressman Hansen
B. Wollen (Genwal)

6200-11 (1/69)



U. S. Department of Agriculture
Forest Service Map
Manti-LaSal National Forest
1964

Figure 1

ENVIRONMENTAL ASSESSMENT
CRANDALL CANYON MINE
GENWAL COAL COMPANY, INC.
EMERY COUNTY, UTAH

Responsible Official: Reed C. Christensen
Forest Supervisor
Manti-LaSal National Forest
599 West Price River Drive
Price, Utah 84501

For Further Information Contact: Ira W. Hatch
Price Ranger District
Manti-LaSal National Forest
10 North Carbon Avenue
Price, Utah 84501

Preparation: Bruce C. Jessen, Geologist

Recommend Approval: Ira W Hatch
District Ranger
Date: January 26, 1982

Concurrence: and Approval: Reed C Christensen
Forest Supervisor
Date: 1/29/82

I. INTRODUCTION

A. Purpose or Need for Action

Genwal Coal Company, Inc. has obtained rights to Federal Coal Lease SL-062648, issued in 1942. The lease is in Crandall Canyon which is located approximately 15 miles northwest of Huntington on Utah Highway 31 in Emery County, Utah. The subject area is located in Sections 4 and 5, T16S, R7E, SLM (refer to maps, figure 1 and 2). Forest development road #50248 services the mine. Genwal intends to produce coal over the next five years at a rate of 132,000 tons per year. Genwal has submitted a proposed mine and road plan from station 70 to the mine site (see figures 1 and 2). Copies of this complete proposal along with detailed plans and revisions are available at the Manti-LaSal National Forest Supervisor's Office, Price, Utah.

This Environmental Assessment is necessary for a site-specific evaluation and Forest Service concurrence to the proposal.

Development of the Crandall Canyon Mine will be under the authority of the following authorizing actions: the Mineral Leasing Act of February 25, 1920, as amended; The Federal Land Policy and Management Act (FLPMA) of 1976; The Surface Mining Control and Reclamation Act (SMCRA) of 1977; The Multiple Minerals Development Act of August 13, 1954; The Department of Energy Organization Act of August 4, 1977; the National Environmental Policy Act (NEPA) of 1969; The Federal Coal Leasing Amendments Act of 1976, as amended; the Act of October 30, 1978, that further amended the Mineral Leasing Act of 1920; and regulations: Title 43 CFR Subpart 3041, Part 3400, Part 2800 and Title 30 Part 211, Part 700.

B. Issues, Concerns and Opportunities

The I.D. Team listed on page 8, has reviewed and discussed the alternatives and their effects on the environment. Based on their discussion the following issues, concerns and opportunities have been identified.

1. Hydrology and Water Quality

   a. Mine construction and operations could add pollutants and sediment to Crandall and Huntington Creeks and adversely affect water quality.

   b. Mine site drainage facilities must consider flood conditions which can occur in Crandall Canyon.

2. Wildlife and Fisheries

   a. Fisheries in Crandall and Huntington Canyons could be adversely affected. See Appendix A.

   b. Impacts to the deer, elk and raptor use in the area could occur in the form of behavioral avoidance.

3. Soils

There will be increased erosion during construction and on cut and fill slopes until stabilized by revegetation.

4. Engineering and Transportation

a. Activity and operations at the mine site as designed could infringe on the use of the Forest development road by other Forest users and could result in unsafe conditions.

b. Snow removal procedures must be adquate.

c. Suitable disposal areas must be designated for excessive waste produced from mine site construction and from mining.

d. Drainage facilities outlet velocity will be designed to prevent undue erosion.

e. Provide for an unencumbered road right-of-way through the mine site.

f. There is a concern that due to the confining nature of the canyon inadequate room exists to construct both a mine and a road facility while adequately protecting and maintaining the integrity of the stream.

C. Negative Declaration

The Interdisciplinary Team (I.D. Team) did not identify any prime or unique range, farm, wet or timber lands; alluvial valley floors, paleontological values; nor concerns for threatened or endangered floral or faunal species nor cultural resources.

An archaeological survey has been conducted and can be reviewed at the Price Ranger District.

D. Other Information

Genwal's Federal Coal Lease #SL-062648 and the area containing their proposed mine site is within Federal Oil and Gas Lease U-15208. Oil and gas exploration and development activities have not occurred recently in the project area and this project is not expected to adversely affect future oil and gas activities.

II. ALTERNATIVES

A. Alternative One

1. No Action

Consideration of the "No Action" alternative is required by Section 1502.14(d) of the National Environmental Policy Act (NEPA). If the course of "No Action" were adopted, Genwal's proposal and request for a coal mine site would be denied. The road and mine site would not be reconstructed and additional surface disturbance would not occur. Genwal would be denied access to their existing lease and the subsequent enjoyment of the leased mineral as guaranteed by the U.S. Government by the lease terms. This alternative is considered but not evaluated.

B. Alternative Two

1. Project as proposed with mitigations.

a. The action proposed by Genwal Coal Company is titled "Permit Application, Crandall Canyon Underground Coal Mine", including the "Apparent Completeness Review" in three volumes. This is a proposal and permit application by Genwal Coal Company to develop and operate a coal mine from their lease hold in Emery County, Utah.

The apparent completeness review is an update of the proposal and permit application previously filed for this lease hold by Genwal Coal Company.

Genwal will provide the management, personnel and technical expertise for the development and operation of the mine. Construction of the mine site and other facilities may be conducted by outside contracting firms. Under this proposal, Genwal Coal Company intends to exercise their right to extract coal from Federal Coal Lease No. SL-062648. Genwal acquired this property in 1980 from the heirs of John F. Sanders.

Operations will include construction of the mine site and surface facilities involving approximately 8.7 acres. A portion of the mine site is located on fee land adjacent to the coal lease. Mine portals will be constructed to mine two coal seams. The lower portals will make use of two existing portals from previous mine operations.

No permanent surface office building or other structures are proposed due to the limited space available. Plans are to build permanent office facilities and repair shops underground. A mobile office facility will be used in the interim. Surface

facilities will include a sedimentation pond, conveyor system, two coal storage areas with haulout facilities, coal haulage road and various other facilities. Coal will be truck-hauled to market. The structures and facilities are discussed in detail in Volume 1 of the mine plan and in three volumes of the Apparent Completeness Review. Preliminary facilities specifications, sketches, plans and cross-sections are included in these sections.

Construction of the portal area and associated facilities will begin as soon as approvals and permits are granted. At full production capacity, coal extraction is estimated to reach approximately 132,000 tons per year. The mine life is estimated at 5 years at full production. Total coal reserves within the lease tract are estimated at approximately 840,000 tons. Mineable reserves are estimated at 420,000 tons. Limitations on extraction of the coal reserves will result from various factors, including thickness and continuity of the coal seams; thickness of interburdened and pillars left for roof support.

B. Management Requirements, Constraints and Mitigations

The following will be mandatory requirements under Alternative Two, in addition to, or in place of measures included in Genwal's proposal.

1. Mine construction and operations will not commence until the mine plan and construction plans have been approved.
2. Public parking must be separate from mine parking and allow for vehicle turn-around.
3. The Forest development road will be separate from and compatible with the mining operation.
4. The road through the mine site will be designed and maintained so that drainage off the road surface will be into the sediment pond for treatment.
5. The reconstruction of Forest development road #50248 will be to a minimum 34 foot subgrade width, with two 11 foot lanes and two 2 foot shoulders when finished and surfaced.
6. The Forest development road through the site will not be used as part of the coal handling operation.
7. The sediment pond must be designed and maintained to meet Forest Service and OSM specifications.
8. During construction and operation activities temporary sediment control structures may be required in Crandall Creek.

9. Designated vulnerable slopes within the 100 year flood channel will be armored to prevent erosion.

10. An adequate sewage disposal plan will be submitted and when approved will be adhered to.

11. Disturbed areas will be reclaimed and seeded no later than the first fall after the surface disturbance.

    The following seed mixture will be utilized, or other seed mixtures as approved, and be certified to contain a minimum 80% pure live seed and a maximum 1% weeds.

	Per Acre
Smooth Brome	4 lbs.
Intermediate Wheatgrass	2 lbs.
Orchard Grass	1 lb.
Fairway Crested Wheatgrass	2 lbs.
Slender Wheatgrass	2 lbs.
Alfalfa (Ramber)	½ lb.
Yellow Sweet Clover	½ lb.
Kentucky Blue Grass	1 lb.
Timothy	1 lb.

12. Riparian vegetation will be re-established where possible ... all disturbed areas along Crandall Creek.

13. All cut and fill slopes will be no steeper than 1.5 to 1 ratio. Steeper slopes may be approved if geotechnical data assure land stability.

14. Mine site structures will blend with the existing environment where possible and/or practical.

15. All mine site waste materials must be disposed of at designated and approved locations using approved methods.

16. Topsoil will be conserved and protected.

17. At the time of reclamation of the mine site the stockpiled topsoil will be analyzed to determine what nutrients are needed, if any, to restore its fertility.

18. Prior to mining, the leasee shall secure adequate baseline data to quantify the existing surface resources on and adjacent to the lease area. The data will be gathered in consultation with and concurrence by the surface managing agency, and shall be adequate to locate and quantify the inter-relationships of the geology, topography, surface hydrology, vegetation and wildlife. The baseline data will be established so that future observations can be made at regular intervals for comparison.

19. The leasee shall establish a monitoring system to locate and quantify the progressive and final effects of underground mining activities on the land surface, the underground and surface hydrology and on the vegetation. The monitoring system shall utilize techniques which will provide a continuing record of change over time. The monitoring shall be an extension of baseline data at representative locations and will be conducted in a manner approved by the surface managing agency in consulation with the State and Federal regulatory agencies.

20. All drainage facilities will be designed and maintained to adequately control the water and prevent erosion.

21. Adequate drainage and sedimentation facilities must be designed and maintained to pick up and treat water intercepted on the disturbed areas of the mine site.

22. The mining company shall provide the Forest Service with an unencumbered right-of-way across any fee lands encountered for the reconstruction of the Forest development road.

23. The site will be so constructed as to encompass the entire surface facilities for the mining operation providing for unrestricted thru-road access while providing adequate protection of the adjacent stream.

III. AFFECTED ENVIRONMENT

The affected environment of the project area in general has been described in the "Final Environmental Statement: Development of Coal Reserves in Central Utah"; the "Final Environmental Statement: Ferron-Price Planning Unit, Manti-LaSal National Forest"; the "Land Management Plan, Ferron-Price Planning Unit, Manti-LaSal National Forest"; and the Crandall Canyon Road and Bridge Environmental Assessment.

Site-specific reports, furnished by the I.D. Team, supply additional environmental data pertinent to the mine site and road. These reports are available for review at the Manti-LaSal National Forest Supervisor's Office or at the Price Ranger District Office. Excerpts of those reports are presented below covering the proposed action and alternative.

A. Hydrology and Water Quality

Portions of the proposed project are located within the 100 year flood plain of Crandall Creek.

B. Visual Quality and Recreation Resources

The corridor from station 70 to the mine site is in an area considered to be unseen Class A scenery. In view of this, the area will be subject to partial retention visual management. Partial retention objectives will allow mining activities to occur, provided that reclamation restores disturbed areas to a natural appearing condition.

Recreation use in the mine area is primarily restricted to big game hunting during the autumn hunting seasons. Crandall Canyon may receive occasional use from hikers and sport fisherman.

C. Engineering and Transportation

The lease area is accessed by Forest Development Road #50248. This road is currently being upgraded by Genwal Coal Company under a Forest Service road use permit. Prior to issuance of this road use permit, this FDR was used primarily for a stock driveway with some occasional recreational use.

Previous surface disturbance for earlier mining operations is limited to the southern ½ of the SW¼, NE¼ of Section 5. Grading in the area has been limited to construction of a steeply inclined access way to the portal for men and equipment and leveling areas for coal stockpiles and small structures. No drainage facilities are in place from previous mine activities at the site.

D. Wildlife and Fisheries

Mule deer and elk utilize portions of Crandall Canyon for summer and winter range. Moose occasionally winter in Huntington Canyon. There is also frequent raptor use of the area. Lower reaches of Crandall Creek support a fishery that is of limited value; however, it may contribute to the high quality Huntington Creek fishery. See appendix A.

IV. ENVIRONMENTAL CONSEQUENCES

A. Effects of Implementation

1. Alternative Two - Proposed Action with Mitigations

Implementation of Alternative Two as proposed, will create the potential for various adverse environmental effects. The following effects to surface resources or resource uses could occur.

a. Hydrology and Water Quality

Water quality could be degraded by snow removal, by continuing high sediment yield rates from disturbed areas and by possibly spills from contaminating agents.

b. Soils

At the mine site 8.7 acres will be disturbed by construction, which would involve cuts, blasting, fills and riprapping the creek bank. Nearness to the stream could result in potential erosion and sedimentation problems.

The area utilized for the project would be taken out of production of native vegetation. This would be permanent on the road surface and temporary at the mine site.

c. Riparian Habitat

Implementing the proposed action could result in the loss of approximately ½ to 3 acres of riparian habitat. See Appendix A. Crandall Canyon has been dedicated to coal mining in the Ferron-Price Land Management Plan to avoid development in Little Bear Canyon and Horse Canyon.

d. Visual Quality and Recreation Resources

The proposed road and mine site will meet the requirements for "Partial Retention" visual quality level.

e. Wildlife and Fisheries

For impacts to the existing fisheries see Appendix A.

A less significant impact to the deer and elk populations could occur in the form of behavorial avoidance of the mine and adjacent portions of Crandall Creek.

f. Engineering and Transportation

The proposed mine site portal, FDR and Forest parking area will disturb an estimated 8.7 acres in the S½ of the SW¼, NE¼ of Section 5. The development will interrupt the existing drainage pattern from an area of approximately 84 acres.

The highwalls for the portals will also interrupt approximately 16 acres of the existing drainage area.

The mine site development and grading will parallel Crandall Creek for approximately 1400 feet.

V. I.D. TEAM AND OTHERS CONSULTED

The following Forest Service I.D. Team convened November 2 and 3, 1981 to identify and discuss the issues and concerns, anticipated effects, possible alternatives and mitigating measures associated with this project.

Brent Barney	Engineer, S.O.
Dennis Kelly	Hydrologist, S.O.
Steven Spencer	Range, D-3
Bruce Jessen	Geologist, D-3

Consultation with Others

Bill Wollen	Genwal Coal Company
Larry Dalton	State of Utah Wildlife
Gent Family	Mine Owner
Wayne Hedberg	DOGM
John Nadolski	OSM
Dan Larsen	Soils, S.O.
Jim Jensen	Visual and Recreation, S.O.
Carol Morrison	Wildlife, D-3
Ira Hatch	District Ranger, D-3
Archie Hamilton	Utah Department of Transportation
Douglas Day	Utah Department of Wildlife Resources
Judy Rose	USDA - Forest Service
Al Mills	USDA - Forest Service
Jim Barton	Fisheries Consultant
James Hansen	U.S. Representative
Jake Garn	U.S. Senator
Orrin Hatch	U.S. Senator
John Garr	State Representative
Max Neilson	BLM

Emery County Commissioners
Southeastern Utah Association of Governments

Carolyn Johnson	Concerned Citizen
Robert Yuhnke	Concerned Citizen

References Cited

1. Apparent Completeness Review, 3 volumes, 1981, Crandall Canyon Coal Mine, Genwal Coal Company.

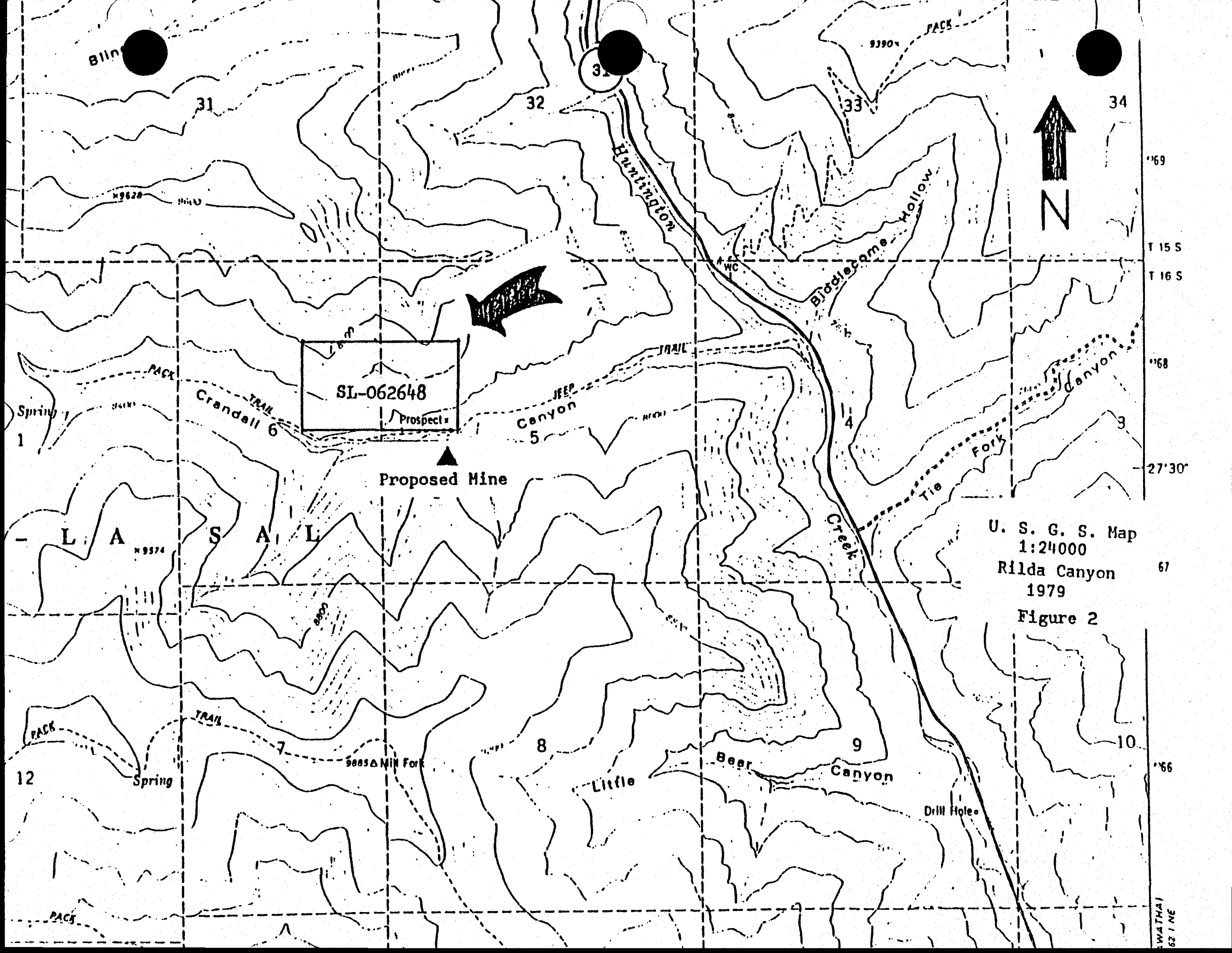
2. Environmental Assessment, 1981, "Crandall Canyon Road and Bridge".

3. Genwal Coal Company, 1981, Permit Application and Mine Plan, Vol. 1, Crandall Canyon Coal Mine.

4. USDA, Forest Service, 1979, "Land Management Plan Ferron-Price Planning Unit, Manti-LaSal National Forest.

5. _____, 1979, "Final Environmental Statement: Ferron-Price Planning Unit, Manti-LaSal National Forest.

6. USDI, U.S. Geological Survey, 1979, "Final Environmental Statement: Development of Coal Resources in Central Utah".


U. S. G. S. Map
1:24000
Rilda Canyon
1979
Figure 2
N
SL-062648
Prospect
Proposed Mine
Huntington
Creek
Biddlecome Hollow
Tie Fork Canyon
Crandall Canyon
JEEP TRAIL
PACK TRAIL
Beer Canyon
Little
Drill Hole
Mill Fork
Spring
L A S A L
T 15 S
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27'30"
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APPENDIX A

United States Department of Agriculture

Forest Service

Uinta NF

7700 Transportation System

Date: NOV 18 1981

Crandall Canyon - Genwal Coal Development

Forest Supervisor, Manti-LaSal NF

In reference to the enclosed correspondence, I find the contents of Mr. Day's letter acceptable, and generally concur with his comments and conclusions.

CC: D-3

I recently received a telephone call from Larry Dalton, resource analyst representing the Southeast Region of the UDWR. Larry and I discussed developments in the Crandall Canyon/Genwal Coal case and current plans for burying approximately 1000 feet of Crandall Canyon Creek in a culvert in the vicinity of the mine development site. This is above the area previously recognized as having some limited fisheries value. I expressed a favorable reaction to the buried pipeline concept in Crandall Canyon, due to undesirable construction conditions and expected contamination from the mine work area and road system.

I feel the facility will need to be carefully designed, engineered, and provide a fail-safe and well maintained intake to ensure against a plugged pipe during a storm event. The buried pipe should be designed to guarantee passage of 100-year flood waters and accompanying watershed debris. A less desirable approach in this instance may be to design and maintain an emergency flood channel through the fill material and above the pipe. A system to prevent loss of sediment and coal dust from work areas and road surfaces should also be incorporated in the plans.

As indicated in previous correspondence, my major fisheries and water quality concerns are related to downstream impacts in Huntington Creek, as well as the immediate concerns in Crandall Canyon Creek.

al Mills

ALVIN D. MILLS
Zone Aquatic Biologist

Enclosure

November 6, 1981

Mr. Cleon B. Feight, Director
Division of Oil, Gas and Mining
1588 West North Temple
Salt Lake City, Utah 84116

Attention: Wayne Hedberg

Dear Jack:

Our Southeastern Region staff has considered the discussion between Wayne Hedberg and Larry Dalton concerning a proposal to require Genwall Coal to [illegible] culvert in as much as 1,000 feet of Crandal Creek on the lower portion [illegible] the permit area. It is our understanding that about one mile of stream below the mine permit area will not be impacted beyond plans originally described in Genwall's permit application. We further understand that the area to be culverted lies above this first mile of stream length and extends beyond the portal area. This upper section does not support a fishery and due to stream character provides little in the way of macroinvertebrate drift for downstream areas. The primary habitat value in this area is flow of water to the downstream area and the riparian habitat.

In view of the level of coal development activity planned for Crandal Canyon it seems advisable to place the afore described length of stream (approximately 1,000 feet) into a culvert system. This section will result in avoidance of mine related pollutants from entering the aquatic system. The loss of riparian habitat needs to be mitigated by Genwall Coal. Mitigation could be accomplished through enhancement of riparian habitats in the lower section of Crandal Creek or along Huntington Creek proximal to the road crossing.

Thank you for an opportunity to provide comment and recommendations for this situation.

Sincerely,

Douglas F. Day
Director

CC:

DFD/LBD/db

bc: Administration
Resource Analysis
Fisheries
U. S. Forest Service
SERO

APPENDIX B

30 USC 1265.

SEC. 515. (a) Any permit issued under any approved State or Federal program pursuant to this Act to conduct surface coal mining operations shall require that such surface coal mining operations will meet all applicable performance standards of this Act, and such other requirements as the regulatory authority shall promulgate.

General standards.

(b) General performance standards shall be applicable to all surface coal mining and reclamation operations and shall require the operation as a minimum to—

Topsoil.

(5) remove the topsoil from the land in a separate layer, replace it on the backfill area, or if not utilized immediately, segregate it in a separate pile from other spoil and when the topsoil is not replaced on a backfill area within a time short enough to avoid deterioration of the topsoil, maintain a successful cover by quick growing plant or other means thereafter so that the topsoil is preserved from wind and water erosion, remains free of any contamination by other acid or toxic material, and is in a usable condition for sustaining vegetation when restored during reclamation, except if topsoil is of insufficient quantity or of poor quality for sustaining vegetation, or if other strata can be shown to be more suitable for vegetation requirements, then the operator shall remove, segregate, and preserve in a like manner such other strata which is best able to support vegetation;

(6) restore the topsoil or the best available subsoil which is best able to support vegetation;

Spoil disposal.

(22) place all excess spoil material resulting from coal surface mining and reclamation activities in such a manner that—

(A) spoil is transported and placed in a controlled manner in position for concurrent compaction and in such a way to assure mass stability and to prevent mass movement;

(B) the areas of disposal are within the bonded permit areas and all organic matter shall be removed immediately prior to spoil placement;

(C) appropriate surface and internal drainage systems and diversion ditches are used so as to prevent spoil erosion and movement;

(D) the disposal area does not contain springs, natural water courses or wet weather seeps unless lateral drains are constructed from the wet areas to the main underdrains in such a manner that filtration of the water into the spoil pile will be prevented;

(E) if placed on a slope, the spoil is placed upon the most moderate slope among those upon which, in the judgment of the regulatory authority, the spoil could be placed in compliance with all the requirements of this Act, and shall be placed, where possible, upon, or above, a natural terrace, bench, or berm, if such placement provides additional stability and prevents mass movement;

(F) where the toe of the spoil rests on a downslope, a rock toe buttress, of sufficient size to prevent mass movement, is constructed;

(G) the final configuration is compatible with the natural drainage pattern and surroundings and suitable for intended uses;

(H) design of the spoil disposal area is certified by a qualified registered professional engineer in conformance with professional standards; and

(I) all other provisions of this Act are met.

(23) meet such other criteria as are necessary to achieve reclamation in accordance with the purposes of this Act, taking into consideration the physical, climatological, and other characteristics of the site; and

(24) to the extent possible using the best technology currently available, minimize disturbances and adverse impacts of the operation on fish, wildlife, and related environmental values, and achieve enhancement of such resources where practicable;