



JON M. HUNTSMAN, JR.  
Governor

GARY R. HERBERT  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

April 8, 2008

Dave Shaver, Manager  
Genwal Resources, Inc.  
P.O. Box 1077  
Price, Utah 84501

Subject: 2006 Midterm Permit Review, Task ID #2945, Genwal Resources, Inc., Crandall Canyon Mine, C/015/0032

Dear Mr. Shaver:

The above-referenced amendment is conditionally approved upon receipt of eight complete clean copies prepared for incorporation (four of these copies must be paper – the other four copies can be on CD). Please submit these copies by May 11, 2008. Once we receive these copies, final approval will be granted, at which time you may proceed with your plans.

A stamped incorporated copy of the approved plans will also be returned to you at that time, for insertion into your copy of the Mining and Reclamation Plan. This modification does not necessitate an update to the Technical Analysis.

If you have any questions, please call me at (801) 538-5262 or Wayne H. Western at (801) 538-5263.

Sincerely,

James D. Smith  
Permit Supervisor

an

O:\015032.CRA\FINAL\WG2945\CondApp2945.doc

File in:

Confidential

Shelf

Expandable

Refer to Record No. 0043, Date 04/17/2008

In C/015/0032, 2008, Incoming.

For additional information





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

Daron Haddock  
Permit Supervisor  
Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Salt Lake City, Utah 84114-5801

April 17, 2008

Re: Mid Term Review  
Crandall Canyon Mines  
C/015/032

Dear Mr. Haddock:

Enclosed are clean copies of the approved mid-term review amendment for the Crandall Canyon Mines, Task #2945. These copies are submitted for incorporation, as per your letter of April 8, 2008.

If you have any questions or comments please contact me at 435 888-4017.

Sincerely,

A handwritten signature in black ink, appearing to read "David Shaver", written in a cursive style.

David Shaver  
Resident Agent

## APPLICATION FOR PERMIT PROCESSING

<input type="checkbox"/> Permit Change	<input type="checkbox"/> New Permit	<input type="checkbox"/> Renewal	<input type="checkbox"/> Transfer	<input type="checkbox"/> Exploration	<input type="checkbox"/> Bond Release	Permit Number: <b>015/032</b>
Title of Proposal: <b>clean copies, approved mid-term review, Task 2945</b>						Mine: <b>GENWAL Mine</b>
						Permittee: <b>GENWAL Resources, Inc.</b>

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.

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

Notary Public \_\_\_\_\_

My Commission Expires: \_\_\_\_\_  
 Attest: STATE OF \_\_\_\_\_ )  
 COUNTY OF \_\_\_\_\_ )

) ss: \_\_\_\_\_

Received by Oil, Gas & Mining

ASSIGNED TRACKING NUMBER



**ADD THIS DOCUMENT TO  
APPENDIX 1-2**



United States  
Department of  
Agriculture

Forest  
Service

Manti-La Sal  
National Forest

Supervisor's Office  
599 West Price River Drive  
Price, UT 84501  
Phone # (435) 637-2817  
Fax # (435) 637-4940

**File Code:** 7730/2820  
**Date:** February 24, 2003

Gary Gray  
Engineer  
Genwal Resources, Inc.  
P.O. Box 1077  
Price, UT 84501

Dear Gary:

Enclosed are three original copies of a new Road Use Permit (RUP) authorizing continued commercial use of the Crandall Canyon Road, Forest Service Road 50248, through October 1, 2007. The maintenance bond and reclamation bond have been recalculated to reflect needs through the life of the permit period. The maintenance bond amount was found to be adequate and will remain at \$7,000. The reclamation bond was found to be low and will increase to \$103,000 (based on current costs projected to 2007 at 2% inflation per year). If you find the RUP acceptable, please sign and return two original copies to this office along with the increased reclamation bond required in Part 14 of the permit. A fully executed original copy of the RUP will be returned to you upon acceptance of the surety provided.

Please note the RUP assigns recurrent maintenance responsibilities to Genwal Resources, Inc. as described in Part 6 of this permit and Exhibit I attached to the permit. A recent inspection of the Crandall Canyon Road has disclosed areas where maintenance/restoration actions are needed. The following work items are conditions of the new permit and are required to accommodate the permitted use (ref. Part 1 of permit):

**Bridge over Huntington Creek:**

Replace existing guard rail with new approach rail system incorporating BCT terminal ends (4 each);

Install Type 3 object markers at each end of approach rails (4 each);

Remove dirt/debris from bridge deck (perform annually).

**Roadway at milepost 0.7:**

Pavement and subgrade are failing. Displacement of the curb has occurred and water seems to be leaking through the joint between the curb and the pavement leading to fill slope erosion. Investigate the failure and submit remedial action and performance schedule to this office for approval prior to initiating work.

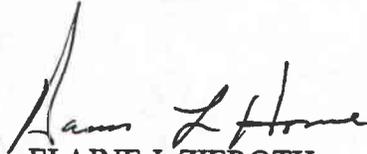


Gary Gray

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If you have any questions relating to the RUP, please contact Jeff Alexander or Aaron Howe at this office. If you have any questions regarding the bonding process, please contact JayLynn Pell also at this office.

Sincerely,

*for*   
ELAINE J. ZIEROTH  
Forest Supervisor

Enclosures

## U.S.D.A. - FOREST SERVICE

ROAD USE PERMIT #0410-03-17  
(Ref: F.S.M. 7731.16)

Authority: Acts of 4/24/50, 10/13/64, and 8/17/7,  
9/9/66, 10/22/76, 12/02/80 (16 U.S.C. 504a, 571c,  
580c-580l, 581, 581l, and 532-538, and 1608, and  
8210) and (P.L. 88-657, P.L. 89-564, P.L. 93-378  
and P.L. 94-588, P.L. 96-487); Federal Aid  
Highway Act of 1968 (P.L. 90-495); Surface  
Transportation Assistance Act of 1978 and 1982(23  
U.S.C. 101a, 201-205) (P.L. 95-599, P.L. 97-424) -

Gary Gray  
(435) 564-4000

Genwall Resources, Inc.  
P.O. Box 1077  
Price, Utah 84501

(Name)

(Address &amp; Zip Code)

(hereafter called the permittee) is hereby granted use of the following road(s) or road segments:

On the Manti-LaSal National Forest:

Forest Service Road #50248 (Crandall Canyon Road) from State Highway 31 westward a distance of 1.5 miles, subject to the provisions of this permit, including clauses 1 through 15, on page(s) 1 through 4 for the purpose of transporting personnel, equipment, supplies and materials for operation and servicing of a coal mine and transporting of coal.

The exercise of any of the privileges granted in this permit constitutes acceptance of all the conditions of the permit.

1. Work Required to Accommodate Permitted Use. In accordance with this use, the permittee shall perform the work described below:

Bridge over Huntington Creek:

Replace existing guard rail with new approach rail system incorporating BCT terminal ends (4 each);

Install Type 3 object markers at ends of approach rails (4 each);

Remove dirt/debris from bridge deck (perform annually).

Roadway at milepost 0.7:

Pavement and subgrade are failing. Displacement of the curb has occurred and water seems to be leaking through the joint between the curb and the pavement leading to fill slope erosion. Investigate the failure and submit remedial action and performance schedule to this office for approval prior to initiating work.

2. Use Plans. The permittee shall notify the Ferron/Price District Ranger, 115 West Canyon Road, P.O. Box 310, Ferron Utah, 84523, telephone no. 435-384-2372, in writing of the names and addresses of permittee's contractors or agents who will use the road on behalf of the permittee, the estimated extent of use, purpose of use, and such other information relative to permittee's anticipated use as the Forest Service may from time to time reasonably request. When there is a significant change in use by the permittee, it is the permittee's responsibility to promptly notify the District Ranger in writing. The Forest Supervisor will approve plans and changes before use may commence.

3. Compliance with Laws, Regulations, and Rules Governing Use. The permittee, in exercising the privileges granted by this permit, shall comply with the regulations of the Department of Agriculture and all Federal, State, County, and Municipal laws, ordinances, or regulations which are applicable to

the area or operations covered by this permit. The permittee, its agents, employees, contractors, and guests of the permittee shall comply with the rules and regulations prescribed by the Forest Service for the control and safety in the use of the road and to avoid damage to the road. Such rules and regulations shall include:

- a. Closing the road or restricting the use when required by any government agency which, by law, has jurisdiction to authorize such closing or restrictions.
- b. Upon reasonable notice, closing the road during periods when, in Forest Service judgment, there is extraordinary fire or avalanche danger.
- c. Traffic controls which, in the judgment of the Forest Service, are required for the safe and effective use of the road by authorized users thereof.
- d. The permittee shall not use chemical poison, as defined in section 2 of the Federal Insecticide, Fungicide, and Rodenticide Act of June 25, 1945, as amended (61 Stat. 163; 73 Stat. 286; 75 Stat. 18; 75 Stat. 190), or any chemical or other road surface treatment without the approval of the Forest Supervisor. The application for approval shall be in writing and shall specify the area to be treated, the material used in the treatment, and the time, rate, and method of application.
- e. Prohibition upon the loading of trucks while such trucks are standing on the roadway surface, except to recover lost material.
- f. Prohibition on the operation on this road of any vehicles or equipment having cleats or other tracks which will injure the surface thereof.
- g. Prohibition on the operation of hauling vehicles of a width in excess of state limit or with a gross weight of vehicles and load in excess of state permitted limit.
- h. The operator shall limit truck speeds to 20 miles per hour.

4. Use Nonexclusive. The privileges granted in this road use permit, including use when the road is closed to public use, is not exclusive. The Forest Service may use the road and authorize others to use the road at any and all times. The permittee shall use the road in such a manner as will not unreasonably or unnecessarily interfere with the use thereof, by other authorized persons including the Forest Service.

5. Insurance. The permittee shall bear the expense to carry public liability damage insurance for the operation of vehicles, in the amount established by applicable State laws, cooperative agreements, or easements issued on the subject road or roads. In any event, the permittee must carry liability insurance and property damage insurance of not less than \$100,000 for injury or death to one person, \$300,000 for injury or death to two or more persons, and \$50,000 for damage to property. Proof of satisfactory insurance may be required by the Forest Service prior to hauling over this road and will be for the duration of the permit.

6. Maintenance. The permittee shall bear the expense of maintenance proportionate to his use. This expense will be borne by the permittee, its agents, operators, and/or contractors.

Where road maintenance standards required by the permittee are above those required by the Forest Service, the permittee shall bear the total incremental cost of maintaining the road to the higher standard. The Forest Service financial responsibility is limited to a commensurate share of those maintenance activities required to be performed for the maintenance level assigned to the road prior to the commercial use.

Maintenance shall be performed in accordance with Forest Service Specifications or requirements for maintenance as hereinafter listed, or as may be mutually agreed upon from time to

time and shall consist of (1) current maintenance as necessary to preserve, repair, and protect the roadbed, surface and all structures and appurtenances, and (2) resurfacing equivalent in extent to the wear and loss of surfacing caused by operations authorized in this permit.

6a. Maintenance and Resurfacing Requirements and Specifications.

Until such time as other substantial use occurs, Genwall Coal Company shall perform all recurring maintenance. At such time as other use commences, the Forest Service will determine the proportionate share of maintenance responsibilities for which each of the parties is to accomplish. The maintenance will be reapportioned based on both number and type of vehicles using the road, as well as the season of use.

Maintenance shall be performed on a routine recurring interval and shall be done in a manner that will preserve the road material and retain the road surface. Soft slopes will be reinforced. Asphalt berms shall be maintained. See attached Maintenance Specification Exhibit I.

7. Performance Bond. In the event the permittee is to perform road maintenance, road resurfacing, or betterment, as determined by the Forest Supervisor, the Forest Service may require as a further guarantee of the faithful performance of such work that the permittee furnish and maintain a surety bond satisfactory to the Forest Service in the sum of seven thousand dollars (\$7,000), or in lieu of a surety bond, deposit into a Federal depository, as directed by the Forest Service, and maintain therein cash in the sum of seven thousand dollars (\$7,000), or negotiable securities of the United States having market value at the time of deposit of not less than seven thousand dollars (\$7,000). As soon as security for the performance of road maintenance or the settlement of claims incident thereto is completed, unencumbered cash guarantees or negotiable securities deposited in lieu of surety bond will be returned to the permittee.

8. Fire Prevention and Suppression. The permittee shall take all reasonable precautions to prevent and suppress forest fires. No material shall be disposed of in open fires during the closed fire season established by law or regulation, without a written permit from the Forest Service.

9. Damages. The permittee shall exercise diligence in protecting from damage the land and property of the United States covered by and used in connection with this permit, and shall promptly repair or upon demand, pay the United States for any damage resulting from negligence, or from violation of the terms of this permit or of any law or regulation applicable to the National Forests, by the permittee, or by his agents, contractors, or employees of the permittee acting within the scope of their agency, contract, or employment.

10. Officials Not to Benefit. No member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this agreement or any benefit that may arise herefrom unless it is made with a corporation for its general benefit.

11. Outstanding Rights. This permit is subject to all outstanding rights.

12. Suspension. Upon the failure of the permittee, its agents, employees or contractors to comply with any of the requirements of this permit, the officer issuing the permit may suspend operations in pursuance of this permit.

13. Reclamation Requirements. At the conclusion of this use, the permittee shall reclaim the roadway by:

a. Removing asphalt pavement and recycle or dispose of, in accordance with Hazardous Materials Laws in the State of Utah.

- b. Reducing the 27 foot subgrade with 22 foot running surface of 8 inch depth to a 20 foot subgrade with a 14 foot running surface of 12 inch depth.
- c. Scarification and ripping of outside 7.3 foot of subgrade in preparation of seeding.
- d. Feathering of the existing outside slope at a maximum slope of 1-1/2:1 and minimum of 4:1.
- e. Replacing of topsoil on reclaimed slopes outside the traveled way and shoulders prior to seeding.
- f. Seeding of reclaimed area with an approved seed mix with mulches and fertilizers.
- g. Adjustments of the drainage structures to fit the reduce roadway section.

14. Reclamation Bond. In the event the permittee is to perform reclamation of the roadway at the conclusion of his use, the Forest Service may required as a further guarantee of the faithful performance of such work that the permittee furnish and maintain a surety bond satisfactory to the Forest Service in the sum of one hundred and three thousand dollars (\$103,000), or in lieu of a surety bond, deposit into a Federal depository, as directed by the Forest Service, and maintain therein cash in the sum of one hundred and three thousand dollars (\$103,000), or negotiable securities of the United States having a market value at time of deposit of not less than one hundred and three thousand dollars (\$103,000). As soon as security for the performance of road reclamation requirements or the settlement of claims thereto is completed, unencumbered cash guarantees or negotiable securities deposited in lieu of surety bond will be returned to the permittee.

15. Termination. This permit shall terminate on October 1, 2007. It may be terminated upon breach of any of the conditions herein. This permit shall be reviewed annually and is subject to revision at such time as conditions of use change.

This permit is accepted subject to all of its terms and conditions.

APPROVED	Permittee (Name and Signature)	Title	Date
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APPROVED	Issuing Officer (Name and Signature)	Title	Date
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## MAINTENANCE REQUIREMENTS

### EXHIBIT I

**Road Maintenance.** Road maintenance is defined as the performance of work on the entire road facility commensurate with permittee's use. This work consists of restoration and preservation of surface, shoulders, roadsides, structures, drainage, sight distance, and such traffic control devices as are necessary for prevention of excessive erosion damage to the facility and adjacent lands.

I. **Description.** Maintenance work to be done currently during the periods of use by the permittee shall include:

- A. Removal of slides and boulders, which obstruct safe sight distance.
- B. Adequate blading and shaping of roadway surfaces, ditches, and grade dips to maintain the original cross-sections.
- C. Removal of earth and debris from ditches and culverts so that the drainage systems will function efficiently at all times.
- D. Prevention of excessive dusting of road surface materials.
- E. Repair of damages to fences, cattleguards, culverts, and other roadway structures including traffic regulatory and directional signs.
- F. Restoration of eroded fills and repair and protection of shoulder berms, berm outlets, stabilized waterways, vegetated slopes, and other erosion control features.
- G. Removal of snow from roadway surface.
- H. Replacement of roadway and/or surfacing material worn out and lost through use of the roadway.

II. **Performance.** All items of maintenance work shall be done currently as necessary to insure safe, efficient transportation and to protect roads, streams, and adjacent lands from excessive damage. Work shall be done in accordance with the following minimum standards of performance.

- A. **Removal of Material.** Earth, rocks, trees, brush, and debris removed from roadways and ditches shall not be deposited in stream channels or upon slope stabilization and erosion control features.
- B. During roadway blading and shaping operations, banks shall not be undercut nor shall gravel or other selected surfacing material be bladed off the roadway surface. The original crown or slope of the road shall be preserved. Mud, debris, and oversize material shall be deposited outside the roadway by hand or by careful blading, and these materials shall not be mixed with the road surfacing material.
- C. Ditches, culverts, drop inlets, trash racks, downspouts, and splatter structures shall be kept clear of earth, slash, and other debris to that drainage systems will function efficiently during, and immediately following, periods of road use by permittees. This includes correcting and eliminating causes of erosion or plugging of the structure, and actual repair of the structure and riprap if damages.

D. Fugitive dust shall be controlled to prevent hazardous driving conditions or loss of road surface or

E. Permittee shall promptly repair all damages, caused by the permittee's operations, to the road surface or to any structures in or adjacent to the roadways. To transport any overweight loads (those that exceed HS-20 loading) will require five (5) days notice prior to transporting on Forest Roads. An inspection of drainage and other structures (bridges, etc.) will be made to determine if the structure can safely accommodate the load.

F. Any washing or settling of roadway fills shall be corrected promptly to prevent additional soil erosion or roadway damage. Shoulder berms, berm outlets, and stabilized waterways shall be protected during road maintenance operations and, if damaged, such structures shall be promptly restored to their original condition, including repair and reseeded of vegetation established to control slope erosion. No earth, rocks, or other debris shall be deposited upon any roadside slope stabilization structure or feature.

## G. Snow Removal

### 1. Requirements

a. Sanding of hazardous areas shall be with sand. Coal dust, chemicals, or salt are not to be used.

b. Equipment - The equipment should be in sound operating condition, be equipped with angle blade or adequate grousers or traction tires, and be operated by a fully qualified operator.

#### c. Removal

Width - Snow will be removed to the full width of the road plus any turnouts and ditch lines. Through-cuts will be allowed only after snow depths exceed the height of the cab or across flat ground. Disposal shall always be to the outside or downhill side of the road.

Outlets - Outlets for surface runoff shall be placed in all snow through-cuts at points where water can flow off the road surface at the following intervals:

8% or less grades - 500 feet center to center minimum.

8% and up grades - 300 feet center to center minimum.

Snow Floor - A four to six-inch snow floor shall be allowed to accumulate on the roadbed to prevent removal of roadbed surfacing.

Cattleguards - Crawler tractors will not be operated across cattleguards.

Culvert Cleaning - Culvert heads and outlets shall be cleaned of snowpack by hand.

Tree Damage - Snow should not be pushed, blown, or stacked on trees along the roadside. Care will be taken to avoid scarring trees with equipment.

### 2. Travel

a. The road may be used while a snow floor remains intact or under frozen conditions.

b. All travel must cease when temperatures allow the road to thaw and rutting of the road surface is occurring.

c. This closure will be in effect until the surface dries or refreezes.

**3. Inspections**

a. Intermittent inspections may be made during snow removal operations.

b. Final inspection will be made to check for full compliance and damages.

**ADD THESE DOCUMENTS TO  
APPENDIX 1-3**

**FOREST SERVICE SPECIAL USE PERMIT**

**SEDIMENTATION POND**

Authorization ID: PRI43  
Contact ID: GENWAL  
Expiration Date: 12/31/2022  
Use Code: 921

FS-2700-4 (8/99)  
OMB 0596-0082

**U.S. DEPARTMENT OF AGRICULTURE**  
**Forest Service**  
**SPECIAL USE PERMIT**  
**AUTHORITY:**  
**FEDERAL LAND POLICY AND MGMT ACT, AS AMENDED October 21, 1976**

GENWAL RESOURCES, INCORPORATED of P.O. BOX 1077, PRICE, UT 84501 (hereinafter called the Holder) is hereby authorized to use or occupy National Forest System lands, to use subject to the conditions set out below, on the Manti-La Sal National Forest, Price Ranger District.

This permit covers 1.5 acres, and/or 0 miles and is described as: Sec. 5, T16S, R7E, SALT LAKE as shown on the location map attached to and made a part of this permit, and is issued for the purpose of:

Four-acre foot capacity sediment pond, 72 inch culvert and energy dissipator for Crandall Creek. Permittee will be responsible for noxious weed control on the permitted area.

The above described or defined area shall be referred to herein as the "permit area".

**TERMS AND CONDITIONS**

**I. AUTHORITY AND GENERAL TERMS OF THE PERMIT**

- A. Authority. This permit is issued pursuant to the authorities enumerated at Title 36, Code of Federal Regulations, Section 251 Subpart B, as amended. This permit, and the activities or use authorized, shall be subject to the terms and conditions of the Secretary's regulations and any subsequent amendment to them.
- B. Authorized Officer. The authorized officer is the Forest Supervisor or a delegated subordinate officer.
- C. License. This permit is a license for the use of federally owned land and does not grant any permanent, possessory interest in real property, nor shall this permit constitute a contract for purposes of the Contract Disputes Act of 1978 (41 U.S.C. 611). Loss of the privileges granted by this permit by revocation, termination, or suspension is not compensable to the holder.
- D. Amendment. This permit may be amended in whole or in part by the Forest Service when, at the discretion of the authorized officer, such action is deemed necessary or desirable to incorporate new terms, conditions, and stipulations as may be required by law, regulation, land management plans, or other management decisions.
- E. Existing Rights. This permit is subject to all valid rights and claims of third parties. The United States is not liable to the holder for the exercise of any such right or claim.
- F. Nonexclusive Use and Public Access. Unless expressly provided for in additional terms, use of the permit area is not exclusive. The Forest Service reserves the right to use or allow others to use any part of the permit area, including roads, for any purpose, provided, such use does not materially interfere with the holder's authorized use. A final determination of conflicting uses is reserved to the Forest Service.
- G. Forest Service Right of Entry and Inspection. The Forest Service has the right of unrestricted access of the permitted area or facility to ensure compliance with laws, regulations, and ordinances and the terms and conditions of this permit.
- H. Assignability. This permit is not assignable or transferable. If the holder through death, voluntary sale or transfer, enforcement of contract, foreclosure, or other valid legal proceeding ceases to be the owner of the improvements, this permit shall terminate.

I. Permit Limitations. Nothing in this permit allows or implies permission to build or maintain any structure or facility, or to conduct any activity unless specifically provided for in this permit. Any use not specifically identified in this permit must be approved by the authorized officer in the form of a new permit or permit amendment.

## II. TENURE AND ISSUANCE OF A NEW PERMIT

A. Expiration at the End of the Authorized Period. This permit will expire at midnight on **12/31/2022**. Expiration shall occur by operation of law and shall not require notice, any decision document, or any environmental analysis or other documentation.

B. Minimum Use or Occupancy of the Permit Area. Use or occupancy of the permit area shall be exercised at least 365 days each year, unless otherwise authorized in writing under additional terms of this permit.

C. Notification to Authorized Officer. If the holder desires issuance of a new permit after expiration, the holder shall notify the authorized officer in writing not less than six (6) months prior to the expiration date of this permit.

D. Conditions for Issuance of a New Permit. At the expiration or termination of an existing permit, a new permit may be issued to the holder of the previous permit or to a new holder subject to the following conditions:

1. The authorized use is compatible with the land use allocation in the Forest Land and Resource Management Plan.
2. The permit area is being used for the purposes previously authorized.
3. The permit area is being operated and maintained in accordance with the provisions of the permit.
4. The holder has shown previous good faith compliance with the terms and conditions of all prior or other existing permits, and has not engaged in any activity or transaction contrary to Federal contracts, permits laws, or regulations.

E. Discretion of Forest Service. Notwithstanding any provisions of any prior or other permit, the authorized officer may prescribe new terms, conditions, and stipulations when a new permit is issued. The decision whether to issue a new permit to a holder or successor in interest is at the absolute discretion of the Forest Service.

F. Construction. Any construction authorized by this permit may commence by N/A and shall be completed by N/A. If construction is not completed within the prescribed time, this permit may be revoked or suspended.

## III. RESPONSIBILITIES OF THE HOLDER

A. Compliance with Laws, Regulations, and other Legal Requirements. The holder shall comply with all applicable Federal, State, and local laws, regulations, and standards, including but not limited to, the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., the Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seq., the Comprehensive Environmental Response, Control, and Liability Act, 42 U.S.C. 9601 et seq., and other relevant environmental laws, as well as public health and safety laws and other laws relating to the siting, construction, operation, and maintenance of any facility, improvement, or equipment on the property.

B. Plans. Plans for development, layout, construction, reconstruction, or alteration of improvements on the permit area, as well as revisions of such plans, must be prepared by a qualified individual acceptable to the authorized officer and shall be approved in writing prior to commencement of work. The holder may be required to furnish as-built plans, maps, or surveys, or other similar information, upon completion of construction.

C. Maintenance. The holder shall maintain the improvements and permit area to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the authorized officer and consistent with other provisions of this authorization. If requested, the holder shall comply with inspection requirements deemed appropriate by the authorized officer.

D. Hazard Analysis. The holder has a continuing responsibility to identify all hazardous conditions on the permit area which would affect the improvements, resources, or pose a risk of injury to individuals. Any non-emergency actions to abate such hazards shall be performed after consultation with the authorized officer. In emergency situations, the holder shall notify the authorized officer of its actions as soon as possible, but not more than 48 hours, after such actions have been taken.

E. Change of Address. The holder shall immediately notify the authorized officer of a change in address.

F. Change in Ownership. This permit is not assignable and terminates upon change of ownership of the improvements or control of the business entity. The holder shall immediately notify the authorized officer when a change in ownership or control of business entity is pending. Notification by the present holder and potential owner shall be executed using Form SF-299 Application for Transportation and Utility Systems and Facilities of Federal Lands, or Form FS-2700-3a, Holder Initiated Revocation of Existing Authorization, Request for a Special Use Permit. Upon receipt of the proper documentation, the authorized officer may issue a permit to the party who acquires ownership of, or a controlling interest in, the improvements or business entity.

#### IV. LIABILITY

For purposes of this section, "holder" includes the holder's heirs, assigns, agents, employees, and contractors.

A. The holder assumes all risk of loss to the authorized improvements.

B. The holder shall indemnify, defend, and hold the United States harmless for any violations incurred under any such laws and regulations or for judgments, claims, or demands assessed against the United States in connection with the holder's use or occupancy of the property. The holder's indemnification of the United States shall include any loss by personal injury, loss of life or damage to property in connection with the occupancy or use of the property during the term of this permit. Indemnification shall include, but is not limited to, the value of resources damaged or destroyed; the costs of restoration, cleanup, or other mitigation; fire suppression or other types of abatement costs; third party claims and judgments; and all administrative, interest, and other legal costs. This paragraph shall survive the termination or revocation of this authorization, regardless of cause.

C. The holder has an affirmative duty to protect from damage the land, property, and interests of the United States.

D. In the event of any breach of the conditions of this authorization by the holder, the authorized officer may, on reasonable notice, cure the breach for the account at the expense of the holder. If the Forest Service at any time pays any sum of money or does any act which will require payment of money, or incurs any expense, including reasonable attorney's fees, in instituting, prosecuting, and/or defending any action or proceeding to enforce the United States rights hereunder, the sum or sums so paid by the United States, with all interests, costs and damages shall, at the election of the Forest Service, be deemed to be additional fees hereunder and shall be due from the holder to the Forest Service on the first day of the month following such election.

E. With respect to roads, the holder shall be proportionally liable for damages to all roads and trails of the United States open to public use caused by the holder's use to the same extent as provided above, except that liability shall not include reasonable and ordinary wear and tear.

F. The Forest Service has no duty to inspect the permit area or to warn of hazards and, if the Forest Service does inspect the permit area, it shall incur no additional duty nor liability for identified or non-identified hazards. This covenant may be enforced by the United States in a court of competent jurisdiction.

#### V. TERMINATION, REVOCATION, AND SUSPENSION

A. General. For purposes of this permit, "termination", "revocation", and "suspension" refer to the cessation of uses and privileges under the permit.

"Termination" refers to the cessation of the permit under its own terms without the necessity for any decision or action by the authorized officer. Termination occurs automatically when, by the terms of the permit, a fixed or agreed upon condition, event, or time occurs. For example, the permit terminates at expiration. Terminations are not appealable.

"Revocation" refers to an action by the authorized officer to end the permit because of noncompliance with any of the prescribed terms, or for reasons in the public interest. Revocations are appealable.

"Suspension" refers to a revocation which is temporary and the privileges may be restored upon the occurrence of prescribed actions or conditions. Suspensions are appealable.

B. Revocation or Suspension. The Forest Service may suspend or revoke this permit in whole or part for:

1. Noncompliance with Federal, State, or local laws and regulations.
2. Noncompliance with the terms and conditions of this permit.
3. Reasons in the public interest.
4. Abandonment or other failure of the holder to otherwise exercise the privileges granted.

C. Opportunity to Take Corrective Action. Prior to revocation or suspension for cause pursuant to Section V (B), the authorized officer shall give the holder written notice of the grounds for each action and a reasonable time, not to exceed 90 days, to complete the corrective action prescribed by the authorized officer.

D. Removal of Improvements. Prior to abandonment of the improvements or within a reasonable time following revocation or termination of this authorization, the holder shall prepare, for approval by the authorized officer, an abandonment plan for the permit area. The abandonment plan shall address removal of improvements and restoration of the permit area and prescribed time frames for these actions. If the holder fails to remove the improvements or restore the site within the prescribed time period, they become the property of the United States and may be sold, destroyed or otherwise disposed of without any liability to the United States. However, the holder shall remain liable for all cost associated with their removal, including costs of sale and impoundment, cleanup, and restoration of the site.

## VI. FEES

A. Termination for Nonpayment. This permit shall automatically terminate without the necessity of prior notice when land use rental fees are 90 calendar days from the due date in arrears.

B. The holder shall pay One Hundred Eighty Dollars \$180.00 for the period from January 1, 2004, to December 31, 2007, and thereafter at the beginning of each 5-year period a lump sum payment for 5 years rent of Two Hundred Twenty Five Dollars \$225.00: Provided, charges for this use shall be made or readjusted whenever necessary to place the charges on a basis commensurate with the fair market value of the authorized use.

C. Payment Due Date. The payment due date shall be the close of business on January 1st of each calendar year payment is due. Payments due the United States for this use shall be deposited at USDA Forest Service, File 71652, P.O. Box 60000, San Francisco, CA 94160-1652, in the form of a check, draft, or money order payable to "Forest Service, USDA." Payments shall be credited on the date received by the designated Forest Service collection officer or deposit location. If the due date for the fee or fee calculation statement falls on a non-workday, the charges shall not apply until the close of business on the next workday.

D. Late Payment Interest, Administrative Costs and Penalties Pursuant to 31 U.S.C. 3717, et seq., interest shall be charged on any fee amount not paid within 30 days from the date the fee or fee calculation financial statement specified in this authorization becomes due. The rate of interest assessed shall be the higher of the rate of the current value of funds to the U.S. Treasury (i.e., Treasury tax and loan account rate), as prescribed and published by the Secretary of the Treasury in the Federal Register and the Treasury Fiscal Requirements Manual Bulletins annually or quarterly or at the Prompt Payment Act rate. Interest on the principal shall accrue from the date the fee or fee calculation financial statement is due.

In the event the account becomes delinquent, administrative costs to cover processing and handling of the delinquency will be assessed.

A penalty of 6 percent per annum shall be assessed on the total amount delinquent in excess of 90 days and shall accrue from the same date on which interest charges begin to accrue.

Payments will be credited on the date received by the designated collection officer or deposit location. If the due date for the fee or fee calculation statement falls on a non-workday, the charges shall not apply until the close of business on the next workday.

Disputed fees are due and payable by the due date. No appeal of fees will be considered by the Forest Service without full payment of the disputed amount. Adjustments, if necessary, will be made in accordance with settlement terms or the appeal decision.

If the fees become delinquent, the Forest Service will:

Liquidate any security or collateral provided by the authorization.

If no security or collateral is provided, the authorization will terminate and the holder will be responsible for delinquent fees as well as any other costs of restoring the site to its original condition including hazardous waste cleanup.

Upon termination or revocation of the authorization, delinquent fees and other charges associated with the authorization will be subject to all rights and remedies afforded the United States pursuant to 31 U.S.C. 3711 *et seq.* Delinquencies may be subject to any or all of the following conditions:

Administrative offset of payments due the holder from the Forest Service.

Delinquencies in excess of 60 days shall be referred to United States Department of Treasury for appropriate collection action as provided by 31 U.S.C. 3711 (g), (1).

The Secretary of the Treasury may offset an amount due the debtor for any delinquency as provided by 31 U.S.C. 3720, *et seq.*)

## VII. OTHER PROVISIONS

A. Members of Congress. No Member of or Delegate to Congress or Resident Commissioner shall benefit from this permit either directly or indirectly, except when the authorized use provides a general benefit to a corporation.

B. Appeals and Remedies. Any discretionary decisions or determinations by the authorized officer are subject to the appeal regulations at 36 CFR 251, Subpart C, or revisions thereto.

C. Superior Clauses. In the event of any conflict between any of the preceding printed clauses or any provision thereof and any of the following clauses or any provision thereof, the preceding printed clauses shall control.

D. Dam Safety (B37).

1. Definitions. The following definitions apply to this clause:

a. Qualified Engineer. An engineer authorized to practice engineering in the field of dams in the State where the dam is located, either by professional registration as provided by State law or by reason of employment by the State or Federal Government.

b. Dam Failure. Catastrophic event characterized by the sudden, rapid, and uncontrolled release of impounded water. It is recognized that there are lesser degrees of failure and that any malfunction or abnormality outside the design assumptions and parameters which adversely affect a dam's primary function of impounding water may also be considered a failure.

c. Rehabilitation or Modification. Repair of major structure deterioration to restore original condition; alteration of structures to meet current design criteria, improve dam stability, enlarge reservoir capacity, or increase spillway and outlet works capacity; replacement of equipment.

d. Hazard Potential. The classification of a dam based on the potential for loss of life or property damage that could occur if the structure failed (FSM 7500).

e. Emergency Action Plan. Formal plan of procedures to prevent or reduce loss of life and property that could occur if the structure failed. The plan does not include flood plain management for the controlled release of floodwaters for which the project is designed.

2. Dam Classification. The dam constructed pursuant to this authorization shall be classified according to its height and storage capacity (water debris or both) as well as its hazard potential as follows:

Height and Storage Capacity (A, B, C, or D): D

Hazard Potential (Low, Moderate, High): Low

Classification criteria are contained in FSM 7511, which the Forest Service may amend from time to time.

The provisions of sections 5 and 8 of this clause apply only to dams classified as high hazard, or as otherwise may be specifically provided for in this authorization to address special or unique circumstances.

The hazard potential of the dam shall be reassessed at least every five years by a qualified engineer retained by the holder, and this information made available to the authorized officer. The Forest Service may change the hazard potential at any time based on changed conditions or new information.

3. Construction, Inspection, Certification, and Project Files. For construction, rehabilitation or improvement, the holder shall provide for inspection by a qualified engineer to ensure adequate control of the work being performed. At a minimum, the qualified engineer shall maintain a daily inspection diary, descriptions of design changes, and records of construction material and foundation tests. Upon completion of construction, rehabilitation, or improvement, the holder shall forward to the Forest Service a statement from the qualified engineer responsible for inspection certifying that the works were built in accordance with the approved plans and specifications, or approved revisions thereto. No water shall be impounded until approval is given by the authorized officer.

All design notes, as-built plans, and the aforementioned diaries and records shall be maintained in a project file by the holder for the duration of this authorization, and shall be available to the Forest Service or other inspection personnel (not applicable to debris retention dams).

4. Dam Operation and Maintenance Plans. Dam operation and maintenance plans shall be prepared during the design phase for new dams. The plan(s) shall, as a minimum, describe operating requirements and procedures to be followed for the operation of the structure; routine or recurring maintenance required; record keeping to be performed for operation and maintenance; and individuals responsible for implementing the plans. At the time of the operation and maintenance inspection, the plan shall be reviewed and amended as needed by the individual responsible for implementation and the engineer performing any inspection. No plans or amendments thereto shall be valid until approved by the authorized officer.

5. Dam Emergency Action Plan. The following provisions are required for certain hazard classifications identified in section 2. The holder shall, during the design phase, prepare an emergency action plan which will include, but not be limited to:

- a. Actions to be taken upon discovery of an unsafe condition or impending failure situation to prevent or delay dam failure, and reduce damage or loss of life from subsequent failure.
- b. Procedures for notification of law enforcement, civil preparedness, and Forest Service personnel.
- c. Procedures for notifying persons in immediate danger of losing life or property.
- d. Maps delineating the area which would be inundated by water, debris, or both in the event of dam failure.
- e. The names of those individuals responsible for activating the plan and carrying out the identified actions.

In preparing the emergency action plan, the holder shall consult and cooperate with appropriate law enforcement and civil preparedness personnel, who may be responsible for implementing all or part of the plan. Emergency action plans shall be reviewed and updated annually, and tested at intervals not exceeding five years.

6. Inspection and Maintenance of Dams. The holder shall have the dam and appurtenant structures inspected by a qualified engineer to determine the state of operation and maintenance at least every year. An inspection shall also be made following earthquakes, major storms, or overflow of spillways other than the service spillway. Two copies of the inspection report shall be provided to the authorized officer within 30 days of the date of inspection.

Repairs or operational changes recommended by the inspecting engineer shall be made by the holder within a reasonable period of time following the inspection, but in no event later than one year from the inspection (unless a longer period of repairs is authorized in writing, or a shorter period is required when such repairs are deemed by the authorized officer as immediately required for reasons of public safety). Upon request by the authorized officer, the holder shall provide a plan of action outlining planned time and methods for performing said repairs or operational changes, and notify the authorized officer when actions are completed. The authorized officer shall specify a completion date for corrective work. If corrective action is not taken by the date specified by the authorized officer, the Forest Service shall have corrective action taken and the holder shall be responsible for all costs including legal and court costs.

7. Forest Service Inspection of Dams. The holder shall allow inspection of the dam and appurtenant structures at any time by the authorized officer. Any condition adversely affecting or which could adversely affect the operation of the facility; safety of the structure or the public, or surrounding lands and resources shall, upon written notice, be corrected or changed by the holder at the holder's expense. The authorized officer shall specify a completion date for corrective work. If corrective action is not taken by the date specified by the authorized officer, the Forest Service shall have corrective action taken and the holder shall be responsible for all costs including legal and court costs. A copy of the Forest Service inspection report shall be provided to the holder.

An inspection performed by the Forest Service does not relieve the holder of the responsibility of ensuring that inspections are made in accordance with section 6 of this clause.

8. Dam Safety Evaluations. This provision is required for certain hazard classifications identified in section 2.

Beginning in 2003 and at 5-year intervals thereafter, the holder shall have a formal dam safety evaluation performed by a qualified engineer to verify the safety and integrity of the dam and appurtenant structures. The evaluation will include, but is not limited to, a detailed field inspection of the dam and appurtenant structures and a review of all pertinent documents, such as investigation, design, construction, instrumentation, operation, maintenance, and inspection records. The evaluation shall be based on current accepted design criteria and practices. The holder shall provide two copies of the evaluation report to the authorized officer and Regional Engineer. Based on this report, the authorized officer may require the holder to perform additional evaluations pursuant to such standards as the officer may define and may require rehabilitation or modification of the structure within a reasonable time.

9. Right of Action To Abate Emergency Situations. In situations where the authorized officer determines on the available facts that there is danger of a dam failure for any reason, such officer may exercise discretionary authority to enter upon the structure and appurtenances authorized herein and take such actions as are necessary to abate or otherwise prevent a failure. Such actions include, but are not limited to, lowering the level of the impounded waters utilizing existing structures or by artificial breach of the dam. In the event that such actions are taken, the United States shall not indemnify or otherwise be liable to the holder for losses or damages, including losses or damages to the structure or the value of impounded waters. The holder shall be responsible for all costs including legal and court costs. The failure of the Forest Service to exercise any discretion under this provision shall not be a violation of any duty by the United States, and shall not relieve the holder of any and all liability for damages in the event of a dam failure.

10. Liability. The activities permitted by this authorization shall be deemed a high risk use and occupancy. Sole responsibility for the safety of the dam and associated facilities and any liability resulting therefrom shall be on the holder and his successors, agents, or assigns. Pursuant to 36 CFR 251.56(d), or its replacement, the holder shall be liable for injury, loss, or damage resulting from this authorization regardless of the holder's fault or negligence. Maximum strict liability shall not exceed \$1,000,000.00 except as that amount may be changed in the aforementioned regulations.

In addition to all waivers and limitations on liability of the United States under this authorization, the provisions of 33 U.S.C. 702(c) shall apply to any damages from or by floods or flood waters at any place.

E. Operating Plan (C8). The holder shall provide an Operating Plan. The plan shall be prepared in consultation with the authorized officer or designated representative and cover operation and maintenance of facilities, dates or season of operations, and other information required by the authorized officer to manage and evaluate the occupation and/or use of National Forest System lands. The provisions of the Operating Plan and the annual revisions shall become a part of this authorization and shall be submitted by the holder and approved by the authorized officer or their designated representative(s). This Operating Plan is hereby made a part of the authorization.

F. Removal and Planting of Vegetation and Other Resources (D5). The holder shall obtain prior written approval from the authorized officer before removing or altering vegetation or other resources. The holder shall obtain prior written approval from the authorized officer before planting trees, shrubs, or other vegetation within the authorized area.

G. Revegetation of Ground Cover and Surface Restoration (D9). The holder shall be responsible for prevention and control of soil erosion and gulying on lands covered by this authorization and adjacent thereto, resulting from construction, operation, maintenance, and termination of the authorized use. The holder shall so construct permitted improvements to avoid the accumulation of excessive heads of water and to avoid encroachment on streams. The holder shall revegetate or otherwise stabilize all ground where the soil has been exposed as a result of the holder's construction, maintenance, operation, or termination of the authorized use and shall construct and maintain necessary preventive measures to supplement the vegetation.

H. Pesticide Use (D23). Pesticides may not be used to control undesirable woody and herbaceous vegetation, aquatic plants, insects, rodents, trash fish, etc., without the prior written approval of the Forest Service. A request for approval of planned uses of pesticides will be submitted annually by the holder on the due date established by the authorized officer. The report will cover a 12-month period of planned use beginning 3 months after the reporting date. Information essential for review will be provided in the form specified. Exceptions to this schedule may be allowed, subject to emergency request and approval, only when unexpected outbreaks of pests require control measures which were not anticipated at the time an annual report was submitted.

I. Superseded Authorization (X18). This authorization supersedes a special-use authorization designated: PRI409001, dated 7/28/83 for a sediment pond, termination date 12/31/02.

J. Corporation Status Notification (X46). The holder shall furnish the authorized officer with the names and addresses of shareholders owning three (3) percent or more of the shares, and number and percentage of any class of voting shares of the entity which such shareholder is authorized to vote. In addition, the holder shall notify the authorized officer within fifteen (15) days of the following changes:

1. Names of officers appointed or terminated.
2. Names of stockholders who acquire stock shares causing their ownership to exceed 50 percent of shares issued or who otherwise acquire controlling interest in the corporation.
3. A copy of the articles of incorporation and bylaws.
4. An authenticated copy of a resolution of the board of directors specifically authorizing a certain individual or individuals to represent the holder in dealing with the Forest Service.
5. A list of officers and directors of the corporation and their addresses.
6. Upon request, a certified list of stockholders and amount of stock owned by each.
7. The authorized officer may, when necessary, require the holder to furnish additional information as set forth in 36 CFR 251.54 (e)(1)(iv).

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0082.

This information is needed by the Forest Service to evaluate requests to use National Forest System lands and manage those lands to protect natural resources, administer the use, and ensure public health and safety. This information is required to obtain or retain a benefit. The authority for that requirement is provided by the Organic Act of 1897 and the Federal Land Policy and Management Act of 1976, which authorize the Secretary of Agriculture to promulgate rules and regulations for authorizing and managing National Forest System lands. These statutes, along with the Term Permit Act, National Forest Ski Area Permit Act, Granger-Thye Act, Mineral Leasing Act, Alaska Term Permit Act, Act of September 3, 1954, Wilderness Act, National Forest Roads and Trails Act, Act of November 16, 1973, Archaeological Resources Protection Act, and Alaska National Interest Lands Conservation Act, authorize the Secretary of Agriculture to issue authorizations for the use and occupancy of National Forest System lands. The Secretary of Agriculture's regulations at 36 CFR Part 251, Subpart B, establish procedures for issuing those authorizations.

The Privacy Act of 1974 (5 U.S.C. 552a) and the Freedom of Information Act (5 U.S.C. 552) govern the confidentiality to be provided for information received by the Forest Service. Public reporting burden for collection of information, if requested, is estimated to average 1 hour per response for annual financial information; average 1 hour per response to prepare or update operation and/or maintenance plan; average 1 hour per response for inspection reports; and an average of 1 hour for each request that may include such things as reports, logs, facility and user information, sublease information, and other similar miscellaneous information requests. This includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

This permit is accepted subject to the conditions set out above.

Date 6/9/03 GENWAL RESOURCES, INC.

(CORPORATE SEAL)

By: Samuel J. Dinkley  
(Vice) President Operations

ATTEST: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
(Assistant) Secretary

The following certificate shall be executed by the Secretary or Assistant Secretary of the Corporation:

I \_\_\_\_\_ certify that I am the \_\_\_\_\_ Secretary of the Corporation that executed the above permit; that \_\_\_\_\_ who signed said permit on behalf of said Corporation was then \_\_\_\_\_ of said Corporation; that I know his/her signature on said permit is genuine; and that said permit was duly signed, sealed, and attested to for and on behalf of said Corporation by authority of its governing body

(CORPORATE SEAL)

\_\_\_\_\_  
(Assistant Secretary)

**U. S. DEPARTMENT OF AGRICULTURE**  
Forest Service

By: Samuel J. Dinkley  
(Authorized Officer Signature)

for Elaine J. Zieroth, Forest Supervisor  
(Name and Title)

6/10/2003  
(Date)

**FOREST SERVICE SPECIAL USE PERMIT**

**SNOW STORAGE**

Authorization ID: PRI42  
Contact ID: GENWAL  
Expiration Date: 12/31/2022  
Use Code: 522

FS-2700-4 (8/99)  
OMB 0596-0082

**U.S. DEPARTMENT OF AGRICULTURE**  
**Forest Service**  
**SPECIAL USE PERMIT**  
**AUTHORITY:**  
**ORGANIC ADMINISTRATION ACT June 4, 1897**

GENWAL RESOURCES, INCORPORATED of P.O. BOX 1077, PRICE, UT 84501 (hereinafter called the Holder) is hereby authorized to use or occupy National Forest System lands, to use subject to the conditions set out below, on the Manti-La Sal National Forest, Price Ranger District.

This permit covers .1 acres, and/or 0 miles and is described as: Sec. 6, T16S, R7E, SALT LAKE as shown on the location map attached to and made a part of this permit, and is issued for the purpose of:

Snow storage and summer parking. Permittee will be responsible for noxious weed control on the permitted area.

The above described or defined area shall be referred to herein as the "permit area".

**TERMS AND CONDITIONS**

**I. AUTHORITY AND GENERAL TERMS OF THE PERMIT**

A. Authority. This permit is issued pursuant to the authorities enumerated at Title 36, Code of Federal Regulations, Section 251 Subpart B, as amended. This permit, and the activities or use authorized, shall be subject to the terms and conditions of the Secretary's regulations and any subsequent amendment to them.

B. Authorized Officer. The authorized officer is the Forest Supervisor or a delegated subordinate officer.

C. License. This permit is a license for the use of federally owned land and does not grant any permanent, possessory interest in real property, nor shall this permit constitute a contract for purposes of the Contract Disputes Act of 1978 (41 U.S.C. 611). Loss of the privileges granted by this permit by revocation, termination, or suspension is not compensable to the holder.

D. Amendment. This permit may be amended in whole or in part by the Forest Service when, at the discretion of the authorized officer, such action is deemed necessary or desirable to incorporate new terms, conditions, and stipulations as may be required by law, regulation, land management plans, or other management decisions.

E. Existing Rights. This permit is subject to all valid rights and claims of third parties. The United States is not liable to the holder for the exercise of any such right or claim.

F. Nonexclusive Use and Public Access. Unless expressly provided for in additional terms, use of the permit area is not exclusive. The Forest Service reserves the right to use or allow others to use any part of the permit area, including roads, for any purpose, provided, such use does not materially interfere with the holder's authorized use. A final determination of conflicting uses is reserved to the Forest Service.

G. Forest Service Right of Entry and Inspection. The Forest Service has the right of unrestricted access of the permitted area or facility to ensure compliance with laws, regulations, and ordinances and the terms and conditions of this permit.

H. Assignability. This permit is not assignable or transferable. If the holder through death, voluntary sale or transfer, enforcement of contract, foreclosure, or other valid legal proceeding ceases to be the owner of the improvements, this permit shall terminate.

I. Permit Limitations. Nothing in this permit allows or implies permission to build or maintain any structure or facility, or to conduct any activity unless specifically provided for in this permit. Any use not specifically identified in this permit must be approved by the authorized officer in the form of a new permit or permit amendment.

## II. TENURE AND ISSUANCE OF A NEW PERMIT

A. Expiration at the End of the Authorized Period. This permit will expire at midnight on 12/31/2022. Expiration shall occur by operation of law and shall not require notice, any decision document, or any environmental analysis or other documentation.

B. Minimum Use or Occupancy of the Permit Area. Use or occupancy of the permit area shall be exercised at least 365 days each year, unless otherwise authorized in writing under additional terms of this permit.

C. Notification to Authorized Officer. If the holder desires issuance of a new permit after expiration, the holder shall notify the authorized officer in writing not less than six (6) months prior to the expiration date of this permit.

D. Conditions for Issuance of a New Permit. At the expiration or termination of an existing permit, a new permit may be issued to the holder of the previous permit or to a new holder subject to the following conditions:

1. The authorized use is compatible with the land use allocation in the Forest Land and Resource Management Plan.
2. The permit area is being used for the purposes previously authorized.
3. The permit area is being operated and maintained in accordance with the provisions of the permit.
4. The holder has shown previous good faith compliance with the terms and conditions of all prior or other existing permits, and has not engaged in any activity or transaction contrary to Federal contracts, permits laws, or regulations.

E. Discretion of Forest Service. Notwithstanding any provisions of any prior or other permit, the authorized officer may prescribe new terms, conditions, and stipulations when a new permit is issued. The decision whether to issue a new permit to a holder or successor in interest is at the absolute discretion of the Forest Service.

F. Construction. Any construction authorized by this permit may commence by N/A and shall be completed by N/A. If construction is not completed within the prescribed time, this permit may be revoked or suspended.

## III. RESPONSIBILITIES OF THE HOLDER

A. Compliance with Laws, Regulations, and other Legal Requirements. The holder shall comply with all applicable Federal, State, and local laws, regulations, and standards, including but not limited to, the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., the Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seq., the Comprehensive Environmental Response, Control, and Liability Act, 42 U.S.C. 9601 et seq., and other relevant environmental laws, as well as public health and safety laws and other laws relating to the siting, construction, operation, and maintenance of any facility, improvement, or equipment on the property.

B. Plans. Plans for development, layout, construction, reconstruction, or alteration of improvements on the permit area, as well as revisions of such plans, must be prepared by a qualified individual acceptable to the authorized officer and shall be approved in writing prior to commencement of work. The holder may be required to furnish as-built plans, maps, or surveys, or other similar information, upon completion of construction.

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D. Hazard Analysis. The holder has a continuing responsibility to identify all hazardous conditions on the permit area which would affect the improvements, resources, or pose a risk of injury to individuals. Any non-emergency actions to abate such hazards shall be performed after consultation with the authorized officer. In emergency situations, the holder shall notify the authorized officer of its actions as soon as possible, but not more than 48 hours, after such actions have been taken.

E. Change of Address. The holder shall immediately notify the authorized officer of a change in address.

F. Change in Ownership. This permit is not assignable and terminates upon change of ownership of the improvements or control of the business entity. The holder shall immediately notify the authorized officer when a change in ownership or control of business entity is pending. Notification by the present holder and potential owner shall be executed using Form SF-299 Application for Transportation and Utility Systems and Facilities of Federal Lands, or Form FS-2700-3a, Holder Initiated Revocation of Existing Authorization, Request for a Special Use Permit. Upon receipt of the proper documentation, the authorized officer may issue a permit to the party who acquires ownership of, or a controlling interest in, the improvements or business entity.

#### IV. LIABILITY

For purposes of this section, "holder" includes the holder's heirs, assigns, agents, employees, and contractors.

A. The holder assumes all risk of loss to the authorized improvements.

B. The holder shall indemnify, defend, and hold the United States harmless for any violations incurred under any such laws and regulations or for judgments, claims, or demands assessed against the United States in connection with the holder's use or occupancy of the property. The holder's indemnification of the United States shall include any loss by personal injury, loss of life or damage to property in connection with the occupancy or use of the property during the term of this permit. Indemnification shall include, but is not limited to, the value of resources damaged or destroyed; the costs of restoration, cleanup, or other mitigation; fire suppression or other types of abatement costs; third party claims and judgments; and all administrative, interest, and other legal costs. This paragraph shall survive the termination or revocation of this authorization, regardless of cause.

C. The holder has an affirmative duty to protect from damage the land, property, and interests of the United States.

D. In the event of any breach of the conditions of this authorization by the holder, the authorized officer may, on reasonable notice, cure the breach for the account at the expense of the holder. If the Forest Service at any time pays any sum of money or does any act which will require payment of money, or incurs any expense, including reasonable attorney's fees, in instituting, prosecuting, and/or defending any action or proceeding to enforce the United States rights hereunder, the sum or sums so paid by the United States, with all interests, costs and damages shall, at the election of the Forest Service, be deemed to be additional fees hereunder and shall be due from the holder to the Forest Service on the first day of the month following such election.

E. With respect to roads, the holder shall be proportionally liable for damages to all roads and trails of the United States open to public use caused by the holder's use to the same extent as provided above, except that liability shall not include reasonable and ordinary wear and tear.

F. The Forest Service has no duty to inspect the permit area or to warn of hazards and, if the Forest Service does inspect the permit area, it shall incur no additional duty nor liability for identified or non-identified hazards. This covenant may be enforced by the United States in a court of competent jurisdiction.

#### V. TERMINATION, REVOCATION, AND SUSPENSION

A. General. For purposes of this permit, "termination", "revocation", and "suspension" refer to the cessation of uses and privileges under the permit.

"Termination" refers to the cessation of the permit under its own terms without the necessity for any decision or action by the authorized officer. Termination occurs automatically when, by the terms of the permit, a fixed or agreed upon condition, event, or time occurs. For example, the permit terminates at expiration. Terminations are not appealable.

"Revocation" refers to an action by the authorized officer to end the permit because of noncompliance with any of the prescribed terms, or for reasons in the public interest. Revocations are appealable.

"Suspension" refers to a revocation which is temporary and the privileges may be restored upon the occurrence of prescribed actions or conditions. Suspensions are appealable.

B. Revocation or Suspension. The Forest Service may suspend or revoke this permit in whole or part for:

1. Noncompliance with Federal, State, or local laws and regulations.
2. Noncompliance with the terms and conditions of this permit.
3. Reasons in the public interest.
4. Abandonment or other failure of the holder to otherwise exercise the privileges granted.

C. Opportunity to Take Corrective Action. Prior to revocation or suspension for cause pursuant to Section V (B), the authorized officer shall give the holder written notice of the grounds for each action and a reasonable time, not to exceed 90 days, to complete the corrective action prescribed by the authorized officer.

D. Removal of Improvements. Prior to abandonment of the improvements or within a reasonable time following revocation or termination of this authorization, the holder shall prepare, for approval by the authorized officer, an abandonment plan for the permit area. The abandonment plan shall address removal of improvements and restoration of the permit area and prescribed time frames for these actions. If the holder fails to remove the improvements or restore the site within the prescribed time period, they become the property of the United States and may be sold, destroyed or otherwise disposed of without any liability to the United States. However, the holder shall remain liable for all cost associated with their removal, including costs of sale and impoundment, cleanup, and restoration of the site.

## VI. FEES

A. Termination for Nonpayment. This permit shall automatically terminate without the necessity of prior notice when land use rental fees are 90 calendar days from the due date in arrears.

B. The holder shall pay One Hundred Eighty Dollars \$180.00 for the period from January 1, 2004, to December 31, 2007, and thereafter at the beginning of each 5-year period a lump sum payment for 5 years rent of Two Hundred Twenty Five Dollars \$225.00: Provided, charges for this use shall be made or readjusted whenever necessary to place the charges on a basis commensurate with the fair market value of the authorized use.

C. Payment Due Date. The payment due date shall be the close of business on January 1st of each calendar year payment is due. Payments due the United States for this use shall be deposited at USDA Forest Service, File 71652, P.O. Box 60000, San Francisco, CA 94160-1652, in the form of a check, draft, or money order payable to "Forest Service, USDA." Payments shall be credited on the date received by the designated Forest Service collection officer or deposit location. If the due date for the fee or fee calculation statement falls on a non-workday, the charges shall not apply until the close of business on the next workday.

D. Late Payment Interest, Administrative Costs and Penalties Pursuant to 31 U.S.C. 3717, et seq., interest shall be charged on any fee amount not paid within 30 days from the date the fee or fee calculation financial statement specified in this authorization becomes due. The rate of interest assessed shall be the higher of the rate of the current value of funds to the U.S. Treasury (i.e., Treasury tax and loan account rate), as prescribed and published by the Secretary of the Treasury in the Federal Register and the Treasury Fiscal Requirements Manual Bulletins annually or quarterly or at the Prompt Payment Act rate. Interest on the principal shall accrue from the date the fee or fee calculation financial statement is due.

In the event the account becomes delinquent, administrative costs to cover processing and handling of the delinquency will be assessed.

A penalty of 6 percent per annum shall be assessed on the total amount delinquent in excess of 90 days and shall accrue from the same date on which interest charges begin to accrue.

Payments will be credited on the date received by the designated collection officer or deposit location. If the due date for the fee or fee calculation statement falls on a non-workday, the charges shall not apply until the close of business on the next workday.

Disputed fees are due and payable by the due date. No appeal of fees will be considered by the Forest Service without full payment of the disputed amount. Adjustments, if necessary, will be made in accordance with settlement terms or the appeal decision.

If the fees become delinquent, the Forest Service will:

Liquidate any security or collateral provided by the authorization.

If no security or collateral is provided, the authorization will terminate and the holder will be responsible for delinquent fees as well as any other costs of restoring the site to its original condition including hazardous waste cleanup.

Upon termination or revocation of the authorization, delinquent fees and other charges associated with the authorization will be subject to all rights and remedies afforded the United States pursuant to 31 U.S.C. 3711 *et seq.* Delinquencies may be subject to any or all of the following conditions:

Administrative offset of payments due the holder from the Forest Service.

Delinquencies in excess of 60 days shall be referred to United States Department of Treasury for appropriate collection action as provided by 31 U.S.C. 3711 (g), (1).

The Secretary of the Treasury may offset an amount due the debtor for any delinquency as provided by 31 U.S.C. 3720, *et seq.*)

## VII. OTHER PROVISIONS

A. Members of Congress. No Member of or Delegate to Congress or Resident Commissioner shall benefit from this permit either directly or indirectly, except when the authorized use provides a general benefit to a corporation.

B. Appeals and Remedies. Any discretionary decisions or determinations by the authorized officer are subject to the appeal regulations at 36 CFR 251, Subpart C, or revisions thereto.

C. Superior Clauses. In the event of any conflict between any of the preceding printed clauses or any provision thereof and any of the following clauses or any provision thereof, the preceding printed clauses shall control.

D. Nondiscrimination in Employment and Services (B1). During the performance of this authorization, the holder agrees:

1. In connection with the performance of work under this authorization, including construction, maintenance, and operation of the facility, the holder shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age, or disability. (Ref. Title VII of the Civil Rights Act of 1964, as amended).

2. The holder and employees shall not discriminate by segregation or otherwise against any person on the basis of race, color, religion, sex national origin, age, or disability, by curtailing or refusing to furnish accommodations, facilities, services, or use privileges offered to the public generally. (Ref. Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; Title IX of the Education Amendments, and the Age Discrimination Act of 1975).

3. The holder shall include and require compliance with the above nondiscrimination provisions in any subcontract made with respect to the operations under this authorization.

4. When furnished by the Forest Service, signs setting forth this policy of nondiscrimination will be conspicuously displayed at the public entrance to the premises, and at other exterior or interior locations as directed by the Forest Service.

5. The Forest Service shall have the right to enforce the foregoing nondiscrimination provisions by suit for specific performance or by any other available remedy under the laws of the United States of the State in which the breach or violation occurs.

E. Operating Plan (C8). The holder shall provide an Operating Plan. The plan shall be prepared in consultation with the authorized officer or designated representative and cover operation and maintenance of facilities, dates or season of operations, and other information required by the authorized officer to manage and evaluate the occupation and/or use of National Forest System lands. The provisions of the Operating Plan and the annual revisions shall become a part of this authorization and shall be submitted by the holder and approved by the authorized officer or their designated representative(s). This Operating Plan is hereby made a part of the authorization.

F. Removal and Planting of Vegetation and Other Resources (D5). The holder shall obtain prior written approval from the authorized officer before removing or altering vegetation or other resources. The holder shall obtain prior written approval from the authorized officer before planting trees, shrubs, or other vegetation within the authorized area.

G. Revegetation of Ground Cover and Surface Restoration (D9). The holder shall be responsible for prevention and control of soil erosion and gulying on lands covered by this authorization and adjacent thereto, resulting from construction, operation, maintenance, and termination of the authorized use. The holder shall so construct permitted improvements to avoid the accumulation of excessive heads of water and to avoid encroachment on streams. The holder shall revegetate or otherwise stabilize all ground where the soil has been exposed as a result of the holder's construction, maintenance, operation, or termination of the authorized use and shall construct and maintain necessary preventive measures to supplement the vegetation.

H. Pesticide Use (D23). Pesticides may not be used to control undesirable woody and herbaceous vegetation, aquatic plants, insects, rodents, trash fish, etc., without the prior written approval of the Forest Service. A request for approval of planned uses of pesticides will be submitted annually by the holder on the due date established by the authorized officer. The report will cover a 12-month period of planned use beginning 3 months after the reporting date. Information essential for review will be provided in the form specified. Exceptions to this schedule may be allowed, subject to emergency request and approval, only when unexpected outbreaks of pests require control measures which were not anticipated at the time an annual report was submitted.

I. Superseded Authorization (X18). This authorization supersedes a special-use authorization designated: PRI409002, dated 8/13/87 for snow storage and summer parking, termination date 12/31/02.

J. Corporation Status Notification (X46). The holder shall furnish the authorized officer with the names and addresses of shareholders owning three (3) percent or more of the shares, and number and percentage of any class of voting shares of the entity which such shareholder is authorized to vote. In addition, the holder shall notify the authorized officer within fifteen (15) days of the following changes:

1. Names of officers appointed or terminated.
2. Names of stockholders who acquire stock shares causing their ownership to exceed 50 percent of shares issued or who otherwise acquire controlling interest in the corporation.
3. A copy of the articles of incorporation and bylaws.
4. An authenticated copy of a resolution of the board of directors specifically authorizing a certain individual or individuals to represent the holder in dealing with the Forest Service.
5. A list of officers and directors of the corporation and their addresses.
6. Upon request, a certified list of stockholders and amount of stock owned by each.
7. The authorized officer may, when necessary, require the holder to furnish additional information as set forth in 36 CFR 251.54 (e)(1)(iv).

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0082.

This information is needed by the Forest Service to evaluate requests to use National Forest System lands and manage those lands to protect natural resources, administer the use, and ensure public health and safety. This information is required to obtain or retain a benefit. The authority for that requirement is provided by the Organic Act of 1897 and the Federal Land Policy and Management Act of 1976, which authorize the Secretary of Agriculture to promulgate rules and regulations for authorizing and managing National Forest System lands. These statutes, along with the Term Permit Act, National Forest Ski Area Permit Act, Granger-Thye Act, Mineral Leasing Act, Alaska Term Permit Act, Act of September 3, 1954, Wilderness Act, National Forest Roads and Trails Act, Act of November 16, 1973, Archaeological Resources Protection Act, and Alaska National Interest Lands Conservation Act, authorize the Secretary of Agriculture to issue authorizations for the use and occupancy of National Forest System lands. The Secretary of Agriculture's regulations at 36 CFR Part 251, Subpart B, establish procedures for issuing those authorizations.

The Privacy Act of 1974 (5 U.S.C. 552a) and the Freedom of Information Act (5 U.S.C. 552) govern the confidentiality to be provided for information received by the Forest Service Public reporting burden for collection of information, if requested, is estimated to average 1 hour per response for annual financial information; average 1 hour per response to prepare or update operation and/or maintenance plan; average 1 hour per response for inspection reports; and an average of 1 hour for each request that may include such things as reports, logs, facility and user information, sublease information, and other similar miscellaneous information requests. This includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

This permit is accepted subject to the conditions set out above.

Date 6/9/03 GENWAL RESOURCES, INC.

(CORPORATE SEAL)

By: Samuel E. Dinkley  
(Vice) President Operations

ATTEST: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
(Assistant) Secretary

The following certificate shall be executed by the Secretary or Assistant Secretary of the Corporation:

I \_\_\_\_\_ certify that I am the \_\_\_\_\_ Secretary of the Corporation that executed the above permit; that \_\_\_\_\_ who signed said permit on behalf of said Corporation was then \_\_\_\_\_ of said Corporation; that I know his/her signature on said permit is genuine; and that said permit was duly signed, sealed, and attested to for and on behalf of said Corporation by authority of its governing body

(CORPORATE SEAL)

\_\_\_\_\_  
(Assistant Secretary)

**U. S. DEPARTMENT OF AGRICULTURE**  
Forest Service

By: Anna L. Hume  
(Authorized Officer Signature)

*for* Elaine J. Zieroth, Forest Supervisor  
(Name and Title)

6/10/2003  
(Date)

**FOREST SERVICE SPECIAL USE PERMIT**

**TOPSOIL STORAGE PILES**

Authorization ID: PRI41  
Contact ID: GENWAL  
Expiration Date: 12/31/2022  
Use Code: 522

FS-2700-4 (8/99)  
OMB 0596-0082

**U.S. DEPARTMENT OF AGRICULTURE  
Forest Service  
SPECIAL USE PERMIT  
AUTHORITY:  
ORGANIC ADMINISTRATION ACT June 4, 1897**

GENWAL RESOURCES, INCORPORATED of P.O. BOX 1077, PRICE, UT 84501 (hereinafter called the Holder) is hereby authorized to use or occupy National Forest System lands, to use subject to the conditions set out below, on the Manti-La Sal National Forest, Price Ranger District.

This permit covers 1.5 acres, and/or 0 miles and is described as: Sections 4 and 5, T16S, R7E, SALT LAKE as shown on the location map attached to and made a part of this permit, and is issued for the purpose of:

Four storage sites for topsoil material from the development of mine site, sediment control devices (silt fences), and access to site. Size and location of sites are as follows:

- Stockpile Site #1 - .2 acres - W ¼ Sec. 5, T16S, R7E
- Stockpile Site #2 - .2 acres - W ¼ Sec. 5, T16S, R7E
- Stockpile Site #3 - .5 acres - NW ¼ Sec 4, T16S, R7E
- Stockpile Site #4 - .6 acres - NE ¼ of NW ¼ Sec. 5, T16S, R7E

Permittee will be responsible for noxious weed control on the permitted area.

The above described or defined area shall be referred to herein as the "permit area".

**TERMS AND CONDITIONS**

**I. AUTHORITY AND GENERAL TERMS OF THE PERMIT**

A. Authority. This permit is issued pursuant to the authorities enumerated at Title 36, Code of Federal Regulations, Section 251 Subpart B, as amended. This permit, and the activities or use authorized, shall be subject to the terms and conditions of the Secretary's regulations and any subsequent amendment to them.

B. Authorized Officer. The authorized officer is the Forest Supervisor or a delegated subordinate officer.

C. License. This permit is a license for the use of federally owned land and does not grant any permanent, possessory interest in real property, nor shall this permit constitute a contract for purposes of the Contract Disputes Act of 1978 (41 U.S.C. 611). Loss of the privileges granted by this permit by revocation, termination, or suspension is not compensable to the holder.

D. Amendment. This permit may be amended in whole or in part by the Forest Service when, at the discretion of the authorized officer, such action is deemed necessary or desirable to incorporate new terms, conditions, and stipulations as may be required by law, regulation, land management plans, or other management decisions.

E. Existing Rights. This permit is subject to all valid rights and claims of third parties. The United States is not liable to the holder for the exercise of any such right or claim.

F. Nonexclusive Use and Public Access. Unless expressly provided for in additional terms, use of the permit area is not exclusive. The Forest Service reserves the right to use or allow others to use any part of the permit area, including roads, for any purpose, provided, such use does not materially interfere with the holder's authorized use. A final determination of conflicting uses is reserved to the Forest Service.

G. Forest Service Right of Entry and Inspection. The Forest Service has the right of unrestricted access of the permitted area or facility to ensure compliance with laws, regulations, and ordinances and the terms and conditions of this permit.

H. Assignability. This permit is not assignable or transferable. If the holder through death, voluntary sale or transfer, enforcement of contract, foreclosure, or other valid legal proceeding ceases to be the owner of the improvements, this permit shall terminate.

I. Permit Limitations. Nothing in this permit allows or implies permission to build or maintain any structure or facility, or to conduct any activity unless specifically provided for in this permit. Any use not specifically identified in this permit must be approved by the authorized officer in the form of a new permit or permit amendment.

## II. TENURE AND ISSUANCE OF A NEW PERMIT

A. Expiration at the End of the Authorized Period. This permit will expire at midnight on 12/31/2022. Expiration shall occur by operation of law and shall not require notice, any decision document, or any environmental analysis or other documentation.

B. Minimum Use or Occupancy of the Permit Area. Use or occupancy of the permit area shall be exercised at least 365 days each year, unless otherwise authorized in writing under additional terms of this permit.

C. Notification to Authorized Officer. If the holder desires issuance of a new permit after expiration, the holder shall notify the authorized officer in writing not less than six (6) months prior to the expiration date of this permit.

D. Conditions for Issuance of a New Permit. At the expiration or termination of an existing permit, a new permit may be issued to the holder of the previous permit or to a new holder subject to the following conditions:

1. The authorized use is compatible with the land use allocation in the Forest Land and Resource Management Plan.
2. The permit area is being used for the purposes previously authorized.
3. The permit area is being operated and maintained in accordance with the provisions of the permit.
4. The holder has shown previous good faith compliance with the terms and conditions of all prior or other existing permits, and has not engaged in any activity or transaction contrary to Federal contracts, permits laws, or regulations.

E. Discretion of Forest Service. Notwithstanding any provisions of any prior or other permit, the authorized officer may prescribe new terms, conditions, and stipulations when a new permit is issued. The decision whether to issue a new permit to a holder or successor in interest is at the absolute discretion of the Forest Service.

F. Construction. Any construction authorized by this permit may commence by N/A and shall be completed by N/A. If construction is not completed within the prescribed time, this permit may be revoked or suspended.

## III. RESPONSIBILITIES OF THE HOLDER

A. Compliance with Laws, Regulations, and other Legal Requirements. The holder shall comply with all applicable Federal, State, and local laws, regulations, and standards, including but not limited to, the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., the Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seq., the Comprehensive Environmental Response, Control, and Liability Act, 42 U.S.C. 9601 et seq., and other relevant environmental laws, as well as public health and safety laws and other laws relating to the siting, construction, operation, and maintenance of any facility, improvement, or equipment on the property.

B. Plans. Plans for development, layout, construction, reconstruction, or alteration of improvements on the permit area, as well as revisions of such plans, must be prepared by a qualified individual acceptable to the authorized officer and shall be approved in writing prior to commencement of work. The holder may be required to furnish as-built plans, maps, or surveys, or other similar information, upon completion of construction.

C. Maintenance. The holder shall maintain the improvements and permit area to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the authorized officer and consistent with other provisions of this

authorization. If requested, the holder shall comply with inspection requirements deemed appropriate by the authorized officer.

D. Hazard Analysis. The holder has a continuing responsibility to identify all hazardous conditions on the permit area which would affect the improvements, resources, or pose a risk of injury to individuals. Any non-emergency actions to abate such hazards shall be performed after consultation with the authorized officer. In emergency situations, the holder shall notify the authorized officer of its actions as soon as possible, but not more than 48 hours, after such actions have been taken.

E. Change of Address. The holder shall immediately notify the authorized officer of a change in address.

F. Change in Ownership. This permit is not assignable and terminates upon change of ownership of the improvements or control of the business entity. The holder shall immediately notify the authorized officer when a change in ownership or control of business entity is pending. Notification by the present holder and potential owner shall be executed using Form SF-299 Application for Transportation and Utility Systems and Facilities of Federal Lands, or Form FS-2700-3a, Holder Initiated Revocation of Existing Authorization, Request for a Special Use Permit. Upon receipt of the proper documentation, the authorized officer may issue a permit to the party who acquires ownership of, or a controlling interest in, the improvements or business entity.

#### IV. LIABILITY

For purposes of this section, "holder" includes the holder's heirs, assigns, agents, employees, and contractors.

A. The holder assumes all risk of loss to the authorized improvements.

B. The holder shall indemnify, defend, and hold the United States harmless for any violations incurred under any such laws and regulations or for judgments, claims, or demands assessed against the United States in connection with the holder's use or occupancy of the property. The holder's indemnification of the United States shall include any loss by personal injury, loss of life or damage to property in connection with the occupancy or use of the property during the term of this permit. Indemnification shall include, but is not limited to, the value of resources damaged or destroyed; the costs of restoration, cleanup, or other mitigation; fire suppression or other types of abatement costs; third party claims and judgments; and all administrative, interest, and other legal costs. This paragraph shall survive the termination or revocation of this authorization, regardless of cause.

C. The holder has an affirmative duty to protect from damage the land, property, and interests of the United States.

D. In the event of any breach of the conditions of this authorization by the holder, the authorized officer may, on reasonable notice, cure the breach for the account at the expense of the holder. If the Forest Service at any time pays any sum of money or does any act which will require payment of money, or incurs any expense, including reasonable attorney's fees, in instituting, prosecuting, and/or defending any action or proceeding to enforce the United States rights hereunder, the sum or sums so paid by the United States, with all interests, costs and damages shall, at the election of the Forest Service, be deemed to be additional fees hereunder and shall be due from the holder to the Forest Service on the first day of the month following such election.

E. With respect to roads, the holder shall be proportionally liable for damages to all roads and trails of the United States open to public use caused by the holder's use to the same extent as provided above, except that liability shall not include reasonable and ordinary wear and tear.

F. The Forest Service has no duty to inspect the permit area or to warn of hazards and, if the Forest Service does inspect the permit area, it shall incur no additional duty nor liability for identified or non-identified hazards. This covenant may be enforced by the United States in a court of competent jurisdiction.

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1. Noncompliance with Federal, State, or local laws and regulations.
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3. Reasons in the public interest.
4. Abandonment or other failure of the holder to otherwise exercise the privileges granted.

C. Opportunity to Take Corrective Action. Prior to revocation or suspension for cause pursuant to Section V (B), the authorized officer shall give the holder written notice of the grounds for each action and a reasonable time, not to exceed 90 days, to complete the corrective action prescribed by the authorized officer.

D. Removal of Improvements. Prior to abandonment of the improvements or within a reasonable time following revocation or termination of this authorization, the holder shall prepare, for approval by the authorized officer, an abandonment plan for the permit area. The abandonment plan shall address removal of improvements and restoration of the permit area and prescribed time frames for these actions. If the holder fails to remove the improvements or restore the site within the prescribed time period, they become the property of the United States and may be sold, destroyed or otherwise disposed of without any liability to the United States. However, the holder shall remain liable for all cost associated with their removal, including costs of sale and impoundment, cleanup, and restoration of the site.

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C. Payment Due Date. The payment due date shall be the close of business on January 1st of each calendar year payment is due. Payments due the United States for this use shall be deposited at USDA Forest Service, File 71652, P.O. Box 60000, San Francisco, CA 94160-1652, in the form of a check, draft, or money order payable to "Forest Service, USDA." Payments shall be credited on the date received by the designated Forest Service collection officer or deposit location. If the due date for the fee or fee calculation statement falls on a non-workday, the charges shall not apply until the close of business on the next workday.

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Liquidate any security or collateral provided by the authorization.

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A. Members of Congress. No Member of or Delegate to Congress or Resident Commissioner shall benefit from this permit either directly or indirectly, except when the authorized use provides a general benefit to a corporation.

B. Appeals and Remedies. Any discretionary decisions or determinations by the authorized officer are subject to the appeal regulations at 36 CFR 251, Subpart C, or revisions thereto.

C. Superior Clauses. In the event of any conflict between any of the preceding printed clauses or any provision thereof and any of the following clauses or any provision thereof, the preceding printed clauses shall control.

D. Nondiscrimination in Employment and Services (B1). During the performance of this authorization, the holder agrees:

1. In connection with the performance of work under this authorization, including construction, maintenance, and operation of the facility, the holder shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age, or disability. (Ref. Title VII of the Civil Rights Act of 1964, as amended).

2. The holder and employees shall not discriminate by segregation or otherwise against any person on the basis of race, color, religion, sex national origin, age, or disability, by curtailing or refusing to furnish accommodations, facilities, services, or use privileges offered to the public generally. (Ref. Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; Title IX of the Education Amendments, and the Age Discrimination Act of 1975).

3. The holder shall include and require compliance with the above nondiscrimination provisions in any subcontract made with respect to the operations under this authorization.

4. When furnished by the Forest Service, signs setting forth this policy of nondiscrimination will be conspicuously displayed at the public entrance to the premises, and at other exterior or interior locations as directed by the Forest Service.

5. The Forest Service shall have the right to enforce the foregoing nondiscrimination provisions by suit for specific performance or by any other available remedy under the laws of the United States of the State in which the breach or violation occurs.

E. Operating Plan (C8). The holder shall provide an Operating Plan. The plan shall be prepared in consultation with the authorized officer or designated representative and cover operation and maintenance of facilities, dates or season of operations, and other information required by the authorized officer to manage and evaluate the occupation and/or use of National Forest System lands. The provisions of the Operating Plan and the annual revisions shall become a part of this authorization and shall be submitted by the holder and approved by the authorized officer or their designated representative(s). This Operating Plan is hereby made a part of the authorization.

F. Removal and Planting of Vegetation and Other Resources (D5). The holder shall obtain prior written approval from the authorized officer before removing or altering vegetation or other resources. The holder shall obtain prior written approval from the authorized officer before planting trees, shrubs, or other vegetation within the authorized area.

G. Revegetation of Ground Cover and Surface Restoration (D9). The holder shall be responsible for prevention and control of soil erosion and gulying on lands covered by this authorization and adjacent thereto, resulting from construction, operation, maintenance, and termination of the authorized use. The holder shall so construct permitted improvements to avoid the accumulation of excessive heads of water and to avoid encroachment on streams. The holder shall revegetate or otherwise stabilize all ground where the soil has been exposed as a result of the holder's construction, maintenance, operation, or termination of the authorized use and shall construct and maintain necessary preventive measures to supplement the vegetation.

H. Pesticide Use (D23). Pesticides may not be used to control undesirable woody and herbaceous vegetation, aquatic plants, insects, rodents, trash fish, etc., without the prior written approval of the Forest Service. A request for approval of planned uses of pesticides will be submitted annually by the holder on the due date established by the authorized officer. The report will cover a 12-month period of planned use beginning 3 months after the reporting date. Information essential for review will be provided in the form specified. Exceptions to this schedule may be allowed, subject to emergency request and approval, only when unexpected outbreaks of pests require control measures which were not anticipated at the time an annual report was submitted.

I. Superseded Authorization (X18). This authorization supersedes a special-use authorization designated: PRI409003, dated 8/17/87 for storage of topsoil, termination date 12/31/02.

J. Corporation Status Notification (X46). The holder shall furnish the authorized officer with the names and addresses of shareholders owning three (3) percent or more of the shares, and number and percentage of any class of voting shares of the entity which such shareholder is authorized to vote. In addition, the holder shall notify the authorized officer within fifteen (15) days of the following changes:

1. Names of officers appointed or terminated.
2. Names of stockholders who acquire stock shares causing their ownership to exceed 50 percent of shares issued or who otherwise acquire controlling interest in the corporation.
3. A copy of the articles of incorporation and bylaws.
4. An authenticated copy of a resolution of the board of directors specifically authorizing a certain individual or individuals to represent the holder in dealing with the Forest Service.
5. A list of officers and directors of the corporation and their addresses.

6. Upon request, a certified list of stockholders and amount of stock owned by each.
7. The authorized officer may, when necessary, require the holder to furnish additional information as set forth in 36 CFR 251.54 (e)(1)(iv).

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0082.

This information is needed by the Forest Service to evaluate requests to use National Forest System lands and manage those lands to protect natural resources, administer the use, and ensure public health and safety. This information is required to obtain or retain a benefit. The authority for that requirement is provided by the Organic Act of 1897 and the Federal Land Policy and Management Act of 1976, which authorize the Secretary of Agriculture to promulgate rules and regulations for authorizing and managing National Forest System lands. These statutes, along with the Term Permit Act, National Forest Ski Area Permit Act, Granger-Thye Act, Mineral Leasing Act, Alaska Term Permit Act, Act of September 3, 1954, Wilderness Act, National Forest Roads and Trails Act, Act of November 16, 1973, Archaeological Resources Protection Act, and Alaska National Interest Lands Conservation Act, authorize the Secretary of Agriculture to issue authorizations for the use and occupancy of National Forest System lands. The Secretary of Agriculture's regulations at 36 CFR Part 251, Subpart B, establish procedures for issuing those authorizations.

The Privacy Act of 1974 (5 U.S.C. 552a) and the Freedom of Information Act (5 U.S.C. 552) govern the confidentiality to be provided for information received by the Forest Service Public reporting burden for collection of information, if requested, is estimated to average 1 hour per response for annual financial information; average 1 hour per response to prepare or update operation and/or maintenance plan; average 1 hour per response for inspection reports; and an average of 1 hour for each request that may include such things as reports, logs, facility and user information, sublease information, and other similar miscellaneous information requests. This includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

This permit is accepted subject to the conditions set out above.

Date 6/9/03 GENWAL RESOURCES, INC.

(CORPORATE SEAL)

By: Samuel L. Dwyer  
(Vice) President *operations*

ATTEST: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
(Assistant) Secretary

The following certificate shall be executed by the Secretary or Assistant Secretary of the Corporation:

I \_\_\_\_\_ certify that I am the \_\_\_\_\_ Secretary of the Corporation that executed the above permit; that \_\_\_\_\_ who signed said permit on behalf of said Corporation was then \_\_\_\_\_ of said Corporation; that I know his/her signature on said permit is genuine; and that said permit was duly signed, sealed, and attested to for and on behalf of said Corporation by authority of its governing body

(CORPORATE SEAL)

\_\_\_\_\_  
(Assistant Secretary)

**U. S. DEPARTMENT OF AGRICULTURE**  
Forest Service

By: Elaine J. Zieroth  
(Authorized Officer Signature)

*h2* Elaine J. Zieroth, Forest Supervisor  
(Name and Title)

6/10/2003  
(Date)

APPENDIX 1-9

OWNERSHIP & CONTROL

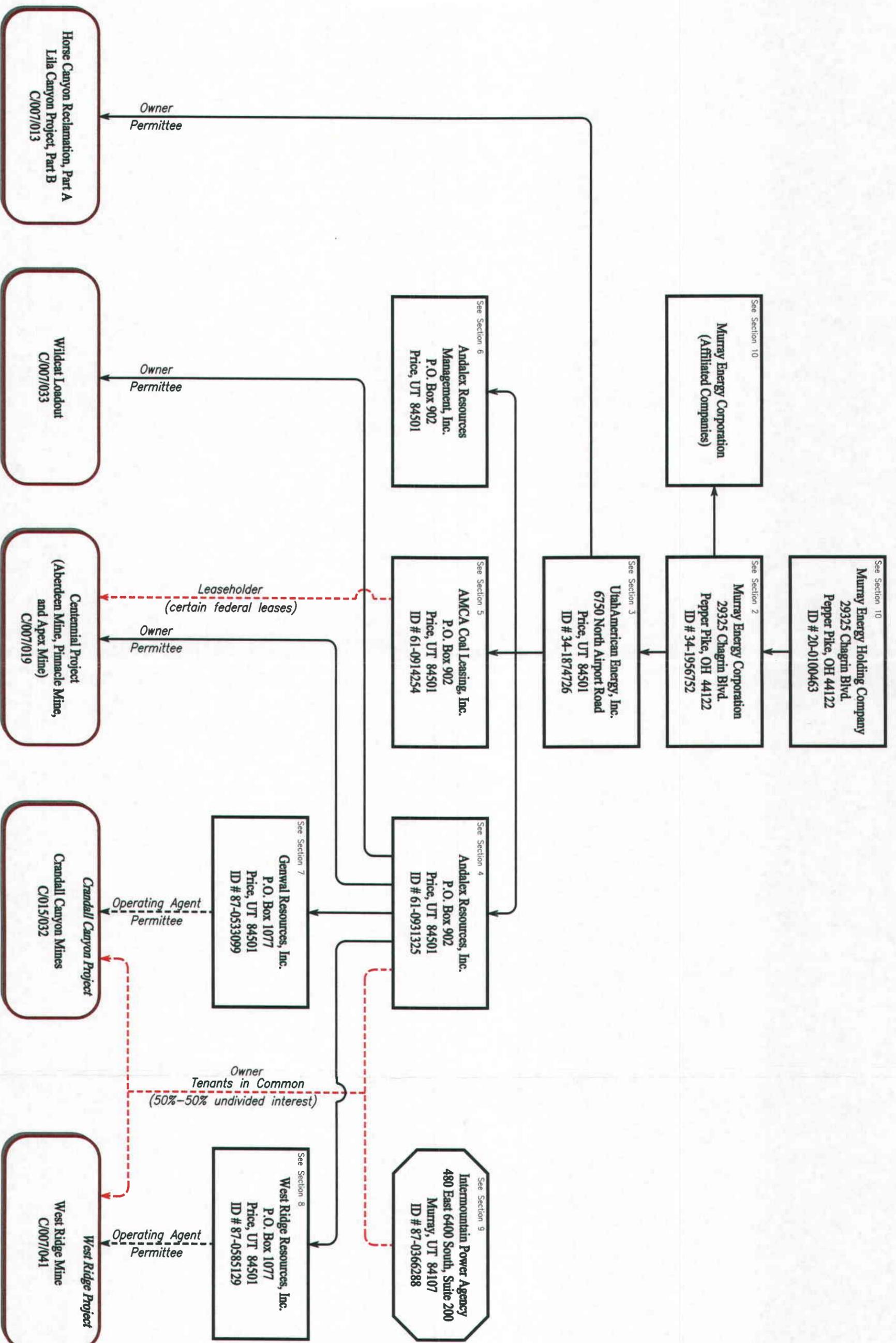
# **OWNERSHIP AND CONTROL**

**REVISED 1/29/2008**

**Section 1**

Insert  
Family Tree

# OWNERSHIP AND CONTROL



**Section 2**

**MURRAY ENERGY CORPORATION**

Suite 300

29325 Chagrin Boulevard

Pepper Pike, OH 44122

**Appointment of Officers**

		<u>Begin</u>	<u>End</u>
Robert E. Murray	Chairman, President & Chief Executive Officer	02/23/01 02/23/01	
John R. Forrelli	Vice President	12/18/03	12/17/04
Robert D. Moore	Vice President & Chief Financial Officer	12/17/04 04/23/07	
P. Bruce Hill	Vice President - Human Resources	12/18/03	
Michael D. Loiacono	Treasurer	02/23/01	
Michael D. Loiacono	Chief Financial Officer	12/20/05	04/23/07
Michael O. McKown	Secretary	02/23/01	

**Incorporation Information:**

State of Incorporation	Ohio; Charter No. 1211519
Date of Incorporation	February 23, 2001
ID#	34-1956752

**Shareholder:**

	<u>Begin</u>	<u>End</u>
Murray Energy Holdings Co. (100%)	10/21/03	
Robert E. Murray	2/23/01	10/21/03

**Directors:**

Robert E. Murray	02/23/01	
Michael D. Loiacono	12/20/05	04/23/07
Henry W. Fayne	01/28/05	
Richard L. Lawson	01/28/05	
Andrew D. Weissman	10/23/03	
Robert D. Moore	04/23/07	

**Section 3**

UTAHAMERICAN ENERGY, INC.  
P.O. Box 902  
6750 North Airport Road  
Price, UT 84501

**Officers:**

		<u>Begin</u>	<u>End</u>
P. Bruce Hill	Chief Executive Officer	08/18/06	
P. Bruce Hill	President	12/16/06	
Douglas H. Smith	President	08/18/06	12/16/06
Clyde I. Borrell	President	07/31/98	05/19/06
Robert D. Moore	Treasurer	08/18/06	
Michael O. McKown	Secretary	08/18/06	
Marsha Baker Kocinski	Secretary	07/31/98	06/25/02
Barbara Boyce	Secretary	07/31/98	11/01/99
Jay Marshall	Manager	07/31/98	8/18/06

**Directors:**

Robert E. Murray	07/31/98
P. Bruce Hill	08/18/06

**Owner:<sup>a</sup>**

Murray Energy Corp.

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<sup>a</sup> Coal Resources, Inc. is incorrectly listed as a shareholder the AVS OFT. Coal Resources, Inc has never been a shareholder of UEI.

#### Section 4

ANDALEX RESOURCES, INC.

P.O. Box 902

6750 North Airport Road

Price, UT 84501

#### Officers:

		<u>Begin</u>	<u>End</u>
P. Bruce Hill	President and Chief Executive Officer	12/16/06	
Douglas H. Smith	President	03/07/94	12/16/06
Robert D. Moore	Treasurer	08/18/06	
Michael O. McKown	Secretary	08/18/06	

#### Former Officers/Directors:

Peter B. Green	Director	01/05/98	08/18/06
Peter B. Green	CB	05/11/90	08/18/06
Peter B. Green	CEO	05/11/90	08/18/06
Ronald C. Beedie	Director	01/05/88	08/18/06
John Bradshaw	Secretary	02/05/90	08/18/06
John Bradshaw	Vice-President	02/05/90	08/18/06
Douglas H. Smith	Director	03/07/94	08/18/06
Samuel C. Quigley	Vice-President	02/24/95	08/18/06
Andalex Hungary Ltd.	Shareholder	12/28/20	08/18/06
Alexander Harold Samuel Green	Director	01/11/02	08/18/06

#### Directors:

Robert E. Murray	08/18/06
P. Bruce Hill	08/18/06

#### Owner:

UtahAmerican Energy, Inc.	100%	08/18/06
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#### MSHA Numbers

Apex Mine	42-01750
Pinnacle Mine	42-01474
Aberdeen Mine	42-02028
Wildcat Loadout	42-01864

**Section 5**

AMCA COAL LEASING, INC.  
P.O. Box 902  
6750 North Airport Road  
Price, UT 84501

**Appointment of Officers:**

		<u>Begin</u>	<u>End</u>
P. Bruce Hill	President and Chief Executive Officer	12/16/06	
Douglas H. Smith	President	08/18/06	12/16/06
Robert D. Moore	Treasurer	12/16/06	
Michael O. McKown	Secretary	12/16/06	

**Directors:**

Robert E. Murray	08/18/06
P. Bruce Hill	08/18/06

**Owner:**

UtahAmerican Energy, Inc., 100% ownership	08/18/06
---	----------

**Section 6**

ANDALEX RESOURCES MANAGEMENT, INC.  
P.O. Box 902  
6750 North Airport Road  
Price, UT 84501

**Appointment of Officers:**

		<u>Begin</u>	<u>End</u>
Douglas H. Smith	President	08/18/06	12/16/06
P. Bruce Hill	President and Chief Executive Officer	12/16/06	
Robert D. Moore	Treasurer	12/16/06	
Michael O. McKown	Secretary	12/16/06	

**Directors:**

Robert E. Murray	08/18/06
P. Bruce Hill	08/18/06

**Shareholders:**

UtahAmerican Energy, Inc. 100%	08/18/06
--------------------------------	----------

**Section 7**

GENWAL RESOURCES, INC.  
P.O. Box 1077  
Price, UT 84501

**Officers:**

		<u>Begin</u>	<u>End</u>
Douglas H. Smith	President	08/18/06	12/16/06
P. Bruce Hill			
P. Bruce Hill	President and Chief Executive Officer	12/16/06	
Robert D. Moore	Treasurer	12/16/06	
Michael O. McKown	Secretary	12/16/06	

**Directors:**

Robert E. Murray	08/18/06
P. Bruce Hill	08/18/06

**Former Directors:**

Peter B. Green	8/9/06
Ronald C. Beedie	8/9/06
Douglas H. Smith	8/18/06
Gordon Ulrich	10/30/96

**Former Officers:**

Peter B. Green	Chairman & CEO	8/9/06
Samuel C. Quigley	Vice President	8/18/06
John Bradshaw	Vice President	5/17/05
John Bradshaw	Secretary & Treasurer	8/18/06
Douglas H. Smith	President	12/16/06

**Owner:**

ANDALEX Resources, Inc. is and remains the sole shareholder of Genwal Resources, Inc.<sup>a</sup>

**MSHA Numbers**

Crandall Canyon Mine      42-01715

<sup>a</sup> Intermountain Power Agency holds, as a tenant in common, an undivided 50% interest in certain real property interests regarding the Crandall Canyon Mine.

**Section 8**

WEST RIDGE RESOURCES, INC.<sup>a</sup>  
P.O. Box 1077  
Price, UT 84501

**Officers:**

		<u>Begin</u>	<u>End</u>
Douglas H. Smith	President	08/18/06	12/16/06
P. Bruce Hill	President and Chief Executive Officer	12/16/06	
Robert D. Moore	Treasurer	12/16/06	
Michael O. McKown	Secretary	12/16/06	

**Directors:**

Robert E. Murray	08/18/06
P. Bruce Hill	08/18/06

**Owner:**

Andalex Resources, Inc.<sup>b</sup> 100%

<u>Former Directors</u> <sup>c</sup>	<u>Begin Date</u>	<u>End Date</u>
Peter B. Green	4/1/98	8/9/06
Ronald C. Beedie	4/1/98	8/9/06
Douglas H. Smith	4/1/98	9/18/06

<u>Former Officers</u> <sup>d</sup>	<u>Position</u>	<u>Begin Date</u>	<u>End Date</u>
Peter B. Green	Chairman & CEO	4/15/98	8/9/06
Samuel C. Quigley	Vice President	4/15/98	8/18/06
John Bradshaw	Secretary	4/15/98	8/18/06
Douglas H. Smith	President	4/15/98	12/168/06

**MSHA Number**

West Ridge Mine 42-022444

<sup>a</sup> WEST RIDGE Resources, Inc. ("WRRI") was formed on March 10, 1998. No actions of WRRI occurred before that date.

<sup>b</sup> ANDALEX Resources is (and remains) the sole shareholder of WRRI. WRRI and the Intermountain Power Agency hold certain real property interests as tenants in common, each owning a 50% interest therein.

<sup>c</sup> The initial directors of WRRI (as shown above) were appointed on April 1, 1998; the "Begin Date[s]" for each such director shown on the OFT form are incorrect.

<sup>d</sup> The initial officers of WRRI (as shown above) were appointed on April 15, 1998; the "Begin Date[s]" for each such officer shown on the OFT form are incorrect. Also, Christopher G. Van Bever never served as an officer of WRRI; the information shown on the OFT form to the contrary is incorrect.

**Section 9**

**INTERMOUNTAIN POWER AGENCY**

(Tenant in Common, 50% undivided interest; West Ridge Mine Permit C/007/041; Crandall Canyon Mine Permit C/015/032)<sup>a</sup>

10653 South River Front Parkway, Suite 120

South Jordan, Utah 84095

(801) 938-1333

**Appointment of Officers:**

Ray Farrell	Chairman	12/1998
R. Leon Bowler	Vice-Chairman	12/1984
Ted L. Olson	Secretary	01/2002
Russell F. Fjeldsted	Treasurer	03/2007

**Directors:**

	<u>Begin Date</u>	<u>End Date</u>
R. Leon Bowler	06/1977	
Ray Farrell	11/1978	
Clifford C. Michaelis <sup>b</sup>	01/1988	6/2007
Ted L. Olson	01/1990	
Russell F. Fjeldsted	01/1992	
Walter Meacham	01/1999	
Gary O. Merrill	01/2002	6/2007
Robert O. Christiansen	06/2007	
Ed Collins	06/2007	

<sup>a</sup> Intermountain Power Agency holds, as a tenant in common, an undivided 50% interest in certain real property interests regarding the West Ridge Mine and the Crandall Canyon Mine.

<sup>b</sup> Replacing controller Dan R. Eldredge, serving from April 11, 1988 to January 1990.

Name and address of IPA's general manager:

Jim Hewlett  
Intermountain Power Agency  
10653 South River Front Parkway, Suite 120  
South Jordan, Utah 84095  
Telephone (801) 938-1333  
Assumed position December 1, 2007

Resident Agent for IPA:

Mark Buchi  
Holme, Roberts, and Owen  
299 South Main, Suite 1800  
Salt Lake City, Utah 84111  
Assumed position January, 1988

IPA Designated representative to the Crandall Canyon Project and West Ridge Project Management Boards:

Aram Benyamin  
Operating Agent  
Los Angeles Department of Water & Power  
111 North Hope Street, Room 1263  
Los Angeles, California 90012-2694  
Telephone (213) 367-0286

Principle Shareholders of IPA:

IPA has no shareholders. IPA is a political subdivision of the State of Utah created under the Interlocal Cooperation Act, Title II, Chapter 13, Utah Code Ann. 1953, as amended, and as such, has not issued stock.

**Section 10**

MURRAY ENERGY AFFILIATE COMPANIES

**AMCOAL HOLDINGS, INC.**

10/10/05-blr

**Principal Office:**

29325 Chagrin Boulevard  
Suite 300  
Pepper Pike, Ohio 44122

101 Prosperous Place  
Suite 125  
Lexington, Kentucky 40509

Officers:

Robert E. Murray	President	5/23/03
P. Bruce Hill	Vice President – Human Resources	10/01/98
Robert D. Moore	Treasurer	10/01/98
Michael O. McKown	Secretary	3/1/05
Jeffrey L. Cash	Assistant Treasurer	11/01/99

Incorporation Information:

State of Incorporation: Ohio;  
Charter No. 1007981

Date of Incorporation: June 12, 1998

ID #34-1867389

Shareholders: Murray Energy Corporation

Directors: Robert E. Murray

Revised 2/14/05

THE AMERICAN COAL COMPANY

**Principal Office:**

29325 Chagrin Boulevard  
Suite 300 P. O. Box 727  
Pepper Pike, Ohio 44122 Harrisburg, Illinois 62946

Officers:

Robert E. Murray	Acting President	11/02/02
John R. Forrelli	Vice President	9/07/04
Michael O. McKown	Vice President, General Counsel and Secretary	3/15/99 3/1/05
P. Bruce Hill	Vice President – Human Resources	10/01/98
Robert D. Moore	Treasurer	10/01/98
Jeffrey L. Cash	Assistant Treasurer and Assistant Secretary	11/01/99 6/01/01

Incorporation Information:

State of Incorporation	Delaware; Charter No. 2881631
Date of Incorporation	June 2, 1998
ID #73-1543124	

Shareholders: AmCoal Holdings, Inc.

Directors: Robert E. Murray

Revised: 2/14/05

**THE AMERICAN COAL SALES COMPANY**

29325 Chagrin Boulevard  
Suite 300  
Pepper Pike, Ohio 44122

Officers:

		<u>Begin</u>	<u>End</u>
Robert E. Murray	Chief Executive Officer	11/11/88	
B. J. Cornelius	President	9/08/95	
Edwin D. Lane	Vice President	11/01/99	3/1/05
William E. Hollars	Vice President	3/1/05	
Richard Rice	Vice President	11/11/88	11/01/99
Michael O. McKown	Secretary	3/1/05	
Steven C. Ellis	Secretary	11/10/88	3/1/05
James R. Turner, Jr.	Treasurer and Assistant Secretary	3/1/05	
Duane A. Smith	Assistant Treasurer and Assistant Secretary	6/25/01	
Brenda L. Murray	Assistant Secretary	9/8/95	6/25/01

Incorporation Information:

State of Incorporation                      Ohio; Charter No. 727836  
Date of Incorporation                        June 29, 1988  
ID #34-1603699

Shareholder:                                      Coal Resources, Inc.

Directors:                                        Robert E. Murray                                      9/08/95

Revised  
5/2/07

AMERICAN COMPLIANCE COAL, INC.

29325 Chagrin Boulevard  
Suite 300  
Pepper Pike, Ohio 44122

Officers:

		<u>Begin</u>	<u>End</u>
Stanley T. Piasecki	President	3/1/05	
Charles E. Shestak	Vice President	03/10/03	
Michael O. McKown	Secretary	3/1/05	
Robert D. Moore	Treasurer and Assistant Secretary	6/25/01	
Elmer A. Mottillo	Assistant Treasurer	6/25/01	8/22/03

Former Officers:

Clyde I. Borrell	President	6/02/97	3/1/05
William W. Taft	Secretary	5/24/94	3/1/05

Incorporation Information:

State of Incorporation Colorado;  
Charter No. 19941059260

Date of Incorporation May 24, 1994

ID #34-1797161

Shareholder:

Murray Energy Corporation (100%)	6/1/01	
Robert E. Murray	5/24/94	2/23/01

Director:

Robert E. Murray	5/24/94
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Revised  
5/2/07

AMERICAN ENERGY CORPORATION

43521 Mayhugh Hill Road  
Township Highway 88  
Beallsville, Ohio 43716

Officers:

		<u>Begin</u>	<u>End</u>
Robert E. Murray	President	12/15/04	
Robert D. Moore	President	6/25/01	12/15/04
Michael O. McKown	Secretary	11/01/99	
James R. Turner, Jr.	Treasurer	3/1/05	
Robert D. Moore	Treasurer	6/25/01	12/15/04
Robert L. Putsock	Assistant Treasurer	1/27/04	

Incorporation Information:

State of Incorporation	Ohio; Charter No. 00842695
Date of Incorporation ID #31-1550443	April 12, 1993

Shareholder: Murray Energy Corporation  
(100%)

Director:

Robert E. Murray	12/15/04	
P. Bruce Hill	7/02/01	12/15/04

Revised  
3/16/07

**ANCHOR LONGWALL AND REBUILD, INC.**

One Industrial Park Drive  
Wheeling, West Virginia 26003

Officers:

		<u>Begin</u>	<u>End</u>
P. Bruce Hill	President and Assistant Secretary	2/16/99	11/10/06
Chad Underkoffler	President	2/16/99	
Michael O. McKown	Secretary	11/10/06	
		11/01/99	
James R. Turner, Jr.	Treasurer	9/16/05	
Duane A. Smith	Assistant Secretary	11/01/99	

Incorporation Information:

State of Incorporation      West Virginia;  
Charter No. 00961100093212818

Date of Incorporation      April 18, 1996

ID #55-0749933

Shareholder:

I.D. # 34-1586390  
Address: 29325 Chagrin  
Boulevard  
Suite 300  
Pepper Pike, OH 44122

Coal Resources, Inc.

Director:

Charles E. Shestak	11/01/99
P. Keith McGilton	11/01/99

Revised  
3/6/07

125 Old Farm Drive,  
Pittsburgh, PA 15239

**AVONMORE RAIL LOADING, INC.**

Officers:

P. Bruce Hill	President	6/25/01
Robert D. Moore	Treasurer	6/25/01
Michael O. McKown	Secretary	3/1/05
Robert L. Putsock	Assistant Treasurer	1/02/03
Elmer A. Mottillo	Assistant Secretary	1/02/03

Incorporation Information:

State of Incorporation	Delaware; Charter No. 0798860
Date of Incorporation Qualified	February 19, 1974 May 6, 1974 Pennsylvania; PA Entity #000302999

ID #25-1253970

Shareholder: Mill Creek Mining Company

Director: Charles E. Shestak

Revised: 2/14/05

**BELMONT COAL, INC.**

P. O. Box 146  
Powhatan, Ohio 43942

Officers:

		<u>Begin</u>	<u>End</u>
Robert D. Moore	President	6/25/01	
Maynard St. John	Vice-President	1/02/02	6/26/02
James R. Turner, Jr.	Secretary/Treasurer	9/16/05	
Kristi D. Brown	Secretary/Treasurer	11/08/01	9/16/05

Incorporation Information:

State of Incorporation      Ohio;  
Charter No. 00842697

Date of Incorporation      April 12, 1993

ID #31-1536602

Shareholder:

Murray Energy Corporation (100%)	6/1/01	
Robert E. Murray	4/19/93	6/1/01

Director:

Duane A. Smith	4/12/93	12/15/06
Robert D. Moore	12/15/06	

Revised  
3/6/07

**CANTERBURY COAL COMPANY**

125 Old Farm Drive  
Pittsburgh, PA 15239

Officers:

P. Bruce Hill	President and General Manager	6/25/01
Robert D. Moore	Secretary and Treasurer	6/25/01 6/25/01
Robert L. Putsock	Assistant Treasurer	1/02/03
Elmer A. Mottillo	Assistant Secretary	1/02/03

Incorporation Information:

State of Incorporation      Pennsylvania;  
PA Entity #000055242

Date of Incorporation      July 26, 1963

ID #25-1127473

Shareholder:              Mill Creek Mining Company  
(100%)

Director:                  Charles E. Shestak

Revised  
3/6/07

29325 Chagrin Boulevard  
Suite 300  
Pepper Pike, Ohio 44122

**COAL RESOURCES HOLDINGS CO.**

Officers:

		<u>Begin</u>	<u>End</u>
Robert E. Murray	President and CEO	6/27/03	
Michael D. Loiacono	Treasurer	6/27/03	
	CFO	12/20/05	04/23/07
Robert D. Moore	CFO	04/23/07	
Scott A. Boyle	Chief Financial Officer	10/29/05	12/20/05
P. Bruce Hill	Secretary	3/1/05	11/01/05
Michael O. McKown	Secretary	11/01/05	
Robert L. Putsock	Assistant Secretary and Assistant Treasurer	6/25/01 6/25/01	

Incorporation Information:

State of Incorporation Delaware;  
Charter No. 3676954

Date of Incorporation June 27, 2003

ID #20-0100479

Shareholder:

Robert E. Murray (Class A Shares  
100%)  
Robert Eugene Murray (Class B  
Shares 20%)  
Robert Edward Murray (Class B  
Shares 20%)  
Ryan Michael Murray (Class B  
Shares 20%)  
Jonathan Robert Murray (Class B  
Shares 20%)  
Fifth Third Bank of Northeast  
Ohio, Trustee (Class B Shares  
20%)

Director:

Robert E. Murray 6/27/03

Revised  
5/10/07

**COAL RESOURCES, INC.**

29325 Chagrin Boulevard  
Suite 300  
Pepper Pike, Ohio 44122

Officers:

		<u>Begin</u>	<u>End</u>
Robert E. Murray	Chairman, President and Chief Executive Officer	3/1/05	
Michael D. Loiacono	Treasurer	1/28/05	
Robert D. Moore	CFO	12/20/05	04/23/07
Scott A. Boyle	CFO Chief Financial Officer	04/23/07 10/17/05	12/20/05
P. Bruce Hill	Secretary	3/1/05	11/01/05
Michael O. McKown	Secretary	11/01/05	
Robert L. Putsock	Assistant Secretary and Assistant Treasurer	6/25/01 6/25/01	

Incorporation Information:

State of Incorporation: Ohio;  
Charter No. 717546

Date of Incorporation: January 29, 1988

ID #34-1586390

Shareholder:

Coal Resources Holdings Co.	10/21/03	
Robert E. Murray	1/29/88	10/21/03

Directors:

Robert E. Murray		
Henry W. Fayne		
Andrew Weissman		
Richard L. Lawson		
Michael D. Loiacono	12/20/05	04/23/07
Robert D. Moore	04/23/07	

Revised  
5/10/07

**CONSOLIDATED LAND COMPANY**

29325 Chagrin Boulevard  
Suite 300  
Pepper Pike, Ohio 44122

Officers:

Robert D. Moore	President	8/11/04
Robert D. Moore	Treasurer and Assistant Secretary	6/25/01 6/25/01
Michael O. McKown	Secretary	3/1/05
Elmer A. Mottillo	Assistant Secretary	8/22/03

Incorporation Information:

State of Incorporation	Ohio; Charter No. 00842696
Date of Incorporation	April 12, 1993
ID #34-1769562	

<u>Shareholder:</u>	Murray Energy Corporation (100%)	6/1/01
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<u>Director:</u>	Robert D. Moore	8/11/04
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Revised  
3/6/07

**ENERGY RESOURCES, INC.**

P. O. Box 259  
R. D.#2, Fermantown Road  
Brockway, PA 15824

Officers:

Stanley T. Piasecki	President and Chief Executive Officer	8/11/04
Elmer A. Mottillo	Treasurer	8/22/03
Michael O. McKown	Secretary	3/1/05
Charles E. Shestak	Assistant Secretary	4/30/93

Incorporation Information:

State of Incorporation	Pennsylvania; PA Entity #762734
Date of Incorporation	September 14, 1982
ID #31-1044044	

Shareholder: Mill Creek Mining Company

Director: Stanley T. Piasecki 8/11/04

Revised 2/14/05

**THE HOCKING VALLEY RESOURCES COMPANY**

29325 Chagrin Boulevard  
Suite 300  
Pepper Pike, Ohio 44122

Officers:

P. Bruce Hill	President	3/1/05
Michael D. Loiacono	Secretary and Treasurer	4/05/93

Incorporation Information:

State of Incorporation	Ohio; Charter No. 755531
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Date of Incorporation	August 25, 1989
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ID #34-1635301

<u>Shareholder:</u>	Ohio Valley Resources, Inc.
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<u>Director:</u>	Robert E. Murray	4/05/93
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Revised  
3/6/07

**KENAMERICAN RESOURCES, INC.**

101 Prosperous Place  
Suite 125  
Lexington, Kentucky 40509

Officers:

		<u>Begin</u>	<u>End</u>
Robert N. Sandidge	President	12/16/06	
Dennis W. Bryant	President/Manager	10/1/05	12/16/06
B. J. Cornellius	Senior Vice-President--Sales	11/1/05	
James R. Turner, Jr.	Treasurer	3/1/05	
Robert D. Moore	Assistant Treasurer	3/1/05	
Michael O. McKown	Secretary	2/13/06	

Incorporation Information:

State of Incorporation      Kentucky;  
   Charter No. 0331655

Date of Incorporation      June 9, 1994

ID #61-1264385

Shareholder:                      Mill Creek Mining Company

Director:                              Robert E. Murray                      6/1/05

Revised  
3/6/07

**MAPLE CREEK MINING, INC.**

**Principal Office:**

29325 Chagrin Boulevard  
Suite 300  
Pepper Pike, Ohio 44122

981 Route 917  
Bentleyville, Pennsylvania 15314

Officers:

		<u>Begin</u>	<u>End</u>
Paul B. Piccolini	President	4/28/06	
Ronnie D. Dietz	Vice President and Treasurer	3/1/05	
Michael B. Gardner VACANT	Secretary	3/1/05	5/01/07
Roberta K. Heil	Assistant Secretary	11/01/99	

Incorporation Information:

State of Incorporation	Pennsylvania; PA Entity #2607113
Date of Incorporation	November 9, 1994
ID #25-1755305	

<u>Shareholder:</u>	Sunburst Resources, Inc.	1/11/95
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<u>Director:</u>	Robert E. Murray
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MILL CREEK MINING COMPANY

P. O. Box 259  
R. D. #2, Fermantown Road  
Brockway, PA 15824

Officers:

		<u>Begin</u>	<u>End</u>
Charles E. Shestak	President	8/18/98	
James R. Turner, Jr.	Treasurer	3/1/05	
Robert D. Moore	Treasurer	6/25/01	3/1/05
Robert D. Moore	Assistant Treasurer	3/1/05	
Michael O. McKown	Secretary	3/1/05	
Michael E. Elliott	Secretary	8-18-98	3/1/05
Robert L. Putsock	Assistant Secretary and Assistant Treasurer	6/25/01 6/25/01	

Incorporation Information:

State of Incorporation      Pennsylvania;  
PA Entity #0007447787

Date of Incorporation      December 1, 1981

Certificate of Amendment      July 7, 1988;  
#8854525

ID #31-1040986

Shareholder:      Coal Resources, Inc.

Director:      Robert E. Murray      5/14/04

Revised  
3/6/07

**MONVALLEY TRANSPORTATION CENTER, INC.**

P. O. Box 135  
1060 Ohio Avenue  
Glassport, Pennsylvania 15045

Officers:

Paul B. Piccolini	President	4/28/06
James R. Turner, Jr.	Secretary and Treasurer	3/1/05

Incorporation Information:

State of Incorporation	Pennsylvania; PA Entity #856918
Date of Incorporation	February 15, 1985
ID #25-1490495	

Shareholders: Pennsylvania Transloading, Inc.

Directors: Robert E. Murray and  
Michael D. Loiacono 11/01/99

MURRAY ENERGY CORPORATION

29325 Chagrin Boulevard, Suite 300  
Pepper Pike, Ohio 44122

Officers:

		<u>Begin</u>	<u>End</u>
Robert E. Murray	Chairman, President, & Chief Executive Officer	02/23/01	
John R. Forrelli	Vice President	12/18/03	12/17/04
Robert D. Moore	Vice President & Chief Financial Officer	12/17/04	
P. Bruce Hill	Vice President/Human Resources	04/23/07	
Michael D. Loiacono	Treasurer	12/18/03	
Robert D. Moore	Chief Financial Officer	02/23/01	
Michael O. McKown	CFO	12/20/05	04/23/07
	Secretary	04/23/07	
		02/23/01	

Incorporation Information:

State of Incorporation           Ohio;  
  Charter No. 1211519

Date of Incorporation           February 23, 2001

ID #34-1956752

Shareholder:

Robert E. Murray	02/23/01	10/21/03
Murray Energy Holdings Co. 100%	10/21/03	

Directors:

Robert E. Murray	02/23/01	
Michael D. Loiacono	01/28/05	04/23/07
Henry W. Fayne	01/28/05	
Richard L. Lawson	01/28/05	
Andrew D. Weissman	10/23/03	
Robert D. Moore	04/23/07	

Revised 5/10/07

29325 Chagrin Boulevard, Suite 300  
Pepper Pike, Ohio 44122

MURRAY ENERGY HOLDINGS CO.

Officers:

Robert E. Murray	President & CEO	6/30/03	11/29/05
Scott Boyle	President & CEO	11/29/05	12/20/05
Michael D. Loiacono	President & CEO	1/10/05	4/23/07
Robert D. Moore	President & CEO	4/23/07	
Michael D. Loiacono	Treasurer	1/10/05	
		6/30/03	
Michael O. McKown	Secretary	6/30/03	

Incorporation Information:

State of Incorporation Delaware;  
Charter No. 3676958

Date of Incorporation June 27, 2003

ID # 20-0100463

Shareholders:

Robert Eugene Murray  
Robert Edward Murray  
Jonathan Robert Murray  
Ryan Michael Murray  
Fifth Third Bank of  
Northeast Ohio, Trustee

Directors:

Robert E. Murray	6/30/03	
Michael D. Loiacono	6/30/03	4/23/07
Michael O. McKown	6/30/03	
Robert D. Moore	4/23/07	

**OHIOAMERICAN ENERGY INCORPORATED**

29325 Chagrin Boulevard  
Suite 300  
Pepper Pike, Ohio 44122

Officers:

D. Michael Jamison	President	5/1/05
Michael O. McKown	Secretary	5/1/05
Robert D. Moore	Treasurer	5/1/05
Elmer A. Mottillo	Assistant Treasurer	6/30/06

Incorporation Information:

State of Incorporation	Ohio
Date of Incorporation	February 1, 2005
ID # 20-3044610	Ohio Charter No. 1518533

Director: Robert E. Murray 5/1/05

Shareholder: Murray Energy Corporation 5/1/05

Revised  
3/6/07

## THE OHIO VALLEY COAL COMPANY

**Principal Office:**  
56854 Pleasant Ridge Road  
Alledonia, Ohio 43901

29325 Chagrin Boulevard  
Suite 300  
Pepper Pike, Ohio 44122

### Officers:

		<u>Begin</u>	<u>End</u>
Vacant	President	11/4/05	
Paul B. Piccolini	Vice President	1/1/07	
Ronnie D. Dietz	Treasurer, Assistant Secretary and Corporate Comptroller	3/1/05	
Michael B. Gardner	Secretary	3/1/05	5/01/07
Roberta K. Heil	Assistant Secretary	11/01/99	
Bonnie M. Froehlich	Assistant Secretary and Assistant Treasurer	6/25/01 6/25/01	

### Incorporation Information:

State of Incorporation	Ohio; Charter No. 384971
Date of Incorporation	June 6, 1969
Certificate of Amendment	October 4, 1988; #201274
ID #34-1041310	

Shareholder: Ohio Valley Resources, Inc.

Director: Robert E. Murray

Revised  
5/2/07

**OHIO VALLEY RESOURCES, INC.**

29325 Chagrin Boulevard  
Suite 300  
Pepper Pike, Ohio 44122

Officers:

		<u>Begin</u>	<u>End</u>
Paul B. Piccolini	President	4/28/06	
John Forrelli	President	11/1/99	4/28/06
Ronnie D. Dietz	Treasurer, Assistant Secretary and Corporate Comptroller	3/1/05	
Michael D. Loiacono	Treasurer, Assistant Secretary and Corporate Comptroller	3/10/95	4/28/06
VACANT	Secretary	3/1/05	05/01/07
Stephen Ellis	Secretary	3/10/95	3/1/05

Incorporation Information:

State of Incorporation      Ohio;  
   Charter No. 721514

Date of Incorporation      March 29, 1988

ID #34-1586391

Shareholders:

Murray Energy Corporation	6/1/01	
(100%)		
Robert E. Murray	3/10/95	6/1/01

Director:

Robert E. Murray

Revised  
3/6/07

56854 Pleasant Ridge Road  
Alledonia, Ohio 43902

## THE OHIO VALLEY TRANSLOADING COMPANY

### Officers:

		<u>Begin</u>	<u>End</u>
Vacant	President	11/4/05	
Paul B. Piccolini	Vice-President	1/1/07	
Ronnie D. Dietz	Treasurer, Assistant Secretary and Corporate Comptroller	3/1/05	
Michael B. Gardner	Secretary	3/1/05	05/01/07
Roberta K. Heil	Assistant Secretary	9/01/00	

### Incorporation Information:

State of Incorporation	Ohio; Charter No. 727835
Date of Incorporation	June 29, 1988
ID #34-1611209	

### Shareholder:

Ohio Valley Resources, Inc.

### Director:

Robert E. Murray 4/06/93

Revised  
3/6/07

## THE OKLAHOMA COAL COMPANY

29325 Chagrin Boulevard  
Suite 300  
Pepper Pike, Ohio 44122

### Officers:

		<u>Begin</u>	<u>End</u>
Paul B. Piccolini	President	4/28/06	
Gregory C. Smith	President	11/1/99	4/28/06
Michael O. McKown	Secretary	3/1/05	
Gregory A. Gorospe	Secretary	9/15/94	11/1/99
James R. Turner, Jr.	Treasurer and Assistant Secretary	3/1/05	
Kathleen Bednarek	Treasurer	6/20/00	6/26/00
Robert L. Putsock	Assistant Secretary	1/10/03	
Kathleen Bednarek	Assistant Secretary	9/3/96	6/26/00

### Incorporation Information:

State of Incorporation      Oklahoma;  
Charter No. DB00477836

Date of Incorporation      April 17, 1989

Licensed in Ohio              February 27, 1991;  
FL 790739

ID #34-1673480

Shareholder:                      The American Coal Sales Company

Director:                              Robert E. Murray

Revised  
3/6/07

29325 Chagrin Boulevard  
Suite 300  
Pepper Pike, Ohio 44122

**ONEIDA COAL COMPANY, INC.**

Officers:

		<u>Begin</u>	<u>End</u>
Robert D. Moore	President and Treasurer	06/25/01	
Robert L. Putsock	Assistant Secretary	11/01/99	
Michael O. McKown	Secretary	06/25/01	
		03/1/05	

Former Officers:

John Blaine Earles	Vice-President	2/28/92	7/2/93
Tivis Arnold Graybeal	Secretary	2/28/92	4/28/94
Anthony Carl Laplaca	Secretary	4/28/94	11/1/99
Joseph R. Bourgo	Vice-President	9/1/92	10/20/00
Joseph R. Bourgo	Treasurer	4/28/94	10/20/00
Norma Jean Mccourt	Assistant Secretary	4/28/94	11/1/99

Incorporation Information:

State of Incorporation      West Virginia;  
Charter No.  
00000020004097TAX

Date of Incorporation      August 29, 1983

ID #62-1011712

Shareholder:

West Virginia Resources, Inc.    2/28/92  
(100%)  
Daryl Napier      02/28/92

Director:

Robert E. Murray

Revised 5/2/07

125 Old Farm Drive  
Pittsburgh, PA 15239

**PENNAMERICAN COAL, INC.**

Officers:

P. Bruce Hill	President	6/25/01
Robert D. Moore	Treasurer and Secretary	6/25/01 6/25/01
Robert L. Putsock	Assistant Secretary	6/25/01

Incorporation Information:

State of Incorporation	Pennsylvania; PA Entity #2545905
Date of Incorporation	September 13, 1993
ID #25-1722115	

<u>Shareholder:</u>	Mill Creek Mining Co.	11/08/93
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<u>Director:</u>	Robert E. Murray
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Revised 2/14/05

PENNAMERICAN COAL LP

125 Old Farm Drive  
Pittsburgh, PA 15239

Partners:

Pinski Corp.	Managing Partner	8/19/96
PennAmerican Coal, Inc.	Limited Partner	7/8/98

EIN# 25-1800809  
Partnership Effective 7/8/98

Revised  
3/6/07

**PENNSYLVANIA TRANSLOADING, INC.**

29325 Chagrin Boulevard  
Suite 300  
Pepper Pike, Ohio 44122

Officers:

Paul B. Piccolini	President	4/28/06
James R. Turner, Jr.	Treasurer	3/1/05
Michael O. McKown	Secretary	3/1/05

Incorporation Information:

State of Incorporation                      Ohio;  
Charter No. 736747

Date of Incorporation                      November 18, 1988

Qualified:                                      Pennsylvania;  
December 28, 1988

Certificate of Authority                      No. 8898868

ID #34-1603748

Shareholder:                                      Sunburst Resources, Inc.                      04/01/96  
(100%)

Director:    Robert E. Murray

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Revised  
5/10/07

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<sup>a</sup> Sunburst Resources, Inc. has always been a shareholder and has no relation to Consolidated Land Company.

125 Old Farm Drive  
Pittsburgh, PA 15239

PINSKI CORP.

Officers:

P. Bruce Hill	President and General Manager	9/05/00
Robert D. Moore	Secretary and Treasurer	6/25/01 6/25/01
Robert L. Putsock	Assistant Treasurer and Assistant Secretary	6/25/01 6/25/01

Incorporation Information:

State of Incorporation	Pennsylvania PA Entity #002710766
Date of Incorporation	August 19, 1996
ID #25-1800870	

Shareholder:

PennAmerican Coal, Inc.

Director:

Charles E. Shestak

Revised 2/14/05

SPRING CHURCH COAL COMPANY

125 Old Farm Drive  
Pittsburgh, PA 15239

Officers:

P. Bruce Hill	President	6/25/01
Robert D. Moore	Secretary and Treasurer	6/25/01 6/25/01
Robert L. Putsock	Assistant Treasurer	1/02/03
Elmer A. Mottillo	Assistant Secretary	1/02/03

Incorporation Information:

State of Incorporation	Pennsylvania; PA Entity #000696663
Date of Incorporation	November 2, 1979
ID #25-1372128	

Shareholder: Mill Creek Mining Company

Director: Charles E. Shestak

Revised: 2/14/05

586 National Road  
Wheeling, West Virginia 26003

**SUNBURST RESOURCES, INC.**

Officers:

		<u>Begin</u>	<u>End</u>
Paul B. Piccolini	President	4/28/06	
Ronnie D. Dietz	Treasurer	3/1/05	
Michael B. Gardner	Secretary	3/1/05	05/01/07

Incorporation Information:

State of Incorporation      Pennsylvania;  
PA Entity #2616384

Date of Incorporation      January 10, 1995

ID #25-1766427

Shareholder:      Ohio Valley Resources, Inc.      4/01/97

Director:      Robert E. Murray

Revised  
3/7/07

TDK COAL SALES, INCORPORATED

P. O. Box 259  
R. D. #2, Fermantown Road  
Brockway, PA 15824

Officers:

Stanley T. Piasecki	President and Chief Executive Officer	8/11/04
Elmer A. Mottillo	Treasurer	8/22/03
Michael O. McKown	Secretary	3/1/05
Charles E. Shestak	Assistant Secretary	2/01/99

Incorporation Information:

State of Incorporation	Pennsylvania; PA Entity #00758582
Date of Incorporation	June 28, 1982
ID #25-1422374	

Shareholder:

Energy Resources, Inc.

Director:

Stanley T. Piasecki 8/11/04

Revised: 02/14/05

**UMCO ENERGY, INC.**

29325 Chagrin Boulevard  
Suite 300  
Pepper Pike, Ohio 44122

Officers:

		<u>Begin</u>	<u>End</u>
Paul B. Piccolini	President	4/28/06	
Ronnie D. Dietz	Treasurer and Assistant Secretary	3/1/05	
Michael B. Gardner	Secretary Vice-President	3/1/05 5/3/06	05/01/07

Incorporation Information:

State of Incorporation      Pennsylvania;  
PA Entity #1072295

Date of Incorporation      December 29, 1988

ID #52-1615668

Shareholder:              Maple Creek Mining, Inc.  
and Toni J. Southern

Director:                    Robert E. Murray

Revised  
3/6/07

**UTAHAMERICAN ENERGY, INC.**

P.O. Box 902  
6750 North Airport Road  
Price, Utah 84501

Officers:

		<u>Begin</u>	<u>End</u>
P. Bruce Hill	Chief Executive Officer	8/18/06	
P. Bruce Hill	President	12/16/06	
Douglas H. Smith	President	8/18/06	12/16/06
Clyde I. Borrell	President	7/31/98	5/19/06
Robert D. Moore	Treasurer	8/18/06	
Michael O. McKown	Secretary	8/18/06	
Marsha Baker Kocinski	Secretary	7/31/98	6/25/02
Barbara Boyce	Secretary	7/31/98	11/01/99
Jay Marshall	Manager	7/31/98	8/18/06

Incorporation Information:

State of Incorporation                      Utah;  
Charter No. 212673

Date of Incorporation                      July 30, 1998

ID #34-1874726

Shareholders:                              Murray Energy Corporation  
(100%)

Directors:                                  Robert E. Murray                      7/31/98  
P. Bruce Hill                              8/18/06

Revised  
5/2/07

**WEST VIRGINIA RESOURCES, INC.**

953 National Road  
Suite 207  
Wheeling, West Virginia 26003

Officers:

		<u>Begin</u>	<u>End</u>
Neil Kok	President	10/2/06	
Robert D. Moore	President	10/20/00	10/20/00
Robert E. Murray	President, CEO	12/27/91	10/20/00
Anne Besece	Treasurer and Secretary	10/2/06	
Robert L. Putsock	Treasurer and Assistant Secretary	6/25/01	10/2/06
Robert E. Murray	Treasurer	12/27/91	6/25/01
Michael O. McKown	Secretary	3/1/05	10/2/06
Anthony Carl Laplaca	Secretary	12/27/91	3/1/05

Incorporation Information:

State of Incorporation: West Virginia;  
Charter No. 00913610154813604

Date of Incorporation: December 27, 1991

ID #55-0713676

Shareholder: Mill Creek Mining Company 12/27/91  
(100%)

Director: Robert E. Murray

Revised  
3/6/07

**WYAMERICAN ENERGY, INC.**

29325 Chagrin Boulevard  
Suite 300  
Pepper Pike, Ohio 44122

Officers:

Robert D. Moore	President, Treasurer and Secretary	5/3/06
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Incorporation Information:

State of Incorporation	Wyoming; Charter No. 1998003378171
Date of Incorporation	September 22, 1998
ID #34-1875051	

Shareholder: Murray Energy Corporation

Director: Robert E. Murray

Revised  
3/7/07

APPENDIX 1-11

VIOLATION INFORMATION

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# **VIOLATION INFORMATION**

Information updated to February, 2008

Name of Operation		Identifying number for operation		Federal or State Permit Number	MSHA ID Number			
Tower				007/019	42-01750 42-01474 42-02028 42-01864			
Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term. etc.)	Abatement Action	Appeal Y or N
9/27/2006	10000	DOGM			Failure to renew	9/29/2006	terminated	N
10/6/2006	10002	DOGM			Failure to submit fan plan	12/4/2006	terminated	N
2/7/2007	10003	DOGM			Non coal Waste	2/12/2007	terminated	N
7/6/2007	10007	DOGM			Vehicle in ditch	7/06/07	terminated	N
8/27/2007	10008	DOGM			vehicle in ditch	8/28/2007	terminated	N
8/27/2007	10009	DOGM			no sed pond inspection	8/27/07	terminated	N

Name of Operation	Identifying number for operation	Federal or State Permit Number	MSHA ID Number
		015/032	42-01715

Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term, etc.)	Abatement Action	Appeal Y or N
8/19/2004	Nov4-49-4-1	DOGIM			Parking in Forest	Term	moved vehicle	N
9/13/2004	Nov4-49-5-1	DOGIM			non-coal waste	Term	moved waste	N
9/8/2005	Nov5-49-2-1	DOGIM			Failure annual subsidence	Term		N
10/4/2006	#10001	DOGIM			Culvert Plugged	Term	Unplugged	N
9/6/2007	10014	DOGIM			no sed pond inspection	TERM	Inspected	N
9/10/2007	10015	DOGIM			plugged culvert	term	unplugged	N
1/14/2008	10016	DOGIM			mine water stored in pond	Term	rerouted water	N
1/14/2008	10017	DOGIM			gravity flow from portals	Term	stopped flow	N
2/06/2008	10019	DOGIM			failure to request permit renewal			





Name of Operation		Identifying number for operation					Federal or State Permit Number	MSHA ID Number
UMCO		74645					PA 63921301	3608375
Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term, etc.)	Abatement Action	Appeal Y or N
9/1/2004	426787	DMRM		63921301	86.13	No resolution		N
9/3/2004	426786	DMRM		63921301	89.142a(b)	No resolution		N
9/20/2004	427936	DMRM		63921301	89.142a(b)	No resolution		N
1/4/2005	445603	Air Quality		63921301	25.127.25	ADM. Close Out		N
1/13/2005	445603	Air Quality		63921301	25.127.25	ADM Close Out		N
3/18/2005	445603	Air Quality		63921301	25.127.25	ADM Close Out		N
6/10/2005	466153	DEP		63921301	25.89.21	No resolution		N
7/15/2005	448412	DEP		63921301	25.89.68	Abated		N
7/15/2005	448413	DEP		63921301	25.89.83(a)	Abated		N
10/10/2006	499479	PADEP		63921301	89.142a(f)	No resolution		Y

Name of Operation		Identifying number for operation				Federal or State Permit Number	MSHA ID Number
Maple Creek		4244				63723707	36-00970
Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term. etc.)	Abatement Action
5/7/2004	394440	MCM		63841302	89.142A.F.1	Abated	
5/12/2004	394880	MCM		63841302	89.142A.F.1	No resolution	
5/13/2004	395344	MCM		63841302	89.142A.F.1	No resolution	
5/13/2004	395345	MCM		63841302	89.142A.F.1 V	No resolution	
5/13/2004	395346	MCM		63841302	89.142A.E	Abated	
5/7/2004	394440	MCM		63841302	89.142A.F.1	Abated	
7/7/2004	401714	MCM		63841302	89.142A.F.1	No resolution	
7/30/2004	421806	MCM		63841302	SMCRA.18.6	Abated	
8/26/2004	425804	MCM		63841302	89.142A.F.1	No resolution	
8/13/2004	426148	MCM		63723707	86.13	Abated	
9/8/2004	427302	MCM		63723707	90.102	Abated	
9/10/2004	427564	MCM		63723707	90.102	Abated	
9/13/2004	427565	MCM		63723707	90.102	Abated	
9/14/2004	427566	MCM		63723707	90.102	Abated	
9/14/2004	427567	MCM		63723707	90.112	Abated	
10/19/2004	432068	MCM		63723707	90.102	Abated	
7/29/2005	469866	DEP		63723707	89.142a(b)(1)(iii)	No Resolution	
12/1/2005	478486	PADEP		63841302	89.145a(b)	No Resolution	
12/1/2005	478487	PADEP		63841302	89.145a(f)(1)(v)	No Resolution	
12/1/2005	478488	PADEP		63841302	89.145a(b)	No Resolution	
1/9/2006	480660	PADEP		63841302	1396.18(f)	Abated	
6/12/2006	491619	PADEP		6381302	89.142a(e)	No Resolution	Y





<b>Name of Operation</b>	<b>Identifying number for operation</b>	<b>Federal or State Permit Number</b>	<b>MSHA ID Number</b>
Energy Resources, Inc.	470	License # 1465	360 269 5

Charlie Shestak

Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term. etc.)	Abatement Action	Appeal Y or N
5/11/2004	143258	PaDEP	ERI	24010101	87.147	Abated	Corrected	N
8/26/2004	167665	PaDEP	ERI	24010101	87.140	Abated	Corrected	N
8/30/2004	168590	PaDEP	ERI	24970102	87.147	Abated	Corrected	N
7/6/2004	147120	PaDEP	ERI	33901602	89.52	Abated	Corrected	N
7/31/2006	211989	PaDEP	ERI	17841607	86.152	Abated	Corrected	N
4/11/2006	486936	PaDEP	ERI	17930120	87.157	Abated	Corrected	N



David Bartsch

Name of Operation		Identifying number for operation		Federal or State Permit Number	MSHA ID Number			
Belmont Coal Company				D-0241/D-1020	33-04397/33-03048			
Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term. etc.)	Abatement Action	Appeal
2/24/2004	24541	DMR	Mine	D-0241	Gullies exist in regraded	Terminated	regraded	Y or N
								N

David Bartsch

Name of Operation		Identifying number for operation			Federal or State Permit Number	MSHA ID Number		
The Ohio Valley Coal Co.		Powhatan No. 6 Mine			State - D-33-01159 0360			
Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term. etc.)	Abatement Action	Appeal Y or N
8/2/2004	19662	DMRM	Mine D-0360		Failure to maintain sediment control	Terminated	Cleaned Ditch	N
5/23/2006	19656	DMRM	Mine D-0360		Failure to maintain the perimeter of diversion ditch	Terminated	Cleaned Ditch	N
11/30/2006	28473	DMRM	Mine D-0360		Undirected Drainage	Terminated	Cleaned Ditch	N
11/30/2006	28484	DMRM	Mine D-0360		Coal Blocking Diversion Ditch	Terminated	Cleaned Ditch	N

Name of Operation			Identifying number for operation					Federal or State Permit Number	MSHA ID Number
American Energy Corp							D-0425	33-01070	
Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation	Status (Abated, Term. etc.)	Abatement Action	Appeal Y or N	
1/25/2005	21807	ODNR		D-0425	subsidized residnet ran out of water	Terminated	filled tank with water	N	
4/27/2005	19696	ODNR		D-0425	Coal located outside stockpile area	Terminated	cleaned coal	N	
4/29/2005	19695	ODNR		D-0425	Maintenance on pond 018	Terminated	cleaned out pond	N	
4/27/2005	19697	ODNR		D-0425	drainage from property not entering sumps	Terminated	construct sumps	N	
10/3/2005	21871	ODNR		D-0425	Failure to sub specific repairs ( landowner)	Active		N	
6/15/2006	21860	ODNR		D-1159	Segregate Prim Farmland soils	Active	Waiting on ODNR, All information submitted	N	
Aug-05	CO-1726	ODNR		D-0425	Uncontrolled discharge ( Slurry )	Active	Will submit revised Plan Mtd Month	N	

Name of Operation		Identifying number for operation				Federal or State Permit Number	MSHA ID Number
Date Issued	Violation Number	Name of Issuing Agency	Person Issued To	Permit Number	Brief Description of Violation		
					Galatia Mine & Millennium Portal	IDNR Mining Permit #2 and #352	11-02752
9/27/2004	37-1-04	IDNR	DeNeal	Permit #2	Failure to submit groundwater report on schedule	Terminated	N
4/13/2005	37-01-05	IDNR	DeNeal	Permit #2	Failure to submit w/g mining maps	Terminated	N
5/12/2005	37-02-05	IDNR	DeNeal	Shadow Area 9	failure to complete subsidence mitigation in contemporaneous manner.	Modified	N
6/17/2005	37-03-05	IDNR	DeNeal	352	broken waterline-failure to prevent minepumpage from passing through sediment pond before going offsite	Terminated	N

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The following companies either did not have any violations in the last three years or do not have permits.

Oklahoma Coal Company

KenAmerican Resources, Inc.

Onieda Coal, Inc.

MonValley Transportation Center, Inc.

Mill Creek Mining Co.

Pinski Corp

American Compliance Coal Inc.

Coal Resources Inc.

PA Transloading, Inc.

West Virginia Resources Inc.

WildCat Loadout

American Coal Sales Co.

Hocking Valley Resources Co..

**LIST OF APPENDICES**  
**DESCRIPTION**

**APPENDIX NUMBER**

APPENDIX 2-8

Laboratory Analysis, Native Fill and Imported Fill

APPENDIX 2-9

Letter Regarding Noxious Weeds in Fill

APPENDIX 2-10

Letter Regarding Prime Farmland

APPENDIX 2-11

Laboratory Analysis, South Crandall Portals Tunneling Material

Note: Bold number plates and appendices are included with this submittal.

After the lower pad of the Expansion Area was completed to finish grade, the permanent coal storage area was prepared. Topsoil material was removed from Map Unit C (Figure 8B), a small area of the adjacent slope near the location where the southern flank of the coalpile rests against the existing hillside. This topsoil was salvaged under the direction of Pat Johnston, soil scientist, to assure optimum recovery of the soil resource in this area. The soil was stockpiled at topsoil stockpile #4 for storage until it is utilized during final reclamation. Between all salvage areas, about 3,880 cubic yards of topsoil was collected and stockpiled at stockpile #4 for final reclamation. This amount exceeded the original projection of 3,480 cubic yards by 400 cubic yards.

During coal storage and stockpiling activities, coal was pushed up beyond area C onto an area where topsoil had not been stripped. In order to abate violations N98-45-1-1 and N98-45-3-1, GENWAL has removed the coal from the area where topsoil had not been removed on the south slope. (The approximate area is identified as Map Unit F on Figure 8B.) The previously undisturbed topsoil area, which had been covered with coal, was cleaned thoroughly using the best technology available. The topsoil was then removed under the supervision of Pat Johnston, reclamation specialist/soil scientist between August 5- August 18, 1998 and transported to topsoil stockpile #4. The topsoil was removed from the slope area that was and could potentially be affected by the coal stockpile in the future. Approximately 690 cubic yards (69 truck loads) was salvaged from the slope. The visible topsoil depth averaged 3-4 inches over this area but 8-9 inches was actually removed due to the steepness of the slope and the operational constraints of the equipment on the steep slope.

During phase 2 of the surface expansion, three portals will be established on the south slope of the mine yard. The new portals will be constructed along the south side of the upper pad of the existing mine-yard (refer to Plate 5-3). This area is presently serving as the parking lot and material storage yard. The new portals will consist of an intake portal, a fan portal, and a belt portal. The intake portal will be used to accommodate fresh air intake into the mine, and also to provide primary travel access into the mine for employees and materials. The fan portal will support a ventilation fan which will suck return ventilation air out of the mine. The belt entry will be located south of the existing coal pile and will contain the main conveyor belt hauling coal out of the mine.

Construction of the portals will be done within the existing permitted disturbed area boundary. The existing disturbed area boundary will not be increased. The existing sediment pond has been sized to accommodate this new portal construction area, so no changes to the sediment pond

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will be required. ~~Except for adding a new culvert under the access ramp to the new portal, none of the previously approved and existing surface drainage structures will be affected.~~

~~In the area of the new south portals, the base of the coal seam is located approximately 17' above (i.e., higher than) the level of the existing mine-yard. An earthen ramp will be constructed on the existing pad to gain access up to the level of the coal seam. In the area of the intake and fan portals, the existing hill slope will be excavated with a back-hoe to expose the coal seam in preparation for construction of the portal canopies. A small elevated pad will also be constructed in front of the fan portal on which the mine fan can later be installed. This fan pad will be constructed as a continuation of the access ramp leading to the intake portal. The access ramp to the intake portal and the fan pad will be constructed partially using the earthen material generated in the process of facing up the coal seam and partially using fill material hauled in from an off-site borrow source. (See Appendix 2-8 for laboratory analysis of the native fill and the imported fill) The imported fill material will come from the same source (i.e., the same borrow pit) that supplied the pad material for the recently completed surface expansion. This borrow site would be the Nielson Construction commercial borrow pit located in Huntington Canyon below the power plant. The source of fill material has been determined to be free of noxious weeds (see Appendix 2-9). As the access ramp is being constructed a new culvert (C-11A) will be added to handle sheet flow drainage from the upper material yard (see Plate 7-5). It is estimated that approximately 3500 cubic yards of fill will be needed to construct the access ramp/fan pad. This quantity will be verified after construction on the as-built plans.~~

~~As the access ramp and fan pad are constructed from the existing yard surface up to the level of the coal seam outcrop, some of the new fill material will be placed up against the intervening existing undisturbed slope. Part of the access ramp/fan pad will therefore be constructed on top of the existing slope. Before this ramp/pad is constructed, topsoil along the existing slope below the fan pad and access ramp will be protected in-place using a geotextile cover placed along the undisturbed slope under the fill material. This topsoil protection technique would be identical to the approved method used during construction of the existing surface expansion facilities (Phase I surface expansion). It is estimated that approximately 3366 square feet (0.08 acres) of in place soil will be protected by geotextile during construction of the south portals. A description of the geotextile to be used is given in Appendix 2-7.~~

~~After the access ramp and fan pad have been constructed (and the underlying in-place topsoil protected with geotextile), the portal excavation can begin. Prior to starting the portal cuts, the existing topsoil at the portal sites will first be salvaged. Topsoil conditions along the south slope portal area is similar to the conditions at the adjacent coal pile area where topsoil was salvaged during August, 1998. This topsoil salvage effort is described in appendix 2-5, Part II, prepared by Pat Johnson, soil scientist. At that area, according to Ms. Johnson's report, the depth of true topsoil was 3" but an average of 8" - 9" of material was taken due to the operating nature of the backhoes which were employed in the salvage process. In addition, an intensive soil inventory and site investigation was performed on the south slope on August 18, 1998 and is included in Appendix 2-6.~~

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In order to minimize the area of additional disturbance associated with the construction of the south portals these portals will be constructed by excavating individual pockets into the hillside for each portal rather than along a common highwall. By utilizing individual pocket cuts for the portals the total area of new disturbance is expected to be less than 4500 sq. ft. (0.11 acres). Topsoil will be removed from the areas of the south portal pocket cuts prior to excavation as described in Section 2.31.1. According to the Nyenhuis survey, the upper 2 feet (24 inches) is suitable for salvage. Based on the Nyenhuis soil survey it is anticipated that approximately 9000 cu. ft. (333 yds.) of topsoil will be salvaged from the intake and fan portal cuts.

The salvaged topsoil will be stored on the existing topsoil pile #4 located off-site at the bottom of Crandall Canyon. This topsoil pile is constructed on Forest Service land under a Special Use Permit issued on 8/17/87. This pile #4 was originally constructed in 1997 during Phase 1 of the surface facility expansion. At that time it was designed and constructed sufficiently large to accommodate the additional topsoil storage requirements for the Phase 2 south portal construction. The Forest Service has concurred with the addition of the south portal topsoil to this pile. All topsoil removal, salvage and storage will be over-seen, directed and monitored by an independent soils scientist or knowledgeable contractor approved by the Division. A report of the topsoil salvage operation will be prepared by the soil scientist and added to the MRP upon completion as Appendix 2-5, Part III.

After the portal sites have been faced up construction of the portal canopies will begin. These canopies will be constructed from steel I-beams and plate according to the MSHA guidelines. The canopies will be anchored to concrete footers. These canopies will provide a safe structure from which the miners can begin driving the entries back into the coal seam. After the intake and fan entries have been driven into the hillside and connected together underground with a cross-cut, work can then be started on construction of the mine fan installation. While the fan is being installed, the miners will drive the belt entry from inside the mine out to the belt portal. During this phase of development, mined coal will be moved away from the surface with a front-end loader, a mobile radial stacker, or some other temporary means of conveyance. After the belt portal connection is completed, a new conveyor truss will be installed from a concrete landing at the belt portal out to the existing coal pile. All coal from the mine will then be delivered directly to the existing coal pile and will be crushed and loaded on trucks through the existing coal handling facilities.

Power, water, communications, and other mine infrastructure will be supplied to the south portals as an extension of the pre-existing Crandall Canyon Mine facilities.

Figure 5-11 depicts a typical cross-section through the south portals, showing the pocket cut, access ramp, in-situ soil geotextile protection, and the portal canopy construction.

Plate 5-3 depicts that area of the south slope where the portals are proposed to be located during phase 2 expansion in mid-1999. Plate 5-3 also shows the cut slope disturbance in the southwest portion of the mine yard. The topography for this portion of the mine yard has been revised to reflect the as-built configuration. A side canyon drainage channel conveying undisturbed area runoff to the main Crandall Creek channel forms the western boundary of the mine yard in this area. Rip rap for the culvert inlet headwall was installed on both sides of the channel farther up the embankments than depicted on the proposed construction map. This additional rip rap was added

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to protect the main culvert inlet from erosion due to the side canyon drainage. Rip rap was added to the side channel to increase the integrity of the channel and to prevent the channel embankment from eroding thus allowing undisturbed drainage to enter the mine yard area. The same rip rap specifications used for the main undisturbed drainage inlet culvert and headwall were also used for armoring the side channel.

~~GENWAL is also considering a second possible option for constructing the south portal intake and fan portals. Instead of constructing a ramp up to the level of the coal seam, short tunnels will be driven from the existing yard level up to the coal seam. In this scenario the pocket cuts will be made into the hillside lower down at the same level as the existing pad. This level is approximately 15' below the base of the coal seam. Since the coal seam sits directly on top of the Star Point Sandstone, this sandstone out-crops at the existing yard level. Tunneling will begin in the sandstone and ramp up underground to the coal seam.~~

If the tunnels are driven at an incline of 10% they will be about 160' long to where they intersect the base of the coal seam. At 8' high and 20' wide, excavation of the two tunnels (intake and fan) would generate approximately 1900 cu yds. of material during construction. This tunnel excavation material will consist of sandstone mixed with coal. This excess material will be disposed of by placing it in a 6' deep layer along the existing fill bank located between the upper material yard and the coal storage pad. This embankment is part of the designated coal storage area and currently is covered with coal. Therefore, after the tunnel excavation material is layered onto the embankment, it too will be covered over by the active coal pile for the remaining life of the mine. Refer to Figure 13-a and 5-13b for more details of this tunneling construction option.

Upon final reclamation the tunnel excavation material will be hauled back into the mine tunnels where it would be sealed up prior to backfilling the portals. Backfilling and reclamation of the portal pocket cuts would be the same regardless of whether the ramp or tunnel option is selected. ~~If GENWAL elects the tunnel construction option, topsoil will be salvaged in exactly the same manner as described previously. The amount of topsoil salvaged, stored and redistributed would be the same regardless. If the tunnel option is selected, there would be no additional in-place topsoil required to be protected with geotextile, because there would be no fill material placed up against the hillside.~~

~~If this option is selected,~~ GENWAL commits to ensuring the protection of the hydrologic balance for surface and groundwater systems as required by R645-301-731. The tunnel excavation material will be tested for acid- and toxic-forming material and the analytical results of this testing will be presented to the Division. (Appendix 2-11) The hydrologic balance will be protected in the following manner.

- a) The excavation material will consist of fragmented Star Point sandstone. This sandstone

outcrops naturally in the minesite area and is one of the major geological features which determine the character of Crandall Canyon and many other canyons in the Wasatch Plateau. This predominant sandstone is not known to be acid- or toxic-forming anywhere in the Utah coalfields. However, further site-specific testing of the sandstone will be conducted prior to any construction.

- b) The proposed location of the material storage is on top of the existing pad fill. Any runoff from this area would report to the existing sediment pond.
- c) The existing pad fill in the proposed storage area varies between 10' and 40' thick over the bypass culvert and is densely compacted. This thickness of compacted fill material is sufficient to preclude any leaching downward into the bypass culvert or groundwater.

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Stockpile #4 will be constructed with topsoil removed from the surface expansion project. The stockpile will be located across the road and north of stockpile #3. This location was previously surveyed for cultural resources by Forest Service archeologist, Barbara Blackshear. No cultural resources were located. Soil survey information for this area is presented in Appendix 2-3A.

The pile area will accommodate approximately 5,000 cubic yards of soil material with sideslopes on a 3:1 slope and a top elevation of 6,997'. Approximately 4,756 cubic yards of material were salvaged from the surface expansion area. Approximately 333 cubic yards of additional material is expected to be salvaged from the south portals. Refer to Plates 2-5, 2-5A and 2-5B for design detail. These plates will be updated in the MRP to reflect the as-built configuration after construction of the south portals is complete. Refer to Plate 2-5C for the as-built drawing.

The topsoil and substitute topsoil materials are stored in Stockpile #4 and will be protected from erosion by a vegetative cover. Upon placement and configuration of the topsoil stockpile, two tons per acre of organic mulch and an approved seed mix was applied at the specified rate approved by the Division. The mulch and seed was applied to the topsoil stockpile in the early fall of 1997. Silt fence was placed around the perimeter of the pile.

### **2.32 Topsoil and Subsoil Removal**

All topsoil and subsoil, associated with the initial disturbance, were removed during the construction season of 1982. The volumes of salvaged topsoil and subsoil, included in Section 2.42, is 9,219 bank cubic yards. The topsoil was stored in four locations as shown on Plates 2-2, 2-2a, 2-3, and 2-5. The topsoil associated with the proposed culvert expansion will be removed and stockpiled according to approved plans. Areas showing soil removal are shown on Plate 2-4 and Figure 8B; and the stockpile area is shown on Plates 2-3 and 2-5.

### **2.33 Topsoil Substitute and Supplements**

Section 2.24 and 2.42 of this chapter address the substitute topsoil soils and their perspective locations.

### **2.34 Topsoil Storage**

All topsoil and subsoil from the initial disturbed area were removed and stored during the construction season of 1982. The volumes of salvaged topsoil and subsoil are included in Section 2.42 of this chapter. The topsoil was stored in four locations as shown on Plates 2-2, 2-2a, 2-3, and 2-5. Sections 2.31 and 2.42 of this chapter address the topsoil storage and location of the topsoil piles.

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## 2.44 Soil Stabilization

Before the topsoil is redistributed, the area to receive topsoil will be regraded and ripped to ensure positive contact and minimize slippage between the existing surface and the redistributed topsoil. The regraded area will be disced on slopes of less than 20% and scarified with a trackhoe on slopes greater than 20% until the grade becomes impractical for the equipment to operate. Topsoil will be redistributed in a manner that achieves an approximate, uniform stable thickness on a surface that will prevent excess compaction of the topsoil. The topsoil will be protected from wind and water erosion before and after it is reseeded. It is proposed that the topsoil will be redistributed with a front end loader and D-6 size dozer. Surface roughening techniques, such as gouging or deep pocking, will be used on the soil surface to minimize compaction and promote water harvest and conservation.

On slopes of 30% and less a wood fiber mulch of 1.5 tons per acre will be used which will be bonded with the soil using a tackifying agent. However, the steeper slopes south of Crandall Creek will be treated with a PAM chemical soil treatment to enhance moisture retention and relieve compaction. Then, the seed would be broadcast and hand raked into the soil surface. A soil inoculation treatment may also be incorporated into the soil to aid the re-establishment of soil bacteria, microhorizia and mycelium. Wood fiber mulch will be sprayed over the seed bed and then a bonded fiber matrix tackifier will be applied.

## 2.50 Performance Standards

All topsoil, subsoil and topsoil substitutes or supplements will be removed, maintained and redistributed according to the plan given under R645-301-230 and R645-301-240.

## 2.52 Stockpile Maintenance

All stockpiled topsoil, subsoil and topsoil substitutes or supplements will be located, maintained and redistributed according to plans given under R645-301-230 and R645-301-240. Stockpiled topsoil will be protected through a combination of berms, vegetative cover, strawbale dikes and/or silt fences. In addition, those piles adjacent to the main access road that could be impacted by salt used in ice removal will be closely monitored to determine if the vegetation is adversely impacted. In the event damage is in evidence, salt use will be suspended in those areas adjacent to topsoil piles. *(Note: after two decades of salting the road, no adverse affects on the vegetation on the topsoil pile has been observed, as noted in the annual reports. The amount of salt used on the road varies from year to year depending on the amount of snow fall. The salt (NaCl) used on this road is identical to the salt used by UDOT on Highway 31 running through Huntington Canyon.)*

**LIST OF APPENDICES**  
**DESCRIPTION**

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APPENDIX 2-9	Letter Regarding Noxious Weeds in Fill
APPENDIX 2-10	Letter Regarding Prime Farmland
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Note: Bold number plates and appendices are included with this submittal.

After the lower pad of the Expansion Area was completed to finish grade, the permanent coal storage area was prepared. Topsoil material was removed from Map Unit C (Figure 8B), a small area of the adjacent slope near the location where the southern flank of the coalpile rests against the existing hillside. This topsoil was salvaged under the direction of Pat Johnston, soil scientist, to assure optimum recovery of the soil resource in this area. The soil was stockpiled at topsoil stockpile #4 for storage until it is utilized during final reclamation. Between all salvage areas, about 3,880 cubic yards of topsoil was collected and stockpiled at stockpile #4 for final reclamation. This amount exceeded the original projection of 3,480 cubic yards by 400 cubic yards.

During coal storage and stockpiling activities, coal was pushed up beyond area C onto an area where topsoil had not been stripped. In order to abate violations N98-45-1-1 and N98-45-3-1, GENWAL has removed the coal from the area where topsoil had not been removed on the south slope. (The approximate area is identified as Map Unit F on Figure 8B.) The previously undisturbed topsoil area, which had been covered with coal, was cleaned thoroughly using the best technology available. The topsoil was then removed under the supervision of Pat Johnston, reclamation specialist/soil scientist between August 5- August 18, 1998 and transported to topsoil stockpile #4. The topsoil was removed from the slope area that was and could potentially be affected by the coal stockpile in the future. Approximately 690 cubic yards (69 truck loads) was salvaged from the slope. The visible topsoil depth averaged 3-4 inches over this area but 8-9 inches was actually removed due to the steepness of the slope and the operational constraints of the equipment on the steep slope.

During phase 2 of the surface expansion, three portals will be established on the south slope of the mine yard. The new portals will be constructed along the south side of the upper pad of the existing mine-yard (refer to Plate 5-3). This area is presently serving as the parking lot and material storage yard. The new portals will consist of an intake portal, a fan portal, and a belt portal. The intake portal will be used to accommodate fresh air intake into the mine, and also to provide primary travel access into the mine for employees and materials. The fan portal will support a ventilation fan which will suck return ventilation air out of the mine. The belt entry will be located south of the existing coal pile and will contain the main conveyor belt hauling coal out of the mine.

Construction of the portals will be done within the existing permitted disturbed area boundary. The existing disturbed area boundary will not be increased. The existing sediment pond has been sized to accommodate this new portal construction area, so no changes to the sediment pond will be required.

In the area of the new south portals, the base of the coal seam is located approximately 17' above (i.e., higher than) the level of the existing mine-yard.

Prior to starting the portal cuts, the existing topsoil at the portal sites will first be salvaged. Topsoil conditions along the south slope portal area is similar to the conditions at the adjacent coal pile area where topsoil was salvaged during August, 1998. This topsoil salvage effort is described in appendix 2-5, Part II, prepared by Pat Johnson, soil scientist. At that area, according to Ms. Johnson's report, the depth of true topsoil was 3" but an average of 8" - 9" of material was taken due

to the operating nature of the backhoes which were employed in the salvage process. In addition, an intensive soil inventory and site investigation was performed on the south slope on August 18, 1998 and is included in Appendix 2-6.

In order to minimize the area of additional disturbance associated with the construction of the south portals these portals will be constructed by excavating individual pockets into the hillside for each portal rather than along a common highwall. By utilizing individual pocket cuts for the portals the total area of new disturbance is expected to be less than 4500 sq. ft. (0.11 acres). Topsoil will be removed from the areas of the south portal pocket cuts prior to excavation as described in Section 2.31.1. According to the Nyenhuis survey, the upper 2 feet (24 inches) is suitable for salvage. Based on the Nyenhuis soil survey it is anticipated that approximately 9000 cu. ft. (333 yds.) of topsoil will be salvaged from the intake and fan portal cuts.

The salvaged topsoil will be stored on the existing topsoil pile #4 located off-site at the bottom of Crandall Canyon. This topsoil pile is constructed on Forest Service land under a Special Use Permit issued on 8/17/87. This pile #4 was originally constructed in 1997 during Phase 1 of the surface facility expansion. At that time it was designed and constructed sufficiently large to accommodate the additional topsoil storage requirements for the Phase 2 south portal construction. The Forest Service has concurred with the addition of the south portal topsoil to this pile. All topsoil removal, salvage and storage will be over-seen, directed and monitored by an independent soils scientist or knowledgeable contractor approved by the Division.

After the portal sites have been faced up construction of the portal canopies will begin. These canopies will be constructed from steel I-beams and plate according to the MSHA guidelines. The canopies will be anchored to concrete footers. These canopies will provide a safe structure from which the miners can begin driving the entries back into the coal seam. After the intake and fan entries have been driven into the hillside and connected together underground with a cross-cut, work can then be started on construction of the mine fan installation. While the fan is being installed, the miners will drive the belt entry from inside the mine out to the belt portal. During this phase of development, mined coal will be moved away from the surface with a front-end loader, a mobile radial stacker, or some other temporary means of conveyance. After the belt portal connection is completed, a new conveyor truss will be installed from a concrete landing at the belt portal out to the existing coal pile. All coal from the mine will then be delivered directly to the existing coal pile and will be crushed and loaded on trucks through the existing coal handling facilities.

Power, water, communications, and other mine infrastructure will be supplied to the south portals as an extension of the pre-existing Crandall Canyon Mine facilities.

Figure 5-11 depicts a typical cross-section through the south portals, showing the pocket cut, access ramp, in-situ soil geotextile protection, and the portal canopy construction.

Plate 5-3 depicts that area of the south slope where the portals are proposed to be located during phase 2 expansion in mid-1999. Plate 5-3 also shows the cut slope disturbance in the southwest portion of the mine yard. The topography for this portion of the mine yard has been revised

to reflect the as-built configuration. A side canyon drainage channel conveying undisturbed area runoff to the main Crandall Creek channel forms the western boundary of the mine yard in this area. Rip rap for the culvert inlet headwall was installed on both sides of the channel farther up the embankments than depicted on the proposed construction map. This additional rip rap was added to protect the main culvert inlet from erosion due to the side canyon drainage. Rip rap was added to the side channel to increase the integrity of the channel and to prevent the channel embankment from eroding thus allowing undisturbed drainage to enter the mine yard area. The same rip rap specifications used for the main undisturbed drainage inlet culvert and headwall were also used for armoring the side channel.

Short tunnels will be driven from the existing yard level up to the coal seam. The pocket cuts will be made into the hillside lower down at the same level as the existing pad. This level is approximately 15' below the base of the coal seam. Since the coal seam sits directly on top of the Star Point Sandstone, this sandstone out-crops at the existing yard level. Tunneling will begin in the sandstone and ramp up underground to the coal seam.

If the tunnels are driven at an incline of 10% they will be about 160' long to where they intersect the base of the coal seam. At 8' high and 20' wide, excavation of the two tunnels (intake and fan) would generate approximately 1900 cu yds. of material during construction. This tunnel excavation material will consist of sandstone mixed with coal. This excess material will be disposed of by placing it in a 6' deep layer along the existing fill bank located between the upper material yard and the coal storage pad. This embankment is part of the designated coal storage area and currently is covered with coal. Therefore, after the tunnel excavation material is layered onto the embankment, it too will be covered over by the active coal pile for the remaining life of the mine. Refer to Figure 13-a and 5-13b for more details of this tunneling construction option.

Upon final reclamation the tunnel excavation material will be hauled back into the mine tunnels where it would be sealed up prior to backfilling the portals. Backfilling and reclamation of the portal pocket cuts would be the same regardless of whether the ramp or tunnel option is selected.

GENWAL commits to ensuring the protection of the hydrologic balance for surface and groundwater systems as required by R645-301-731. The tunnel excavation material will be tested for acid- and toxic-forming material and the analytical results of this testing will be presented to the Division. (Appendix 2-11) The hydrologic balance will be protected in the following manner.

- a) The excavation material will consist of fragmented Star Point sandstone. This sandstone

Revised 4/05/2003

7/97 Revised 09/98

2 - 6b

outcrops naturally in the minesite area and is one of the major geological features which determine the character of Crandall Canyon and many other canyons in the Wasatch Plateau. This predominant sandstone is not known to be acid- or toxic-forming anywhere in the Utah coalfields. However, further site-specific testing of the sandstone will be conducted prior to any construction.

- b) The proposed location of the material storage is on top of the existing pad fill. Any runoff from this area would report to the existing sediment pond.
- c) The existing pad fill in the proposed storage area varies between 10' and 40' thick over the bypass culvert and is densely compacted. This thickness of compacted fill material is sufficient to preclude any leaching downward into the bypass culvert or groundwater.

Revised 4/05/2003

7/97 Revised 09/98

Stockpile #4 will be constructed with topsoil removed from the surface expansion project. The stockpile will be located across the road and north of stockpile #3. This location was previously surveyed for cultural resources by Forest Service archeologist, Barbara Blackshear. No cultural resources were located. Soil survey information for this area is presented in Appendix 2-3A.

The pile area will accommodate approximately 5,000 cubic yards of soil material with sideslopes on a 3:1 slope and a top elevation of 6,997'. Approximately 4,756 cubic yards of material were salvaged from the surface expansion area. Approximately 333 cubic yards of additional material is expected to be salvaged from the south portals. Refer to Plates 2-5, 2-5A and 2-5B for design detail. These plates will be updated in the MRP to reflect the as-built configuration after construction of the south portals is complete. Refer to Plate 2-5C for the as-built drawing.

The topsoil and substitute topsoil materials are stored in Stockpile #4 and will be protected from erosion by a vegetative cover. Upon placement and configuration of the topsoil stockpile, two tons per acre of organic mulch and an approved seed mix was applied at the specified rate approved by the Division. The mulch and seed was applied to the topsoil stockpile in the early fall of 1997. Silt fence was placed around the perimeter of the pile.

### **2.32 Topsoil and Subsoil Removal**

All topsoil and subsoil, associated with the initial disturbance, were removed during the construction season of 1982. The volumes of salvaged topsoil and subsoil, included in Section 2.42, is 9,219 bank cubic yards. The topsoil was stored in four locations as shown on Plates 2-2, 2-2a, 2-3, and 2-5. The topsoil associated with the proposed culvert expansion will be removed and stockpiled according to approved plans. Areas showing soil removal are shown on Plate 2-4 and Figure 8B; and the stockpile area is shown on Plates 2-3 and 2-5.

### **2.33 Topsoil Substitute and Supplements**

Section 2.24 and 2.42 of this chapter address the substitute topsoil soils and their perspective locations.

### **2.34 Topsoil Storage**

All topsoil and subsoil from the initial disturbed area were removed and stored during the construction season of 1982. The volumes of salvaged topsoil and subsoil are included in Section 2.42 of this chapter. The topsoil was stored in four locations as shown on Plates 2-2, 2-2a, 2-3, and 2-5. Sections 2.31 and 2.42 of this chapter address the topsoil storage and location of the topsoil piles.

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## **2.44 Soil Stabilization**

Before the topsoil is redistributed, the area to receive topsoil will be regraded and ripped to ensure positive contact and minimize slippage between the existing surface and the redistributed topsoil. The regraded area will be disced on slopes of less than 20% and scarified with a trackhoe on slopes greater than 20% until the grade becomes impractical for the equipment to operate. Topsoil will be redistributed in a manner that achieves an approximate, uniform stable thickness on a surface that will prevent excess compaction of the topsoil. The topsoil will be protected from wind and water erosion before and after it is reseeded. It is proposed that the topsoil will be redistributed with a front end loader and D-6 size dozer. Surface roughening techniques, such as gouging or deep pocking, will be used on the soil surface to minimize compaction and promote water harvest and conservation.

On slopes of 30% and less a wood fiber mulch of 1.5 tons per acre will be used which will be bonded with the soil using a tackifying agent. However, the steeper slopes south of Crandall Creek will be treated with a PAM chemical soil treatment to enhance moisture retention and relieve compaction. Then, the seed would be broadcast and hand raked into the soil surface. A soil inoculation treatment may also be incorporated into the soil to aid the re-establishment of soil bacteria, microhorizia and mycelium. Wood fiber mulch will be sprayed over the seed bed and then a bonded fiber matrix tackifier will be applied.

## **2.50 Performance Standards**

All topsoil, subsoil and topsoil substitutes or supplements will be removed, maintained and redistributed according to the plan given under R645-301-230 and R645-301-240.

## **2.52 Stockpile Maintenance**

All stockpiled topsoil, subsoil and topsoil substitutes or supplements will be located, maintained and redistributed according to plans given under R645-301-230 and R645-301-240. Stockpiled topsoil will be protected through a combination of berms, vegetative cover, strawbale dikes and/or silt fences. In addition, those piles adjacent to the main access road that could be impacted by salt used in ice removal will be closely monitored to determine if the vegetation is adversely impacted. In the event damage is in evidence, salt use will be suspended in those areas adjacent to topsoil piles. *(Note: after two decades of salting the road, no adverse affects on the vegetation on the topsoil pile has been observed, as noted in the annual reports. The amount of salt used on the road varies from year to year depending on the amount of snow fall. The salt (NaCl) used on this road is identical to the salt used by UDOT on Highway 31 running through Huntington Canyon.)*

APPENDIX 2-11

LABORATORY ANALYSIS  
SOUTH CRANDALL PORTALS  
TUNNELING MATERIAL

**APPENDIX 2-11**

**LABORATORY ANALYSIS**

**SOUTH CRANDALL PORTALS TUNNELING MATERIAL**

**Soil Analysis Report  
Genwal Resources, Inc.**

Report ID: S0606190001

Project: Utah Table #6

PO Box 1077  
Price, UT 84501

Date: 7/12/2006  
Work Order: S0606190

Date Received: 6/9/2006

Lab ID	Sample ID	Depths Ft.	pH s.u.	Saturation %	Conductivity dS/m	1/3 Bar %	15 Bar %	Calcium meq/L	Magnesium meq/L	Sodium meq/L	SAR	Electrical	
S0606190-001	UDH-04-01 Bld Cyn Seam	0-0	6.3	30.6	0.94	14	6	1.73	1.53	4.29	3.36		
S0606190-002	UDH-04-01 Bld Cyn Floor	76.3-82.7	7.7	24.9	0.63	14	5	1.03	1.74	2.44	2.07		
S0606190-003	UDH-04-01 Floor of Bld Cyn Seam	0-0	6.9	35.8	1.35			4.50	4.60	3.65	1.71		
S0606190-004	UDH-04-01 Bld Cyn Shale Floor	0-0	7.6	24.0	0.58	12	5	0.87	1.25	2.48	2.41		
S0606190-005	UDH-04-01 Immediate Roof - Bld Cyn Shale Floor	0-0	7.7	44.0	0.73	6	3	1.39	1.16	3.50	3.10		
S0606190-006	UDH-04-01 Drk sst below Bld Cyn Shale Floor	82.7-83	7.4	29.7	1.34	8	4	4.80	6.03	2.32	1.00		
S0606190-007	UDH-04-01 Bld Cyn Shale Floor	106.1-108.6	8.0	32.6	0.48	14	4	0.90	0.71	2.38	2.65		
S0606190-008	UDH-04-01 Bld Cyn Shale Floor	108.6-113	8.0	24.0	0.91	11	3	2.00	4.68	1.67	0.92		
S0606190-009	UDH-04-01 Bld Cyn Shale Floor	95-103	8.6	25.4	0.42	12	6	1.30	1.10	2.04	1.86		
S0606190-010	UDH-04-01 Bld Cyn Shale Floor	98.8-99.6	8.1	34.6	0.69	14	7	1.10	0.78	3.51	3.62		
S0606190-011	UDH-04-01 Bld Cyn Shale Floor roof rider seam	103-106.1	7.9	53.6	0.44	9	3	0.95	0.77	1.75	1.89		

These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H2OSol= water soluble, AB-DTPA= Ammonium Bicarbonates-DTPA, AAO= Acid Ammonium Oxalate  
 Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Add Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential  
 Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen Barten  
 Karen Barten, Soil Lab Supervisor

**Soil Analysis Report**  
**Genwal Resources, Inc.**

Report ID: S0606190001

PO Box 1077  
 Price, UT 84501

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Lab ID	Sample ID	Depths Ft.	Sand %	Silt %	Clay %	Texture	Available		Exchangeable		Nitrate ppm	Selenium ppm
							Sodium meq/100g	Sodium meq/100g	Sodium meq/100g	Sodium meq/100g		
S0606190-001	UDH-04-01 Bid Cyn Seam	0-0	69.0	12.0	19.0	Sandy Loam	0.67	0.54	0.45	0.13	0.15	
S0606190-002	UDH-04-01 Bid Cyn Floor	76.3-82.7	24.0	55.0	21.0	Silty Loam	0.24	0.18	0.24	0.16	0.05	
S0606190-003	UDH-04-01 Floor of Bid Cyn Seam	0-0	81.0	5.0	14.0	Sandy Loam						
S0606190-004	UDH-04-01 Bid Cyn Shale Floor	0-0	53.0	24.0	23.0	Sandy Clay Loam	0.31	0.25	0.34	0.16	0.08	
S0606190-005	UDH-04-01 Immediate Roof - Bid Cyn Shale Floor	0-0	85.0	5.0	10.0	Loamy Sand	0.39	0.24	0.39	0.27	0.04	
S0606190-006	UDH-04-01 Drk sst below Bid Cyn Shale Floor	82.7-83	78.0	9.0	13.0	Sandy Loam	0.23	0.16	0.33	0.14	0.07	
S0606190-007	UDH-04-01 Bid Cyn Shale Floor	106.1-108.6	84.0	8.0	8.0	Loamy Sand	0.38	0.30	0.50	0.17	0.03	
S0606190-008	UDH-04-01 Bid Cyn Shale Floor	108.6-113	80.0	14.0	6.0	Loamy Sand	0.08	0.04	0.16	0.16	<0.02	
S0606190-009	UDH-04-01 Bid Cyn Shale Floor	95-103	80.0	9.0	11.0	Sandy Loam	0.30	0.25	0.24	0.17	0.02	
S0606190-010	UDH-04-01 Bid Cyn Shale Floor	98.8-99.6	74.0	7.0	19.0	Sandy Loam	0.62	0.50	0.56	0.33	0.12	
S0606190-011	UDH-04-01 Bid Cyn Shale Floor roof rider seam	103-106.1	94.0	1.0	5.0	Sand	0.23	0.14	0.42	0.16	0.02	

These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H2OSol= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate  
 Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential  
 Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karee Reed

**Soil Analysis Report  
Genwal Resources, Inc.**

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Price, UT 84501

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Project: Utah Table #6  
Date Received: 6/9/2006

Lab ID	Sample ID	Depths Ft.	TOC %	Total Sulfur %	T.S. AB 1/1000t	Neut. Pot. 1/1000t	T.S. ABP 1/1000t	Sulfate		Pyritic		Organic		PyrS AB 1/1000t
								Sulfur %	1/1000t	Sulfur %	1/1000t	Sulfur %	1/1000t	
S0606190-001	UDH-04-01 Bid Cyn Seam	0-0	8.8	0.37	11.4	10.9	-0.54							
S0606190-002	UDH-04-01 Bid Cyn Floor	76.3-82.7	0.4	<0.01	<0.01	514	514							
S0606190-003	UDH-04-01 Floor of Bid Cyn Seam	0-0	14.4	0.87	27.2	19.5	-7.76	0.02	0.61	0.24			19.1	
S0606190-004	UDH-04-01 Bid Cyn Shale Floor	0-0	0.7	0.02	0.66	6.06	5.40							
S0606190-005	UDH-04-01 Immediate Roof - Bid Cyn Shale Floor	0-0	33.7	0.48	15.0	167	152							
S0606190-006	UDH-04-01 Drk sst below Bid Cyn Shale Floor	82.7-83	3.9	0.28	8.64	356	348							
S0606190-007	UDH-04-01 Bid Cyn Shale Floor	106.1-108.6	14.3	0.11	3.40	91.7	88.3							
S0606190-008	UDH-04-01 Bid Cyn Shale Floor	108.6-113	0.3	0.02	0.64	526	526							
S0606190-009	UDH-04-01 Bid Cyn Shale Floor	95-103	0.9	<0.01	<0.01	547	547							
S0606190-010	UDH-04-01 Bid Cyn Shale Floor	98.8-99.6	16.0	0.81	25.3	14.4	-10.9	0.02	0.46	0.33			14.5	
S0606190-011	UDH-04-01 Bid Cyn Shale Floor roof rider seam	103-106.1	44.0	0.47	14.7	60.1	45.4							

These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H2Osol= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate  
 Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential  
 Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Gene A. Baird

**Soil Analysis Report**  
**Genwal Resources, Inc.**

Report ID: S0606190001

Date: 7/12/2006  
 Work Order: S0606190

Project: Utah Table #6  
 Date Received: 6/9/2006

PO Box 1077  
 Price, UT 84501

Lab ID	Sample ID	Description	Depths		PyrS ABP /1000t
			Ft.	Ft.	
S0606190-001	UDH-04-01 Bld Cyn	Seam	0-0		
S0606190-002	UDH-04-01 Bld Cyn	Floor	76.3-82.7		
S0606190-003	UDH-04-01 Floor of Bld Cyn Seam		0-0	0.42	
S0606190-004	UDH-04-01 Bld Cyn	Shale Floor	0-0		
S0606190-005	UDH-04-01	Immediate Roof - Bld Cyn Shale Floor	0-0		
S0606190-006	UDH-04-01 Drk sst below Bld Cyn	Shale Floor	82.7-83		
S0606190-007	UDH-04-01 Bld Cyn	Shale Floor	106.1-108.6		
S0606190-008	UDH-04-01 Bld Cyn	Shale Floor	108.6-113		
S0606190-009	UDH-04-01 Bld Cyn	Shale Floor	95-103		
S0606190-010	UDH-04-01 Bld Cyn	Shale Floor	98.8-99.6	-0.10	
S0606190-011	UDH-04-01 Bld Cyn	Shale Floor roof rider seam	103-106.1		

These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H2OSol= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate  
 Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential  
 Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen Barton  
 Karen Barton Soil Lab Supervisor

## CHAPTER 5

### LIST OF APPENDICES

<u>APPENDIX NUMBER</u>	<u>DESCRIPTION</u>
5-1	Geomechanics Laboratory Report
5-2	Coal Pillar Sizing Report
5-3	Coal Pillar Safety Factor Calculations
5-4	Coal Pillar Safety Factor Calculations
5-5	BLM Report
5-6	Terratek Report
5-7	Method Used to Determine Maximum Surface Limit of Possible Subsidence
5-8	Subsidence Monitoring Plan
5-9	Deleted
5-10	Spill Prevention and Countermeasure Control Plan (SPCC) January 21, 1992
5-11	Culinary Water Supply
5-12	Sewage Plans
5-13	Coal Silo Calculations
5-14	UPDES Permit
5-15	Contract Document & Specifications for Haul Road Improvement Project

## CHAPTER 5

### LIST OF APPENDICES (continued)

<u>APPENDIX NUMBER</u>	<u>DESCRIPTION</u>
5-16	Storage Pad Stability Analysis
5-17	Road Expansion (within permit area) Safety Factor, Drawings
5-18	Fire Prevention Plan
5-19	Slope Stability Investigation Portal Pad
5-20	Bond Estimate (DOGM determination)
5-21	Reclamation Fill Stability Analysis At The Crandall Canyon Mine Emery County, Utah
5-22	Crandall Canyon Mine Site Reclamation Plan
5-23	Air Quality Permit Amendment, South Portals
5-23A	Blasting Plan
5-24	R2P2 (Resource Recovery and Protection Plan) Approval Letter (South Crandall Federal Lease UTU-78953)
5-24A	R2P2 (Resource Recovery and Protection Plan) Approval Letter (120 Acre Modification, Federal Lease UTU-68082)
5-25	Subsidence Survey Letters of Notification

#### **5.21.14 Mine Maps and Permit Area Maps**

Plate 1-1 shows leases of the existing permit area (including the South Crandall lease area and the U-68082 lease mod area) and defines the Incidental Boundary Change area. Plate 5-2 shows the boundaries of all areas affected by mining operations, including the proposed underground workings within the IBC area. Plate 5-3 shows the disturbed surface area within the permit area including the culvert expansion. The location and extent of potential subsidence is shown on Plate 6-2.

#### **5.21.15 Land Surface Configuration Maps**

Topographic maps used by GENWAL to depict surface contours within the permit area are represented on Plate 5-3.

#### **5.21.16 Maps and Cross-Sections of the Features and Proposed Features**

Maps produced by GENWAL show the facilities, disturbed area, disturbed area boundary, (Plate 5-3), explosive storage (there is no explosive storage on the surface), and point source discharges (Plate 7-5). These maps are located within this application.

#### **5.21.17 Transportation Facilities Maps**

This application describes each road and conveyor system to be constructed and used by the applicant as required by R645-301-527. Maps supporting this section include Plates 5-3, 5-6, 5-10, 5-19, 7-5, 7-5A, ~~7-5B~~ and 7-5C.

#### **5.21.18 Support Facilities**

Drawings showing support facilities are located on Plates 5-3, 5-6, 5-7, 5-8, 5-18, 7-5, 7-5A, ~~7-5B~~, and 7-5C.

#### **5.21.20 Signs and Markers**

Signs and Markers are posted, maintained, and removed by the operator; will be of uniform design that can be easily seen and read, be made of durable material, and conform to local laws and regulations, and be maintained during all activities to which they pertain. Identification signs will be placed, maintained, and marked in accordance with R645-301-243.

#### **5.21.24 Mine and Permit Identification Signs**

Mine and permit identification signs will be displayed in accordance with R645-301-521.240 through R645-301-521.244.

## **5.24 Blasting**

There are no structures or dwellings within one mile of the mine permit area; there are no residents within one half mile of the blasting site.

All surface blasting will be done under the direction of a person trained, examined and certified as provided for under the R645 coal rules, Section 105, which is regulated by the Utah Division of Oil, Gas and Mining.

The use of explosives will be done in accordance with R645-31-524 and all applicable Federal laws for storage and use.

All records as required in R645-301-524.700 will be kept at the mine site or at the office for a period of at least three years.

GENWAL will post blasting signs, in accordance with R645-301-524.510, 511 and 512, that is along the edge of any blasting area that is within 100 feet of any public road and at the point where any other road provides access to the blasting area, as well as at all entrances to the permit area from public roads.

GENWAL will control access to the area immediately prior to and after the blast until the certified blaster determines all is clear according to R645 524.531 and 532.

Signals, audible within a half mile, will be given prior to and after the blast as outlined in R645-301-465 and according to the posted sign containing a description of the signals.

All surface blasting will be done between sunrise and sunset, unless other criteria is met in R645-301-524.420. Blasting will be done so as no fly rock will leave the permit area, where practical. Netting or other protective means will be used to achieve this where there exists a possibility of this occurrence. Flyrock traveling in the air or along the ground will not be cast from the blasting site more than  $\frac{1}{2}$  the distance to the nearest occupied structure; beyond the area of control required under R645-301-524.530.

For blasts that require more than 5 pounds of explosives, GENWAL will publish a schedule of the blasts and submit a blasting plan to the Division for approval. The blasting plans will be included in Appendix 5-23A.

## 5.25 Subsidence

The term "subsidence" applies to the deformation or movement in the overburden. The thickness of the overburden ranges from zero at the outcrop to approximately 2400 feet, as shown on Plate 6-2. In general, the strength of the overburden is typical of the late Cretaceous sediments being mined in Eastern Utah and Western Colorado. However, it should be noted that the overburden at the Crandall Canyon mine has substantially more massive sandstones than in other areas (i.e., the Deer Creek Mine). Thus, providing greater overburden strengths and reducing the potential for significant subsidence.

Four methods have been utilized to arrive at the range of the possible maximum subsidence at the Crandall Canyon Mine. The methods are: Dunrud's (USGS) equation (discussed in the text below); Boundary Element Method (BEM) using "TABEX-2D" and a Finite Element Mathematical (FEM) simulation using "ANSYS (Appendix 5-6); and the National Coal Board (NCB) of England Technique (Appendix 5-6). The amount of subsidence varies from 3.9', 5.5', 3.34', and 0.25', respectively. Experience at the mine indicates that the 0.25' range of subsidence most accurately represents specific site conditions under room and pillar conditions and the projected maximum of 3.34' under longwall conditions.

The magnitude of vertical subsidence is a function of coal height, overburden depth, stratigraphy, mining technique, and distance from barrier pillars. According to Dunrud's work completed in 1980, based upon a study of subsidence in an underground coal mine at Somerset, Colorado, (USGS 1980), the maximum amount of subsidence expected is equal to 70% of the coal height extracted, (Figure 5-4). The Somerset subsidence curves are included because the overburden characteristics are similar to those encountered at Crandall Canyon and the lack of reported data indicating amounts of subsidence for western underground coal mines.

The maximum subsidence experienced for western coal mines according to Peng, ranges from 33 to 65% and Gentry and Abel cited examples of 70% of the coal height extracted. Thus, to be conservative, a 70% value will be used within this report. The maximum value may be reduced by the amount of coal not recovered in the mining areas, i.e., 20% of the coal is expected to be unrecoverable in the pillared areas at the Crandall Canyon Mine and approximately 12% for the longwall areas. For the areas near an unmined solid pillar the maximum amount of subsidence is reduced (irrespective of the mining method) according to the graph shown in Figure 5-5 based upon work by Gentry and Abel.

The largest magnitude of subsidence that may occur is 3.9 feet at a point 40 feet east of the section line between Sections 5 and 6 and 1522 feet south of the section line between Sections 32 and 5. The values were calculated by reducing the coal heights shown on Plated 5-2 by 20% which represents the unrecoverable coal in the pillared areas (using a six foot coal height), then multiplying by 70% to obtain the maximum possible subsidence value from Figure 5-4 which assumes a worse

case scenario. The subsidence values were reduced according to Figure 5-5 for areas that border a barrier pillar along the perimeter of the lease shown on Plate 5-2.

Horizontal movement which would create slope failure along the escarpment is not expected to occur due to subsidence because only limited coal outcrop occurs within the lease (the east side of the lease area). Within that area of old works no pillar extraction is anticipated.

As with areas in the western part of lease SL-062648 and at the Co-Op's Trail Canyon and Bear Canyon Mines and the Beaver Creek #4 mine, no escarpment failure has occurred. Horizontal movement creating tension or compression cracks can not be projected due to the overburden thickness and lack of jointing density and attitude data along the surface rock exposures.

In addition, GENWAL will second mine no closer than 200 feet to any outcrop (with the exception of portals) and, in accordance with Forest Service Stipulation #20, no mining will be done within a zone that might impact the Joes Valley Fault. This area is determined by a 22 degree angle-of-draw (from vertical) eastward from the surface expression of the Joes Valley Fault was used to project the outer limits of subsidence. Thus, subsidence will not intercept the Joes Valley Fault. If subsidence does occur along the western perimeter, all effects of the subsidence will be maintained within the mining permit boundary. No perennial streams will be affected. On the Dellenbach fee tract mining will not extend closer than 200 feet from the outcrop (other than portals) and no closer than 50 feet from the property boundaries. It should be noted that the mine projections and timing for the Dellenbach tract, and the South Crandall lease and the U-68082 lease mod area are shown on Plate 5-2.

It is accepted practice in this area to use two sources of information for subsidence evaluation. The sources are: 1) "Some Engineering Geologic Factors Controlling Coal Mine Subsidence in Utah and Colorado", Geologic Survey Professional Paper 969, by C. Richard Dunrud, 1976, and 2) "SME Mining Engineering Handbook", Volume 1, by Arthur B. Cummins and Ivan A. Given, 1973. The conclusions based upon the above source material are tempered by on site evaluation and actual experience based on similar mining conditions in late Cretaceous overburdens with similar thicknesses and strengths. The surface area topography within the lease is shown on Plate 3-1, 3-1a, 1-1 and others. The topographic map shows the relative steep sloping sides of the canyons which contains Crandall Canyon Creek, Blind Canyon Creek, and Horse Canyon Creek where rock outcrops are abundant. However, there are few, if any, talus slopes.

#### **5.25.10 Subsidence Control Plan**

The Subsidence Control Plan contained herein addresses specifically those items that are required by R645-301-525 Pertaining to Subsidence. This plan is an amendment to the original application filed on December 17, 1980, by GENWAL the SUBSIDENCE CONTROL PLAN FOR GENWAL COAL COMPANY, INC., as prepared by David A. Skidmore and L. G. Manwaring of Revised 4/05/2003

Coal Systems Inc., on August 28, 1981; and the Mid-term permit revisions dated 5-30-86. The format of the currently approved COAL SYSTEMS report will be used with the conclusions based upon the results of the drilling of the Blind Canyon seam which was obtained in April, 1985, and the Hiawatha seam data obtained to date during mine development. The original application was submitted pursuant to the following: Title 40, Chapter 10, Utah Code Annotated, 1943, as amended, the "Cooperative Agreement between the United States Department of Interior and the State of Utah"; the Surface Mining Control and Reclamation Act (P. L. 95-87); and all regulations promulgated under those Acts affecting mining operation conducted in the State of Utah.

It should be noted that, according to the stipulations of federal lease UTU-78953, there will be no second mining or subsidence under Little Bear Creek within the South Crandall lease area.

#### **5.42.72 through 5.42.742 Excess Waste**

All waste material generated from the removal of the structures will be removed from the property and sold as scrap or disposed of in a state approved land fill. See Section 5.28 of this chapter for more detail on excess waste and spoil.

#### **5.42.80 Estimate of Reclamation Costs**

Estimate of reclamation costs are included under Appendix 5-20.

## CHAPTER 5

### LIST OF APPENDICES

<u>APPENDIX NUMBER</u>	<u>DESCRIPTION</u>
5-1	Geomechanics Laboratory Report
5-2	Coal Pillar Sizing Report
5-3	Coal Pillar Safety Factor Calculations
5-4	Coal Pillar Safety Factor Calculations
5-5	BLM Report
5-6	Terratek Report
5-7	Method Used to Determine Maximum Surface Limit of Possible Subsidence
5-8	Subsidence Monitoring Plan
5-9	Deleted
5-10	Spill Prevention and Countermeasure Control Plan (SPCC) January 21, 1992
5-11	Culinary Water Supply
5-12	Sewage Plans
5-13	Coal Silo Calculations
5-14	UPDES Permit
5-15	Contract Document & Specifications for Haul Road Improvement Project

## CHAPTER 5

### LIST OF APPENDICES (continued)

<u>APPENDIX NUMBER</u>	<u>DESCRIPTION</u>
5-16	Storage Pad Stability Analysis
5-17	Road Expansion (within permit area) Safety Factor, Drawings
5-18	Fire Prevention Plan
5-19	Slope Stability Investigation Portal Pad
5-20	Bond Estimate (DOGM determination)
5-21	Reclamation Fill Stability Analysis At The Crandall Canyon Mine Emery County, Utah
5-22	Crandall Canyon Mine Site Reclamation Plan
5-23	Air Quality Permit Amendment, South Portals
5-23A	Blasting Plan
5-24	R2P2 (Resource Recovery and Protection Plan) Approval Letter (South Crandall Federal Lease UTU-78953)
5-24A	R2P2 (Resource Recovery and Protection Plan) Approval Letter (120 Acre Modification, Federal Lease UTU-68082)
5-25	Subsidence Survey Letters of Notification
5-26	Forest Service Trailhead Parking Arrangement

#### **5.21.14 Mine Maps and Permit Area Maps**

Plate 1-1 shows leases of the existing permit area (including the South Crandall lease area and the U-68082 lease mod area) and defines the Incidental Boundary Change area. Plate 5-2 shows the boundaries of all areas affected by mining operations, including the proposed underground workings within the IBC area. Plate 5-3 shows the disturbed surface area within the permit area including the culvert expansion. The location and extent of potential subsidence is shown on Plate 6-2.

#### **5.21.15 Land Surface Configuration Maps**

Topographic maps used by GENWAL to depict surface contours within the permit area are represented on Plate 5-3.

#### **5.21.16 Maps and Cross-Sections of the Features and Proposed Features**

Maps produced by GENWAL show the facilities, disturbed area, disturbed area boundary, (Plate 5-3), explosive storage (there is no explosive storage on the surface), and point source discharges (Plate 7-5). These maps are located within this application.

#### **5.21.17 Transportation Facilities Maps**

This application describes each road and conveyor system to be constructed and used by the applicant as required by R645-301-527. Maps supporting this section include Plates 5-3, 5-6, 5-10, 5-19, 7-5, 7-5A, and 7-5C.

#### **5.21.18 Support Facilities**

Drawings showing support facilities are located on Plates 5-3, 5-6, 5-7, 5-8, 5-18, 7-5, 7-5A, and 7-5C.

#### **5.21.20 Signs and Markers**

Signs and Markers are posted, maintained, and removed by the operator; will be of uniform design that can be easily seen and read, be made of durable material, and conform to local laws and regulations, and be maintained during all activities to which they pertain. Identification signs will be placed, maintained, and marked in accordance with R645-301-243.

#### **5.21.24 Mine and Permit Identification Signs**

Mine and permit identification signs will be displayed in accordance with R645-301-521.240 through R645-301-521.244.

## 5.24 Blasting

There are no structures or dwellings within one mile of the mine permit area; there are no residents within one half mile of the blasting site.

All surface blasting will be done under the direction of a person trained, examined and certified as provided for under the R645 coal rules, Section 105, which is regulated by the Utah Division of Oil, Gas and Mining.

The use of explosives will be done in accordance with R645-31-524 and all applicable Federal laws for storage and use.

All records as required in R645-301-524.700 will be kept at the mine site or at the office for a period of at least three years.

GENWAL will post blasting signs, in accordance with R645-301-524.510, 511 and 512, that is along the edge of any blasting area that is within 100 feet of any public road and at the point where any other road provides access to the blasting area, as well as at all entrances to the permit area from public roads.

GENWAL will control access to the area immediately prior to and after the blast until the certified blaster determines all is clear according to R645 524.531 and 532.

Signals, audible within a half mile, will be given prior to and after the blast as outlined in R645-301-465 and according to the posted sign containing a description of the signals.

All surface blasting will be done between sunrise and sunset, unless other criteria is met in R645-301-524.420. Blasting will be done so as no fly rock will leave the permit area, where practical. Netting or other protective means will be used to achieve this where there exists a possibility of this occurrence. Flyrock traveling in the air or along the ground will not be cast from the blasting site more than  $\frac{1}{2}$  the distance to the nearest occupied structure; beyond the area of control required under R645-301-524.530.

For blasts that require more than 5 pounds of explosives, GENWAL will publish a schedule of the blasts and submit a blasting plan to the Division for approval. The blasting plans will be included in Appendix 5-23A.

## 5.25 Subsidence

The term "subsidence" applies to the deformation or movement in the overburden. The thickness of the overburden ranges from zero at the outcrop to approximately 2400 feet, as shown on Plate 6-2. In general, the strength of the overburden is typical of the late Cretaceous sediments being mined in Eastern Utah and Western Colorado. However, it should be noted that the overburden at the Crandall Canyon mine has substantially more massive sandstones than in other areas (i.e., the Deer Creek Mine). Thus, providing greater overburden strengths and reducing the potential for significant subsidence.

Four methods have been utilized to arrive at the range of the possible maximum subsidence at the Crandall Canyon Mine. The methods are: Dunrud's (USGS) equation (discussed in the text below); Boundary Element Method (BEM) using "TABEX-2D" and a Finite Element Mathematical (FEM) simulation using "ANSYS (Appendix 5-6); and the National Coal Board (NCB) of England Technique (Appendix 5-6). The amount of subsidence varies from 3.9', 5.5', 3.34', and 0.25', respectively. Experience at the mine indicates that the 0.25' range of subsidence most accurately represents specific site conditions under room and pillar conditions and the projected maximum of 3.34' under longwall conditions.

The magnitude of vertical subsidence is a function of coal height, overburden depth, stratigraphy, mining technique, and distance from barrier pillars. According to Dunrud's work completed in 1980, based upon a study of subsidence in an underground coal mine at Somerset, Colorado, (USGS 1980), the maximum amount of subsidence expected is equal to 70% of the coal height extracted, (Figure 5-4). The Somerset subsidence curves are included because the overburden characteristics are similar to those encountered at Crandall Canyon and the lack of reported data indicating amounts of subsidence for western underground coal mines.

The maximum subsidence experienced for western coal mines according to Peng, ranges from 33 to 65% and Gentry and Abel cited examples of 70% of the coal height extracted. Thus, to be conservative, a 70% value will be used within this report. The maximum value may be reduced by the amount of coal not recovered in the mining areas, i.e., 20% of the coal is expected to be unrecoverable in the pillared areas at the Crandall Canyon Mine and approximately 12% for the longwall areas. For the areas near an unmined solid pillar the maximum amount of subsidence is reduced (irrespective of the mining method) according to the graph shown in Figure 5-5 based upon work by Gentry and Abel.

The largest magnitude of subsidence that may occur is 3.9 feet at a point 40 feet east of the section line between Sections 5 and 6 and 1522 feet south of the section line between Sections 32 and 5. The values were calculated by reducing the coal heights shown on Plated 5-2 by 20% which represents the unrecoverable coal in the pillared areas (using a six foot coal height), then multiplying by 70% to obtain the maximum possible subsidence value from Figure 5-4 which assumes a worse case scenario. The subsidence values were reduced according to Figure 5-5 for areas that border a barrier pillar along the perimeter of the lease shown on Plate 5-2.

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In addition, GENWAL will second mine no closer than 200 feet to any outcrop (with the exception of portals) and, in accordance with Forest Service Stipulation #20, no mining will be done within a zone that might impact the Joes Valley Fault. This area is determined by a 22 degree angle-of-draw (from vertical) eastward from the surface expression of the Joes Valley Fault was used to project the outer limits of subsidence. Thus, subsidence will not intercept the Joes Valley Fault. If subsidence does occur along the western perimeter, all effects of the subsidence will be maintained within the mining permit boundary. No perennial streams will be affected. On the Dellenbach fee tract mining will not extend closer than 200 feet from the outcrop (other than portals) and no closer than 50 feet from the property boundaries. It should be noted that the mine projections and timing for the Dellenbach tract, and the South Crandall lease and the U-68082 lease mod area are shown on Plate 5-2.

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The Subsidence Control Plan contained herein addresses specifically those items that are required by R645-301-525 Pertaining to Subsidence. This plan is an amendment to the original application filed on December 17, 1980, by GENWAL the SUBSIDENCE CONTROL PLAN FOR GENWAL COAL COMPANY, INC., as prepared by David A. Skidmore and L. G. Manwaring of Coal Systems Inc., on August 28, 1981; and the Mid-term permit revisions dated 5-30-86. The format of the currently approved COAL SYSTEMS report will be used with the conclusions based upon the results of the drilling of the Blind Canyon seam which was obtained in April, 1985, and the Hiawatha seam data obtained to date during mine development. The original application was submitted pursuant to the following: Title 40, Chapter 10, Utah Code Annotated, 1943, as amended,

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It should be noted that, according to the stipulations of federal lease UTU-78953, there will be no second mining or subsidence under Little Bear Creek within the South Crandall lease area.

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All waste material generated from the removal of the structures will be removed from the property and sold as scrap or disposed of in a state approved land fill. See Section 5.28 of this chapter for more detail on excess waste and spoil.

#### **5.42.80 Estimate of Reclamation Costs**

Estimate of reclamation costs are included under Appendix 5-20.

REPLACE THIS DOCUMENT IN  
APPENDIX 5-14



State of Utah

Department of  
Environmental Quality

Dianne R. Nielson, Ph.D.  
*Executive Director*

DIVISION OF WATER QUALITY  
Walter L. Baker, P.E.  
*Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY HERBERT  
*Lieutenant Governor*

November 16, 2005

**CERTIFIED MAIL**  
**(Return Receipt Requested)**

Gary Gray, Engineer  
Genwal Resources Inc.  
P.O. Box 1077  
Price, Utah 84501

Dear Mr. Gray:

Subject: Utah Pollutant Discharge Elimination System (UPDES)  
Permit Number UT0024368

Enclosed is UPDES Permit Number UT0024368 for your facility. Discharge Monitoring Report Forms (EPA Form 3320-1) for reporting and self-monitoring requirements (as specified in the permit) will be sent to you as soon as they are printed. This permit will become effective on December 1, 2005, subject to the right of appeal in accordance with the provisions of *Utah Administrative Code, Section R317-9*.

At the direction of the Legislature, a fee schedule was included in the Utah Department of Environmental Quality Budget appropriation request in accordance with *Utah Code Annotated 19-1-201*. The fee schedule, as approved by the legislature, includes a prescribed permit fee for specific Industrial Categories. The prescribed fee for a coal mining facility minor UPDES permit is \$3,600.00. Please remit \$3,600.00 within 30 days of receipt of this letter to:

Dept. of Environmental Quality  
Division of Water Quality  
Attn: Stacy Carroll  
P.O. Box 144870  
Salt Lake City, Utah 84114-4870

As the state agency charged with the administration of issuing UPDES permits and associated modifications, we are continuously looking for ways to improve our quality of service to you. In an effort to improve the UPDES permitting process, we are asking for your input. Since our customer permittee base is limited, your input is important. Please take a few moments to complete the enclosed questionnaire and return it in the postage paid, self-addressed return envelope. The results will be used to improve our quality and responsiveness to our permittees and give us feedback on customer satisfaction. We will take note of the issues you have identified and address them on a continual basis.

If you have any questions with regard to this matter, please contact Kari Lundeen at (801) 538-6760 or via e-mail at [klundeen@utah.gov](mailto:klundeen@utah.gov).

Sincerely,



Mike Herkimer, Manager  
Permits and Compliance Section

MDH:KAL:mc/st

Enclosure(s)

cc: Qian Zhang, EPA Region VIII  
Claron Bjork, Environmental Health Director, Southeastern Utah District Health Department  
Dave Ariotti, District Engineer

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STATE OF UTAH  
DIVISION OF WATER QUALITY  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
SALT LAKE CITY, UTAH  
AUTHORIZATION TO DISCHARGE UNDER THE  
UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM  
(UPDES)

In compliance with provisions of the *Utah Water Quality Act, Title 19, Chapter 5, Utah Code Annotated (UCA) 1953, as amended* (the "Act"),

**GENWAL RESOURCES, INC.**

is hereby authorized to discharge from its facility located in Crandall Canyon, approximately 1 ½ miles northwest of Huntington, Utah, with outfalls located as indicated in the permit, to receiving waters named

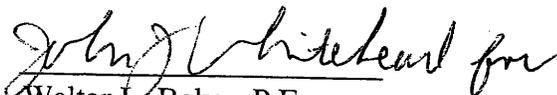
**CRANDALL CREEK (TRIBUTARY OF THE COLORADO RIVER)**

in accordance with discharge point, effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on December 1, 2005.

This permit and the authorization to discharge shall expire at midnight, November 30, 2010.

Signed this 16<sup>th</sup> day of November, 2005.



Walter L. Baker, P.E.  
Executive Secretary  
Utah Water Quality Board

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I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Definitions.

1. "7-day and weekly average" is the arithmetic average of all samples collected during a consecutive 7-day period or calendar week whichever is applicable. The 7-day and weekly averages are applicable only to those effluent characteristics for which there are 7-day average effluent limitations. The calendar week, beginning on Sunday and ending on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains the Saturday.
2. "10-year, 24-hour precipitation event" means the maximum 24-hour precipitation event with a probable recurrence interval of once in 10 years. This information is available in *Weather Bureau Technical Paper No. 40*, May 1961 and *National Oceanographic and Atmospheric Administration Atlas 2*, 1973 for the 11 Western States, and may be obtained from the National Climatic Center of the Environmental Data Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.
3. "30-day and monthly average" is the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.
4. "Act" means the "*Utah Water Quality Act*".
5. "Best Management Practices" (BMP's) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMP's also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
6. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

7. "Chronic toxicity" occurs when the inhibitory concentration to 25% of the population (IC<sub>25</sub>) is less than or equal to 66% effluent.
8. "Coal pile runoff" means the rainfall runoff from or through any coal storage pile.
9. "Composite samples" shall be flow proportioned. The composite sample shall contain, as a minimum, at least four (4) samples collected over the composite sample period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six (6) hours nor more than 24 hours. Acceptable methods for preparation of composite samples are as follows:
  - a. Constant time interval between samples, sample volume proportional to flow rate at time of sampling;
  - b. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time the sample was collected may be used;
  - c. Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every "X" gallons of flow); and,
  - d. Continuous collection of sample, with sample collection rate proportional to flow rate.
10. "CWA" means *The Federal Water Pollution Control Act*, as amended, by *The Clean Water Act of 1987*.
11. "Daily Maximum" (Daily Max.) is the maximum value allowable in any single sample or instantaneous measurement.
12. "EPA" means the United States Environmental Protection Agency.
13. "Executive Secretary" means Executive Secretary of the Utah Water Quality Board.
14. "Flow-weighted composite sample" means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.
15. "Grab" sample, for monitoring requirements, is defined as a single "dip and take" sample collected at a representative point in the discharge stream.

16. "IC<sub>25</sub>" is the concentration of toxicant (given in % effluent) that would cause a 25% reduction in mean young per female or a 25% reduction in overall growth for the test population.
17. "Illicit discharge" means any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a UPDES permit (other than the UPDES permit for discharges from the municipal separate storm sewer) and discharges from fire fighting activities, fire hydrant flushing, potable water sources including waterline flushing, uncontaminated ground water (including dewatering ground water infiltration), foundation or footing drains where flows are not contaminated with process materials such as solvents, springs, riparian habitats, wetlands, irrigation water, exterior building wash down where there are no chemical or abrasive additives, pavement wash water where spills or leaks of toxic or hazardous materials have not occurred and where detergents are not used, and air conditioning condensate.
18. An "instantaneous" measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.
19. "Point Source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharges. This term does not include return flows from irrigated agriculture or agriculture storm water runoff.
20. "Runoff coefficient" means the fraction of total rainfall that will appear at a conveyance as runoff.
21. "*Section 313* water priority chemical" means a chemical or chemical categories which:
  - a. Are listed at *40 Code of Federal Regulations (CFR) 372.65* pursuant to *Section 313 of Title III of the Emergency Planning and Community Right-to-Know Act (EPCRA)* (also known as *Title III of the Superfund Amendments and Reauthorization Act of 1986*);
  - b. Are present at or above threshold levels at a facility subject to *EPCRA, Section 313* reporting requirements, and
  - c. Meet at least one of the following criteria:

- (1) Are listed in *Appendix D* of *40 CFR 122* on *Table II* (organic priority pollutants), *Table III* (certain metals, cyanides, and phenols) or *Table IV* (certain toxic pollutants and hazardous substances);
  - (2) Are listed as a hazardous substance pursuant to *Section 311(b)(2)(A)* of the *CWA* at *40 CFR 116.4*; or
  - (3) Are pollutants for which EPA has published acute or chronic toxicity criteria.
22. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
23. "Significant materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under *Section 101(14)* of *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)*; any chemical the facility is required to report pursuant to *EPCRA Section 313*; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.
24. "Significant spills" includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under *Section 311* of the *Clean Water Act* (see *40 CFR 110.10* and *40 CFR 117.21*) or *Section 102* of *CERCLA* (see *40 CFR 302.4*).
25. "Storm water" means storm water runoff, snowmelt runoff, and surface runoff and drainage.
26. "Time-weighted composite" means a composite sample consisting of a mixture of equal volume aliquots collected at a constant time interval.
27. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include

noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

28. "Waste pile" means any non-containerized accumulation of solid, non-flowing waste that is used for treatment or storage.

Acronym List

BMP	Best Management Practices
CERCLA	Comprehensive Environmental Response, Compensation, & Liability Act
CFR	Code of Federal Regulations
DMR	Discharge Monitoring Report
DO	Dissolved Oxygen
EPCRA	Emergency Planning & Community Right-to-Know Act
TDS	Total Dissolved Solids
TIE	Toxicity Identification Evaluation
TRE	Toxicity Reduction Evaluation
TSS	Total Suspended Solids
UAC	Utah Administrative Code
UCA	Utah Code Annotated
UPDES	Utah Pollutant Discharge Elimination System
WET	Whole Effluent Toxicity

Unit List

mg/L	milligrams per liter
MGD	million gallons per day
ml/L	milliliters per liter
SU	standard units
µg/L	micrograms per liter

B. Description of Discharge Points.

The authorization to discharge provided under this permit is limited to those outfalls specifically designated below as discharge locations. Discharges at any location not authorized under a UPDES permit are in violation of the *Act* and may be subject to penalties under the *Act*. Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge may be subject to criminal penalties as provided under the *Act*.

<u>Outfall Number</u>	<u>Location of Discharge Point</u>
001	An 18-inch discharge pipe on the east side of the sedimentation pond. Coordinates: 39° 27' 38" north, 111° 09' 59" west.

Outfall Number  
002

Location of Discharge Point  
A 12-inch discharge pipe within the Crandall Creek bypass culvert riser pipe, west of the Master Control Console building in the lower yard of the facility.  
Coordinates: 39° 27' 38" north, 111° 09' 59" west.

C. Narrative Standard.

It shall be unlawful, and a violation of this permit, for the permittee to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural deposits, floating debris, oil, scum or other nuisances such as color, odor or taste, or cause conditions which produce undesirable aquatic life or which produce objectionable tastes in edible aquatic organisms; or result in concentrations or combinations of substances which produce undesirable physiological responses in desirable resident fish, or other desirable aquatic life, or undesirable human health effects, as determined by bioassay or other tests performed in accordance with standard procedures.

D. Specific Limitations and Self-monitoring Requirements.

1. Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from Outfalls 001 and 002. Such discharges shall be limited and monitored by the permittee as specified in *Parts I.D.1. through I.D.5.*

Effluent Characteristics	Effluent Limitations				Monitoring Requirements	
	30 Day Average	7 Day Average	Daily Minimum	Daily Maximum	Sample Frequency	Sample Type
Flow, MGD	Report	<sup>3</sup> NA	NA	Report	Monthly	Continuous Recorder
Total Suspended Solids (TSS), <sup>4</sup> mg/L	25	35	NA	70	Monthly	Grab
Total Iron, mg/L	NA	NA	NA	1.0	Monthly	Grab
Oil & Grease, mg/L	NA	NA	NA	10	Monthly	Grab
Total Dissolved Solids (TDS), mg/L <i>Interim b/</i>	NA	NA	NA	1200	2 x Month	Grab
TDS, mg/L <i>Final b/</i>	500	NA	NA	1200	1 x Month	Grab

<sup>1</sup> See Part I. A., "Definitions", for definition of terms.      <sup>2</sup>MGD: million gallons per day  
<sup>3</sup> NA - Not Applicable      <sup>4</sup>mg/L: milligrams per liter

Effluent Characteristics	Effluent Limitations <sup>1</sup> (continued)				Monitoring Requirements	
	30 Day Average	7 Day Average	Daily Minimum	Daily Maximum	Sample Frequency	Sample Type
Dissolved Oxygen, mg/L d/	≥ 4.0	NA	NA	NA	Monthly	Grab
Sanitary Waste e/	NA	NA	NA	None	Monthly	Visual
Whole Effluent Toxicity, Chronic (outfall 002)	NA	NA	NA	Pass, IC <sub>25</sub> = 66% effluent	Quarterly	Composite
<sup>1</sup> See Part I. A., "Definitions", for definition of terms.				<sup>2</sup> MGD: million gallons per day		
<sup>3</sup> NA – Not Applicable				<sup>4</sup> mg/L: milligrams per liter		

a/ In addition to monthly sampling for oil and grease, a visual inspection for oil and grease, floating solids, and visible foam shall be performed at least twice per month at 001 and 002. There shall be no sheen, floating solids, or visible foam in other than trace amounts. If a sheen is observed, a sample of that effluent shall be collected immediately thereafter and oil and grease shall not exceed 10 mg/L in concentration.

b/ *Interim limits for TDS shall be effective from the effective date of this permit until February 28, 2006. The final TDS limits will be enforceable beginning March 1, 2006 or sooner if the permittee can make it so.* The interim TDS concentration from each of the outfalls shall not exceed 1200 mg/L as a daily maximum limit. Because the permittee is not likely to meet the final 500 mg/L 30-day average and will not meet the 1 ton per day loading limit, the permittee is required to complete an intercepted groundwater survey and/or participate in and/or fund a salinity-offset project, to include TDS offset credits, by February 28, 2006.

The salinity-offset project shall include TDS credits on a ton-for-ton basis for which the permittee is over the 1 ton per day loading limit. The tonnage reduction from the offset project must be calculated by a method similar to one used by the Natural Resources Conservation Service, Colorado River Basin Salinity Control Forum, or other applicable agency.

If the permittee will be participating in the construction and implementation of a salinity-offset project, then a project description and implementation schedule shall be submitted to the Executive Secretary within 6 months of the determination by the Executive Secretary, which will then be reviewed for approval. The salinity offset project description and implementation schedule must be approved by the Executive Secretary and shall be appended to this permit.

If the permittee is funding a salinity-offset project through third parties, the permittee shall provide satisfactory evidence to the Executive Secretary that the required funds have been deposited to the third party within 6 months of the determination by the Executive Secretary. A monitoring and adjustment plan to track the TDS credits shall also be submitted to the Executive Secretary within 6 months of the aforementioned determination, which will then be reviewed for approval. The monitoring and adjustment plan must be approved by the Executive Secretary and shall be appended to this permit.

c/ The pH shall not be less than 6.5 SU nor greater than 9.0 SU in any sample and shall be monitored monthly by instantaneous grab sample.

d/ The 30-day average DO shall not be less than 4.0 mg/L and shall be monitored monthly by an instantaneous grab sample.

e/ There shall be no discharge of sanitary waste.

2. Samples collected in compliance with the monitoring requirements specified above shall be collected at outfalls 001 and 002 prior to mixing with the receiving water.
3. Should any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period that is less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may, at outfall 001, substitute the following limitations for the TSS and pH limitations contained in *Part I.D.1*:

Effluent Characteristics	Daily Minimum	Daily Maximum
Settleable solids (SS), milliliter/liter	NA	0.5
pH, SU	6.0	9.0

In order to substitute the above limitations, the sample collected during the storm event must be analyzed for all permitted parameters specified under *Part I.D.1*. (excepting TSS). Such analyses shall be conducted on either grab or composite samples.

Should any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period that is greater than the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may, at outfall 001, comply with the following pH limitation instead of the limitation contained in *Part I.D.1*:

Effluent Characteristics	Daily Minimum	Daily Maximum
pH, SU	6.0	9.0

In order to substitute the above limitation, the sample collected during the storm event must be analyzed for all permitted parameters specified under *Part I.D.1*. Such analyses shall be conducted on either grab or composite samples.

4. The operator shall have the burden of proof that the increase in discharge was caused by the applicable precipitation event described in *Part I.D.3*. The alternate limitation in *Part I.D.3* shall not apply to treatment systems that treat exclusively underground mine water (i.e. outfall 002).
5. Whole Effluent Testing - Chronic Toxicity. Starting on the effective date of the permit, the permittee shall quarterly conduct chronic short-term toxicity tests on a composite sample of the final effluent. The sample shall be collected at outfall 002.

The monitoring frequency shall be quarterly. Samples shall be collected on a two-day progression; i.e., if the first sample is on a Monday, during the next sampling period, sampling shall be on a Wednesday. If chronic toxicity is detected, the test shall be repeated in less than four weeks from the date the initial sample was taken. The need for any additional samples, and/or a Toxicity Reduction Evaluation (TRE) (*see Part I.D.5.*) shall be determined by the Executive Secretary. If the second test shows no chronic toxicity, routine monitoring shall be resumed.

The chronic toxicity tests shall be conducted in general accordance with the procedures set out in the latest revision of *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, Fourth Edition, October 2002, EPA-821-R-02-013* as per *40 CFR 136.3(a) TABLE IA-LIST OF APPROVED BIOLOGICAL METHODS*, and the *Region VIII EPA NPDES Chronic Test Conditions - Static Renewal Whole Effluent Toxicity Test (August 1997)*. In case of conflicts, the Region VIII procedure will prevail. Tests will be conducted quarterly using Ceriodaphnia dubia and semi-annually using Pimephales promelas (fathead minnow). A CO<sub>2</sub> atmosphere may be used (in conjunction with an unmodified test) in order to account for pH drift.

Chronic toxicity occurs when the IC<sub>25</sub> is less than or equal to an effluent concentration of 66%. If any of the acceptable control performance criteria are not met, the test shall be considered invalid.

Quarterly test results shall be reported along with the Discharge Monitoring Report Form (DMR) submitted for the end of the reporting calendar quarter. For example, biomonitoring results for the calendar quarter ending March 31 shall be reported with the standard DMR due April 28, with the remaining biomonitoring reports submitted with standard DMRs due each July 28, October 28, and January 28. Biomonitoring results shall be reported on a biomonitoring DMR form, shall be consistent with the latest revision of the *Region VIII NPDES Whole Effluent Toxics Control Program, August 1997, Appendix C: Region VIII Guidance for Chronic Whole Effluent Toxicity Reporting*, and shall include all chemical and physical data as specified.

If the results for one year of testing indicate no chronic toxicity, the permittee may request a reduction in testing frequency and/or reduction to one species. The Executive Secretary may approve, partially approve, or deny the request based on results and other available information. If approval is given, the modification will take place without a public notice.

The current Utah whole effluent toxicity (WET) policy is in the process of being updated and revised to assure its consistency with the Environmental Protection Agency's national and regional WET policy. When the revised WET policy has been finalized and officially adopted, this permit may be reopened and modified to incorporate satisfactory follow-up chronic toxicity language (chronic pattern of toxicity, preliminary toxicity investigation, and/or toxicity identification evaluation (TIE)/TRE, etc.) without a public notice, as warranted and appropriate.

6. Toxicity Reduction Evaluation. If toxicity is detected during the life of this permit and it is determined by the Executive Secretary that a TRE is necessary, the permittee shall be so notified and shall initiate a TRE immediately thereafter. The purpose of the TRE will be to establish the cause of the toxicity, locate the source(s) of the toxicity, and control or provide treatment for the toxicity.

A TRE may include but is not limited to one, all, or a combination of the following:

- a. Phase I - Toxicity Characterization
- b. Phase II - Toxicity Identification Procedures
- c. Phase III - Toxicity Control Procedures

- d. Any other appropriate procedures for toxicity source elimination and control

If the TRE establishes that the toxicity cannot be eliminated immediately, the permittee shall submit a proposed compliance plan to the Executive Secretary. The plan shall include the proposed approach to control toxicity and a proposed compliance schedule for achieving control. If the approach and schedule are acceptable to the Executive Secretary, this permit may be reopened and modified.

If the TRE shows that the toxicity is caused by a toxicant(s) that may be controlled with specific numerical limitations, the permittee may:

- a. Submit an alternative control program for compliance with the numerical requirements.
- b. If necessary, provide a modified biomonitoring protocol that compensates for the pollutant(s) being controlled numerically.

If acceptable to the Executive Secretary, this permit may be reopened and modified to incorporate any additional numerical limitations, a modified compliance schedule if judged necessary by the Executive Secretary, and/or a modified biomonitoring protocol.

Failure to conduct an adequate TRE, or failure to submit a plan or program as described above, or the submittal of a plan or program judged inadequate by the Executive Secretary, shall be considered a violation of this permit.

II. STORM WATER DISCHARGE REQUIREMENTS

A. Coverage of This Section.

1. Discharges Covered Under This Section. The requirements listed under this section shall apply to storm water discharges from the industrial facility.

a. Site Coverage. This section covers discharges of storm water associated with industrial activity to waters of the State from the confines of the facility listed on the cover page. Specific monitoring requirements have been included and are based on the requirements of the UPDES Multi Sector General Permit for Storm Water Discharges Associated with Industrial Activity, Permit No. UTR000000.

B. Prohibition of Non-Storm Water Discharges.

The following non-storm water discharges may be authorized under this permit provided the non-storm water component of the discharge is in compliance with this section; discharges from fire fighting activities; fire hydrant flushing; potable water sources including waterline flushing; drinking fountain water; irrigation drainage and lawn watering; routine external building wash down water where detergents or other compounds have not been used in the process; pavement wash waters where spills or leaks of toxic or hazardous materials (including oils and fuels) have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; uncontaminated compressor condensate; uncontaminated springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials such as solvents.

C. Storm Water Pollution Prevention Plan Requirements: Contents of the Plan. The plan shall include, at a minimum, the following:

1. Pollution Prevention Team. Each plan shall identify a specific individual or individuals within the facility organization as members of a storm water Pollution Prevention Team who are responsible for developing the storm water pollution prevention plan and assisting the facility or plant manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's storm water pollution prevention plan.

2. Description of Potential Pollutant Sources. Each plan shall provide a description of potential sources which may reasonably be expected to add significant amounts of pollutants to storm water discharges or which may result in the discharge of pollutants during dry weather from separate storm sewers draining the facility. Each plan shall identify all activities and significant materials, which may be reasonably expected to have the potential as a significant pollutant source. Each plan shall include, at a minimum:

a. Drainage. A site map must be maintained indicating drainage areas and storm water outfalls. For each area of the facility that generates storm water discharges associated with the waste water treatment related activity with a reasonable potential for containing significant amounts of pollutants, a prediction of the direction of flow and an identification of the types of pollutants that are likely to be present in storm water discharges associated with the activity. Factors to consider include the toxicity of the pollutant; quantity of chemicals used, produced or discharged; the likelihood of contact with storm water; and history of significant leaks or spills of toxic or hazardous pollutants. Flows with a significant potential for causing erosion shall be identified. The site map shall include but not be limited to:

- (1) Drainage direction and discharge points from all wastewater associated discharges.
- (2) Location of any erosion and sediment control structure or other control measures utilized for reducing pollutants in storm water runoff.
- (3) Location of any handling, loading, unloading or storage of chemicals or potential pollutants such as caustics, hydraulic fluids, lubricants, solvents or other petroleum products, or hazardous wastes and where these may be exposed to precipitation.
- (4) Locations where any major spills or leaks of toxic or hazardous materials have occurred
- (5) Location of any sand or salt piles.

- (6) Location of fueling stations or vehicle and equipment maintenance and cleaning areas that are exposed to precipitation.
  - (7) Location of receiving streams or other surface water bodies.
  - (8) Locations of outfalls and the types of discharges contained in the drainage areas of the outfalls.
- b. Inventory of Exposed Materials. An inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a narrative description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water between the time of 3 years prior to the effective date of this permit; method and location of onsite storage or disposal; materials management practices employed to minimize contact of materials with storm water runoff between the time of 3 years prior to the effective date of this permit and the present; the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives.
- c. Spills and Leaks. A list of significant spills and significant leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility after the date of 3 years prior to the effective date of this permit. Such list shall be updated as appropriate during the term of the permit.
- d. Sampling Data. A summary of existing discharge sampling data describing pollutants in storm water discharges from the facility, including a summary of sampling data collected during the term of this permit.
- e. Summary of Potential Pollutant Sources and Risk Assessment. A narrative description of the potential pollutant sources from the following activities associated with treatment works: access roads/rail lines; loading and unloading operations; outdoor storage activities; material handling sites; outdoor vehicle storage or maintenance sites; significant dust or particulate generating processes;

and onsite waste disposal practices. Specific potential pollutants shall be identified where known.

3. Measures and Controls. The facility shall develop a description of storm water management controls appropriate for the facility, and implement such controls. The appropriateness and priorities of controls in a plan shall reflect identified potential sources of pollutants at the facility. The description of storm water management controls shall address the following minimum components, including a schedule for implementing such controls:
  - a. Good Housekeeping. All areas that may contribute pollutants to storm waters discharges shall be maintained in a clean, orderly manner. These are practices that would minimize the generation of pollutants at the source or before it would be necessary to employ sediment ponds or other control measures at the discharge outlets. Areas where good housekeeping practices should be implemented are storage areas for raw materials, waste materials and finished products; loading/unloading areas and waste disposal areas for hazardous and non-hazardous wastes. Examples of good housekeeping measures include; sweeping; labeling drums containing hazardous materials; and preventive monitoring practices or equivalent measures.
  - b. Preventive Maintenance. A preventive maintenance program shall involve timely inspection and maintenance of storm water management devices (e.g., cleaning oil/water separators, catch basins) as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and ensuring appropriate maintenance of such equipment and systems.
  - c. Spill Prevention and Response Procedures. Areas where potential spills that can contribute pollutants to storm water discharges can occur, and their accompanying drainage points, shall be identified clearly in the storm water pollution prevention plan. Where appropriate, specifying material handling procedures, storage requirements, and use of equipment such as diversion valves in the plan should be considered. Procedures and equipment for cleaning up spills shall be identified in the plan and made available to the appropriate personnel.

- d. Inspections. In addition to the comprehensive site evaluation required under *Part II.D.*, qualified facility personnel shall be identified to inspect designated equipment and areas of the facility on a periodic basis. The following areas shall be included in all inspections: loading and unloading areas for all significant materials; storage areas, including associated containment areas; waste management units; and vents and stacks from industrial activities. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections shall be maintained. The use of a checklist developed by the facility is encouraged.
- e. Employee Training. Employee training programs shall inform personnel responsible for implementing activities identified in the storm water pollution prevention plan or otherwise responsible for storm water management at all levels of responsibility of the components and goals of the storm water pollution prevention plan. Training should address topics such as spill response, good housekeeping and material management practices. The pollution prevention plan shall identify how often training will take place, but training should be held at least annually (once per calendar year). Employee training must, at a minimum, address the following areas when applicable to a facility: petroleum product management; process chemical management; spill prevention and control; fueling procedures; general good housekeeping practices; proper procedures for using fertilizers, herbicides and pesticides.
- f. Record Keeping and Internal Reporting Procedures. A description of incidents (such as spills, or other discharges), along with other information describing the quality and quantity of storm water discharges shall be included in the plan required under *Part II.C.* Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the plan.
- g. Non-storm Water Discharges.
- (1) Certification. The plan shall include a certification that the discharge has been tested or evaluated for the presence of non-storm water discharges. The certification shall include the identification of

potential significant sources of non-storm water at the site, a description of the results of any test and/or evaluation for the presence of non-storm water discharges, the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the onsite drainage points that were directly observed during the test. Certifications shall be signed in accordance with *Part V.G.* of this permit.

- (2) Exceptions. Except for flows from fire fighting activities, sources of non-storm water listed in *Part II.B. (Prohibition of Non-storm Water Discharges)* that are combined with storm water discharges associated with industrial activity must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.
  - (3) Failure to Certify. Any facility that is unable to provide the certification required (testing for non-storm water discharges), must notify the Executive Secretary within 180 days of the effective date of this permit. If the failure to certify is caused by the inability to perform adequate tests or evaluations, such notification shall describe: the procedure of any test conducted for the presence of non-storm water discharges; the results of such test or other relevant observations; potential sources of non-storm water discharges to the storm sewer; and why adequate tests for such storm sewers were not feasible. Non-storm water discharges to waters of the State that are not authorized by a UPDES permit are unlawful, and must be terminated.
- h. Sediment and Erosion Control. The plan shall identify areas, which, due to topography, activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion.
  - i. Management of Runoff. The plan shall contain a narrative consideration of the appropriateness of traditional storm water management practices (practices other than those which control the generation or source(s) of pollutants)

used to divert, infiltrate, reuse, or otherwise manage storm water runoff in a manner that reduces pollutants in storm water discharges from the site. The plan shall provide that measures that the permittee determines to be reasonable and appropriate shall be implemented and maintained. The potential of various sources at the facility to contribute pollutants to storm water discharges associated with industrial activity (*see Part II.C.2, Description of Potential Pollutant Sources*) shall be considered when determining reasonable and appropriate measures. Appropriate measures or other equivalent measures may include: vegetative swales and practices, reuse of collected storm water (such as for a process or as an irrigation source), inlet controls (such as oil/water separators), snow management activities, infiltration devices, wet detention/retention devices and discharging storm water through the waste water facility for treatment.

D. Comprehensive Site Compliance Evaluation.

Qualified personnel shall conduct site compliance evaluations at appropriate intervals specified in the plan, but in no case less than once a year. Such evaluations shall provide:

1. Areas contributing to a storm water discharge associated with industrial activity shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.
2. Based on the results of the evaluation, the description of potential pollutant sources identified in the plan in accordance with *Part II.C.2. (Description of Potential Pollutant Sources)* and pollution prevention measures and controls identified in the plan in accordance with *Part II.C.3. (Measures and Controls)* shall be revised as appropriate within 2 weeks of such evaluation and shall provide for implementation of any changes to the plan in a timely manner, but in no case more than 12 weeks after the evaluation.

3. A report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with *Part II.C.3.i.* shall be made and retained as part of the storm water pollution prevention plan for at least 3 years after the date of the evaluation. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with *Part IV.G (Signatory Requirements)* of this permit.
4. Deadlines for Plan Preparation and Compliance. The facility shall prepare and implement a plan in compliance with the provisions of *Part II* of this permit within 270 days of the permit effective date.
5. Keeping Plans Current. The facility shall amend the plan whenever there is a change in design, construction, operation, or maintenance, that has a significant effect on the potential for the discharge of pollutants to the waters of the state or if the storm water pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified by the plan, or in otherwise achieving the general objective of controlling pollutants in storm water discharges associated with the activities at the facility.

E. Monitoring and Reporting Requirements

1. Quarterly Visual Examination of Storm Water Quality. The facility shall perform and document a visual examination of a storm water discharge associated with industrial activity from each outfall, except discharges exempted below. The examination must be made at least once in each of the following designated periods during daylight hours unless there is insufficient rainfall or snow melt to produce a runoff event: January through March; April through June; July through September; and October through December.
  - a. Sample and Data Collection. Examinations shall be made of samples collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed 1 hour) of when the runoff or snowmelt begins discharging. The examinations shall document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm

water pollution. The examination must be conducted in a well-lit area. No analytical tests are required to be performed on the samples. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where practicable, the same individual should carry out the collection and examination of discharges for entire permit term.

b. Visual Storm Water Discharge Examination Reports.

Visual examination reports must be maintained onsite in the pollution prevention plan. The report shall include the examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.

c. Representative Discharge. If the permittee reasonably believes multiple outfalls discharge substantially identical effluents, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by an outfall, the permittee may collect a sample of effluent from one such outfall and report that the observation data also applies to the substantially identical outfall(s) provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan.

d. Adverse Conditions. When a discharger is unable to collect samples over the course of the visual examination period as a result of adverse climatic conditions, the discharger must document the reason for not performing the visual examination and retain this documentation onsite with the results of the visual examination. Adverse weather conditions, which may prohibit the collection of samples,

include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

- e. Inactive and Unstaffed Site. When a discharger is unable to conduct visual storm water examinations at an inactive and unstaffed site, the operator of the facility may exercise a waiver of the monitoring requirement as long as the facility remains inactive and unstaffed. The facility must maintain a certification with the pollution prevention plan stating that the site is inactive and unstaffed so that performing visual examinations during a qualifying event is not feasible.

F. EPCRA Section 313 Requirements.

1. In areas where *Section 313* water priority chemicals are stored, processed or otherwise handled, appropriate containment, drainage control and/or diversionary structures shall be provided. At a minimum, one of the following preventive systems or its equivalent shall be used:
  - a. Curbing, culverting, gutters, sewers, or other forms of drainage control to prevent or minimize the potential for storm water run-on to come into contact with significant sources of pollutants; or
  - b. Roofs, covers or other forms of appropriate protection to prevent storage piles from exposure to storm water and wind.
2. No tank or container shall be used for the storage of a *Section 313* water priority chemical unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature, etc.

Liquid storage areas for *Section 313* water priority chemicals shall be operated to minimize discharges of *Section 313* chemicals. Appropriate measures to minimize discharges of *Section 313* chemicals may include secondary containment provided for at least the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation, a strong spill contingency and integrity testing plan, and/or other equivalent measures.
3. Material storage areas for *Section 313* water priority chemicals

other than liquids that are subject to runoff, leaching, or wind shall incorporate drainage or other control features that will minimize the discharge of *Section 313* water priority chemicals by reducing storm water contact with *Section 313* water priority chemicals.

4. Truck and rail car loading and unloading areas for liquid *Section 313* water priority chemicals shall be operated to minimize discharges of *Section 313* water priority chemicals. Protection such as overhangs or door skirts to enclose trailer ends at truck loading/unloading docks shall be provided as appropriate. Appropriate measures to minimize discharges of *Section 313* chemicals may include: the placement and maintenance of drip pans (including the proper disposal of materials collected in the drip pans) where spillage may occur (such as hose connections, hose reels and filler nozzles) for use when making and breaking hose connections; a strong spill contingency and integrity testing plan; and/or other equivalent measures.
5. Processing equipment and materials handling equipment shall be operated so as to minimize discharges of *Section 313* water priority chemicals. Materials used in piping and equipment shall be compatible with the substances handled. Drainage from process and materials handling areas shall minimize storm water contact with *Section 313* water priority chemicals. Additional protection such as covers or guards to prevent exposure to wind, spraying or releases from pressure relief vents from causing a discharge of *Section 313* water priority chemicals to the drainage system shall be provided as appropriate. Visual inspections or leak tests shall be provided for overhead piping conveying *Section 313* water priority chemicals without secondary containment.
6. Drainage from areas covered by *Parts II.F. 1, 2, 3, or 4* should be restrained by valves or other positive means to prevent the discharge of a spill or other excessive leakage of *Section 313* water priority chemicals. Where containment units are employed, such units may be emptied by pumps or ejectors; however, these shall be manually activated.

Flapper-type drain valves shall not be used to drain containment areas. Valves used for the drainage of containment areas should, as far as is practical, be of manual, open-and-closed design. If facility drainage is not engineered as above, the final discharge of all in-facility storm sewers shall be equipped to be equivalent with a diversion system that could, in the event of an uncontrolled spill of *Section 313* water priority chemicals, return the spilled material to the facility.

Records shall be kept of the frequency and estimated volume (in gallons) of discharges from containment areas.

7. Other areas of the facility (those not addressed in *Parts II.F. 1, 2, 3, or 4*, from which runoff that may contain *Section 313* water priority chemicals or spills of *Section 313* water priority chemicals could cause a discharge shall incorporate the necessary drainage or other control features to prevent discharge of spilled or improperly disposed material and ensure the mitigation of pollutants in runoff or leachate.
8. All areas of the facility shall be inspected at specific intervals identified in the plan for leaks or conditions that could lead to discharges of *Section 313* water priority chemicals or direct contact of storm water with raw materials, intermediate materials, waste materials or products. In particular, facility piping, pumps, storage tanks and bins, pressure vessels, process and material handling equipment, and material bulk storage areas shall be examined for any conditions or failures that could cause a discharge. Inspection shall include examination for leaks, wind blowing, corrosion, support or foundation failure, or other forms of deterioration or non-containment. Inspection intervals shall be specified in the plan and shall be based on design and operational experience. Different areas may require different inspection intervals. Where a leak or other condition is discovered that may result in significant releases of *Section 313* water priority chemicals to waters of the State, action to stop the leak or otherwise prevent the significant release of *Section 313* water priority chemicals to waters of the State shall be immediately taken or the unit or process shut down until such action can be taken. When a leak or non-containment of a *Section 313* water priority chemical has occurred, contaminated soil, debris, or other material must be promptly removed and disposed in accordance with Federal, State, and local requirements and as described in the plan.
9. Facilities shall have the necessary security systems to prevent accidental or intentional entry that could cause a discharge. Security systems described in the plan shall address fencing, lighting, vehicular traffic control, and securing of equipment and buildings.
10. Facility employees and contractor personnel that work in areas where *Section 313* water priority chemicals are used or stored shall be trained in and informed of preventive measures at the facility. Employee training shall be conducted at intervals specified in the

plan, but not less than once per year. Training shall address: pollution control laws and regulations, the storm water pollution prevention plan and the particular features of the facility and its operation that are designed to minimize discharges of *Section 313* water priority chemicals. The plan shall designate a person who is accountable for spill prevention at the facility and who will set up the necessary spill emergency procedures and reporting requirements so that spills and emergency releases of *Section 313* water priority chemicals can be isolated and contained before a discharge of a *Section 313* water priority chemical can occur. Contractor or temporary personnel shall be informed of facility operation and design features in order to prevent discharges or spills from occurring.

III. MONITORING, RECORDING AND REPORTING REQUIREMENTS

- A. Representative Sampling. Samples taken in compliance with the monitoring requirements established under *Part I* shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge. Sludge samples shall be collected at a location representative of the quality of sludge immediately prior to the use-disposal practice.
- B. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under *Utah Administrative Code (UAC) R317-2-10*, unless other test procedures have been specified in this permit.
- C. Penalties for Tampering. The *Act* provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both.
- D. Reporting of Monitoring Results. Monitoring results obtained during the previous month shall be summarized for each month and reported on a DMR Form (EPA No. 3320-1), post-marked no later than the 28<sup>th</sup> day of the month following the completed reporting period. The first report is due on December 28, 2005. If no discharge occurs during the reporting period, "no discharge" shall be reported. Legible copies of these, and all other reports including WET test reports required herein, shall be signed and certified in accordance with the requirements of *Signatory Requirements (Part V.G.)*, and submitted to the Director, Division of Water Quality at the following address:
- original to: Department of Environmental Quality  
Division of Water Quality  
288 North 1460 West  
PO Box 144870  
Salt Lake City, Utah 84114-4870
- E. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.
- F. Additional Monitoring by the Permittee. If the permittee monitors any parameter more frequently than required by this permit, using test procedures approved under *UAC R317-2-10* or as otherwise specified in

this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated. Only those parameters required by the permit need to be reported.

G. Records Contents. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The individual(s) who performed the sampling or measurements;
3. The date(s) and time(s) analyses were performed;
4. The individual(s) who performed the analyses;
5. The analytical techniques or methods used; and,
6. The results of such analyses.

H. Retention of Records. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the Executive Secretary at any time. A copy of this UPDES permit must be maintained on site during the duration of activity at the permitted location.

I. Twenty-four Hour Notice of Noncompliance Reporting.

1. The permittee shall (orally) report any noncompliance that may seriously endanger health or environment as soon as possible, but no later than 24 hours from the time the permittee first became aware of circumstances. The report shall be made to the Division of Water Quality, (801) 538-6146, or 24-hour answering service (801) 536-4123.
2. The following occurrences of noncompliance shall be reported by telephone (801) 536-4123 as soon as possible but no later than 24 hours from the time the permittee becomes aware of the circumstances:
  - a. Any noncompliance that may endanger health or the environment;
  - b. Any unanticipated bypass that exceeds any effluent limitation in the permit (*see Part IV.G, Bypass of Treatment Facilities.*);

- c. Any upset which exceeds any effluent limitation in the permit (*see Part IV.H, Upset Conditions.*); or,
  - d. Violation of a maximum daily discharge limitation for any of the pollutants listed in the permit.
3. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:
  - a. A description of the noncompliance and its cause;
  - b. The period of noncompliance, including exact dates and times;
  - c. The estimated time noncompliance is expected to continue if it has not been corrected; and,
  - d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
  - e. Steps taken, if any, to mitigate the adverse impacts on the environment and human health during the noncompliance period.
4. The Executive Secretary may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Division of Water Quality, (801) 538-6146.
5. Reports shall be submitted to the addresses in *Part III.D, Reporting of Monitoring Results.*
- J. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for *Part III.D* are submitted. The reports shall contain the information listed in *Part III.I.3.*
- K. Inspection and Entry. The permittee shall allow the Executive Secretary, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:
  1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and,
4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the *Act*, any substances or parameters at any location.

IV. COMPLIANCE RESPONSIBILITIES

- A. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and re-issuance, or modification; or for denial of a permit renewal application. The permittee shall give advance notice to the Executive Secretary of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.
- B. Penalties for Violations of Permit Conditions. The Act provides that any person who violates a permit condition implementing provisions of the Act is subject to a civil penalty not to exceed \$10,000 per day of such violation. Any person who willfully or negligently violates permit conditions of the Act is subject to a fine not exceeding \$25,000 per day of violation; Any person convicted under *UCA 19-5-115(2)* a second time shall be punished by a fine not exceeding \$50,000 per day. Except as provided at *Part IV.G, Bypass of Treatment Facilities* and *Part IV.H, Upset Conditions*, nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.
- C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.
- E. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- F. Removed Substances. Collected screening, grit, solids, sludge, or other pollutants removed in the course of treatment shall be buried or disposed of in such a manner to prevent any pollutant from entering any waters of the state or creating a health hazard. Sludge/digester supernatant and filter

backwash shall not directly enter either the final effluent or waters of the state by any other direct route.

G. Bypass of Treatment Facilities.

1. Bypass Not Exceeding Limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to *Parts IV.G.2. and IV.G.3.*
2. Prohibition of Bypass.
  - a. Bypass is prohibited, and the Executive Secretary may take enforcement action against a permittee for bypass, unless:
    - (1) Bypass was unavoidable to prevent loss of human life, personal injury, or severe property damage;
    - (2) There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance, and
    - (3) The permittee submitted notices as required under *Part IV.G.3.*
  - b. The Executive Secretary may approve an anticipated bypass, after considering its adverse effects, if the Executive Secretary determines that it will meet the three conditions listed in *Part IV.G.2a. (1), (2) and (3).*
3. Notice.
  - a. Anticipated bypass. Except as provided in *Part IV.G.2. and Part IV.G.3.b,* if the permittee knows in advance of the need for a bypass, it shall submit prior notice, at least ninety days before the date of bypass. The prior notice shall include the following unless otherwise waived by the Executive Secretary:

- (1) Evaluation of alternative to bypass, including cost-benefit analysis containing an assessment of anticipated resource damages;
  - (2) A specific bypass plan describing the work to be performed including scheduled dates and times. The permittee must notify the Executive Secretary in advance of any changes to the bypass schedule;
  - (3) Description of specific measures to be taken to minimize environmental and public health impacts;
  - (4) A notification plan sufficient to alert all downstream users, the public and others reasonably expected to be impacted by the bypass;
  - (5) A water quality assessment plan to include sufficient monitoring of the receiving water before, during and following the bypass to enable evaluation of public health risks and environmental impacts; and
  - (6) Any additional information requested by the Executive Secretary.
- b. Emergency Bypass. Where ninety days advance notice is not possible, the permittee must notify the Executive Secretary, and the Director of the Department of Natural Resources, as soon as it becomes aware of the need to bypass and provide to the Executive Secretary the information in *Part IV.G.3.a.(1)* through (6) to the extent practicable.
- c. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass to the Executive Secretary as required under *Part III.I., Twenty-four-Hour Notice of Non-Compliance Reporting*. The permittee shall also immediately notify the Director of the Department of Natural Resources, the public and downstream users and shall implement measures to minimize impacts to public health and environment to the extent practicable.

- H. Upset Conditions.
1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of *Part IV.H.2.* are met. Executive Secretary's administrative determination regarding a claim of upset cannot be judiciously challenged by the permittee until such time as an action is initiated for noncompliance.
  2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
    - a. An upset occurred and that the permittee can identify the cause(s) of the upset;
    - b. The permitted facility was at the time being properly operated;
    - c. The permittee submitted notice of the upset as required under *Part III.I, Twenty-four Hour Notice of Noncompliance Reporting*; and,
    - d. The permittee complied with any remedial measures required under *Part IV.D, Duty to Mitigate.*
  3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.
- I. Toxic Pollutants. The permittee shall comply with effluent standards or prohibitions established under *Section 307(a) of The Water Quality Act of 1987* for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
- J. Changes in Discharge of Toxic Substances. Notification shall be provided to the Executive Secretary as soon as the permittee knows of, or has reason to believe:

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
    - a. One hundred micrograms per liter (100 µg/L);
    - b. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
    - c. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with *UAC R317-8-3.4(7)* or (10); or,
    - d. The level established by the Executive Secretary in accordance with *UAC R317-8-4.2(6)*.
  2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
    - a. Five hundred micrograms per liter (500 µg/L);
    - b. One milligram per liter (1 mg/L) for antimony;
    - c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with *UAC R317-8-3.4(9)*; or,
    - d. The level established by the Executive Secretary in accordance with *UAC R317-8-4.2(6)*.
- K. Industrial Pretreatment. Any wastewaters discharged to the sanitary sewer, either as a direct discharge or as a hauled waste, are subject to Federal, State and local pretreatment regulations. Pursuant to *Section 307 of The Water Quality Act of 1987*, the permittee shall comply with all applicable federal General Pretreatment Regulations promulgated at *40 CFR 403*, the State Pretreatment Requirements at *UAC R317-8-8*, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the wastewaters.

In addition, in accordance with *40 CFR 403.12(p)(1)*, the permittee must notify the POTW, the EPA Regional Waste Management Director, and the State hazardous waste authorities, in writing, if they discharge any substance into a POTW which if otherwise disposed of would be considered a hazardous waste under *40 CFR 261*. This notification must include the name of the hazardous waste, the EPA hazardous waste number, and the type of discharge (continuous or batch).

V. GENERAL REQUIREMENTS

- A. Planned Changes. The permittee shall give notice to the Executive Secretary as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in the permit. In addition, if there are any planned substantial changes to the permittee's existing sludge facilities or their manner of operation or to current sludge management practices of storage and disposal, the permittee shall give notice to the Executive Secretary of any planned changes at least 30 days prior to their implementation.
- B. Anticipated Noncompliance. The permittee shall give advance notice to the Executive Secretary of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.
- C. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and re-issuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- D. Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit.
- E. Duty to Provide Information. The permittee shall furnish to the Executive Secretary, within a reasonable time, any information which the Executive Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Executive Secretary, upon request, copies of records this permit requires to be kept.
- F. Other Information. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Executive Secretary, it shall promptly submit such facts or information.
- G. Signatory Requirements. All applications, reports or information submitted to the Executive Secretary shall be signed and certified.

1. All permit applications shall be signed by either a principal executive officer or ranking elected official.
2. All reports required by the permit and other information requested by the Executive Secretary shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - a. The authorization is made in writing by a person described above and submitted to the Executive Secretary, and,
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
3. Changes to authorization. If an authorization under *Part V.G.2.* is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of *Part V.G.2.* must be submitted to the Executive Secretary prior to or together with any reports, information, or applications to be signed by an authorized representative.
4. Certification. Any person signing a document under *Part V.G.* shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- H. Penalties for Falsification of Reports. The *Act* provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than \$10,000.00 per violation, or by imprisonment for not more than six months per violation, or by both.
- I. Availability of Reports. Except for data determined to be confidential under *UAC R317-8-3.2*, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of Executive Secretary. As required by the *Act*, permit applications, permits and effluent data shall not be considered confidential
- J. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the permittee of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under the *Act*.
- K. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.
- L. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
- M. Transfers. This permit may be automatically transferred to a new permittee if:
1. The current permittee notifies the Executive Secretary at least 20 days in advance of the proposed transfer date;
  2. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,
  3. The Executive Secretary does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in *Part V.M.2*.

- N. State Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by *UCA 19-5-117*.
- O. Water Quality-Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations and compliance schedule, if necessary, if one or more of the following events occurs:
1. Water Quality Standards for the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.
  2. A final wasteload allocation is developed and approved by the State and/or EPA for incorporation in this permit.
  3. A revision to the current Water Quality Management Plan is approved and adopted which calls for different effluent limitations than contained in this permit.
- P. Toxicity Limitation-Re-opener Provision. This permit may be reopened and modified (following proper administrative procedures) to include WET testing, a WET limitation, a compliance schedule, a compliance date, additional or modified numerical limitations, or any other conditions related to the control of toxicants if toxicity is detected during the life of this permit.

APPENDIX 5-23A

BLASTING PLAN

**APPENDIX 5-23A**

**Blasting Plan**

**CHAPTER 7  
LIST OF PLATES**

<b><u>PLATE NUMBER</u></b>	<b><u>DESCRIPTION</u></b>
PLATE 7-1	Crandall Creek Plan and Profile
PLATE 7-2	Crandall Creek Cross Sections
PLATE 7-3	Proposed Pond Details
PLATE 7-4	Deleted
PLATE 7-4A	Deleted
PLATE 7-5	Drainage Map
PLATE 7-5A(1,2)	As-Built Cross Sections
PLATE 7-5B	Deleted
PLATE 7-5C	Watershed Boundary Map
PLATE 7-6	Deleted
PLATE 7-6A	Deleted
PLATE 7-7	Exploration Drill Hole and Hiawatha Coal Outcrop Locations
PLATE 7-8	Blind Canyon Watershed Land Types
PLATE 7-9	Terratek Blind Canyon Watershed Subsidence Modeling
PLATE 7-10	Blind Canyon Watershed Land Types & Drainage
PLATE 7-11	Pre & Postmining Blind Canyon Topography
PLATE 7-12	Seep and Spring Locations
PLATE 7-13	Potentiometric Surface of Spring Canyon Member, Star Point Formation
PLATE 7-14	Groundwater Rights

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 UPDES 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 use of flocculants and gel-logs will be considered as stopgap measures until more permanent treatment facilities are in-place.

Make-up water for in-mine use is pumped from Crandall Creek into the main mine sump at no more than 75 gallons per minute (pump capacity). At its lowest recorded flow, at the lower flume, a minimum of 100 gallons per minute remains within Crandall Creek even when the mine is withdrawing water for in-mine use.

The majority of natural water inflow is occurring in the old mine workings (Leases U054762 and SL-062648). According to GENWAL personnel, natural mine inflow accounts for less than 400,000 gallons per year of the total water used in-mine. Only negligible mine inflow has been encountered in Lease UTU-68082 and State Lease ML-21569. Currently, water used in mining operations is being pumped to State Lease SL-21569 from the sump in the old mine workings. All inflow water is used in underground mining operations.

### **Effects of Mining Operation On Groundwater**

Mine dewatering (resulting in removal of water from the aquifers) is the primary mechanism by which the groundwater system may be impacted. As previously stated, it is believed that the water emitting from seeps and springs in State Leases ML-21568 and ML-21569, as well as areas within and adjacent to UTU-68082 (LBA No.9) and groundwater supporting springs and seeps in the South Crandall Lease area (UTU-78953), originate from perched aquifers with no direct communication with the regional Star Point aquifer. Although groundwater discharging from Little Bear Spring travels through a fracture system in the Star Point Sandstone, it is believed that the fracture system is the conveyance system for the the groundwater. Groundwater migrating through the pore spaces in the Star Point Sandstone near the spring likely does not contribute any significant quantity of

Water quality samples will be collected from the flume locations quarterly, and analyzed according to the list contained in Table 7-8. In the years 1990, 1995, 2000 and every fifth year thereafter the samples collected during the low-flow period (normally fourth quarter) will be analyzed according to Table 7-9. All samples will be analyzed for total and dissolved constituents according to the indicated lists. Sampling and analysis will be conducted quarterly until the surface areas are reclaimed, at which time sampling will be conducted semiannually until the surety bond is released. For perennial streams, those samples will be collected during high-flow (normally second quarter) and low-flow (normally fourth quarter) periods. Discharges from the sedimentation pond will be analyzed in accordance with the UPDES permit for the facility.

Stream flow observations made during drilling operations as well as seep and spring surveys suggest that large portions of the south fork of Horse Creek, and both the north and south forks of Crandall Creek have only ephemeral and intermittent flows within State Leases ML-21568 and ML-21569 and portions of UTU-68082. Plate 7-16 shows the points of transition between perennial and intermittent flow for Horse Creek, Blind Creek, the north and south forks of Crandall Creek, and Indian Creek. Blind Creek has been determined to be intermittent.

Stream channel monitoring stations have been established along both the north and south forks of Crandall Creek, and the south branch of Horse Creek to determine what stream reaches exhibit perennial flow. Stream flow and water temperature were measured twice monthly from May through July, and monthly during the remainder of 1991 when the area was accessible. Stream monitoring results are found in Appendix 7-23. Stream monitoring was again done on September 28, 1992. These results are also contained in Appendix 7-23. Stream monitoring ceased at the end of 1992.

To provide for proper monitoring of Indian Creek (in Upper Joe's Valley) a 36-inch Parshall flume was installed. This flume is equipped with a Stevens Type-F water-level recorder to allow the collection of continuous flow data. Charts will be changed and the flumes inspected on a monthly basis. The location of this flume is depicted on Plate 7-16. Because of its higher elevation and limited access this flume is typically operational from June 1 through November 1 of any given year. If seasonal variations and access allow, this station will be operated for longer periods.

Water quality samples will be collected from the Indian Creek flume location quarterly (weather permitting), and analyzed according to the list contained in Table 7-8. In the years 1995, 2000 and every fifth year thereafter the samples collected during the low-flow period (normally fourth quarter) will be analyzed according to Table 7-9. All samples will be analyzed for total and dissolved constituents according to the indicated lists. When flumes or other monitoring devices are no longer required, they will be removed and the affected areas will be restored.

No retreat mining will be conducted within the designated stream channel buffer zones. Horse Canyon is located hydraulically upgradient and north of the UTU-68082 (LBA No. 9) north boundary line. Current mine plans show that because of limited coal height that neither development mining or retreat mining will occur beneath Horse Canyon and the stream channel buffer zones. Since mining has already occurred under Blind Canyon, Crandall Canyon, and beneath the upper reaches of the left fork (South Fork) tributary of Horse Canyon, any adverse effects to the respective

The presence of acid- or toxic-forming materials has been determined by laboratory testing (as defined in "Guidelines for Management of Topsoil and Overburden for Underground and Surface Coal Mining"). These data are contained in Appendix 6-2. If waste material is generated it will be tested for acid- or toxic-forming materials on a yearly basis or prior to disposal. If such material is identified, it will be stored in an enclosed area (i.e. dumpster) or within a containment (bermed) area until such time as it can be disposed of.

#### **7.31.4 Transfer of Wells**

Before final bond release, exploratory or monitoring wells will be sealed in a safe and environmentally sound manner in accordance with Sections 7.38 and 7.65.

#### **7.31.5 Discharges**

The Applicant will not discharge into the underground mine, unless specifically approved by the Division and/or meets the approval of MSHA. Discharges will be limited to the following:

1. Water
2. Coal processing waste
3. Fly ash from a coal-fired facility
4. Sludge from an acid-mine-drainage treatment facility
5. Flue-gas desulfurization sludge
6. Inert materials used for stabilizing underground mines
7. Underground development waste.

#### **7.31.51 Gravity Discharges**

The angle at which the coal bed is inclined from the horizontal (dip) prevents any gravity discharge of water from the surface entries.

#### **7.31.6 Stream Buffer Zones**

The disturbed area is drained by ephemeral "streams" which are tributaries to Crandall Creek. The undisturbed drainages will enter Crandall Canyon above and below the culvert. Stream buffer zones will be maintained above and below the culvert. Portions of the road lie within 100' of Crandall Creek. The sediment pond outslope is contiguous to Crandall Creek, a perennial stream at the mine facility area.

Crandall Creek water quality is protected from the impacts of the mine by the use of revegetation, silt fences and/or straw bales, and rip-rapped channels. In addition, buffer zone signs have been installed to indicate the area beyond which no disturbance shall take place. For additional information concerning stream buffer zone protection [Section 3.23.300](#) of this permit.

3. Diverting runoff using protected channels or pipes through disturbed areas so as not to cause additional erosion;
4. Using straw dikes, riprap, check dams, mulches, vegetative sediment filters, dugout ponds and other measures that reduce overland flow velocities, reduce runoff volumes or trap sediment;
5. Treating with chemicals/paving;
6. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, treating mine drainage in underground sumps.

#### **7.42.20 Siltation Structures**

#### **7.42.21 General Requirements**

Additional contributions of suspended solids and sediment to stream flow or runoff outside the permit area will be prevented to the extent possible using the best technology currently available.

#### **Alternate Sediment Control Areas and Small Area Exemptions**

ASCA-2 (consisting of 0.34 acre) exists at the northwest corner of the site. This area was initially constructed as a substation pad but was never utilized as such. A 12-inch CMP culvert was installed to act as a discharge into UD-1. A silt fence and strawbale dike have been placed to trap the sediment and prevent erosion. (Refer to Plates 7-5)

ASCA-5, ASCA-6, ASCA-7 and ASCA-11 consist of the topsoil stockpiles #1, #2, #3, and #4 respectfully. These stockpiles are located on the north and south side of the access road as shown on Plate 2-3. Disturbed areas associated with the topsoil stockpiles are 0.20 acres, 0.22 acres, 0.62 acres and 0.65 acres for ASCA-5, ASCA-6, ASCA-7, and ASCA-11, respectively. All topsoil stockpiles have been protected from erosion by a combination of dikes, silt-fencing, berms, and a vegetative cover. (Refer to Plate 2-3)

ASCA-9 (0.15 acres) is the outslope of the sediment pond; ASCA-10 (0.02 acres) is the headwall of the inlet of the main by-pass culvert. The drainage from these areas can not be directed to the sediment pond and are too close to the creek to construct separate sediment ponds. Therefore GENWAL has used alternate sediment control methods such as silt fences, straw bale dikes and vegetation. (Refer to Place 7-5)

Note: ASCA's 1, 3, 4 and 8 have been eliminated through previous permitting actions.

## 7.42.22 Sedimentation Pond

### Design

The sedimentation pond located in Crandall Canyon has been redesigned to control the additional storm runoff from the pad extension and from the designated undisturbed drainage areas above the pad extension associated with the proposed culvert expansion. The topography and watershed boundaries are shown on Plate 7-5 and 7-5C. Cross sections of the pond design are shown on Plate 7-3.

Flow conditions in Crandall Creek adjacent to the sedimentation pond were examined to determine if flood flows may erode the downstream toe (see Appendix 7-5). As noted, the peak flow from the 100-year, 24-hour precipitation event will encroach 0.6 foot above the toe of the embankment. Thus, a riprap protective layer (with a median rock diameter of 12.5 inches) was placed along the lower 2.0 feet of the embankment as shown in Plate 7-4. Placement of this riprap will serve an incidental purpose of increasing the stability of the dam by placing additional weight on the downstream toe (Figure 7-10).

Following construction of the sedimentation pond as designed herein, all disturbed areas associated with pond construction (with the exception of the interior of the pond) will be revegetated with the temporary seed mixture. This mixture was developed in consultation with Lynn Kunzler of the Division and Walt Nowak of the U.S. Forest Service. This mixture provides rapid growth species, sod-forming species, and species that are compatible with other plants.

Seeding will be done in the late fall, just prior to the first heavy snowfall of the year (Plummer et al., 1968). Seeding will be accomplished by hydroseeder. Mulch will be placed after seeding. The mulch, which consists of two tons of straw or grass hay per acre of disturbed area, will be spread over the area to be planted by hydromulcher.

Following seeding, the revegetated out slopes of the pond will be inspected during normal pond inspections to determine the effectiveness of the seeding. Straw-bale dikes will be added as necessary to control excessive gulying on the dam face. These dikes will be installed as noted by Figure 7-11.

#### 7.42.30 Diversions

Diversion UD-1 is a 42" culvert placed along the western edge of the site at the location shown on Plate 7-5 to divert water from a 95-acre undisturbed watershed around the yard area. Analyses and design information associated with this and other diversions associated with the site are contained in Appendix 7-4. (Table 10)

Two additional diversions were designed to convey water from undisturbed areas away from the disturbed site. One (UD-2) was constructed in the northwest portion of the site along the proposed substation pad. UD-2 is an open ditch diversion. UD-3 is a 24" culvert diversion located in the northeastern portion of the site to convey water away from the portal area. Design details are presented in Tables 8 and 10 respectively in Appendix 7-4.

The existing culverts in the mine yard were examined to determine their adequacy with respect to passing the peak flow. Details of these designs are provided in Appendix 7-4.

Similarly, ditches within the disturbed area are designed to pass the peak flow from the 10-year, 6-hour storm. Typical cross sections and design calculations are contained in Appendix 7-4 for these ditches. Ditches have been evaluated for adequacy in passing the 10 year-24 hour storm and found to be of adequate size (see Appendix 7-4).

A berm was placed around the (un-used) power substation area to prevent runoff water that accumulates thereon from flowing across the remainder of the site. A small channel on the substation pad collects water from the pad and adjacent undisturbed areas. A stilling basin was placed at the downstream end of this diversion to trap sediment prior to discharging into UD-1.

### **Expansion Area Surface Water Drainage and Sediment Control**

Water on the extended mining pad associated with the proposed culvert expansion comes from two sources. The pad itself and two watershed areas located in undisturbed terrain to the south of the proposed pad. Runoff from the pad and watersheds is collected and controlled by the use of drainage ditches and culverts. All runoff diverted through the drainage ditches and culverts will eventually go into a sediment pond. The watersheds are shown on Plate 7-5. The location of drainage ditches and culverts can be also be found on Plate 7-5.

All diversion ditches have been designed to have a triangular channel with a minimum depth of one foot and side slopes of 1H:1V. During the periods of peak flow at least 3" of the channel depth will be freeboard. The calculations associated with drainage ditch design can be found in Appendix 7-4.

#### **7.42.40 Road Drainage**

All of GENWAL's roads have been designed, located and constructed as required by the regulations R645-301-742.410 through R645-301-742-423.5.

#### **7.43 Impoundment**

There are no permanent impoundments associated with the GENWAL facilities. Temporary impoundments of water collected for runoff control will occur in the sediment pond. The physical design of the sediment pond are certified designs as required in R645-301-512 and are presented in Section 5.33 and Appendix 7-4 of this application. The sediment pond does not meet the criteria for MSHA regulations. The hydrologic design for the sediment pond is presented in Section 7.42.20 and Appendix 7-4. On cessation and reclamation of mining and disposal activities, the sediment pond will be removed.

#### **7.44 Discharge Structures**

The sediment pond is equipped with a decant, a riser pipe (cmp) principle overflow and a rip-rapped open-channel emergency spillway. Sediment pond details are covered under Section 7.42.20 and in Appendix 7-4.

#### **7.45 Disposal of Excess Spoil**

No significant excess spoil will be developed by the underground mine. In the event spoil is generated during the mining operations, this will be transported to an approved disposal site. The handling of these materials will comply with R645-301-745.

#### **7.46 Coal Mine Waste**

The disposal and placement of any refuse materials will be conducted in accordance with the plans presented in Chapter 5 of this application.

#### **7.47 Disposal of Noncoal Mine Waste**

##### **Garbage**

Solid waste generated from mining activities, such as garbage and paper products, is disposed of in large trash "dumpsters" located near the portal. A contract garbage hauling service, empties the contents of the dumpsters on a weekly basis and hauls the garbage to an approved dump or landfill.

##### **Unusable Equipment**

All salvageable mining equipment is sold to local scrap dealers: items such as broken bolts, worn out engine parts, and items which might be recycled. Any machinery or large parts are placed in a stockpile near the material storage area for periodic salvage by local scrap dealers. No mining equipment will be merely abandoned.

##### **Petroleum Products**

Oil and grease wastes are collected in tanks and returned to distributors for refining or used as heating fuel. In case of spills, a spill control plan has been developed and is located at the mine site.

#### **7.48 Casing and Sealing of Wells**

Following completion of reclamation, the monitoring wells for the mine site will be plugged and abandoned in accordance with R645-301-631 and R645-301-748. This will prevent the potential for disturbance to the hydrologic balance.

#### **7.50 Performance Standards**

All coal mining and reclamation operations will be conducted to minimize disturbance to the hydrologic balance within the permit and adjacent areas, to prevent material damage to the hydrologic balance outside the permit area and support approved postmining land uses in accordance with the terms and conditions of the approved permit and the performance standards of R645-301 and R645-302. For the purpose of SURFACE COAL MINING AND RECLAMATION ACTIVITIES, operations will be conducted to assure the protection or replacement of water rights in accordance with the terms and conditions of the approved permit and the performance standards of R645-301 and R645-302.

The following sections, 7.51 through 7.55 provide a commitment to meet the requirements of the applicable laws. Specific plans for accomplishing compliance are provided under the applicable, referenced sections of this Mining and Reclamation Plan.

**CHAPTER 7  
LIST OF PLATES**

<b><u>PLATE NUMBER</u></b>	<b><u>DESCRIPTION</u></b>
PLATE 7-1	Crandall Creek Plan and Profile
PLATE 7-2	Crandall Creek Cross Sections
PLATE 7-3	Proposed Pond Details
PLATE 7-4	Deleted
PLATE 7-4A	Deleted
PLATE 7-5	Drainage Map
PLATE 7-5A(1,2)	As-Built Cross Sections
PLATE 7-5B	Deleted
PLATE 7-5C	Watershed Boundary Map
PLATE 7-6	Deleted
PLATE 7-6A	Deleted
PLATE 7-7	Exploration Drill Hole and Hiawatha Coal Outcrop Locations
PLATE 7-8	Blind Canyon Watershed Land Types
PLATE 7-9	Terratek Blind Canyon Watershed Subsidence Modeling
PLATE 7-10	Blind Canyon Watershed Land Types & Drainage
PLATE 7-11	Pre & Postmining Blind Canyon Topography
PLATE 7-12	Seep and Spring Locations
PLATE 7-13	Potentiometric Surface of Spring Canyon Member, Star Point Formation
PLATE 7-14	Groundwater Rights

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 UPDES 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 use of flocculants and gel-logs will be considered as stopgap measures until more permanent treatment facilities are in-place.

Make-up water for in-mine use is pumped from Crandall Creek into the main mine sump at no more than 75 gallons per minute (pump capacity). At its lowest recorded flow, at the lower flume, a minimum of 100 gallons per minute remains within Crandall Creek even when the mine is withdrawing water for in-mine use.

The majority of natural water inflow is occurring in the old mine workings (Leases U054762 and SL-062648). According to GENWAL personnel, natural mine inflow accounts for less than 400,000 gallons per year of the total water used in-mine. Only negligible mine inflow has been encountered in Lease UTU-68082 and State Lease ML-21569. Currently, water used in mining operations is being pumped to State Lease SL-21569 from the sump in the old mine workings. All inflow water is used in underground mining operations.

### **Effects of Mining Operation On Groundwater**

Mine dewatering (resulting in removal of water from the aquifers) is the primary mechanism by which the groundwater system may be impacted. As previously stated, it is believed that the water emitting from seeps and springs in State Leases ML-21568 and ML-21569, as well as areas within and adjacent to UTU-68082 (LBA No.9) and groundwater supporting springs and seeps in the South Crandall Lease area (UTU-78953), originate from perched aquifers with no direct communication with the regional Star Point aquifer. Although groundwater discharging from Little Bear Spring travels through a fracture system in the Star Point Sandstone, it is believed that the fracture system is the conveyance system for the the groundwater. Groundwater migrating through the pore spaces in the Star Point Sandstone near the spring likely does not contribute any significant quantity of

Water quality samples will be collected from the flume locations quarterly, and analyzed according to the list contained in Table 7-8. In the years 1990, 1995, 2000 and every fifth year thereafter the samples collected during the low-flow period (normally fourth quarter) will be analyzed according to Table 7-9. All samples will be analyzed for total and dissolved constituents according to the indicated lists. Sampling and analysis will be conducted quarterly until the surface areas are reclaimed, at which time sampling will be conducted semiannually until the surety bond is released. For perennial streams, those samples will be collected during high-flow (normally second quarter) and low-flow (normally fourth quarter) periods. Discharges from the sedimentation pond will be analyzed in accordance with the UPDES permit for the facility.

Stream flow observations made during drilling operations as well as seep and spring surveys suggest that large portions of the south fork of Horse Creek, and both the north and south forks of Crandall Creek have only ephemeral and intermittent flows within State Leases ML-21568 and ML-21569 and portions of UTU-68082. Plate 7-16 shows the points of transition between perennial and intermittent flow for Horse Creek, Blind Creek, the north and south forks of Crandall Creek, and Indian Creek. Blind Creek has been determined to be intermittent.

Stream channel monitoring stations have been established along both the north and south forks of Crandall Creek, and the south branch of Horse Creek to determine what stream reaches exhibit perennial flow. Stream flow and water temperature were measured twice monthly from May through July, and monthly during the remainder of 1991 when the area was accessible. Stream monitoring results are found in Appendix 7-23. Stream monitoring was again done on September 28, 1992. These results are also contained in Appendix 7-23. Stream monitoring ceased at the end of 1992.

To provide for proper monitoring of Indian Creek (in Upper Joe's Valley) a 36-inch Parshall flume was installed. This flume is equipped with a Stevens Type-F water-level recorder to allow the collection of continuous flow data. Charts will be changed and the flumes inspected on a monthly basis. The location of this flume is depicted on Plate 7-16. Because of its higher elevation and limited access this flume is typically operational from June 1 through November 1 of any given year. If seasonal variations and access allow, this station will be operated for longer periods.

Water quality samples will be collected from the Indian Creek flume location quarterly (weather permitting), and analyzed according to the list contained in Table 7-8. In the years 1995, 2000 and every fifth year thereafter the samples collected during the low-flow period (normally fourth quarter) will be analyzed according to Table 7-9. All samples will be analyzed for total and dissolved constituents according to the indicated lists. When flumes or other monitoring devices are no longer required, they will be removed and the affected areas will be restored.

No retreat mining will be conducted within the designated stream channel buffer zones. Horse Canyon is located hydraulically upgradient and north of the UTU-68082 (LBA No. 9) north boundary line. Current mine plans show that because of limited coal height that neither development mining or retreat mining will occur beneath Horse Canyon and the stream channel buffer zones. Since mining has already occurred under Blind Canyon, Crandall Canyon, and beneath the upper reaches of the left fork (South Fork) tributary of Horse Canyon, any adverse effects to the respective streams should manifest as reduced stream flow and a continuous high volume inflow into the mine workings.

The presence of acid- or toxic-forming materials has been determined by laboratory testing (as defined in "Guidelines for Management of Topsoil and Overburden for Underground and Surface Coal Mining"). These data are contained in Appendix 6-2. If waste material is generated it will be tested for acid- or toxic-forming materials on a yearly basis or prior to disposal. If such material is identified, it will be stored in an enclosed area (i.e. dumpster) or within a containment (bermed) area until such time as it can be disposed of.

#### **7.31.4 Transfer of Wells**

Before final bond release, exploratory or monitoring wells will be sealed in a safe and environmentally sound manner in accordance with Sections 7.38 and 7.65.

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The Applicant will not discharge into the underground mine, unless specifically approved by the Division and/or meets the approval of MSHA. Discharges will be limited to the following:

1. Water
2. Coal processing waste
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#### **7.31.51 Gravity Discharges**

The angle at which the coal bed is inclined from the horizontal (dip) prevents any gravity discharge of water from the surface entries.

#### **7.31.6 Stream Buffer Zones**

The disturbed area is drained by ephemeral "streams" which are tributaries to Crandall Creek. The undisturbed drainages will enter Crandall Canyon above and below the culvert. Stream buffer zones will be maintained above and below the culvert. Portions of the road lie within 100' of Crandall Creek. The sediment pond outslope is contiguous to Crandall Creek, a perennial stream at the mine facility area.

Crandall Creek water quality is protected from the impacts of the mine by the use of revegetation, silt fences and/or straw bales, and rip-rapped channels. In addition, buffer zone signs have been installed to indicate the area beyond which no disturbance shall take place. For additional information concerning stream buffer zone protection see Section 3.23.300 of this permit.

3. Diverting runoff using protected channels or pipes through disturbed areas so as not to cause additional erosion;
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#### **7.42.20 Siltation Structures**

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Additional contributions of suspended solids and sediment to stream flow or runoff outside the permit area will be prevented to the extent possible using the best technology currently available.

#### **Alternate Sediment Control Areas and Small Area Exemptions**

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ASCA-9 (0.15 acres) is the outslope of the sediment pond; ASCA-10 (0.02 acres) is the headwall of the inlet of the main by-pass culvert. The drainage from these areas can not be directed to the sediment pond and are too close to the creek to construct separate sediment ponds. Therefore GENWAL has used alternate sediment control methods such as silt fences, straw bale dikes and vegetation. (Refer to Place 7-5)

Note: ASCA's 1, 3, 4 and 8 have been eliminated through previous permitting actions.

## 7.42.22 Sedimentation Pond

### Design

The sedimentation pond located in Crandall Canyon has been redesigned to control the additional storm runoff from the pad extension and from the designated undisturbed drainage areas above the pad extension associated with the proposed culvert expansion. The topography and watershed boundaries are shown on Plate 7-5 and 7-5C. Cross sections of the pond design are shown on Plate 7-3.

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Following construction of the sedimentation pond as designed herein, all disturbed areas associated with pond construction (with the exception of the interior of the pond) will be revegetated with the temporary seed mixture. This mixture was developed in consultation with Lynn Kunzler of the Division and Walt Nowak of the U.S. Forest Service. This mixture provides rapid growth species, sod-forming species, and species that are compatible with other plants.

Seeding will be done in the late fall, just prior to the first heavy snowfall of the year (Plummer et al., 1968). Seeding will be accomplished by hydroseeder. Mulch will be placed after seeding. The mulch, which consists of two tons of straw or grass hay per acre of disturbed area, will be spread over the area to be planted by hydromulcher.

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#### **7.42.30 Diversions**

Diversion UD-1 is a 42" culvert placed along the western edge of the site at the location shown on Plate 7-5 to divert water from a 95-acre undisturbed watershed around the yard area. Analyses and design information associated with this and other diversions associated with the site are contained in Appendix 7-4. (Table 10)

Two additional diversions were designed to convey water from undisturbed areas away from the disturbed site. One (UD-2) was constructed in the northwest portion of the site along the proposed substation pad. UD-2 is an open ditch diversion. UD-3 is a 24" culvert diversion located in the northeastern portion of the site to convey water away from the portal area. Design details are presented in Tables 8 and 10 respectively in Appendix 7-4.

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A berm was placed around the (un-used) power substation area to prevent runoff water that accumulates thereon from flowing across the remainder of the site. A small channel on the

substation pad collects water from the pad and adjacent undisturbed areas. A stilling basin was placed at the downstream end of this diversion to trap sediment prior to discharging into UD-1.

### **Expansion Area Surface Water Drainage and Sediment Control**

Water on the extended mining pad associated with the proposed culvert expansion comes from two sources. The pad itself and two watershed areas located in undisturbed terrain to the south of the proposed pad. Runoff from the pad and watersheds is collected and controlled by the use of drainage ditches and culverts. All runoff diverted through the drainage ditches and culverts go into a sediment pond. The watersheds are shown on Plate 7-5. The location of drainage ditches and culverts can be also be found on Plate 7-5.

All diversion ditches have been designed to have a triangular channel with a minimum depth of one foot and side slopes of 1H:1V. During the periods of peak flow at least 3" of the channel depth will be freeboard. The calculations associated with drainage ditch design can be found in Appendix 7-4.

#### **7.42.40 Road Drainage**

All of GENWAL's roads have been designed, located and constructed as required by the regulations R645-301-742.410 through R645-301-742-423.5.

#### **7.43 Impoundment**

There are no permanent impoundments associated with the GENWAL facilities. Temporary impoundments of water collected for runoff control will occur in the sediment pond. The physical design of the sediment pond are certified designs as required in R645-301-512 and are presented in Section 5.33 and Appendix 7-4 of this application. The sediment pond does not meet the criteria for MSHA regulations. The hydrologic design for the sediment pond is presented in Section 7.42.20 and Appendix 7-4. On cessation and reclamation of mining and disposal activities, the sediment pond will be removed.

#### **7.44 Discharge Structures**

The sediment pond is equipped with a decant, a riser pipe (cmp) principle overflow and a rip-rapped open-channel emergency spillway. Sediment pond details are covered under Section 7.42.20 and in Appendix 7-4.

#### **7.45 Disposal of Excess Spoil**

No significant excess spoil will be developed by the underground mine. In the event spoil is generated during the mining operations, this will be transported to an approved disposal site. The handling of these materials will comply with R645-301-745.

#### **7.46 Coal Mine Waste**

The disposal and placement of any refuse materials will be conducted in accordance with the plans presented in Chapter 5 of this application.

#### **7.47 Disposal of Noncoal Mine Waste**

##### **Garbage**

Solid waste generated from mining activities, such as garbage and paper products, is disposed of in large trash "dumpsters" located near the portal. A contract garbage hauling service, empties the contents of the dumpsters on a weekly basis and hauls the garbage to an approved dump or landfill.

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##### **Petroleum Products**

Oil and grease wastes are collected in tanks and returned to distributors for refining or used as heating fuel. In case of spills, a spill control plan has been developed and is located at the mine site.

#### **7.48 Casing and Sealing of Wells**

Following completion of reclamation, the monitoring wells for the mine site will be plugged and abandoned in accordance with R645-301-631 and R645-301-748. This will prevent the potential for disturbance to the hydrologic balance.

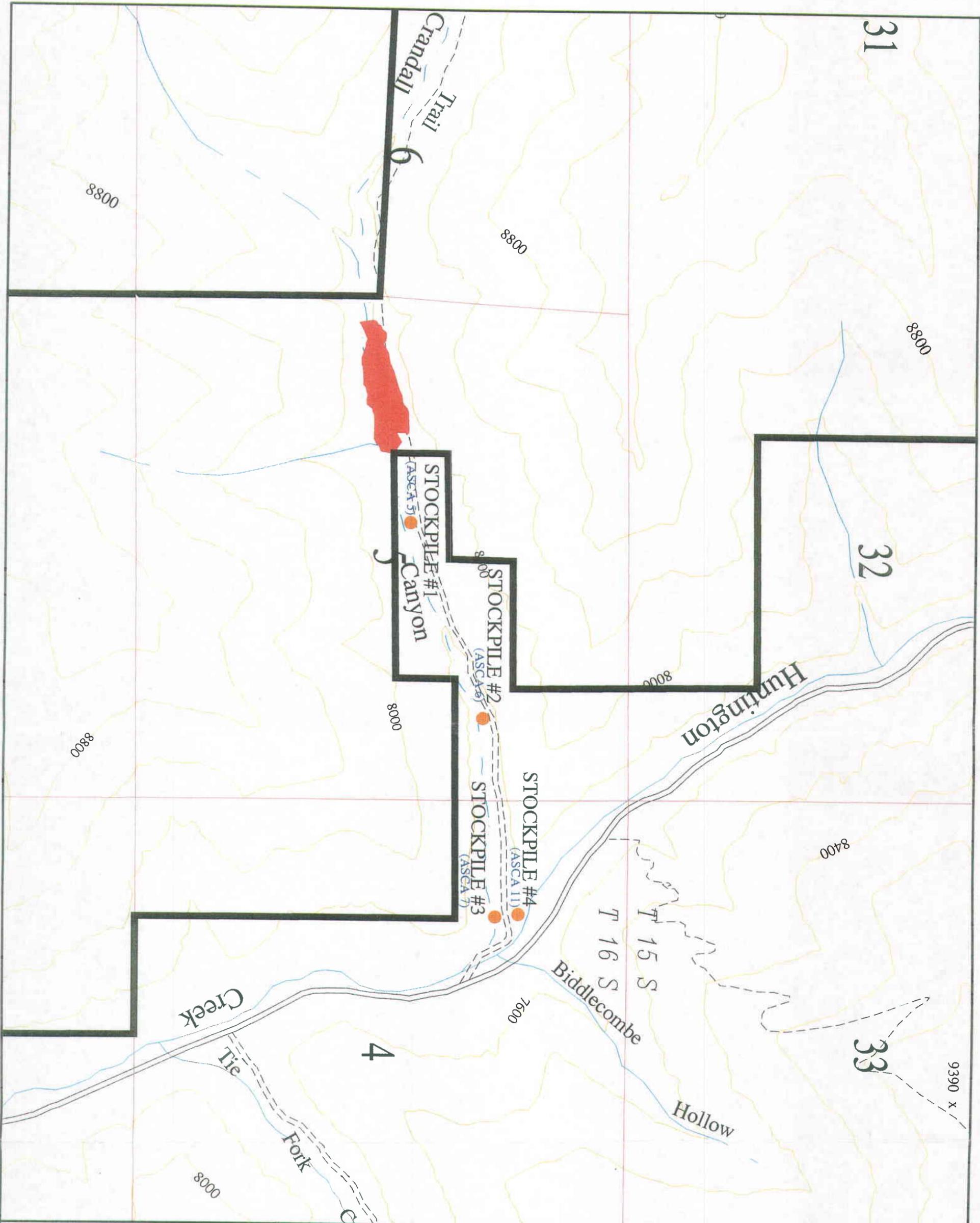
#### **7.50 Performance Standards**

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The following sections, 7.51 through 7.55 provide a commitment to meet the requirements of the applicable laws. Specific plans for accomplishing compliance are provided under the applicable, referenced sections of this Mining and Reclamation Plan.

**PLATE 2-3**

**TOPSOIL STOCKPILE LOCATIONS**



**LEGEND**

- UDOGM PERMIT BOUNDARY 
  - MINE SURFACE FACILITIES 
  - STOCKPILE LOCATIONS  (PERMIT AREA)
- THE PERMIT AREA IS ENTIRELY WITHIN THE MANTI - LA SAL NATIONAL FOREST



P.O. Box 1077, 794 North "C" Canyon Rd, Price Utah  
Telephone: (435) 888-4000

**CRANDALL CANYON MINE  
TOPSOIL STOCKPILE LOCATIONS**

REV: 3	ACAD: STOCKPILE LOCATIONS
DATE: 06-01-06	BY: JDS
SCALE: 1"=1000'	PLATE #: <b>2-3</b>

**PLATE 2-5C**

**TOPSOIL PILE #4  
AS-BUILT**



**PLATE 5-3**

**SURFACE FACILITIES**

- LEGEND:**
- SEWIMENT POND (SPECIAL USE PERMIT AREA)
  - EXTENT OF DISTURBANCE
  - 10' CONTOUR
  - JERSEY BARRIERS
  - RE-ESTABLISHED USFS ROAD (DOUBLE-LANE)
  - SAFETY BARRIERS
  - FENCING

- FACILITY LEGEND:**
1. Shop
  2. Ventilation Fan
  3. Rockdust Silo
  4. Concrete Dumpster Pod
  5. Power Center
  6. Power Pole
  7. Offices & Bathhouse (U'grad)
  8. Intake Portal
  9. Belt Portal
  10. Fan Portal
  11. Mine Belt
  12. Oil Storage
  13. Visual Disconnect
  14. New Warehouse and Office Building
  15. 4500 Gallon Culinary Water Tank
  16. Shotcrete
  17. Ports Shed
  18. Portable Shed
  19. Ventilation Fan
  20. Material Storage Sheds
  21. Intake Portal
  22. Return Portal
  23. Belt Portal
  24. Mag Tank
  25. Powder Storage
  26. Cap Storage
  27. Concrete Ditch

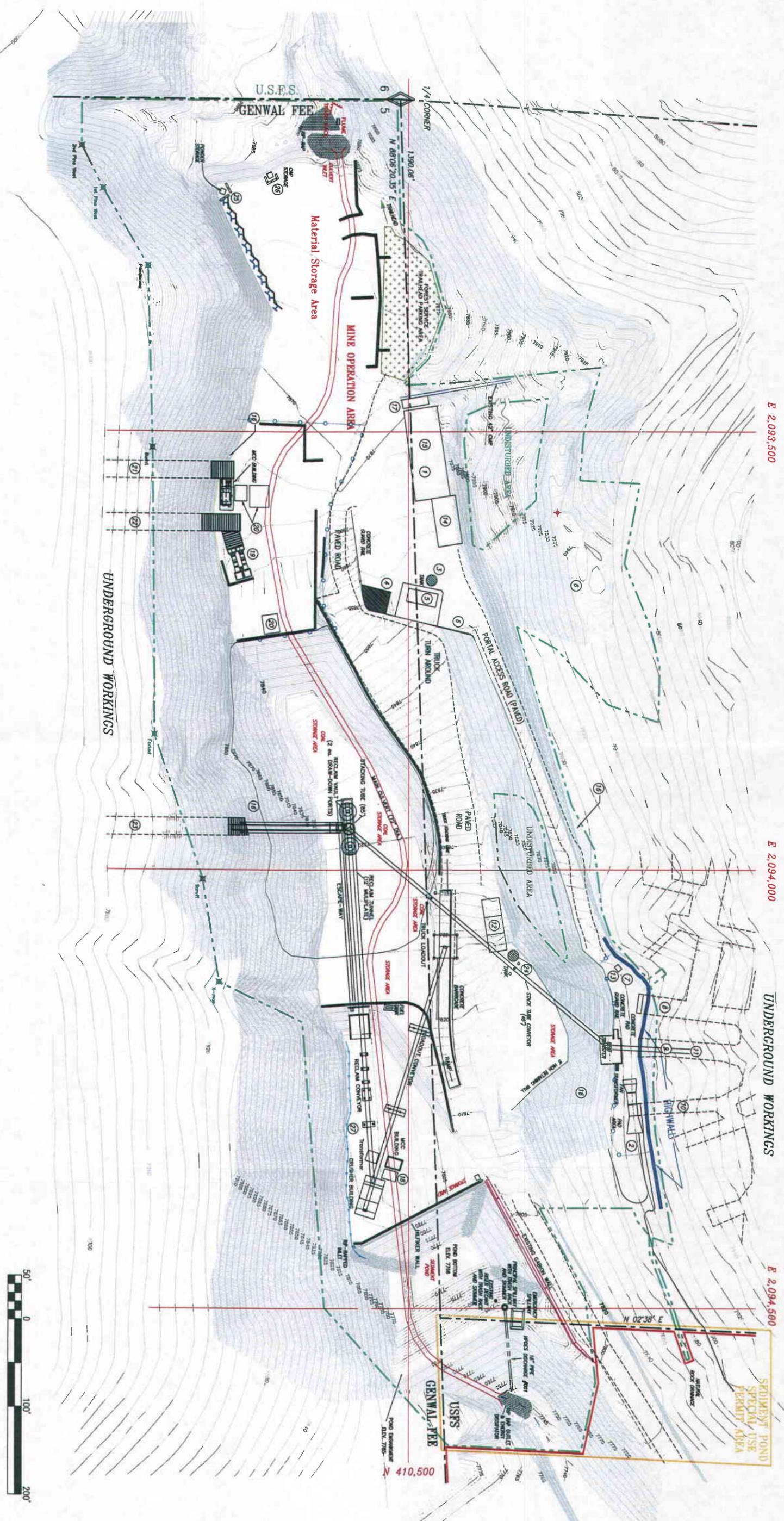
File in:  
 Confidential  
 Shelf  
 Expandable  
 Refer to Record No. **0043** Date **11/19/08**  
 In **010150033** **ADD. SURVEILLING**  
 For additional information



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Telephone: (435) 888-4000

**CRANDALL CANYON MINE  
SURFACE FACILITIES**

REV: 13	ACLD: 5-3
DATE: 3-05-08	BY: PU
SCALE: AS SHOWN	PLATE #: 5-3



E 2,093,500

E 2,094,000

UNDERGROUND WORKINGS

E 2,094,500

SEWIMENT POND  
SPECIAL USE  
PERMIT AREA

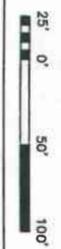
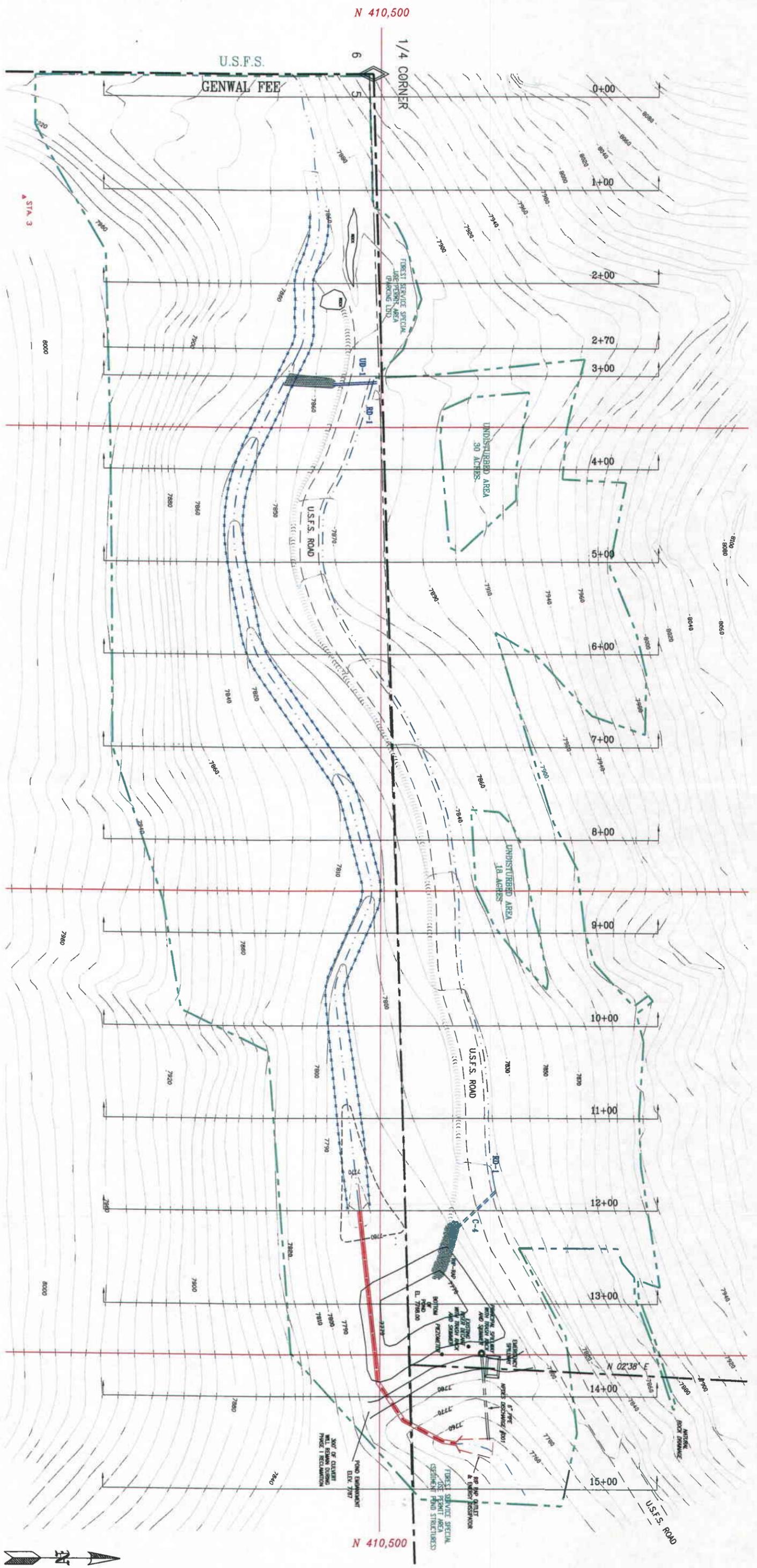
PLATE 5-16

RECLAMATION (PHASE I)

E 2,093,500

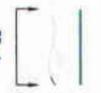
E 2,094,000

E 2,094,500



**LEGEND:**

- EXTENT OF DISTURBANCE
- 10' CONTOUR
- CROSS-SECTION
- RECLAMATION DIVERSION DITCH
- BERM
- ALTERNATE SEDIMENT CONTROL
- 6" @ CULVERT



CONTOUR INTERVAL = 10'  
 PHOTOGRAPHY DATE = OCTOBER 25, 1989

**NOTE:**

- 1) SEDIMENT POND WILL STAY IN PLACE DURING PHASE I RECLAMATION.
- 2) STREAM BED WILL BE RETURNED AS IT PRESENTLY EXISTS.

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 Refer to Record No. *CD43* Date *04/17/88*  
 In *0150008, 8008, 8009, 8010, 8011*  
 For additional information



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**CRANDALL CANYON MINE  
 RECLAMATION (PHASE I)**

DRAWN BY: PU	REVISION NUMBER: 7
DATE: 03-05-08	PLATE #: 5-16
SCALE: AS SHOWN	

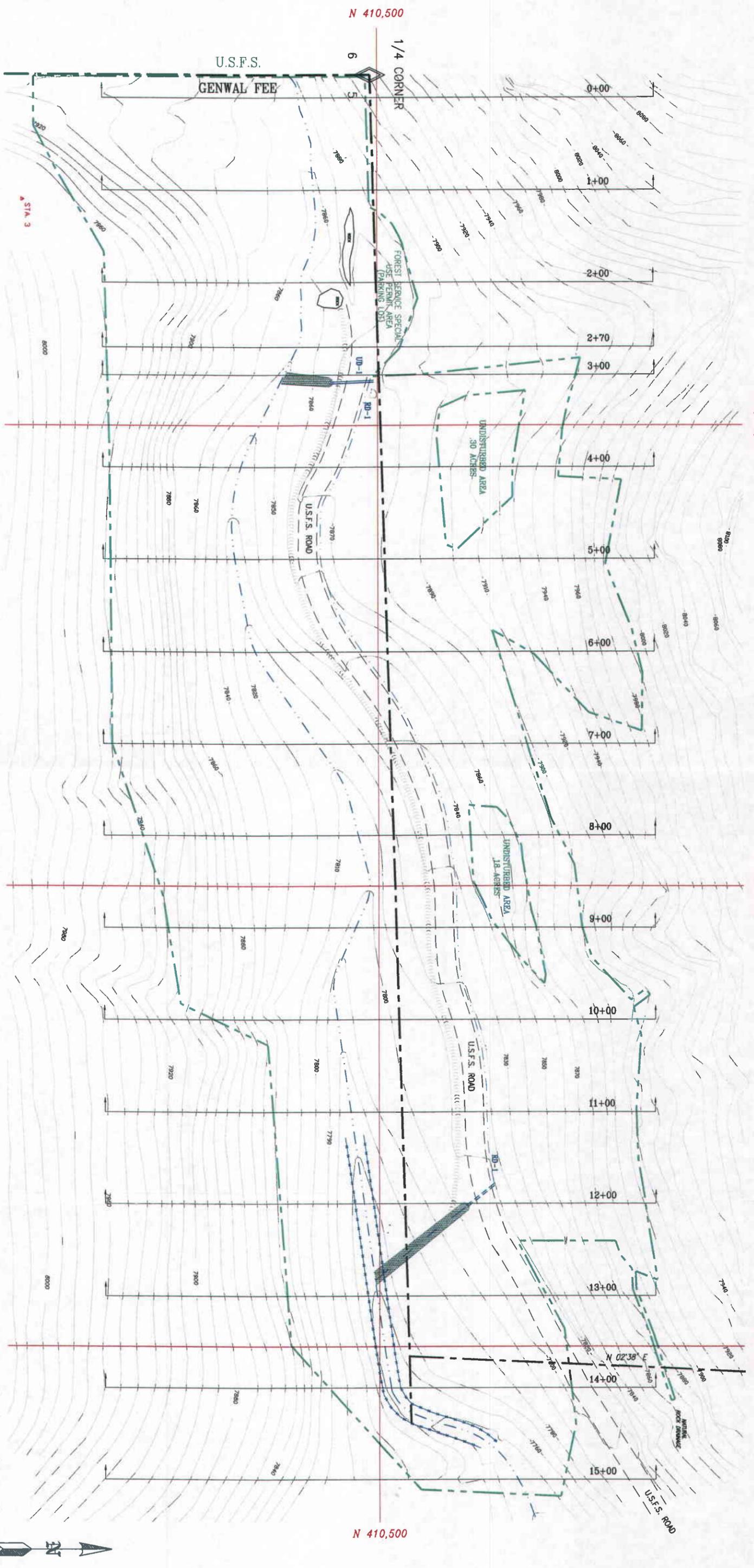
PLATE 5-17

RECLAMATION (PHASE II)

E 2,093,500

E 2,094,000

E 2,094,500



**LEGEND:**

- EXTENT OF DISTURBANCE
- 10' CONTOUR
- CROSS-SECTION
- RECLAMATION DIVERSION DITCH
- BERM
- ALTERNATE SEDIMENT CONTROL
- 6" Ø CULVERT

NOTE:  
 1) STREAM BED WILL BE RETURNED AS IT PRESENTLY EXISTS.

CONTOUR INTERVAL = 10'  
 PHOTOGRAPHY DATE = OCTOBER 25, 1989

File in:  
 Confidential  
 Expandable  
 Sheet

Refer to Record No. **DD43** Date **11/13/08**  
 In **CE150032** **2008** *disclosure*

For additional information



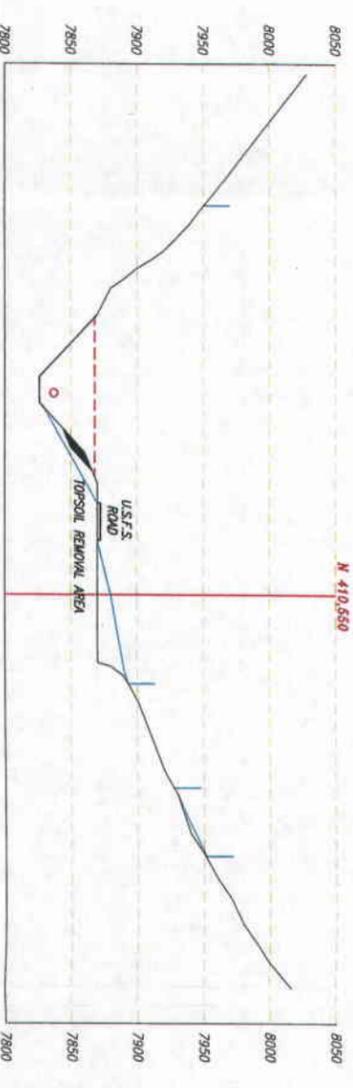
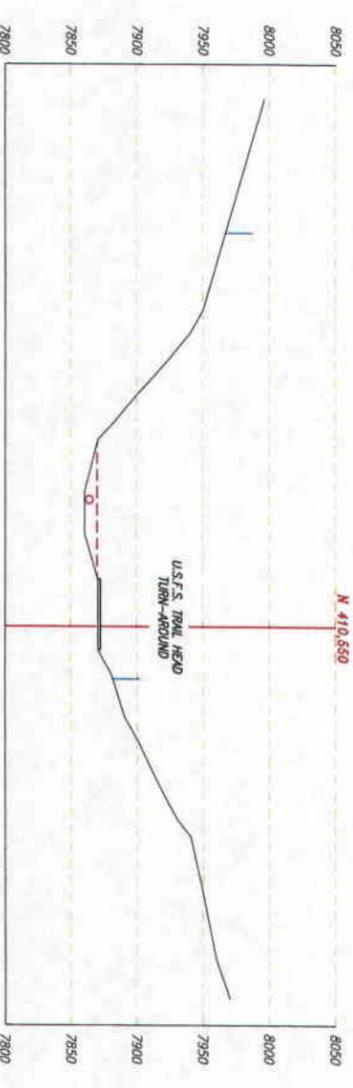
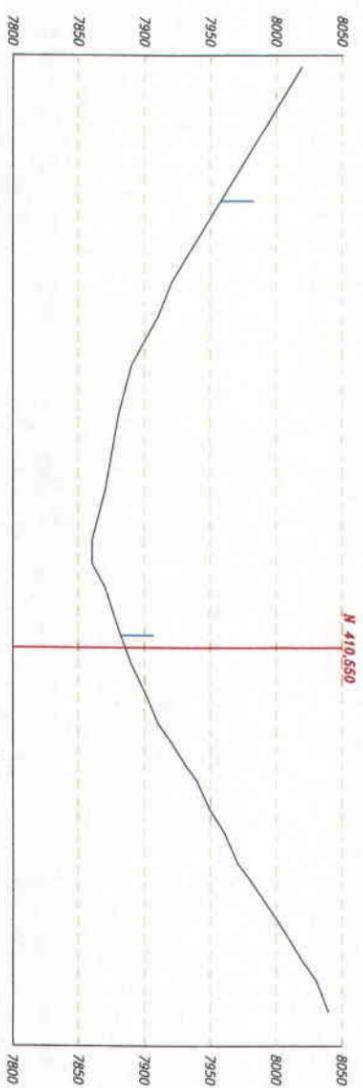
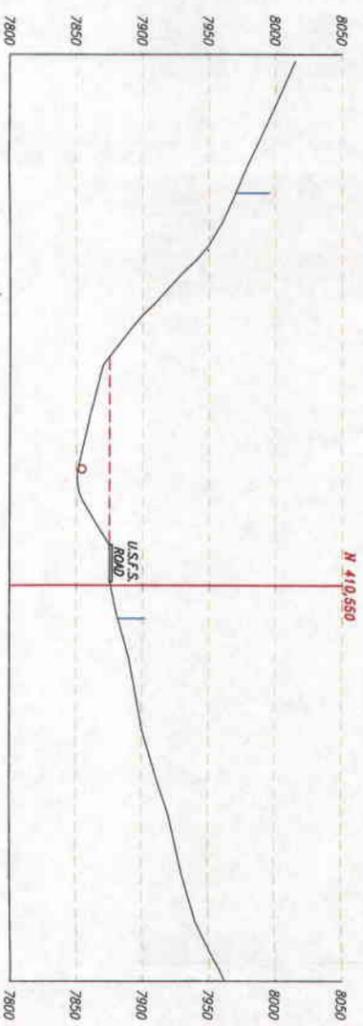
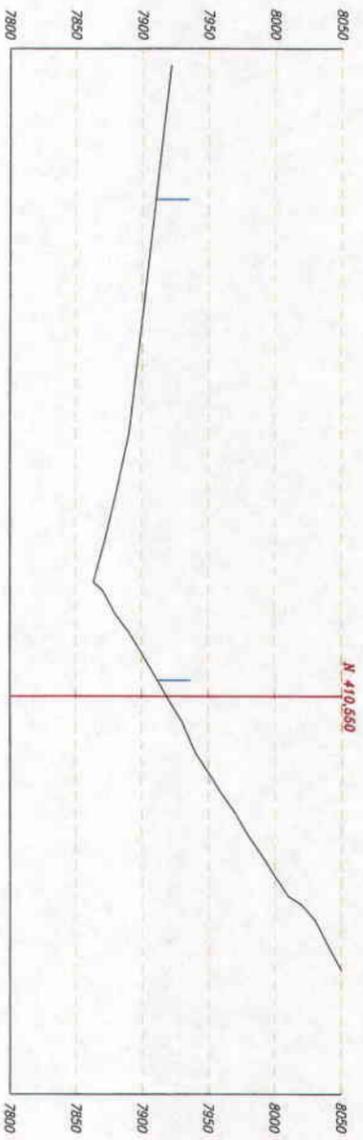
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**CRANDALL CANYON MINE  
 RECLAMATION (PHASE II)**

DRAWN BY: PUJ	REVISION NUMBER: 7
DATE: 03-05-08	PLATE #: 5-17
SCALE: AS SHOWN	

**PLATE 5-17A**

**RECLAMATION CROSS-SECTIONS**

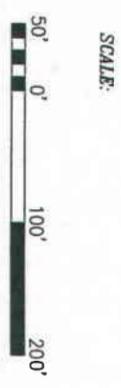


**LEGEND:**

- EXISTING GROUND LINE
- PROPOSED GROUND LINE
- RECLAMATION LINE
- EXTENT OF DISTURBANCE

**NOTES:**

- 1) CROSS-SECTION LOCATIONS ARE SHOWN ON PLATES 5-16 AND 5-17.
- 2) STREAM BED IS BASED ON ACTUAL SURVEY.
- 3) SEDIMENT POND WILL REMAIN IN PLACE THROUGH PHASE 1 RECLAMATION.



File in:  
 Confidential  
 Shelf  
 Expandable

Refer to Record No. *00415* Dated *7/20/08*  
 In *CRANDALL CANYON MINE RECLAMATION*  
 For additional information



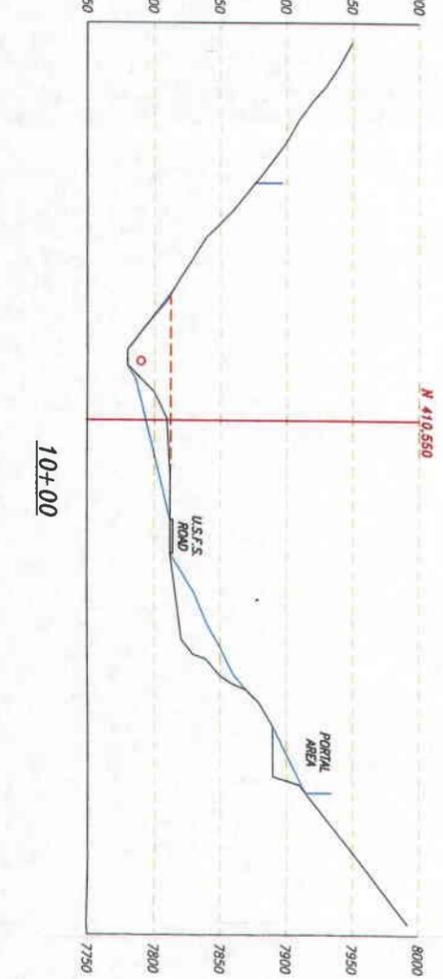
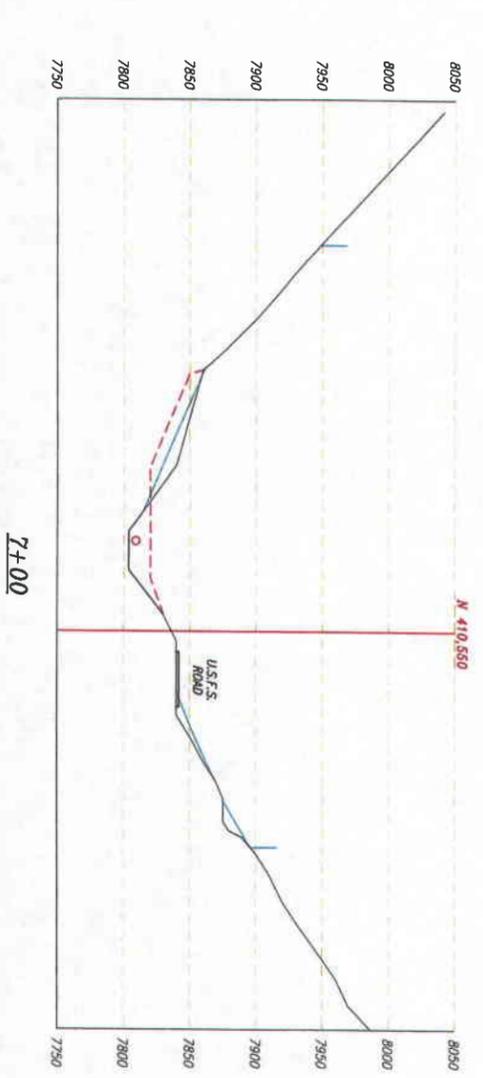
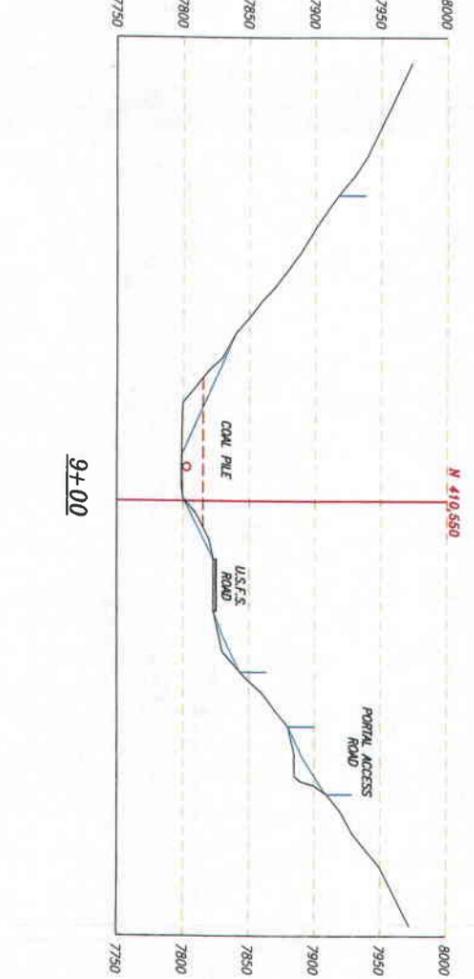
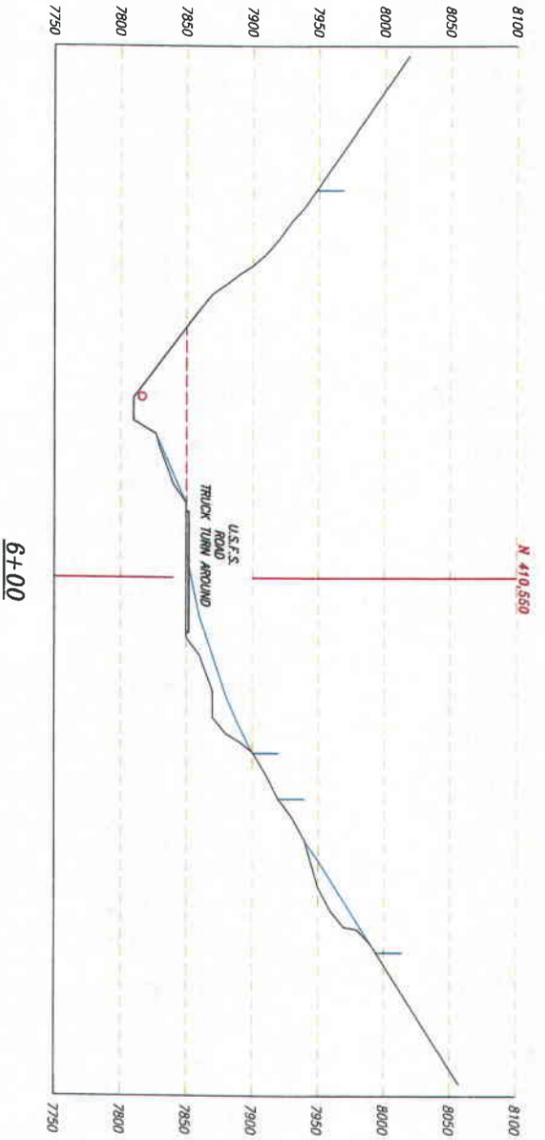
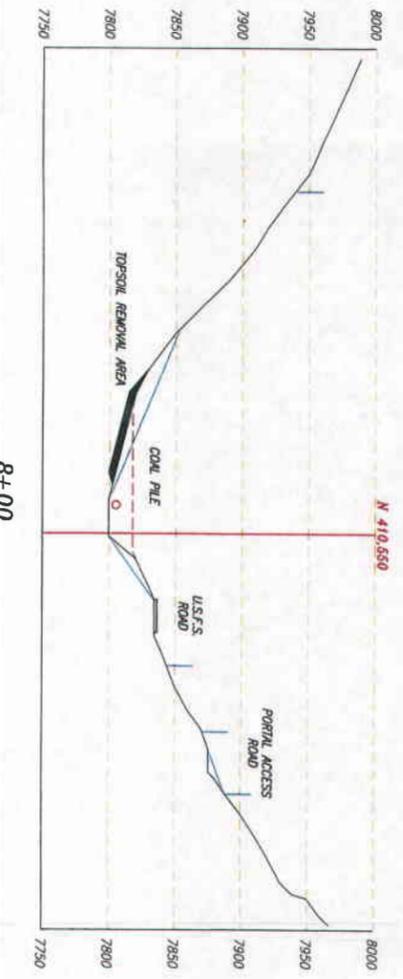
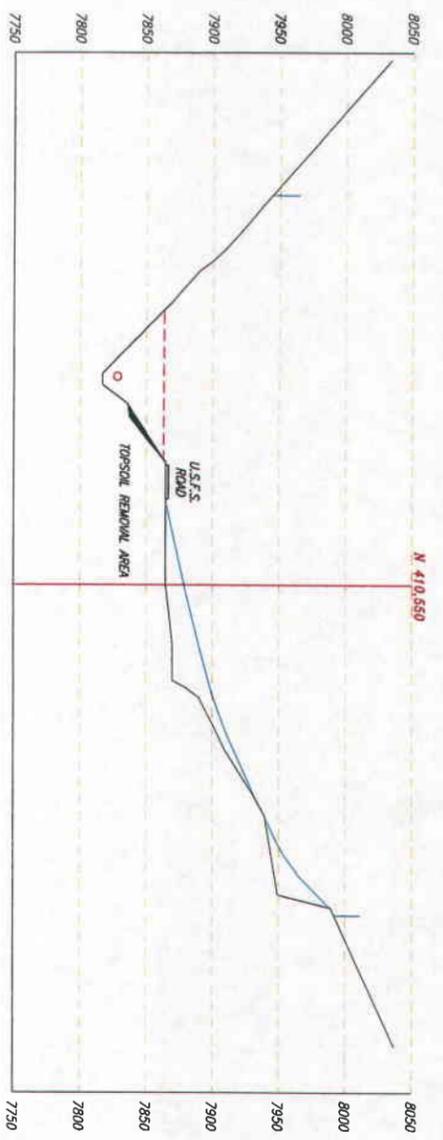
**GENWAL**  
 RESOURCES, INC.  
 P.O. Box 1420 186 North 100 West Binghamton, Utah  
 Telephone: (801) 687-8013

**CRANDALL CANYON MINE RECLAMATION CROSS-SECTIONS**

DRAWN BY: <i>PJJ</i>	REVISION NUMBER: <i>4</i>
DATE: <i>3-06-08</i>	PLATE #: <i>5-17A</i>
SCALE: <i>AS SHOWN</i>	

**PLATE 5-17B**

**RECLAMATION CROSS-SECTIONS**



**LEGEND:**

EXISTING GROUND LINE

PROPOSED GROUND LINE

RECLAMATION LINE

EXTENT OF DISTURBANCE

- NOTES:**
- 1) CROSS-SECTION LOCATIONS ARE SHOWN ON PLATES 5-16 AND 5-17.
  - 2) STREAM BED IS BASED ON ACTUAL SURVEY.
  - 3) SEDIMENT POND WILL REMAIN IN PLACE THROUGH PHASE 1 RECLAMATION.



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In *CP150032 2008* concerning  
For additional information



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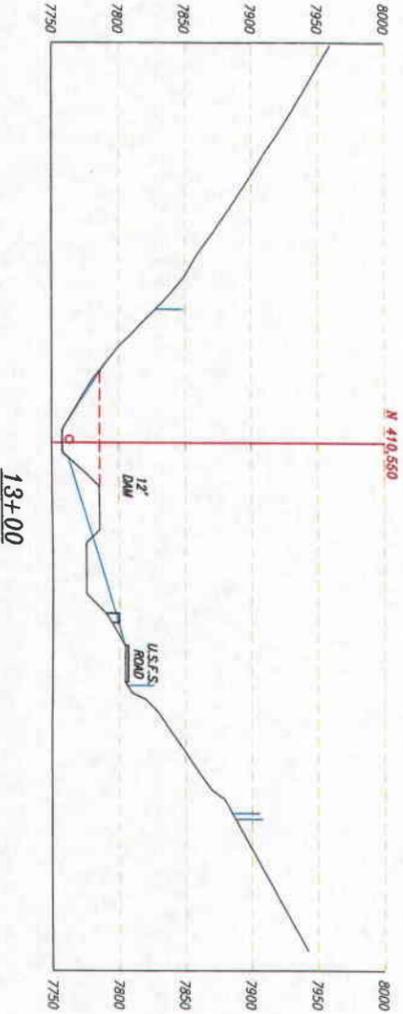
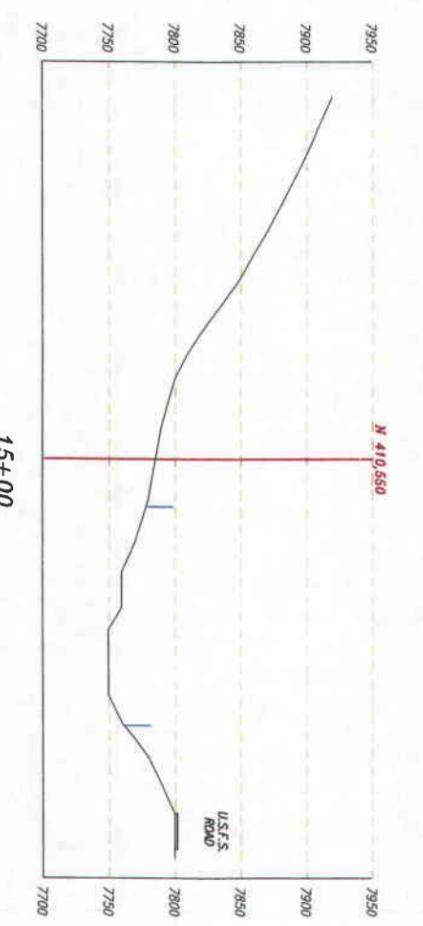
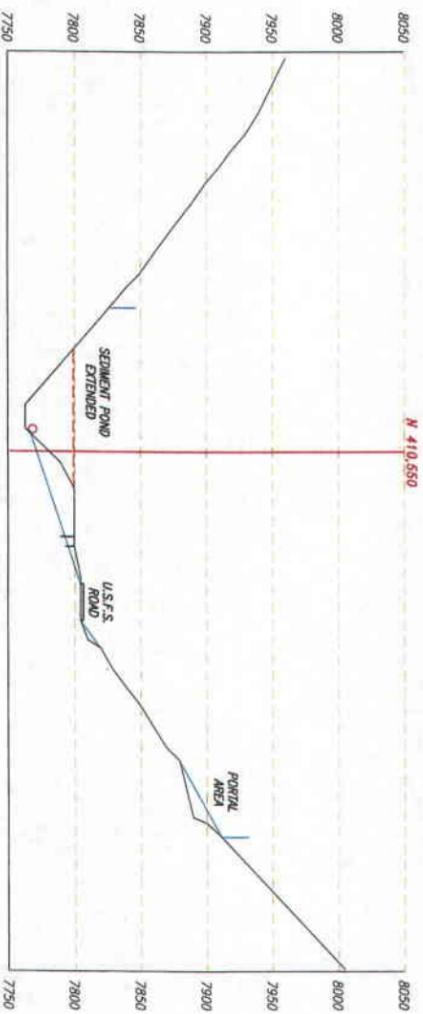
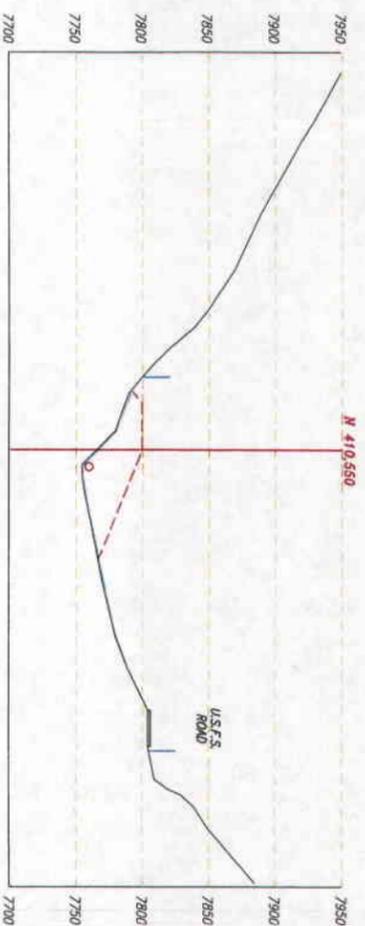
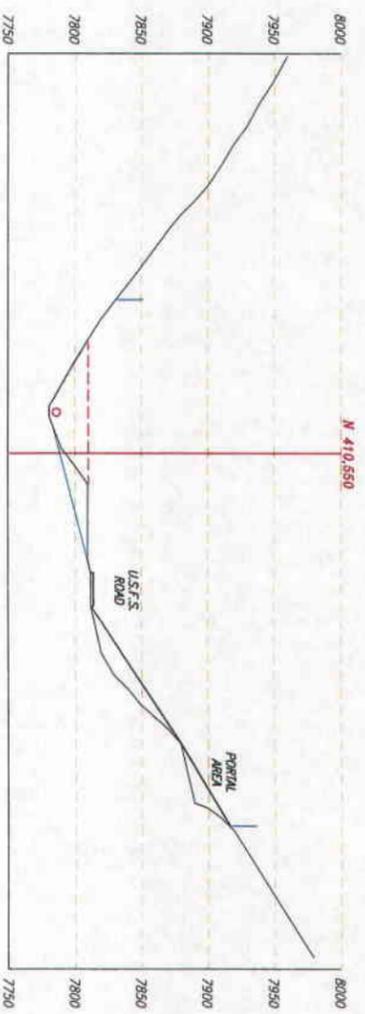
P.O. Box 1420 106 North 100 West Buhlton, Utah  
Telephone (801) 627-9013

**CRANDALL CANYON MINE  
RECLAMATION CROSS-SECTIONS**

DRAWN BY: PJJ	REVISION NUMBER: 4
DATE: 3-06-08	PLATE #: 5-17B
SCALE: AS SHOWN	

**PLATE 5-17C**

**RECLAMATION CROSS-SECTIONS**



**LEGEND:**

- EXISTING GROUND LINE
- PROPOSED GROUND LINE
- RECLAMATION LINE
- EXTENT OF DISTURBANCE

**NOTES:**

- 1) CROSS-SECTION LOCATIONS ARE SHOWN ON PLATES 5-16 AND 5-17.
- 2) STREAM BED IS BASED ON ACTUAL SURVEY.
- 3) SEDIMENT POND WILL REMAIN IN PLACE THROUGH PHASE 1 RECLAMATION.



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**CRANDALL CANYON MINE  
 RECLAMATION CROSS-SECTIONS**

DRAWN BY: RLU	REVISION NUMBER: 4
DATE: 3-06-08	PLATE #: 5-17C
SCALE: AS SHOWN	

**PLATE 5-20**

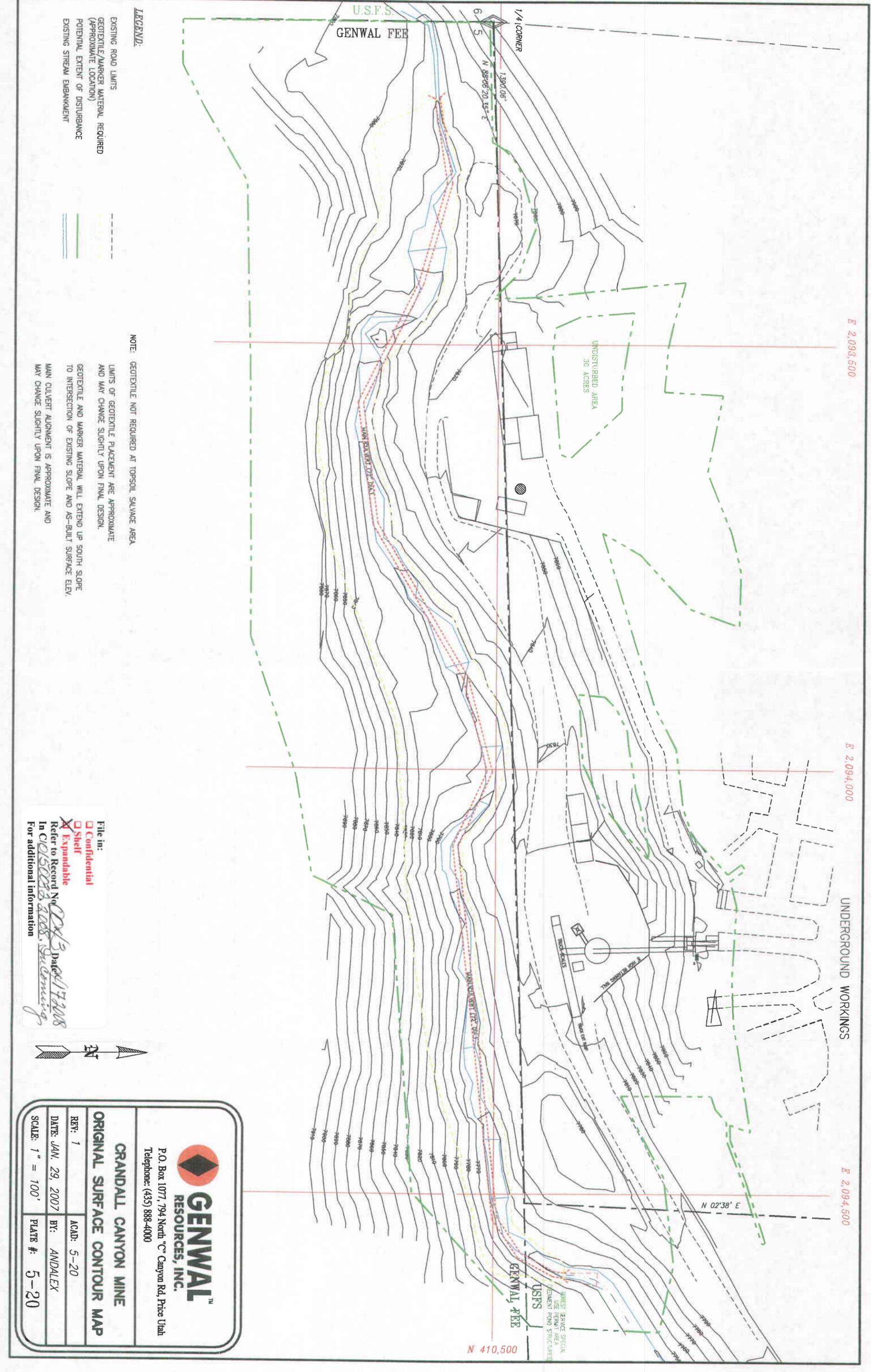
**ORIGINAL SURFACE CONTOUR**

E 2,093,500

E 2,094,000

UNDERGROUND WORKINGS

E 2,094,500



**LEGEND:**

- EXISTING ROAD LIMITS
- GEOTEXILE/MARKER MATERIAL REQUIRED (APPROXIMATE LOCATION)
- POTENTIAL EXTENT OF DISTURBANCE
- EXISTING STREAM EMBANKMENT

NOTE: GEOTEXILE NOT REQUIRED AT TOPSOIL SALVAGE AREA

LIMITS OF GEOTEXILE PLACEMENT ARE APPROXIMATE AND MAY CHANGE SLIGHTLY UPON FINAL DESIGN.

GEOTEXILE AND MARKER MATERIAL WILL EXTEND UP SOUTH SLOPE TO INTERSECTION OF EXISTING SLOPE AND AS-BUILT SURFACE ELEV.

MAIN CULVERT ALIGNMENT IS APPROXIMATE AND MAY CHANGE SLIGHTLY UPON FINAL DESIGN.

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 Refer to Record No. *0243* Date *01/17/2008*  
 In *C:\050003\2008\Subdrawing*  
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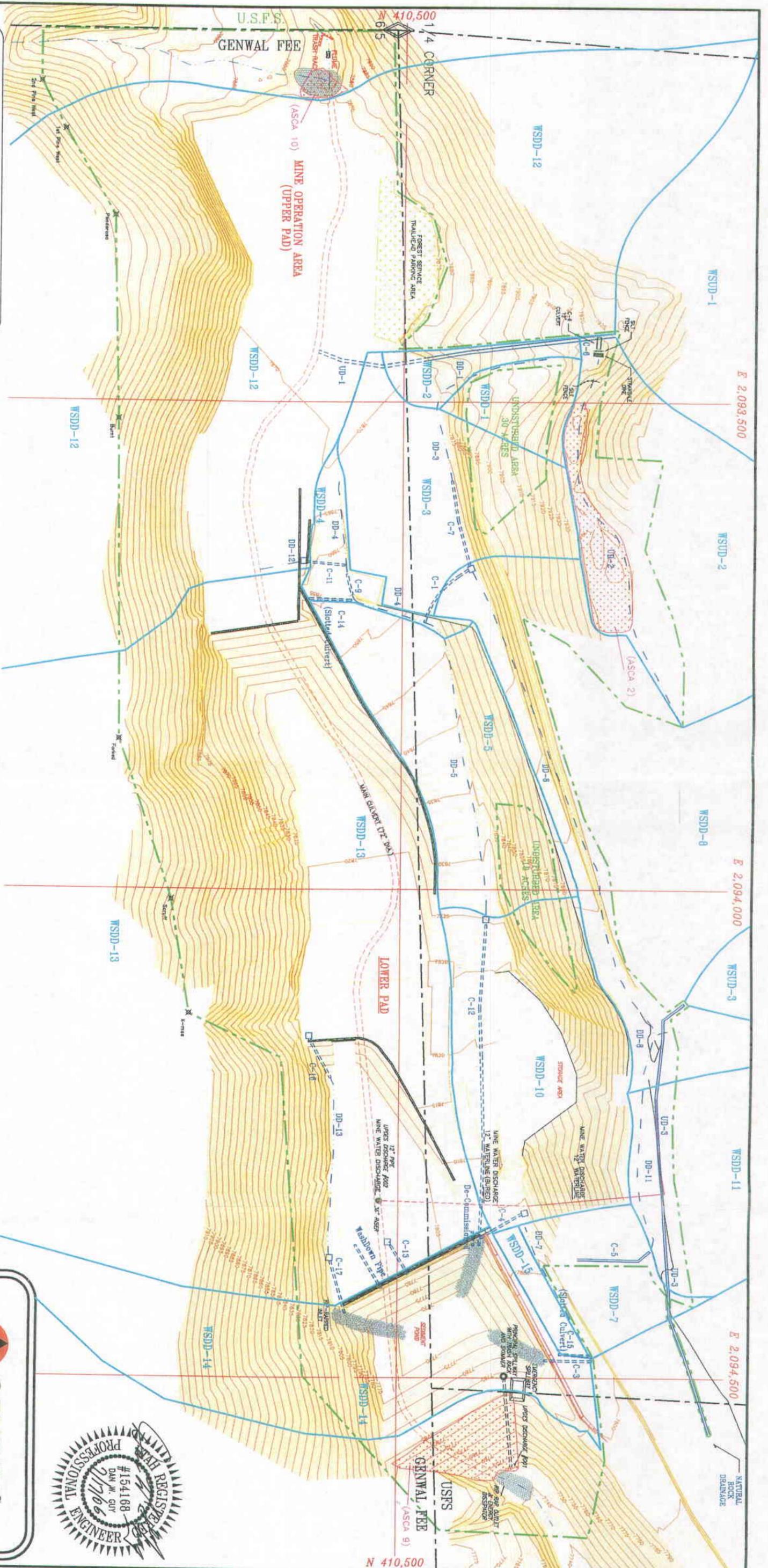
**GRANDDALL CANYON MINE**

**ORIGINAL SURFACE CONTOUR MAP**

REV: 1	ACAD: 5-20
DATE: JAN. 29, 2007	BY: ANDALEX
SCALE: 1" = 100'	PLATE #: 5-20

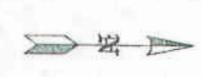
**PLATE 7-5**

**DRAINAGE MAP**



**LEGEND:**

- POTENTIAL EXTENT OF DISTURBANCE
- 10' CONTOUR
- JERSEY BARRIERS
- WATERSHED BOUNDARY
- UNDISTURBED/DISTURBED WATERSHED
- DIVERSION DITCH
- CULVERT (Solid-Above Grd/Bashed-Buried)
- 6" DIAMETER CULVERT
- ASCA AREA



CONTOUR INTERVAL = 10'

File in:  
 Confidential  
 Shell  
 Expandable  
 Refer to Record No. **0043** Dated **1/13/08**  
 In **CD0003A, 3008, 3009, 3010**  
 For additional information

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**GRANDALL CANYON MINE**  
DRAINAGE MAP

REV: 11	ACAD: 7-5
DATE: JUNE 2006	BY: BLACKHAWK
SCALE: 1" = 100'	PLATE #: 7-5



**PLATE 7-5A**

**EXISTING TOPOGRAPHY**



File in:  
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 Shelf  
 Expandable  
 Refer to Record No. 0013 Date 01/17/2008  
 In 0150038.000 preparing  
 For additional information

LEGEND:  
 CROSS-SECTION LINE: \_\_\_\_\_

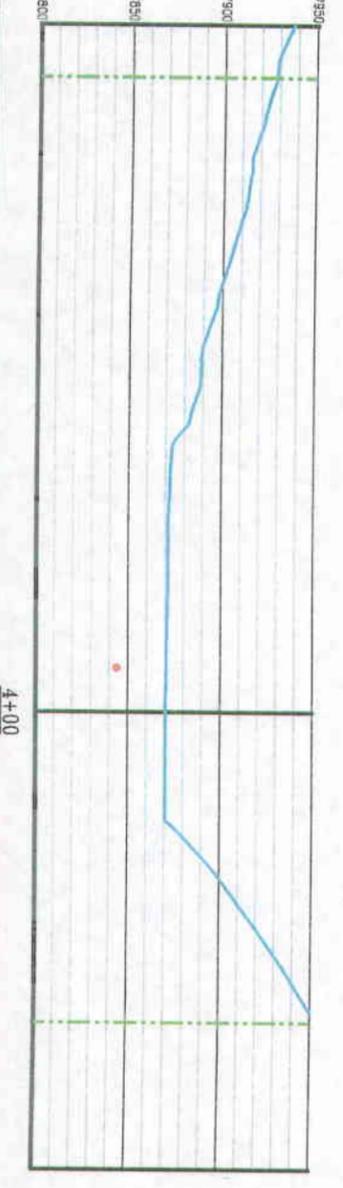
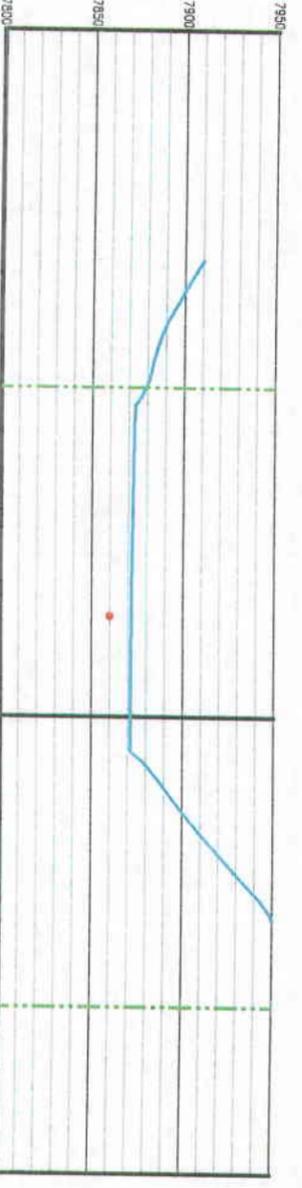
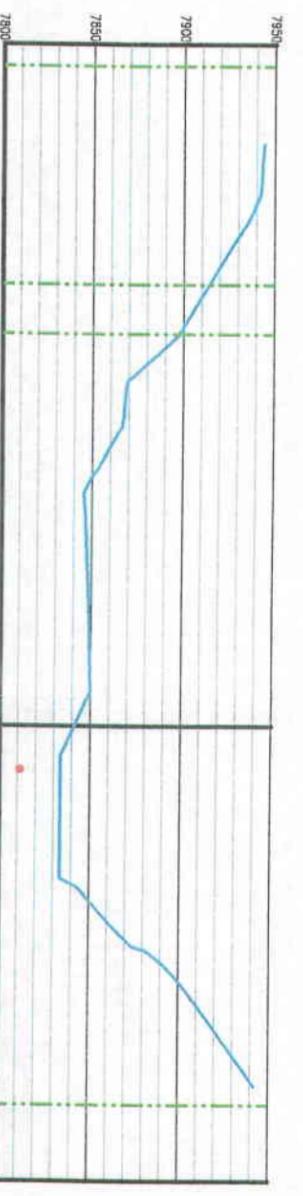
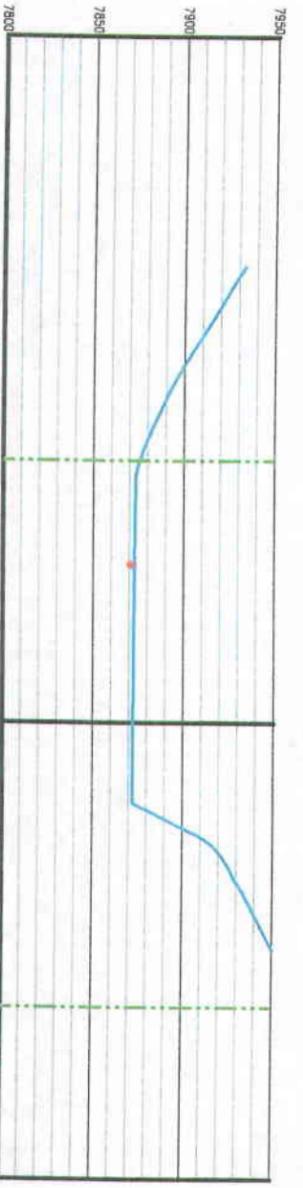
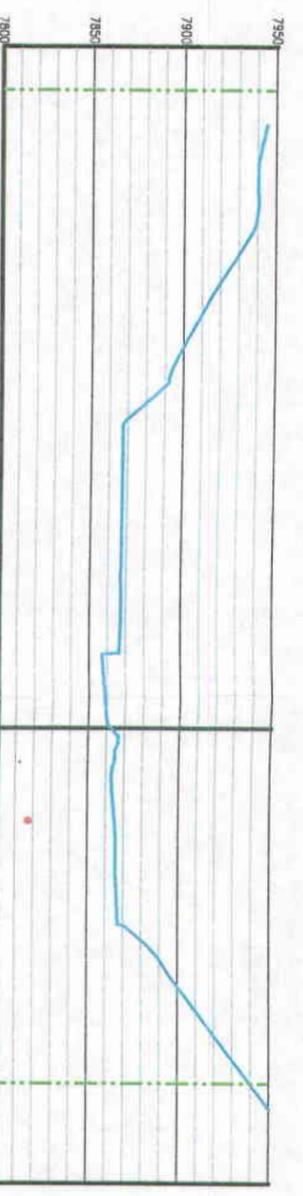
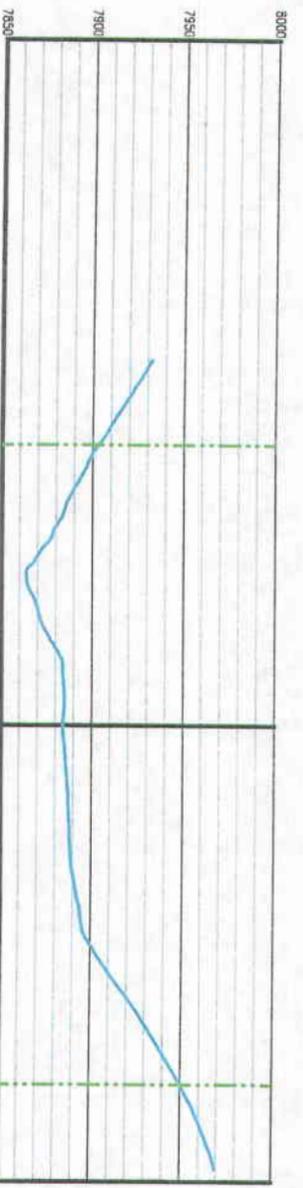
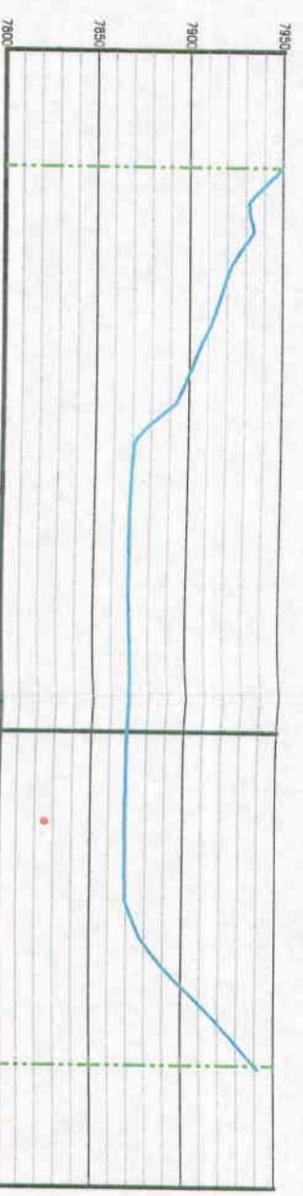
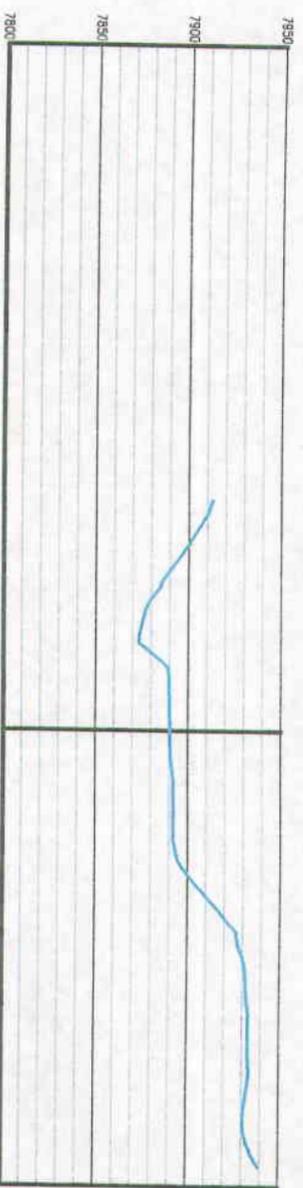
NOTE:  
 REFER TO PLATE 7-5A(1) & 7-5A(2) FOR CROSS-SECTIONS.



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<b>CRANDALL CANYON MINE</b> <b>EXISTING TOPOGRAPHY</b>	
REV: 1	ACAD: 7-5A
DATE: JUNE 2006	BY: BLACKHAWK
SCALE: 1" = 100'	PLATE #: 7-5A

**PLATE 7-5A(1)**

**EXISTING TOPOGRAPHY  
CROSS-SECTIONS**



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 Refer to Record No. **CD43** Date **1/7/08**  
 In **CD50038, 808, Steepleway**  
 For additional information

LEGEND:  
 EXISTING SURFACE:   
 DISTURBED AREA BOUNDARY:   
 CULVERT LOCATION:





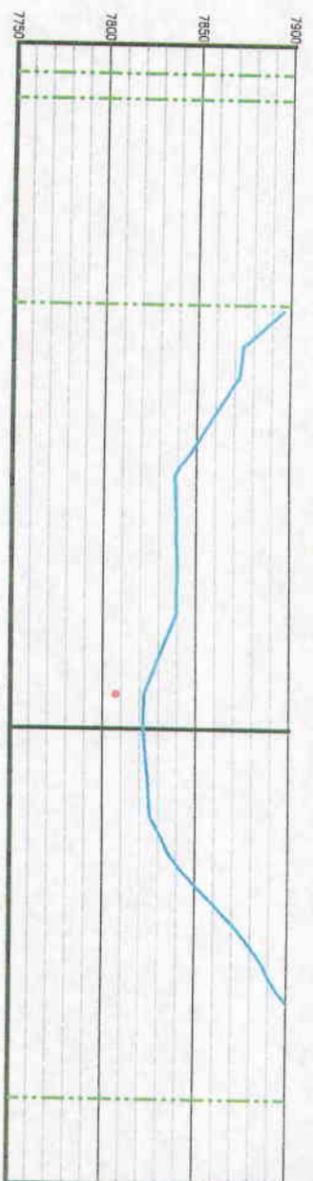
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**CRANDALL CANYON MINE**  
**EXISTING CROSS-SECTIONS**

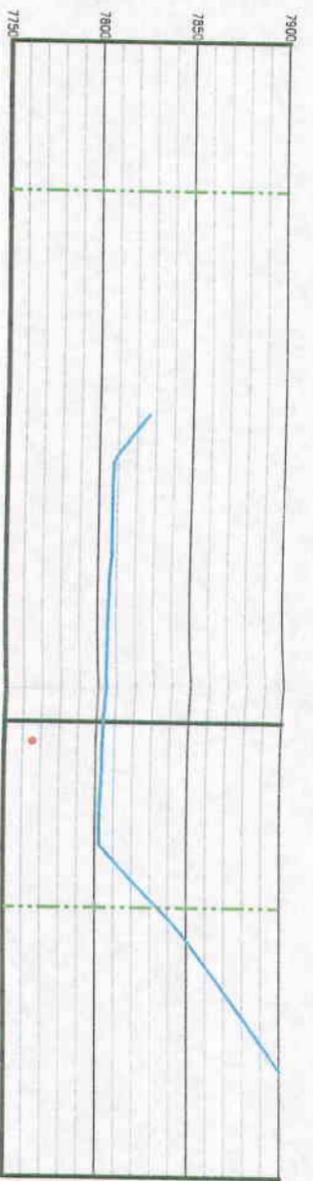
REV: 1	ACAD: 7-5A
DATE: JUNE 2006	BY: BLACKHAWK
SCALE: 1" = 100'	PLATE #: 7-5A(1)

PLATE 7-5A(2)

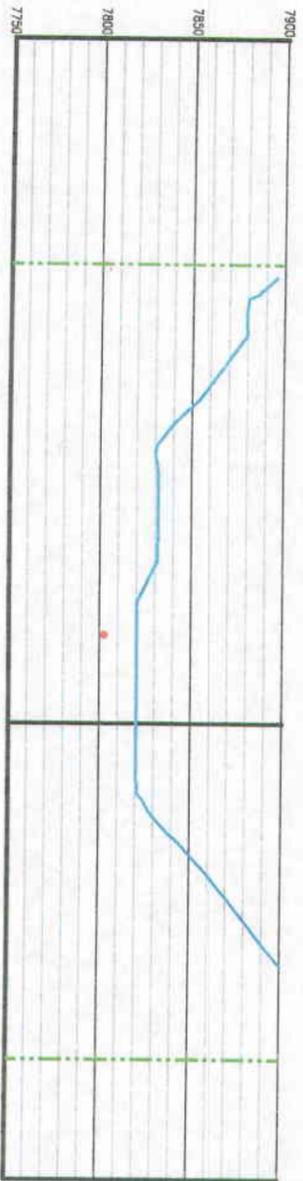
EXISTING TOPOGRAPHY  
CROSS-SECTIONS



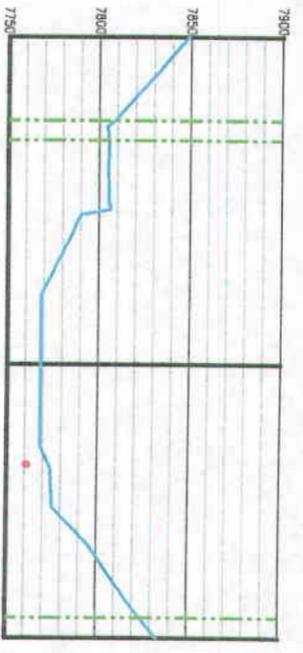
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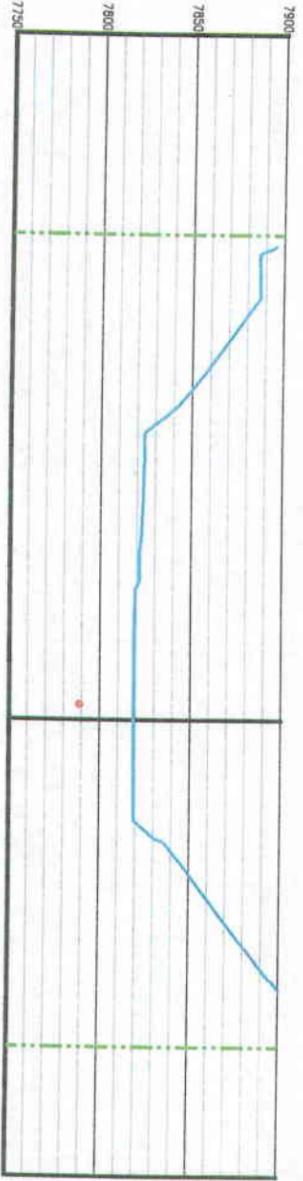
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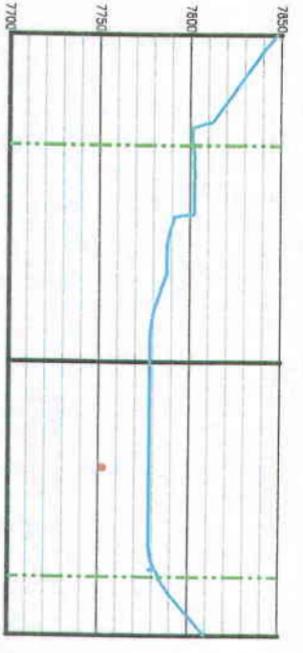
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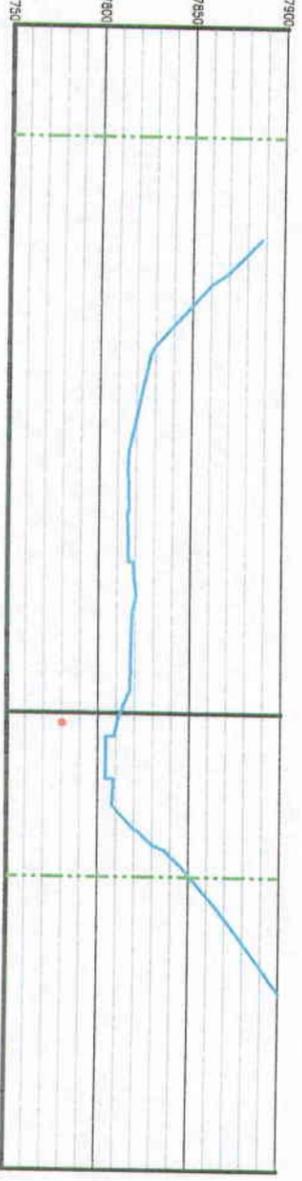
14+00



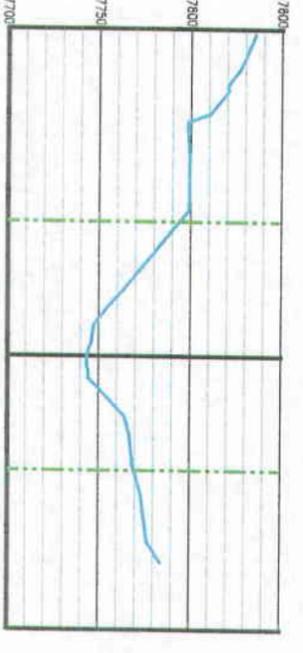
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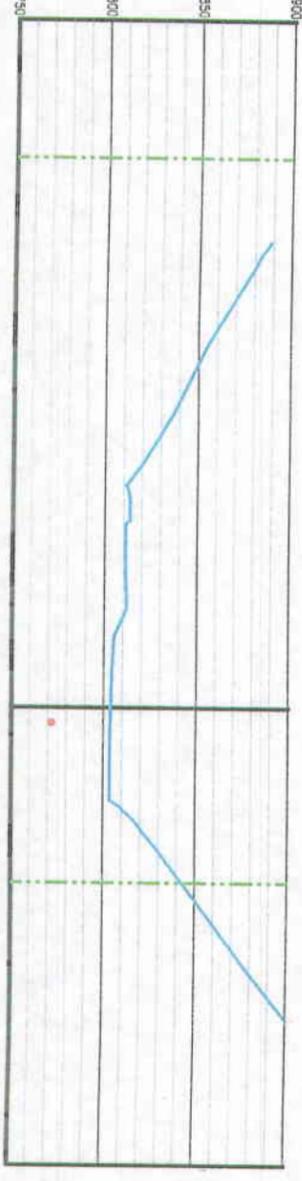
15+00



11+00



16+00



12+00

LEGEND:  
 EXISTING SURFACE: ———  
 DISTURBED AREA BOUNDARY: - - - -  
 CULVERT LOCATION: ●

File in:  
 Confidential  
 Shelf  
 Expandable  
 Refer to Record No. 0043 Date 07/2008  
 In 0050032, 2008, Wyoming  
 For additional information





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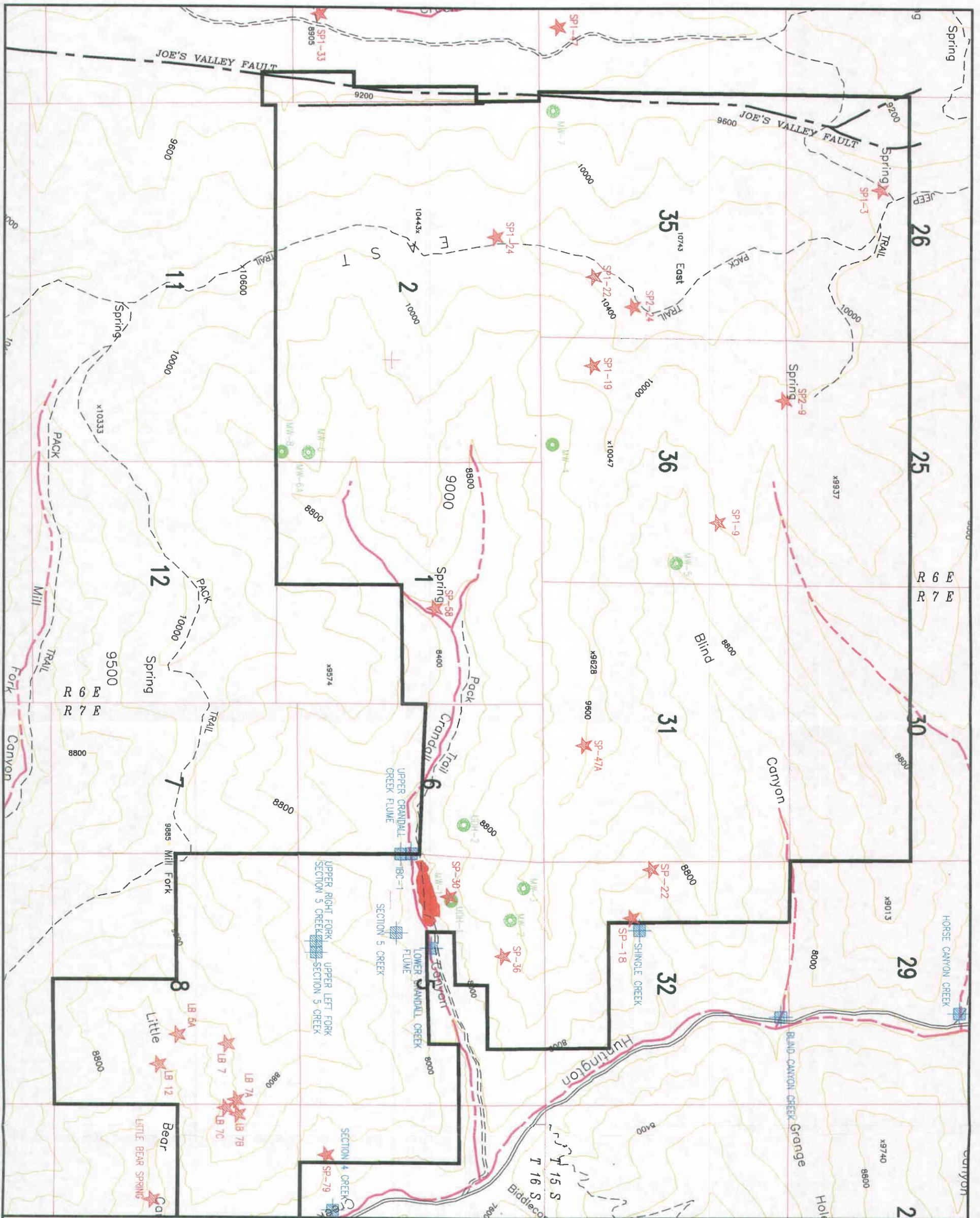
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Telephone: (435) 888-4000

**CRANDALL CANYON MINE**  
**EXISTING CROSS-SECTIONS**

REV: 1	ACAD: 7-5A
DATE: JUNE 2006	BY: BLACKHAWK
SCALE: 1" = 100'	PLATE #: 7-5A(2)

PLATE 7-18

WATER MONITORING SITES



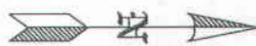
**LEGEND**

-  MINE SURFACE FACILITIES
-  UDOGM PERMIT BOUNDARY
-  PERENNIAL STREAM REACHES (based on 1992 thru 1998 observations)
-  MONITORING LOCATIONS OF SURFACE SPRINGS
-  MONITORING LOCATIONS OF UNDERGROUND WELLS
-  MONITORING LOCATIONS OF STREAMS

**File in:**

- Confidential
- Shelf
- Expandable

Refer to Record No. 0043 Date 1/7/2008  
 In C0150032, 3005, In Coming  
 For additional information



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**CRANDALL CANYON MINE  
WATER MONITORING SITES MAP**

REV: 10	ACAD: 7-18
DATE: 02-28-05	BY: JDS
SCALE: 1"=2000'	PLATE #: <b>7-18</b>