

Document Information Form

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Agreement

cc:

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Date _____ For additional information

ACT/007/004
#3

AGREEMENT
BY AND BETWEEN
AMAX COAL COMPANY
AND
UTAH DIVISION OF OIL, GAS & MINING

This Agreement is made and entered into by and between the Utah Division of Oil Gas and Mining (the "Division") and Amax Coal Company ("Amax") and is to become effective as of October 15, 1994. The intent of this Agreement is to facilitate right of entry by the Division's Abandoned Mine Reclamation Program ("AMRP") to place coal refuse at an existing coal refuse disposal site operated by Amax.

RECITALS

A. The Division's AMRP requires a coal refuse disposal area in order to complete reclamation of the Sed Ponds Project Site. The Sed Ponds Project Site consists of a series of abandoned pre-SMCRA sediment ponds that lie adjacent to the Price River in the Castle Gate area of Carbon County, Utah. These ponds are composed of coal refuse which is causing negative environmental impacts on stream sediment load, aquatic life and water quality in the Price River. See Exhibit B for location of the Sed Ponds Project site.

B. Amax operates a permitted coal refuse disposal site ("Disposal Site") in the immediate vicinity of the Sed Ponds site. Amax leases said land from the surface owners, Blackhawk Coal Company (see Exhibit B for location).

C. The Division's AMRP proposes to place approximately 26,000 cubic yards of coal refuse ("Placement Activities") at the Disposal Site.

D. Amax's Disposal Site is part of its currently inactive Castle Gate Mine which is permitted under the Division's Coal Regulatory Program ("CRP"). Under said permit, Amax has certain regulatory responsibilities regarding the Disposal Site.

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Refer to Record No. 0021 Date _____

In C/ 007, 004, Incoming

For additional information _____

AGREEMENT

NOW THEREFORE, in consideration of the mutual obligations and undertakings contained in this Agreement, Amax and the Division agree to the following:

1. Amax agrees to execute a Right of Ingress/Egress and Right of Entry, Exhibit A, giving the Division's AMRP permission to access and conduct Placement Activities at the Disposal Site.
2. Amax agrees to have the access road to the Disposal Site in good and operable condition prior to the Division's AMRP's usage. The Division's AMRP agrees to maintain the road in the same condition during haulage of refuse to the Disposal Site, and upon completion of Placement Activities, return it to the same condition prior to the AMRP's usage.
3. The Division, with representatives from its CRP and AMRP, and Amax will jointly inspect and acknowledge the condition of the Disposal Site and access road prior to Placement Activities and again after Placement Activities are complete.
4. The Division through its AMRP agrees to conduct Placement Activities and to maintain the Disposal Site in accordance with the terms of Amax's Mining and Reclamation Plan ("MRP") during Placement Activities, and upon completion of these Placement Activities, return it to the same condition as existed prior to use by the AMRP. The AMRP's technical specifications for Placement Activities, Exhibit C, have been reviewed and accepted by Amax.
5. The Division's AMRP agrees to have coal refuse analyzed for plasticity and gradation limits and to have the results reviewed and approved by Amax before commencement of Placement Activities.

6. The Division's AMRP agrees to have a qualified professional engineer inspect the Disposal Site at least once per week during Placement Activities. Weekly certified reports shall be made to Amax and to the Division and shall include comments on refuse conditions, fill stability, road conditions, erosion, hydrologic structures (diversions, berms, and channels) etc. The attached form, Exhibit D, or one with appropriate requirements will be used.

7. Upon completion of Placement Activities, the Division's AMRP agrees to provide Amax and the Division's CRP with a final report showing elevations, areal and vertical extent of the refuse placed by the Division's AMRP into the Disposal Site. Approval by Amax and the Division's CRP of the final configuration of the fill will be given prior to equipment removal by the contractor.

8. The Division's AMRP agrees to notify Amax in writing of the date of onset, suspension, resumption or completion of Placement Activities.

9. The Division's AMRP will make a good faith effort to complete the Placement Activities by May 1, 1995.

10. The Division agrees to assume liability for any and all injuries sustained by or caused to third parties by its employees, agents, and contractors as a result of the Placement Activities.

11. Except as set forth in this Agreement, neither party shall undertake any activity, expressed or implied, nor make any representation which purports to bind the other.

12. Modification of this Agreement shall be in writing and approved by all parties hereto.

13. The Division through its CRP agrees that execution of this Agreement by each party will constitute an amendment to Amax's present MRP to allow the Division's AMRP to conduct Placement Activities at the Disposal Site.

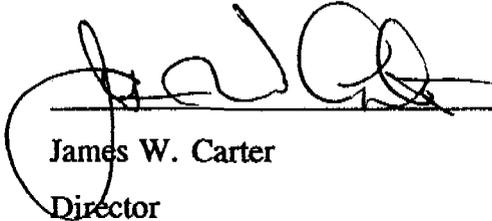
14. This Agreement shall remain in effect for the term of the disposal activities, but no longer than May 1, 1996.

15. During the term of this Agreement, Amax's' Mining and Reclamation Plan is amended to incorporate this Agreement.

AMAX COAL COMPANY

UTAH DIVISION OF OIL GAS & MINING





James W. Carter
Director

Date: 10/7/94

Date: 10/4/94

- Exhibits:
- Exhibit A- Ingress/Egress and Right of Entry Agreement
 - Exhibit B- Site Location Map
 - Exhibit C- Construction Specifications
 - Exhibit D- Example of Weekly Inspection Report

INGRESS/EGRESS & RIGHT OF ENTRY CONSENT FOR
RECLAMATION ACTIVITIES

by
AMAX COAL COMPANY

The undersigned, Amax Coal Company, (hereafter the Lessee), does hereby consent to the following activities by the Utah Division of Oil, Gas & Mining, Department of Natural Resources (Division) and its agents, employees or contractors:

1. Duly authorized employees, agents and/or contractors of the Division may enter upon described land ("Disposal Site") to dispose of coal refuse that was created by pre-SMCRA mining activities. These mining activities affect the public's health, safety and general welfare on the abandoned sed pond site (Exhibit B) in Carbon County, Utah. The Disposal Site's location is more particularly described as follows:

Schoolhouse Canyon Disposal Site

NW4 SW4 of Section 36, Township 12 South, Range 9 East, SLBM. Also see Exhibit B.

2. The Division proposes to place approximately 26,000 cubic yards of coal refuse at the Disposal Site. This coal refuse will be taken from abandoned sediment ponds located along the Price River in order to facilitate their reclamation.

3. The Division expressly assumes liability for any and all injuries sustained by or caused to third parties by its employees, agents, and contractors.

4. Except as herein set forth in this right of entry consent, neither the Division nor the Lessee shall undertake any activity, either expressed or implied, nor make any representation which purports to bind the other.

5. Duly authorized personnel of the Division are granted permission to inspect reclamation work at reasonable times.

EXHIBIT A

6. It is expressly understood that all costs incurred for studies and reclamation activities shall be the sole liability of the Division.

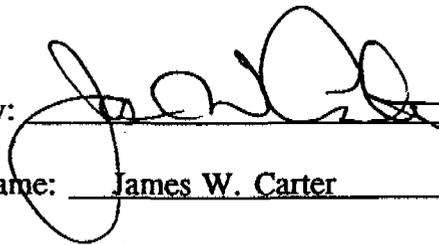
7. All reclamation activity performed is pursuant to authority and funding under the Surface Mining Control and Reclamation Act of 1977 and Title 40-10-25 et seq. U.C.A. and does not constitute a warranty or guarantee to the Lessee relative to the protection of public health, safety, and general welfare or suitability of the premises for any specific use.

Dated this _____ day of _____, 1994

DIVISION OF OIL, GAS & MINING

AMAX COAL COMPANY

I certify that I am the legal Lessee or agent for the legal Lessee of the above described property.

By: 
Name: James W. Carter
Title: Director

By: 
Name: KEITH H. SIEBER
Title: VICE PRESIDENT / GENERAL MANAGER


Mary Ann Wright, Administrator
Abandoned Mine Reclamation Program

SED PONDS PROJECT

SECTION 0301

SITE 1	SED PONDS SITE
SITE 2	ROYAL STOCKPILE SITE
SITE 3	SCHOOLHOUSE CANYON DISPOSAL SITE

EXHIBIT C

SECTION 0301
SPECIFIC SITE REQUIREMENTS
(Revised Section 0300)

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. This Section describes the location, the features present, and the WORK to be performed at each site in the Sed Ponds Project area, as revised by Change Order No. 1 (Form DP-28) to the CONTRACT. The items of the WORK at each site shall be performed according to the appropriate sections of these Specifications. This Section 0301 replaces and supersedes Section 0300 as of the effective date of the change order.
- B. It is the intent of these Specifications that the site-specific scope of WORK be as described in this Section. The General Technical Specifications, Sections 0200 through 0290, outline WORK broadly applicable to all abandoned mine reclamation situations and that may not be required at each site in this project. Where there is a conflict between Section 0301 and the General Technical Specifications (0200's), Section 0301 shall govern.

1.02 LOCATIONS AND DESCRIPTIONS

- A. Descriptions of each of the project sites and their locations are presented below. Details and dimensions are shown on the Drawings. CONTRACTOR shall be aware that the dimensions on the Drawings are approximate. CONTRACTOR shall also be aware that minimum or maximum dimensions on the Drawings or given in the Specifications are specific and are to be adhered to unless such changes are approved in writing by the OWNER. The quantities presented in the specific site sections should be considered as an estimate with a tolerance of plus or minus 15 percent. CONTRACTOR shall visit the site and determine for his or her own purposes the quantities and amounts required in performing the WORK as intended in these Specifications and on the Drawings.

B. SED PONDS SITE

The Sed Ponds Site is located in Price Canyon, about 3 miles north of Helper, in the NW¼ of Section 1, T13S, R9E. The site is mapped on the Helper 7½' USGS quadrangle.

The site is reached from the junction of highways US-6 and US-191/U-33 in Price Canyon by taking US-191/U-33 north and east 0.3 miles. Then turn north 0.2 miles onto the private paved road that accesses the UP&L Carbon Plant coal stockpile and the Castle Gate mine south entrance. The site is about 300 feet west of the Castle Gate mine entrance gate, between the railroad tracks and the Price River. Currently there is no vehicle access to the Sed Ponds Site itself.

The Sed Ponds Site is an area approximately 1,200 feet by 200 feet in the floodplain of the Price River between the river and the embankment of the Rio Grande Railroad tracks. The sediment ponds consist of a series of three basins formed by berms 10 to 15 feet high along and at angles to the river bank. The berms are constructed of soil excavated from the original floodplain along with a large amount of coal refuse. In addition, the ponds contain coal refuse in depths exceeding six feet. Most of this coal consists of very fine particle sizes. There are an estimated 26,000 cubic yards of coal on the site. The surface elevations of the bottoms of the ponds are even with or lower than the elevations of the adjacent reaches of the river. The coal at the Sed Ponds Site has burned in the past, although it is not known to be burning now. CONTRACTOR should be aware of the potential for encountering burning coal at the site and take appropriate precautions.

C. ROYAL STOCKPILE SITE

The Royal Stockpile Site is located in Price Canyon, about 3 miles north of Helper, in the SE¼ NE¼ of Section 35, T12S, R9E. The site is mapped on the Helper 7½' USGS quadrangle.

The site is reached from the junction of highways US-6 and US-191/U-33 in Price Canyon by taking US-6 north and west 1.8 miles to the turnoff to the Price River Water Improvement District plant (marked by a sign). Take the turnoff road 0.7 miles, past the PRWID plant to the site (just north of the Castle Gate mine north gate). This road is paved, but there is a narrow bridge with a 20 ton weight limit posted. The site is also accessible from the south through the Castle Gate mine without crossing the bridge.

The Royal Stockpile Site consists of a pile of sandstone cobbles and boulders salvaged from a previous reclamation project on the site. The pile covers an area approximately 60 feet by 250 feet to depths of up to 8 feet. Rocks in the pile range in size from 6 inches to 6 feet in diameter. The pile contains an estimated 3000 cubic yards of loose, randomly stacked rock.

D. SCHOOLHOUSE CANYON DISPOSAL SITE

The Schoolhouse Canyon Disposal Site is located in Price Canyon about 3 miles north of Helper, in the SE¼ SW¼ of Section 36, T12S, R9E. The site is mapped on the Helper 7½' USGS quadrangle.

The site is reached from the junction of highways US-6 and US-191/U-33 in Price Canyon by taking US-191/U-33 north and east 0.3 miles. Then turn north 0.2 miles onto the private paved road that accesses the UP&L Carbon Plant coal stockpile and the Castle Gate mine south entrance. Continue north on the Castle Gate mine road to the mine prep plant, where the road switches back to the southeast and then north again east to climb the steep grade to the disposal area. The flat top surface of the fill covers about 4 acres.

The Schoolhouse Canyon Disposal Site consists of an approved head-of-hollow fill site used by the Castle Gate mine for disposal of waste rock and coal.

PART 2 - SPECIAL CONDITIONS AND RESTRICTIONS

2.01 UTILITIES

- A. A number of public and private utilities are present in or near the project sites or traffic routes. CONTRACTOR is responsible for identifying, locating, and protecting all utility lines. CONTRACTOR shall locate and stake out utilities prior to excavation or grading. Relocation or providing additional support may be necessary to protect some utilities. CONTRACTOR is responsible for repairing or compensating any damage caused to utility lines in the course of the work, including any fees, fines, or penalties. Several known utilities are described below. CONTRACTOR shall notify OWNER of any other utilities encountered.

B. PRICE RIVER WATER IMPROVEMENT DISTRICT

The Price River Water Improvement District owns and operates an 18-inch water line that runs through the Castle Gate mine, mostly parallelling the railroad tracks.

The District should be notified before mobilizing on-site.

For more information, contact:

Phillip Palmer or Rod Ivie
Price River Water Improvement District
P.O. Box 903
265 South Fairgrounds Road
Price, Utah 84501
(801) 637-6350 fax (801) 637-6374

C. PRICE CITY

Price Municipal Corporation owns and operates two water lines in the project area. A 16-inch pipe runs through the Castle Gate mine along the main mine access road. A 12-inch pipe runs along the east side of highway US-6.

Price City will mark the ground locations of the lines with 48 hours notice. Vehicle or equipment traffic crossings over water lines should be bridged with at least two feet of dirt or gravel road base.

For more information, contact:

Gary D. Sonntag, City Engineer
Price City Engineering Department
P.O. Box "P"
432 West 600 South
Price, Utah 84501
(801) 637-5010

D. HELPER CITY

Helper Municipal Corporation owns and operates water lines in the project area. Eight-inch ductile iron pipes and 8-inch cast iron pipes with lead joints run through the Castle Gate mine and the Royal Stockpile Site along the main mine access road.

Helper City is concerned about potential leaks at the joints in the cast iron pipe caused by heavy truck traffic. Leaks caused by equipment operation were a recurring problem during the previous reclamation work at the Royal Stockpile Site.

For more information, contact:

Gary Harwood, Water Supervisor
Helper Municipal Corporation
P.O. Box 221
Helper, Utah 84526
(801) 472-5391

E. MCI FIBER OPTIC CABLE

MCI is installing a fiber optic cable line along the west edge of the railroad track ballast. The line is currently still under the control of the installation construction contractor. Penalties for damaging the line are substantial. Line location and a full time monitor will be provided at no charge if there is excavation within 60 feet of the line.

For more information and blue staking, call toll-free:

1-800-MCI-WORK (1-800-624-9675)

F. BURIED TELEPHONE CABLE

There is a buried telephone cable along the west side of highway US-6 that may be affected by the work at the UDOT Stockpile Site.

G. RIO GRANDE RAILROAD OVERHEAD TELEPHONE WIRES

The overhead wires along the railroad tracks at the Sed Ponds Site are used for communication by the railroad. Adequate clearance above construction vehicles must be maintained.

The railroad can raise the lower strands to maintain clearance, if necessary. CONTRACTOR will be responsible for paying the railroad the costs of raising the wires.

For more information, contact:

John Matthews, Roadmaster
D&RGW RR Co./Southern Pacific Transportation Co.
Depot Street
Helper, Utah 84526
(801) 472-3391 Salt Lake City office: (801) 974-9280

H. ABANDONED UTILITIES

Abandoned wood, tile, and steel pipelines are present on the Sed Ponds Site. It is not necessary to protect these abandoned lines. CONTRACTOR shall notify OWNER of any other abandoned or inactive utilities encountered for proper disposition.

2.02 RAILROADS

- A. Vehicles and equipment are not permitted to approach or cross the two main line Rio Grande Railroad tracks except at a crossing specifically designed for that purpose, installed by the railroad, and staffed by a railroad crossing guard. CONTRACTOR shall comply with the crossing guard's directions regarding safe crossing times and procedures.
- B. The railroad will construct and install the crossing and provide the crossing guard. CONTRACTOR will be responsible for paying the railroad the costs of the crossing installation and the guard.
- C. The railroad has designated a segment of the track where a crossing may be located (between the UP&L concrete curb wall and the railroad milepost #630). CONTRACTOR shall coordinate with the railroad and indicate the precise location desired within that segment for the crossing. CONTRACTOR should allow two weeks for crossing installation. Contact person for the railroad for installation of the crossing is:
John Matthews, Roadmaster
D&RGW RR Co./Southern Pacific Transportation Co.
Depot Street
Helper, Utah 84526
(801) 472-3391 Salt Lake City office: (801) 974-9280
- D. Crawler-type equipment may cross the railroad crossing only if the road surface is protected with old tires or other protection acceptable to the railroad.
- E. Pedestrian traffic across the railroad tracks should be kept to a minimum. Whenever possible, pedestrian crossings should be made at the vehicle crossing.

- F. CONTRACTOR shall exercise extreme caution whenever vehicles, equipment, or people are working near the railroad tracks.
- G. CONTRACTOR shall be responsible for any damage caused to railroad property, equipment, or facilities.
- H. CONTRACTOR shall install a steel gate at the crossing location to prevent unauthorized vehicle access to the crossing. The gate shall be kept locked when not attended by the crossing guard or CONTRACTOR.
- I. CONTRACTOR shall comply with all applicable terms of the license agreement executed by the railroad, OWNER, and CONTRACTOR that governs access to the railroad property.

2.03 HIGHWAYS/AUTOMOBILE TRAFFIC

- A. CONTRACTOR is responsible for obtaining and providing all necessary encroachment permits, warning signs, flaggers, and other traffic controls in accordance with MUTCD standards as required by the Utah Department of Transportation or as necessary to protect the safety of traffic on vehicle travel routes. CONTRACTOR should allow 2-4 weeks for processing the UDOT Right of Way Encroachment Permit.
- B. For more information, contact:
Dale Stapley, Districts Permits Officer
Utah Department of Transportation
District Four Office
Route #3 Box 75C5
940 South Carbon Avenue
Price, Utah 84501-0903
(801) 637-1100 ext. 402

2.04 PRICE RIVER

- A. Excavation and fill placement in the riparian zone for this project is authorized by Stream Channel Alteration Permit Number 93-91-03SA from the Utah Division of Water Rights. The permit expires June 24, 1995. Water quality protection measures stipulated in the permit are incorporated into the stream protection work specified below and in Section 0280: Drainage Control and Stream Protection.
- B. OWNER is in the process of obtaining authorization to use a 2 acre-foot allocation of Price River water from the Castle Gate mine. When authorized, the water may be pumped directly from the Price River. This will require a diversion permit from Division of Water Rights.
- C. For more information, contact:
Mark Page, Area Engineer
Utah Division of Water Rights
Price Area Office
P.O. Box 718
Price, Utah 84501-0718
(801) 637-1303

2.05 CASTLE GATE MINE

- A. The Castle Gate mine is a permitted mine site under the jurisdiction of the Division of Oil, Gas and Mining's Coal Regulatory Program. Activities on this property must conform to the mine operator's reclamation plan. Activities within the mine's permit area are subject to inspection by the Coal Regulatory Program and the issuance of notices of violations. CONTRACTOR is responsible for keeping those parts of the permit area affected by this work in conformance with the operator's reclamation plan. CONTRACTOR is responsible for paying any fines assessed for violations caused by the CONTRACTOR. OWNER anticipates that controlling runoff along the access road and haul roads will be the primary issue of concern.
- B. Reclamation, site maintenance, or other mine operation work may be taking place for the mine by the mine or another contractor at the same time as this work. CONTRACTOR shall coordinate with the mine or any other contractor to minimize interference between operations.
- C. CONTRACTOR is responsible for repairing any damage caused to mine property, equipment, or facilities.
- D. CONTRACTOR shall keep the north and south Castle Gate mine gates locked when not working.
- E. CONTRACTOR shall clean up any spilled oil, antifreeze, gasoline, or other petroleum product and any material contaminated by such spills within the permit area, including the Schoolhouse Canyon Disposal Site.
- F. CONTRACTOR shall not store or bring any hazardous materials or extremely hazardous materials onto the permit area. Fuel tanks shall not be kept on the permit area. Refueling shall not take place within the permit area.
- G. CONTRACTOR shall not store or bring any equipment, petroleum products, portable toilets, or construction materials or supplies onto the permit area.
- H. Drainage control structures (diversions, berms, and channels) and road structures (road berms, diversions, and surfaces) affected by the work shall be maintained according to the current permit standards or any subsequent revisions.
- I. The person responsible for overseeing the Castle Gate mine property is:
Lonnie Mills, Senior Environmental Engineer
Cyprus Plateau Mining Corp.
P.O. Box PMC
Price, Utah 84501
(801) 637-2875

2.06 UP&L CARBON PLANT

- A. Access to the Sed Ponds site will require travel through the UP&L Carbon Plant on the plant's private paved road. CONTRACTOR's vehicles will share the road with coal trucks going to the scales and coal stockpile, other vehicles, heavy equipment, and pedestrians. Traffic on the road for plant operations can be heavy. Access to the Sed Ponds site may also be arranged over the power plant coal stockpile.
- B. CONTRACTOR is responsible for coordinating traffic through the power plant property with the plant to maintain traffic safety and to minimize interference with plant operations. Such coordination may include providing flaggers or designating a shared CB radio channel for communication.

C. CONTRACTOR is responsible for repairing any damage caused to the plant property, equipment, or facilities, including the road surface.

D. For more information, contact:
Tim Gwyther, Plant Manager
UP&L Carbon Plant
P.O. Box 839
Helper, Utah 84526
(801) 472-3493

2.07 BLASTING

A. Blasting to break rock shall be permitted only with the prior approval in writing by the OWNER.

2.08 ADDITIONAL INSURANCE REQUIREMENTS

- A. Additional liability insurance is required by the Denver and Rio Grande Western Railroad Company (Southern Pacific Transportation Company) for work within the railroad right-of-way.
- B. CONTRACTOR shall obtain personal injury and broad form property damage insurance with limits not less than \$6,000,000 combined single limit per occurrence. The insurance policy will name the Denver and Rio Grande Western Railroad Company as an additional insured. All of the terms, restrictions, and requirements of General Condition #25 (Liability Insurance) shall apply to this coverage.
- C. Certificates evidencing that satisfactory insurance coverage is in effect shall be furnished to the OWNER at least three working days prior to mobilizing onto the Sed Ponds Site.

PART 3 - EXECUTION

3.01 WORK REQUIRED AT ALL SITES

The following WORK shall be performed at each of the sites in the Sed Ponds Project Area except as otherwise specified in this Section.

- A. Improve access to the site along the routes described to the degree required to conduct the WORK. Such improvement shall be performed in accordance with Section 0230: Access Improvement and Section 0280: Drainage Control and Stream Protection.
- B. Demolish and dispose of items specifically identified for demolition in accordance with Section 0240: Demolition and Clean-up.
- C. Clean up and remove from site trash and miscellaneous waste too small to be identified for demolition in accordance with Section 0240: Demolition and Clean-up.
- E. Perform required site grading and earthwork in accordance with Section 0270: Site Grading/Earthwork.
- F. Revegetate all areas disturbed during construction in accordance with Section 0290: Revegetation.
- G. Control surface water runoff and soil erosion in accordance with the drainage control method identified for the specific site in this Section and in accordance with Section 0280: Drainage Control and Stream Protection.

- H. Where WORK access or temporary stream protection has been created, close the access following construction in accordance with Section 0230: Access Improvement and Section 0280: Drainage Control and Stream Protection.

3.04 SED PONDS SITE (Reference Drawings 2, 12-17)

The WORK at the Sed Ponds Site shall include the excavation and removal of coal refuse, the import and placement of clean fill, the installation of riprap bank protection, and the revegetation of all disturbed areas.

A. ACCESS IMPROVEMENT

Improve site access to the extent necessary to perform the work in accordance with Section 0230: Access Improvements, and as follows:

1. Prior to undertaking any access improvement work within the Castle Gate mine permit area CONTRACTOR will conduct a joint inspection with the OWNER and the DOGM Coal Regulatory Program of the existing mine haul road and the route of the new access road to be constructed. The inspection will assess the existing site conditions and determine the appropriate drainage and other controls required to comply with the Castle Gate mine permit.
2. Site access will require moderate to substantial improvement work. Remove the berm blocking the access road in a manner that maintains drainage patterns and complies with the Castle Gate mine permit. Stockpile the material for use later to replace the berm.
3. Where the access route crosses the old, idle, partially buried railroad track sidings, place soil, road base, or clean fill over the track as necessary to make the route passable to vehicles.
4. Protect utilities as specified in Section 0300 Part 2.01 above.
5. Arrange for installation of the railroad crossing as specified in Section 0300 Part 2.02.A&B above. Install a gate at the crossing as specified in Section 0300 Part 2.02.H above
6. Maintain drainage controls and other site operations in the Castle Gate mine permit area in accordance with the mine's permit as specified in Section 0300 Part 2.05 above.
7. Spray roadways with water as necessary to control dust.
8. Upon completion of the work, it will not be necessary to remove the soil, road base, or clean fill used to cover the old idle railroad tracks. It will be necessary to replace the berm that blocked the access road.
9. Upon completion of the work and/or if work is suspended, CONTRACTOR will conduct a joint inspection with the OWNER and the DOGM Coal Regulatory Program of the existing mine haul road and the route of the new access road. The inspection will assess compliance with the Castle Gate mine permit and determine the appropriate drainage and other controls required for continued compliance.

B. RIVER PROTECTION

Control Price River water quality in accordance with Section 0280: Drainage Control and Stream Protection, and as follows:

1. Install a silt fence along the east bank of Price River at the toe of the coal berm for the entire length of the site in accordance with Section 0280: Drainage Control and Stream Protection. The purpose of the silt fence is to catch coal, rock, and soil particles disturbed by the work before they enter the stream channel. The fence may need to be moved and/or maintained as the work progresses. An estimated 1420 feet of silt fence will be required.
2. Install other stream protection measures as required and directed by OWNER. Such measures may include in-stream fabric check dams or temporary sandbag or silt fence jetties/deflectors to keep the stream flow centered in the channel and away from the working bank. Remove temporary controls when no longer needed.
3. CONTRACTOR shall not place any equipment or materials within the existing or reconstructed stream channel or in flowing waters at any time. Construction materials, bedding materials, excavated material, etc. shall not be stockpiled in riparian or channel areas.
4. CONTRACTOR shall perform site grading, earthwork, and riprap placement adjacent to the stream bottom in limited reaches so that disturbance to stream flows and sediment loading to the stream are negligible. Unless the CONTRACTOR can demonstrate that adequate protection of the river can be ensured with longer working lengths, these lengths should be no longer than 100 feet.
5. CONTRACTOR shall control grading on the site to prevent water from draining into excavation areas. CONTRACTOR shall provide all pumping required to keep excavated areas clear of water during construction.
6. Construction work shall occur only during low flow periods.
7. Equipment fueling, lubrication, and servicing shall not be performed within 100 feet of the stream channel. All fluid leaks shall be promptly cleaned up. OWNER strongly encourages CONTRACTOR to collect and recycle used crankcase oil and hydraulic fluid where facilities exist to do so.

C. SITE DRAINAGE CONTROL

Construct temporary drainage ditches, silt fences, and straw bale check dams as necessary or as directed by OWNER to control runoff from rain or dust suppression spray and to trap sediment carried by runoff. The work shall be done in accordance with Section 0280: Drainage Control and Stream Protection.

D. SITE GRADING/EARTHWORK

Perform site grading and earthwork to remove coal refuse from the site and to establish suitable topography using clean soil/rock fill. The work shall be done in accordance with Section 0270: Site Grading/Earthwork, and as follows:

1. The intent of this work is to remove coal refuse from the river floodplain and to establish suitable topography in that area with clean soil/rock fill. The work will establish the slopes shown on the Drawings, with no regraded slope being greater than 2½h:1v.

2. Excavate the coal refuse forming the river bank and within the sediment pond bottoms and berms to the elevations and contours shown in the Drawings. Strip the coal down to the clean subsurface from the entire area. It is acceptable to leave a thin veneer of coal residue. Excavation into the railroad embankment shall be the minimum necessary to remove the coal and shall at no time occur within 25 feet of the track centerline or within the downward projection of a 2h:1v slope from the edge of the track. Keep vegetation, organic materials, and other noncoal wastes segregated from the coal refuse.
3. Reconstruct the river bank with clean soil/rock fill from the Royal stockpile and a fill source acceptable to OWNER. Place the toe of the clean soil/rock fill about 2 feet east of the former coal bank toe so that the toe of the final riprapped bank will be at the same location as the toe of the former coal bank. Slope the clean soil/rock fill at 2½h:1v to a vertical height of 5 feet above the channel bed. Place additional clean soil/rock fill in the former basin interior between the reconstructed bank and the railroad embankment as shown in the Drawings. Cross slope of the fill shall be approximately 2 percent.
4. Bank additional clean soil/rock fill against the railroad embankment as necessary to achieve the contours and elevations shown in the drawings for the high flow bank subgrade. The final top elevation of the high flow bank should be 11 feet above the elevation of the corresponding reach of river channel. The reconstructed high flow bank height will vary from 3½ to 5 feet because of the varying width of the floodplain.
5. The regrading shall be done in such a manner as to blend the upstream and downstream ends of the earthwork with the existing topography of adjacent areas.
6. No debris shall be placed within the clean soil/rock fill. The distribution of materials within the clean soil/rock fill shall be such that there are no lenses, pockets, or layers of material differing substantially in texture and gradation from the surrounding material in the fill. The fill shall be free of void spaces. The clean soil/rock fill materials shall be placed and spread in horizontal layers not exceeding 24 inches and compacted with track equipment. The top 2 feet of the fill shall be free of rocks greater than 24 inches in diameter.
7. The top surface of the fill should be left in a roughened condition conducive to water storage and erosion reduction as described in the specifications for surface preparation for revegetation, Section 0290 Part 3.05.
8. When possible, excavation of coal from the channel bank shall be done in a manner that maintains existing trees and other riparian vegetation.
9. Suitable rock and clean soil encountered in the river bank and berm excavation may be salvaged for use as riprap or clean soil/rock fill.
10. CONTRACTOR shall be responsible for all surveying and grade staking necessary to perform the work. CONTRACTOR will confirm that the survey base used is consistent with the plans provided by the OWNER. Final grade shall be certified by a registered surveyor. OWNER shall have surveys performed at its discretion for confirmation purposes.
11. An estimated 26,000 bank cubic yards of coal refuse material will be excavated and removed from the site. An estimated 38,000 bank cubic yards of clean soil/rock fill will be imported and placed, including that used to reconstruct the river bank, fill the basin interior, and to form the high flow bank subgrade and topdressing.

B. COAL REFUSE TRANSPORT

Load the excavated coal refuse onto trucks or scrapers and transport it to the Schoolhouse Canyon Disposal Site in accordance with Section 0275: Material Transport, Section 0280: Site Grading/Earthwork, and as follows:

1. An estimated 26,000 bank cubic yards of coal refuse will be loaded and transported. The haul distance to the Schoolhouse Canyon Disposal Site through the Castle Gate mine is 1.2 miles.
2. CONTRACTOR will exercise caution, use appropriate speeds, and maintain adequate clearance when operating vehicles near the Castle Gate mine structures and overhead conveyors and when crossing the railroad tracks.
3. Equipment refueling shall not be performed on the Castle Gate mine permit area.

E. RIPRAP INSTALLATION

Construct two levels of permanent streambank protection (riprap) in accordance with Section 0280: Drainage Control and Stream Protection, and as follows:

1. The size gradation for the riprap to be used for both the low and high flow banks is:

<u>Rock Size</u>	<u>Percent Finer by Weight</u>
1½ inch	15 percent (D ₁₅)
16 inch	50 percent (D ₅₀)
24 inch	85 percent (D ₈₅)
32 inch	100 percent (D ₁₀₀)

1. Prepare the bank slopes by grading them to a uniform 2½h:1v slope to the vertical height specified.
2. On the low flow bank adjacent to the existing channel, place a geotextile fabric filter blanket smoothly and uniformly on the slope of the clean soil/rock fill according to the manufacturer's recommendations. The top edge shall be keyed into the fill. Overlap of fabric pieces shall be at least 2 feet. Place riprap on top of the fabric along the entire bank length and height to a thickness of 2 feet. Care shall be taken in laying the fabric and placing the riprap to avoid tearing the fabric. Torn fabric shall be replaced with the proper overlap as required. The riprap shall be dumped on the fabric from no higher than 3 feet to prevent tearing the fabric and segregation of particle sizes.
3. On the high flow bank adjacent to the railroad embankment, place an 18-inch gravel filter blanket smoothly, uniformly, and in a manner that will not cause segregation of particle sizes. The gravel shall be placed on the slope of the clean soil/rock fill to a vertical height of 11 feet above the corresponding reach of river channel. The high flow bank height will vary from 3½ to 5 feet. Place riprap on top of the gravel along the entire bank length and height to a thickness of 2 feet. Key the toe of the riprap into the clean soil/rock fill to a depth of 3 feet. The riprap shall be dumped on the gravel bedding from no higher than 5 feet to prevent segregation of particle sizes.
4. An estimated 1550 lineal feet of low flow bank will be riprapped, requiring an estimated 3450 square yards of geotextile fabric (at 20 feet wide) and an estimated 1550 cubic yards of riprap.
5. An estimated 1440 lineal feet of high flow bank will be riprapped, requiring an estimated 900 cubic yards of gravel and an estimated 2000 cubic yards of riprap.

6. The available rock at the designated riprap source areas may not meet the specified size gradations. It may be necessary to crush or specially handle the rock to meet the sizing requirements.

F. DEMOLITION/CLEAN-UP

Clean up and dispose of trash and debris on the site in accordance with Section 0240: Demolition and Clean-up, and as follows:

1. Remove larger items to an approved offsite disposal site, but not to the Schoolhouse Canyon Disposal Site. No noncoal wastes shall be disposed of within the Castle Gate mine permit area.
2. Cutting torches shall be used carefully and in a manner that will not ignite the coal refuse.
3. The old, partially buried tile utility pipeline along the railroad embankment may be buried in place.
4. Grubbed vegetation shall not be considered trash and debris to be disposed. It shall be kept onsite and scattered over the surface following placement of the clean soil/rock fill.
5. An estimated 15 cubic yards of steel and wood debris will need to be removed and disposed of.

G. REVEGETATION

Revegetate all areas disturbed by reclamation activities in accordance with Section 0290: Revegetation, and as follows:

1. Seed the clean soil/rock fill with the Sed Ponds Seed Mix.
2. Seed a 20-foot wide zone in the clean soil/rock fill along the top of the low flow bank riprap with the Riparian Supplement Seed Mix. Note that this zone will be seeded with both mixes.
3. Plant willow cuttings in the Price River channel along the toe of the low flow bank riprap. Plant the cuttings in two staggered rows on approximate 3-foot centers.
4. Scatter any grubbed vegetation randomly over the site to provide mulch and colonization sites.
5. An estimated 4.2 acres will need to be revegetated with the Sed Ponds Seed Mix. An estimated 0.6 acres (1400 ft x 20 ft) will need to be revegetated with the Riparian Supplement Seed Mix. An estimated 1400 lineal feet of low flow bank will need to be revegetated with the willow cuttings, requiring 930 cuttings.

3.05 ROYAL STOCKPILE SITE (Reference Drawings 3, 12)

The WORK at the Royal Stockpile Site shall include the removal of riprap and clean soil/rock fill and the revegetation of all disturbed areas.

A. ACCESS IMPROVEMENT

Improve site access to the extent necessary to perform the work in accordance with Section 0230: Access Improvements, and as follows:

1. Site access will require minimal work. Access to the site is possible on existing paved roads without improvement.

2. Protect utilities as specified in Section 0300 Part 2.01 above.

B. FILL/RIPRAP LOADING

Excavate the clean soil/rock fill and rock riprap and load onto trucks for transport to the Sed Ponds Site in accordance with Section 0275: Material Transport, Section 0280: Site Grading/Earthwork, and as follows:

1. An estimated 4000 cubic yards of material (clean soil/rock fill and riprap combined) will be excavated and loaded.
2. There are wellheads in the vicinity of the stockpile. Locate and flag these prior to excavating material.
3. Excavate the stockpiled material down to the original mineral soil.
4. If additional material is required beyond that previously stockpiled, obtain the material by excavating mounds and knolls down to the adjacent grade or by excavating a broad, shallow borrow pit (that is, stripping the soil surface). The intent is to obtain material without creating a permanent depression. No more than 2000 cubic yards of additional material beyond that previously stockpiled shall be obtained from this site.
5. Upon completion of the riprap and clean soil/rock fill export, leave the site in a neat, tidy condition. Any residual boulders or rubble should be consolidated into a pile. The final grade should be predominantly flat or gently sloping to drain freely. There should be no abrupt changes in slope or contour. The ground surface should be left in a roughened condition conducive to water storage and erosion reduction as described in the specifications for surface preparation for revegetation, Section 0290 Part 3.05.

C. FILL/RIPRAP TRANSPORT

Transport the clean soil/rock fill and rock riprap to the Sed Ponds Site in accordance with Section 0275: Material Transport, and as follows:

1. An estimated 4000 cubic yards of material (clean soil/rock fill and riprap combined) will be transported. The haul distance to the Sed Ponds Site through the Castle Gate mine is 1.1 miles.
2. CONTRACTOR is responsible for cleanup and removal of any material dumped or spilled prior to reaching the destination site. CONTRACTOR is responsible for damages caused by improperly handled material.

D. DRAINAGE CONTROL

Construct temporary drainage ditches, silt fences, and straw bale check dams as necessary or as directed by OWNER to control runoff from rain or dust suppression spray and to trap sediment carried by runoff.

F. REVEGETATION

Revegetate all areas disturbed by reclamation activities in accordance with Section 0290: Revegetation, and as follows:

1. Seed the disturbed areas with the Sed Ponds Seed Mix.
2. An estimated 1.2 acres will need to be revegetated.

3.06 SCHOOLHOUSE CANYON DISPOSAL SITE (Reference Drawing 12)

The WORK at the Schoolhouse Canyon Disposal Site shall include haulroad improvement and maintenance, drainage control, and coal refuse disposal.

A. ACCESS IMPROVEMENT

Improve site access to the extent necessary to perform the work in accordance with Section 0230: Access Improvements, and as follows:

1. Site access will require minimal work. Access to the site is possible on existing paved and dirt/gravel roads without significant improvement.
2. Maintain site and road conditions along the Castle Gate mine haulage roads in accordance with the current Castle Gate mine permit standards and any subsequent revisions. Diversions, berms, channels, and surfaces shall be maintained according to the current permit and regulations.
3. Spray roadways with water as necessary to control dust.

B. DRAINAGE CONTROL

Construct and maintain temporary drainage ditches, silt fences, and straw bale check dams along haulage routes and at the disposal site as necessary or as directed by OWNER to control runoff from rain or dust suppression spray and to trap sediment carried by runoff.

C. COAL REFUSE DISPOSAL

Dispose of the coal refuse at the Schoolhouse Canyon Disposal Site in accordance with Section 0280: Site Grading/Earthwork, and as follows:

1. An estimated 26,000 bank cubic yards of coal refuse will be transported to the site.
2. CONTRACTOR is responsible for cleanup and removal of any material dumped or spilled prior to reaching the destination site. CONTRACTOR is responsible for damages caused by improperly handled material.
3. The coal refuse shall be unloaded and spread in horizontal lifts not exceeding 12 inches and compacted by equipment exerting a minimum 100 PSI pressure making sufficient passes to obtain 100 percent coverage. If the moisture content of the refuse is greater than 8 percent, the refuse shall be placed in 6-inch lifts, allowed to dry, and then compacted as specified above.
4. Fill Grading: The fill shall be crowned and sloped to direct drainage to the back and sides of the fill. There should be no abrupt changes in slope or contour. Slopes on the top of the fill shall not exceed 3 percent. The grade of the outslope shall not exceed 50 percent (2h:1v). OWNER anticipates that the coal imported coal refuse will only raise the top surface of the fill by an average of about 4 feet. However, should the placement of the fill should extend 50 feet vertically from the existing terrace, a 10-15-foot terrace will be constructed on the face of the fill. The terrace will slope towards the face at 1-3 percent and towards the side channels at 1-3 percent.
5. Fill Drainage: The fill shall be graded as specified above to direct runoff to the back and sides towards existing control structures. Drainage may not be allowed to flow over the face of the fill. No permanent water impoundments will be allowed on the fill. Diversions, berms, and channels will be maintained in accordance with the Castle Gate mine permit standards.

6. Prohibited Materials: The following materials shall not be placed within the fill: any noncoal wastes including but not limited to grease, lubricants, paints, flammable liquids, petroleum products, garbage, abandoned machinery, lumber, or combustible materials; any refuse that would degrade surface or groundwater; vegetative and organic material; hazardous or extremely hazardous materials.

F. REVEGETATION

Revegetation is not required at this site. Some spot revegetation of areas disturbed by reclamation activities along the haulage route may be necessary in case of excessive disturbance. Such areas will be revegetated in accordance with Section 0290: Revegetation, and as required by the Coal Regulatory Program. Any such disturbance will be considered unnecessary and OWNER will make no additional allowance to the CONTRACTOR for its repair.

PART 4 - WORK SCHEDULING

4.01 INTERMEDIATE DEADLINES

- A. Completion of the low flow bank riprap installation before spring runoff is critical to the success of the project. Failure to complete the riprap could result in a severe water pollution event and loss of coal refuse or clean fill. CONTRACTOR shall organize the execution of the work so that completion of the low flow bank riprap is the first priority. The entire length of the low flow bank riprap shall be completed by December 9, 1994.
- B. All site grading/earthwork and riprap installation work at the Sed Ponds Site shall be completed by January 13, 1995.

4.02 WINTER SUSPENSION OF WORK

- A. If severe winter weather conditions or frozen ground force operations to shut down prior to completion, all sites shall be left in a condition that minimizes the safety hazards and the potential for erosion. Supplemental erosion control measures may be required by OWNER.
- B. Drainage controls and patterns shall be re-established at the access road improvement on the Castle Gate mine permit area, as determined by the joint OWNER, CONTRACTOR, and Coal Regulatory Program inspection.

PART 5 - PAYMENT

5.01 ALLOWANCE FOR PARTIAL PAYMENTS

- A. Because of the anticipated length of time required for completion of some parts of the work with large quantities involved, OWNER will allow partial progress payments for these work items to cover intermediate operating expenses. The items for which partial payments will be allowed are: low flow bank riprap installation, high flow bank riprap installation, and clean soil/rock fill placement. All other items of work shall be paid at the bid price for the completed task only.
- B. CONTRACTOR may invoice for actual work performed during the monthly billing periods up to 60% of the total work for the three items listed above. Payment for work performed shall not exceed 20% of the total work per billing period on a cumulative basis. (That is, up to 20% for the first month, up to 40% for the second, and up to 60% for the third.) Payment of the balance will be held pending a final determination of the quantity of work and adjustment of the contract quantity, if necessary, by a Change

Order. Progress payments are not subject to retainage. Release of the final balance will be subject to retainage of 10% of the *total* amount.

- C. Measurement for partial and final payment for the low flow and high flow bank riprap shall be based on lineal feet of riprap installed and in place, including filter blanket.
- D. Measurement for partial payment for the clean soil/rock fill placement will be based on a truck count and the average load volume of the trucks as determined by OWNER. Measurement for release of the final payment for clean soil/rock fill placement will be based on achieving the final grade, lines, and intent as shown on the Drawings and described in this section.

5.02 PAYMENT

- A. Payment for clean soil/rock fill, riprap, and gravel bedding will be based on the material delivered and in place. No separate payment will be made for excavation and loading at, and transport from, the supplier or borrow site.
- B. Separate payments will be made for coal refuse excavation at the Sed Ponds Site (Site Grading/Earthwork), coal refuse transport to the Schoolhouse Canyon disposal site (Material Transport), and coal refuse distribution and compaction at the disposal site (Site Grading/Earthwork). Quantities for these separate steps in the disposal process should be identical.

END OF SECTION 0301

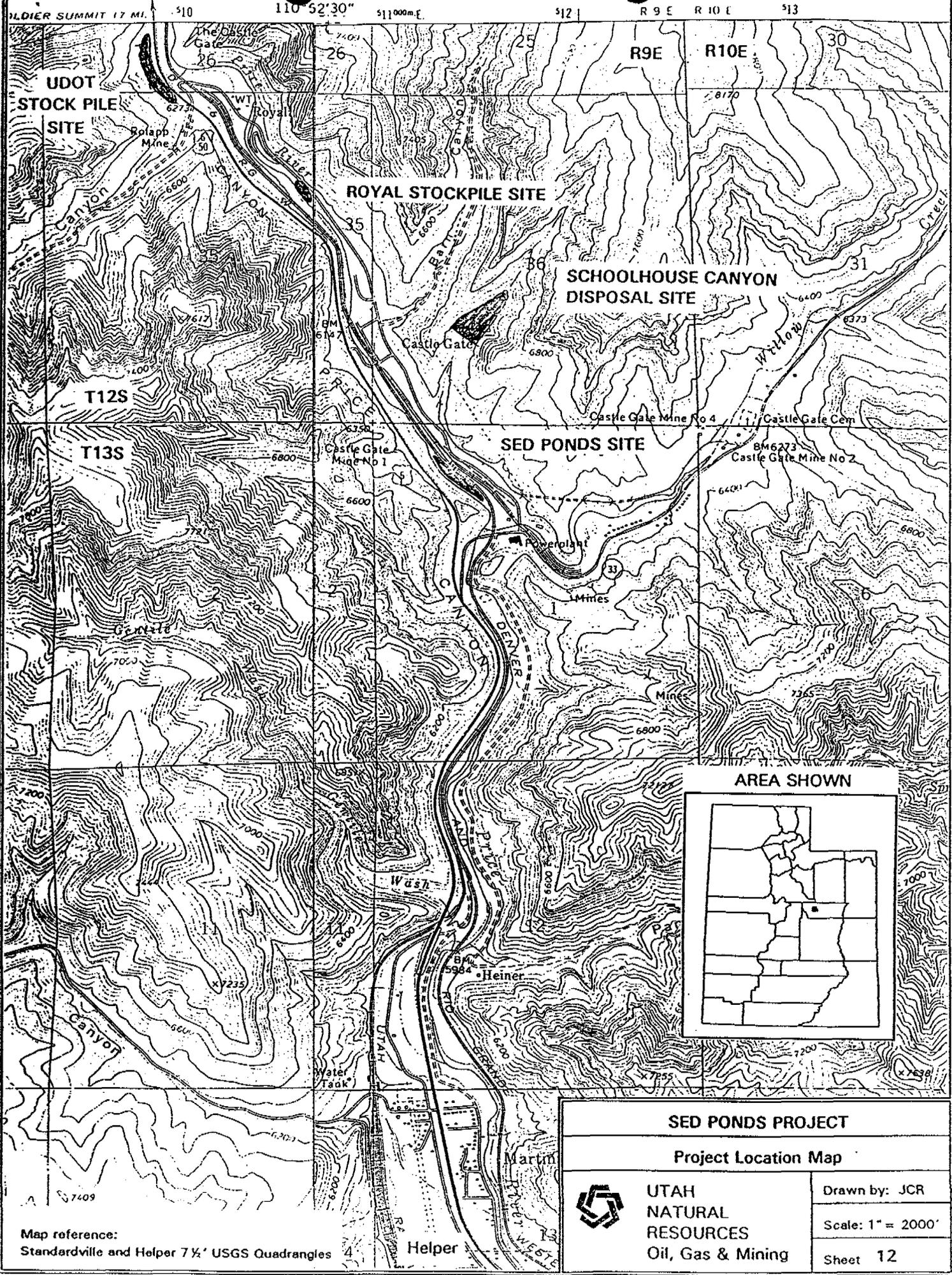
APPENDIX D

ADDITIONAL PROJECT LOCATION & DESIGN DRAWINGS FOR SECTION 301

INDEX OF DRAWINGS

Sheet 12	Project Location Map <i>Replaces Sheet 1</i>
Sheet 13	Sed Ponds Site Cross Sections (Typical) <i>Replaces Sheet 6</i>
Sheet 14	Low Flow Bank Riprap Detail <i>Replaces Sheet 7</i>
Sheet 15	High Flow Bank Riprap Detail <i>Replaces Sheet 8</i>
Sheet 16	JBR Figure 3: Typical Channel Cross Section (No Coal Scenario) <i>Replaces Sheet 9</i>
Sheet 17	JBR Plate 4: Regraded Configuration Map (No Coal Scenario) <i>Replaces Sheet 11</i>

Sheet 17 is a pocketed oversized drawing.



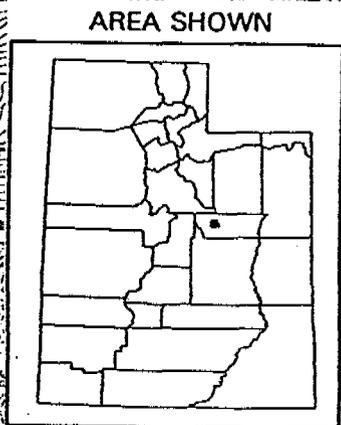
110° 52' 30" 511000m.E. 512 | R 9 E R 10 E 513

UDOT
STOCK PILE
SITE

ROYAL STOCKPILE SITE

SCHOOLHOUSE CANYON
DISPOSAL SITE

SED PONDS SITE



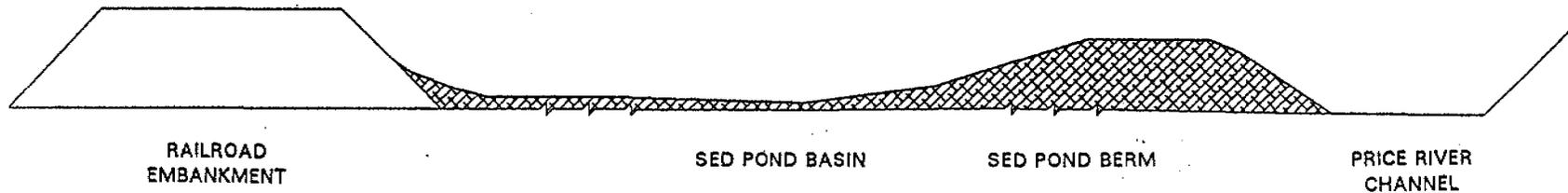
Map reference:
Standardville and Helper 7 1/2' USGS Quadrangles

SED PONDS PROJECT	
Project Location Map	
	UTAH NATURAL RESOURCES Oil, Gas & Mining
	Drawn by: JCR
	Scale: 1" = 2000'
Sheet 12	

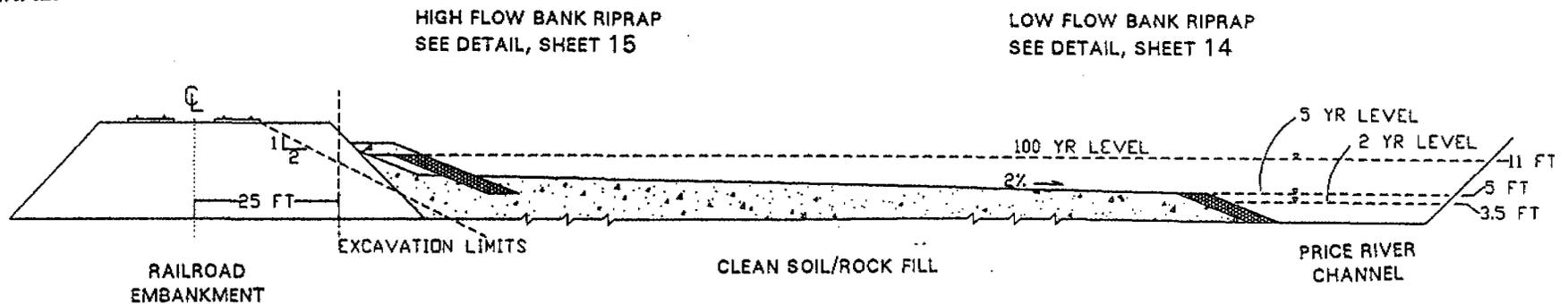
SCALE



EXISTING:



FINAL:



Note: The actual native ground surface beneath the existing coal and regraded clean fill is irregular and unknown.

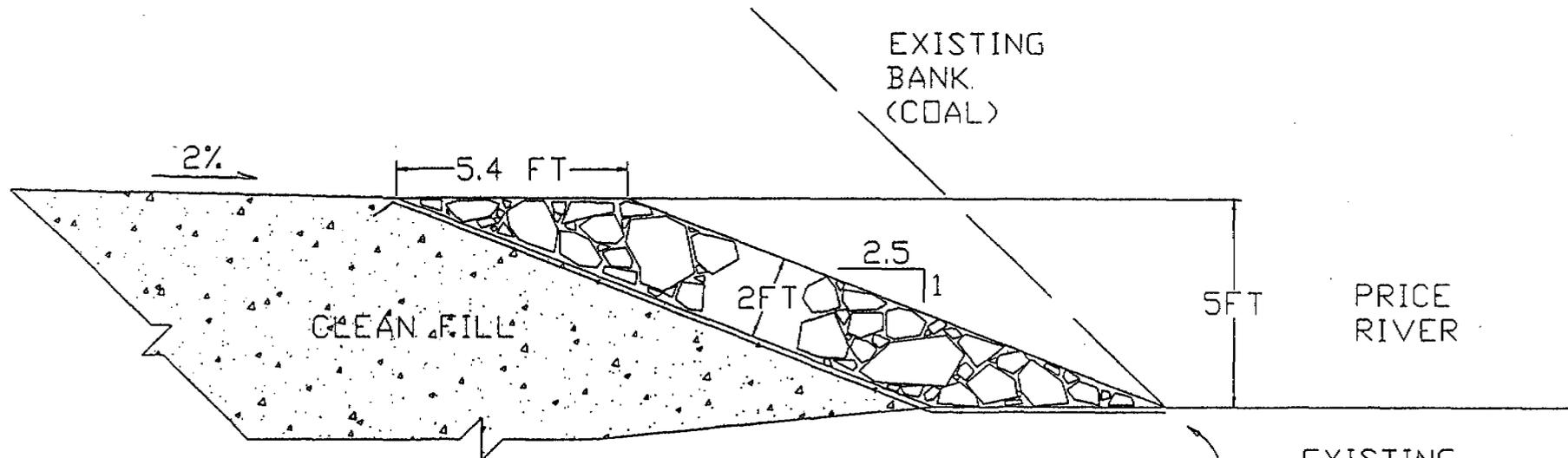
References: "Figure 3: Typical Channel Cross Section: No Coal Scenario" (drawing dated March 30, 1992; revised March 7, 1993) and "Plate 4: Regraded Configuration Map: No Coal Scenario." (drawing dated March 8, 1994) in JBR Consultants Group, Salt Lake City. "Price River Sediment Pond Site Reclamation Project." (report dated March 10, 1994).

SED PONDS PROJECT	
Sed Ponds Site Cross Sections (Typical)	
 UTAH NATURAL RESOURCES Oil, Gas & Mining	Drawn by: JCR
	Scale: 1" = 30'
	Sheet 13

SCALE



0 5 FT



RIPRAP SIZE GRADATION

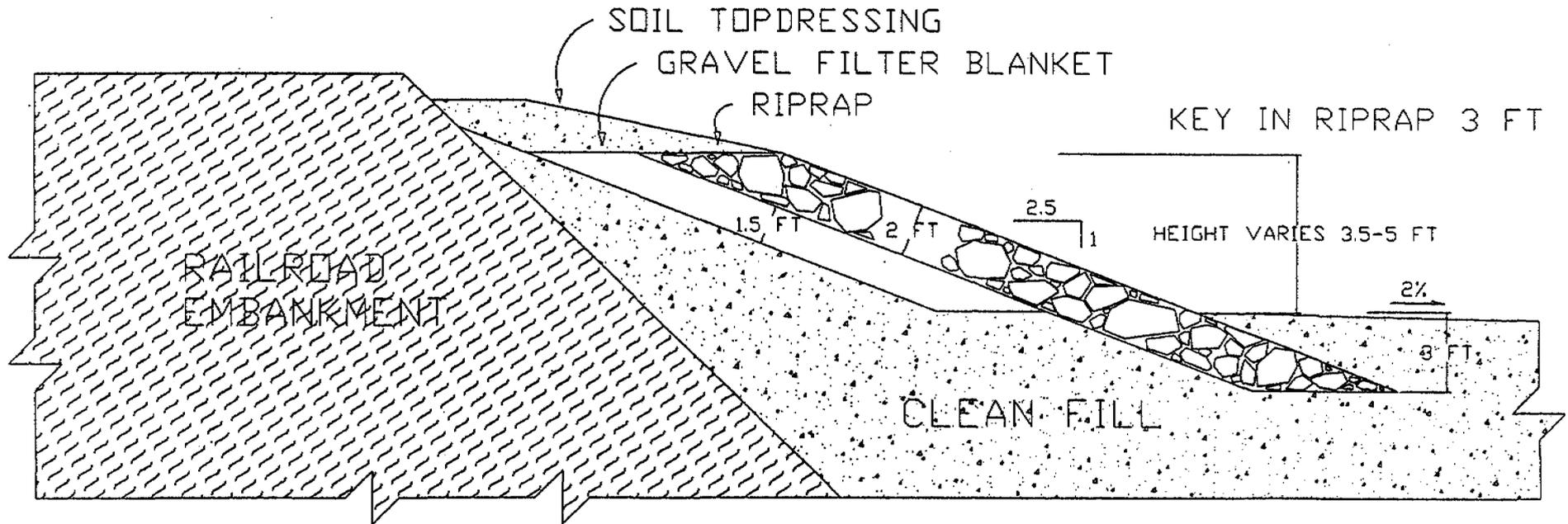
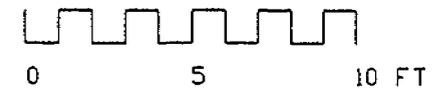
- Dmax = 32 IN
- D85 = 24 IN
- D50 = 16 IN
- D15 = 1.5 IN

GEOTEXTILE FILTER BLANKET (Mirafi 500X OAE)

Reference: "Figure 3: Typical Channel Cross Section: No Coal Scenario, Detail A" (drawing dated March 30, 1992; revised March 7, 1994) in JBR Consultants Group, Salt Lake City. "Price River Sediment Pond Site Reclamation Project." (report dated March 10, 1994).

SED PONDS PROJECT	
Low Flow Bank Riprap Detail	
 UTAH NATURAL RESOURCES Oil, Gas & Mining	Drawn by: JCR
	Scale: 1" = 4'
	Sheet 14

SCALE



RIPRAP SIZE GRADATION

$D_{max} = 32 \text{ IN}$
 $D_{85} = 24 \text{ IN}$
 $D_{50} = 16 \text{ IN}$
 $D_{15} = 1.5 \text{ IN}$

GRAVEL FILTER BLANKET SIZE GRADATION

$D_{max} = 2.0 \text{ IN}$
 $D_{min} = 0.08 \text{ IN}$

SED PONDS PROJECT

High Flow Bank Riprap Detail



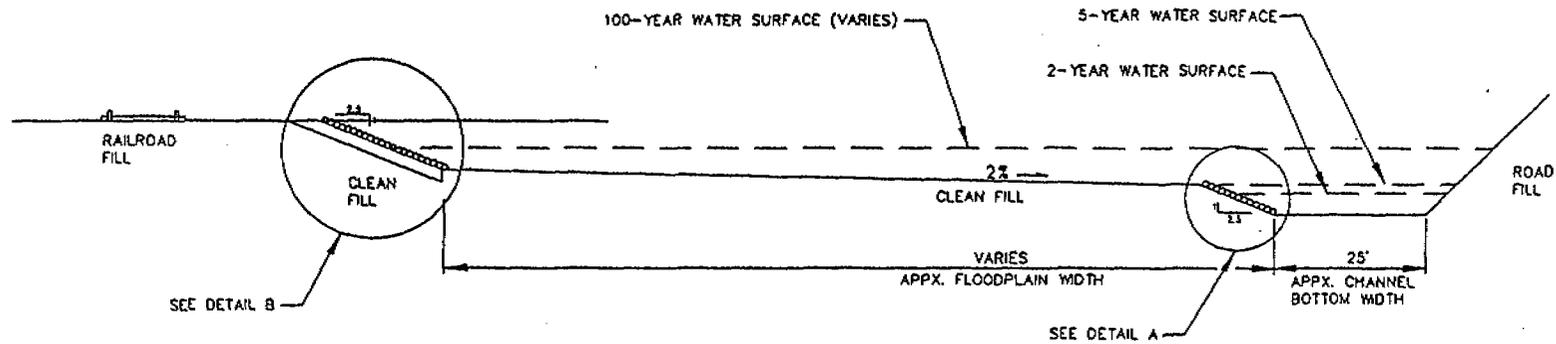
UTAH
 NATURAL
 RESOURCES
 Oil, Gas & Mining

Drawn by: JCR

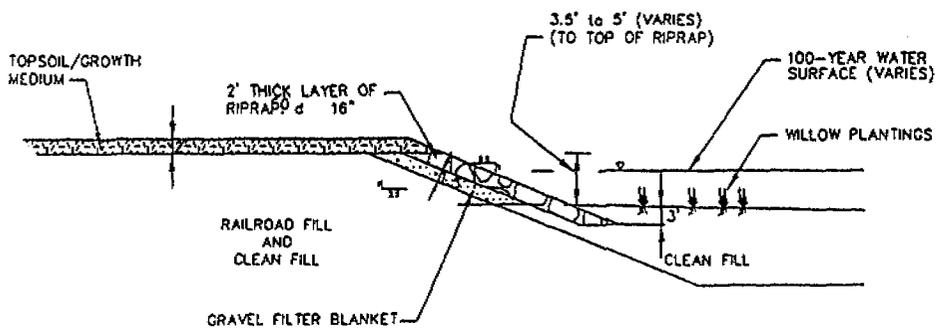
Scale: 1" = 4'

Sheet 15

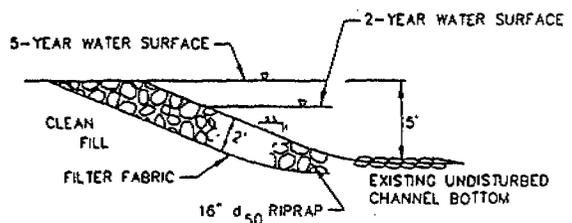
Reference: "Figure 3: Typical Channel Cross Section: No Coal Scenario, Detail B" (drawing dated March 30, 1992; revised March 7, 1994) in JBR Consultants Group, Salt Lake City. "Price River Sediment Pond Site Reclamation Project." (report dated March 10, 1994).



CROSS SECTION
NTS



DETAIL B
NTS



DETAIL A
NTS



PRICE RIVER SEDIMENT PONDS RECLAMATION PROJECT	
FIGURE 3 TYPICAL CHANNEL CROSS SECTION (NO COAL SCENARIO)	
jbr environmental consultants, inc. <small>1000 E. 10th St. Suite 200 Salt Lake City, UT 84143</small>	DATE: 3/30/92 3/7/92
DESIGN: MLB DRAWING: MLU CHECK: MLB SCALE: NTS	SHEET NO.

U000M01-1

OPERATORS WEEKLY INSPECTION FORM COAL WASTE IMPOUNDMENTS

Name _____ Title _____
 Date _____ Date Last Inspected _____
 Site Name _____
 Refusal Facility ID No. _____

1. Foundation preparation (removal of vegetation? topsoil?) _____ Yes ___ No
2. Lift thickness (inches) _____
3. Compaction (4 to 6 complete passes) _____ Yes ___ No
4. Burning* (specify extent & location) _____ Yes ___ No
5. Angle of slope (degrees) _____
6. Seepage* (specify location, color & approximate volume)
 - From underdrain pipes _____ Yes ___ No
 - At isolated points on embankment slopes _____ Yes ___ No
 - At natural hillside _____ Yes ___ No
 - Over widespread areas _____ Yes ___ No
 - From downstream foundation area _____ Yes ___ No
 - "Bolls" beneath stream or ponded water _____ Yes ___ No
7. Cracks or scarps on crest _____ Yes ___ No
8. Cracks or scarps on slope _____ Yes ___ No
9. Sloughing or bulging on slope _____ Yes ___ No
10. Major erosion problems _____ Yes ___ No
11. Surface movements in valley or on hillside* _____ Yes ___ No
12. Erosion of toe* _____ Yes ___ No
13. Water impounded against toe* _____ Yes ___ No
14. _____ Increase _____ Decrease in water level (feet) _____
16. Embankment freeboard (feet) _____
16. Cracks, bulging, or erosion on upstream face* _____ Yes ___ No
17. Visible sumps or sinkholes in slurry surface _____ Yes ___ No
18. Clogging*
 - Spillway channels & pipes _____ Yes ___ No
 - Decant system _____ Yes ___ No
 - Diversion ditches _____ Yes ___ No
19. Cracking or crushing of pipes*
 - Spillway pipes _____ Yes ___ No
 - Decant system _____ Yes ___ No
20. Trash racks clear & in place _____ Yes ___ No

Adverse conditions noted in items marked (*) should be described (extent, location, volume, etc.) in the space provided, Major adverse changes in these items could cause instability.

Inspection Category	Comments