

0010



CONSOL ENERGY.

Consolidation Coal Company

P.O. Box 566
Sesser, IL 62884
(618) 625-2041

COPY

March 18, 2004

Mr. Lowell Braxton, Director
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Re: Emery Deep Mine Permit C/015/015
Final Clean Copy Submittal, Dust Control Ammendment deficiencies
Amendment to MRP to abate NOV N03-39-1-1, Task ID # 1762

Jagging
C/015/0015

Dear Mr. Braxton:

Per your memo dated 2/20/2004, enclosed please find five 5 copies of clean deficiency responses.
Also enclosed find a signed C1 form and C2 forms.

If you have any questions concerning this request, please call me at (618) 625-6850.

Sincerely,

John Gefferth
John Gefferth
Permit Coordinator

JAG/jag em.mrpamnd.finalclean.doc

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MAR 18 2004
DIV. OF OIL, GAS & MINING

File in:

- Confidential
- Shelf
- Expandable

Refer to Record No 0010 Date 03182004
In C/0150015 Incoming

APPLICATION FOR COAL PERMIT PROCESSING

COPY

Permit Change [X] New Permit [] Renewal [] Exploration [] Bond Release [] Transfer []

Permittee: Consolidation Coal Company

Mine: Emery Mine

Permit Number: 015/015

Title: Deficiency responses 2/04

Description, Include reason for application and timing required to implement:

Clean copy submittal per DOGM conditional approval dated 2/20/04.

Instructions: If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

- 1. Change in the size of the Permit Area? Acres: _____ Disturbed Area: _____ [] increase [] decrease.
2. Is the application submitted as a result of a Division Order? DO# _____
3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
4. Does the application include operations in hydrologic basins other than as currently approved?
5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
6. Does the application require or include public notice publication?
7. Does the application require or include ownership, control, right-of-entry, or compliance information?
8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
9. Is the application submitted as a result of a Violation? NOV # _____
10. Is the application submitted as a result of other laws or regulations or policies?
11. Does the application affect the surface landowner or change the post mining land use?
12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
13. Does the application require or include collection and reporting of any baseline information?
14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
15. Does the application require or include soil removal, storage or placement?
16. Does the application require or include vegetation monitoring, removal or revegetation activities?
17. Does the application require or include construction, modification, or removal of surface facilities?
18. Does the application require or include water monitoring, sediment or drainage control measures?
19. Does the application require or include certified designs, maps or calculation?
20. Does the application require or include subsidence control or monitoring?
21. Have reclamation costs for bonding been provided?
22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
23. Does the application affect permits issued by other agencies or permits issued to other entities?

Please attach four (4) review copies of the application. If the mine is on or adjacent to Forest Service land please submit five (5) copies, thank you. (These numbers include a copy for the Price Field Office)

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.

JOHN GEFERTH
Print Name

John Geffert 3/18/04
Sign Name, Position, Date
Permit Coordinator

Subscribed and sworn to before me this 18th day of March, 2004

Joelle Burns
Notary Public

My commission Expires: April 4, 2005
Attest: State of Utah
County of Salt Lake



For Office Use Only:

Assigned Tracking Number:

Received by Oil, Gas & Mining

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MAR 18 2004

DIV. OF OIL, GAS & MINING

APPLICATION FOR COAL PERMIT PROCESSING

Detailed Schedule Of Changes to the Mining And Reclamation Plan

COPY

Permittee: Consolidation Coal Comply

Mine: Emery Mine

Permit Number: 015/015

Title: Clean copy submittal per DOGM conditional approval dated 2/20/04. Dust Control Ammendment. PAGE 1/4

Provide a detailed listing of all changes to the Mining and Reclamation Plan, which is required as a result of this proposed permit application. Individually list all maps and drawings that are added, replaced, or removed from the plan. Include changes to the table of contents, section of the plan, or other information as needed to specifically locate, identify and revise the existing Mining and Reclamation Plan. Include page, section and drawing number as part of the description.

DESCRIPTION OF MAP, TEXT, OR MATERIAL TO BE CHANGED

<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter I Page 6
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter I Page 4
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter I Page 5
<input checked="" type="checkbox"/> Add	<input type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter II Page 17a
<input checked="" type="checkbox"/> Add	<input type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter II Page 17b
<input checked="" type="checkbox"/> Add	<input type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter II Page 17c
<input checked="" type="checkbox"/> Add	<input type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter II Page 17d
<input checked="" type="checkbox"/> Add	<input type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter II Page 17e
<input checked="" type="checkbox"/> Add	<input type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter II Page 17f
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter II Page 18
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter II Page 25
<input checked="" type="checkbox"/> Add	<input type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter II Page 25b
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter II Page 28
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter III C-1, page 11
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter III Plate index
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter III page 2
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<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter IV page 7
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<input checked="" type="checkbox"/> Add	<input type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter IV page 7b
<input checked="" type="checkbox"/> Add	<input type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter IV Appendix IV-7-G page 10a
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter IV page A-2
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter IV page A-2a
<input checked="" type="checkbox"/> Add	<input type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter VI, Appendix VI-6, page 52a-1 thru 52a-8

Any other specific or special instruction required for insertion of this proposal into the Mining and Reclamation Plan.

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DIV. OF OIL, GAS & MINING

APPLICATION FOR COAL PERMIT PROCESSING

Detailed Schedule Of Changes to the Mining And Reclamation Plan

COPY

Permittee: Consolidation Coal Complanly
Mine: Emery Mine **Permit Number:** 015/015
Title: Clean copy submittal per DOGM conditional approval dated 2/20/04. Dust Control Ammendment PAGE 2/4

Provide a detailed listing of all changes to the Mining and Reclamation Plan, which is required as a result of this proposed permit application. Individually list all maps and drawings that are added, replaced, or removed from the plan. Include changes to the table of contents, section of the plan, or other information as needed to specifically locate, identify and revise the existing Mining and Reclamation Plan. Include page, section and drawing number as part of the description.

DESCRIPTION OF MAP, TEXT, OR MATERIAL TO BE CHANGED

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<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter VIII Page 20
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter X Part B page 5
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<input checked="" type="checkbox"/> Add	<input type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter X-C, page 5b
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<input checked="" type="checkbox"/> Add	<input type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter X, Part C, Appendix X.C-3, Table of contents
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<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter X, Part C, Appendix X.C-3, page 5
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter X, Part C, Appendix X.C-3, page 9
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter X, Part C, Appendix X.C-3, page 10
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter X, Part C, Appendix X.C-3, page 13
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter X, Part C, Appendix X.C-3, page 17
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter X, Part C, Appendix X.C-3, page 18
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter X, Part C, Appendix X.C-3, page 23
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter X, Part C, Appendix X.C-3, page 24
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter X, Part C, Appendix X.C-3, Appendix F
<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter X, Part C, Appendix X.C-3, Appendix I, page 1
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<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	Chapter X, Part C, Appendix X.C-3, Appendix J, page 1
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<p>Any other specific or special instruction required for insertion of this proposal into the Mining and Reclamation Plan.</p>	<p>Received by Oil, Gas & Mining</p> <p style="font-size: 1.5em; font-weight: bold; color: gray;">RECEIVED</p> <p style="font-size: 1.2em; font-weight: bold; color: gray;">MAR 18 2004</p> <p style="font-size: 0.8em; color: gray;">DIV. OF OIL, GAS & MINING</p>
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I.B Legal, Financial, and Compliance Information

The Emery Mine is owned by Consolidation Coal Company. Consolidation Coal Company is owned by Consol Energy Inc., a public company. Rheinbraun A.G. of Lindenthal, Germany controls 73.65% of Consol Energy stock. The first page of Appendix I-1 is a chart of Consol's ownership structure.

UMC 782.13, UMC 782.19

Permit Applicant: Consolidation Coal Company
Consol Plaza
1800 Washington Road
Pittsburgh, PA 15241
(412) 831-4000

Mine Operator: Consolidation Coal Company
1800 Washing Road
Pittsburgh, PA 15241
(412) 831-4000

Mine Operation: Emery Mine
P. O. Box 527
Emery, UT 84522
(801) 286-2301

Resident Agent: C T. Corporation System
175 South Main St.
Salt Lake City, UT 84111

Consolidation Coal Company is a corporation, incorporated under the laws of the State of Delaware.

Consol have not jointly operated any coal mines in the United States under any other names within the previous five years.

The Mine Safety and Health Administration identification number for the Emery Mine is 42-00079.

A list of the officers and directors of Consol is contained in Appendix III, attached to this chapter.

Revised 4-23-92
Revised 8-31-95
Revised 9-16-96
Revised 10-13-03

Section 22 T22S, R6E

Consolidation Coal Company
1800 Washington Road
Pittsburgh, Pennsylvania 15241
(412) 831-4000

John & Vicki Byars
P.O. Box 575
Emery, Utah 84522

Kenneth L. & Earlene Christiansen
P.O. Box 552
Emery, Utah 8452

D.U. Company, Inc.
53 West Angelo Avenue
Salt Lake City, Utah 84115

Section 27 T22S, R6E

Consolidation Coal Company
1800 Washington Road
Pittsburgh, Pennsylvania 15241
(412) 831-4000

Section 28 T22S, R6E

Wayne Staley
Emery, Utah 84522
(801) 286-2213

Glendon E. Johnson
1200 19th ST. NW Suite 500
Washington, DC 20036

Consolidation Coal Company
1800 Washington Road
Pittsburgh, Pennsylvania 15241
(412) 831-4000

Section 29 T22S, R6E

George Olsen
15 E. Center
Orangeville, Utah 84537

Emery County
Emery County Courthouse
Castle Dale, Utah 84513

Refer to Page 7b thru 7d for
Exploration & Surface Agreement

Morgan Robertson
P.O. Box 65
Emery, Utah 84522

Glendon E. Johnson
1200 19th ST. NW Suite 500
Washington, DC 20036

Revised 10/2003

Osburn Bret Carter
P.O. Box 24
Emery, Utah 84522

Section 30 T22S, R6E

George Olsen
15 E. Center
Orangeville, Utah 84537
(801) 748-2522

Bonnie A. Petty (trustee)
3839 Highland Cove Lane
Apt 202
Salt Lake City, Utah 84106

Josiah K. & Etta Marie Eardley
2433 South Highway 10
Price, Utah 84501

George Lewis
75 East 3rd South
Salt Lake City, Utah 84103
Phone Unknown

Consolidation Coal Company
1800 Washington Road
Pittsburgh, Pennsylvania 15241
(412) 831-4000

Emery County
Emery County Courthouse
Castle Dale, Utah 84513

Morgan Robertson
P.O. Box 65
Emery, Utah 84522

Right of Entry - Road & Monitoring
Facilities, right-of-way & easement
grant executed 10-3-88, filed &
recorded 10-6-88, Utah, Emery County
Book 174, Page 600-601

Glendon E. Johnson
1200 19th ST. NW Suite 500
Washington, DC 20036

Thomas C. Bunn
P.O. Box 59
Paradise, Utah 84328

Wynona P. Olsen (trustee)
3805 Highland Cove Lane
Apt #D18
Salt Lake City, Utah 84146

Revised 10/2003

4 EAST PORTAL STRUCTURES - No structure listed for the 4th East Portal existed prior to disturbance for the boxcut with the exception of a subsidence marker.

Topsoil Stockpile & Topsoil Berms

Map Code: identified on Plate II-3
Status: existing - 3rd quarter 2002

This stockpile is located in the northwest corner of the proposed disturbance. The stockpile will be fully bermed to contain a 100 yr/24 hr rainfall event. The stockpile and berms is sized to contain approximately 7,900 cubic yards of topsoil material. Berms constructed with topsoil make up the north and western portion of the excavation stockpile and the west perimeter of the disturbance boundary. These berms contain approximately 1,400 cubic yards of topsoil.

Excavation Material Stockpile

Map Code: identified on Plate II-3
Status: existing - 3rd quarter 2002

This stockpile is located on the west edge of the portal excavation. The pile is sized to contain approximately 128,000 cubic yards of material. Material placed in the pile will come from the portal and airshaft excavation. Additional material from the construction of the coal handling facilities may also be placed within the pile. Placement of a material berm will be constructed around the pile to assist in sediment control. The berm shall be constructed with an interior retention basin sized to fully contain a 100 yr/24 hr rainfall event. The non-topsoil material will be utilized in the reclamation of the portal entries, backfilling the boxcut excavation and airshaft.

Sediment Pond #9

Map Code: identified on Plate II-3
Status: existing - 3rd quarter 2002

This sediment pond is proposed to be placed in the northeast corner of the 4 East disturbance site. The pond will be partially incised (0.2 ac-ft) of sediment volume. An embankment will be constructed along the west and north sides to provide required storage volume for runoff. This pond is designed to fully contain a 10 yr/24 hr storm event. The dewatering of the pond following 24 hours will be through a 15-inch PVC pipe equipped with a slide gate. An emergency spillway has been designed to handle events in excess of a 10 yr/24 hr storm.

Inserted 10/2002
Revised 9/2003

Coal Handling Facilities & Stockpiles

Map Code: identified on Plate II-3
Status: existing - 4th quarter 2002

The coal exits the mine portal via a 54-inch conveyor belt and is delivered to a transfer point located on the lower bench of the boxcut excavation. The transfer point moves the coal to a 42-inch conveyor belt which moves the coal off the lower bench to the crusher/screen building located on the top area of the site. This transfer point will be equipped with the ability to dump coal onto a surge coal pile located on the lower bench within the portal excavation. Crushing is performed as the coal is transferred to a 5' by 10' fixed sloping screen. Coal passing through the screen is fed to a third conveyor. Coal trapped by the screen is fed into a crusher for processing.

The crushed coal leaves the crusher/screen building by conveyor belt to a radial stacker. The radial stacker can be fed directly into a hopper/feeder which conveys the coal to the truck loadout facility. The radial stacker will also feed a small coal stockpile when haul trucks are not available. The coal from the stacker stockpile will be fed into the hopper/feeder by front-end loaders.

This facility will handle a throughput capacity of approximately 1,300,000 tons of coal per year.

Surface drainage from the lower coal stockpile located on the lower bench area runs to a sump located on the portal entry level. Some drainage runoff may flow into the underground mine workings. Runoff collected in the sump will be pumped to the underground mine. Surface runoff from the radial stockpile and truck loadout facilities is conveyed by berms and culverts to sedimentation pond no. 9.

Stream Diversion - Unaffected Drainage

Map Code: identified on Plate II-3
Status: existing - 3rd quarter 2002

This diversion is propose as a temporary diversion. The diversion will intercept and divert natural drainage from the upstream watershed around the site. The natural stream is ephemeral.

Inserted 10/2002
revised 9/2003

County Road - Cowboy Mine Road No. 915

Map Code: identified on Plate II-3
Status: Existing

This road is used by local farmers and the Live Earth operation.

Storage Area

Map Code: identified on Plate II-3
Status:existing - 4th quarter 2002

This supply yard is located adjacent to the portal ramp and contains parts and bulk supply items used on a continual basis for either the surface or the underground operation. The yard is used to store inventory parts, machinery, and bulk items in a consistent and easily accessible manner. The supply yard is located within the proposed surface drainage control area and reports to sedimentation pond no. 9.

Airshaft

Map Code: identified on Plate II-3
Status: existing - 4th quarter 2002

The proposed airshaft will be located in the southwest portion of the disturbance area. The 16 ft diameter vertical shaft will be approximately 70 feet in depth. The airshaft and associated exhaust fan and housing is required to ventilate the underground mine workings.

Rock Dust Bin

Map Code: identified on Plate II-3
Status: existing - 4th quarter 2002

This structure is a supported steel bin 11 ft. in diameter and 38 ft. high. It is used for bulk storage and delivery of rock dust and has a capacity of 100 tons. Surface drainage from the bin area will report to sedimentation pond #9.

Inserted 10/2002
Revised 9/2003

Water Tank

Map Code: identified on Plate II-3
Status: Existing - 4th Quarter 2002

The 100,000- gallon tank measures 25 feet high by 26 feet in diameter, and will be located near the southwest corner of the topsoil stockpile. The tank will sit upon a concrete base. It is equipped with an overflow, level indicator, and a bank of valves to direct flow.

The water tank serves as a surge tank for both surface and underground water supplies. Water from underground is pumped to the tank through a bi-directional pipeline.

Surface drainage from the tank area flows into the northwest corner of the disturbed portal yard where it discharges through a silt fence. The tank shall be equipped with an automatic level control to eliminate any overflow discharge.

Truck Scale

Map Code: identified on Plate II-3
Status: Existing - 4th quarter 2002

The truck scale will be a standard highway scale unit of a size and capacity suitable for weighing highway coal trucks. Also associated with the scale is a small metal building to house the controls and read-out . The scales shall be calibrated and certified by the State at least once per year. Surface runoff from the scale area will report to sediment pond #9.

Silt Fence

Map Code: identified on Plate II-3
Status: Existing - 3rd quarter 2002

To treat surface runoff leaving the disturbance area. Provides alternate sediment control for small areas which do not report through sediment pond #9 or full containment retention basins. The fence is located along the northern and northwest corner of the disturbance area. This silt fence controls untreated drainage between the topsoil stockpile and outside slope of sediment basin #9 and the fence line. The silt fence located in the northwest corner treats drainage off the primary road leading to the ventilation fan site. A small section of silt fence will also be installed along the southern berm to provide a discharge point for the small watershed collected along the berm.

Inserted 10/2002
Revised 9/2003

Ventilation Fan Road

Map Code: identified on Plate II-3
Status: Existing - 4th quarter of 2002

Classified as a primary roadway. Light truck traffic will use the road to access the ventilation fan.

Coal Loadout Road

Map Code: identified on Plate II-3
Status: Proposed - 4th quarter of 2002

Classified as a primary road. The roadway will enter the loadout along the east fence line from County Road No. 915. Coal trucks will load from the loadout bin and proceed across the scales located near the northeast corner of the permit area. Trucks & other vehicles will exit onto Emery County Road No. 915 (referred locally as "Cowboy Mine Road"). Drainage off the road will be conveyed to sediment pond 9.

Jersey Barriers

Status: Proposed - 4th quarter of 2003

These barriers will be strategically placed along the perimeter of the stockpile to prevent encroachment of coal fines into the adjacent plant area.

Wind Fence

Map Code: Identified on Plate II-3
Status: Proposed - 4th quarter of 2003

Wind fence(s) will be constructed upstream of the stockpile. The wind fence disrupts the mechanism that causes dust particles to become airborne.

Water Cannon

Map Code: Installed near stockpile, perhaps integrated with/on wind fence.
Status: Proposed - 4th quarter of 2003

Used to control fugitive emissions during high wind events. System automated based on wind velocities.

Inserted 10/2002
Revised 9/2003

Cattle Guard

Map Code: Identified on Map II-3
Status: Proposed 4th quarter of 2003

Used to assist in collecting solids which may dislodge from truck tires under both overly wet and dry conditions. This collection sump makes it less likely for solids to be re-entrained.

Inserted 9/2003

UMC 784.18

Two (2) structures, associated with underground mining activities, are located within 100 ft. of the right-of-way of County Road 9-07. The location of Borehole Pump Facility #3 and the Northwest Coal Stockpile are shown on Plates VI-18 and II-1, respectively. They were approved by the Division and subsequently constructed according to the approved plan.

Four structures associated with the 4th East Portal site are located within 100 ft. of the right of way of County Road 9-15. These structures consist of cattle guard, berms, perimeter fencing, and the relocated haulroad.

Other than future access or haul roads joining the public roads, Consol does not propose any other facilities within 100 ft. of a right-of-way. To protect the general public the entrance gate will be posted with a stop sign prior to entering onto the county road from the mine property. The county road will be posted with warning signs as to the existence of the mine entrance. Flagman will be used to protect the general public and employees during construction activities where operation of large equipment or transportation of supplies may create a safety concern. The following pages 18a thru 18d is the Emery County Encroachment Permit to upgrade county road 915 and to construct an access.

No public road relocations are proposed for the permit area.

UMC 784.23(a), (b) (1 through 12)

This permit renewal application contains the necessary maps, plans and cross-sections to provide compliance with the appropriate regulations.

UMC 784.24

Descriptions for transportation facilities, specifically roads and conveyor systems, whether existing or proposed, have been provided previously in this part.

For the sake of continuity we are providing all design information in Chapter IV. Chapter IV also covers the designs for relocation of natural drainage ways.

UMC 786.21

All existing structures have been found by the Division to be in compliance with this regulation.

UMC 817.150 - 176

Detailed design information for all roads, to show compliance with these performance standards, is contained in Chapter IV.

Revised 10/2002
Revised 9/2003
Revised 01/2004

UMC 817.52

In addition to NPDES monitoring of discharge points, a monitoring program of surface and ground water sites has been established to assess mining impacts on these resources. The current operational monitoring plan is described in Sec, VI.A.5.

UMC 817.95

Protection of air resources during operation of the mine is discussed in Part C of Chapter X. Appendix X.C-1 evaluates emissions from the proposed preparation plant. Fugitive dust (particulate) is considered the only potentially significant air pollutant generated by both facilities. Appendix X.C-2 evaluates emissions from the 4th East Portal. Appendix X.C-3, Norwest's evaluation and recommendation of engineering controls and other measures to minimize generation of dusting from the 4th East Portal. Consol is committed to implementing Phase I of Norwest's dust control plan as described in App.X.C-3 of the MRP. Consol will implement Phase II if it is determined that Phase I fails to adequately control the coal fines. Phase II controls, if necessary, will consist of a permanently installed and integrated dust suppression system, such as Benetechs program for dust control on conveyor systems and downstream stockpiles

The Phase II Benetech system as it was presented to DOGM by Norwest on August 26, 2003 has been partially installed. The pipe system for the watersprays and water cannons, and the two control boxes (flow control and electric control) are components of the Benetech designed system. If Phase II is warranted, a chemical additive station will be installed and plumbed to the existing pipes.

Control measures employed at the current operation utilize water sprays at all product transfer points, a silt fence downwind of the conical product stockpile, a water truck to wet down unpaved roads, and revegetation of topsoil and subsoil stockpiles. Measures to be used at the proposed coal preparation plant will include fully hooded conveyor belts, totally enclosed transfer points with water sprays, stacking tubes with water sprays at storage pile loading points, revegetation of topsoil and subsoil stockpiles, and water spraying of unpaved roads.

All control equipment will be properly installed, maintained, and operated such that visible emissions from the facilities will not exceed opacity limits established by the Utah Division of Environmental Health and applicable requirements of the Clean Air Act. Operator will perform opacity readings as required by the modified approval order.

UMC 817.97

Protection of fish and wildlife during operation of the mine is discussed in Chapter IX, The discussion addresses mining impacts on these resources and mitigative measures that will be

Revised 10/2002
Revised 10/2003
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employed at the mine. A study of fish and wildlife and their habitats, within the permit area, was conducted by Mine Reclamation Consultants, Inc. in 1980 and their report is attached in Appendix IX-1.

A fish and macro-invertebrate count was performed in September of 2002 by JBR Consultants. The study was conducted in Quitchupah Creek and Christiansen Wash. The completed report from JBR is attached as Appendix IX-2.

- plant species for revegetation have been selected for their compatibility with habitat restoration and grazing as well as erosion control and survival.
- recommendations from the Utah Department of Wildlife Resources will be followed to insure minimal impact on fish and wild-life.
- water spraying throughout the operations and reclamation process, on a regular basis is and will be used to control air pollutants.
- a subsidence monitoring and mitigation plan is in effect which will protect established buffer zones and repair any damage elsewhere.

UMC 783.24(i)

The permit area does not contain any public parks. All cultural resource issues are covered in Part A of Chapter X.

UMC 783.24 (k)

The permit area and adjacent area does contain land which is within the boundaries of any units of the National System of Trails or the Wild and Scenic Rivers System, including study rivers designated under Section 5(a) of the Wild and Scenic Rivers Act.

Portions of the designated disturbance area under the Emery Mine permit was placed under the National Trails System in late 2002. The Act cited as the "Old Spanish Trail Recognition Act of 2002" was by the President on December 4, 2002. Notation as to the trails existence is located on the "Cultural Resource Map", Plate X-A-1.

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III.C.1. BACKFILLING AND GRADING

UMC 817.101, UMC 817.106, UMC 784.13(b)(3)

Following completion of mining, surface debris will be removed as described in Chapter III.B.1. Prior to final reclamation grading the 4th East portal area will be sampled for SAR, PH and EC. Surface areas affected by mining operations will be graded to blend into the surrounding landscape so as to achieve the final postmining topography shown on Plate III-5, III-6, III-7, III-8. All areas will be graded to approximately pre-disturbance contours with the exception of the proposed coarse refuse disposal area and the proposed slurry impoundment.

Should rills and gullies form in areas to be respread, they will be filled and grade prior to respreading suitable plant growth material. Final grading and soil respreading on all surface affected acres will be performed along the contour where practical to minimize erosion. No highwalls exist at this operation since the existing portals of the drift mine are at the base of a natural formation. Reclamation of the proposed 4E portal is discussed in Chapter III.C.2. None of the following materials will be placed on the downslope of a steep slope during or after the reclamation process.

- (1) Spoil
- (2) Waste Materials
- (3) Debris
- (4) Abandoned or Disabled Equipment

There has been a mine at the site of the present-day Emery Mine since the 1890's. As a result, there are not topographic maps available of the pre-mining topography. As best as can be determined, the surface as it exists now does not vary radically from the premining landscape. The existing mine facilities area and the proposed preparation plant site and associate disturbance areas are projected to remain virtually the same upon completion of mining. The embankments and berms which control runoff in the existing mine yard will be removed. Some of the material utilized in the construction of these structures will be utilized as necessary for fill in the reclamation of the portals or the mine yard area. Some excess cut material from the Underground Development Waste Disposal Site may also be used for fill in the reclamation of the portals or the mine yard area. The location of the existing surface water management facilities in this area (Pond No. 2 and No. 3 and the surface water runoff control berm) are shown on Plate VI-10. These facilities will remain in place until final abandonment.

Pond No. 2 is a cross valley structure that was built with the burrow material from incised Pond No. 3. Additional embankment material was borrowed from the area adjacent to Pond No. 3. The two ponds will be graded at the same time and the fill material will be returned to its original location or used in reclamation of the portals. For detail concerning topsoil and revegetation, please refer to Chapter III.E.1 and III.F.1 respectively. Additional detail concerning the volume of material contained in the embankments of these structures can be found in Chapter IV.B.

Pond No. 1 was constructed prior to August 3, 1977. This structure will be reclaimed when it is no longer needed to treat mine discharge water. It is an incised

CHAPTER III

RECLAMATION PLAN (CONT.)

PLATES		PAGE
III-1	DISTURBANCE AREAS	Map Pocket
III-2	DISTURBANCE AREAS	Map Pocket
III-3	DISTURBANCE AREAS	Map Pocket
III-4	DISTURBANCE AREAS	Map Pocket
III-4A	DISTURBANCE AREAS	Map Pocket
III-5	POSTMINING TOPOGRAPHY	Map Pocket
III-6	POSTMINING TOPOGRAPHY	Map Pocket
III-7	POSTMINING TOPOGRAPHY	Map Pocket
III-8	POSTMINING TOPOGRAPHY	Map Pocket
III-9	PERMIT BOUNDARY AREAS	Map Pocket

TABLE III-1

SURFACE OPERATIONS AREA
PRE- AND POST-MINING LAND USES

<u>Land Use</u>	<u>Acres Pre-Mining</u>	<u>Acres Post-Mining</u>
Grazing/Wildlife	417.2	436.7
Industrial (Coal Mining)	19.5	0
Roads	<u>5.8</u>	<u>5.8</u>
TOTAL	442.5	442.5

TABLE III-2

EXISTING AND FUTURE
SURFACE DISTURBANCE AREAS

	<u>Acres</u>	<u>%</u>
Prior to August 3, 1977 Area	19.5	4
August 3, 1977 to May 3, 1978 Area	4.7	1
May 3, 1978 to January 5, 1986 Area	17.9	4
Post January 5, 1986 Area	8.6	2
Post July 1, 2002 Area at 4th East Portal	16.0	3
Potential Surface Operations Area	375.8	86
<hr/> TOTAL	<hr/> 442.5	<hr/> 100

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UMC 817.100, UMC 817.101(a), UMC 817.113

A description of each item listed under Contemporaneous Reclamation in the reclamation schedule follows.

The sections of road reclaimed in 1982 were completed in conjunction with upgrading the road to borehole pump #1. Reclamation consisted of removing existing culverts across Quitchapah Creek and disking and harrowing of the roadbeds. Since no earth materials were removed and no road surfacing material was placed during construction (prior to Aug. 3, 1977) of these roads, no grading, backfilling or topsoil respreading was required. Following this the reclaimed site was seeded with the following seed mix.

<u>Species</u>	<u>Lbs PLS¹</u>	<u>PLS/Sq.Ft.</u>
Crested wheatgrass	0.5	10
Western wheatgrass	1.0	14
Indian ricegrass	0.5	11
Galleta	0.5	9
Streambank wheatgrass	1.0	18
Fourwing saltbush	<u>1.5</u>	<u>12</u>
TOTAL	5.0	74

Seeding was performed with a grass seed drill with disc furrow openers and press or packing wheels. No chemical soil amendments, irrigation or herbicides were necessary. Straw mulch was applied to the reclaimed areas and crimped at the rate of 1.5 tons/acre.

The reclamation of an old abandoned mine portal and associated borrow area for backfill was completed in 1986 in conjunction with fire control activities. The method utilized to seal the portal is described in Chapter III.C.2. Since the sealed portal was riprapped to protect the area from erosion, no seed was applied. The reclaimed borrow area is located along Christiansen Wash approximately three hundred feet upstream of the sealed portal. It is located in an area where soils consist of gullied and alluvial land (Plate VII-1) and the vegetation is of the greasewood shrubland type (Plate VIII-1). Reclamation of the borrow area consisted of grading to approximate predisturbance conditions and broadcasting according to seed plan B (Chapter VIII.C.4). The application rate for seed plan B was doubled and the area was lightly raked to aid in covering the seeds since the seed was applied by broadcasting.

The area affected by vehicle traffic to install wooden poles along the east fence line of the 4th East Portal was seeded and hydro-mulched with native seed mix described in Chapter VIII.C.3 on August 19, 2003.

Areas affected along the south and southeast corner of the fence line by vehicle traffic during the construction of the transmission lines and subsequent repair was hydromulched only in the fall of 2002.

The area affected along the west fence line during construction of the perimeter fence was hydromulched only during the fall of 2002.

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¹Pure Live Seed

Reclamation of the underground development waste disposal site and excess cut material site will be initiated as soon as all the material presently being stored at the northwest coal stockpile area is placed in the waste disposal site. During excavation of the initial disposal site, excavation material will be stockpiled to provide four (4) feet of non-toxic material to cover the wastes. Based upon differences in soil quality, the cover material will be segregated into two stockpiles. One stockpile will be designated as a subsoil stockpile and the other will be designated as a topsoil stockpile. These stockpiles will be independently bermed and contemporaneously revegetated. Excess cut material will be conveyed and placed in a bermed depression west of the office building. After the existing temporarily stored wastes are placed in the disposal site, the wastes will be covered with subsoil and topsoil, and revegetated. The remaining portion of the disposal site will be developed and reclaimed in a similar manner on an as-needed basis as additional underground development wastes are generated. In order to reclaim the active portion of the site, sufficient cover material will be maintained in stockpiles adjacent to the active area. Temporary stabilization will be established by broadcasting the native following seed mix described in Chapter VIII.C.3 :

Permanent cover will be established by utilizing seed mix A (mixed desert shrub) as described in Chapter III.F.1 and Chapter VIII.C.4. Additional detail concerning backfilling and grading of these sites may be found in Chapter III.C.1. The soil quality and design parameters for the disposal site are described in Chapter VII - Appendix 2 and Chapter IV.C.1. respectively.

Contemporaneous grading will be conducted at the coarse refuse disposal site as the refuse is deposited. As the refuse disposal bank is constructed, grading will be conducted on the lower face to insure stability and maintain the design slope (2.5H to 1V). A small 25 foot wide terrace will be constructed above each grade lower face to control drainage. In addition, grading will be conducted on all lower faces to repair any gullies which occur during the life of the facility. The slurry impoundment is projected to be constructed in conjunction with the coarse refuse disposal site construction. Therefore, the slurry impoundment borrow area shown on Plate III-3 will be contemporaneously reclaimed as described in Chapter III.C.1. The borrow area will be jointly reclaimed with the contemporaneous grading of the coarse refuse disposal site within one (1) year of the construction of these two (2) facilities. Upon final cessation of active use, the final grading and backfilling as described in Chapter III.C.1 will be completed according to the reclamation schedule. Topsoiling and revegetation will be completed as described in Chapter III.E.1 and Chapter III.F.1. Additional detail concerning the design parameters and drainage control can be found in Chapter IV.C and Chapter VI.C respectively.

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All surface land areas affected by mining activities will be restored in a timely manner and reclaimed as contemporaneously as practicable with mining operations. Seeding and planting of disturbed areas will be conducted immediately after final site preparation and during the first normal period for favorable planting conditions. When necessary to effectively control erosion, any disturbed area will be seeded and planted, contemporaneously with the completion of grading, with the temporary seed mix described in Chapter VIII.C.3 until a permanent cover is established.

UMC 800.11-UMC 800.13, UMC 800.15-UMC 800.50

After the permit renewal application has been approved, but before the permit renewal is issued, a bond or bonds for performance will be filed with DOGM on the required forms furnished by DOGM to comply with UMC 800.11-UMC 800.13 and UMC 800.15-UMC 800.50.

UMC 800.14

The following information applies to the existing and anticipated near future surface disturbances at the Emery Mine. Furthermore it is assumed that these costs shall be updated with each permit renewal and therefore only reflect the cost of reclamation during the permit term. For additional detail of the unit costs and assumptions for this estimate, please refer to Chapter IV.B.

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impoundment with the excavated dirt forming an embankment around the pond. Prior to reclamation, the accumulated sediment may be removed and disposed of in the same manner as the coal fines described in Chapter III.B.1. Reclamation grading will require the dozing of the embankment material back into the pond so that approximate original topography is replaced.

Pond No. 4 was also constructed prior to Aug 3, 1977. This structure is an evaporation lagoon for the waste produce of the reverse osmosis water treatment system. Reclamation of this site will include the removal of the embankment so that approximate original topography is achieved. Analysis of the soils in the bottom of this pond will be made to determine if evaporative salts have accumulated to a toxic level. Soils that are found to be toxic will be removed or covered with sufficient material to comply with UMC 817.103.

Existing ponds No. 5 and No. 6 and proposed pond No. 7 are all incised structures. Prior to reclamation, the accumulated sediment may be removed and disposed of in the same manner as the coal fines described in Chapter III.B.1. Reclamation grading will require the dozing of the embankment material back into the ponds so that approximate original topography is replaced. However, subsoil and topsoil which are removed and stockpiled from these sites will also be utilized in the reclamation of these ponds.

Existing sediment pond no.9 collects and treats runoff from the 4 East Portal site. Reclamation of this site will include the removal of the embankment and filling the incised volume so that original topography is achieved. Analysis of the soils in the bottom of this pond will be made to determine if evaporative salts have accumulated to a toxic level. Soils that are found to be toxic will be removed or covered with sufficient material to comply with rules and regulations. However, subsoil and topsoil which are removed and stockpiled from this site will also be utilized in the reclamation of this pond.

For additional detail concerning the topsoil and revegetation of these sites, please refer to Chapter III.E.1 and Chapter III.F.1. Additional detail concerning the volume of material in the embankments and design information for Pond No. 1, 2, 3, 4, 5, 6 and 9 is contained in Chapter IV.B and Chapter VI.C respectively. The location of these structures may be found on Plates II-1,II-2 and II-3 and on Plate VI-10.

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Topsoil material contained within stockpiles will be sampled and analyzed for soil texture, available potassium, phosphorus, total nitrogen, and pH prior to redistribution. Any cryptogamic material which was harvested during topsoil salvaging and transplanted on the topsoil stockpile needs to be reharvested prior to disturbing the stockpile. The cryptogams should be temporarily stored in a dry place until topsoil redistribution, gouging, seeding and mulching is completed.

After resspreading and soil testing have been completed, the seedbed may have, fertilizer broadcasted or sprayed onto the soil. Incorporation of the fertilizer and other amendments into the rooting zone by surface roughening prior to seeding the approved seed mix described in Chapter VIII.C.4.

Reclamation of subsoil and topsoil stockpile areas will be completed in the same manner as other disturbed areas. Subsoil stockpiles will be removed to the original ground surface during grading and backfilling operations. Topsoil stockpiles will be removed until the required topsoil depth is retained over the stockpile site. Thus, topsoil resspread operations need only to be conducted on the subsoil stockpile sites. Surface preparation on all subsoil and topsoil stockpile sites will be conducted as previously described.

Plates III-1, III-2, III-3, III-4 and III-4A, indicate the location of all existing and near-future disturbance areas at Emery Mine. For additional information pertaining to the topsoil quality, data, and substitution plans, please refer to Chapter VII.

During final reclamation at the 4th East Portal the topsoil will be respread to an average depth of 7 to 8 inches. This average is derived from taking the loose cubic yards placed in the topsoil stockpile of 7,840 cu. yds plus topsoil berms (1,400 cu. yds) plus and estimated 1,200 yards from the disturbed land (1.0 ac.) of the extension area (avg. 9 inch). The 7,840 cu. yds. contained within the current topsoil stockpile was obtained from an as-built certification of the stockpile. The total 10,440 cubic yards of stored topsoil will be respread over ten (10) acres of reclaimed disturbance area. One (1) acre of the disturbed land will not be retopsoiled due to stream restoration of the original rock lined channel which transects the disturbance area. Therefore the average depth of redistributed topsoil shall be:

Area to be Retopsoiled: $10.0 \text{ acres} * 43,560 \text{ sq ft/acre} = 435,600 \text{ sq ft}$
Volume of Material Available: $10,440 \text{ cu yds} * 27 \text{ cu ft /cu yd} = 281,880 \text{ cu ft}$

Depth of Cover (D in ft): $\text{Area for Retopsoiling (435,600 sq ft)} * D = \text{Available Topsoil (281,880 cu. ft.)}$
therefore, $D = 281,880 \text{ cu ft}/435,600 \text{ sq ft}$ or $D = .64 \text{ ft}$ or 7.7 inches

The topsoiled surface will be roughened (gouged) by pocking with a backhoe or excavator. Following the roughening the site will be seeded with the appropriate seed mixture and mulch as described in Chapter VIII.C.4 and VIII.C.7.

If cryptogamic soils were harvested, they should be applied manually as a final step. The cryptogams shall be planted in selective locations, such as along the interior edges of gouged depressions. Areas where this material is transplanted, shall be recorded either by survey and/or marked in the field.

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Soils and Vegetation

Refer to Chapter VII, Appendix VII-3 & Appendix VII-4 for narrative of soil resources at the 4 East Portal Area. Prior to portal and diversion excavation, the area will be checked for topsoil thickness. Once the thickness is determined, depth stakes, thickness maps or similar measures will be used to ensure total recovery. All topsoil designated on Plate III-1 for topsoil removal shall be removed and stockpiled in the topsoil stockpile location refer to Plate II-3 and/or IV-3.

Salvage of topsoil material from the 4th East Portal area will involve the following deviation from the topsoil handling plan outlined in Chapter III.E.1.

1. The topsoil which lies within the interior of the excavation material stockpile and topsoil stockpile will be preserved in-place.
2. The interface of the in-place original topsoil and the place material will be marcated with a 4" yellow tape. The tape shall be placed in a 10 ft by 10 ft. grid. and shall remain in place until final reclamation.
3. The topsoil stockpile will be roughened by pocking the surface.
4. Following seeding of the topsoil pile it will be irrigated and records kept as to date and amount of water applied.

The topsoil material from the excavation material and the topsoil stockpile will remain preserved in-place. This practice deviates from normal topsoil handling practices. This deviation is requested in an attempt to preserve the soil structures and cryptogam's within the area. Prior to placement of excavated overburden material on top of the in-place topsoil, the interface was delineated in the field with 4-inch wide yellow tape. The tape was applied in a 10 ft by 10 ft grid pattern. Material from the excavation will be placed over top the in-place topsoil. No toxic material will be placed within this excavation pile.

The topsoil stockpile interface between the in-place and placed topsoil was marked with the grid pattern utilizing the yellow tape.

Salvaging of the topsoil with the initial disturbance of the 4th East Portal was conducted under the direction of Jim Nyenhuis a qualified soil specialist under a contract with Mt. Nebo Scientific of Springville, Utah. Soil salvage from the site progressed from the north (Persayo-Chipeta map unit) to the south (Castle Valley & Montwell soil units), with the Castle Valley soils being placed on top of the stockpile. The surface of the topsoil stockpile was roughened with a backhoe leaving undulating (pocked) surface. The topsoil stockpile was hydro-seeded and tactified on July 10,2002, with non-native seed mixture defined in Chapter VIII.C.3 This seed mix involved Crested Wheatgrass, Fourwing Saltbush and Russian Wildrye. The southern edge of the topsoil berm was seeded with the native (interim) seed mix which included Shadscale, Fourwing Saltbush, Castle Valley Clover, Streambank Wheatgrass, Scarlet Globemallow, Winter Fat, Blue Grama, Indian Ricegrass and Alkali Sacaton.

The berm located along the northern half of the east fence line was removed in the spring of 2003. This material which consisted of topsoil was removed to protect it from fugitive coal fines. The relocated topsoil was placed on the western outside edge of the topsoil stockpile berm. This section of berm was hydro-seeded and tactified August 19, 2003. The seed mix utilized in the reseeding involved the native seed mix under Chapter VIII.C.3. Record of the applied seed mix was provided to DOGM at the time of reseeding for their records.

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Irrigation of the south and west side of the topsoil berm (only) began on July 11, 2002 by applying one-quarter inch of water. The following table represents the date and amount of water sprayed on the berm.

July 12 - 1/4"	July 18 - 3/4"	July 29 - 1/2"
July 15 - 1/2"	July 19 - 1/2"	Aug 1 - 1/2" Rain
July 16 - 1/4"	July 22 - 1/4"	Aug 2 - 1/2" Rain
July 17 - 1/4"	July 23 - 1/4"	Periodic Rains Have Continued No Further Manual Watering

The topsoil stockpile was not irrigated because of seeding with non-native mix.

Salvage of topsoil contaminated by wind blown coal fines at the 4th East Portal site will be handled in the following manner:

Prior to any topsoil salvage operation, coal fines will be vacuumed up to the best extent possible. This vacuuming operation will be done in a manner which attempts to minimize further disturbance of the topsoil and its vegetation. On completion of the vacuuming operation, the one acre area of surface disturbance will be checked for cryptogamic matter prior to any topsoil removal. The Division of Oil, Gas and Mining will assist in determining the presence of cryptogams of this soil prior to removal. Should cryptogams be found within the area, the organic matter will be manually collected and immediately transplanted by hand on the topsoil stockpile. The location selected for transplanting of the cryptogams shall be a small confined area of the topsoil stockpile. The cryptogamic material shall be placed along the interior western edge of depressions (gouges) to protect it from prevailing winds. To prevent over saturation the material should be placed within the upper portion of the depression, not in the depression bottom. The depressions where transplanting of cryptogams took place shall be noted, staked and records kept of the area.

The existing west end of the topsoil stockpile berm will be crowded into the existing stockpile (see Figure IV-15). Topsoil currently in-place between the water tank and the topsoil stockpile will be picked up and placed in the topsoil stockpile. Topsoil from the additional 1 acre of disturbance associated with construction of the re-route road will be picked up under the direction of a qualified soil specialist. The excavated topsoil will be moved to the existing topsoil stockpile, where, it will be used to rebuild the berm. The stockpile and associated berm will be placed in a manner to allow for minimal side slope, but, still retains the runoff from the stockpile. The disturbed portions of the topsoil stockpile and berm will be randomly poked and seeded with native seed mix defined in Chapter VIII.C.3. Seed tag will be saved and date of seeding recorded. Copy of seed tag will be forwarded to DOGM. The affected berm(s) and stockpile will be mulched with straw or hay applied at a rate of one to two tons per acre. The material used for mulching needs to be free of noxious weeds.

All berms composted of topsoil will be clearly marked as topsoil storage area.

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Wildlife

The disturbance area was inspected on April 11, 1989 by Mr. L. B. Dalton of the Division of Wildlife Resources, Department of Natural Resources, State of Utah. Mr. Dalton finds that "the portal development will have minimal impacts on the wildlife resource." These findings, in letter form, are attached for reference.

The 4 East portal site was resurveyed in May 2002 by Mt. Nebo Scientific Consultants. The survey was performed by request from the Division of Oil Gas and Mining. The report is contained as Appendix VIII-3 in Chapter VII.

The vegetation map and T&E survey for the extension area of 1.5 acres at the 4th East Portal was modified by Patrick Collins, Ph.D. of Mt. Nebo Consultants. Mr. Collins letter is located in Chapter VII, Appendice VII-4.

Sampling of fish and macro invertebrates were conducted in September 2002 by JBR Environmental Consultants. The survey was conducted in Quitchupah Creek and Christiansen Wash. The sampling was performed to provide new baseline data for the reactivation of mining operations. Because of the minimal number of samples taken, a second sampling will be performed in September of 2003. The process methods and final report of the 2002 sampling is contained as Appendix IX-2. In accordance with DOGM requirements for perennial streams the micro invertebrate sampling will be performed every three years following the 2003 sampling. Results of these sampling's will be included as part of the annual report for that year.

Cultural Resources

The area of disturbance was surveyed in 1975, as part of an 880 acre area of investigation, by Mr. Michael S. Berry, Assistant Utah State Archaeologist. After traversing the entire area on 50 to 75 foot intervals, three (3) sites were located and recorded. The nearest of these sites is approximately 0.5 miles to the southwest of the proposed 4 East Portal Site. As a result, we do not anticipate any cultural resource impacts from this development.

Mr. Berry's report on this investigation is contained in Chapter X.

The 4 East portal site was resurveyed in May 2002 by Montgomery Archaeological Consultants. The survey was performed by request from the Division of Oil Gas and Mining. The report is contained as Appendix 5-5 in Chapter X. In March 2003, Montgomery Archaeological Consultants extended the cultural resource survey of the 4th East Portal site. This report is "Confidential", Appendix 5-7 in Chapter X, Vol 2, and should be placed in DOGM's confidential files.

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APPENDIX IV-7-G 4th EAST PORTAL ROADS

The proposed road system for the 4th East Portal is comprised of two (2) primary roads. These roads are to be constructed fairly flat, following the existing topography with topsoil removed. The first primary road noted as the Coal Loadout Road, begins just southeast of the loadout off exiting to the right off Emery County Road 915. Coal trucks will access coal loadout bin from the south and exit the loadout at the northeast corner of the site. The surface of the road will be rocked, dust suppressant will be utilized to control fugitive dust. For further detail on the road and use of chemical suppressants, refer to Appendix X.C-3 in Chapter X. The second primary road noted as the Ventilation Fan Road, branches off the coal loadout road at the west edge of the boxcut ramp and proceeds along the west side of the disturbed area to access the ventilation fan site. This section of the road is to be on bedrock (sandstone) or constructed of materials available on the site. Access to the site will be light truck to perform daily fan checks.

As-built drawings will be filed upon final construction. Please refer to Plate IV-13 for the proposed profile, plans and cross sectional views of the primary Coal Loadout Facility road. Proposed profile for the Ventilation Fan Road is delineated on Plate IV-14.

The portal site is entirely fenced restricting access to and from the site. The entrances to the site is through two gates located in the northeast corner of the site. These entrances connect directly to Emery County Road No 915, also known as Cowboy Mine Road.

To protect the general public the entrance gate will be posted with a stop sign prior to entering onto the county road from the mine property. The county road will be posted with warning signs as to the existence of the mine entrance. Flagman will be used to protect the general public and employees during construction activities where operation of large equipment or transportation of supplies may create a safety concern. The mine road has excellent visibility in both direction of the county road.

Road Culvert No. 1 - Coal Loadout Road (station 0+90 inlet)

Design information: Drainage collected between the coal loadout facility and the county road right-of-way is conveyed thru the culvert into sedimentation pond #9.

Based on SEDCAD 4 modeling "Emergency Spillway 25YR/24 HR Design Storm" the peak inflow of 2.54 cfs will need to conveyed by the road culvert. Therefore, a corrugated metal pipe 18-inches in diameter is proposed.

WORKSHEET 1
DESCRIPTION OF THE WORST-CASE RECLAMATION SCENARIO

Worst Case - is at completion of mining when the coal reserve is exhausted, all facilities have been constructed and abandoned. Coal stockpile has been sold and removed from the site leaving the coal base. Coal handling facility were neglected the final years of maintenance and major parts for resale of salvage has already been removed. The site contains no valuable assets or mobile equipment.

The following discussion will present the tasks needed to be performed for returning the mine site to the original premining condition. See Plate III-1 of Chapter III of MRP.

I. Structure Demolition:

When returning site to post mining land use, all surface structures must be removed. This includes all man made items to include the following:

- a. Crusher/Screen Facility - sized 25' x 30' x 40' constructed of metal sheeting, steel I-beams and reinforced concrete slab floor 25'x 30' x 2'. Cost of demolition includes removing floor and building.
- b. Five structures included for the process coal transportation from the mine mouth to the loadout. Each structure is connected with the conveyor system. Two belts (740') transport the coal from the mine mouth to the crusher/screen processing building. The 200' section from the crusher to the coal stockpile is a radial stacker. The final 100' section of belt moves the coal from the stockpile to the loadout.
 - 250' of 54" belt from the mine mouth to transfer point
 - 490' of 48" belt from transfer point to the crusher/screen facility
 - 200' of 48" belt on the radial stacker to the loadout.
 - 100' of 48" from the pile to the loadout.
 - Loadout structure 26' x 26' x 35'
- c. 1.4 miles of powerline from the mine's main substation to the 4th East Portal. Powerline consists of 5 line hung on 32 overhead poles.
- d. Water supply tank installed on concrete pad (37' dia x 1'). Cost of Demolition includes the cost of removing tank and concrete slab.
- e. Rock dust tank - placed on concrete pad (8' x 10' x 1') - cost of demolition includes the cost of removing tank and concrete pad.
- f. Ventilation Fan - concrete collar 16.5' diameter hole, fan and housing. Demolition cost includes fan housing, fan, and concrete collar. Backfilling included in earthwork.
- g. Radial stacker - 10' x 75' x 1' - reinforced concrete.
- h. Cattle Guard - 8' x 16' x 1' bottom + 2(2' x 16' x 1')sides - reinforced concrete
- i. Wind Fence- 25 steel posts with concrete - posthole -7' depth by 24" dia
- j. Concrete Barriers - preped cast blocks - reusable, truck cost

Earthmoving Activity -

4th East development involved excavating a boxcut to ramp down to the coal seam. Ramp constructed 10% grade, with depth of approximately 70 ft. The boxcut is to be backfilled and restoration of an ephemeral stream channel through the backfilled boxcut. The portal consists of three entries which will require MSHA approved seals be constructed and backfilled in accordance with MRP (refer to page 16, chapter III). Site is to be returned to approximate original contour (AOC). Backfill material to come from the stored excavation material stockpile (see Plate IV-3, Chapter IV). Fill material is to be placed in three (3') foot lifts and compacted. The fill material primarily consists of blasted rock (sandstone) from the original excavation of the boxcut. The final three (3) foot lift is not to be compacted. Travel over the final lift should be limited and avoided by heavy rubber tired equipment.

In addition all waste coal material from the stockpile area is to be placed in the bottom of the boxcut. Sedimentation Pond #9 and the Diversion ditch are to be backfilled and graded into the surrounding topography.

Sedimentation pond is partially incised 0.3 ac-ft of sediment volume. The pond bottom to be sampled for toxicity and sediment placed in the mine's refuse pile if needed. Volume incised is 460 b.c.y.

Diversion ditch measures 500 feet in length with an average depth of 5 feet, bottom width of 6 ft and side slope of 2H:1V. Volume is 1,500 b.c.y.

Ventilation shaft to be backfilled with non toxic material from the excavation stockpile. Shaft measures 16.5 ft in diameter with a depth of 70 feet.

Non topsoil berms need to be graded back into the surrounding topography. This earthwork can be included with the final grading of the backfill prior to topsoiling. Rubber liner required (300' x 14') as part of stream restoration.

Topsoil Replacement

Topsoil stockpile is located adjacent to the excavation stockpile. The MRP requires for 7 to 8-inches of topsoil be spread over 10 acres of disturbed area where topsoil was originally salvaged. The plan notes the harvesting of cryptogams from the topsoil crust prior to disturbing for topsoiling activities. Refer to Plate III-1, Chapter III.

Revegetation

Under this MRP, topsoil was saved in-place underneath the excavation stockpile. The MRP requires that this in-place topsoil along with the original surface of the topsoil stockpile be ripped. The area involves 5 acres. The ripping of 12-inches with a spacing of 2-feet is required to decompress the soil horizons. These five acres will be roughened and seeded with a permanent seed mix and mulched. The 11 acres where topsoil is to be respread will be surface roughened prior to seeding and mulching with the seed mix. The surface roughening involves using a backhoe or excavator to develop shallow depressions randomly to the disturbed surface. Following mulching all cryptogam material shall be transplanted back into depressions formed from the roughening activity. Area of transplanting should be recorded and marked.

EMERY PERMIT ACT 015/015

Pond No. 9

I. Hydrologic Information

Drainage Area: 4.9 acres or 0.0077 mi²
 Storm Type: SCS Type II
 Hydrologic Soil Groups: C
 Curve Number: 85 (moderate)
 Design Event - Normal Pool: 10 yr/24 hr (1.7 inches)*
 Design Event - Spillway: 25 yr/24 hr (2.1 inches)*

*Note: Precipitation value obtained from Precipitation-Frequency Atlas, Volume VI - Utah.

A) Runoff Characteristics

SCS Soil Group	Land Use	Area	Curve No.
C	Mine Yard Area	4.9 Ac.	90

B) Direct Runoff, Q (10 yr/24 hr)

$$Q = \frac{(P - 0.2S)^2}{P + 0.8S} \quad \text{where:} \quad \begin{array}{l} P = \text{precipitation (inches)} \\ S = (1000/CN) - 10 \\ = (1000/90) - 10 \\ = 1.11 \end{array}$$

$$= \frac{(1.7 - 0.2(1.11))^2}{1.7 + 0.8(1.11)}$$

$$= 0.84 \text{ inches}$$

C) Total Runoff Volume, Vt (10 yr/24 hr)

$$Vt = \frac{(4.9Ac)(0.84 \text{ inches})}{12 \text{ in/ft}}$$

$$Vt = 0.343 \text{ ac-ft}$$

Pond No. 9
 Inserted 10/2002
 Revised 9/2003

D) Sediment Storage Volume:

The following are sediment yield calculations as predicted by the Universal Soil Loss Equation (USLE) for an estimated life of 5 years. Using the Universal Soil Loss Equation;

$$A = (R)(K)(LS)(CP) \text{ where:}$$

- A = Average Soil Loss (tons/ac-yr)
- R = Rainfall Erosivity Factor (Annual) = 20
- K = Soil Erodibility Factor = 0.35
(SCS Soils Interpretation Record)
- *LS = Slope Length and Steepness Factor
- **CP = Control Practice Factor

The following USLE Parameters charts illustrate the Control Practice Factor (CP) and topographic characteristics of the watershed for specific time intervals during the estimated 5 year life of the pond. Weighted averages of the USLE Parameters are then applied to the Universal Soil Loss Equation for the period of time specified to predict the sediment yield.

USLE Parameters (1-5 Years)

Location	Area (Ac)	Activity	Avg. Slope (%)	CP
----------	-----------	----------	----------------	----

Mine Yard Area	4.9	Disturbed	3.5	1.00
----------------	-----	-----------	-----	------

$$S = 21\% \quad **CP = 0.66$$

$$*LS = 3.5$$

$$A = (20)(0.35)(4.9)(1.00)$$

$$A = 34.3 \text{ tons/ac-yr}$$

$$\text{Sediment Yield} = (34.3 \text{ tons/ac-yr})(4.9 \text{ ac})(5 \text{ yr})$$

$$= 840.4 \text{ tons}$$

Pond No. 9
 Inserted 10/2002
 Revised 9/2003

* Topographic Factor, LS "Applied Hydrology and Sedimentology for Disturbed Areas" p. 334, LS is derived using an Average Slope Length = 100 ft. and an area weighted avg. slope, S.

** Control Practice Factor CP "Applied Hydrology and Sedimentology for Disturbed Areas" p. 390, Appendix 5A. CP represents the area weighted average of the CP values.

Weighted Sediment Density

Mine Yard Area containing coal fines = 2.8 acres

Mine Yard Area containing soil material = 2.1 acres

Soil Density = 68 lb/cf

Coal Density = 54.4 lb/cf

$$\begin{aligned} \text{Weighted Sediment Density} &= \frac{(2.8 \text{ ac})(54.4 \text{ lb/cf}) + (2.1 \text{ ac})(68 \text{ lb/cf})}{4.9 \text{ acres}} \\ &= 60.23 \text{ lb/cf} \end{aligned}$$

Required Sediment Volume (5 years)

Sediment Yield = 840.4 tons

Weighted Sediment Density = 60.23 lb/cf

$$\begin{aligned} \text{Total Sediment Volume} &= (755.6 \text{ tons}) \frac{(2000 \text{ lb})}{\text{ton}} \frac{(\text{ft}^3)}{60.23 \text{ lb.}} \frac{(\text{ac})}{43560 \text{ ft}^2} \\ &= 0.64 \text{ ac-ft or } 0.13 \text{ ac-ft/yr} \end{aligned}$$

Total Sediment Storage

The dewatering system for Pond No. 9 consists of one (1) 15 inch diameter pipe located at the normal pool elevation of 6052.55 ft. The 15 inch pipe furnished with a slide gate which remain closed except when dewatering.

Total Sediment Storage (Elev. 6052.55') = 0.328 ac-ft

60% Sediment Storage (Elev. 6052.1') = 0.20 ac-ft

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Cleanout of Pond No. 9 will be conducted when the sediment level reaches Elev. 6052.0 ft. Based on the estimated annual sediment accumulation of 0.13 ac-ft/yr, the cleanout interval for Pond 9 is approximately 1.6 years. Please see the following page for storage volume calculations.

E) Pond No. 9 Stage - Storage Information

Listed below is the stage-storage relationship for this pond:

EMERY MINE
POND NO. 9
STAGE VS. STORAGE

ELEVATION (FT)	AREA (AC)	AVG AREA (AC)	DEPTH (FT)	VOLUME (AC-FT)	CUM. VOLUME (AC-FT)
6049.4	0.000				0.000
		0.010	0.6	0.006	
6050.0	0.020				0.006
		0.061	1	0.061	
6051.0	0.101				0.067
		0.145	1	0.145	
6052.0	0.189				0.212
		0.213	0.55	0.117	
6052.6	0.236				0.328
		0.258	0.45	0.116	
6053.0	0.280				0.444
		0.368	1	0.368	
6054.0	0.456				0.812
		0.496	0.55	0.598	
6054.6	0.536				1.411

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F) Design Pool Information (10 yr/24 hr)

Pond No. 9 is designed and will be constructed to provide full containment of runoff from a 10 yr/24 hr event by maintaining the one 15 inch CMP slide gate closed at all times except when the pond is being dewatered. From the Stage vs. Storage Curve having a Total Sediment Elev. 6052.55', the Peak Pool Elev. during the 10 yr/24 hr event is derived as follows:

Design Pool Volume = Total Sediment Volume + Total Runoff Volume

$$= 0.328 \text{ ac-ft} + 0.325 \text{ ac-ft}$$

$$= 0.653 \text{ ac-ft}$$

Peak Pool Elev. (10 yr/24 hr) = 6053.64 ft.

With the top of the embankment at an elev. 6055.2 ft., full containment of the 10 yr/24 hr runoff is provided. To facilitate Pond No. 9 in discharging precipitation events larger than the 10 year/24 hour storm, the proposed open channel emergency spillway will be constructed 0.9 foot above the peak pool of the 10 yr/24 hr design storm at an elev. 6054.55 feet.

Dewatering of Pond No. 9 will proceed only after a minimum of 24 hours of storm water detention is provided to achieve effluent limitations.

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G) Dewatering Discharge Calculations (10 yr/24 hr event)

The peak discharge for the proposed 15- inch steel pipe outlet for Pond No. 9 is derived using the full pipe flow equation as derived in "Applied Hydrology and Sedimentology for Disturbed Areas", 1983 and shown below.

$$Q = \frac{a (2gH')^{0.5}}{(Kx + Ke + Kb + KcL)^{0.5}}$$

where: H' = Peak Pool Elev. - Outlet Elev. + 0.6D

$$H' = 6053.64' - 6052.55' - 0.6 (15/12)$$

$$H' = 0.34'$$

$$Q = \frac{a [2g(0.34)]^{0.5}}{(Kx + Ke + Kb + KcL)^{0.5}}$$

where: a = pipe area, 3.93 ft²

Kx = exit coefficient, 1.0

Ke = entrance coefficient, 1.0

Kb = bend coefficient, 0.0

Kc = friction coefficient, 0.0715
(using $n = 0.015$)

L = pipe length, 40 ft.

$$Q = \frac{3.93[2(32.2)(0.34)]^{0.5}}{[1.0 + 1.0 + 0.0 + 0.0715(40)]^{0.5}}$$

$$Q = 8.36\text{cfs}$$

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H) Dewatering Discharge Rate

The following is an estimate of the time required to discharge the 10 yr/24 hr design storm runoff volume through the 15-inch outlet pipe after a minimum of 24 hours of detention.

From the previous discharge calculations,

$$\begin{aligned} Q \text{ max} &= 8.36 \text{ cfs} \\ Q \text{ avg} &= 4.18 \text{ cfs} \end{aligned}$$

$$\begin{aligned} \text{Estimated Discharge Time} &= \frac{\text{Total Runoff Volume (10 yr/24 hr)}}{Q \text{ avg}} \\ &= \frac{(0.325\text{ac-ft})(43560 \text{ ft}^2/\text{ac}) \times \text{hr}}{4.18\text{cfs} \times 3600\text{s}} \\ &= 0.94 \text{ hours} \end{aligned}$$

I) Emergency Spillway Design (25 yr/24 hr storm event)

The proposed emergency overflow spillway will be constructed to discharge stormwater runoff which exceeds a 10 year/24 hour precipitation event. During the 25 year/24 hour design event, Pond No. 9 provides full storage of the runoff volume. (See the Outlet Verification, Item J, for routing information.) The spillway will be a trapezoidal shaped broad crested weir. Dimensions of the overflow spillway section is designed as follows:

Bottom Width : 5 ft.
Sideslopes : 1V:3H
Manning's "n" : 0.035 (rocklined)
Depth : 0.65 ft.
Flowline Elev. : 6054.55 ft.
Peak Flow Depth : 0.0 ft.
Peak Outflow : 0.0 cfs
Peak Velocity : 0.0 fps
Channel Slope : Flat
1.0% (Min)

The spillway will be constructed in the fill embankment and will discharge into the watershed of Christiansen Wash.

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J) Outlet Verification (25 year/24 hour event)

A SEDCAD computer routing was performed to confirm peak discharge and peak stage values for the 25 year/24 hour storm event. The SCS Type II storm distribution was used in the SEDCAD computer routing. With the 15" dewatering pipe control valves closed*, full storage of the 25 year/24 hour event is provided while the remaining runoff is discharged through the proposed Emergency Spillway. A summary of the results is as follows:

Pond Data

Normal Pool Elev.	=	6052.55 ft.
Emergency Spillway Elev.	=	6054.55 ft.
Embankment Crest Elev.	=	6055.2 ft.

Routing Data

Peak Inflow	=	9.58 cfs
Peak Outflow	=	0.00 cfs
Peak Outflow Velocity	=	0.00 fps
Peak Pool Elev.	=	6053.96 ft.

* Note: SEDCAD modeled with 1-inch corrugated metal pipe to function as a gated valve. Detailed discharge table contained within SEDCAD 4 Report demonstrates discharge from the straight pipe (1-inch principle) is 0.00 at all elevations. The proposed design fully contains the 25 yr/24 hr design storm.

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- VII-1 TOPSOIL SUBSTITUTION PLAN - REVEGETATION DEMONSTRATION PLAN
FOR AREAS AFFECTED PRIOR TO
AUGUST 3, 1977
- VII-2 TOPSOIL SUBSTITUTION PLAN - UNDERGROUND DEVELOPMENT WASTE
DISPOSAL SITE
- VII-3 SOIL RESOURCES AT THE 4th EAST PORTAL AREA-
Mt. Nebo Scientific, Inc., April 2002
- VII-4 LETTER FROM MT. NEBO CONSULTANTS - APPEND 1.5 AC. AREA
TO 4th EAST PORTAL AREA-

PLATES

- VII-1 SOIL MAP

VIII.C. DEMONSTRATION OF COMPLIANCE WITH PERFORMANCE STANDARDS

VIII.C.1 UMC 783.19 VEGETATION INFORMATION

Vegetation information is provided in this chapter starting with VIII.A.1 ENVIRONMENTAL BASELINE DESCRIPTION and finishing with a review of PLATE VIII-1.C, VEGETATION AND LAND USE MAP.

VIII.C.2 UMC 783.24 MAPS: GENERAL REQUIREMENTS

Refer to Plate VIII-1 for the location of the following reference areas:

- Mixed Desert Shrubland
- Greasewood
- Riparian Meadow

VIII.C.3 UMC 817.100 CONTEMPORANEOUS (*INTERIM*) RECLAMATION

When necessary to provide interim or temporary revegetation of disturbed areas one of the following seed mixes will be applied by an approved seeding method.

	<u>Common Name</u>	<u>Scientific Name</u>	Minimum Pounds of Pure Live <u>Seed/Acre</u>
<u>NATIVE</u>	Blue grama	<i>Boutelous graeillis</i>	0.75
	Streambank wheatgrass	<i>Elymus lanceolatus</i>	4.0
	Alkali scaton	<i>Sporobolus airoides</i>	0.25
	Winterfat	<i>Eurotia lanata</i>	2.0
	Fourwing saltbush	<i>Atriplex canescens</i>	4.0
	Shadscale saltbush	<i>Atriplex confertifolia</i>	4.0
	Scarlet globemallow	<i>Sphaeralcea coccinea</i>	0.5
		<u>TOTAL # of Seed/Acre</u>	<u>15.5</u>
<u>NON-NATIVE</u>	Russian wild rye	<i>Leymus angustus</i>	3.0
	Highcrest crested wheatgrass	<i>Agropyron cristatum</i>	8.0
	Fourwing saltbush	<i>Atriplex canescens</i>	2.0
		<u>TOTAL # of Seed/Acre</u>	<u>13</u>

This interim vegetation cover will remain until final reclamation is conducted and the revegetation plan described under VIII.C.4 is established.

38-year period. Temperature extremes are shown on Tables X.B-4 and X.B-5. During the period from 1960 to 1978 winter temperatures varied from -16°F to 85°F and summer temperatures varied from 11°F to 98°F. (BLM, 1979).

Since 1978, there has not been a weather station operating in the vicinity of the Emery Mine site. From 1978 thru 1986 a weather station did record precipitation, temperature and wind at a higher elevation (+1,400 feet). Therefore, the permittee will install a weather station on-site of the permit. The weather station shall record precipitation, temperature, barometric pressure, wind speed and direction. The information shall be recorded and submitted within the annual report. The initial data from this weather station is anticipated to begin in January 2003.

The superintendent or his designated person will be responsible for wind data collection and maintenance of the weather station.

References

Bureau of Land Management. 1979. EMRIA Report No. 16: Reclaimability Analysis of the Emery Coal Field, Emery County, Utah. Prepared by Playa Del Rey, CA: Geoscientific Systems and Consulting for the BLM.

VTN. 1974. Environmental Assessment Report for the Emery Mine Project, Consolidation Coal Co. and Kemmerer Coal Co., Emery County, Utah. Denver: VTN for Consolidation Coal Company.

Revised 10/2002
Revised 1/2004

CHAPTER X

PART C: AIR QUALITY

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X.C-1	Air Quality Impacts of a Coal Preparation Facility in Emery County, Utah
X.C-2	Approval Order & Application of "Notice of Intent of Modify Approval Order DAQE-117-95", Modification of 4 East Portal
X.C-3	Norwest's Study of Control Measures to Minimize Fugitive Dusting at 4th East Portal

Prior to production, Consol will contact NRCS for assistance in establishing a baseline on the area East of the road on Consol property. This baseline will consist of three transects, each containing three sample sites. Once The transects are in place, their location will be submitted to DOGM for inclusion in the MRP. The sample points will be clearly marked for field identification. Once production resumes and a stockpile is created these nine sample sites will be monitored monthly to calculate the % coal fines on the surface soil. The NRCS has indicated that they would instruct DOGM and mine personnel, from the Field Book for Sampling Soils, on the method to determine % cover. Records of the initial baseline and the monthly observations will be kept on site.

In addition to the above monitoring, there will be a person certified in opacity reading to conduct opacity readings at the eastern permit boundary. These readings will be done once every fifteen seconds for six minutes. The readings will be recorded on a Visible Emissions Recording Form, and kept on file for inspection. A digital photo of the opacity will be taken and kept on file.

The opacity readings will begin when production resumes. They will continue twice per week for the first six months. If there are no fugitive dust problems noted from the monthly checks of the soil surface, the opacity reading frequency will be reduced to once per week for one year. If after this period, there are no noted fugitive dust problems the opacity readings, and monthly transect monitoring will be terminated. This 1½ year monitoring period will be considered the cumulative time period that coal is being produced, stockpiled and/or hauled at the 4th East portal. If there is not a stockpile (i.e. production ceases) the monitoring will temporarily be halted and will not resume until coal production and/or haulage resumes..

The opacity readings will be done at the eastern permit boundary. The opacity reader will stand on either the southeastern or northeastern permit boundary, depending on the position of the sun and the sky conditions. The opacity reader will try to take the readings during the afternoon when possible.

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Inserted 02/2004

1a. 4th East Portal Site

Fugitive dust emission at the 4th East Portal will consist primarily from the coal handling and stockpiling of coal. The coal stockpile will be sprayed with water as it is discharged into the pile. In addition the stockpile will be protected to some degree by the rock stockpile located to along the west side of the boxcut. This rock stockpile will function as a wind break from the prevailing westerly winds. The rock stockpile consists primarily of cobble to boulder size sandstone.

The road to the coal loadout will be watered periodically throughout the day. Topsoil stockpile will be roughened, seeded and mulched to prevent wind and water erosion. Berms shall remain roughened and seeded. Rock or wood mulch as well as erosion control netting may be utilized as situation warrants to minimize effects of erosion.

On January 9, 2003, Notice of Violation was written for wind blown coal fines outside the permit area. To abate the violation the following Air Resource Protection shall be implemented to eliminate the generation of coal fines and provide measures to protect the surrounding environment from accumulation of coal fines should they occur.

Dust Control Program:

- Dust treatment program (coal yard and truck re-route areas)
- Water cannon
- Concrete (Jersey) barriers
- Wind fences
- Conveyor and transfer point enclosures
- Water sprays (conveyors)
- Water truck
- Vacuum truck
- Cattle guard
- Replacement of crusher
- Haul truck re-routng
- Maintenance plan

Details for each of these engineering controls and other measures are discussed in Appendix X.C-3. Consol is committed to implementing Phase I of Norwests dust control plan as described in App.X.C-3 of the MRP. Consol will implement Phase II if it is determined that Phase I fails to adequately control the coal fines.

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CHAPTER IV - ENGINEERING DESIGNS

PLATES (In Map Pockets)

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Amendment to Mine Reclamation Plan (MRP) – Emery Mine

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The upgrades described above for CR 915 will also be applied to the turn off to the plant, including the application of gravel. Figure 3B shows the general locations where gravel will be applied. The arc-shape will be sufficiently large (e.g., ≥ 60 foot radius) to safely route trucks onto the property. In order to further minimize potential dusting, the county road segment will be posted with a 10 MPH speed limit sign, effective along the 500-foot segment and the turn off to the plant.

Topsoil will be removed from a portion of the 1.5-acre parcel and stockpiled, and the area will be re-graded to allow drainage to flow to the approved and existing sediment pond to the north. See Figure 2. An 18" diameter culvert will be installed near the main gate, a natural low point, to convey runoff from the disturbed area to the pond.

The main traffic routes within the coal yard (e.g., the loop around the stockpile and the roadway west toward the spoils pile) will also be upgraded as described above for CR 915, except for the gravel cover. Figure 4A shows the coal yard and re-route areas where dust suppressant will be applied. In all cases the maintenance program (described in greater detail below) will monitor the ongoing effectiveness of the magnesium chloride at suppressing dust. When breakdown is noted, re-application of the chemical will occur. Two to four applications per year are standard practice.

The application of magnesium chloride in the re-route and the coal yard areas will be supplemented by the localized application of dust suppressant (e.g., portable spray device) in hard to access areas, such as the stockpile base and around the concrete barriers, as discussed below. Benetech's Dust TARBT, e.g., is available in totes, and will be stored onsite, mixed with water to the proper mixture, then applied where and when needed. See Figure 4B for possible locations for localized application.

Traffic (truck) re-routing is applied in general industry to shorten the travel path, to avoid areas where dusting may occur, and thereby better control air emissions. This aptly describes the haul truck traffic situation at Emery, where travel path and duration in dusty areas can be reduced by re-routing truck traffic.

The Environmental Protection Agency's (EPA's) AP-42 document (see Appendix B), a comprehensive compendium of air emission factors and controls for a wide range of industry categories, endorses traffic re-routing as a means of reducing dust levels. In the Emery case, it will also allow for less re-entrainment of coal and other particulate matter.

Truck re-routing is considered Good Engineering Practice (GEP) and Best Management Practice (BMP), because the design of a shorter travel path results in fewer air emissions.

WATER CANNON

One or more high volume (about 100-150 gallons per minute) water cannons will be installed near the stockpile as depicted in Figure 5. The water cannons' installed location will be determined during wind fence construction. During periods of elevated wind velocities, the cannons will be activated. Water cannons designed for all-weather use will be installed. The basic manual system will be automated using a wind-speed indicator and water activation trigger device. Guidance from U.S. EPA (AP-42 Compilation of Air Pollution Emission Factors, Section 13.2) indicates that entrainment of dust from aggregate storage piles occurs at wind velocities over 12 miles per hour (mph). When sustained wind velocities exceed 12 mph, water cannons will be automatically activated. Cannons will remain on for a period of several minutes (up to 15 minutes) – long enough to adequately wet the pile without causing runoff. If elevated wind velocities persist, the water cannons will continue to be activated on a pre-set cycle (e.g., no more than one activation per hour). The operator will review historic mine weather station data as it becomes available and adjust the wind speed trigger accordingly.

When operators are onsite, there will be the option for manual override of the system, i.e., the mine superintendent will be able to activate and operate the water cannon system when he determines that conditions warrant it. Manual override will also be used to demonstrate the effectiveness of the system when required, e.g., during inspections.

The attached technical bulletin, found in Appendix C, from Nelson Irrigation Corporation for their 100 Series Big Gun nozzle demonstrates that varying combinations of water pressure (psi), water flow rate (gpm) and nozzle diameter will provide more than adequate coverage of the stockpile area based on throw (diameter, ft) of the nozzle. The nozzles (probably two, as conceptually shown in the September 12, 2003 Mine Reclamation Plan package submitted to DOGM) will also be located on stands, probably several feet in height to maximize water distribution in the pile area. A further feature available from the manufacturer that enhances throw of water spray is a choice of angle of trajectory for the nozzle. For example, for the 100 Series nozzles the vendor offers trajectory choices of 18, 21, 24 and 43°. In addition, the nozzles will likely be arranged, as shown in the conceptual drawing in the September 12 submittal, so that the spray patterns overlap, further ensuring adequate coverage. A video clip viewable at www.nelsonirrigation.com (click products then Big Gun sprinklers) further demonstrates the coverage capabilities of the nozzles being considered. Probably the most striking feature in the clip is that the arcing stream provides a curtain of water that blankets everything in its path. The nozzle does not simply throw a stream of water a desired distance. With the design features considered, CONSOL is confident that the water cannons will provide adequate coverage of the stockpile area.

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One vendor's water cannon nozzle design being considered for installation at Emery is shown in the attached Appendix C.

The use of water to control fugitive emissions in both paved and unpaved areas is widespread in general industry; water has been used effectively in applications similar to Emery Mine for years. EPA's AP-42 document (see Appendix B) recognizes the value of water as a dust suppressant for application on unstabilized (unpaved, disturbed) areas, such as the coal yard at the Emery Mine. Although a high evaporation rate as found at Emery may shorten the effective longevity of the control, this is offset by serial applications as needed.

The use of high pressure water sprays in this application is considered GEP and BMP, because water is effective at controlling dust if periodically re-applied, based on evaporation rate. Water for dust control is relevant to the situation at Emery, because water has a proven track record in similar applications in arid climates. Water cannons activated by high winds are very effective at controlling blowing dust from (coal) stockpiles by saturating the material.

A water cannon system has been effectively used to control coal dust emissions at the Sandusky Docks Corporation storage area in Sandusky, Ohio. See Appendix D for details.

CONCRETE BARRIERS

In order to confine the stockpile base for improved dust control, concrete (concrete) barriers will be used in tandem with an ongoing program to reshape the pile to minimize the surface area of the pile exposed to wind. The on-site front-end loader will be used as necessary to consolidate material onto the pile. The concrete barriers will be strategically placed along the perimeter of the stockpile to prevent encroachment of coal fines into adjacent plant areas such as truck loading. A conceptual drawing showing placement of the barriers in the stockpile area is shown in Figure 6. A specification sheet for the barriers as provided by one vendor is shown in Appendix E.

Barriers are widely used in industry for stockpile segregation and also for containment. Concrete barriers may also double as stockpile erosion control in general industry; they are more durable than the typical silt fence, i.e., an improvement over the typical control. Confining the base of the stockpile with barriers will reduce encroachment of product into other areas of the plant, e.g., the load out and scale areas, where the material may otherwise become pulverized under tire pressure and dispersed by wind. The concrete structure also doubles as a safety barrier for the front-end loader operator; it defines the perimeter of the raised stockpile berm, and it segregates the loader from oncoming haul trucks in the loading area.

ASARCO in East Helena, MT successfully used concrete barriers to contain open stockpiles as part of its EPA-approved State Implementation Plan (SIP) for lead.

The barriers are very durable and are considered GEP and BMP in this application.

WIND FENCES

A wind fence, similar to the one shown in Figure 7, will be installed upwind of the stockpile area at the 4th East Portal. The conceptual placement of the fence is illustrated in Figure 8. A wind fence disrupts the mechanism that causes dust particles to become airborne in the first place, i.e., moving air or wind. Wind fences are upstream devices intended to deflect air movement and reduce airspeed, and are acknowledged as a control device in EPA's AP-42 (see Appendix B). When properly installed and when the wind is in proper alignment to the wind fence, wind speed is reduced up to 60%. Final placement of the fence will be determined following consultation with the vendor. The attached wind rose for Ferron, Utah (about 18 miles north of the mine) and the attached topographical map of the coal yard area will be factored into the decision. See Figure 9 and plate III-1 in the permit. The wind fence will extend to ground level.

The wind fence material will be either the Raring Corporation's WindTamer fabric mesh or Ultra Span's panel system, where panels are suspended from cables attached to upright wooden or steel poles. The WindTamer fabric is mounted directly to either steel or wooden poles using mounting brackets. The fabric is drawn tight during installation using a come along device so that the fabric does not flap in the wind. The taut fabric functions as a semi-permeable barrier and wind deflection device. Appendix F shows the basic design of the UltraSpan system that may be installed at Emery.

Emery has opted for steel poles as the fabric support structure. The poles will be installed in a perimeter line upwind of the stockpile at a spacing of about 15 feet. The fence length is estimated at 400 feet with a height of about 45 feet.

Although not widely used in industry, wind fences are nevertheless acknowledged in EPA's AP-42 document as a stockpile dust control mechanism, usually in tandem with one or more additional controls, such as pile wetting with water. See Appendix B.

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The use of wind fences in this application is considered GEP and BMP, because wind velocity impacting the pile is reduced up to 60%, depending on alignment of the fence and mesh material. Wind that contacts the surface tangentially is either dampened or deflected.

Wind fences have been applied at Tri-Gen Bio Power in Loudon, TN; at Cape Breton Development Corporation in Sydney, Nova Scotia; at Helvetia Coal Company's Lucerne 6E Mine near Indiana, PA; and at Graymont Western in Calgary, Alberta.

CONVEYOR AND TRANSFER POINT ENCLOSURES

Lightweight metal panels or sections of conveyor belt will be used to better enclose the conveyor belt system at the mine. The stacker conveyor, for example, has openings on the west side, and the prevailing wind is from the west. In addition, enclosure of transfer points will be improved by adding panels where feasible.

Enclosing material handling devices (conveyors and transfer points) is general industry practice to reduce fugitive dust emissions. EPA's AP-42 document (see Appendix B) frequently refers to enclosure as one of the preferred control options. At Emery, improved enclosure of the radial stacker on the windward side and the conveyor system transfer points will reduce dusting from these sources. The material handling system at Emery is already partially enclosed; more completely enclosing conveyors and transfer points is considered GEP and BMP.

WATER SPRAYS (CONVEYORS)

Water sprays will continue to be operated at the three locations indicated in the attached Figure 10, namely the crusher inlet, the crusher outlet and the stacker discharge. The spray bars will be upgraded to accommodate the possible addition of a dust suppressant at a future date if required.

DOGM has previously agreed that should Phase I controls fail to achieve the intended results with regards to off-site deposition of coal fines, then Phase II controls (i.e., the Benetech permanent and integrated dust suppression system) must be implemented. The water spray system to be installed and operated under Phase I is designed and will be installed by Benetech. This assures compatibility of design and equipment should Phase II be necessary. As previously discussed with DOGM, the locations of the Benetech spray bars under the upgrade plan are the crusher inlet, the crusher outlet and the stacker discharge.

The use of water sprays to control fugitive emissions in both paved and unpaved areas is widespread in general industry; water has been used effectively in applications similar to Emery Mine for years. EPA's AP-42 document (see Appendix B) recognizes the value of applying water to haul roads and unstabilized (unpaved, disturbed) areas, such as the coal yard at the Emery Mine. Although a high evaporation rate as found at Emery may shorten the effective longevity of the control, this is offset by multiple applications along the conveyor system. The use of water sprays in this application is considered GEP and BMP, because water is effective at controlling dust if periodically re-applied, based on evaporation rate. Water sprays are relevant to the situation at Emery, because they have a proven track record in similar applications in arid climates.

The location of the spray points (along the conveyor system) was a determination made by Benetech during their site visit at the 4th East Portal. As previously discussed, it is imperative that the Benetech water sprays be installed as per their specifications under the Phase I control program in the outside chance that the Phase II program (i.e., Benetech's permanent and integrated Benetech dust suppression program for the conveyor system) may someday be necessary.

WATER TRUCK

The current water truck has a gravity feed water distribution system. The water delivery feature will be upgraded to a multi-point spray bar, and the truck will be used to supplement the magnesium chloride dust treatment program in the coal yard and re-route areas by adding moisture to the areas treated with magnesium chloride and by wetting untreated areas as needed for dust control.

REPLACEMENT OF CRUSHER

The current hammer mill crusher is rated at 500 TPH. See Figure 13 for location. It will be replaced with a 500 TPH double-roll crusher or other type of non-pulverizing device. Regulatory agencies (EPA, OSHA, MSHA) consider substitution or modification of process equipment known to generate less air emissions a valid engineering control (GEP and BMP). Replacing the crusher at Emery, e.g., is an ideal application of this engineering principle, where a double-roll crusher or other type of non-pulverizing crusher would produce a larger size product, on average, than the present hammer mill crusher. Substitution of equipment for the purpose of emissions reduction is widely observed in general industry. See Appendix H for specifications on candidate replacement crushers located to date.

Prior to crusher replacement, a Notice of Intent (NOI) will be timely filed with Utah's Division of Air Quality. A courtesy copy of the NOI will be sent to DOGM.

TRUCK RE-ROUTING (SEE ABOVE SECTION ON DUST TREATMENT PROGRAM FOR DETAILS ON TRUCK RE-ROUTING)

Figure 14 shows the location of the combined Phase I controls at the Emery Mine 4th East Portal area.

MAINTENANCE PROGRAM

The mine superintendent's main function is to direct all day-to-day, on-site activities as they relate to operations at the Emery Mine's 4th East Portal. The mine superintendent is the stockpile manager, responsible for the initial implementation and ongoing sustainability of the dust control plan. He will be responsible for inspections, maintenance and repairs of the dust control equipment and measures. Furthermore, he will direct the on-site training activities, to include mine personnel and haul truck drivers, so that each person at the 4th East Portal understands his job as it relates to dust control.

See Appendix I for the outline of the maintenance program for the Phase I controls at the Emery Mine 4th East Portal area.

During site inspections by DOGM, dust controls and measures will be readily available for demonstration purposes, as follows:

WATER SPRAYS Water sprays will be on and available for inspection during normal operation when material is on the moving conveyor belt.

WATER CANNONS Water cannons will be capable of manual activation and operation. Accordingly, this system will be available for demonstration upon request.

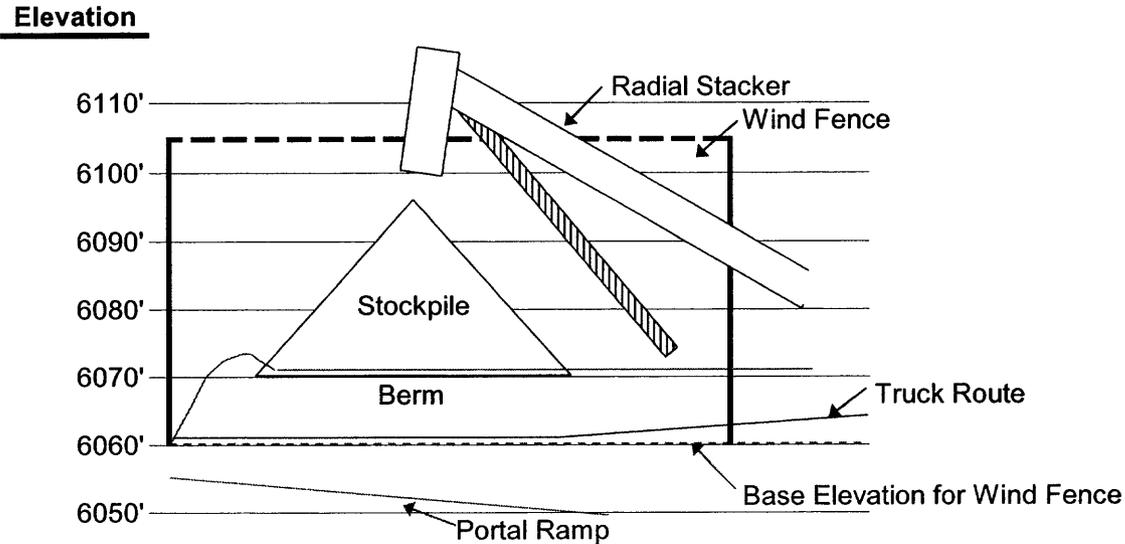
WIND FENCE The wind fence is a passive control device that reduces wind velocity or deflects wind around a potential dust source, in this case the stockpile. The optimal demonstration opportunities for this passive device will be during periods of elevated and sustained wind velocities, particularly under prevailing wind conditions (out of the west).

CONCRETE BARRIERS Personnel will be able to immediately verify the optimal placement of concrete barriers in the stockpile area, and whether cracks have been properly sealed to prevent blowing dust.

DUST TREATMENT PROGRAM (COAL YARD AND TRUCK RE-ROUTE) It will be readily apparent (blowing dust) to area personnel if dust suppressant needs to be re-applied in the coal yard and the re-route areas. *The areas receiving dust suppressant outlined on Figure 14 will be sampled and analyzed for SAR, pH and EC prior to final reclamation grading.*

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CONSOL
Emery Mine - 4th East Portal
Looking East - Stockpile Area



Rationale for ~45' High Wind Fence

Maximum Elevation of Pile	6100'
Base Elevation for Wind Fence	- 6060'
Difference	40'

Rationale - Height of Wind Fence

In order to determine the approximate height needed for the wind fence, the “as built” drawing prepared by Johansen & Tuttle Engineering Inc. and various photos of the stockpile area were reviewed. The main section of the wind fence, about 250 ft in length, will be situated upwind (west) of the stockpile, most likely along the west side of the existing haul truck route. According to the drawing, the base elevation of the stockpile is 6060 ft; however, the pile is located on top of a ten to fifteen foot high berm (higher at the north end than the south end). Although the height of the radial stacker is about 40 feet above the stockpile base (at elevation of about 6110 ft), the discharge end features a shroud or drop chute about 10 ft in length, such that the elevation at the bottom of the shroud is about 6100 ft. With zero drop height from shroud to pile (very conservative assumption: not usually the case), the difference between stockpile base and shroud discharge elevations (6100 ft – 6060 ft) is about 40 ft. So that any estimating error will be on the conservative side, a few additional feet were added (e.g., in case the shroud length was over-estimated), bringing the total to about 45 ft. Approximately 45 ft is the estimated height requirement for the wind fence.

Appendix I – Maintenance Plan for Emery Mine 4th East Portal

Once the engineering controls and other measures are implemented at the 4th East Portal area, they will be inspected on a set schedule under the facility's maintenance plan so that the effectiveness of the controls is maintained. A maintenance log will be kept at the facility and updated at least weekly. The mine superintendent will be responsible for inspection and maintenance activities as they relate to the dust controls and measures. An integral part of the maintenance plan will be the provision for training and education, whereby plant personnel will be made aware of the controls in operation at the mine. They will be trained to know when the controls are not operating properly and how and to whom to report malfunctions.

The engineering controls and other measures included in the inspection and maintenance program are as follows:

- Dust treatment program (coal yard and truck re-route areas)
- Water cannon
- Concrete (Jersey) barriers
- Wind fences
- Conveyor and transfer point enclosures
- Water sprays (conveyors)
- Water truck
- Vacuum truck
- Cattle guard
- Replacement crusher
- Truck re-route

The inspection forms will likely contain the following elements:

Dust Treatment Program

- Weekly inspection of the truck re-route and coal yard area for determination of effectiveness of dust suppressant and condition of gravel cover
- Indicate whether re-application of dust suppressant or repair of gravel surface is indicated
- Maintain log of when dust suppressant applied
- Indicate whether localized application of dust suppressant is needed, e.g., along the stockpile berm
- Maintain weekly log of repair and maintenance activities

Water Cannon

- Weekly test of water cannon to assure adequate pressure and proper coverage of stockpile area
- Indicate whether repairs or adjustments to the system are needed
- Weekly check on condition of wind activation system
- Record of when water cannon system is activated by wind
- Maintain weekly log of repair and maintenance activities

Jersey Barriers

- Daily inspection for optimum placement of barriers to contain the stockpile base
- Assure that barriers separate the stockpile area from the truck loading area
- Indicate condition of the barriers and whether gaps exist between barriers that allow material outside the containment area
- Assure that material is consolidated onto the pile to decrease exposed surface area of material that may produce dust
- Maintain weekly log of repair and maintenance activities

Wind Fences

- Daily check on the condition of the mesh material – Any rips or tears?
- Over a period of time, determine if the fence is optimally positioned to prevent wind erosion from the stockpile area
- Maintain weekly log of repair and maintenance activities

Conveyor and Transfer Point Enclosures

- Daily check when operating on whether conveyor enclosure panels are in place and in good condition
- Daily check when operating on enclosures for transfer points
- Maintain weekly log of repair and maintenance activities

Water Sprays (Conveyors)

- Inspect each operating shift for proper operation of water sprays, e.g., adequate pressure, no clogged spray nozzles
- Maintain weekly log of repair and maintenance activities

Water Truck

- Prior to use, determine if spray coverage is adequate, e.g., pressure is acceptable and nozzles are clear
- Maintain log book showing date and times of water application and areas where applied
- Maintain weekly log of repair and maintenance activities

Vacuum Truck

- Maintain log of when and where vacuum truck is used

Cattle Guard

- Daily inspection of condition of grate and underlying concrete sump
- Indicate whether the sump needs to have solids removed (vacuum truck)

- Log book showing date and description of repairs
- Maintain weekly log of repair and maintenance activities

Crusher

- Perform routine operations and maintenance checks when operating to assure proper performance
- Maintain log showing date of all repairs
- Maintain weekly log of repair and maintenance activities

Truck Re-route

See Dust Treatment Program (coal yard and truck re-route areas) for checklist items applicable to the truck re-route area.

Log books and inspection and maintenance records applicable to the above engineering controls and other control measures will be updated at least weekly and will be available for review at the Emery Mine.

A training and education outline to be used for employee awareness sessions will be developed, and a copy of the training program will be kept on file at the facility. Training records will also be maintained.

APPENDIX J

NORWEST STATEMENT OF QUALIFICATIONS

**CONSOL - Emery Mine - 4th East Portal
Statement of Norwest's Level of Involvement
During Implementation of Controls**

On October 7, 2003 CONSOL formally retained Norwest Corporation (Norwest) to design and implement the fugitive dust control plan as presented to DOGM on August 26, 2003 and as contained in the September 12, 2003 submittal to DOGM to amend the Mine Reclamation Plan for the Emery Mine, 4th East Portal. The contract is for turn key implementation, i.e., Norwest will manage all aspects of implementation, including onsite field supervision of sub-contractors involved in installation of control devices.

The scope of work for the contract includes the following tasks:

1. Prepare Installation and Implementation Schedule

Norwest will prepare a schedule for installation and operation of controls. Where feasible, controls will be installed by the expiration date of the most recent DOGM extension. For controls that will not be operational by this date, justification will be provided.

2. Design Engineering Dust Controls and Measures

Initial design specifications at installed locations for the selected control devices and dust abatement measures will be prepared by Norwest (Note: Preliminary engineering data have already been included in the MRP amendment submitted to DOGM on September 12, 2003.).

3. Prepare Final Design Criteria for Controls

Norwest will refine the design criteria for control devices and dust control measures.

4. Secure Bids for Controls and Measures

Norwest will screen and select contractors to provide control device equipment and services.

5. Prepare Detailed Cost Estimate

Norwest will prepare a comprehensive cost estimate for the procurement and installation of controls once bids are received, and will submit the document as an interim deliverable to CONSOL.

6. Final Design of Controls and Measures

Design specifications and installed locations for the selected controls, based on bids received from vendors, will be reviewed and finalized by Norwest. The final design package will be provided to CONSOL.

7. Manage Procurement and Installation Construction

In addition to the above tasks, Norwest will manage all aspects of ordering, receiving and installing the selected controls at the Emery Mine site – the turn key

implementation of the dust control program. It is anticipated that third party contractors will be used for the various installations, and that Norwest will make several visits to the 4th East Portal site as necessary when subcontractors are present to supervise key aspects of control installation.