CHAPTER II
OPERATION PLAN

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INTEGRATED ENGINEERING CORPORATION

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Div. of Oil, Gas & Mining

Revised 7/2016
Chapter II  OPERATION PLAN

This chapter summarizes the surface facilities and operations which will be utilized during the life of the Emery Mine.

II.A  STRUCTURES AND FACILITIES

UMC 784.11(b)  784.12

Following is a list and description of all of the surface structures either in use or proposed for the mine. The status of each structure and the map reference is provided at the beginning of each description.

At the 4th East Portal no surface structures or subsurface utilities existed prior to disturbing the site for excavation of the portal boxcut in 2002 with the exception of subsidence marker (#88-7). This marker was established in 1988 to provide elevation control as part of the subsidence control plan. The marker will be replaced with a new marker to provide subsidence monitoring for this section of the underground mine workings.

Stacker-Reclaim System
Map Code: 1, Plate II-1
Status: existing - 3rd quarter 1976

The reclaim system consists of a stationary 48-inch stacking conveyor, a ventilated reclaim tunnel, and a 48-inch reclaim conveyor.

Coal exiting the mine via conveyor, is transferred to the stacking conveyor, which discharges into a surge pile. The reclaim tunnel is located under the surge pile and is equipped with an adjustable feeder belt that withdraws a controlled flow of coal from the surge pile and deposits it upon the reclaim conveyor. The reclaim conveyor then transports coal to the tipple feed system.

All drainage from the reclaim area is diverted to sedimentation pond no.2.

Tipple
Map Code: 2, Plate II-1
Status: existing - prior to 1975

The tipple consists of a 1¼-inch scalping screen, a crusher, a doubledock 1¼"x5/16" sizing screen, four product storage bins and various short-length product conveyors.
Coal is fed to the tipple via the reclaim system. It is initially split into two flows by the scalping screen. The 1¼"x0" material becomes the "crushed run-of-mine" (CROM) while the +1¼" is crushed to 1¼ x 0". This is then screened at 1¼"x5/16" to create the "stoker" product. The stoker, fines, and oversize are all stored in bins (the CROM is stockpiled). The fines are either added to the stoker with oil, as determined by the customer, or added to the CROM. The oversize is added back into the tipple feed.

All drainage from the tipple area is diverted to sedimentation pond no. 2.
Tipple Control Station

Map Code: 3, Plate II-1
Status: existing - prior to 1975

The tipple control station is a small concrete block structure adjacent to the tipple. It contains the controls to all the tipple and reclaim functions. This structure is within the surface drainage control area.

Surface Storage Tank Containment Area

Map Code: 4, Plate II-1
Status: proposed - 3rd quarter 1991

The proposed concrete containment structure measures 50 ft. by 23.5 ft., with 3 ft. high walls. It will contain a 6,000 gallon diesel fuel tank and an 8,000 gallon stoker oil tank. Stoker oil will be heated in an adjacent 300 gallon tank enclosure and then piped to the stoker coal loadout belt at the tipple. The application of oil to stoker coal provides for dust suppression in residential or industrial furnace usage. Also to be included in this containment structure is an area for outside storage of petroleum products in 5 to 55 gallon drums for use underground as required.

This facility will replace four (4) underground storage tanks and is designed to contain any spill of petroleum product that might occur. This structure will be located within the approved drainage control area.

100,000 Gallon Water Tank

Map Code: 5, Plate II-1
Status: existing - 4th quarter 1975

The 100,000-gallon tank measures 25 feet high by 26 feet in diameter, and is located on the canyon wall above the tipple. The tank sits upon a concrete base. It is equipped with an overflow, level indicator, and a bank of valves to direct water flow.

The 100,000-gallon 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. Water may be drawn from the bi-directional pipeline for surface use (bathhouses, washdown hoses, fire hydrants, etc.), or may be allowed to return to the mine via the feedline if the water demand from the underground machinery is greater than that of the tank feed.

Surface drainage from the tank area flows into the mine yard where it is diverted to sedimentation pond no. 2. The tank is also equipped with an automated level control to eliminate any overflow discharge.
Fresh Water Treatment Building

Map Code: 6, Plate II-1
Status: existing - 1st quarter 1976

The fresh water treatment building is located near the office/warehouse. The building houses a reverse osmosis machine and a 5,000-gallon fresh water surge tank. The building itself is a prefabricated metal building sitting on a concrete foundation. Water drawn from the 100,000-gallon tank is processed through the reverse osmosis (R/O) at the rate of 24 gallons per minute. The R/O produces two products on a 60% to 40% basis—clean water to brine (reject). The clean water is chlorinated and pumped to a 5,000-gallon holding tank and is distributed to the bathhouses and offices. The brine is pumped to a lagoon for evaporation.

Evaporation Lagoon

Map Code: Pond No 4, Plate II-1
Status: existing - 1st quarter 1976, reconstructed 1984/1985

The evaporation lagoon is an earthen structure which covers approximately 1.6 acres of surface area and has a storage capacity of 2.7 acre-feet. The lagoon is formed by a circular 3.5-foot-high berm installed on a 1V:3H upstream and downstream slope, with an embankment top width of 12 feet.

Waste water, or brine, from the reverse osmosis water purification system is transported to the evaporation lagoon through a 2-inch PVC line. The brine is contained here until it evaporates.

Mine Access Portal (Main Facilities Area)

Map Code: 8, Plate II-1
Status: existing - prior to 1975

The mine access portal is approximately 300 feet east of the tipple at the outcrop of the I zone. The portal is equipped with a flood door to hold back possible flood waters and to protect the immediate opening from float rock which might fall from the canyon wall.

The mine access portal serves two purposes: 1) to allow access of rubber-tired vehicles for the transportation of men and supplies into the mine and 2) to serve as a primary intake airway.

Drainage around this portal is controlled by the approved drainage control system. Surface runoff from areas adjacent to the access portal flows into the mine portal.

Revised 8-31-95
4 East Mine Access Portal
Map Code: Plate II-3  (plan view)
Status: proposed - 3rd quarter 2002

This 3-entry portal is designed to provide access to the 4 East operating sections of the mine and for future development of the northern part of the mine. The entries will be established at the bottom of an open cut located at the eastern edge of the permit area, near the center of Section 27. A ramp, on a grade of 10%, will lead to the bottom of the portal cut. Each entry will be 8 ft. high by 14 ft. wide and will be driven on 45 ft. centers. Once established, the portal will be utilized for two purposes: 1) to allow access of rubber-tired vehicles for the transportation of men and supplies into the mine and 2) to serve as a coal haulage portal.

Unaffected drainage will be diverted from the portal site along the outside toe of the perimeter berm. An ephemeral stream which naturally transverse the site will be diverted by a temporary diversion channel. This excavated channel will divert the stream to the south and west prior to entering an existing ephemeral stream channel. Runoff from the excavation stockpile and topsoil stockpile will flow into retention basins constructed within the interior of the stockpile structures. These retention basins are designed for full containment of a 100 yr/24 hr precipitation event. Surface runoff from areas within the ramp excavation area of the portal will flow into the underground mine workings or a sump. The runoff collected in the sump may be pumped into the underground mine. All other disturbance runoff reports directly to sedimentation pond no. 9 or through alternate sediment control structures.

Excavated rock will be stockpiled around the western perimeter of the open cut. The location of individual parts of this facility are shown on Plate II-3, which also includes the open cut layout. Detail listing of structures are provided on pages 17a thru 17e in this Chapter II. Details of the excavation design and diversion are provided in Chapter IV. Drainage information for the site is covered in Chapter VI.

Coal Haulage Portal
Map Code: 7, Plate II-1
Status: existing - prior to 1975

The coal haulage portal is located at the tipple and enters the canyon wall about 20 feet above the l zone. This portal and its associated entries are provided with box checks and man doors so that the opening is isolated from the mine ventilation current. The coal haulage portal and the mainline haulage entries are equipped with 48-inch conveyor systems, usually hung from the roof by chains. Coal is transported from the working sections by 42-inch conveyors and is transferred to the mainline conveyors at appropriate intersection. Coal leaving the haulage portal is dumped into the reclaim system and is then processed through the tipple.

The area around this opening is graded so that the surface water flows away from the portal and is diverted to sedimentation pond no. 2.

Revised 10/2002
Auxiliary Intake Portal

Map Code: 9, Plate II-1
Status: existing - 3rd quarter 1978

The auxiliary intake portal is about 100 feet east of the mine access portal at the outcrop of the I zone. It is fenced in to prevent entrance of people or wildlife and is provided with warning signs. This portal serves as an additional intake airway for the mine. It joins with the mine access entries about 400 feet in by the surface.

Except for the area immediately surrounding this opening, the surface is graded away from the portal so that surface drainage can be diverted to pond no. 2.
CHAPTER II  OPERATION PLAN

This chapter summarizes the surface facilities and operations which will be utilized during the life of the Emery Mine including the original Main Portal facilities (Plate II-1), the new Emery 2 Expansion facilities (Plate II-1), 4th East Portal facilities (Plate II-3), and the proposed Preparation Plant Facility (new Plate II-1A). Plate II-1 only depicts the original mine portal facilities and the new proposed Emery 2 expansion facilities. Plate II-1A depicts the proposed preparation plant facilities only. Removal of structures is discussed in Chapter III under UMC 784.11(b).

Per the Division's request, photo logs have been embedded into Plates II-1 and Plate II-3. These photo logs depict the condition of the existing facilities.

Chapter II pages 5 through 17f have been replaced with pages 5 through 17f. These supporting pages along with Plates II-1, II-1A and II-3 have been reordered, renumbered, and reworded to correspond directly with Chapter IV Part IV.B bond calculation sheets.

The numbered facilities appearing in the Facilities Key in Plates II-1 and II-3 have been assigned colors to identify their current state of reclamation. Facilities identified with green text have been removed. Facilities identified with yellow text are partially removed. Facilities identified with black text are existing. Facilities that have been removed appear only on the map. Existing facilities or partially removed facilities appear on the map, in the operations plan, and in the bond sheets.

Chapter IV, Appendix IV-9 (Bond Deletion Support) has been inserted to provide detail on the facilities that have been removed and cross referenced with map codes and bond calculation sheet names.

II.A  STRUCTURES AND FACILITIES

UMC 784.11(b) 784.12

Following is a list and description of the entire surface structures either in use or proposed for the mine. The status of each structure and the map reference are provided at the beginning of each description.

At the 4th East Portal, no surface structures or subsurface utilities existed prior to disturbing the site for excavation of the portal boxcut in 2002, with the exception of subsidence marker (#88-7). This marker was established in 1988 to provide elevation control as part of the subsidence control plan. The marker was replaced with a new marker to provide subsidence monitoring for this section of the underground mine workings. See Chapter IV Appendix IV-7 and Plate IV-8 (Mine Yard Roads) for the existing approved road and drainage design detail.

Main Portal Facilities

**Tipple Stacker-Reclaim System**
Map Code: 1, Plate II-1
Status: Existing – 3rd quarter 1976

The reclaim system consists of a stationary 48-inch stacking conveyor, coal stockpile feeder, ventilated reclaim tunnel, and 48-inch reclaim conveyor.

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Chapter II Page 5

Replaced 7/2016
Coal exiting the mine via conveyor is transferred to the stacking conveyor, which discharges into a surge pile. The reclaim tunnel is located under the surge pile and is equipped with an adjustable feeder belt that withdraws a controlled flow of coal from the surge pile and deposits it upon the reclaim conveyor. The reclaim conveyor then transports coal to the tipple feed system.

All drainage from the reclaim area is diverted to Sedimentation Pond No. 2.

The tipple consists of a 1½-inch scalping screen, crusher, double deck 1¼"x5/16" sizing screen, 4 product storage bins, and various short-length product conveyors.

Coal is fed to the tipple via the reclaim system. It is initially spilt into 2 flows by the scalping screen. The 1¼"x0" material becomes the "crushed run-of-mine" (CROM) while the +1¼" is crushed to 1¼ x 0".

**Tipple Control Station**
Map Code: 3, Plate II-1
Status: Existing — prior to 1975

The tipple control station is a small concrete block structure adjacent to the tipple that contains the controls for the tipple and reclaim systems. This structure is within the surface drainage control area.

**Surface Storage Tank Containment Area**
Map Code: 4, Plate II-1
Status: Existing 3rd quarter 1991

The concrete containment structure measures 50 feet by 23.5 feet, with 3-foot high walls that contains a 6,000-gallon diesel fuel tank and an 8,000-gallon stoker oil tank. Also to be included in this containment structure is an area for outside storage of petroleum products in 5- to 55-gallon drums for use underground as required.

**Foreman's Bath House**
Map Code: 6, Plate II-1
Status: Existing

The Foreman's Bath House consists of a Steel building on concrete pad. The building dimensions are 45'x24'x9' and 3'x27'x9' with a volume of 10,449 CF. The concrete floor and sidewalk dimensions are 48'x24'x0.33' and 6'x30'x0.33' for 444 cubic feet of concrete. The foundation is approximately 30 inches thick and consists of 504 cubic feet of concrete. The cross sectional area is 3.5 square feet and the perimeter is 144 feet.

**Evaporation Lagoon**
Map Code: Existing Pond No 4 (located in NW quadrant of map), Plate II-1
Status: Existing — 1st quarter 1976, reconstructed 1984/1985

The evaporation lagoon is an earthen structure that covers approximately 1.6 acres of surface area and has a storage capacity of 2.7 acre-feet. The lagoon is formed by a circular 3.5-foot high berm installed on a 1V:3H upstream and downstream slope, with an embankment top width of 12 feet. The evaporation lagoon is no longer in service due to installation of a public water supply, sewer, and county road. The evaporation pond disturbed area is currently part of the Reclamation test plot study per Chapter III pg 4a and Chapter III App 1.
**Warehouse-Office Building**  
Map Code: 11, Plate II-1  
Status: Existing – 4th quarter 1978

The warehouse/office building measures approximately 120'x60'x20' and is segmented into three sections. Three-fourths of the available space is devoted to the warehouse, while the remaining space is allocated to the main shop and mine offices.

The offices serve as the headquarters for the mine. The warehouse provides enclosed storage space for small and delicate mine supply items and the main shop is used to perform repairs and routine maintenance on mine equipment.

Surface drainage from the area around this building is controlled by the approved surface drainage control system. Wastewater from the building is cycled through an approved sewage system.

There are approximately 193 cubic yards of concrete between the building pads and foundations.

**Bathhouses**  
Map Code: 12, Plate II-1  
Status: Existing – prior to 1975

The bathhouses consist of five units and one empty pad that were converted from trailer-type mobile homes. Each bathhouse is equipped with shower stalls, toilets, sinks, and lockers. The largest unit contains a separate installation for female personnel.

**Tipple Transformer Building**  
Map Code: 16, Plate II-1  
Status: Existing – 2nd quarter 1977

This building is a 3-sided cement block structure located just east of the silt fence that houses the transformer to reduce the 7200 volts incoming from the mine substation to 480 volts for use at the tipple. This structure is located within the improved drainage control area.

**Foreman's/Shift Change Office**  
Map Code: 19, Plate II-1  
Status: Existing – prior to 1975

This structure is an office trailer situated near the warehouse and is located within the approved drainage control area covering the warehouse and supply yard.
**Mine Fan Building**
Map Code: 20, Plate II-1  
Status: Existing – 3rd quarter 1978

The mine fan building is a compartmented metal structure which contains the main fan (8-foot Jeffery, axial flow), motor house and controls, and dueling. The fan building (located at the mine return air opening which has been backfilled and reclaimed) is equipped with an air lock for access, explosion doors, and an emergency diesel power unit. The auxiliary fan (54-inch Joy, axial flow) has been removed.

The main fan was used to ventilate the mine under normal operating conditions. The auxiliary would be used if the main fan became inoperable. The mine fan building was constructed according to MSHA guidelines and is within the approved drainage control area.

**Steam Cleaner Building**
Map Code: 23, Plate II-1  
Status: Existing – prior to 1975

This cement block building houses the steam cleaner unit used to wash down equipment and is located within the approved drainage control area.

**Scrap Yard**
Map Code: 26, Plate II-1  
Status: Existing – 2nd quarter 1979

The scrap yard occupies an area on the south side of Quitchupah Creek and is used to store old or used equipment. Some of the material is sold to a scrap dealer about once a year. The remaining items are kept on hand for possible use around the mine. The scrap yard is located within the approved surface drainage control area.

**Supply Yard**
Map Code: 27, Plate I  
Status: Existing – prior to 1975

This supply yard is located south of the warehouse and contains parts and bulk supply items used on a continual basis for either the surface or 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 approved surface drainage control area.

**Truck Scale**
Map Code: 28A, Plate II-1  
Status: Existing – 4th quarter 1989

The truck scale consists of a standard highway scale unit of a size and capacity suitable for weighing medium duty highway coal trucks. Also associated with the scale is a small metal building in which the controls and readout are located. The scale weighs the trucks before and after loading to determine the tonnage of coal being sold. It is calibrated and certified by the State at least once each year. The truck scale is located within the approved surface drainage control area.
Coal Stockpile Area
Map Code: 31, Plate II-1
Status: Existing – lower piles prior to 1975
– northwest pile 3rd quarter 1982

The CROM product is discharged into a "live" storage pile at the tipple, where it is either loaded immediately onto trucks with a front-end loader or shuttled to a stockpile.

The mine has two static stockpile areas. The "lower" stockpile located south of Quitchupah Creek has a storage capacity of 20,000 tons. The third stockpile is northwest of the mine office near the mine entrance gate. This pile has a capacity of 150,000 tons and is used to handle excess mine production during times of decreased near term coal sales. Under normal operating conditions, approximately 15,000 tons of combined products are stockpiled at any time, with a monthly stockpile flux of about 5,000 tons. This allows adequate surge capacity but eliminates the problems of stockpile fires and the expense of rehandling.

All the stockpile areas are contained within the approved surface drainage control system.

Bridge on Quitchupah Creek
Map Code: 33, Plate II-1
Status: Existing – 3rd quarter 1979

The bridge on Quitchupah Creek is constructed of a multiplate arch on a concrete foundation with concrete wingwalls and is equipped with guardrail and designed to pass 2,230 cfs of water. The bridge was installed to allow access to the stockpile area south of Quitchupah Creek. It replaced two 3-foot diameter culverts determined to be undersized for design flood conditions. This structure was approved for construction by the Utah State Division of Oil, Gas, and Mining on March 19, 1979.
**Non-Coal Waste Storage Area**

Map Code: 34, Plate II-1  
Status: Existing – prior to 1975

The non-coal waste storage area consists of two small pits dug into the side of the hill in the stockpile area south of Quitchupah Creek. The pits measure approximately 20'x40'x10'.

Waste materials such as trash, timbers, and cement blocks are hauled from the mine and temporarily stored in the two waste pits. Periodically, the material is loaded onto coal trucks and hauled to a private landfill that is not controlled by Bronco Utah Operations.

The pits slope into the hill so surface water entering the pit is contained. The storage area is within the approved surface drainage control system.

**Parking Area**

Map Code 35, Plate II-1  
Status: Existing – prior to 1975

The employee parking area is located near the office and bathhouses and provides ample space for employees and visitors. The parking area is within the approved surface drainage control area.

**Mine Yard Roads**

Map Code: 36, Plate II-1  
Status: Existing – prior to 1975

The mine yard road system is comprised of 6 sections. Four are Class I roads and 2 are Class II roads. Section 1 (a paved Class I road) begins at the mine gate and ends at the warehouse office building. Section 2 (a Class II road) branches off Section 1 and accesses the storage area west of the warehouse/office building. Section 3 is a Class I road which starts at the mine yard and accesses the coal storage area south of Quitchupah Creek, crossing an approved bridge over the Creek. Section 4 (a Class II road) is located between the tipple stockpile and ventilation fan building. New Plate IV-8A depicts Section 5 and Mine Yard Road not previously shown, a Class I road that is a continuation of Section 3 and will facilitate access to the Emery 2 expansion portal. As-built cross sections for the Class I roads are contained in Chapter IV.

See Chapter IV Appendix IV-7 and Plate IV-8 (Mine Yard Roads) for the existing approved road and drainage design detail in the main portal area. All these roads are within the approved surface drainage control area and are periodically watered down during dry weather to prevent fugitive dust.

**Mine Rescue Storage Area**

Map Code: 37, Plate II-1  
Status: Existing – prior to 1975

The mine rescue storage area is a steel building that measures approximately 20'x24'x12' with a total volume of approximately 5,760 cubic feet. The floor consists of a concrete pad which measures 24'x18'x 0.5'. The foundation contains approximately 224 cubic feet of non-reinforced concrete. The mine rescue storage area is within the approved surface drainage control and disturbed area.
Material Storage Area
Map Code: 40, Plate II-1
Status: Existing – 4th quarter 1982

Located east of the bathhouse trailers, this area is used as outside storage for parts, machinery, and bulk items in an orderly and accessible manner. It is located within the approved drainage control area.

Training Site Pad
Map Code: 41, Plate II-1
Status: Existing 2008

This area located near the employee parking area consists of a concrete pad measuring approximately 37'x47'x4" used for annual MSHA training. The training pad area is within the approved surface drainage control and disturbed area.

Existing Mine Substation
Map Code: 42, Plate II-1
Status: Existing – 3rd quarter 1976

The original mine substation is located on top of the north canyon overlooking the mine. It consists of various electrical appliances used to transform high voltage to usable mine power. The substation is enclosed by an 8-foot high fence.

This structure is used to convert high line voltage (69 KV) to 7200 volts AC. One circuit is strictly for the underground mine, while the second circuit supplies power to the surface facilities and the mine fan. The mine substation was installed according to existing electrical codes and MSHA guidelines.

Borehole Pump No. 1
Map Code: 43, Plate II-1 and Plate VI-10B
Status: Existing – prior to 1975

The borehole pump facility consists of a multi-stage deep-well turbine pump, 200 horsepower electric motor, and high-voltage transformer. The pump is rated at 1,200 gallons per operating minute and is used to dewater the underground workings. Water is diverted from the various areas of the mine to the borehole pump. From there, the water is pumped to the surface and through an 8-inch buried PVC line to the mine discharge sedimentation pond (Pond No. 1).

Borehole Pump No. 2
Map Code: Identified by name, Plate VI-10B
Status: Existing – 4th quarter 1986

This borehole pump facility consists of a multi-stage deep-well turbine pump, 200 horsepower electric motor, high voltage transformer, and automatic starter control. A 10-inch buried PVC carries water to Sedimentation Pond No. 1.
Borehole Pump No. 3
Map Code: Plate VI-18 and Plate VI-10A
Status: Existing – 4th quarter 1988

This borehole pump facility consists of a multi-stage deep-well turbine pump, 200 horsepower electric motor, high voltage transformer, and because of the remote location, an automatic starter control. The facility also contains a sedimentation pond (designated as Pond No. 6). A buried 10-inch line conveys pump discharge to the pond. An alternate discharge line taps into the pipe downstream of the pump drive just prior to the buried section and discharges, when required, into the adjacent landowner's irrigation system. This alternate discharge point is incorporated into the NPDES permit as outfall 004. Prior to construction, topsoil and subsoil were salvaged and stockpiled for use in reclamation of the site.

Sewage Pumping Station
Map Code: 44, Plate II-1
Status: Existing – 4th quarter 1975

The mine sewage system consists of a 13,500-gallon septic tank, pump system, and 30,000 ft² leach field. The design capacity of the system is 13,500 gallons per day. The system now processes about 7,000 gallons of raw sewage per day produced from the bathhouses and the office/warehouse. The system was approved for construction by the Utah State Department of Health on September 22, 1975.

Transformer Storage Pad
Map Code: 45, Plate II-1
Status: Existing

The transformer storage pad consists of a concrete pad measuring approximately 32'x32'x0.5'.

Power Line
Map Code: 46, Plate II-1
Status: Existing

The power line from the existing mine substation Map Code 42 to the 4th East Portal is being reclaimed. 4012 feet of line west and north of the substation remains along with 17 utility poles. Approximately 3900 feet of power line and poles to the 4th East Portal have been removed.

Mine Discharge Sedimentation Ponds
Map Codes: Pond No. 1, Plate II-2
           Pond No. 2, Plate II-1
           Pond No. 3, Plate II-1
           Pond No. 5, Plate II-1
           Pond No. 6, Plate VI-18
           Pond No. 8, Plate II-1
Status: Existing

The sediment pond numbering system in the MRP is not consistent with the NPDES Permit numbering system. For a cross reference and location, please see Plate VI-4 legend.

Pond No. 1 is an excavated sedimentation structure measuring 780 feet long, 140 feet wide, and 8 feet deep at normal pool and is equipped with a concrete inlet and outlet. The sides of the pond are riprapped to prevent wave erosion. This pond settles out particulate matter from mine water.
discharged from borehole pumps 1 and 2. Discharge is measured by means of a flume and water samples are also taken monthly. The discharge point is approved by the EPA as outfall 001 of NPDES permit UT-0022616. The pond's design storage volume is 19.3 acre-feet and design flow is 1,401,150 gallons per day with a retention time of 36 hours. This results in an actual storage of 6.4 acre-feet with 12.9 acre-feet remaining for sediment and expansion. Sediment buildup since 1976 has reduced available storage to 16.1 acre-feet. Present flow from the mine averages 370,000 gallons per day.

Pond no. 6 is an excavated structure receiving mine water from borehole pump no. 3. The pond is 300 feet long, 230 feet wide, and 6½ feet deep. Treated water is then discharged into an unnamed tributary of Quitchupah Creek. The pond has both concrete inlet and outlet. The outlet contains a flume and volume readings and water samples are taken monthly. The sides are protected against erosion by riprap. Design storage volume is 10.2 acre-feet with a flow rate of 750 gpm and a retention time of 36 hours. This results in an actual storage for 5.0 acre-feet of water with 5.2 acre-feet remaining for sediment and expansion. Current discharge rates average 250,000 gpd. Two NPDES discharge points under UT-0022616 are approved for the facility. Outfall 003 is the pond outlet and outfall 004 is an alternate discharge point located at the borehole pump, to be used by an adjacent landowner for irrigation. Prior to pond excavation, 6 inches of CBE2 topsoil and 11 inches of BLC2 topsoil were stockpiled. Excess subsoil was also stockpiled for use in reclamation. Each stockpile is protected with a berm.
Proposed Preparation Plant

Map Code: Preparation plant and loadout facilities shown on Plate II-1a
Waste disposal facilities shown on Plate II-2
Status: Proposed

The plant will consist of raw coal washing and crushing facilities and a waste (refuse) disposal system. The plant as described in the following narrative will process 700 tons of coal per hour, which will accommodate an expansion of the mine. As the underground operation proceeds to the south, it may be necessary to improve coal quality through washing to meet existing contractual requirements and expand markets.

The proposed preparation plant will be located above the canyon wall north of the existing facilities. The mine electrical substation and water tank are presently located near the proposed site. Two roads will access the plant: the coal haulage road will be the primary route for exporting coal from the plant and a smaller road will provide employee access. Best available control technology will be used to control fugitive dust emissions from the plant and associated facilities.

The existing 42-inch belt from the mine will feed the 8"x0 run-of-mine (ROM) coal to the existing ROM 48-inch stacker belt. The existing ROM belt will be extended to deliver the ROM coal at a maximum rate of 700 tons per hour (TPH) to the transfer building located at the top of the canyon wall. Two-stage sampling of the raw coal will be located in the transfer building.

The transfer building will divert the ROM coal to one of two 42-inch raw coal storage belts that will deliver the ROM coal via concrete stacking tubes to one of the two storage piles. The east raw coal storage pile which feeds the preparation plant will receive 8"x0 ROM coal. The west raw coal storage pile which feeds the 2,000-ton loadout silo will receive 1¼"x0 ROM coal. The 8"x0 ROM coal will be screened and crushed to 1¼"x0 in the transfer building.

Each raw coal pile will be furnished with 4 reclaim feeders which will be used to control the feed from the piles to the 42-inch raw coal reclaim belt and the 42-inch raw coal loadout belt. Each belt will have a maximum rate of 700 TPH. The feeders and reclaim belt will be located in a reinforced concrete tunnel under the piles.

The reclaim belt will then deliver the raw coal to the transfer building to be located at the tail of the 42-inch plant feed belts. Raw coal will be delivered to the plant at the rate of 700 TPH by the plant feed belt.

The 8"x0 raw coal being delivered to the plant will be screened at 3/8". The 3/8"x0 sized coal will be delivered to the clean coal conveyor or stoker belt at the rate of 237 TPH. The 8"x3/8" will report to the pre-wet screen where the remaining minus 3/8" coal will be removed from the 8"x3/8".

The 3/8"x0 coal from the pre-wet screens will be delivered to the "fine coal dewatering circuit" at the rate of 52 TPH. This circuit consists of a series of sieve bends, desliming screen, cyclones, and centrifuges. The desliming screen will be used to scalp out the 28 mesh x 0 material. The 3/8" x 28 mesh material will be fed to the centrifuge for drying. The minus 28 mesh will then be pumped to cyclones for a 100 mesh separation. The 28 mesh x 100 mesh from the cyclone underflow will report to another centrifuge for drying. The minus 100 mesh from the cyclones will be...
delivered to the static thickener. Under flow from the thickener will be pumped to the slurry pond at the rate of 3 TPH, 130 GPM. The total 3/8" x 100 mesh product from this circuit will be delivered to the clean coal belt at the rate of 49 TPH.

The 8"x3/8" coal from the pre-wet screens will report to the "coarse coal wash circuit" at the rate of 413 TPH. This circuit consists of a heavy media vessel, drain and rinse screens, centrifuge, clean coal crusher, and magnetic separators for recovery of the magnetite, media used in the wash. The 8"x3/8" size fraction will be processed in the heavy media vessel. The 8"x1¼" heavy media product will be crushed to 1¼"x0 and report to the clean coal belt at the rate of 128 TPH. The 1¼"x3/8" portion of the heavy media product will be centrifuged and delivered to the clean coal belt or stoker belt at the rate of 216 TPH.

The 8"x3/8" coarse refuse from the heavy media vessel will be dewatered on a drain and rinse screen before being sent to the 200-ton refuse bin at the rate of 67 TPH. Coarse refuse will be hauled by a scraper to the refuse disposal area.

A 42-inch clean coal transfer belt will deliver the 1¼"x0 clean product from the plant to a sample building where a 2-stage sampling system will be located. A 42-inch clean coal storage belt will take the coal from the sample building to a 20,000-ton stockpile. A concrete stacking tube will be used to drop the coal into the pile. Clean coal will be loaded from the pile into highway haulage trucks by front-end loaders or fed to the 2,000-ton loadout silo.

The clean coal storage pile will be furnished with 4 reclaim feeders which will be used to control the feed from the pile to the 42-inch clean coal loadout belt. The belt will have a maximum rate of 700 TPH. The feeders and loadout belt will be located in a reinforced concrete tunnel under the pile.

The 2,000-ton loadout silo will load highway haulage trucks. The mine will have the flexibility of loading trucks with raw coal, clean coal or a raw coal, clean coal blend.

The 3/8"x0 size raw coal fraction and the 1¼"x3/8" clean coal size fraction can be diverted to a 36-inch stoker belt. This system will be incorporated into the facilities to allow for projected sales of 40,000 tons per year (TPY) of stoker coal (1¼"x3/8") and modified stoker coal (1¼"x3/8" plus 10-20% of 3/8"x0).

At any given time, the stoker belt will deliver either the 1¼"x3/8" to a 200-ton bin or the 3/8"x0 to a 50-ton bin. The proper size fraction will be diverted to the proper bin when the bin needs to be refilled. A 2-stage sampling system is located above the bins.

Stoker coal and modified stoker coal will be loaded out of the bins to trucks by a 36-inch truck loadout belt. This belt is used so the amount of 3/8"x0 in the modified stoker can be monitored. The belt loadout also allows the coal to be sprayed with oil before being loaded into the trucks.
Underground Development Waste Disposal Site
Map Code: Identified by name, Plate II-1a
Status: Proposed

Underground development wastes currently stored on the northwest coal stockpile site and any new development wastes generated will be permanently buried in this disposal site. This disposal area is a 2.1-acre site located at the gravel borrow pit on the hilltop east of the northwest coal stockpile area. A complete description of this disposal site is given in this part under UMC 784.19, with design information located in Chapter IV.
4th East Portal Facilities

4 East Mine Access Portal
Map Code: 4E24 Plate II-3 (plan view)
Status: Sealed, some grading required

This 3-entry portal system has been sealed per MSHA requirements.

Excavated rock was stockpiled around the western perimeter of the open cut and will be used for boxcut backfilling during reclamation. Details of the excavation design and diversion are provided in Chapter IV. Drainage information for the site is covered in Chapter VI.

Topsoil Stockpile
Map Code: 4E09 Plate II-3
Status: Existing

This stockpile (located in the northwest corner of the proposed disturbance) will be fully bermed to contain a 100-year/24-hour rainfall event. The stockpile and berms are sized to contain approximately 7,900 cubic yards of topsoil material. Berms constructed with topsoil make up the north and west 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: 4E08 Plate II-3
Status: Existing

This stockpile (located on the west edge of the portal excavation) 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-year/24-hour rainfall event. The non-topsoil material will be utilized in the reclamation of the portal entries, backfilling the boxcut excavation and airshaft.

Sediment Pond No. 9
Map Code: 4E10 Plate II-3
Status: Existing

This sediment pond (located in the northeast corner of the 4 East disturbance site) 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-year/24-hour 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-year/24-hour storm.

INTEGRATED

JUL 14 2016

Div. of Oil, Gas & Mining

Replaced 7/2016
Coal Handling Facilities & Stockpiles
Map Code: 4E01, 4E02, 4E05, 4E14, 4E15, 4E16, 4E17, and 4E29 Plate II-3
Status: Existing

The coal handling facility at 4 East Portal is being demolished and reclaimed. Conveyor belts and radial stacker have been dismantled and moved to the Main Portal for reuse. The Transfer Point, Crusher/Screening, Recessed Feeder, and Truck Scale structures are partially disassembled and in the process of being relocated. The travel pad for the Radial Stacker and Truck Loadout facility will be removed in the near future. All areas will then be graded and revegetated.

Surface runoff from the 4 East facility is conveyed by berms, pumps, and culverts to Sediment Pond No. 9.

Temporary Stream Diversion - Unaffected Drainage
Map Code: 4E21 Plate II-3
Status: Existing – 3rd quarter 2002

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

Supply Yard
Map Code: 4E27 Plate II-3
Status: Existing

This supply yards are located adjacent to the portal ramp adjacent to the radial stacker and adjacent to Sed Pond 9. Supply yards contains parts and bulk supply items used on a continual basis for either the surface or 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 Sediment Pond No. 9.

Ventilation Fan
Map Code: 4E20 Plate II-3
Status: Existing

The airshaft located in the southwest portion of the disturbance area has been sealed with a concrete cap. The associated exhaust fan and housing is being disassembled and moved to Main Portal for Emery 2 expansion.

Rock Dust Bin
Map Code: 4E13 Plate II-3
Status: Existing

This structure is being moved to Main Portal for Emery 2 expansion. Surface drainage from the bin area reports to Sediment Pond No. 9.
Water Tank
Map Code: 4E19 Plate II-3
Status: Existing

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

The water tank served as a surge tank for surface and underground water supplies. Water from underground was 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 is equipped with an automatic level control to eliminate any overflow discharge.

Truck Scale
Map Code: 4E14 Plate II-3
Status: Existing

The truck scale and associated control building are being moved to Main Portal for Emery 2 expansion. Surface runoff from the scale area will report to Sediment Pond No. 9.

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

To treat surface runoff leaving the disturbance area. Provides alternate sediment control for small areas which do not report through Sediment Pond No. 9 or full containment retention basins. The silt fence (located along the north and northwest corner of the disturbance area) controls untreated drainage between the topsoil stockpile and outside slope of Sediment Pond No. 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.

Ventilation Fan Road
Map Code: Identified at CH IV, Appendix IV-7
Status: Existing

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

Coal Loadout Road
Map Code: Identified at CH IV, Appendix IV-7
Status: Existing

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 and other vehicles will exit onto Emery County Road No. 915 (referred to locally as "Cowboy Mine Road"). Drainage off the road will be conveyed to Sediment Pond No. 9.
**Jersey Barriers**
Status: Existing

These barriers were placed along the perimeter of the stockpile to prevent encroachment of coal fines into the adjacent plant area. They will be moved and used as needed for other operations.

**Wind Fence**
Map Code: 4E32 Plate II-3
Status: Existing

Wind fences were constructed upstream of the stockpile. The wind fence disrupts the mechanism that causes dust particles to become airborne.

**Cattle Guard**
Map Code: 4E25 Plate II-3
Status: Existing

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

**Power Line**
Map Code: 4E18, Plate II-3
Status: Existing

Approximately 2,100 feet of power and utility poles are located at 4 East within the disturbed area.

**Oil Storage**
Map Code: 4E28, Plate II-3
Status: Existing

Steel building used for storage of oil containers. The building is 60'x18'x8' with an 8-inch thick concrete floor. Drainage from this area is conveyed to Sediment Pond No. 9.

**Substation Pad and Compressor Shed**
Map Code: identified on Plate II-3
Status: Existing

Concrete pad for electric substation and wooden shed for compressor. Concrete pad volume is 104 cubic yards. The shed dimensions are 12'x16'x8'. Drainage from this area reports to Sediment Pond No. 9.
Roads Misc.

Road to Mine Substation
Map Code: Identified on Plate II-1
Status: Existing – prior to 1975

The road to the mine substation is on top of the canyon, north of the mine entrance and is used to access the substation.

This road will be used to access the proposed preparation plant facilities area. The design information to upgrade this structure for use as the plant access road is presented in Chapter IV.

Road to Borehole Pump Facility No. 1
Map Code: Shown on CH IV, Appendix IV-7 and Plate IV-8
Status: Existing – prior to 1975

The road to borehole pump no. 1 is located approximately 3/4 of a mile north of the mine entrance and branches off County Road 9-07. The road is used solely to access and maintain dewatering pump no. 1.

Road to Mine Discharge Sedimentation Pond No. 1
Map Code: Shown on Plate II-2
Status: Existing – 4th quarter 1976

This road (located about ½ mile north of the mine entrance) was used in the past to access Sedimentation Pond No. 1 but a culvert used for crossing Quitchupah Creek was washed out in a flood, thereby making the road impassable.

Upon construction of the preparation plant, the road will be constructed to access the plant waste disposal facilities. The design for rebuilding this road as a coal refuse haulage road is presented in Chapter IV.
Emery 2 Expansion Facilities

Mine Substation
Map Code: e1, Plate II-1
Status: Proposed 2016

Electric substation mounted on a concrete pad. The 20 MVA substation is located adjacent to the existing mine substation (Map Code 42). The pad contains 75 cubic yards of concrete. The substation area is within the approved surface drainage control area and disturbed area.

Conveyor 6/Truck Loadout
Map Code: e2, Plate II-1
Status: Proposed 2016

48-inch Conveyor from Screen/Crusher Building to Truck Loadout area. The conveyor is 217 feet long consisting of 122 feet of elevated structure and 95 feet on grade. Two concrete pads with dimensions 16'x12'x3' and 12'x9'x3' (33 cubic yards total) along with metal frame structure support the elevated portion of the belt. Suspended solids contributions will be minimized by utilizing covered conveyors (Plate II-I, photo log P5) and water sprays. The conveyor and loadout area is within the approved surface drainage control area and disturbed area.

Screening & Crushing Facility
Map Code: e3, Plate II-1
Status: Proposed 2016

Screening and crushing equipment with metal support structure mounted on a 46'x26'x3' concrete pad and 10 piers (143 cubic yards total). Equipment structure will have approximate dimensions of 40'x20'x55' high. The facility will receive coal from Conveyor 5 and discharge to Conveyor 6. The Screening & Crushing Facility is within the approved surface drainage control area and disturbed area.

Conveyor 5
Map Code: e4, Plate II-1
Status: Proposed 2016

54-inch conveyor partially elevated and supported by metal frame structure mounted on concrete pads with the remaining conveyor length constructed on grade and within a reclaim tunnel. Four concrete pads and piers with dimensions 20'x20'x3' pad with 8-foot diameter by 4.5-foot high pier, 34'x18'x3' pad with 10-foot diameter by 4.5-foot high pier, 36'x20'x3' pad with 10-foot diameter by 4.5-foot high pier, and 28'x8'x3' pad with 20'x3'x3' pad, for a total of 259 cubic yards.

Conveyor 5 will receive coal from feeders beneath the Conveyor 4/Radial Stacker stockpile and discharge to the Screening and Crushing Facility. Suspended solids contributions will be minimized by utilizing covered conveyors (Plate II-I, photo log P5) and water sprays. Conveyor 5 is within the approved surface drainage control area and disturbed area.
Emery 2 Expansion Facilities (cont.)

Reclaim Tunnel
Map Code: e5, Plate II-1
Status: Proposed 2016

Corrugated metal tunnel to house a portion of Conveyor 5. The tunnel will be 320 feet long and consist of a 12-foot diameter corrugated metal pipe buried in a backfilled trench. Concrete (141 cubic yards) will be poured to a thickness of 2.7 feet to form a floor surface within the pipe for mounting the conveyor structure. Approximately half the tunnel length will be utilized under the current mine plan. The full length will be utilized during future mine expansion. A 3-foot diameter, 120-foot long escape tunnel is also included with this structure. Coal from the Radial Stacker stockpile will fall through feeders onto Conveyor 5. The Reclaim Tunnel is located within the approved surface drainage control area and disturbed area. Reclamation of the tunnels will consist of excavating cover soil, removing the tunnels, and backfilling the trenches. The cross sectional area of the excavation required for tunnel demolition is 666 square feet for the main tunnel and 232 square feet for the escape tunnel, resulting in 7,893 cubic yards and 1,031 cubic yards of excavation/backfill, respectively. Final surface reclamation costs are included in bond calculations for the entire portal area grading costs.

Conveyor 4/Radial Stacker
Map Code: e6, Plate II-1
Status: Proposed 2016

48-inch radial stacking conveyor supported by metal frame structure. The conveyor will receive coal from the drop chute at the end of Conveyor 2 and discharge to a stockpile. The stacker will travel on a compacted rock surface. The conveyor will be anchored to a concrete pad supporting the drop chute (concrete included with Conveyor 2). Suspended solids contributions will be minimized by utilizing covered conveyors (Plate II-I, photo log P5) and water sprays. Conveyor 4/Radial Stacker is located within the approved surface drainage control area and disturbed area.

Conveyor 2, Phase I
Map Code: e7p1 Plate II-1
Status: Proposed 2016

60-inch conveyor supported by metal frame structure. The 260-foot portion of Conveyor 2, Phase I will be located within the original permit area.

The conveyor is elevated and supported by metal framework anchored to 2 concrete pads with dimensions of 36’x20’x3’. A 10-foot diameter, 4.5-foot high concrete pier is mounted on each pad for a total concrete volume (includes the 2 pad/piers) of 186 cubic yards. The drop chute at the end of Conveyor 2 is supported by a 22’x16’x3’ concrete pad (39 cubic yards) that also anchors the Radial Stacker. Suspended solids contributions will be minimized by utilizing covered conveyors (Plate II-I, photo log P5) and water sprays. Conveyor 2, Phase I is located within the approved surface drainage control area and disturbed area.
Emery 2 Expansion Facilities (cont.)

Conveyor 2, Phase II
Map Code: e7p2 Plate II-1
Status: Proposed 2016

60-inch conveyor supported by metal frame structure. The remaining 680-foot portion of Conveyor 2, Phase II will be located within the expanded permit boundary.

The 365-foot portion of Conveyor 2, Phase II is elevated and supported by metal framework anchored to 2 concrete pads with dimensions of 34'x18'x3' and 36'x20'x3', respectively. A 10-foot diameter, 4.5-foot high concrete pier is mounted on each pad for a total concrete volume of 174 cubic yards (includes the 2 pad/piers).

A 315-foot section of Conveyor 2 is constructed on grade utilizing small, portable pads. The transition pad (to Conveyor 1) dimensions are 23.5'x16'x3', with a volume of 42 cubic yards. Suspended solids contributions will be minimized by utilizing covered conveyors (Plate II-1, photo log P5) and water sprays. Conveyor 2, Phase II will be located within an approved surface drainage control area and disturbed area.

Conveyor 1
Map Code: e8 Plate II-1
Status: Proposed 2016

60-inch conveyor supported by metal frame structure. The 700-foot conveyor system transports coal from the Emery 2 mine portal to Conveyor 2 (Map Code e8).

A 215-foot section of conveyor is elevated and supported by metal framework anchored to 2 concrete pads with dimensions of 20'x20'x3' and 18'x18'x3', respectively. A 10-foot diameter, 4.5-foot high concrete pier is mounted on each pad for a total concrete volume of 102 cubic yards (includes the 2 pads/piers). The remaining 485-foot section is built on grade utilizing small, portable pads. The transition pad dimensions into the mine are 25'x16'x3', with a volume of 44 cubic yards. Suspended solids contributions will be minimized by utilizing covered conveyors (Plate II-1, photo log P5) and water sprays. Conveyor 1 will be located within the approved surface drainage control area and disturbed area.
Emery 2 Expansion Facilities (cont.)

Portals
Identified on Plate II-1
Status: Proposed 2016

This 3-entry portal is designed to provide access to the Emery 2 Expansion operating sections of the mine and for future reserve development. The entries will be established at the bottom of an open boxcut located at the southern edge of the permit area in Section 33. The majority of the excavated material will be used as fill to establish grade to support the conveyor system and mine access road. The excess material from the boxcut will be stockpiled and used in future reclamation. A ramp on a grade of approximately 10% will lead to the bottom of the portal boxcut. Each entry will be approximately 8 feet high by 14 feet wide and will be driven on 45-foot centers. Once established, the portal will be utilized for two purposes: 1) to allow access of rubber-tired vehicles for transportation of men and supplies into the mine and 2) to serve as a coal haulage portal.

Unaffected drainage will be diverted past the portal site to Quitchupah Creek. Affected drainage will collect in retention basin 1 and be pumped to Sediment Pond 3 (UPDES Outfall 005).

Culvert (UC-1)
Map Code: e10 Plate II-1
Status: Proposed 2016

Culvert (UC-1) is a 30-inch diameter CHDPE 800 feet in length. This culvert conveys unaffected drainage upstream of the portals to Quitchupah Creek.

Culvert (UC-2)
Map Code: e11 Plate II-1
Status: Proposed 2016

Culvert (UC-2) is 30-inch diameter CHDPE 760 feet in length. This culvert conveys unaffected drainage to Quitchupah Creek.

Water Tank
Map Code: e12 Plate II-1
Status: Proposed 2016

The 100,000-gallon tank was disassembled at 4th East Portal and reassembled at the current location above the mine entrance portal west of the boxcut. The tank measures 25 feet high by 26 feet in diameter, with the walls sitting upon a concrete footer. The interior of the tank rests on sand. The tank is equipped with an overflow, level indicator, and valves to direct flow.

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

Surface drainage from the tank area will be directed to Pond 3.
Emery 2 Expansion Facilities (cont.)

Ventilation Shaft/Fan
Map Code: e13 Plate II-1
Status: Proposed 2016

A 16-foot diameter raise-bore shaft located west of the Emery 2 Portal boxcut is used for mine ventilation. Depth of the shaft is approximately 120 feet. The ventilation fan and housing previously utilized at 4th East Portal is constructed over the shaft.

Four 4-inch diameter boreholes are installed near the ventilation shaft to provide access for water and power to the mine.

Surface drainage from the ventilation shaft and fan area will be directed to Pond 3.

Powerline
Map Code: e14 Plate II-1
Status: Proposed 2016

An overhead electric powerline extends from the Mine Substation (Map Code e1) along the conveyor belt to Emery 2 Mine portal to provide power for the mine. A line also extends from the powerline in the boxcut to the Ventilation Fan (Map Code e13). The powerline will be 3600 feet in length and have 18 power poles.

Topsoil Stockpile
Identified on Plate II-1 as existing topsoil stockpile T-2
Status: Existing

This existing stockpile is located south of the coal mine waste pile. Salvaged soil from the Emery 2 Expansion area will be stockpiled here. The stockpile will be fully bermed to contain a 100-yr/24-hr rainfall event.

Excess Boxcut Material
Identified on Plate II-1 as Coal Stockpile Area
Status: Existing

This existing coal stockpile area will be used to store excess boxcut material (89,000 cubic yards) not used for fill. The coal stockpile area reports to an approved drainage basin.
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 haul road.

Other than future access or haul roads joining the public roads, Bronco 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 through 18d are the Emery County Encroachment Permit to upgrade county road 915 and to construct an access.

There will be no proposed coal mining and reclamation operations within 100 feet of the right-of-way line of any public road related to the Emery 2 expansion permit boundary.

No public road relocations are proposed for the permit area.

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

This permit 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.
Application having been made by Consolidation Coal Company through Jonathan Pachter, its authorized agent, a fee of $25.00 being paid and a Letter of Financial Assurance in lieu of a bond provided, the Application having been reviewed and accepted, permission is hereby granted Applicant to proceed with the construction of an access for the purpose of routing haul truck traffic into the 4th East Portal with proposed widening of the Cowboy Mine Road #915. Design subject to final approval by the County Engineers or Road Supervisor.

Stipulations:
1. Dust control during construction period.
2. Proper signing while construction is in effect.
3. Posting for safety during construction and traffic control (if needed).
4. Road repairs in the event of damages.
5. Final inspection upon completion of project.
6. Strict compliance with Ordinance 8-7-85A or as amended.

DATED this 16th day of September, 2003.

Supervisor

EMERY COUNTY ROAD DEPARTMENT

By

INFORMATION AND RELEASE

The Emery County Road Department Supervisor inspected said site on the __________ day of ________ 20__, finds the following:

- Deficiencies which must be corrected before release can be considered.
- Released

Supervisor

EMERY COUNTY ROAD DEPARTMENT

By

Person to Contact:

Name: James Byars

Address: P.O. Box 527, Emery, Utah 84527

Phone #: (435) 285-3509

P.O. Box 888 • 300 North 1st West • Castle Dale, Utah 84518 • Telephone (435) 381-5450 • FAX (435) 381-5239
Mr. Rex Funk  
Emery County Road Department  
P.O. Box 889  
Castle Dale, UT 84513  

Re: Consolidation Coal Company – Emery Mine, 4th East Portal  
Roadway Encroachment Application and Maintenance in Lieu of Bond Request  

Dear Mr. Funk:  

Attached please find a completed application for roadway encroachment to affect County Road (Cowboy Mine Road) 915, located to the east of CONSOL’s Emery Mine 4th East Portal. As described in the application, the purpose of the encroachment is to re-route haul truck traffic. In order to accommodate haul trucks, the unpaved road will be upgraded to include widening to allow for two-way traffic, grading, providing proper drainage, applying a suitable gravel cover, and treating the gravel surface with an acceptable dust suppressant, e.g., magnesium chloride. The upgrades just described also apply to the turn-off from CR 915 onto the Emery Mine property.  

In lieu of a bond, CONSOL requests that Emery County accept this letter of assurance that maintenance will be performed on the segment of CR 915 subject to encroachment. The gravel cover will be kept intact, and dust suppressant will be re-applied as necessary to maintain its effectiveness.  

At the end of mine life, CONSOL understands that the county will assume maintenance of the improved segment at that time.  

Please call me with any questions or concerns.  

Very truly yours,  

Jonathan Pachter  
Manager – Environmental Permits  

Attachment  
cc: John Gefferth
ROADWAY ENCROACHMENT APPLICATION

Consolidation Coal Company (Applicant) hereby applies for a permit to encroach upon a roadway within Emery County known as Cowboy Mine Road 915, for the purpose of routing haul truck traffic into the 4th East Portal coal yard at the Emery Mine.

Said encroachment is proposed at the following location upon said roadway: beginning at the north end of CMR 915 at the entrance to the 4th East Portal yard area, and proceeding about 500 feet in a southeasterly direction along the unpaved road and is described as the haul truck re-route. See attached map.

Applicant proposes work to begin on or about October 6, 2003 and to be completed on or before October 14, 2003. A processing fee of $25 is tendered with this Application. Applicant agrees to comply with all laws, ordinances and regulations of all governmental agencies, including, but not limited to Emery County, as well as instructions of the Emery County Road Department Supervisor or his indicated representative. Fees in the amount of ** and a bond in the amount of ** be in force for a period of ** years, are hereby tendered, or will be tendered before a Permit is issued.

DATED this _ day of _ , 20_.

Jonathan Pachter
Manager - Environmental Permits
Title

James Byars
Person to Contact on Job Site
see above

Address
435-286-3509
Phone #

* to a turn-in to CONSOL’s coal yard.
** Please see attached cover and maintenance in lieu of bond letter from applicant.

Mail completed application to:

Emery County Road Department
P.O. Box 889
Castle Dale, Utah 84513
**UMC 817.180**

Existing roads and conveyor systems are contained within approved and carefully maintained drainage control systems. Transportation facilities associated with the final layout of the preparation plant will be designed to comply with this regulation.

**UMC 817.181**

Existing facilities, as approved by the Division, have been constructed to be in compliance with this standard. The best practical technology will be utilized in designing the preparation plant and associated structures to maintain compliance with this standard.
II.B DRAINAGE CONTROLS

**UMC 784.14(a), (b)**

A response to (a) and (b) of this regulation is provided in Chapter VI in conjunction with part (c).

**UMC 784.16 (a) (1) (i-iii), (v), (a), (2), (i-iii), (a) (3) (i), (iii), (b)(1), (b) (2), (c), (d), (e)**

The location and plan views of all ponds, impoundments, and coal processing waste embankments are shown on Plates II-1, II-1A (Proposed Preparation Plant Detail), II-2, II-3, IV-3, and VI-18. This chapter (II), and Chapters IV and VI contain information to describe each structure, provide detailed design and operational criteria (including geotechnical information), and to assess hydrologic impacts. All designs are certified by a qualified, registered, professional engineer. This also applies to any structure which meets or exceeds MSHA requirements. Removal of structures is covered in the reclamation plan presented in Chapter III. As in other instances, this application attempts to consolidate information, where possible, for ease of location.

See Appendix VI-21 (Emery 2 Surface Facility Hydrologic Design Calculations) for a discussion and detailed drainage design.

**UMC 784.22**

Three (3) diversions have been designed for the permit area. Each intercepts overland flow from drainage areas of less than one (1) square mile. These diversions are shown on Plate VI-10 (500 scale) and individually on the following 100 scale maps:

- Waste Disposal Site Diversion (constructed): Plate II-2
- 4 East Portal Diversion: Plate II-3 & Plate VI-10a
- Preparation Plant Area Diversion: Plate II-1

Each diversion is designed to achieve compliance with UMC 817.43 and UMC 817.44. This design information is contained in Chapter VI.

**UMC 817.41-.50**

Mining activities will be conducted so as to minimize changes to the prevailing hydrologic balance in both the permit and adjacent areas. This is accomplished through mine plan considerations and through the implementation of a water management plan as described in Section VI.B.

The mine has the portals located up dip of the mining areas which will prevent gravity drainage from the mine.
The major components of this plan consist of overland flow diversions and sedimentation ponds which are described in Sections VI.B.1 and VI.B.2 respectively. In areas where these methods are impractical, the plan utilizes alternate sediment control methods (see Sec. VI.B.3) or requests sedimentation control exemptions for small areas (see Sec. VI.B.4).

The effectiveness of this plan is monitored by analysis of water samples routinely collected as required by NPDES permits UT 0022616. A compliance history for these permitted outfalls is given in Sec. VI.A.6.

UMC 817.55

Water is discharged into the underground workings of the Emery Mine. It is also proposed for future operations. Surface runoff adjacent to the portal area flows into the mine portal.

UMC 817.57

Within the adjacent area, there are two (2) streams which fall under the definition of part (a) of this regulation, Quitchupah Creek and Christiansen Wash.

As stated in the subsidence control plan in Chapter V, Part B (UMC 784.20), the underground pillar layout will be designed to provide a buffer zone of at least 100 ft. on either side of these streams. These buffer zones will be marked as required by UMC 817.11.

In the mine yard area, the streams are protected by berms which direct runoff, from the affected surface to two (2) sediment ponds. This drainage control, as approved by the Division, effectively protects the hydrologic balance in this area.

The drainage control plan for the permit area is presented in detail in Chapter VI.
II.C PLACEMENT AND HANDLING OF MATERIALS

**UMC 784.13(b)(7), UMC 817.89**

Non-coal waste materials, which may be acid-forming, toxic-forming, or a fire hazard, are temporarily stored in a small area (approx. 800 ft²) dug into the side of the hill in the area south of Quitchupah Creek. This storage area is coded 34 on Plate II-2. The materials are then hauled to a private landfill which is not controlled by Consol.

This containment area is not within eight (8) ft. of a coal outcrop or coal storage area. Fires are prevented and would easily be detected and extinguished if they did occur. Fire hydrants and extinguishers are located at key positions around the surface facilities area. The area is within the approved surface drainage control system.

**UMC 784.19, UMC 817.71-.74**

EXISTING COAL MINE WASTE DISPOSAL SITE

The existing Coal Mine Waste pile is located in the northern portion of area 31, Plate II-1. This pile will remain active for the life of mine. This pile has an active MSHA Coal Refuse ID No.1211-UT-09-00079-01. The MSHA permit granted an initial exemption from the 2 foot compaction requirement, and allows for only lateral extension of the pile in 2 foot compacted lifts in the future. The additional underground development waste that will be placed on the pile will come from future U/G overcast development. The volume will not exceed 600 cu.yds., and will be sampled for acid/toxic parameters and included in the annual report. This will bring the capacity of the Coal Mine Waste Pile to 37,600 cu.yds. The material will be placed in less than 2 foot lifts and compacted per 30 CFR Part 77.215. This material will be moved to the Proposed Permanent development waste disposal site within 12 months after cessation of mining. Consol has entered into an agreement with Covol Engineered Fuels LLC to haul the existing coal mine waste to their DOGM permit pending site in Wellington Utah for processing and sale. The Covol site is currently under SCMRA bond, and the permit is under review by DOGM. The operation will consist of a scalping screen to size the material on site and a front end loader to load onto over the road trucks. This operation will be completed within a two week period. The oversize material that remains on the Consol site will be re-compacted and tested for compaction per Consol’s MSHA permit. No new disturbance is anticipated. We estimate that the piles volume will be reduced by as much as 80%.

PERMANENT DEVELOPMENT WASTE DISPOSAL SITE

A Permanent Development Waste Disposal Site for underground development waste will be constructed on the hilltop adjacent to the northwest coal stockpile. The area has been disturbed previously by removing a gravel subsoil layer for use as fill material outside the mine area and more recently for the base of the coal stockpile. This created borrow pits on both sides of the access road.

The 4.3 acre site will be developed in two stages, with the area south of the road used first. The existing pit will be enlarged by removing gravel down to the underlying blue gate shale, if necessary, to provide sufficient storage volume. The excavated material will be stockpiled on the north side of the road to be used as non-toxic cover material over the waste. Any excess excavated material will be placed in the bermed depression on the west side of the officewarehouse building.

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A safety berm will be constructed on the south side of the access road as the pit advances toward the road. The road will be temporarily relocated to the north to allow for disposal underneath. It will be returned to its original location and grade after that part of the disposal site is filled. The north portion of the site will then be developed.

Initially, the site will be used to bury wastes presently stored on the northwest coal stockpile base. Wastes will be placed and compacted using tracked and rubber tired equipment. Reclamation will be conducted as described in Chapter III, Drainage for the site is controlled by existing sedimentation ponds, Refer to CH VI. Design details and site surveys are contained in Chapter IV
UMC 785.13

During the term of this permit, alternative, experimental mining practices which would require a variance from the environmental protection performance standards of Subchapter K are not proposed.

UMC 785.17(b)(2), (b)(4), UMC 817.21-.23

Prior to the construction of any surface facility, topsoil and subsoil will be removed and stockpiled separately. The site will be visually inspected prior to disturbance for cryptogamic soils. If cryptogams are found, effort will be made to harvest these structures. The cryptogam material will be stored in a dry place until the material can be respread on the completed topsoil stockpile. Following removal of cryptogam's, effort will be made to segregate the top crust (up to 2-inch) of the topsoil from the site. The crust which contains many of the fine roots and nutrients for the cryptogamic material will be respread over the completed topsoil stockpile following roughening and seeding. The cryptogam's will then be selectively respread on the stockpile in areas protected from the effects of wind and water erosion. Removal depths will vary according to the soil classifier's recommendations. Soils will normally be picked up by scrapers but may also be removed by back hoes and/or front end loaders. If vegetation is of sufficient size to potentially cause stockpile instability, it will be removed prior to soil recovery.

Stockpiles will be constructed with a maximum side slope of 2:1 (horiz:vert.) to prevent wind and water erosion. These piles will also be vegetated to assist erosion control. To minimize the effects of wind and water erosion, stockpiled material should utilize surface roughening techniques prior to seeding and mulching. Surface roughening should be performed by a backhoe or excavator to form random depressions from 1 ft to 2 ft in depth. The roughening is to be performed over the entire surface area of the stockpile including side slopes. Berm structures should also utilize some roughening methods to enhance protection from wind and water erosion.

Plates II-1, II-1A (Proposed Preparation Plant Detail), II-2, II-3, IV-3 and VI-18 show the location of both existing and proposed preparation plant topsoil and subsoil stockpiles.

Chapter VII contains the details of the soils plan and Chapter VIII covers vegetation, including temporary, contemporaneous, and final reclamation methods.

It should be noted that a portion of existing subsoil stockpile S-I overlaps the proposed clean coal storage area of the proposed preparation plant area on the operations plan map. This conflict will be resolved prior to construction of the preparation plant facility by utilizing the stockpile in reclamation at the earliest possible time. The respread depth and respread location will be provided to the Division prior to initiating any reclamation. If it is not possible to utilize the stockpile prior to construction of the preparation plant facility, final disposition of this stockpile will be determined in consultation with the Division.

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Surface blasting activities are not conducted by the applicant at the Emery Mine.

Surface blasting was performed by contractors in the development of the 4th East Portal during excavation of the boxcut per the approved blasting plan (Refer to CH IV, Appendix IV-12. Surface blasting will be conducted by contractors in the development of the Emery 2 portals and possibly an access road (Section 7) per an approved blasting plan (refer to CH IV, Appendix 12). The contractor will not store explosives on site. Refer to CH IV, Appendix IV-12a for blasting notifications, waivers and pre-blast surveys.

Explosives are used and handled as directed by MSHA. Currently, explosive storage during mining is not contemplated. If an explosive magazine is required in the future, one will be permitted and bonded.

The requirements of these regulations, concerning disposal construction, inspections, and drainage for coal processing waste banks are covered in chapter IV (part IV.C.1)

While no coal processing waste is produced at the present time, this renewal application proposes a preparation plant in the future. At that time a plan for fire suppression, burned waste utilization, and storage in mine workings will be prepared for approval by the Division and MSHA.

The requirements of these regulations for waste dam and embankment design and construction are covered in Chapter IV (part IV.C.2)

During the term of this permit, Bronco does not plan to conduct any surface operations on prime farmland.
UMC 817.52

In addition to NPDES monitoring of discharge pints, 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, was initiated to abate NOV 03-39-11.

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 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

Refer to page 25a for a discussion on the Windy Gap Process

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
The Emery 2 expansion area will pump approximately 141,000,000 gallons of water per year (gpy) from the mine during the permit term (refer to CH VI Table VI-22). The water that is used for dust suppression is accounted for in the ventilation calculation and the coal moisture consumption calculation. Portions of the water sprayed on the coal are either evaporated by the ventilation process, drain back into the mine drainage system, or is carried out in the product. The consumed volume is accounted for in the ventilation evaporation calculation and the coal moisture consumption calculation.

Mining consumption: See above explanation, and coal moisture consumption calculation
Ventilation consumption: See Ventilation evaporation calculation
Coal producing consumption: See coal moisture calculation

Ventilation evaporation: Using the Valley Camp of Utah, Inc. Belina Mine’s estimate outlined in the Windy Gap Process document, the forecasted maximum mine works being ventilated during the permit term is 200 acres or 0.313 sq.mi. Using 8.6 ac-ft/yr/sq.mi., the current underground works account for ac-ft/yr/sq.mi. * 0.313 sq.mi. = 2.7 ac-ft of water evaporated.

Sediment pond evaporation: Pond 1 (3.1 ac.), pond 6 (1.8 ac.), and pond 9 (0.2 ac.) would evaporate 5.1 acres * 4.11 = 21 ac-ft/yr consumed.

Surface Dust Control water consumption: Dust control on the surface facilities consumes 5,000 gallons per day 5000 gal/day * 251 operating days/yr = 1,255,000 gal/yr or 3.9 ac-ft/yr consumed.

Springs and seep effects from subsidence: There have been no reports of seeps from subsidence.

Alluvial aquifer abstractions into mines: There are no water infiltrations from alluvial systems into the mine.

Alluvial well pumpage: There is zero pumpage from alluvial wells.
Deep aquifer pumpage: There is zero pumpage from deep aquifer wells.
Post mining inflow to old workings: There is zero post mining inflow to the old workings

Coal moisture consumption: The inherent moisture in the Emery coal is approximately 4%. The as received moisture of the coal is approximately 6%. The maximum Emery Mine production could be 1,300,000 tons of coal. Using these values, the consumption could be (0.02 * 1,300,000 tons * 2000 lbs/ton)/ 8.33 lbs per gal * 325,850 gal per ac-ft. = 19.2 ac-ft/yr consumed.

Direct diversion: There are no direct diversions at the Emery mine therefore zero consumption.

Adding the approximate consumptive losses together equals 46.8 ac-ft. Emery 2 is forecasted to discharge approximately 141,000,000 gallons (432 ac-ft) of water per year. Doing the math, you arrive at a 385.2 ac-ft. per year enhancement to the Colorado River Basin. Water consumption by the Emery mine will not jeopardize the existence of or adversely modify the critical habitat of the Colorado River endangered fish species.
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.
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.

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.

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. No air monitoring plan has been proposed.

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 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.
UMC 817.99

At any time a slide occurs which potentially may have an adverse effect on the public, property, health, safety, or the environment, Consol, as operator, will notify the Division by the fastest available means and comply with any remedial measures required by the Division.

UMC 817.121 -.126

All of the issues concerning subsidence, including monitoring, are covered in Part B of Chapter V.

UMC 817.131

In the event of temporary cessation of operations, surface access openings to underground operations will be effectively supported and maintained and surface facilities will be secured. The provisions of the approved permit will be followed during any period of such temporary cessation.

If mining and reclamation operations are to be temporarily ceased for a period of 30 days or more, Consol will provide to the Division, the notice and information required by part (b) of this regulation.

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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.