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TECHNICAL ANALYSIS

Coastal States Energy Company
Skyline Mine
ACT/007/005

December 1, 1989

UMC 817.11 Signs and Markers - JRH

Existing Environment and Applicant's Proposal

The operator has posted and maintained signs and markers as required by this section which are specifically described in part 3.2.7 of the Mining and Reclamation Plan (MRP) and below.

The operator has posted identification signs at the points of access to the permit area from public roads and highways. Information on the signs includes the name, business address, telephone number, and identification numbers of current mining and reclamation permits and other authorizations to conduct mining and reclamation activities.

Perimeter markers have been placed at those areas affected by surface mining activities and those areas that will be impacted during reclamation. These markers are readily identified as blue steel fence posts.

Topsoil signs are posted at all topsoil stockpile areas. These signs will remain in place until the topsoil is redistributed during final reclamation.

Stream buffer zone signs have been placed at those points of the operation where public or employee access to perennial and intermittent streams is possible. Those points include the portal area on the southwest and middle forks of the upper Eccles Creek, the pump houses along Eccles Creek and the loadout facilities near Eccles and Pleasant Valley Creeks and along the south fork of Eccles Creek at the South Fork portal breakout.

Compliance

The operator is considered to be in compliance with the requirements of this section.

Stipulations

None.

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UMC 817.13 Casing and Sealing of Exposed Underground Openings: General Requirements - JRH

Existing Environment and Applicant's Proposal

Information regarding this rule is referenced to part 4.9 of the MRP.

The operator has stated that temporary or permanent abandonment of water and monitoring wells will be in accordance with the requirements of the State of Utah, Administrative Rules for Water Well Drillers, Division of Water Rights.

The operator currently has no plans to transfer any exploratory or monitoring wells for use as water wells.

Compliance

The operator is considered to be in compliance with the requirements of this section.

Stipulations

None.

UMC 817.14 Casing and Sealing of Exposed Underground Openings: Temporary - JRH

UMC 817.15 Casing and Sealing of Exposed Underground Openings: Permanent - JRH

Existing Environment and Applicant's Proposal

Information regarding the requirements of these sections is found in part 4.9 of the MRP.

The operator has committed to portal closures in accordance with 30 CFR 75.1711.

Although the gradient from the portals is down-dip, there is no conclusive information found within the MRP indicating that the mine workings will not eventually fill with water and discharge through at least one of the portal openings.

The operator has committed to the design and construction of hydrologic seals or drains to control the discharge of water from the mine workings in the event that such controls are necessary.

Current designs for the portal closures include backfilling the portals a minimum of 25 feet in accordance with 30 CFR 75.1711 and additional backfilling over the portals for reduction of the highwalls to meet AOC requirements.

Compliance

This section is considered to be technically adequate. The operator has committed to temporarily close mine openings in accordance with the requirements of this section of the regulations.

Because of the difficulty in determining the amount and final design requirements for the hydraulic design of the portal openings, the operator's commitment to complete this design within the permit term in which these reclamation activities will occur is considered to be adequate. The operator has recognized that the evaluation and the design of this problem is part of the Mining and Reclamation Plan and that the best time to complete this design is at the time of reclamation and in conjunction with the permit renewal to be accomplished immediately prior to that time.

The final design of portal drainage controls and potential discharge may be deferred until reclamation, when the determination of their use can be more readily determined.

Stipulations

None.

UMC 817.21-.25 Topsoil - LK/JSL

Existing Environment and Applicant's Proposal

The soils at the Skyline Mine are primarily colluvium, residuum with some alluvium derived primarily from sandstone. The soils tend to be gravelly with clay in the subsoils.

A udic moisture regime with a cryic temperature regime prevail. Average annual precipitation is between 25 and 30 inches, with the mean annual soil temperature higher than 0°C but lower than 8°C. The topography of the area is gently sloping to steep ranging from 0 to 60 percent slope. The aspect is generally north and south. The soil capability class ranges from VIe to VIIe.

Under native vegetation, the erosion hazard associated with these soils is moderate. The erosion hazard for disturbed soils is primarily severe (primarily due to steep slopes). These soils are generally well drained and (except for soil unit 2 which is poorly drained) range in texture from loam to fine sandy loam. The pH of the A1 Horizon ranges from 6.2 to 7.3 with the slightly acid soils being affiliated with the spruce-fir soils. The electrical conductivity ranges from 0.20 to 3.22 mmho/cm with an average of 1.07 mmho/cm. The depths of reported A horizons range from 4 to 32 inches.

The Skyline Mine soils resource at the loadout and portal yards is surveyed at the Order 1 scale while the soil over the conveyor route has been surveyed at an Order 2 scale. Two soils series and 14 soil units have been identified within the permit area. The soil at the loadout pad site consisted primarily of coarse-loamy, mixed mollic cryofluent. The soils along the conveyor routes are varied but are primarily loamy-skeletal mixed typic cryoborolls and coarse-loamy, mixed cumulic cryoborolls. The waste rock disposal area soil series have been extrapolated from adjacent soils. The two series predominant at the waste rock site are the Croydon and Trag series.

The Croydon and Trag taxonomic classification units have been identified as fine-loamy, mixed argic cryoboralls and fine-loamy, mixed typic argiborolls respectively. The soils in Unit 1 and 2 have shallow ground water levels, approximately 8-10" for Unit 2 and 18-24" for Unit 1. Soil profile depths generally range from 40 to 60 inches. Soil Unit 9 contains 95% rock outcrop and 5% soil.

Compliance

UMC 817.21: General Requirements

Topsoil was removed from the portal site, conveyor bench and loadout areas and is stored in topsoil piles at the portal site and the loadout area. No topsoil was removed from the waste rock disposal site because the site had been previously disturbed. Topsoil piles were seeded to provide long-term protection (Section 4.6). The operator's plan complies with the provisions of UMC 817.21.

UMC 817.22: Removal

Existing vegetation and topsoil were removed prior to surface disturbance. Soil was excavated from 0-45 inches in the aspen and spruce/fir soils, and 0-8 inches in the sagebrush/grassland soils.

Mass balance of soils removed are summarized in the bonding section of this Technical Analysis. Total volume removed is 107,321 cubic yards. No substitute materials are proposed (Section 4.6.4). The operator has complied with UMC 817.22.

UMC 817.23: Storage

Topsoil materials that were removed were stockpiled at the portal area, loadout area and near the South Fork breakout area. All stockpiles were seeded during the first available planting season with the seed mix in Table 4.6-1. The topsoil was stockpiled on slopes less than 2h:1v and all stockpiles are located outside the influences of operations. Growth of noxious plant species on these stockpiles will be prevented. Signs identifying the topsoil have been placed on each stockpile (Sections 4.6.3 and 4.6.5). This action complied with the requirements of UMC 817.23.

UMC 817.24: Redistribution

Topsoil will be redistributed over areas to be revegetated. Areas will be ripped prior to topsoiling to prevent slippage planes. Topsoil will be redistributed in an approximate uniform thickness. Travel on the redistributed topsoil will be limited to minimize compaction. Surface compaction of topsoil will be mitigated by ripping to a minimum 6" depth (Section 4.6.4). Topsoil placement will occur just prior to seeding and mulching (Table 4.2-1).

Topsoil redistribution depths are identified in Volume 5 under Engineering Calculations (Section 17). In summary, north slopes will receive 2.5 feet, south slopes will receive 2.0 feet and the loadout area and waste disposal site will receive 1.0 feet of topsoil. The operator's proposal will comply with the requirements of UMC 817.24.

UMC 817.25: Nutrients and Soil Amendments

Following redistribution, topsoil will be fertilized based on soil tests conducted prior to revegetation. Topsoil will be analyzed for N, P, K, Fe, Mg, Mn, Zn, Ca, and pH to determine fertilizer formulation and application. Currently, it is expected that 100 pounds per acre of available nitrogen will need to be applied. Fertilizer will be applied at the time of seeding by the same methods as seeding, but will not be mixed with the seed (Section 4.5). This plan will comply with the requirements of UMC 817.25.

Stipulations

None.

UMC 817.41 Hydrologic Balance: General Requirements - RPS

Existing Environment and Applicant's Proposal

The applicant proposes to control surface runoff from disturbed areas by using a combination of diversions, berms, channels, culverts, and two sedimentation ponds. At the main mine faciltiy area, all but approximately 7.2 acres (value determined by Regulatory Authority from Plate 3.2.1) of undisturbed drainage will be diverted from the disturbed area. At the loadout area, all but 4.26 acres of undisturbed drainage will be diverted from the disturbed area (Section 13, Volume 5).

Thirty-three acres of disturbed area drainage at the main facilities area and 8.3 acres of disturbed area drainage at the loadout area will report to sedimentation ponds for treatment prior to discharge from the permit area (Sections 7 and 13, Volume 5). Water produced within the mine is discharged via Mines #1 and #3 to the mine facilities sedimentation pond for treatment.

The ponds are adequately sized to contain the runoff expected from the 10 yr. - 24 hr. precipitation event and the design sediment volume (see discussion in TA section in UMC 817.46). The portal area pond has an additional volume available for treatment of mine water discharge (Section 7, page 2, Volume 5). Details of the sedimentation pond and diversions are discussed in Section UMC 817.43, 817.44, and 817.46 of this TA. The applicant proposes to treat 16.3 acres of disturbed drainage with alternative sediment controls (e.g., revegetation, paving, straw bales). Disturbed runoff from the waste rock disposal pit (2.09 acres) will be contained within the pit and will not discharge from the area.

Diversion channels proposed for the site are adequate to pass, at a minimum, the expected peak flow from a 10 yr. - 24 hr. precipitation event. Channel linings of riprap are proposed as necessary to reduce channel velocities and provide channel erosion protection (Sections 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 14, and 19 of Volume 5).

Compliance

The operator has proposed designs utilizing best technology available to minimize water pollution in the permit and adjacent areas. Sections UMC 817.42, 817.43, 817.44, 817.46, and 817.47 dicuss details of the applicant's proposal and the Regulatory Authority's Technical Analysis. The applicant's proposals will meet the general requirements for this section.

Stipulations

None.

UMC 817.42 Hydrologic Balance: Water Quality Standards And Effluent Limitations - RPS

Existing Environment and Applicant's Proposal

The applicant proposes to route most disturbed area drainage from the main mine facilities pad and loadout areas (total disturbed area of 42.1 acres) to sedimentation ponds for treatment prior to discharge off the permit area. The applicant commits to retaining the loadout area sedimentation system at the site until the revegetation and drainage requirements of UMC 817.46 (u) are met (Sections 4.1, p. 4-3 of the MRP). The sedimentation pond at the mine facilities area will be removed during the intitial phase of reclamation due to:

1. Reconstruction of the Eccles Creek drainage necessitates removal of the pond to ensure a stable channel location (i.e. canyon bottom).

2. Following reconstruction of the Eccles Creek drainage, the reclaimed area on the north would not report to the pond without extensive diversion structures. The associated redisturbance of the reclaimed area with removal of those structures and the design of the backfill required for those structures would not minimize the disturbance to the hydrologic balance and meet approximate original contour requirements.

Sediment control for the reclaimed mine facilities area during the bond period will be accomplished using alternative sediment control methods (i.e. silt fencing, revegetation, terracing). Additionally, the site conditions are favorable to rapid revegetation following regrading which will further the erosion protection.

The applicant proposes to utilize the option presented under subsection (a)(3) of this regulation to treat drainage from several areas using alternative sediment controls. The total for these areas is approximately 16.3 acres. This regulation essentially gives authority to the Regulatory Authority to grant an exemption for small areas from the requirement that all disturbed area drainage must report to a sedimentation pond.

Twenty-five areas of the existing site fall under this criteria (Section 3.2.12, Volume 2, MRP). UMC 817.42(a)(3) requires that the applicant utilize alternative sediment control measures for these areas. The applicant discusses each area and the associated proposed sediment control structure or measure in Section 3.2.12 found in Volume 2. Some of these areas are classified as "Special Exempt Areas". These areas are paved approach areas from the State highway or County roads and are located within the right-of-way for those roads.

The alternative sediment control areas are largely small, isolated areas that are unable to report to one of the two sedimentation ponds. An exception to this generalization is the waste rock disposal pit. The disturbance associated with the waste rock disposal pit is approximately 2.0 acres (not including access road). The disposal area is located in a pit and surface runoff from the disturbed area will be retained within the pit. A sedimentation pond for this area is unnecessary and infeasible. The applicant has presented calculations for the runoff expected from a 25 yr. - 24 hr. precipitation event (Section 15, Volume 5) for the 2.09 acres of disturbed area and 1.57 acres of undisturbed hillslope adjacent to the pit. The applicant has presented a disposal schedule for the pit that demonstrates the pit will have adequate volume for total retention of the runoff volume (25 yr. - 24 hr.) throughout the life of the facility and during the reclamation period (Section 16, Volume 5).

A diversion to route the small area of undisturbed drainage from the pit is not feasible due to potential stability problems with the hillslope installation. The Division feels a diversion is not necessary at this waste disposal location due to the small area of the undisturbed drainage. The total expected runoff <u>volumes</u> for the 10 yr. - 24 hr. and 100 yr. - 24 hr. precipitation events are 0.06 Ac-Ft and 0.14 Ac-Ft. respectively (SCS methodology). These runoff quantities are considered to be insignificant and will be contained within the disposal pit.

<u>Compliance</u>

The Applicant is in compliance with this regulation.

<u>Stipulation</u>

None.

UMC 817.43 Hydrologic Balance: Diversions And Conveyance of Overland Flow, Shallow Ground Water Flow, And Ephemeral Streams - RPS

Existing Environment and Applicant's Proposal

The control of drainage at the site is achieved using a system of temporary diversions and culverts to divert most undisturbed (areas not affected by mining operations) drainage from the facilities and loadout disturbed areas. Mine yard drainage systems at the loadout and facilities areas collect surface flow from the disturbed area and route it to an associated sedimentation pond.

USBR culvert nomographs or Manning's Equation at typical slope were used to calculate and verify the culvert or diversion capacities. The analysis is presented in Volume 5 of the MRP. One exception to this approach is presented. The application contains a stage-discharge curve for the middle branch of Eccles Creek inlet (CU-2). The inlet was constructed essentially as a drop inlet type spillway, so this analysis is appropriate. The culverts were largely analyzed assuming inlet and outlet control conditions to ensure culvert capacity for the predicted 10 yr. - 24 hr. flow event.

The application presents several designs for concrete swales located within the sediment pond drainage boundaries. These swales largely have the necessary freeboard to meet the requirements of subsection (f)(2) of this regulation. However, the calculations indicate that the 0.3 ft. freeboard requirement is not met in all cases.

However, the operator used conservative design flows in the design of each swale. Essentially, the disturbed area at the mine facilities area was divided into three drainage areas with each of these areas containing several diversions. The entire disturbed area at the loadout site was used to generate the design peak. Each of the swales was designed using the entire design peak from each subarea. In reality, only a portion of each peak will report to each diversion/swale. In addition, the freeboard for these swales will be provided by ground level above the concrete portion of the swale.

Compliance

The applicant is in compliance with this regulation.

Stipulations

None.

UMC 817.44 Hydrologic Balance: Stream Channel Diversions - RPS

Existing Environment and Applicant's Proposal

The applicant has proposed a system of culverts to divert the flows from watersheds identified as NB, MB, and SB beneath the mine facilities disturbed area (Plates 3.2.4-2 and 3.2.1-1, Vol. 2). The flow from the north branch watershed is stated to be intermittent in nature, with the middle and south branches classified as perennial. The majority of the seasonal baseflow for Eccles Creek originates in the middle fork drainage. A 100 yr. - 24 hr. design precipitation event was used in the design work for the operational phase. Technical analysis of the design resulted in the conclusion that the design is adequate with respect to capacity.

Predicted peak flow values for each structure were analyzed utilizing the SCS Curve Number methodology (NEH-4, SCS, 1974). The results of that analysis are summarized in Section 3 of Volume 5. The peak flow values were determined with direct consultation from the Division and the applicant's values are identical to those of the Regulatory Authority.

The application has presented designs for the reclamation of the mine facilities area channels in Section 18 of Volume 5. The channel designs are based upon a 100 yr. - 24 hr. design peak flow. Technical analysis of these designs demonstrate that reclamation of the channel is technically feasible. A compound channel design incorporates a floodplain designed to pass the 100 yr. - 24 hr. flow event and a seasonal flow channel with a capacity for the 10 yr. - 24 hr. event (Section 18, Volume 5, MRP). This design approximates the premining and existing upstream configuration of the channel. The MRP contains cross-sections of the upstream channel configuration in Volume 3 (Maps 4.19.5-1 through 4.19.5-4). Longitudinal profiles of the reclaimed channels (with 100 ft. of upstream undisturbed channel) are presented on DWG. 4.4.2-1B1 in Volume 3. Adequately sized riprap and filter blanket gradations are additionally proposed to ensure channel stability (Section 18).

At the loadout area, Eccles Creek was diverted during the original construction of the site in the early 1980s. The stream channel was approved by the Division during that period and the channel constructed according to that approval. During the past decade, the stream diversion is stablizing and the stream banks are revegetating. The MRP states that further reclamation of the channel is not planned. The operator feels the channel is stablizing and meets the criteria of UMC 817.44 (d). Further reclamation efforts would disturb the stabilized system and would be counter-productive.

Based upon site inspections of the channel for the past 10 years, the Division concurs with this plan at this time. Based upon the rate of recovery of the channel during this period, it is foreseeable that the channel will be fully recovered prior to the reclamation of the facility (projected life of the facility is approximately 20 years). If at the time of reclamation, the channel does not meet the criteria of UMC 817.44, the operator will be required to reclaim the channel to those standards. Bonding calculations (contingency costs) have accounted for the cost to design the final channel if needed.

The reclamation plan proposes to replace the culvert identified as CD-10 (operational phase designation) during the reclamation phase (Plates 3.2.1-3 and 4.4.2-1C) with a pipe arch designated as CD-17 with sufficient capacity to pass the expected 100 yr. - 24 hr. precipitation event. The culvert is necessary to provide access to the site as approved for the postmining land use. Additionally, culvert CD-12 will be left onsite adjacent to the county road to Clear Creek to provide for road drainage and access to the lower site from the east.

The reclamation plan also dictates removal of the well house crossing culverts and the South Fork Breakout access culvert located on the South Fork of Eccles Creek. The Eccles Creek channel has been impacted and rechannelized from the construction of State Highway 264 by the Utah Department of Transportation (UDOT). The well house crossings will be removed and the area restored to approximate existing channel configurations in the immediate area and conform to the specifications of UDOT. The plan presents designs for a restored channel in the South Fork Breakout area that demonstrates the capacity and stability to pass a 100 yr. - 24 hr. precipitation event (Section 19, Volume 5).

The diversion at the waste rock disposal area identified as DU-5 will be constructed to pass the 100 yr. - 24 hr. event during the operational phase of the facility. No further enlargement of the channel will be required. Diversion UDD-2 (Map 4.16.1-1B) will be reconstructed to pass the 100 yr. - 24 hr. event and swale 10 will be removed during the reclamation of the area.

Compliance

The applicant is in compliance with this regulation.

Stipulations

None.

UMC 817.45 Hydrologic Balance: Sediment Control Measures - RPS

Existing Environment and Applicant's Proposal

The disturbed area drainage will be controlled and treated using a sedimentation pond system, berms, diversions, concrete swales and straw bales/silt fences. Erosion of diversions will be minimized as adequate riprap protection has been proposed. Disturbed area drainage that is unable to report to the sedimentation pond due to geographical constraints will be treated in treatment structures (straw bales) or sediment control measures (e.g. paving, revegetation, natural vegetation filters, etc.) which will be implemented as necessary in order to minimize sediment contribution off the permit area. (see TA section UMC 817.42 for discussion of these alternative sediment control areas).

Compliance

The applicant is in compliance with this regulation.

Stipulations

None.

UMC 817.46 Hydrologic Balance: Sedimentation Ponds - JRH

Existing Environment and Applicant's Proposal

An evaluation of the embankment for the loadout facilities sediment pond in found under Section 1 in Volume 5 of the MRP.

The combined inslope and outslope of the loadout facilities sediment pond is 4:1, less than the 5:1 criteria as indicated in part (m) of this section. However, analysis provided by the operator indicates that the minimum factor of safety in all cases for the the pond embankment is not less than 2.0. Based on these calculations, it can be determined that the embankment is stable under normal operating conditions and is in accordance with the requirements of part (m) of this section and that a variance from the specific requirements of this section of the regulations is considered appropriate.

The mine facilities sediment pond is incised into the lower bench of the mine facilities area. Portions of the pond embankment are excavated from solid rock and the earthen embankments are constructed at a 2:1 slope. This sedimentation pond is considered to meet the design standards for stability.

Compliance

The operator is considered to be in compliance with part (m) of this section.

Stipulations

None.

UMC 817.46 Hydrologic Balance: Sedimentation Ponds

Existing Environment and Applicant's Proposal

The operation utilizes two sedimentation ponds to treat drainage from disturbed areas at the mine facilities and loadout areas.

Loadout Area Pond

The sedimentation pond at the Skyline mine loadout area is an embankment type basin with a capacity of 1.18 AF at the elevation of the primary spillway (7919.71 ft.). A stage-volume curve for the pond generated from Plate 3.2.1-4 by the Regulatory Authority is presented in the Appendix of this document. The spillway system consists of a drop inlet type primary spillway with a manual decant valve at an elevation of 7915.69 ft. which is above the maximum elevation designed for sediment volume (7915.6 ft.). The pond is located adjacent to the mine facilities and as near as possible to the disturbed area. Plates 7-1 and 7-2 can assist the reader with interpretation of the following discussion.

Drainage from 8.3 Ac (Regulatory Authority value is 8.39) of disturbed area is routed to the pond for treatment prior to discharge off the permit area. A mine yard drainage system collects the drainage through a series of diversions and culverts. This system reduces the flow length for surface flow from drainage on the mine pad and therefore will minimize erosion and sediment production from the disturbed area.

The first phase of the Regulatory Authority's technical analysis of the pond design involved determining the expected runoff volumes for different design storms (10 yr. - 24 hr., 25 yr. - 24 hr., 100 yr. - 24 hr.). Drainage area for the sediment pond was digitized, a representative curve number was selected and appropriate rainfall depths were selected for the storms.

Using SCS curve number methodology, the expected runoff volumes for the design precipitation events were calculated. The results of those calculations verify that the applicant's values are correct.

Phase two of the analysis was to determine the appropriate design volume for accumulated sediment from the disturbed area. The applicant used the Universal Soil Loss Equation (U.S.L.E.) (Section 13, Volume 5). The applicant does not propose any discharge from the mine to the pond.

Based upon Plate 7-2, the Regulatory Authority calculated a stage- volume curve for the proposed pond (attached). The curve verifies the applicant's curve presented in Section 13 of Volume 5 (page 9 of 13). The curve demonstrates that the pond is adequately designed with respect to the 10 yr. - 24 hr. runoff volume and the required sediment volume from the disturbed area. The volume of the pond is sufficient (below the top of the embankment) to contain a 10 yr. - 24 hr. precipitation event runoff and design sediment volume of 1.2 ac.-ft. The primary spillway is located at an elevation of 7919.71 feet. The application states the primary spillway would have to be raised less than one (1) inch to provide total containment of the runoff and full sediment volume (page 4, Section 13, Volume 5). The Regulatory Authority feels this is not necessary due to the inherent low accuracy in the methods used to calculate the runoff and sediment volumes. The applicant's values are within the range of acceptability.

The dewatering system for the pond consists of a manual decant valve located at an elevation of 7915.69 ft. (see Plate 3.2.1 - 4A). The operator commits to retaining all runoff for a minimum period of 24 hours prior to operation of the decant valve.

The applicant has proposed to survey the pond to determine the accumulated sediment volume (Section 3.2.1, Volume 2). The MRP contains a commitment to clean the pond when sediments accumulate to 60 percent of the design volume. The calculated cleanout volume is 0.13 AF which will occur at an elevation of 7915.2 feet.

A technical analysis of the spillway system was conducted utilizing hydraulic theory applicable to drop inlet type structures. Values of weir, orifice, and pipe flow were calculated for incremental changes of head of 0.2 feet. The resulting stage - discharge curve is presented in Section 13 of Volume 5. From this curve we can conclude that the spillway is sufficiently designed. The primary spillway has the capacity to discharge the 25 yr. - 24 hr. event (17.34 cfs) at an elevation of 7920.68 ft. which provides 1.32 ft. of freeboard to the crest of the embankment.

The top width of the embankment ranges between 8 and 15 ft which generally meets the criteria of (H + 35)/5 where H = height of the embankment. Plate 7-2 depicts an 8 ft. embankment height and 2:1 slopes for the embankment. Section 1 of Volume 5 presents a stability analysis that demonstrates the pond is stable with those slopes. The applicant has committed to the requirements of UMC 817.46 (r) relative to quarterly pond inspections. A certification of the constructed pond by a registered professional engineer is presented in Section 3.2.1, page 3-17A and 3-17B, Volume 2.

The applicant has committed to leave the sedimentation pond and all associated diversions at the loadout site until the requirements of 817.46 (u) are met.

Mine Facilities Area Sedimentation Pond

The sedimentation pond at the mine facilities area is an excavated pond with a depth of 19.6 ft. to the spillway. Section 7 of Volume 5 presents the sedimentation pond design. The pond is designed to completely contain the expected runoff volume from a 10 yr. - 24 hr. precipitation event with the design sediment volume.

To facilitate design, the applicant utilized the option presented in 817.46 (b)(3) and applied a 0.1 AF of sediment storage volume for each acre of disturbed area proposed by the applicant (33.79 acres). This is a conservative approach when compared with design sediment volumes predicted using the Universal Soil Loss Equation and sediment delivery ratios. The design volume for sediment was determined to be 3.38 AF.

An additional volume is available in the pond to treat mine water discharge. The application states that volume is 97,550 cubic feet. The Regulatory Authority used Plate 3.2.1-2B to develop a stage - volume curve for the pond (attached). Analysis of that curve suggests that the 97,550 cu. ft. presented by the applicant may be overestimated. However, the value determined by the Regulatory Authority appears to be sufficient to treat current mine discharges. A precise value cannot be determined by the Regulatory Authority due to discrepancies in the MRP relative to the top elevation of the pond. Recognizing that the analysis conducted by the Regulatory Authority is approximate, the volume available for mine water discharge to an elevation of 8582.75 ft. is about 65,000 cubic feet.

Conversations with the operator have indicated that the volume of mine water discharge reported in the MRP is likely overestimated. Instrumentation used to measure the discharge is not

completely representative of the actual discharge. Calibration of the totalizer meter and water handling practices (i.e. transfer of water from Mine #1 to Mine #3) contribute to an inflated estimate of the discharge volume.

The pond spillway is designed to pass the 100 yr. - 24 hr. precipitation event of 74.3 cfs with approximately 1.6 ft. of head (section 7, p. 5 of 6, Volume 5). A stage - discharge curve developed by the Regulatory Authority (attached) verifies the values presented by the applicant. An emergency spillway is not provided at this pond due to the incised construction. A manual decant valve is provided at an elevation of 8570.6 feet. The applicant commits to removal of the sediment when the volume accumulates to 60 percent of the design volume. That volume is 2.03 ac. - ft. and the corresponding elevation is approximately 8567.1 feet. The applicant proposes to survey the pond to determine the accumulated sediment volume due to the constant full nature of the pond due to mine water discharge. A certification report required by subsection (r) of this regulation is found in Section 3.2.1 of Volume 2.

Compliance

Analysis conducted by the Regulatory Authority using information provided in the MRP indicates that the sediment pond may have a volume available for mine water discharge that is less than the reported value in the application. The Regulatory Authority has discussed this issue with the applicant and it is apparent that the design and calculations can be revised to more accurately reflect the existing sedimentation pond system. The pond performance relative to total suspended solids and settable solids limitations has been acceptable to date. Stipulation UMC 817.46 - (1) - RS is required to revise the information presented in the application to more accurately define the sedimentation pond function.

The design for the reclamation phase sediment pond at the loadout area does not contain provisions for a spillway system required by subsections (g) and (i) of this regulation. The MRP should be revised to provide this information. Therefore, stipulation UMC 817.46 - (2) - RS is required for approval.

Stipulations UMC 817. 46 - (1-2) - RS

1. Prior to June 1, 1990, the applicant must submit revisions to the mine facilities area sediment pond design criteria and calculations, which include current operating discharges and updates, drainage area values, sediment volume and yield predictions, stage - volume calculations, and detention time modeling as appropriate. This information will be supplied in accordance with UMC 817.46 and 817.49.

2. **Within 90 days of permit issuance, the permittee shall submit an adequate design for a spillway system for the loadout area sediment pond to be installed during the reclamation period.**

UMC 817.47 Hydrologic Balance: Discharge Structures - RPS

Existing Environment and Applicant's Proposal

The applicant has proposed to install an energy dissapator for the discharge from the spillway at the loadout area sedimentation pond (Section 13, Volume 5). The design of the structure is based upon the expected exit velocities for the design event of 18.31 cfs. Section 13 presents a computer model output of the pond that demonstrates the discharge expected from a 100 yr. - 24 hr. event is 13.1 cfs. Therefore, adequate dissipation measures are proposed for the discharge.

The discharge from the sedimentation pond at the mine site facilities area reports directly into the 72 inch bypass culvert. Therefore, energy dissapation measures are unnecessary for this pond. This culvert additionally acts as a stream crossing for Eccles Creek at State Highway 264. Energy dissapation of the flow for this culvert was provided during the construction of the State Highway. Site inspection indicates that the flow is adequately dissapated for the flows experienced since the culvert installation.

Compliance

The applicant is in compliance with this regulation.

Stipulations

None.

UMC 817.49 Hydrologic Balance: Permanent And Temporary Impoundments - RPS

Existing Environment and Applicant's Proposal

The applicant has committed to removal of the sedimentation ponds prior to final abandonment of the site. There will be no permanent ponds or embankments at the site. The applicant has submitted the inspection report required by 817.49 (h) (Section 3.2.1, P. 3-17B, Volume 2) for the loadout area pond. A report (817.49 (h)) for the portal area pond is not required because the pond is an incised structure on the mine pad.

The loadout area pond will be enlarged to treat the drainage from the loadout disturbed area during the reclamation bond period (phase I reclamation). The sedimentation pond at the minesite will be reclaimed during phase I reclamation with alternative sediment control measures used to treat and contain sediment within the site during the revegetation period.

The sedimentation pond at the portal area is an excavated pond with sideslopes generally 2:1. A portion of the pond is excavated in bedrock with steeper sideslopes and has been determined to be stable. Erosion protection at the inlets is provided due to the constant level of the pond water surface from mine dewatering operations.

Compliance

The applicant is in compliance with this regulation.

Stipulations

None.

UMC 817.50 Hydrologic Balance: Underground Mine Entry and Access Discharges - JRH

Existing Environment and Applicant's Proposal

Information regarding this section of the regulations is found in parts 3.2 and 4.11 of the Mining and Reclamation Plan.

The operator states that the mine portals have been designed to ensure that water will not be gravity discharged from the mine. The portals will have a minimum negative (in mine) slope of four percent to prevent any gravity discharge.

All of the mine workings are located down dip from the entries which precludes gravity discharge. Upon abandonment of mining activities, the entries will be sealed as indicated in part 4.9 of the plan.

Compliance

The operator is considered to be in compliance with the requirements of this section.

Refer also to those comments under TA Sections UMC 817.14 and 817.15 regarding the reclamation and sealing of the mine entries.

Stipulations

None.

UMC 817.52 Hydrologic Balance: Surface and Ground Water Monitoring - RPS/DD

Existing Environment and Applicant's Proposal

Surface and Ground water monitoring has been conducted at the site since 1979 to establish the baseline and operational phase conditions of the hydrologic balance for the first five year permit term. The applicant has proposed to continue monitoring the hydrologic system with a sampling scheme that is largely consistent with Division guidelines. Plate 2.3.6-1 depicts the proposed surface and ground water monitoring sites to be used to monitor potential impacts to the system. Tables 2.7.3-1 through 2.7.3-3, Volume 1, summarize the water monitoring stations and proposed parameter list.

The operator's current monitoring plan consists of collection of samples from 25 surface sites (including two NPDES points), 9 wells, and 15 springs. Baseline and operational phase water monitoring data are submitted in Volume 4 and the Volume entitled "Water Quality Data". Update sheets for the monitoring results will be submitted on a quarterly basis within 90 days of the end of the sample quarter (Section 2.4.4).

The proposal (Section 2.4.4) includes a commitment to continue the monitoring program throughout the post-mining period.

Coal will be mined from three seams in the basal coal zone of the upper coal-bearing member of the Blackhawk Formation, a unit of the Cretaceous Mesaverde Group which is prominent throughout the Wasatch Plateau. The Skyline Mine is situated along the axis of the Clear Creek anticline, a major structural feature of the northern Wasatch Plateau.

Major faults (Plates 2 and 2.2-1) border the minesite. The largest of these is the Connelville Fault, which is near the eastern boundary of the permit area. The Valentine Fault is located approximately mid-way between the eastern and western borders of the permit area. Both the Connelville and Valentine faults have displacements which diminish to the north. Their displacements are on the order of 20 to 30 feet and 200 feet respectively. The northern part of the Joe's Valley fault trends along the west side of the permit area where it disappears beneath the alluvial deposits of Huntington Canyon. It has a displacement of 80 to 100 feet south of the permit area. Other smaller faults lie in echelon with the major faults over the permit area.

Geochemical samples of the roof and floor strata of the three seams intended for mining were collected and analyzed (Volume 1, Section 2.2.8). Conclusions from the tests revealed that the sulfur content in the coal seams and surrounding rock would not be sufficient to cause acid mine drainage.

Ground water resources were studied by monitoring springs and wells on and adjacent to the mine plan area. Baseline data necessary to validate the long term hydrologic consequences has been collected. Ongoing ground water and subsidence monitoring programs designed to monitor the impacts of mining on the hydrologic balance are being conducted. The ground water monitoring program is outlined in Volume 1, Section 2.3.7, whereas, the locations for the monitoring sites are shown on Plate 2.3.6-1. The subsidence monitoring program is discussed in Vol. 3, Section 4.17.

Mining impacts are addressed in Volume 1, Section 2.5. Ground water intercepted in the mine is utilized in the mining process or discharged to the surface where it is treated via a sedimentation pond. The amount of water discharged from each mine on each monitoring occasion will be monitored at the mine mouth through the use of totalizing flow meters. Totals and water quality will be recorded and submitted to the Division.

Compliance

The applicant has submitted sufficient water monitoring and subsidence information to the Division so that an assessment of the probable hydrologic consequences from mining could be conducted over the current five year permit term.

The requirements of UMC 798.14(a)(3) and 784.14(c) are specifically addressed in the Mining and Reclamation Plan (MRP) under Sections 2.3, 2.5 and 4.11. Water rights replacement are covered in Section 4.11.1. Water quality is covered in Sections 4.11.1 and 4.11.4. Water monitoring requirements are addressed in Sections 2.3 and 2.4.

The information submitted to characterize the geology and ground water regime is sufficient to determine the probable hydrologic consequences for the next 5-year permit term, but not for the life of mine operation.

Some hydrologic information, such as spring locations, proposed mining areas, potential subsidence zones and ground flow patterns, indicates that there is potential for mining to disrupt the hydrologic balance if mining continues to the west. The applicant intends to collect and utilize data from mining in the current five

year permit term to help determine the feasibility of mining beneath perennial streams and structures. The applicant commits to not mining under Electric Lake (Section 4.17.3) and providing full support room and pillar mining under upper Huntington Creek, Bolger, South Fork of Eccles Creek and Electric Lake buffer zones unless geotechnical data supports feasibility of mining and it is consented to by the Regulatory Authority. Full extraction mining techniques under the creek buffer zone and evaluation areas shown on Map 4.17.1-1 will only be proposed if evidence shows surface effects can be mitigated.

Stipulations

None.

UMC 817.53 Hydrologic Balance: Transfer of Wells - RPS

The applicant does not propose to transfer any of the water monitoring or exploratory wells for use as a water well on the permit or adjacent areas (Section 4.9, Volume 3).

Compliance

The applicant is in compliance with this regulation.

Stipulations

None.

UMC 817.55 Hydrologic Balance: Discharge of Water Into An Underground Mine - RPS

Existing Environment and Applicant's Proposal

The operator proposes to divert an insignificant amount of runoff into the underground mine at the South Fork Breakout area (Section 3.2.11, Volume 2). A small area of disturbed drainage (less than .25 acre) with an expected 10 yr. - 24 hr. precipitation event volume of 1300 cubic feet will be routed to the underground workings and eventually discharge into the portal area pond for sediment control.

Similarly, an insignificant amount of surface runoff from the areas at the mouths of portals will drain into the mine. The water is dissapated within the mine or will report to the sedimentation pond for treatment prior to discharge from the permit area.

Compliance

The applicant is in compliance with this regulation.

Stipulations

None.

UMC 817.56 Hydrologic Balance: Postmining Rehabilitation of Sedimentation Ponds, Diversions, Impoundments, and Treatment Facilities - RPS

Existing Environment and Applicant's Proposal

The applicant proposes to remove all sedimentation ponds and associated diversions following compliance with the criteria of UMC 817.46 (u) (Section 4.1). The applicant commits to renovating all reclaimed channels and permanent culverts (examples: loadout crossing and SR 171 crossing) to the design specifications upon final abandonment (Section 4.1, Volume 3).

Compliance

The applicant is compliance with this regulation.

Stipulations

None.

UMC 817.57 Hydrologic Balance: Stream Buffer Zones - RPS

Existing Environment and Applicant's Proposal

The site is located adjacent to two perennial stream systems that meet the criteria of subsection (c) of this regulation. The mine facilites, pump house crossings, and water tank areas are located on the upper reaches of Eccles Creek, the Breakout area is located adjacent to the South Fork of Eccles Creek, and the Loadout area is located adjacent to the confluence of Eccles and Mud Creeks. Disturbance in all of these areas is within 100 feet of those channels (as per original permit application approval). The operator has installed buffer zone signs at those areas (Section 3.2.7, Volume 2) and proposes to restore the channels upon reclamation (designs in Sections 14 and 18, Volume 5).

Compliance

The applicant is in compliance with this regulation.

Stipulations

None.

UMC 817.59 Coal Recovery - JRH

Existing Environment and Applicant's Proposal

General information regarding coal recovery is referenced to part 3.1 of the Mining and Reclamation Plan.

Coal recovery is based on two mining methods, continuous miner room and pillar and longwall mining. Mineable seam thicknesses are limited to a minimum of 5 feet and a maximum of 12 feet based on economic and equipment limitations for the operations. Production for the operations is expected to range between 3.5 and 5 million tons per year. Three seams are to be mined within the permit area and multiple seam mining will occur in those areas where seam thickness allows and the interburden between seams exceeds 30 feet.

Compliance

This section is considered to be technically adequate.

Mining methodology utilized by the operator is considered to be the best technology available for recovery of coal in those mining conditions encountered. Mining methodology and coal recovery were also subject to review and approval by the Bureau of Land Management because of the federal leases involved with the operations.

Stipulations

None.

UMC 817.61-.68 Use of Explosives - JRH

Existing Environment and Applicant's Proposal

Information regarding the use of explosives is found in parts 3.29 and 4.8 of the MRP.

The operator has indicated that surface blasting for the operations is not routine for the mine. In the event of any surface blasting, the operator has committed to conduct blasting operations in accordance with 30 CFR 850 by a certified blaster and in accordance with UMC 817.61-.68.

Explosives magazines used in conjunction with the underground mining operations are located on Map 3.2.1-1. The operator has stated that these magazines have been constructed and maintained in accordance the Federal and State regulations.

Compliance

The operator is considered to be in compliance with the requirements of this section of the regulations.

Stipulations

None.

UMC 817.71 Disposal of Excess Spoil and Underground Development Waste: General Requirements - JRH

Existing Environment and Applicant's Proposal

Information regarding this section of the regulations is found in parts 3.2.8, 4.16, and 4.21 of the Mining and Reclamation Plan.

The operator indicates that most of the waste materials produced underground will be disposed of underground in conjunction with normal mining operations. Excess materials produced that cannot be gobbed underground will be brought to the surface and stored temporarily at the mine facilities area as designated on Map 3.2.1-1. When sufficient material has accumulated in the temporary storage location, it will then be transported to the permanent excess spoil and mine development waste facilities located near the town of Scofield.

Some of this material has also been used in conjunction with the construction of pads and roads at the loadout facilities area. This material will be permanently disposed of while backfilling and grading the cuts and highwalls located at the loadout facilities area. Currently there is approximately 35,000 cubic yards of material placed at the loadout facilities area. Toxicity tests were performed on this material prior to construction to ensure suitability for that material as fill for construction. Additionally, it was determined by the operator that the spoil and development waste materials were placed between 4.5 and 17.7 feet above observed ground water levels and no material was placed at or below ground water level. During final reclamation, none of the waste material will be placed below the ground water table or within the 100 year flood plain. Similar mine waste materials, including sediment pond waste, has been disposed of at the loadout facilities area. These materials are tested for toxicity prior to permanent disposal.

Mine development waste materials have also been used in the construction of the mine surface facilities. This material has been accounted for in the mass balance for reclamation construction on

the site. Sufficient latitude is present with the creation of the final contours of the mine facilities area to allow for any excess material to be incorporated into that area and still meet approximate original contour requirements.

The Waste Rock Disposal Site is located approximately 4 miles from the mine facilities and is an abandoned strip pit located to the southeast of Scofield, Utah. Refer to Map 4.16-1A. Access to the disposal site has been upgraded and is included in the permit area. The waste materials are hauled by truck from the mine site and the loadout facilities to the waste rock disposal site.

Because the strip pit and the access road to the pit were previously disturbed, salvage of suitable topsoil material in this area was not possible. Topsoil will be imported from the mine facilities area during reclamation to provide 1 foot of cover and topsoil material over the waste.

Groundwater information is not available in the area due to the existence of underground coal fires. No discharge sources exist in this area. The operator indicates that proper sealing of the pit will effectively eliminate degradation of the ground water as well as prevent any accidental ignition of the rock/coal waste material.

No surface water flows have been encountered during monitoring.

Compliance

The operator is considered to be in compliance with the requirements of this section.

Due to the lack of cover material available for the Waste Rock Disposal Site, the operator has implemented a sampling program to test for acid- and toxic-forming materials. Based on the preliminary information obtained from these samples, it was found that the material is not considered to be acid- or toxic-forming and that the amount of cover over the excess spoil and mine development waste can be reduced to the extent that only requirements for revegetation be met. The operator has committed to import approximately 4,000 cubic yards of excess topsoil material from the mine facilities area to cover the waste material with 1 foot of topsoil.

Utilization of the abandoned strip pit for the waste rock disposal site had posed some initial problems in addition to being previously disturbed. Adjacent underground workings near and below the pit were and currently are on fire. The operator underwent extensive drilling to determine whether or not the underground

workings would affect the pit area. As a precaution, the pit bottom and pit walls were covered with a minimum of four feet of non-combustible fill material to form a barrier where coal seams were exposed during previous mining activities and to seal any cracks or fissures venting from the adjacent coal fires.

Stipulations

None.

UMC 817.72 Disposal of Underground Development Waste and Excess Spoil: Valley Fills - JRH

UMC 817.73 Disposal of Underground Development Waste and Excess Spoil: Head-of-Hollow Fills - JRH

UMC 817.74 Disposal of Underground Development Waste and Excess Spoil: Durable Rock Fills - JRH

The above regulations are considered not applicable to the operator's waste rock disposal facilities contained in this permit.

UMC 817.89 Disposal of Non-Coal Wastes - JRH

Existing Environment and Applicant's Proposal

Information regarding this section of the regulations is contained in parts 3.2 and 4.8 of the MRP.

The operator has designated areas for the temporary storage of non-coal waste materials. These materials are to be contained in portable dumpsters and transported to a state approved sanitary landfill. The location of the temporary non-coal waste material storage facilities is located on Map 3.2.1-1.

In the event that toxic materials are identified, they will be stored and/or disposed of in accordance with all applicable state and federal regulations.

Compliance

The operator is considered to be in compliance with this section of the regulations.

The operator has committed to comply with the health and safety standards as are required by various federal and state regulations and standards and has developed an extensive operation and mitigation plan. As part of company policy, any spills or accidents must be immediately reported to the Mine Superintendent, who is then responsible to report any such incident to the proper regulatory authorities.

Stipulations

None.

UMC 817.81 Coal Processing Waste Banks: General Requirements - JRH

UMC 817.82 Coal Processing Waste Banks: Site Inspection - JRH

UMC 817.83 Coal Processing Waste Banks: Water Control Measures - JRH

UMC 817.85 Coal Processing Waste Banks: Construction Requirements - JRH

UMC 817.86 Coal Processing Waste: Burning - JRH

UMC 817.87 Coal Processing Waste: Burned Waste Utilization - JRH

UMC 817.88 Coal Processing Waste: Return to Underground Workings - JRH

UMC 817.91 Coal Processing Waste: Dams and Embankments: General Requirements - JRH

UMC 817.92 Coal Processing Waste: Dams and Embankments: Site Preparation - JRH

UMC 817.93 Coal Processing Waste: Dams and Embankments: Design and Construction - JRH

There are no coal processing facilities within the permit area. These sections are considered to be not applicable to the Mining and Reclamation Plan.

UMC 817.95 Air Resource Protection - JRH

Existing Environment and Applicant's Proposal

Information regarding air resource protection is found in part 4.22 and Volume A-1 of the MRP.

The operator has identified the following sources of dust emissions: conveyors and chutes; crushers and sizing equipment; truck dumping; silos; stockpile surfaces; equipment activity; front-end loading; truck travel and unpaved roads; and, mobile equipment.

Methodology used by the operator to help minimize dust emissions includes: covering conveyors and termination of conveyors in facilities equipped with baghouse dust control; use of baghouse dust control in crushing and screening facilities; utilization of bottom-dump trailers to reduce coal drop height; silos and bins are equipped with baghouse equipment; and, water or chemical suppressant sprays are to be applied as required to meet opacity limitations.

Baseline information and the air monitoring program was developed by Radian Corporation. Meteorological information was collected at Boardinghouse Peak and Eccles Canyon from January 1, 1979 through December 31, 1979. Particulate sampling was accomplished during the five-month period from June 1, 1979 through October 31, 1979.

In the event that the overland conveyor system is installed in conjunction with the mining facilities, the operator has committed to monitor for a minimum of 12 months, following the commencement of the overland conveyor operation.

Compliance

The operator is considered to be in compliance with the requirements of this section of the regulations. Approval for the operation of the facilities was granted by the Bureau of Air Quality and the Air Quality Permit to Operate was issued in October of 1981.

Stipulations

None.

UMC 817.97 Protection of Fish, Wildlife, and Related Environmental Values - LK

Existing Environment and Applicant's Proposal

The Skyline mine and associated facilities (Loadout Area, Conveyor Corridor, South Fork Breakout and Waste Rock Disposal Area) have disturbed ca. 58.52 acres of federal (Manti-LaSal National Forest) and private surface. Most of the facilities are above 8,500 feet elevation and have disturbed aspen, conifer, mountain brush, riparian and sagebrush vegetation types (refer to TA section UMC 817.111-.117).

The biogeographical area of the permit area provides potential habitat for ca. 364 species of vertebrate wildlife, including 84 mammal species, 241 bird species, 14 fish species, 19 reptile

species and 6 amphibian species. Low level wildlife studies are included in the MRP in sections 2.8 to 2.10 and Appendix Volumes A-2 and A-3. Permitting issues were raised concerning deer and elk migrations and the fisheries in Eccles Creek. Detailed studies and reports resolving these issues can be found in the appendix volumes. Results of raptor surveys are also included. Threatened and endangered species surveys were also conducted with results being discussed in Sections 2.7.3 and 2.9.3.

The Utah Division of Wildlife Resources has designated the environs around the mine site as high priority range for deer, elk and moose, with critical habitat for elk in the South Fork, and critical habitat for moose along all drainages (See Wildlife Maps in Appendix Volume A-2).

The operator has provided wildlife mitigation and avoidance plans in Volume 3, pages 4-83 to 4-84.

Compliance

The operator has minimized impacts to fish, wildlife and related environmental values by: minimizing disturbances and adverse impacts identified in the baseline studies (Section 4.18), providing enhancement of Eccles Creek (Section 4.18.1), Posting speed limit signs and animal warning signs along the Eccles Creek highway, constructing power lines to be 'raptor safe', fencing or otherwise excluding wildlife from ponds containing toxic-forming materials (currently none exist), not using persistent pesticides without approval by the Regulatory Authority in advance, participating in the prevention and suppression of forest, range and coal fires, and providing wildlife conservation training as part of the mine training for employees (Section 4.18.2). The revegetation plan was designed to provide cover and forage for wildlife (Section 4.7). No threatened or endangered species (plant or animal) were found during baseline studies. The operator will report to the Division the locations of any threatened or endangered species should they be observed (Volume 1, Section 2.1.2)

The operator has discussed plans for a proposed conveyor that will basically parallel the Eccles Creek Highway (Section 2.9.4). The operator has committed to supplying detailed designs 120 days prior to anticipated construction for review and approval to assure that state-of-the-art designs for animal crossings are incorporated. While the concept of the conveyor is acceptable, approval for construction cannot be granted until after the review of detailed designs and plans.

These plans will comply with the provisions of UMC 817.97.

Stipulations

None.

UMC 817.99 Slides and Other Damage - JRH

Existing Environment and Applicant's Proposal

This rule is addressed in part 4.8.5 of the Mining and Reclamation Plan.

The operator has stated that they will notify the Division in the event of any slide which may have potential adverse affects on public property, health, safety and the environment.

Compliance

The commitment provided by the operator is considered to be technically adequate.

Stipulations

None.

UMC 817.100 Contemporaneous Reclamation - LK

Existing Environment and Applicant's Proposal

The operator has been engaged in contemporaneous revegetation of disturbed areas not needed for active operations since 1980. Areas that have been revegetated or otherwise stabilized include topsoil piles and cut and fill areas at the mine site, loadout area, waste rock disposal area and South Fork breakout area. Final reclamation is currently underway along the conveyor bench slopes and the south side cut slopes at the loadout area (Volume 3, Sections 4.7.3 and Appendix Volume A-2). The waste rock disposal area will be revegetated in stages, as each area is filled to design capacity (Volume 3, Section 4.6.4.1).

Compliance

The operator has provided a reclamation timetable which demonstrates that reclamation will take place during the first appropriate season following surface disturbance (Section 4.2). These plans will comply with the provisions of UMC 817.100.

Stipulations

None.

UMC 817.101 Backfilling and Grading: General Requirements - JRH

Existing Environment and Applicant's Proposal

Information regarding backfilling and grading are referenced to part 4.4 of the Mining and Reclamation Plan.

Final reclamation features are shown on Maps 4.4.2-1A, 4.4.2-1B and 4.4.2-1B1. Cost information and mass balance calculations are found in Volume 5 of the MRP under Engineering Calculations.

Maximum slope information is provided in the plan that indicates that fill areas will be maintained at 2h:1v slopes or less. In those cut areas where competent rock or other natural conditions exist to allow steeper slopes, the final contoured slopes may approach 1h:2v. Final reclamation contours will be reduced to the approximate original contour (2h:1v) upon reclamation or as necessary to maintain slope stability.

Compliance

Mass balance calculations have been presented in the reclamation cost estimate provided by the operator. These calculations have been evaluated by the Division and a summary of the mass balance calculations for backfilling and grading as well as topsoil distribution are found within the calculations for determination of the final bond amount (attached).

All highwalls will be eliminated or reduced during reclamation activities except those which were made in conjunction with the construction of State Road 264. Reduction of these cuts is not considered feasible from a stability and an economic standpoint. These cuts include and are part of the cuts for the state road itself and portions of the overland conveyor bench are directly adjacent to and above the road cuts. These cuts have been determined by the Division to be an integral part of SR 264's construction and are not part of the operator's disturbed or permit area.

Currently, the conveyor bench area is not being utilized by the operator. Contemporaneous revegetation has been applied to the conveyor bench areas to maintain stability and prevent erosion. In the event that the operator plans to install the overland conveyor system, new designs and drawings will be submitted to the Division.

Stipulations

None.

UMC 817.103 Disposal of Acid- or Toxic-Forming Materials - LK

Existing Environment and Applicant's Proposal

The MRP contains discussions and analysis of potential acid- or toxic-forming materials in Section 2.2.8, 3.2.8, 4.4.5. and 4.16.

Rock waste generated at the Skyline mine is temporarily stored at the mine site (in an approved area that reports to a sediment pond) and permanently disposed of in an abandoned strip pit near the town of Scofield, Utah. Materials are moved to the disposal area by truck and compacted. The floor and any exposed coal in the disposal area was covered with a minimum of 4 feet of compacted, non-combustible material. The floor of the disposal area is above the water table.

The applicant has provided a testing plan to analyze materials every 2000 tons or on a quarterly basis (Section 4.4.5). To date no toxic- or acid-forming materials have been identified. Section 3.2.8 provides a commitment to develop special plans for handling toxic- or acid-forming materials should they be encountered.

Compliance

The operator has provided adequate plans to test for, and dispose of toxic- or acid-forming materials should they be identified. The Division will be notified immediately and materials will be disposed of within 30 days (Section 4.4.5).

Analyses of materials submitted in the MRP raise some questions regarding acid-forming potential. Analyses were done by methods other than those identified in the Division's Soils and Overburden Handling Guidelines. However, all future analyses of potential toxic- or acid-forming materials will follow the parameters and methods outlined on Table 6 in the Division's Soil and Overburden Handling Guidelines. The operator's proposal complies with the requirements of UMC 817.103.

Stipulations

None.

UMC 817.106 Regrading or Stabilizing Rills and Gullies - LK

Existing Environment and Applicant's Proposal

The application discusses the stabilization of rills and gullies in section 4.4.4.

Compliance

The operator will fill, regrade and seed all rills and gullies which erode to a depth of 9 inches or more unless there is less than two feet of cover. On areas where less than 2 feet of soil cover is used, rills and gullies which erode to a depth of 6" or deeper will be filled, regraded and seeded. The operator's proposal complies with the requirements of UMC 817.106.

Stipulations

None.

UMC 817.111 - .117 Revegetation Plan - LK

Existing Environment and Applicant's Proposal

The MRP contains baseline vegetation surveys in Appendix Volume A-2 and a summary of vegetation resources of the permit area in Volume 1, Section 2.7. Plate 2.7.1-2 shows the locations of vegetation reference areas.

Most disturbance has occurred in the Spruce-Fir, Aspen, Mountain Brush, and riparian vegetation types. Vegetation reference areas have been established for each of these types. The following table summarizes the various vegetation parameters of the four reference areas.

Summary of Reference Area Data

Vegetation Type	% Cover	Woody Plant Density	Productivity*	Range Condition*
Spruce/Fir	9.8	454 Stems/ac.	150 lbs./ac.	Good
Aspen	96.5	716 "	3000 "	High
Riparian	78.4	138 "	3000 "	Fair
Mtn Brush (waste rock disposal area)	73.6	22,651 "	2000 "	Low good

* From SCS estimates (Oct. 15, 1987)

The MRP contains plans to revegetate disturbed areas within the permit area in Section 4-7 and Appendix A-2 (conveyor bench slopes).

Compliance

UMC 817.111: General Requirements

The operator plans to revegetate all disturbed areas affected by mining operations with a suitable permanent effective and diverse vegetation cover (Section 4.7). Monitoring of revegetated areas will demonstrate reclaimed vegetation is equivalent to surrounding natural revegetation (reference areas) (Section 4.7.5). These plans comply with the provisions of UMC 817.111.

The riparian areas will be restored and woody plants (trees and shrubs) will be established via direct seeding and/or transplanting.

UMC 817.112: Use of Introduced Species

Several introduced species have been used for interim stabilization. However, the only introduced species planned for final revegetation are Melilotus officinalis (yellow sweet clover) and Medicago sativa (alfalfa) (see Tables 4.7-4 to 4.7-6a). These two species are known for their soil building characteristics, are quick growing and will provide soil protection while slower growing native species become established, are compatible with the plant and animal species of the area and provide quality forage for domestic animals and wildlife. The operator's proposed use of introduced species will comply with the provisions of UMC 817.112.

UMC 817.113: Timing

After initial construction, several areas not needed for active operations were seeded to stabilize soils (see TA section UMC 817.100).

Section 4.7 identifies the fall as the preferred period for revegetation work. Section 4.7.2 indicates some seeding may take place in the early spring (even though fall is preferred). DOGM biologists have inspected some areas where interim seeding was performed during the spring season and determined that adequate vegetation for erosion control has established. The operator's plans will comply with the provisions of UMC 817.113.

UMC 817.114: Mulching and Other Soil Stabilizing Practices

Section 4.7.2 indicates all reseeded areas will be mulched with 1,000-2,000 lbs/acre of straw or other inert material. Steeper slopes (greater than 3h:1v) will be hydromulched with 2,000 lbs of a wood fiber hydromulch. While the plan adequately identifies that all areas will be mulched, there is concern that mulch rates less than 2,000 lbs/acre are not adequate. However, the MRP states that

final mulching plans (types and rates) will be determined using the best available technology at the time of reclamation. Also 2,000 lbs/acre was used for bonding calculations. This plan will comply with the provisions of UMC 817.114.

UMC 817.116-117: Standards for Success

The operator has established vegetation reference areas that will be used for determining the success of revegetation. The MRP has identified adequate statistical comparisons for confidence levels for cover, woody plant density and productivity for the revegetated areas and appropriate reference areas for the last two years of the bond release period (Section 4.7.5). The operator will annually inspect revegetated areas to determine the success of seeding. The operator will collect precipitation data on site to document the applicable 5-year (greater than 26" annual precipitation) or 10-year (less than 26" annual precipitation) liability period. These plans comply with the provisions of UMC 817.116-.117.

Finding of Reclamation Feasibility

Site inspections of most interim reclamation areas has shown revegetation efforts are successful. Soils and precipitation are favorable for re-establishment of vegetation. The vegetation plan incorporates native and introduced species that are adapted to the area and seeding and mulching will be conducted using standard revegetation techniques. Revegetation is planned for favorable time periods for successful plant establishment.

Past efforts to revegetate steep, south facing slopes has not provided favorable results. In cooperation with the Soil Conservation Service, the operator implemented an extensive testing program in 1988 to resolve these revegetation problems. Factors being considered are species selection, seeding methods, irrigation and mulching techniques (Appendix A-2). Observations made during the first growing season shows promise for long term establishment of vegetation on these slopes. Therefore, the Division makes a positive finding that the Reclamation Plan identified in the MRP is feasible.

Stipulations

None.

UMC 817.121-.126 Subsidence Control Plan - DD

Applicant's Proposal

The applicant plans to maximize coal recovery using the most efficient and productive mine design and coal extraction methods. Mine designs have been planned based on all available information concerning project area, geologic, hydrologic and stratigraphic characteristics.

The sequence of extraction has been planned to allow each panel in a successively lower seam to be extracted at least two years later than the panel above it. Mining methods will involve both a continuous miner and longwall. The mines will be developed using a continuous miner to drive entries which are connected with cross cuts. The longwall mining systems will be employed to extract the majority of the coal. Room and pillar mining will take place where longwall mining is not feasible.

The three mineable seams are the Upper O'Connor seam (Skyline No. 1 Mine), Lower O'Conner B seam (Skyline No. 2) and the Lower O'Conner A seam (Skyline Mine No. 3). A seam is considered non-minable where the thickness is less than five feet or the interburden between two seams becomes less than 30 feet.

Mining sequences for the Numbers 1 and 3 Mines are provided in Volume 2 on Maps 3.3-1 and 3.3-2.

The applicant lists the following areas that could be harmed if subsidence occurs: the Mountain Fuel Supply Company's pipeline, the upper reaches of Electric Lake Reservoir, perennial streams of the permit area and public roads. Areas of potential subsidence are shown on Map 4.17.1-1 in Volume 3, Section 4.17.

Plans for protecting the Mountain Fuel Supply Company natural gas pipeline are outlined in Volume 2, Section 3.1.7, including reduced extraction beneath the pipe's area of influence. There are no oil of gas wells except for a single abandoned test well at the surface facilities site, which has been provided protection.

Prevention measures have been proposed (Volume 3, Section 4.17.3) to protect structures and resources. Support pillars will be left to protect the pipeline. A buffer zone will be left, so full extraction will not take place beneath Electric Lake Reservoir or Upper Huntington Creek inlet.

A mitigation plan (Volume 3, Section 4.17.4) has been developed by the applicant in the event subsidence should cause diminution to water rights or damage to structures. The applicant will arrange for repairs if the pipeline or improved roads are materially affected. The applicant will replace the water supply of any land owner, if such water supply is contaminated, diminished or interrupted as a result of the Skyline mining operation (Volume 3, Section 4.11.1).

The applicant intends to provide protection to structures and resources by employing limited mining techniques to sensitive areas. An angle of draw of 22 degrees will be used. As mining progresses the protection factor will be reevaluated in conjunction with the subsidence monitoring program. The Bureau of Land Management and the Division of Oil, Gas and Mining has evaluated the 22 degree angle of draw and have determined it sufficient for current mining practices.

A subsidence monitoring program has been established (Volume 3, Section 4.17.5), which incorporates aerial photogrammetric surveys, which will help in determining the effects of underground coal mining. Baseline and annual surveys will be compared to locate, photograph and document the presence of subsidence effects, tension cracks, and fissures. The annual subsidence monitoring report will be provided to the U. S. Forest Service (as land owner) and to the Regulatory Authority.

Compliance

The applicant has submitted sufficient information to address all subsidence issues for the next 5-year permit term. Again the applicant has not submitted detailed site specific or detailed subsurface information for the life of mine operation beneath or adjacent to springs, on the Huntington Canyon side of the drainage divide. This information will be required in subsequent permit renewals, prior to approval of the mining plans for these areas.

Stipulations

None.

UMC 817.131 Cessation of Operations: Temporary - JRH

UMC 817.132 Cessation of Operations: Permanent - JRH

Existing Environment and Applicant's Proposal

Information regarding these sections of the regulations is found in part 3.3 of the Mining and Reclamation Plan.

The operator states that prior to any temporary cessation of mining operations for a period of 30 days or more, or as soon as it is determined that a temporary cessation will extend beyond 30 days, that they will submit to the Regulatory Authority, a notice of intent to cease or abandon operations.

In conjunction with the notice, the operator will state the exact number of surface acres and the extent of subsurface strata which has been affected by underground or surface developments in the permit area prior to cessation or abandonment of mining. The notice will also include the extent and the type of reclamation work which has been completed.

The operator has also indicated that they will sustain and maintain water treatment as well as all mine openings to underground operations and to secure those facilities in which there would be no mining operations.

Upon the decision to permanently cease all mining activities the operator shall notify the Division and all affected areas shall be permanently reclamained in accordance with the approved permit.

Compliance

The operator is considered to be in compliance with the requirements of these sections of the regulations.

Stipulations

None.

UMC 817.133 Postmining Land Use - LK

Existing Environment and Applicant's Proposal

The MRP contains premining land use information in Volume 1, Section 2.12. Premining land uses included grazing, wildlife habitat, recreation, forestry and natural gas transmission. The U.S. Forest Service has four sheep allotments which overlap with the permit area. These allotments are for 2743 sheep.

Productivity estimates for forestry products and grazing are provided in Section 2.12.2, which include nearly 300,000 board feet of spruce and aspen lumber and 17.8 Animal Unit Months for grazing.

Wildlife habitat values are discussed under TA section UMC 817.97. Recreation uses include sightseeing, hunting, fishing, snowmobiling and cross country skiing.

Local zoning of the permit area is for recreation, forestry and mining (page 2-130). U.S. Forest Service land management plans are also discussed on pages 2-130 to 2-131. Postmining land use plans are found in Volume 3, Section 4.12.

Compliance

The operator intends to restore premining wildlife habitat and rangeland following completion of mining. Table 4.12-1 identifies each major area of the mine, the land ownership status, premining land uses, proposed postmining land uses, potential alternative uses and the relationship of land use plans to existing land use policies.

A summary of reclamation activities that will establish the proposed postmining land uses is provided in Sections 4.12.1 to 4.12.6. These plans will comply with the provisions of UMC 817.133.

Stipulations

None.

UMC 817.150-.156 Class I Roads - JRH

Existing Environment and Applicant's Proposal

Information regarding this section is referenced to part 4.20 and Volume 5 of the MRP.

A certification statement as to the design and the construction of Class I roads is found in the Mining and Reclamation Plan on page 4-93B.

Two areas are considered to meet the criteria for Class I roads; the mine access road which provides access to the mine portals from the mine facilities area, and the loadout access road at the unit train loadout facilities. Both of these roads are adjacent to and within the mining and loadout facilities.

The mine access road runs from the #3 mine portal to the maintenance complex area. Map 3.2.1-1 shows the location of the mine access road. The steepest gradient for the road is 10%. Jersey barriers have been placed at the shoulders of the road in lieu of berms to meet MSHA requirements. Drainage ditches have been designed for the road. These calculations are found in Section 6 of Volume 5 of the plan.

The loadout access road includes the haul loop at the unit train loadout facilities used for belly dumping coal trucks into the conveyor and loading facilities. The surface of this road is paved and runoff from the road primarily reports to the sediment pond. Jersey barriers have been placed on both sides of the road to meet MSHA requirements and to control drainage from the road. The outslopes of the road are alternate sediment control areas and are described in the plan and delineated on Map 3.2.1-3.

Compliance

The operator is considered to be in compliance with the requirements of these sections of the regulations.

The design and alignment of these roads is in accordance with the requirements of UMC 817.151-.154, except to the extent that alternative specifications are used.

In those areas where the roads approach and adjoin State Road 264 and State Highway 96, the operator has requested special consideration regarding operation and maintenance. These "Special Exempt Areas" extend to the shoulder of the road and to the right-of-way boundary. These approaches are paved and as part of the permitted area will be reclaimed during final reclamation. Because UDOT and the public have access to and utilize these areas, the operator has no control over and therefore should not be responsible for such activity within these areas. The Division has recognized the problems associated with these areas especially with regard to snow plowing and salting of the roads during the winter months. Accordingly, a variance from the performance standards set forth under UMC 817.42 appears to be reasonable.

Reclamation of these roads will be part of the pads and other facilities associated with and adjacent to these roads. With the exception of the approaches at the loadout facilities, all Class I roads will be reclaimed. The approaches at the loadout facilities are to be left in conjunction with the approved post mining land use as access for the two private landowners in that area, however, no improved roads will extend beyond the approaches and into the reclaimed areas.

Stipulations

None.

UMC 817. 153, 156 and 163, 166 Roads: Class I and II: Drainage - RPS

The drainage from the portal access road (see Plate 3.2.1-1) reports to the sedimentation pond for treatment. The road diversion (DD-5) is designed to pass a 10 yr. - 24 hr. event (page 7, Section 6, Volume 5). Spacing of the culverts on this road exceeds the requirements of these regulations, however, all road drainage reports to the mine facilities sedimentation pond for treatment and the road ditch has not experienced significant erosion during the last permit term (largely due to frequent maintainence).

Drainage from the access road to the waste rock disposal area is routed using a roadside diversion and five swales (Section 14, Volume 5). The drainage from this area essentially dissapates onto a low slope alluvial area. The application states that vegetation in this area acts as a sediment filter for the road drainage.

The access road to the South Fork Breakout area has been closed to public access. Drainage from this road will be treated using straw bales until the area is adequately revegetated (Section 3.2.11).

All other roads are within the existing pad area (i.e. truck turnaround loops, parking, and facility access) and largely report to the sedimentation ponds. Road approaches that do not report to the pond are discussed in Section 3.2.12, Volume 2 of the MRP.

The application states that the access road to the waste rock areas and the loadout areas will remain following reclamation to facilitate the postmining land use. The application states that the culverts to the well houses will be removed and the channel restored to the existing configuration (pgs. 88A and 89). All other roads will be removed and reclaimed during the site reclamation.

Compliance

The applicant's proposal is in compliance with this regulation.

Stipulations

None.

UMC 817.160-.166 Class II Roads - JRH

Existing Environment and Applicant's Proposal

Information regarding this section of the regulations is found in parts 3.2, 4.20, and Volume 5 of the Mining and Reclamation Plan.

The access road to the Waste Rock Disposal Facilities is considered to be a Class II Road. Map 3.2.8-1 shows the location and the design for the access road. The access road is part of a larger area previously disturbed by surface and underground mining operations. Improvements to the previously existing road included the addition of drainage swales as designed and included in the calculations of the MRP, guardrails in areas as required by MSHA and surfacing of the road with gravel. The road is used infrequently to haul waste materials from the mine and loadout facilities to the waste rock disposal site.

The Rock Waste Disposal Access Road will not be reclaimed but will remain as part of the post mining land use facilities. This road previously existed and is currently being used for access for grazing and to other properties above the waste site.

Compliance

The operator is considered to be in compliance with the requirements of these sections of the regulations.

In addition to the Waste Rock Disposal Site Access Road, there are numerous road-type surfaces constructed within the pads and facilities for the mining and loadout operations. However, these road surfaces all report to sediment ponds within the operator's permit areas and tend to change infrequently as surface operations and activities at the site are altered. These roads may be considered as Class II Roads, but the criteria for sediment/erosion control of these roads meets or exceeds the design criteria as required in these sections of the regulations. All of these roads will be reclaimed in conjunction with the reclamation of the pads and other mining facilities.

Stipulations

None.

UMC 817.170-.176 Class III Roads - JRH

Existing Environment and Applicant's Proposal

The road which was constructed to obtain access to the South Fork Portals is considered to be a Class III road. This road was an existing exploration road which was modified slightly for access during portal construction. Currently, the road has undergone some contemporaneous reclamation through the use of water bars and outsloping but will have to be reopened to complete final

reclamation of the portal facilities. This road will be reclaimed upon completion of mining activities. Topsoil materials have been stored at the site and the disturbed areas will be topsoiled and seeded as described in Section 4.7.2 of the plan.

Compliance

The applicant is in compliance with these sections.

Stipulations

None.

UMC 817.180 Other Transportation Facilities - JRH

Existing Environment and Applicant's Proposal

Information regarding this section of the regulations is found in parts 3.2 and 4.20 of the Mining and Reclamation Plan.

The operator has committed to maintain, construct, operate and reclaim those surface areas disturbed for transportation facilities in compliance with all state and federal regulations and in a manner most appropriate to control and minimize related environmental impacts.

Associated with the mine permit area, the Eccles Canyon road has been improved and upgraded to be included in the state highway system as SR-264.

The overland conveyor belt route, which is proposed as one of the facilities for the mining operations, is identified on Map 3.2.3-3. The upper two thirds of the conveyor route consists of benches cut above the highway. The lower third is planned to be constructed on steel towers. As stated in the plan, the final design and drawings for the overland conveyor are pending study of alternate design criteria. The operator has committed to complete the designs and drawings of the overland conveyor and submit this information to the Division 120 days prior to the start of construction. Current proposed capacity of this system will be approximately 1500 tons/hour, travelling along a 48" belt at a speed of approximately 600 ft/min.

Compliance

The information found regarding this section of the regulations is considered to be technically adequate. However, the maps and details of the overland conveyor and the well houses are not of sufficient scale to accurately depict the extent or the disposition

of these areas. The operator has been requested to submit drawings at a larger scale of those areas currently disturbed by the overland conveyor system and the well house facilities. Due to constraints in the drafting and reproduction of these drawings, the operator will not be able to provide these drawings prior to permit renewal. Additionally, the operator is currently evaluating the status of the overland conveyor system and has requested that submittal of these drawings be delayed for a reasonable period to incorporate any such changes into the drawings. This has been determined suitable by the Division with the following stipulation.

Stipulation UMC 817.180 - (1) - JRH

1. **The operator shall submit detailed drawings of the overland conveyor and well house disturbed areas at a scale of not less than 1"=50' within 180 days from the effective date of this permit approval. These drawings shall accurately depict the surface contours and facilities for those areas currently affected by surface mining activities including but not limited to; permit area, disturbed area, sediment control structures, and reclamation treatments.**

UMC 817.181 Support Facilities and Utility Installations - JRH

Existing Environment and Applicant's Proposal

Information regarding this section of the regulations is found in part 3.2 of the Mining and Reclamation Plan.

Support facilities associated with the mine operations include coal storage and rail loadout facilities as shown on Map 3.2.1-3. These facilities consist of two 15,000 ton coal storage silos and a unit train rail loadout. Two additional silos may be built at a future date but currently are not scheduled to be constructed during this permit term.

Associated with the rail loadout facilities are numerous conveyors, a substation, truck dump, stoker coal storage and truck loadout, and sediment pond and sediment control structures.

In conjunction with the mine facilities area, several other structures are associated including an 8,000 ton run-of-mine coal silo, crusher facilities, mine office-shop-warehouse complex, water treatment plant, and sanitary waste facilities.

Portions of the mine facilities pads have also been designated and approved by both the Division and the Forest Service for open coal storage. These areas, while not part of the routine coal handing system, are used during longwall changeover to maintain

production requirements and unit train shipping capacities. These areas are shown on Map 3.2.1-1 and are immediately to the west of the mine office complex. All of this area reports to the mine facilities area sediment pond.

Compliance

This section is considered to be technically adequate with the exception of the well house drawings as indicated in part UMC 817.180 above and the Stipulation for that section.

Stipulations

None.

UMC 822. Operations on Alluvial Valley Floors - LK

Section 2.6 of the MRP indicates that annual precipitation for the permit area ranges from 25 to 30 inches. Since potential evapotranspiration is less than 18 inches annually the permit area does not meet the definition of an arid or semiarid area (UMC 700.5). Therefore, the alluvial valley floor regulations are not applicable to this permit.

UMC 823. Prime Farmland Investigation - LK

Existing Environment and Applicant's Proposal

Prime farmlands are discussed in Section 2.14, Volume 1. A pre-application investigation was conducted to determine if prime farmland could be impacted within the disturbed area. Dr. T. B. Hutchings, State Soils Scientist for the SCS gave a negative determination for prime farmland (Exhibit A, Section 2.14). The negative determination basis is: 1) the land has not been historically used as cropland; and 2) no soil mapping unit within the disturbed area has been designated prime farmland by the SCS.

Compliance

Since no prime farmlands exist within the permit area, prime farmland standards are not applicable.

Stipulations

None.