

12-23-87

0002



UTAH NATURAL RESOURCES  
Oil, Gas & Mining

3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

007/019 #5

Page 1 of 2

NO. N 87-9-17-1

notice of violation

To the following Permittee or Operator:

Name Andalex Resources

Mine Centennial Project  Surface  Underground  Other

County Carbon State Utah Telephone 801/637-5385

Mailing Address PO Box 902 Price, Utah 84501

State Permit No. ACT/007/019

Ownership Category  State  Federal  Fee  Mixed

Date of inspection n/a, 19\_\_

Time of inspection \_\_\_\_\_  a.m.  p.m. to \_\_\_\_\_  a.m.  p.m.

Operator Name (other than Permittee) same as above

Mailing Address same as above

Under authority of the Utah Coal Mining and Reclamation Act, Section 40-10-1 et seq., **Utah Code Annotated**, 1953, the undersigned authorized representative of the Division of Oil, Gas & Mining has conducted an inspection of above mine on above date and has found violation(s) of the act, regulations or required permit condition(s) listed in attachment(s). This notice constitutes a separate Notice of Violation for each violation listed.

You must abate each of these violations within the designated abatement time. You are responsible for doing all work in a safe and workmanlike manner.

The undersigned representative finds that **cessation of mining is**  **is not**  expressly or in practical effect required by this notice. For this purpose, "mining" means extracting coal from the earth or a waste pile, and transporting it within or from the mine site.

This notice shall remain in effect until it expires as provided on reverse side of this form, or is modified, terminated or vacated by written notice of an authorized representative of the director of the Division of Oil, Gas & Mining. Time for abatement may be extended by authorized representative for good cause, if a request is made within a reasonable time before the end of abatement period.

Date of service/ mailing 12-23-87 Time of service/ mailing 4:30  a.m.  p.m.

~~PER~~ Mike Glasson  
Permittee/Operator representative  
mailed from DOGM office  
Signature

Senior Geologist  
Title

Helen Shepherd  
Division of Oil, Gas & Mining representative  
Helen Shepherd  
Signature

Reclamation Specialist  
Title  
#9  
Identification Number

SEE REVERSE SIDE

WHITE-DOGM YELLOW-OSM PINK-PERMITTEE/OPERATOR GOLDENROD-NOV FILE

932



### NOTICE OF VIOLATION NO. N 87-9-17-1

Violation No. 1 of 1

Nature of violation

Failure to comply with the terms and conditions of the permit and the requirements of the regulatory program.

Provisions of act, regulations or permit violated

UMC, 771.19  
Special Permit Condition #1 of the 3-2-87 5 year Permit Renewal

Portion of operation to which notice applies

The operator's Mining and Reclamation Plan

Remedial action required (including any interim steps)

1. Submit a new reformatted MRP, which is well organized, comprehensive, and current.
2. Address, adequately, all specific technical issues as identified in the 12-23-87 review letter, from DOGM.

Abatement time (including interim steps)

Items 1 and 2 to be complete by March 1, 1988 5:00 pm

Permit Stipulation Review  
ANDALEX RESOURCES, INC.  
Centennial Project  
ACT/007/019  
Carbon County, Utah

December 23, 1987

UMC 771.23 Permit Applications - General Requirements for Format  
and Contents - DWD, KW

The applicant still has not submitted a clear, current or concise Mining and Reclamation Plan (MRP). The entire discussion found under UMC 771.23 - KW of the Determination of Completeness, dated August 19, 1987, still applies. The discrepancies are outlined within the sections of this review document. Furthermore, all responses to the determination of completeness should be inserted into the text at the appropriate location. Submittal of concise and complete information is paramount in order to consider each section complete. The preparer of the Mining and Reclamation Plan needs to organize and place pertinent information under the proper sections. Appendices should be used to substantiate information (data or calculations, for example), and not contain modifications or addendums to mine plan information.

UMC 771.23 Permit Applications - General Requirements For Format  
and Contents - JRH

Several ongoing problems with the operator's MRP are directed at the organization of the plan. Primarily the Division requires a regulation cross-reference in order to locate and ensure that the plan is complete and adequate. In order to accomplish this, the cross-reference needs to be fairly extensive in reference, not only to each regulation, but also to each sub-section of the regulations. A partial copy of another operator's cross-reference has been attached to this review as an example of the detail that the Division is looking for. In addition to allowing the Division to determine the plan complete, the reference also indicates to the operator whether or not all of the requirements have been included prior to submittal. Note that the numbering and organization of the example is similar to that used in your MRP. With heading and paragraph numbering in the plan, page numbers need not be included or used in the reference. This will also allow for the insertion of new material into the plan without having to renumber and reindex the plan for each revision of the plan.

The attached example also indicates the information that should be included in Chapter 3 of the MRP. At present, much of the material in your plan that should be in Chapter 3 is scattered throughout the plan, listed in appendices, etc. Consequently, some

of the information that is currently in Chapter 3 (such as the consultant's report for road and pad construction) is contained in the chapter and should be referenced in an appendix.

Chapter 3 is one of the most essential portions of the MRP. This chapter allows for the operator to propose the mining operations and the reclamation activities for the project, and it provides for the commitments that are required under the regulations. Base-line information, consultants' reports and details for design are to be placed in the appendices.

The operation and reclamation plan needs to specifically present how and when the operator intends to conduct mining and reclamation work; it provides assurance to sound basis for design by reference to the detail sections of the plan; it maintains the commitments for reclamation and environmental protection; and it proves the reclamation of the site.

Finally, in Chapter 3, the operator details the timing and sequence of the operation, quantifies the work that must be accomplished in order to achieve reclamation, and determines the costs that will be associated with reclamation of the site.

By placing the consultants' reports and the base-line information in the appendices, any recommendations made in those reports which conflict with or are extraneous to the Mining and Reclamation Plan are held separate so that they do not conflict with the operator's intentions, nor do they cause confusion in the plan or the permit review.

UMC 782.13(a)(1-6) Identification of Interests - DWD

Submit telephone numbers for the legal and equitable owners of record of areas to be affected, leasehold interest, coal to be mined and the resident agent.

UMC 782.13(g) Identification of Interests - DWD

The legal description for the Groves Tract (327.58 acres) is incorrect and needs to be changed.

UMC 782.14(c) Compliance Information - DWD

Although the applicant has submitted a list of violations in Appendix B, this information is still insufficient to address this section. The applicant still needs to state the rule or law that was violated, including a brief description of the violation, status of the proceeding and violation notice, and action taken to abate the violation.

UMC 782.18 Personal Injury and Property Damage Insurance  
Information - JRH

Insurance is provided through Old Republic Insurance Company to Tower Resources, rather than in the name of Andalex Resources, indicated as the permittee in the MRP. The operator shall submit proof of liability insurance as required in the name of the operator. The Division has sent out liability insurance forms to all operators, to update our files and procedures. Upon submittal of this form to the Division, Andalex will be in compliance with the requirements of this section.

UMC 782.19(b) Identification of Other Licenses and Permits - DWD

This section is still incomplete. The applicant has to update the addresses of all license issuers.

UMC 783.12(a) General Environmental Resource Information - DWD

The applicant needs to submit a map identifying the sequence and timing (based on annual production) of past and future mining activities.

UMC 783.12 General Environmental Resource Information - JRH  
UMC 817.59 Coal Recovery - DWD

As part of the Mining and Reclamation Plan, the operator will have to address how he intends to access potential reserves; or in the event that those reserves are not mined by the operator, how access will be maintained or provided for future mining of those reserves.

UMC 783.15 Delineation of Groundwater Resources - KW  
UMC 783.25(f),(j) Cross-Sections, Maps, and Plans - KW

The permit application is insufficient in delineating the depth to ground water and the horizontal extent of the aquifers in the mine area. The inability of the wells to sustain high pumping rates does not indicate that the aquifer/aquifers are small, perched or lenticular. Plate 6 shows five water wells located at the mine site. Data from these wells should be used to determine the nature of the aquifer in the mine area.

The operator must submit a map of the aquifer and sufficient data on the wells so that the Division can evaluate the depth to ground water, direction of flow, and areal extent of the aquifer. This data should include the following:

- 1) Location of each well, clearly shown on a topographic map.

- 2) Elevation of each bore hole.
- 3) Depth to static water level.
- 4) Lithology of aquifer.
- 5) Drill logs of each well.
- 6) Results of all tests performed on each well.
- 7) Any other pertinent information on the aquifer that the operator has available. This should include the results of deepening Well #1.

UMC 783.17 Alternative Water Supply Information - KW

This section must contain a narrative identifying alternative sources of water that could be developed if contamination or diminution of existing water resources occurred in the area.

UMC 783.19 Vegetation Information - LK

The Division received a memo dated November 3, 1987 from Andalex Resources, Inc. (ARI) which discusses the establishment of reference areas for the site and provides productivity estimates and current range condition of the four reference areas as determined by the U.S. Soil Conservation Service. The following comments are specific to the referenced memo and an adequate response will complete the vegetation section.

While the Division understands that four reference areas were established (one for each vegetation type), the operator needs to correlate the reference areas with the revegetation plan; i.e., which reference area will be used with each seed mix? Will more than one reference area be used for any one seed mix, and if so, what area will each reference area represent?

The size (acreage) of each reference area needs to be provided in the MRP.

The map should be identified as a reference area map (currently labelled "Centennial Project Watershed and Culvert Sizing" and "Plate 9").

Sufficient copies of the map and text, marked for easy insertion into the MRP, need to be provided.

The Division reserves final approval of the reference areas selected, pending an on-site review of the reference area locations and conditions.

UMC 783.21 Soil Resources Information - JSL

This section is not complete. The September 22, 1987 submittal does not include the SCS soil survey and map. Revised Plate 18

identifies the soils previously excluded from Earth Environmental Consultants, Inc. report as Bd, Brycan soil disturbed and Da, Datino very stony loam, 15 to 35 percent slopes. The May 27, 1980 SCS survey identifies soils in this area as: A) Datino bouldery fine sandy loam, 15 to 25 percent slopes; B) Brycan bouldery loam, 15 to 25 percent slopes; C) Datino extremely bouldery fine sandy loam, 40 to 65 percent slope; D) Datino extremely bouldery fine sandy loam, 15 to 25 percent slopes; and E) Mine Dumps. Please amend Plate 18 and enclose with the MRP the SCS soil survey, as previously addressed in the January 21, and August 19, 1987 reviews.

UMC 783.22 Land Use Information - LK

The operator has misunderstood previous comments under this section. While past wildlife mitigation has been noted for surface facilities and associated disturbances, comments specific to this section require mitigation for renewable resource lands that are impacted due to subsidence-related activities. Grazing lands and wildlife habitat are considered renewable resource lands. Impacts due to subsidence will require mitigation. Section 2.1 (page 36) must be corrected to identify these as renewable resources.

UMC 783.24-25 Maps: General Requirements, Cross Sections, Maps, and Plans - JRH

<u>UMC 784.11</u>	<u>Operation Plan: General Requirements - JRH</u>
<u>UMC 784.12</u>	<u>Operation Plan: Existing Structures - JRH</u>
<u>UMC 784.13</u>	<u>Reclamation Plan: General Requirements - JRH</u>
<u>UMC 784.23</u>	<u>Operation Plan: Maps and Plans - JRH</u>
<u>UMC 784.24</u>	<u>Transportation Facilities - JRH</u>
<u>UMC 817.180</u>	<u>Other Transportation Facilities - JRH</u>
<u>UMC 817.181</u>	<u>Support Facilities and Utility Installations - JRH</u>

Maps and plans provided in the Mining and Reclamation Plan do not clearly show the affected area as required. The facility maps do not clearly mark the disturbed area boundaries, nor do they indicate the acreage(s) for the disturbed areas on the drawings. Some of the required drawings do not bear the mark of a registered Professional Engineer. These maps and plans must be submitted in an approvable format before a Determination of Completeness can be made.

The maps provided do not account for the sequence and timing for the reclamation work to be accomplished. A reclamation treatments map should be provided and referred to in the plans for reclamation in accomplishment of both Phase I and Phase II reclamation of the site. These maps should specifically show the timing for the placement of sediment control during Phase I and II construction activities, the configuration of the sediment pond(s) during Phase I and II reclamation, and other such temporary sediment and erosion control facilities as may be required throughout reclamation.

Specific details and calculations are not provided in order to determine the reclaimability or the projected costs for reclamation.

The bonding calculations provided by the operator do not have sufficient detail in order to determine them complete. Quantities, equipment selection and productivity for the different equipment must be included in the reclamation cost estimate. The operator has merely provided a breakdown of the reclamation activities in the cost estimate and applied operating hours to them, with no justification.

The reclamation plan must also indicate the timing and sequence of the reclamation work to be accomplished. In addition to the logical requirements for the revegetation plan, the operator must also include specific plans for sediment control and water diversion for Phase I reclamation. Phase I reclamation is accomplished when initial regrading and revegetation treatments have been achieved, but sediment control and measures to protect the site from erosion are used to maintain effluent requirements on the site until vegetation requirements have been met. Phase I reclamation requires that sediment control structures such as sediment ponds and diversion ditches remain until such time as vegetative cover has been established.

UMC 783.24 Maps: General Requirements - KW

UMC 783.25 Cross Sections, Maps and Plans - KW

UMC 784.14 Reclamation Plan: Protection of Hydrologic Balance - KW

Plates 8, 16 and 17 are an attempt to show the topography at the mine site. However, the contours are so poorly shown in the southern half of the maps that determining the topography and channel slopes is impossible. On Plate 17 several channels are shown crossing the road. These will require a designated road crossing or culvert. The method used should be shown on the map and details and designs shown in the hydrology text.

Plate 17 shows that the drainage from watershed C-14 will be forced back upstream after reclamation. This needs to be changed to a smooth transition into the main channel.

Plate 6 and Plate 9 both show the culverts that drain the undisturbed watersheds. However, the two plates do not agree as to the size of the culverts that are in place. These two plates need to be corrected to show the actual configuration that exists in the field.

Plate 11, showing the maps and cross-section of Basin B, needs to be changed to reflect the actual configuration of the ponds, including the location of the culverts.

Water Monitoring Plan for the Protection of Hydrologic Balance - KW

UMC 783.25(b) Cross-Sections, Maps, and Plans - KW

UMC 784.14(b)(3) Reclamation Plan: Protection of Hydrologic Balance  
-KW

UMC 784.23(b)(12) Operation Plan: Maps and Plans - KW

UMC 817.52 Hydrologic Balance: Surface and Groundwater Monitoring  
-KW

This section is incomplete and in serious disarray. A completely new and updated Water Monitoring Plan needs to be submitted and the old plan removed. This plan should include a map showing all monitoring stations, NPDES stations, and correct station identification numbers. The monitoring plan should then list the parameters that will be measured at each location. The list of parameters shown on Page 133 is fairly complete; however, the Division feels that boron, selenium, and arsenic should be included in this list. These metals should be monitored because they are soluble in neutral to basic waters, as characterized by the water at the mine site.

In the present list of parameters, the applicant commits to monitoring pH, E.C., and discharge in the field; however, from the analysis it appears that discharge is not being measured and that pH and E.C. are being measured in the laboratory. These parameters are important and should be determined in the field.

Furthermore, to help define the seasonal variability of the ground water system, the Division feels that the static water level needs to be measured in the monitoring well. This will require the applicant to designate a single well to be used in its monitoring program. This well should not be pumped for use as a water supply. However, the Division recommends that the monitoring well be determined after the direction of ground-water flow has been determined, as required by UMC 783.15 and UMC 783.25(f).

This water quality monitoring plan should also have a commitment to submitting the results of the quarterly monitoring within forty-five days of the sampling date. Furthermore, the document should commit to reporting the station ID number, date and time sampled, date and time analyzed, and the EPA or Utah Department of Health Certification number for each sample analysis.

To help in the analysis of water quality data, a summary of the past monitoring program needs to be included. This table should give the station number, the station location, and each quarter that data was collected. The applicant also needs to include the water quality data collected in 1983 in the MRP.

UMC 784.11(a) Operation Plans: General Requirements - DWD

The applicant shall provide a narrative describing the anticipated annual production of coal by tonnage for the current five-year permit term at a minimum. This estimate should be reflected on a map as outlined under UMC 783.12. The narrative shall also discuss the extraction ratios during the mining sequence. A table should be developed to show tons mined, mineable reserves (estimated reserves) and total reserves (all coal seams and rider seams).

UMC 784.13(b)(5) Reclamation Plan: General Requirements - LK

Information regarding timing of seeding and planting in Appendix K is adequate. However, this needs to be incorporated into Sections 5.1 and 5.5 of the MRP (page 213).

From the discussions in Appendix K and from Map 20, it appears that ARI is planning to plant shrubs on 2.17 acres (in clumps). However, there is no discussion on planting rates (plants per acre), what species will be used, the type of plant material (bare root or containerized) or planting methodology. It is suggested that the areas for the shrub clumps also be seeded with the appropriate seed mix as well. This needs to be incorporated into Section 5.3 of the MRP (page 214).

The type of mulch (i.e. straw, hay, wood fiber, etc.) needs to be identified. Also, the rate identified in Appendix K is too low. A minimum of 1 ton per acre should be used. Appendix K identifies only 29.35 acres of the 32.52 acres of disturbance to be mulched. What type of soil stabilization/moisture retention is planned for the remaining 3.17 acres? This needs to be incorporated into Section 5.5 of the MRP (page 214).

The monitoring plan is insufficient. Monitoring should also occur during year 5, 9 and 10. Monitoring during years 9 and 10 must include cover, woody plant density, productivity and species composition on both the reclaimed area as well as the reference areas. Range condition of the reference areas needs to be reevaluated every 5 years (during field season prior to repermit application) for the life of the mine. This needs to be incorporated into Section 5.7 of the MRP (page 214).

UMC 784.13(b)(1) Reclamation Plan - KW

This section requires a detailed timetable for the removal of the sediment pond. This has been addressed. However, the permit will not be considered clear or concise until the response to this section is inserted into the Reclamation Plan.

- UMC 784.14 Reclamation Plan: Protection of Hydrologic Balance - JRH  
UMC 817.13 Casing and Sealing of Exposed Underground Openings:  
General Requirements - JRH  
UMC 817.14 Casing and Sealing of Exposed Underground Openings:  
Temporary - JRH  
UMC 817.15 Casing and Sealing of Exposed Underground Openings:  
Permanent - JRH

Conflicting information is found in the plan regarding the permanent closure of the mine openings and the probability of mine water discharge upon cessation of mining operations.

No definitive information is provided in the Mining and Reclamation Plan in order to determine the amount or the quality of the water expected to be discharged from the mine. The operator needs to determine these values and include them in this section of the plan.

In the event that mine water does discharge from the portals or is expected to discharge from the mine, the operator shall be required to obtain an NPDES permit for such discharge. In any event, the operator needs to provide commitment to permanently treat and handle mine water discharge upon completion of mining activities.

- UMC 784.16 Reclamation Plan: Ponds, Impoundments, Banks, Dams and Embankments - JRH  
UMC 817.46 Hydrologic Balance: Sedimentation Ponds - JRH

Sediment control structures must remain on the site upon initial reclamation until such time as vegetative and effluent standards are met. In the event that recontouring of the site through reclamation makes the pond(s) unsuitable or ineffective, other such sediment control measures must be designed, described and included in the Mining and Reclamation Plan.

- UMC 784.16(1)(ii) Reclamation Plan - KW

A detailed map and cross-sections of Sediment Pond E during reclamation is needed. Part V of this section allows the applicant to commit to submitting these designs at a later date. The current submittal states that these will be submitted after the concept is approved. The concept of allowing all the drainage above the sediment pond to be collected in one large pond is acceptable if there is room at the location. Therefore, the Division feels that the applicant should submit these details with the MRP so that the entire Reclamation Plan can be approved.

UMC 784.19	Underground Development Waste - JRH
UMC 784.25	Return of Coal Processing Waste To Underground Workings - JRH
UMC 817.71	Disposal of Excess Spoil and Underground Development Waste: General Requirements - JRH
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
UMC 817.88	Coal Processing Waste: Return to Underground Workings - JRH
UMC 817.89	Disposal of Non-Coal Wastes - JRH
UMC 817.101	Backfilling and Grading: General Requirements - JRH
UMC 817.103	Backfilling and Grading: Covering Coal and Acid- and Toxic-Forming Materials - JRH
UMC 817.106	Regrading or Stabilizing Rills and Gullies - JRH

No mass balance calculations could be found in the plan which would indicate the amount of earthwork to be accomplished during reclamation. These calculations must be provided to the Division in order to determine the cost estimate for reclamation activities. Those calculations and other descriptions should be referenced to the maps and cross sections where appropriate.

Some of the indicated cuts and fills on the cross sections show that reclamation of the site will involve slopes which are greater than 2h:1v. The operator must provide sufficient design calculations and stability analysis to show that the final reclaimed configuration will have long-term stability. Those primary areas of concern are the highwalls, bench cuts for pads and roads, and those areas to be filled with slopes greater than 2h:1v.

The operator needs to provide mass balance calculations for the grading and backfilling of the site upon reclamation. Maps need to be provided of sufficient scale and detail in order to show the reclamation work to be accomplished. Areas need to be delineated on the maps and detailed in the text for specific reclamation treatments to be accomplished. Mass balance and cover requirements for topsoil distribution need to be determined.

The operator has indicated that the mine produces raw coal and has no processing waste materials. However, the applicant does not address the method of disposal of incidental coal spoils and coal waste. The plan must incorporate such material as sediment pond waste, cleanup of loadout and coal transportation facilities and other such coal waste materials that may be generated on the site.

The operator must identify both temporary and permanent locations for the disposal of this coal waste material within a permitted area.

The operator should locate and identify through mass balance where the mine development waste, sediment pond waste and contaminated coal and earthen materials will be located upon final reclamation within the permit area. Spoil materials, coal waste and sediment pond waste can and will be developed on the site throughout the life of the operation. Additionally, waste which may not be allowed to be gobbed underground due to coal content may have to be brought to the surface under the direction of MSHA.

Sediment pond waste must be treated as coal waste material due to the high content of coal waste and spoil materials collected from the disturbed area. However, upon suitable testing of the material, other applications for use of this material may be determined and proposed by the operator.

One suitable alternative could be that the operator locate a temporary location for the stockpiling of such materials. Upon reclamation, these materials could be used as backfill materials if proven suitable.

The operator may also wish to indicate that coal fines or spills from the coal handling and conveyor system would be added to the raw coal and shipped as mine product.

UMC 784.21 Fish and Wildlife Plan - LK

The response in Appendix K needs to be incorporated into the MRP. The employee wildlife education sessions should be an annual event. Finally, ARI needs to identify specific mitigation recommendations from the DWR recommendations that they will adhere to (or do not accept).

UMC 784.22 Diversions - KW

UMC 817.43 Diversions - KW

UMC 817.44 Stream Channel Diversions - KW

Although no sizing of ditches or flow velocity calculations were done in this review, the Division feels that the calculated peak flows and velocities are seriously underestimated, due to the miscalculation of drainage areas. Calculations are also needed for the diversions that are not named or talked about in the MRP.

The following mistakes, contradictions, and inadequacies must be rectified before the diversion system can be completely evaluated and reviewed:

Plate 6 (labeled 'as constructed') shows two undisturbed diversions as being riprapped. However, field investigations show these diversions are not riprapped.

Diversion DD-4 is not labeled on Plate 7.

Plate 8 is labeled "Surface Area Drainage." However, UD-1 and UD-2 are not shown on this map.

The drainage ditches from the upper area in Basin B, the Old Workings drainages, and one road drainage ditch to Sediment Pond C (as well as a third undisturbed diversion) are not shown on Plate 8 or labeled on any of the maps, or discussed in the text.

Since the topography on the southern half of Plate 8 and 16 is so poorly defined, watershed slopes and channel velocities cannot be determined .

Plate 9 still has the watershed boundaries incorrectly defined. The more detailed Plate 6 shows a large undisturbed drainage of 35 acres at the northeast end of the permit area draining into the mine area. A second large undisturbed area on the northwest side of the permit is incorrectly shown as draining into undisturbed diversion UD-1 instead of Sediment Pond C. This is due to Plate 9 incorrectly showing the location of Culvert C-4. The more detailed Plate 6 shows that Culvert C-4 is located several hundred feet further north. Thus, a much larger area drains into Sediment Pond C than is shown on Plate 9.

Division calculations show 49 acres which drain through diversion ditches DD-1, DD-2, and DD-3; however, the MRP shows 16 acres. This discrepancy results in large differences in the peak flow in the diversion ditches.

Division calculations show 32 acres which drain through the proposed diversion ditch DD-4; however, the MRP shows 6 acres. This discrepancy also results in a large difference in the peak flow in this diversion ditch.

#### UMC 800 Bonding - JRH

A copy of the bond for the operations is found in Chapter II of the MRP. The bond amount determined is estimated for 1986 dollars and is in the amount of \$381,839.00.

The following information was previously submitted to the operator. Again, these requirements must be met in order to determine the bonding section of the reclamation plan complete.

In providing the revised cost estimate, the operator shall be required to determine the quantities required for each reclamation construction activity, the equipment selected to accomplish the reclamation work, productivity calculations for the equipment based on site criteria, and determination of unit costs and total costs for each reclamation activity. The Division uses Caterpillar Handbook for determination of equipment and productivity, Blue Book Rental Rate Guide for equipment costs, and Means Cost Data to determine labor costs, miscellaneous construction activities and escalation factors to be used in determining the estimated costs for the site.

The operator shall include with the cost estimate, a reference of the sources used in order to determine those costs. Planimetric or cross-sectional information shall be provided along with calculations in order to determine mass balances for the earthwork required. The operator shall also provide a map of the surface facilities area delineating the specific reclamation treatments for each area as they apply. Suitable maps and sections are found in the MRP which can be utilized to accomplish these requirements; however, specific technical information must be included on the drawings in order to determine the bond amount. Maps should include such information as the total affected area, permit area boundaries, identification and location of topsoil piles and waste piles, the acreage and depth of topsoil to be used in reclamation, and the acreage and respective seed mix to be used in revegetation for each respective area. Cross sections should include cut and fill areas and reference earthwork calculations if not included on the drawing. The map shall also indicate the timing and the sequence for the reclamation work to be accomplished, primarily Phase I and Phase II reclamation work. Phase I reclamation consists of the majority of the reclamation work to be accomplished, but sediment control facilities are to remain until vegetation and sediment control standards are met. Phase II reclamation will involve the removal of the sediment control facilities once vegetative cover is established (sediment ponds, diversion ditches, etc.).

The Division shall utilize the estimate provided by the operator in order to determine the amount of bond required.

#### UMC 817.42 Small Area Exemptions - KW

There are no approved small area exemptions at this time. The permit should clearly delineate the areas that do not drain to the sediment pond and then clearly detail what alternative measures are being taken to ensure that runoff meets effluent standards. This includes the reestablishment of vegetation on the roadcut leading to the offices. The revegetation plan for this area should clearly outline a timetable for planting, and a commitment to use an

approved seed mix. The BLM seed mix must be approved by DOGM before it can be used for reseeding this area.

UMC 817.42 Compliance with Effluent Limitations - KW  
UMC 817.50(b) Compliance with Effluent Limitations - KW

In order to show compliance with 817.42 and with the hydraulic structure design specifications, the applicant needs to commit to the installation and daily maintenance of a standard large capacity 8-inch rain gauge or a continuous recording rain gauge. This will allow for the determination of precipitation events that exceed the 10yr - 24hr design event (1.82 inches). This commitment should detail the daily time that precipitation data will be recorded and the gauge serviced.

UMC 817.46 Sedimentation Ponds - KW

Although no sizing of sediment ponds or spillways was done in this review, the Division feels that the calculated runoff and peak flows are seriously underestimated, due to the miscalculation of drainage areas. The sediment ponds must be sized to contain the runoff from undisturbed and disturbed areas.

The following mistakes, contradictions, and inadequacies must be rectified before the sediment ponds can be completely evaluated and reviewed:

The sizing for Pond C is incorrect. The pond must be able to contain 100% of the expected sediment, not 60%.

The Division calculated a drainage area of 32 acres for Pond E; however, the MRP uses an area of less than seven acres.

The Division calculated a drainage area of 34 acres for Pond E-PM; however, the MRP uses an area of less than 25 acres.

The MRP does not show calculations for the primary spillway on Pond E.

The MRP does not have the calculations needed for showing that the emergency spillways on any of the sediment ponds can safely pass the 25yr - 24hr design storm event.

A detailed location of the grouted riprap or conveyor belts used for energy dissipation at the points where the diversion enters the pond must be shown. If conveyor belts are used, details must show how they will be secured. If grouted riprap is used, the narrative must detail average thickness of the dissipator and commit to the use of nonslaking, durable rock.

Boney coal waste, carbonaceous rock or shale is not acceptable. In either event, all discharge points into the pond need to be identified as to the specific type of dissipator that will be used.

UMC 817.48 Hydrologic Balance: Acid-Forming and Toxic-Forming  
Materials - JSL

This section has not been adequately addressed. Please refer to previous comments relative to UMC 817.48 in the January 21, and August 19, 1987 review documents.

jr  
Attachment  
1389R/1:15  
[Rev. 12/23/87]