

UNDERGROUND COAL MINING ACTIVITIES, AND HOW ENHANCEMENT OF THESE RESOURCES WILL BE ACHIEVED, WHERE PRACTICABLE. THE PLAN SHALL COVER THE PORTIONS OF THE MINE PLAN AREA, WITH SPECIFIC ATTENTION TO THE DISTURBED AREA, AND ADJACENT AREAS AS DETERMINED BY THE DIVISION PURSUANT TO SECTION UMC 783.20.

RESPONSE:

PMC was an existing mining operation before promulgation of the regulations. Every effort to bring the operation into full compliance with the regulations has been expended. All disturbed areas not necessary for use have been seeded with diverse seed mixtures that are compatible with wildlife. New facilities that have been constructed after 1977 have been designed to take wildlife into consideration. Old facilities have been evaluated for their impacts upon wildlife.

New facilities constructed since 1977 have been designed to utilize the least amount of disturbance possible to existing wildlife habitat. Mitigative measures have been undertaken to offset disturbance to mule deer winter range.

The DOGM shall be notified of the presence of any critical habitat of a threatened or endangered species listed by the Secretary or any plant or animal listed as threatened or endangered by state or any bald or golden eagle not previously reported.

Roads have been located to minimize impacts to wildlife and speed limits have been reduced to reduce possible impacts to wildlife. The roads do not create barriers to wildlife movement.

The only stream channel near a disturbed area with a potential for aquatic resources is in Corner Canyon near the fan breakouts. No disturbance of the channel was made by the fan construction. The stream has been marked with a buffer zone sign.

Pesticide use is not planned; DOGM as well as other appropriate agencies will be consulted for approval should uses be necessary.

Fires will not be used on the permit area unless approved.

Plant species for reclamation have been and will be chosen for their nutritional value, cover characteristics and their ability to support and enhance fish and wildlife habitats. Plantings will be grouped and distributed in a manner which optimizes edge effect, cover and other benefits to wildlife.

Enhancement of wildlife habitat in the operations area has been accomplished in the following ways:

1. Interim revegetation has been conducted with basically introduced species which have proven value to wildlife.
 - A. Species that "green-up" earlier than native species.
 - B. Species that are more nutritional than native species.
 - C. More diversity in mix than native species.
2. The eight sediment ponds and numerous sediment traps constructed to control run-off also hold water which is utilized by wildlife. This is evidenced by deer and other wildlife tracks at pond edges and trap edges throughout the operations area and many sightings of wildlife drinking from ponds. Water quality in the ponds is acceptable to wildlife as is evidenced by looking at quality data of

pond sampling. This has been further discussed under Mitigation and Management Plans, below.

3. The two canyons occupied by mining operations have been closed to hunting which creates a "mini-reserve" for wildlife.

MITIGATION AND MANAGEMENT PLANS

Mitigation of mining impacts on and management of wildlife are always considered and the plans for implementation approved prior to any perturbation. These actions often follow one of three general forms: (1) design of facilities and access or transportation modes to minimize impacts, (2) operation of the mine and associated facilities to minimize impact, and (3) enhancement of wildlife habitat both in the vicinity of and away from the mine in order to mitigate losses that may occur.

To further avoid potential impacts to the ground water system from the shallow surface cracks referenced above, PMC will inspect the stream channel of the North Fork of the Right Fork of Miller Creek during the season when access is possible (June and October). Water monitoring at Station ST-1 at the forks below the potential subsidence zone will give an indication of water loss due to subsidence if it occurs. Station ST-1 is included in our water monitoring plan and will be monitored monthly from June through October. If monitoring reveals surface cracks which divert stream flow, PMC will seal the cracks in the stream channel with bentonite or other environmentally safe materials to effectively prevent water loss.

Mudwater Canyon is a NPDES discharge point source, therefore, analysis of a full suite of trace elements in the water discharged is not available. However, data from monitoring for NPDES parameters has been summarized and analyzed. This information is summarized in Table 92, Mine Water Quality Evaluation for Cattle and Wildlife. The Table lists the recommended EPA standards for wildlife as taken from EPA (1973) and EPA (1976).

RECEIVED
DEC 31 1987

DIVISION OF
GAS & MINES

As can be seen in Table 92, pH, Iron, and Manganese are well below the EPA standards. Oil & Grease and Total Suspended Solids levels are very low with no potential for adverse effects to cattle and wildlife. Although Total Dissolved Solids (TDS) levels have increased significantly over the past year, the level discharged is still no higher than the receiving stream which is utilized by cattle and wildlife with no adverse effects. We believe the TDS level has peaked and will not become a problem.

As mitigation for wildlife, water discharged from the mine may be utilized as mitigating impacts to springs and/or stream flow lost due to mining in Section 18 beneath the North Fork of the Right Fork of Miller Creek. Details of the method of delivering mine water to the stream channel can be seen in Exhibit 38, Water Rights Mitigation Plan. Details of the plan, which can apply to mitigation for wildlife as well as mitigation for water rights, are as follows: During mining near the stream channel, a horizontal hole can be drilled to the surface near the stream channel bottom. Water from within the mine will gravity flow from the mine to the surface where it will enter the channel. The dip of the coal seam is favorable for this scenario, therefore allowing water inflowing to the mine to collect in the low area where it will flow to the surface.

No special mitigation plan concerning Tie Fork Creek is presented here since there will be no mining beneath it.

No special mitigation plan concerning Tie Fork Creek is presented here since there will be no mining beneath it.

Data collected in Miller Creek and Tie Fork Creek including both tributaries of Tie Fork Creek will provide baseline for future impact analysis and mitigation planning if the need arises. Ongoing water monitoring of Miller Creek and both tributaries of Tie Fork Creek track

RECEIVED
DEC 31 1987

both water quality and quantity, the major factors in aquatic wildlife population success. If negative impacts to water quality or quantity occur because of mining, additional aquatic wildlife investigations will be conducted to assess the impacts and to guide mitigation efforts. Both Miller Creek and Tie Fork Creek (both tributaries) are permanent monitoring points as discussed in response to UMC 784.14(b)(3).

In new mine operations it is easy to suggest, provide and implement mitigative and management measures, but in the case of the Star Point Mines, which were already in operation when the environmental laws came into force, preconstruction design and associated mitigation and management does not always apply. The terrestrial wildlife inhabiting and utilizing the area of concern are accustomed to the present

RECEIVED
DEC 31 1987

pond sampling. This has been further discussed under Mitigation and Management Plans, below.

3. The two canyons occupied by mining operations have been closed to hunting which creates a "mini-reserve" for wildlife.

MITIGATION AND MANAGEMENT PLANS

Mitigation of mining impacts on and management of wildlife are always considered and the plans for implementation approved prior to any perturbation. These actions often follow one of three general forms: (1) design of facilities and access or transportation modes to minimize impacts, (2) operation of the mine and associated facilities to minimize impact, and (3) enhancement of wildlife habitat both in the vicinity of and away from the mine in order to mitigate losses that may occur.

No special mitigation plan concerning Tie Fork Creek is presented here since there will be no mining beneath it.

Data collected in Miller Creek and Tie Fork Creek including both tributaries of Tie Fork Creek will provide baseline for future impact analysis and mitigation planning if the need arises. Ongoing water monitoring of Miller Creek and both tributaries of Tie Fork Creek track both water quality and quantity, the major factors in aquatic wildlife population success. If negative impacts to water quality or quantity occur because of mining, additional aquatic wildlife investigations will be conducted to assess the impacts and to guide mitigation efforts. Both Miller Creek and Tie Fork Creek (both tributaries) are permanent monitoring points as discussed in response to UMC 78-14(b)(3).

In new mine operations it is easy to suggest, provide and implement mitigative and management measures, but in the case of the Star Point Mines, which were already in operation when the environmental laws came into force, preconstruction design and associated mitigation and management does not always apply. The terrestrial wildlife inhabiting and utilizing the area of concern are accustomed to the present

facilities and have adjusted their behavior, including migration patterns, so that change would be of more impact than would retaining the status quo. Facilities designed and constructed since 1977 have been designed with wildlife in mind; conveyors have been constructed to allow deer to cross under, power lines have been designed to be raptor proof and other considerations have been given to all wildlife.

The Corner Canyon Fan was constructed with deer and elk reproductive activity in mind. Construction startup was begun after consultation with UDWR personnel. To minimize habitat disturbance and loss, the planned surface disturbed acreage was reduced. The cut-off ditch above the site was seeded with a diverse seed mixture compatible with wildlife.

The proposed Gentry Mountain ventilation shaft area is accessed by an existing Forest Service road. There will be minimal additional surface activity and disturbance of less than an acre which will reduce habitat loss and minimize human activity on the surface during the summer season. Construction of the shaft will also take into consideration the reproductive period of the elk and mule deer. Openings will be fenced to preclude harm to the high-interest species.

The refuse pile extension area is proposed for a site within mule deer wintering range. The area will be gradually filled and ultimately covered with topsoil. It is to be reseeded and revegetated with species that are proven for their potential on such sites and their value as winter browse for mule deer and as bird habitat. The most successful methods known to management agencies will be used. Care will be taken to control detrimental wildlife use while the area is stabilizing. Since there will be a time lag between the loss and reestablishment of the disturbed winter range, enhancement of winter range in proximity to that lost was conducted to accommodate the displaced animals. Details of these mitigation measures can be found in Exhibit 10, Plateau Unit Train Loadout Expansion Area, Wildlife Mitigation Plan. Briefly, in 1982 approximately 20 acres in mule deer winter range was enhanced by

removing and knocking down mature brush, pinyon and juniper trees to promote new growth of shrubs. The area was seeded with a diverse seed mixture compatible with deer usage. In 1983, containerized shrubs were hand planted consisting of the following:

<u>Species</u>	<u>No. Planted</u>
Fourwing Saltbush	500
Bitterbrush	1,000
Serviceberry	700
Currant	300
Mormon Tea	500
True Mountain Mahogany	500

Data from vegetation monitoring in 1985 as submitted to the DOGM shows that total forage production, perennial and annual forbs increased in the mitigation area, as compared to the control area. In addition, species richness is higher than that of the control area.

In addition to vegetation enhancement, a guzzler was installed at the mitigation area to provide water for deer utilizing the area. The guzzler was installed after ponds constructed for the same purpose in a natural drainage silted full and failed during heavy rainfall shortly after construction.

Mule deer historically have a difficult time wintering when snow depth is excessive or persistent as in 1977-78. Although it would be desirable to only dump refuse when mule deer are on their summer range, it is not feasible. Care will be taken, however, to minimally disturb wintering animals. Vehicles will be restricted to established roads.

Construction of the Unit Train Project disturbed only minimal amounts of vegetation in mule deer winter range. The mitigation area discussed above also provides forage for deer utilizing this area. Since the mitigation area was treated and seeded in 1982-1983, disturbance to the Unit Train Area (1985) was offset. In other words, vegetation enhancement was in place to offset disturbance during critical deer usage.

Overland conveyors feeding the Unit Train facilities were designed and constructed utilizing the UDWR recommended minimum clearance beneath the structure to allow deer crossing.

As discussed previously, eight sediment ponds have been constructed, all of which provide water through much of the year for deer and other wildlife. Five of these ponds are in deer winter range and one more is very close to the upper range limit as defined by UDWR and thus is utilized in some winters. Fifteen sediment traps have been constructed on the surface facilities area and also provide water sources at times for wildlife. These water sources extend the winter range for deer and enhance the overall ecosystem in the area for all forms.

The suitability of the waters in the sedimentation ponds for wildlife are summarized in Table 91, Sedimentation Pond Water Quality Evaluation for Wildlife. This table was prepared by comparing natural waters from station 10-1 in Sagebrush Canyon, a sampling point below treatment facility No. 1 and sedimentation ponds No. 2 and 3, which are listed as ambient and the waters in the sedimentation ponds that are monitored for the NPDES monitoring program, are listed in Table 91 as pond waters. The values from station 10-1 essentially represent drainage from undisturbed areas while the values from the sedimentation ponds represent drainage from areas disturbed by mining. Table 91 also contains the Recommended EPA standards for wildlife as taken from EPA (1973) commonly referred to as the EPA Blue Book and EPA (1976) commonly referred to as the EPA Red Book. These two references have long been accepted as standards used in water quality evaluations.

Table 91 indicates that the parameters; temperature, conductivity, total dissolved solids and total suspended solids have no recommended standards for wildlife applicable to this comparison. The parameters; pH, Arsenic, Barium, Chromium, and lead, all have ambient values below the EPA recommended thresholds so cannot reasonably be suspected as posing any sort of a problem to wildlife. Iron and Manganese values in

the ambient waters exceed the recommended EPA thresholds but all sedimentation pond waters have values significantly lower than the ambient values suggesting that the sediment trapping ability of the ponds significantly lowers total dissolved solids, suspended solids and associated heavy metal values. All Iron values sampled in the sedimentation ponds are below the EPA standard so PMC believes that waters in the ponds are therefore acceptable with respect to Iron. Sixteen of the eighteen Manganese values are also below the EPA standards. Upon comparison of the manganese values obtained from the ambient values reported in Table 91, PMC believes that the values obtained from the sedimentation ponds are considerably cleaner than are the ambient manganese values in this area. We also believe that it is important to point out that the EPA Red Book mentions this standard in connection with "protection of consumer of marine mollusks." Since the EPA Red Book states that "manganese is not considered to be a problem in fresh waters." The explanation given is that permanganates are rapidly oxidized and are rendered nontoxic. Since the Red Book states that "manganese is not known to be a problem in water consumed by livestock" and that no specific criterion is set for agricultural waters. PMC believes that manganese poses little potential threat to wildlife.

Cadmium according to the data presented in Table 91 potentially poses a threat to wildlife. A comparison of these cadmium values with those reported in Table 12, Surface Water Quality Summary, tend to indicate that ambient levels of cadmium in Corner Canyon and Mudwater Canyon are similar to those encountered at station 10-1. Since the sedimentation pond waters have lower suspended and dissolved solids and associated metal values for the parameters measured, PMC believes that the actual potential of an adverse impact from elevated cadmium are highly unlikely. PMC suggests that this evaluation of the water quality of waters in the sedimentation ponds strongly suggests that the waters in these ponds are of suitable water quality for wildlife.

PMC believes that accessibility into the sedimentation ponds should be as good, if not better than natural waters in this area, due to the fact that specific engineering standards were used during the construction of these ponds with slopes usually flatter than those normally found in the area. PMC also believes that due to the history of mining in the area and apparent adjustment of wildlife to the operators that no access problems should be expected. Documented use of the ponds by deer proves that the wildlife in this area have seemingly adjusted to man's activities in this area and past use of these ponds demonstrates compatibility of the ponds for this post mining use.

If the ponds are retained for post mine land use, PMC will attempt to obtain roots of cattails and/or bullrushes and bury these in the mud of ponds that are largely wet during the summer.

Since no riparian habitats exist within the area of surface disturbance, there will be no impact by the proposed action. All water is ephemeral (class 6), but since water is such a limiting resource to game animals, care will be taken to prevent disturbance, erosion, or coal deposition in the ephemeral channels. Roads will be routed or acceptable crossings built to avoid disturbance or erosion.

If the mining operation should require structures that would present a potential barrier to daily or seasonal movements of wildlife, adequate passage structures will be constructed.

As determined in consultation with UDWR, all hazards associated with the mine operation will be covered, buffered or fenced to prevent damage to wildlife of concern.

When conclusive findings are made that mining by PMC has caused impacts to water quality or quantity in a way that impacts wildlife, PMC will mitigate those impacts. Mitigation measures will be determined in conjunction with the DOGM, Land Management Agency, DWR, and water rights

owners. Mitigation measures will be determined considering the best available technology which may include: developing other springs in the vicinity to increase their flow to offset impacted sources, installing water guzzlers to offset water lost or other measures as determined to replace the supply.

In any situation not previously mentioned where wildlife habitats are disturbed by this proposed action, reclamation will be implemented by the best available methods and agreeable to UDWR and the appropriate land management agencies. Should temporary control of rodents or other pests be required to ensure successful reclamation, appropriate authorities will be consulted to determine the method of control. No control measures will be used without prior approval by all parties concerned.

EMPLOYEE AWARENESS AND WILDLIFE

Since there are crucial critical periods in the life history of high interest species such as mule deer and elk, the applicant will communicate such to their employees who will be admonished to avoid all unnecessary disturbance and harrassment of wildlife species.

Periodically, all PMC personnel are required to have presented to them a slide/tape presentation entitled "Coal Mining and Wildlife" which was developed jointly by PMC and the UDWR. The object of this presentation is to spark awareness in PMC personnel of wildlife and the effects of mining on that wildlife resource. In addition, personnel are instructed on procedures related to high interest species.

(2) IF THE APPLICANT STATES THAT IT WILL NOT BE PRACTICABLE, IN ACCORDANCE WITH PARAGRAPH (1), TO ACHIEVE A CONDITION WHICH CLEARLY SHOWS A TREND TOWARD ENHANCEMENT OF FISH AND WILDLIFE RESOURCES AT THE TIME REVEGETATION HAS BEEN SUCCESSFULLY COMPLETED UNDER UMC 817.11 - 817.117, A STATEMENT SHALL BE PROVIDED WHICH ESTABLISHES, TO THE SATISFACTION OF THE DIVISION, WHY IT IS NOT PRACTICABLE TO ACHIEVE SUCH A CONDITION.

RESPONSE:

All surface areas except water surface areas, roads, parking lots, buildings, refuse piles and other operations facilities have been seeded with diverse seed mixtures compatible with wildlife. In addition, approximately 30,000 shrub seedlings have been planted throughout the disturbed areas to provide forage and habitat for wildlife.

(b) A STATEMENT EXPLAINING HOW THE APPLICANT WILL UTILIZE IMPACT CONTROL MEASURES, MANAGEMENT TECHNIQUES, AND MONITORING METHODS TO PROTECT OR ENHANCE THE FOLLOWING, IF THEY ARE TO BE AFFECTED BY THE PROPOSED ACTIVITIES:

(1) THREATENED OR ENDANGERED SPECIES OF PLANTS OR ANIMALS LISTED BY THE SECRETARY UNDER THE ENDANGERED SPECIES ACT OF 1973, AS AMENDED (16 U.S.C. SEC 1531 ET. SEQ. AND THEIR CRITICAL HABITATS);

RESPONSE:

No threatened or endangered species exist on the permit area. If any are identified, every effort will be made to prevent disturbance. PMC personnel are periodically instructed concerning wildlife in the area in an effort to minimize impacts.

(2) SPECIES SUCH AS EAGLES, MIGRATORY BIRDS OR OTHER ANIMALS PROTECTED BY STATE OR FEDERAL LAW, AND THEIR HABITATS; OR OTHER SPECIES IDENTIFIED THROUGH THE CONSULTATION PROCESS PURSUANT TO UMC 783.20; OR

RESPONSE:

Annual raptor surveys are conducted to study the effects of the operation on birds of prey in the area. These surveys cover the entire permit area, and as such go beyond the letter of the law. PMC cooperatively conducts these surveys with the UDWR to enhance general knowledge about this valuable resource.

(3) HABITATS OF UNUSUALLY HIGH VALUE FOR FISH AND WILDLIFE, SUCH AS WETLANDS, RIPARIAN AREAS, CLIFFS SUPPORTING RAPTORS, AREAS OFFERING SPECIAL SHELTER OR PROTECTION, REPRODUCTION AND NURSERY AREAS, AND WINTERING AREA.

RESPONSE:

Visual observations of wildlife are constantly conducted by PMC personnel to document impacts and provide resource information.

Two possible riparian areas exist within 100 feet of existing facilities. These areas are the Mud Water Canyon Fan and the Corner Canyon Fan. Neither of the streams are classified as fisheries.

Regular inspections at both sites will insure that the possible riparian zones are not harmed. Water discharged from the mine at the Mud Water Canyon Fan area is regulated by the NPDES program. Water quality must meet the requirements of EPA, the Utah State Health Department and DOGM, insuring no degradation of the receiving stream. No water is discharged at Corner Canyon.

Downstream monitoring at Station 5-1 on Mud Water Creek and Station 36-1 on Corner Canyon Creek documents potential impacts on waterflow and quality.

Regular inspections at both sites will insure that the possible riparian zones are not harmed. Water discharged from the mine at the Mud Water Canyon Fan area is regulated by the NPDES program. Water quality must meet the requirements of EPA, the Utah State Health Department and DOGM, insuring no degradation of the receiving stream. No water is discharged at Corner Canyon.

Downstream monitoring at Station 5-1 on Mud Water Creek and Station 36-1 on Corner Canyon Creek documents potential impacts to waterflow and quality.

Cliffs exist in the area which are utilized by raptors. Annual searches are made of these cliff faces for evidence of raptor use. Mining beneath two golden eagle nests on a cliff face in Section 18, T15S, R8E (No.'s 20 and 21) may cause subsidence as predicted in Exhibit 30, Prediction of Subsidence Due to Two-Seam Longwall Mining in Section 18, and as revised on Figure 38, Subsidence Prediction - Mining Wattis Seam, and Figure 39, Subsidence Prediction - Mining Wattis and Third Seams.

Monitoring of golden eagles, nesting activity, and cliff effects as a result of mining will be monitored and mitigated according to the plan detailed in Exhibit 41, Golden Eagle Cliff Nesting and Subsidence Monitoring and Mitigation Plan. The plan is in the review process with the U.S. Fish and Wildlife Service and the Utah Division of Wildlife Resources, the eagle regulatory authorities. When the plan is finalized, a copy will be forwarded to the Division for inclusion into PMC's Permit. Commitments made in the final plan will be held as binding upon PMC. The copy included with this submittal is in draft form only.

The only information available that PMC could find on the effects of mining on cliff faces and eagle nests was a monitoring report from Utah Power and Light Mining Company for the years 1986-1987. UP&L Mining

DEC 31 1987

Company is currently longwall mining beneath the Castlegate Sandstone cliff face in Newberry Canyon at the Cottonwood-Wilberg Mine. Their data shows some movement of the cliff top and spalling of cliff face. Conditions at the UP&L site are vastly different from those at PMC and little correlation or prediction of mining effects can be made at PMC at this time.

RECEIVED
DEC 31 1987

STREAM BUFFER ZONES

Only one disturbed area exists in proximity to a stream, and this stream is intermittent. This area is the Corner Canyon Fan Breakout. Because of the sensitivity of the area and because water has been flowing in the channel in the past few high precipitation years, PMC committed to marking the channel as a buffer zone, although, no aquatic resources have been determined to exist in the stream.

No permanent or intermittent aquatic systems occur in the vicinity of any existing or planned surface facilities for PMC's Star Point Mines. Current surface facilities are in the upper reaches of the Serviceberry Creek drainage, which is a tributary of the Miller Creek drainage. Appropriate sedimentation ponds have been constructed. This coupled with coal refuse pile drainage ditches, clear water diversions, water bars, and wind erosion control measures within PMC's disturbed areas, will assure protection from mining impact of aquatic resources far downstream from the mine.

UMC 784.22 DIVERSIONS

EACH APPLICATION SHALL CONTAIN DESCRIPTIONS, INCLUDING MAPS AND CROSS-SECTIONS, OF STREAM, CHANNEL DIVERSIONS AND OTHER DIVERSIONS TO BE CONSTRUCTED WITHIN THE PROPOSED PERMIT AREA TO ACHIEVE COMPLIANCE WITH UMC 817.43-817.44.

RESPONSE:

Descriptions, including maps and cross-sections of diversions to be constructed within the proposed permit area can be found in the response to UMC 784.14(b)(3), Runoff Conveyance Facilities, and will be constructed according to UMC 817.43 and 817.44. Specific information regarding channel reclamation is presented in response to UMC 817.44.

STREAM BUFFER ZONES

Only one disturbed area exists in proximity to a stream, and this stream is intermittent. This area is the Corner Canyon Fan Breakout. Because of the sensitivity of the area and because water has been flowing in the channel in the past few high precipitation years, PMC committed to marking the channel as a buffer zone, although, no aquatic resources have been determined to exist in the stream.

No permanent or intermittent aquatic systems occur in the vicinity of any existing or planned surface facilities for PMC's Star Point Mines. Current surface facilities are in the upper reaches of the Serviceberry Creek drainage, which is a tributary of the Miller Creek drainage. Appropriate sedimentation ponds have been constructed. This coupled with coal refuse pile drainage ditches, clear water diversions, water bars, and wind erosion control measures within PMC's disturbed areas, will assure protection from mining impact of aquatic resources far downstream from the mine.

UMC 784.22 DIVERSIONS

EACH APPLICATION SHALL CONTAIN DESCRIPTIONS, INCLUDING MAPS AND CROSS-SECTIONS, OF STREAM CHANNEL DIVERSIONS AND OTHER DIVERSIONS TO BE CONSTRUCTED WITHIN THE PROPOSED PERMIT AREA TO ACHIEVE COMPLIANCE WITH UMC 817.43 - 817.44.

RESPONSE:

Descriptions, including maps and cross-sections of diversions to be constructed within the proposed permit area can be found in the response to UMC 784.14(b)(3), Runoff Conveyance Facilities, and will be constructed according to UMC 817.43 and 817.44.

UMC 784.23 OPERATION PLAN: MAPS AND PLANS

EACH APPLICATION SHALL CONTAIN MAPS, PLANS, AND CROSS-SECTIONS OF THE PROPOSED MINE PLAN AND ADJACENT AREAS AS FOLLOWS-

(a) THE MAPS, PLANS AND CROSS-SECTIONS SHALL SHOW THE UNDERGROUND COAL MINING ACTIVITIES TO BE CONDUCTED, THE LANDS TO BE AFFECTED THROUGHOUT THE OPERATION, AND ANY CHANGE IN A FACILITY OR FEATURE TO BE CAUSED BY THE PROPOSED OPERATIONS, IF THE FACILITY OR FEATURE WAS SHOWN UNDER UMC 783.24 - 783.25.

(b) THE FOLLOWING SHALL BE SHOWN FOR THE PROPOSED PERMIT AREA UNLESS SPECIFICALLY REQUIRED FOR THE MINE PLAN AREA OR ADJACENT AREA BY THE REQUIREMENTS OF THIS SECTION:

- (1) BUILDINGS, UTILITY CORRIDORS, AND FACILITIES TO BE USED;
- (2) THE AREA OF LAND TO BE AFFECTED WITHIN THE PROPOSED MINE PLAN AREA, ACCORDING TO THE SEQUENCE OF MINING AND RECLAMATION;
- (3) EACH AREA OF LAND FOR WHICH A PERFORMANCE BOND OR OTHER EQUIVALENT GUARANTEE WILL BE POSTED UNDER SUBCHAPTER J OF THIS CHAPTER;
- (4) EACH COAL STORAGE, CLEANING AND LOADING AREA;
- (5) EACH TOPSOIL, SPOIL, COAL PREPARATION WASTE, UNDERGROUND DEVELOPMENT WASTE, AND NON-COAL WASTE STORAGE AREA;
- (6) EACH WATER DIVERSION, COLLECTION, CONVEYANCE, TREATMENT, STORAGE AND DISCHARGE FACILITY TO BE USED;
- (7) EACH SOURCE OF WASTE AND EACH WASTE DISPOSAL FACILITY RELATING TO COAL PROCESSING OR POLLUTION CONTROL;
- (8) EACH FACILITY TO BE USED TO PROTECT AND ENHANCE FISH AND WILDLIFE RELATED ENVIRONMENTAL VALUES;
- (9) EACH EXPLOSIVE STORAGE AND HANDLING FACILITY;
- (10) LOCATION OF EACH SEDIMENTATION POND, PERMANENT WATER IMPOUNDMENT, COAL PROCESSING WASTE BANK, AND COAL PROCESSING WASTE DAM AND EMBANKMENT, IN ACCORDANCE WITH UMC 784 AND DISPOSAL AREAS FOR UNDERGROUND DEVELOPMENT WASTE AND EXCESS SPOIL, IN ACCORDANCE WITH UMC 784.
- (11) EACH PROFILE, AT CROSS-SECTIONS SPECIFIED BY THE DIVISION, OF THE ANTICIPATED FINAL SURFACE CONFIGURATION TO BE ACHIEVED FOR THE AFFECTED AREAS;
- (12) LOCATION OF EACH WATER AND SUBSIDENCE MONITORING POINT;

(13) LOCATION OF EACH FACILITY THAT WILL REMAIN ON THE PROPOSED PERMIT AREA AS A PERMANENT FEATURE, AFTER THE COMPLETION OF UNDERGROUND MINING ACTIVITIES.

(c) MAPS, PLANS AND CROSS-SECTIONS REQUIRED UNDER PARAGRAPHS (B)(5), (6), (10), AND (11) SHALL BE PREPARED BY, OR UNDER THE DIRECTION OF AND CERTIFIED BY A QUALIFIED PROFESSIONAL ENGINEER, OR PROFESSIONAL GEOLOGIST, WITH ASSISTANCE FROM EXPERTS IN RELATED FIELDS SUCH AS LAND SURVEYING AND LANDSCAPE ARCHITECTURE, EXCEPT THAT-

(1) MAPS, PLANS AND CROSS-SECTIONS FOR SEDIMENTATION PONDS MAY ONLY BE PREPARED BY A QUALIFIED REGISTERED ENGINEER; AND,

(2) EXCESS SPOIL AND UNDERGROUND DEVELOPMENT WASTE FACILITIES MAPS, PLANS AND CROSS-SECTIONS MAY ONLY BE PREPARED BY A QUALIFIED REGISTERED PROFESSIONAL ENGINEER.

RESPONSE:

Minor amounts of underground development waste are produced at PMC. Occasionally, faults, dikes, grabens and other geologic structures are encountered in the mine which cause waste rock to be mined. Sometimes, this rock is discarded underground but usually it is transported out of the mine with the coal. It is then washed out of the coal and becomes intermixed with coal refuse and is deposited along with the coal refuse on the refuse or coal waste pile. The waste pile has been designed by professional engineers with the assistance of geotechnical engineers.

UMC 784.24 TRANSPORTATION FACILITIES

EACH APPLICATION SHALL CONTAIN A DETAILED DESCRIPTION OF EACH ROAD, CONVEYOR, AND RAIL SYSTEM TO BE CONSTRUCTED, USED, OR MAINTAINED WITHIN THE PROPOSED PERMIT AREA. THE DESCRIPTION SHALL INCLUDE A MAP, APPROPRIATE CROSS-SECTIONS, AND THE FOLLOWING:

(a) SPECIFICATIONS FOR EACH ROAD WIDTH, ROAD GRADIENT, ROAD SURFACE, ROAD CUT, FILL EMBANKMENT, CULVERT, BRIDGE, DRAINAGE DITCH, AND DRAINAGE STRUCTURE.

(b) A REPORT OF APPROPRIATE GEOTECHNICAL ANALYSIS, WHERE APPROVAL OF THE DIVISION IS REQUIRED FOR ALTERNATIVE SPECIFICATIONS FOR STEEP OUT SLOPES UNDER UMC 817.150(d), 817.152(c), 817.160(d), OR 817.162(c).

(c) A DESCRIPTION OF EACH MEASURE TO BE TAKEN TO OBTAIN APPROVAL OF THE DIVISION FOR ALTERATION OR RELOCATION OF NATURAL DRAINAGEWAY UNDER UMC 817.153(D), 817.163(D) OR 817.173(C).

(d) A DESCRIPTION OF MEASURES, OTHER THAN USE OF A ROCK HEADWALL, TO BE TAKEN TO PROTECT THE INLAY END OF A DITCH RELIEF CULVERT, FOR APPROVAL BY THE DIVISION UNDER UMC 817.153(C)(2)(VI) AND 817.163(C)(2)(VI).

(e) EACH PLAN SHALL CONTAIN A GENERAL DESCRIPTION OF EACH ROAD, CONVEYOR, OR RAIL SYSTEM TO BE CONSTRUCTED, USED, OR MAINTAINED WITHIN THE PROPOSED MINE PLAN AREA.

RESPONSE:

All transportation facilities can be seen on Map 44, Surface Facilities (4 sheets). Pictures can be seen in Exhibit 15, Mine Structure Photographs.

Conveyor belts are utilized to transport coal on the surface at PMC. Free standing steel structures are used to support the conveyors. Descriptions of the conveyors can be found in response to UMC 784.11 (b)(3) and UMC 784.12(a). Details of the conveyor designs can be seen on Map 63, PMC Conveyors 1 and 2 Layour and Map 64, Typical Cross Section Through Overland Conveyor.

All structures are in compliance with Subchapter K. In 1978, DOGM inspected structures existing at that time and found only one structure or facility to be out of compliance, the mine access road to the Number 1 Mine. Refer to a copy of the compliance letter dated April 27, 1978,

Exhibit 24, Pre-existing Non-conforming Structure at the Wattis Mine Site. A showing was made that to bring the road into compliance would create excessive disturbance. This disturbance could not be justified for the Number 1 Mine since it had only a short life remaining. A new road was planned and constructed to the Lion Deck area where the remainder of the life-of-mine operations would be conducted. This new road was constructed to meet the requirements of Subchapter K. Details of this road can be seen on Map 65, Mine Access Road Plan and Map 66, Mine Access Road Profile.

Railroad systems within the permit area consist of spur lines owned by PMC and those owned by Utah Railway Company (URC). In the lower operations area, a spur line serves the old loading area now used only for stoker coal loading. In this area, empty railcar tracks and loaded railcar tracks exist. In the silo area, URC owns the spur and main line; PMC does not control any trackage in this area.

Since 1978, all newly constructed facilities have been permitted through DOGM and meet the requirements of Subchapter K. Hydrologic structures such as culverts and ditches are addressed under responses to UMC 784.16.

UMC 784.25 RETURN OF COAL PROCESSING WASTE TO ABANDONED UNDERGROUND WORKINGS

(a) EACH PLAN SHALL DESCRIBE THE DESIGN, OPERATION AND MAINTENANCE OF ANY PROPOSED COAL PROCESSING WASTE DISPOSAL FACILITY, INCLUDING FLOW DIAGRAMS AND ANY OTHER NECESSARY DRAWINGS AND MAPS, FOR THE APPROVAL OF THE DIVISION AND THE MINE SAFETY AND HEALTH ADMINISTRATION UNDER UMC 817.88.

(b) EACH PLAN SHALL DESCRIBE THE SOURCE AND QUALITY OF WASTE TO BE STORED, AREA TO BE BACKFILLED, PERCENT OF THE MINE VOID TO BE FILLED, METHOD OF CONSTRUCTING UNDERGROUND RETAINING WALLS, INFLUENCE OF THE BACKFILLING OPERATION ON ACTIVE UNDERGROUND MINE OPERATIONS, SURFACE AREA TO BE SUPPORTED BY THE BACKFILL, AND THE ANTICIPATED OCCURRENCE OF SURFACE EFFECTS FOLLOWING BACKFILLING.

(c) THE APPLICANT SHALL DESCRIBE THE SOURCE OF THE HYDRAULIC TRANSPORT MEDIUMS, METHOD OF DEWATERING THE PLACED BACKFILL, RETAINMENT OF WATER UNDERGROUND, TREATMENT OF WATER IF RELEASED TO SURFACE STREAMS, AND THE EFFECT ON THE HYDROLOGIC REGIME.

(d) THE PLAN SHALL DESCRIBE EACH PERMANENT MONITORING WELL TO BE LOCATED IN THE BACKFILLED AREA, THE STRATUM UNDERLYING THE MINED COAL, AND GRADIENT FROM THE BACKFILLED AREA.

(e) THE REQUIREMENTS OF PARAGRAPHS (A), (B), (C), AND (D) OF THIS SECTION SHALL ALSO APPLY TO PNEUMATIC BACKFILLING OPERATIONS, EXCEPT WHERE THE OPERATIONS ARE EXEMPTED BY THE DIVISION FROM REQUIREMENTS SPECIFYING HYDROLOGIC MONITORING.

RESPONSE:

At this time PMC does not plan to return coal processing waste to abandoned mine workings. All coal processing wastes will be disposed in the approved refuse pile in the approved manner.

UMC 784.26 AIR POLLUTION CONTROL PLAN

FOR ALL SURFACE OPERATIONS ASSOCIATED BY UNDERGROUND COAL MINING ACTIVITIES, THE APPLICATION SHALL CONTAIN AN AIR POLLUTION CONTROL PLAN WHICH INCLUDES THE FOLLOWING:

(a) AN AIR QUALITY MONITORING PROGRAM, IF REQUIRED BY THE DIVISION, TO PROVIDE SUFFICIENT DATA TO EVALUATE THE EFFECTIVENESS OF THE FUGITIVE DUST CONTROL PRACTICES, UNDER PARAGRAPH (B) OF THIS SECTION TO COMPLY WITH APPLICABLE STATE AND FEDERAL AIR QUALITY STANDARDS; AND

RESPONSE:

The Utah State Health Department does not require air quality monitoring programs except for major sources; hence PMC has not implemented a monitoring program. Meteorological data, including wind speed and direction, was collected over a three year period to establish a baseline for prevailing winds in the event monitoring equipment placement becomes necessary.

(b) A PLAN FOR FUGITIVE DUST CONTROL PRACTICES, AS REQUIRED UNDER UMC 817.95.

RESPONSE:

Fugitive dust control measures have been considered and implemented on all facilities at PMC. All surface operations including construction and reclamation operations are conducted utilizing dust control measures. Approval orders have been received from the Utah State Department of Health for all facilities at PMC; these approval orders are as follows: Coal Production Increase and Waste Area Expansion approved Aug. 5, 1981; Fly Ash Collector for Mine Repair Boiler approved Nov. 6, 1981; Rock Dust Distribution System approved March 18, 1982; Coal Fired Boiler Lion Deck Bath House approved March 15, 1985; Unit Train Loadout approved April 28, 1982 and Unit Train Loadout Modification approved August 19, 1985. Copies of these approval orders can be found in Exhibit 34, Air Quality Approval Correspondence.

Unpaved roads are periodically watered when climatic conditions dictate. Speeds on these roads are restricted to fifteen miles per hour to reduce fugitive dust. Chemical stabilization has not been necessary; in the event it does, nontoxic agents will be used.

The main access road which carries the vast majority of traffic is paved to prevent fugitive dust. Traffic is restricted to established roadways.

Accumulations of coal, rock and other dust forming materials are promptly removed from roads and unpaved roads are periodically graded and compacted to stabilize the surfaces.

Dumping of coal has been restricted and eliminated where possible by constructing stacking tubes with wind restrictors on the outlet doors. Heights or freefalling coal have been reduced to the lowest level possible. Coal in the system has surface moisture from the mining and washing processes which aids in fugitive dust losses. Coal stockpiles are inspected daily, and burning areas are removed and cooled to prevent further burning.

All transfer points on conveyors are enclosed to prevent fugitive dust losses. Conveyors have covers to prevent wind loss. Fugitive dust from loading of coal at the silo and the truck loading point is controlled with chutes, hoods and by reducing the drop distance as well as with water sprays.

The coal refuse material contains approximately 20% moisture which eliminates any fugitive dust from this material. After it is spread and dried, it crusts over which reduces dust loss from the pile.

Disturbances to land are kept to a minimum to prevent unnecessary contributions of fugitive dust. Those areas which are disturbed during construction that are not necessary for surface facilities are promptly seeded to stabilize the surface material.

Very little surface drilling and blasting are conducted at PMC. When they occur, appropriate measures are used to control dust emissions.

PART UMC 785 - REQUIREMENTS FOR PERMITS FOR SPECIAL CATEGORIES
OF MINING

UMC 785.1 SCOPE

THIS PART ESTABLISHES THE REQUIREMENTS FOR PERMITS FOR CERTAIN CATEGORIES OF UNDERGROUND COAL MINING ACTIVITIES. THESE REQUIREMENTS ARE IN ADDITION TO THE GENERAL PERMIT REQUIREMENTS CONTAINED IN THIS SUBCHAPTER G. ALL OF THE PROVISIONS OF SUBCHAPTER G APPLY TO THESE ACTIVITIES, UNLESS OTHERWISE SPECIFICALLY PROVIDED IN THIS PART.

UMC 785.2 OBJECTIVE

THE OBJECTIVE OF THIS PART IS TO ENSURE THAT PERMITS ARE ISSUED FOR CERTAIN CATEGORIES OF UNDERGROUND COAL MINING ACTIVITIES ONLY AFTER THE DIVISION RECEIVES INFORMATION THAT SHOWS THAT THESE ACTIVITIES WILL BE CONDUCTED ACCORDING TO THE APPLICABLE REQUIREMENTS OF THE ACT, SUBCHAPTER K AND THE REGULATORY PROGRAM.

UMC 785.13 EXPERIMENTAL PRACTICES MINING

(a) PARAGRAPHS (B)-(I) OF THIS SECTION APPLY TO ANY PERSON WHO CONDUCTS OR INTENDS TO CONDUCT UNDERGROUND COAL MINING ACTIVITIES UNDER A PERMIT AUTHORIZING THE USE OF ALTERNATIVE MINING PRACTICES ON AN EXPERIMENTAL BASIS IF THE PRACTICES REQUIRE A VARIANCE FROM THE ENVIRONMENTAL PROTECTION PERFORMANCE STANDARDS OF SUBCHAPTER K.

(b) THE PURPOSE OF THIS SECTION IS TO PROVIDE REQUIREMENTS FOR THE PERMITTING OF UNDERGROUND COAL MINING ACTIVITIES THAT ENCOURAGES ADVANCES IN MINING AND RECLAMATION PRACTICES OR ALLOW POSTMINING LAND USE FOR INDUSTRIAL, COMMERCIAL, RESIDENTIAL OR PUBLIC USE (INCLUDING RECREATIONAL FACILITIES) ON AN EXPERIMENTAL BASIS.

(c) EXPERIMENTAL PRACTICE, AS USED IN THIS SECTION, MEANS THE USE OF ALTERNATIVE UNDERGROUND COAL MINING ACTIVITIES PRACTICES FOR EXPERIMENTAL OR RESEARCH PURPOSES. EXPERIMENTAL PRACTICES NEED NOT COMPLY WITH SPECIFIC ENVIRONMENTAL PROTECTION PERFORMANCE STANDARDS OF SUBCHAPTER K IF APPROVED PURSUANT TO THIS SECTION.

(d) NO PERSON SHALL ENGAGE IN OR MAINTAIN ANY EXPERIMENTAL PRACTICE, UNLESS THAT PRACTICE IS FIRST APPROVED IN A PERMIT BY THE DIVISION AND THE DIRECTOR OF THE OFFICE OF SURFACE MINING.

(e) EACH PERSON WHO DESIRES TO CONDUCT AN EXPERIMENTAL PRACTICE SHALL SUBMIT A PERMIT APPLICATION FOR THE APPROVAL OF THE DIVISION AND THE DIRECTOR OF THE OFFICE OF SURFACE MINING. THE PERMIT APPLICATION SHALL CONTAIN APPROPRIATE DESCRIPTIONS, MAPS AND PLANS WHICH SHOW:

RESPONSE:

The mining within the permit area is underground mining using the room and pillar, and longwall mining methods. At this time, PMC does not anticipate any experimental practices or alternative mining practices to extract coal from our leases. In the advent of an experimental practice being considered, DOGM will be consulted as to which activities will require special consideration by DOGM.

UMC 785.17 PRIME FARMLANDS

(a) SCOPE.

THIS SECTION APPLIES TO ANY PERSON WHO CONDUCTS OR INTENDS TO CONDUCT SURFACE OPERATIONS ON PRIME FARMLANDS HISTORICALLY USED FOR CROPLAND. AREAS WHERE MINING IS AUTHORIZED UNDER PERMITS ISSUED OR MINING PLANS APPROVED PRIOR TO AUGUST 8, 1977, ARE EXEMPT FROM THE PRIME FARMLAND RECONSTRUCTION STANDARDS.

(b) APPLICATION CONTENTS FOR PRIME FARMLAND.

IF LAND WITHIN THE PROPOSED PERMIT AREA IS IDENTIFIED AS PRIME FARMLAND UNDER UMC 783.27, THE APPLICANT SHALL SUBMIT A PLAN FOR THE MINING AND RESTORATION OF THE LAND. EACH PLAN SHALL CONTAIN, AT A MINIMUM-

RESPONSE:

The SCS of the Department of Agriculture has determined no prime farmland exists on the permit area. These letters of determination are found in Exhibit 20, Prime Farmland Determination Correspondence.

UMC 785.19 UNDERGROUND COAL MINING ACTIVITIES ON AREAS OR ADJACENT TO AREAS INCLUDING ALLUVIAL VALLEY FLOORS IN THE ARID OR SEMI-ARID AREAS OF UTAH

(a) SCOPE. THIS SECTION APPLIES TO EACH PERSON WHO CONDUCTS OR INTENDS TO CONDUCT UNDERGROUND COAL MINING ACTIVITIES IN, ADJACENT TO OR UNDER A VALLEY HOLDING A STREAM IN THE ARID OR SEMI-ARID REGIONS OF UTAH.

(b) NO PERSON SHALL ENGAGE IN UNDERGROUND COAL MINING ACTIVITIES SUBJECT TO THIS SECTION, EXCEPT UNDER A PERMIT ISSUED BY THE DIVISION IN ACCORDANCE WITH THIS SECTION.

(c) ALLUVIAL VALLEY FLOOR DETERMINATION.

(1) BEFORE APPLYING FOR A PERMIT TO CONDUCT, OR BEFORE CONDUCTING UNDERGROUND COAL MINING ACTIVITIES WITHIN A VALLEY HOLDING A STREAM OR IN A LOCATION WHERE THE ADJACENT AREA INCLUDES ANY STREAM IN THE ARID OR SEMI-ARID REGIONS OF UTAH, THE APPLICANT SHALL EITHER AFFIRMATIVELY DEMONSTRATE TO THE SATISFACTION OF THE DIVISION, BASED ON AVAILABLE DATA, THE PRESENCE OF AN ALLUVIAL VALLEY FLOOR, OR SUBMIT TO THE DIVISION THE RESULTS OF A FIELD INVESTIGATION OF THE PROPOSED MINE PLAN AREA AND ADJACENT AREA. THE FIELD INVESTIGATIONS SHALL INCLUDE SUFFICIENTLY DETAILED GEOLOGIC, HYDROLOGIC, LAND USE, SOILS, AND VEGETATION STUDIES ON AREAS REQUIRED TO BE INVESTIGATED BY THE DIVISION, AFTER CONSULTATION WITH THE APPLICANT, TO ENABLE THE DIVISION TO MAKE AN EVALUATION REGARDING THE EXISTENCE OF THE PROBABLE ALLUVIAL VALLEY

DEC 31 1987

Revised 12/15/86

(b) APPLICATION CONTENTS FOR PRIME FARMLAND.

IF LAND WITHIN THE PROPOSED PERMIT AREA IS IDENTIFIED AS PRIME FARMLAND UNDER UMC 783.27, THE APPLICANT SHALL SUBMIT A PLAN FOR THE MINING AND RESTORATION OF THE LAND. EACH PLAN SHALL CONTAIN, AT A MINIMUM-

RESPONSE:

The SCS of the Department of Agriculture has determined no prime farmland exists on the permit area. This letter of determination is found in Exhibit 20, Prime Farmland Determination Correspondence.

UMC 785.19 UNDERGROUND COAL MINING ACTIVITIES ON AREAS OR ADJACENT TO AREAS INCLUDING ALLUVIAL VALLEY FLOORS IN THE ARID OR SEMI-ARID AREAS OF UTAH

(a) SCOPE. THIS SECTION APPLIES TO EACH PERSON WHO CONDUCTS OR INTENDS TO CONDUCT UNDERGROUND COAL MINING ACTIVITIES IN, ADJACENT TO OR UNDER A VALLEY HOLDING A STREAM IN THE ARID OR SEMI-ARID REGIONS OF UTAH.

(b) NO PERSON SHALL ENGAGE IN UNDERGROUND COAL MINING ACTIVITIES SUBJECT TO THIS SECTION, EXCEPT UNDER A PERMIT ISSUED BY THE DIVISION IN ACCORDANCE WITH THIS SECTION.

(c) ALLUVIAL VALLEY FLOOR DETERMINATION.

(1) BEFORE APPLYING FOR A PERMIT TO CONDUCT, OR BEFORE CONDUCTING UNDERGROUND COAL MINING ACTIVITIES WITHIN A VALLEY HOLDING A STREAM OR IN A LOCATION WHERE THE ADJACENT AREA INCLUDES ANY STREAM IN THE ARID OR SEMI-ARID REGIONS OF UTAH, THE APPLICANT SHALL EITHER AFFIRMATIVELY DEMONSTRATE TO THE SATISFACTION OF THE DIVISION, BASED ON AVAILABLE DATA, THE PRESENCE OF AN ALLUVIAL VALLEY FLOOR, OR SUBMIT TO THE DIVISION THE RESULTS OF A FIELD INVESTIGATION OF THE PROPOSED MINE PLAN AREA AND ADJACENT AREA. THE FIELD INVESTIGATIONS SHALL INCLUDE SUFFICIENTLY DETAILED GEOLOGIC, HYDROLOGIC, LAND USE, SOILS, AND VEGETATION STUDIES ON AREAS REQUIRED TO BE INVESTIGATED BY THE DIVISION, AFTER CONSULTATION WITH THE APPLICANT, TO ENABLE THE DIVISION TO MAKE AN EVALUATION REGARDING THE EXISTENCE OF THE PROBABLE ALLUVIAL VALLEY

FLOOR IN THE PROPOSED MINING PLAN AREA OR ADJACENT AREA AND TO DETERMINE WHICH AREAS, IF ANY, REQUIRE MORE DETAILED STUDY IN ORDER TO ALLOW THE DIVISION TO MAKE A FINAL DETERMINATION REGARDING THE EXISTENCE OF AN ALLUVIAL VALLEY FLOOR. STUDIES PERFORMED DURING THE INVESTIGATION BY THE APPLICANT OR SUBSEQUENT STUDIES AS REQUIRED OF THE APPLICANT BY THE DIVISION SHALL INCLUDE AN APPROPRIATE COMBINATION, ADAPTED TO SITE-SPECIFIC CONDITIONS, OF-

(i) MAPPING OF UNCONSOLIDATED STREAM-LAID DEPOSITS HOLDING STREAMS INCLUDING, BUT NOT LIMITED TO GEOLOGIC MAPS OF UNCONSOLIDATED DEPOSITS, AND STREAM-LAID DEPOSITS, MAPS OF STREAMS, DELINEATION OF SURFACE WATERSHEDS AND DIRECTIONS OF SHALLOW GROUND WATER FLOWS THROUGH AND INTO THE UNCONSOLIDATED DEPOSITS, TOPOGRAPHY SHOWING LOCAL AND REGIONAL TERRACE LEVELS, AND TOPOGRAPHY OF TERRACES, FLOOD PLAINS AND CHANNELS SHOWING SURFACE DRAINAGE PATTERNS.

(ii) MAPPING OF ALL LANDS INCLUDED IN THE AREA IN ACCORDANCE WITH THIS PARAGRAPH AND SUBJECT TO AGRICULTURAL ACTIVITIES, SHOWING THE AREA IN WHICH DIFFERENT TYPES OF AGRICULTURAL LANDS, SUCH AS FLOOD IRRIGATED LANDS, PASTURE LANDS, AND UNDEVELOPED RANGELANDS, EXIST, AND ACCOMPANIED BY MEASUREMENTS OF VEGETATION IN TERMS OF PRODUCTIVITY AND TYPE.

(iii) MAPPING OF ALL LANDS THAT ARE CURRENTLY OR WERE HISTORICALLY FLOOD IRRIGATED, SHOWING THE LOCATION OF EACH DIVERSION STRUCTURE, DITCH, DAM AND RELATED RESERVOIR, IRRIGATED LAND, AND TOPOGRAPHY OF THOSE LANDS.

(iv) DOCUMENTATION THAT AREAS IDENTIFIED IN THIS PARAGRAPH ARE, OR ARE NOT, SUBIRRIGATED, BASED ON GROUND WATER MONITORING DATA, REPRESENTATIVE WATER QUALITY, SOIL MOISTURE MEASUREMENTS, AND MEASUREMENTS OF ROOTING DEPTH, SOIL MOTTILING, AND WATER REQUIREMENTS OF VEGETATION.

(v) DOCUMENTATION, BASED ON REPRESENTATIVE SAMPLING, THAT AREAS IDENTIFIED UNDER THIS PARAGRAPH ARE, OR ARE NOT FLOOD IRRIGATABLE, BASED ON STREAMFLOW, WATER QUALITY, WATER YIELD, SOILS MEASUREMENTS, AND TOPOGRAPHIC CHARACTERISTICS.

(vi) ANALYSIS OF A SERIES OF AERIAL PHOTOGRAPHS, INCLUDING COLOR INFRARED IMAGERY FLOWN AT A TIME OF YEAR TO SHOW ANY LATE SUMMER AND FALL DIFFERENCES BETWEEN UPLAND AND VALLEY FLOOR VEGETATIVE GROWTH AND OF A SCALE ADEQUATE FOR RECONNAISSANCE IDENTIFICATION OF AREAS THAT MAY BE ALLUVIAL VALLEY FLOORS.

(2) BASED ON THE INVESTIGATIONS CONDUCTED UNDER UMC 785.19(C)(1), THE DIVISION SHALL MAKE A DETERMINATION OF THE EXTENT OF ANY ALLUVIAL VALLEY FLOORS WITHIN THE STUDY AREA AND WHETHER ANY STREAM IN THE STUDY AREA MAY BE EXCLUDED FROM FURTHER CONSIDERATION AS LYING WITHIN AN ALLUVIAL VALLEY FLOOR. THE DIVISION SHALL DETERMINE THAT AN ALLUVIAL VALLEY FLOOR EXISTS IF IT FINDS THAT-

(i) UNCONSOLIDATED STREAMLAID DEPOSITS HOLDING STREAMS ARE PRESENT; AND,

(ii) THERE IS SUFFICIENT WATER TO SUPPORT AGRICULTURAL ACTIVITIES AS EVIDENCED BY;

(A) THE EXISTANCE OF FLOOD IRRIGATION IN THE AREA IN QUESTION OR ITS HISTORICAL USE;

(B) THE CAPABILITY OF AN AREA TO BE FLOOD IRRIGATED, BASED ON STREAMFLOW WATER YIELD, SOILS, WATER QUALITY, AND TOPOGRAPHY; OR

(C) SUBIRRIGATION OF THE LANDS IN QUESTION, DERIVED FROM THE GROUND WATER SYSTEM OF THE VALLEY FLOOR.

(3) IF THE DIVISION DETERMINES THAT AN ALLUVIAL VALLEY FLOOR EXISTS, THEN IT MAY MAKE A FINDING BASED ON DATA AND INFORMATION SUPPLIED BY THE APPLICANT THAT:

(i) THE PROPOSED OPERATION CONDUCTED WITHIN OR IMMEDIATELY ADJACENT TO THE VALLEY FLOOR WOULD INCLUDE NEITHER THE EXTRACTION OF COAL NOR SIGNIFICANT PHYSICAL DISTURBANCE OF THE SURFACE OR GROUNDWATER REGIME; AND

(ii) THE PREMINING LAND USE OF THE PORTION OF THE PROPOSED OPERATION CONDUCTED WITHIN OR IMMEDIATELY ADJACENT TO THE VALLEY FLOOR HAS BEEN UNDEVELOPED RANGE LAND WHICH IS NOT SIGNIFICANT TO FARMING, OR THE AREA

OF THE ALLUVIAL VALLEY FLOOR TO BE AFFECTED PROVIDES OR MAY PROVIDE, NEGLIGIBLE SUPPORT FOR PRODUCTION FROM FARMING.

IF THE DIVISION MAKES SUCH A FINDING, IT MAY WAIVE ALL OR ANY OF THE REQUIREMENTS OF PARAGRAPHS (D) AND (E) OF THIS SECTION AND OF SECTION 822.

RESPONSE:

A review of the mine plan area and adjacent areas to determine the presence of geomorphic criteria for identification of potential alluvial valley floors showed that Doelling (1972) identified alluvial deposits with active stream channels in Nuck Woodward and Huntington Canyons. Nuck Woodward Canyon, which is a minimum of 1.7 mi from the lease boundary, has no potential of being affected by the mining operation, neither does Huntington Canyon which is more distant from the permit area than Nuck Woodward Canyon. The alluvial deposits in Nuck Woodward Canyon cover 60-70 acres.

The alluvial deposits mentioned above are outside the area of influence of the mining operation, because of their distance from the mine plan area. The surface runoff from the watershed, which drains from the mine plan area, is very small. No surface disturbance will occur on the very small area contributing runoff to Nuck Woodward Canyon. Groundwater flow in this portion of the mine plan area tends to follow the dip, which is to the southwest, away from Nuck Woodward Canyon. As a result, this area is not influenced by the mining operation.

Quaternary gravel deposits have been mapped in the drainages downstream from the unit train loadout facility. However, these are terrace gravel deposits which were not deposited by the existing ephemeral drainages. Thus, these areas do not meet the geomorphic criteria of "unconsolidated stream-laid deposits holding streams." In addition, none of the ephemeral drainages yield sufficient water to support agricultural activities.

In consideration of field investigations and geologic, hydrologic, land use, soils and vegetation studies, there are no alluvial valley floors in

the permit and adjacent areas which will be affected by mining and related operations.

(d) APPLICATION CONTENTS FOR OPERATIONS AFFECTING DESIGNATED ALLUVIAL VALLEY FLOORS.

RESPONSE:

The permit area does not contain any designated alluvial valley floors or will any AVF's identified adjacent to the permit area be affected by PMC operations.

(e) NO PERMIT OR PERMIT REVISION APPLICATION FOR UNDERGROUND COAL MINING ACTIVITIES ON LANDS LOCATED IN UTAH SHALL BE APPROVED BY THE DIVISION, UNLESS THE APPLICATION DEMONSTRATES AND THE DIVISION FINDS IN WRITING, ON THE BASIS OF INFORMATION SET FORTH IN THE APPLICATION THAT-

RESPONSE

PMC wishes to request a negative determination of alluvial valley floors as per the discussion contained in response to UMC 785.19(a), (b), (c) and (d) above.

UMC 785.21 COAL PROCESSING PLANTS OR SUPPORT FACILITIES NOT LOCATED WITHIN THE PERMIT AREA OF A SPECIFIED MINE

(a) THIS SECTION APPLIES TO ANY PERSON WHO CONDUCTS OR INTENDS TO CONDUCT UNDERGROUND COAL MINING ACTIVITIES UTILIZING COAL PROCESSING PLANTS OR SUPPORT FACILITIES NOT WITHIN A PERMIT AREA OF A SPECIFIC MINE. ANY PERSON WHO OPERATES SUCH A PROCESSING PLANT OR SUPPORT FACILITY SHALL HAVE OBTAINED A PERMIT FROM THE DIVISION UNDER THE REGULATORY PROGRAM IN ACCORDANCE WITH THE REQUIREMENTS OF THIS SECTION.

(b) ANY APPLICATION FOR A PERMIT FOR OPERATIONS COVERED BY THIS SECTION SHALL CONTAIN IN THE MINING AND RECLAMATION PLAN, SPECIFIC PLANS, INCLUDING DESCRIPTIONS, MAPS AND CROSS-SECTIONS OF THE CONSTRUCTION OPERATION, MAINTENANCE AND REMOVAL OF THE PROCESSING PLANTS AND ASSOCIATED SUPPORT

FACILITIES. THE PLAN SHALL DEMONSTRATE THAT THOSE OPERATIONS WILL BE CONDUCTED IN COMPLIANCE WITH PART UMC 817.

(c) NO PERMIT SHALL BE ISSUED FOR ANY OPERATION COVERED BY THIS SECTION, UNLESS THE DIVISION FINDS, IN WRITING, THAT, IN ADDITION TO MEETING ALL OTHER APPLICABLE REQUIREMENTS OF THIS SUBCHAPTER, THE OPERATIONS WILL BE CONDUCTED IN COMPLIANCE WITH THE REQUIREMENTS OF PART UMC 827.

RESPONSE:

All coal processing plants and support facilities for operation of the Star Point Mines are located within the permit area.

UMC 785.22 IN SITU PROCESSING ACTIVITIES

(a) THIS SECTION APPLIES TO ANY PERSON WHO CONDUCTS OR INTENDS TO CONDUCT UNDERGROUND COAL MINING ACTIVITIES UTILIZING IN SITU PROCESSING ACTIVITIES.

(b) ANY APPLICATION FOR A PERMIT FOR OPERATIONS COVERED BY THIS SECTION SHALL BE MADE ACCORDING TO ALL REQUIREMENTS OF UMC 782, 783, AND 784. IN ADDITION, THE MINING AND RECLAMATION OPERATIONS PLAN FOR OPERATIONS INVOLVING IN SITU PROCESSING ACTIVITIES SHALL CONTAIN INFORMATION ESTABLISHING HOW THOSE OPERATIONS WILL BE CONDUCTED IN COMPLIANCE WITH THE REQUIREMENTS OF PART UMC 828, INCLUDING-

(1) DELINEATION OF PROPOSED HOLES AND WELLS AND PRODUCTION ZONE FOR APPROVAL OF THE DIVISION;

(2) SPECIFICATIONS OF DRILL HOLES AND CASING PROPOSED TO BE USED;

(3) A PLAN FOR TREATMENT, CONFINEMENT OR DISPOSAL OF ALL ACID-FORMING, TOXIC-FORMING OR RADIOACTIVE GASES, SOLIDS, OR LIQUIDS CONSTITUTING A FIRE, HEALTH SAFETY OR ENVIRONMENTAL HAZARD CAUSED BY THE MINING AND RECOVERY PROCESS; AND

(4) PLANS FOR MONITORING SURFACE AND GROUND WATER AND AIR QUALITY,
AS REQUIRED BY THE DIVISION.

RESPONSE:

PMC does not anticipate use of in-situ technology to conduct underground mining activities. A permit application for operations covered by this section would be submitted if in-situ methods are considered viable.

UMC 788.14 PERMIT RENEWALS: COMPLETED APPLICATIONS

(a) CONTENTS. COMPLETE APPLICATIONS FOR RENEWALS OF A PERMIT SHALL BE MADE WITHIN THE TIME PRESCRIBED BY UMC 771.21(b)(2). RENEWAL APPLICATIONS SHALL BE SUBMITTED ON DIVISION FORM UMC-3 AND IN ACCORDANCE WITH PARAGRAPH (2)(b) OF THIS SECTION, INCLUDING AT A MINIMUM, THE FOLLOWING:

RESPONSE:

This application for permit renewal was submitted to the DOGM on September 29, 1986, which is within the 120 day limit prescribed by UMC 771.21(b)(2). According to Mr. John Whitehead (DOGM) Form UMC-3 does not exist. A cover letter requesting permit renewal is included in the beginning of Volume 1 of this application.

(1) A STATEMENT OF THE NAME AND ADDRESS OF THE PERMITTEE, THE TERM OF THE RENEWAL REQUESTED, THE PERMIT NUMBER, AND A DESCRIPTION OF ANY CHANGES TO THE MATTERS SET FORTH IN THE ORIGINAL APPLICATION FOR A PERMIT OR PRIOR PERMIT RENEWAL;

RESPONSE:

Permittees: Local Office
Plateau Mining Company
P.O. Drawer PMC
Price, Utah 84501

General Office
Plateau Mining Company
7200 South Alton Way
P.O. Box 3299
Englewood, CO 80155

This renewal request is for a five year term, to expire January 27, 1992. The current Permit Number is ACT/007/006.

This document incorporates all modifications, stipulation responses to the original permit approval and new facilities additions. It is

intended to be a comprehensive document bringing up-to-date all permitting requirements.

Changes to Matters Set Forth in Original Application:

The following list outlines briefly the changes made to the matters set forth in the original permit application. For details, the reader must review the pertinent responses to regulations contained herein.

1. Ownership of PMC has changed to Cyprus Western Coal Equipment Company. Application for change of ownership has been previously submitted.
2. Many new facilities have been permitted and constructed since the original application, responses to UMC 784 contain descriptions of all new facilities.
3. Hydrology:

All modifications to sediment ponds, drainage ditches and drainage structures have been incorporated into this submittal.

Groundwater discussions now incorporate all data gathered over the past permit term. The probable Hydrologic Consequences Determination has been made using all information and data available.

Groundwater monitoring points have been modified to reflect revision and update of the Probable Hydrologic Consequences, and to include additional monitoring points for mining advancement.

Water monitoring schedules and parameters lists have been revised to include those recommended by DOGM guidelines.

4. The sequence of mining has been revised to reflect the most current mining projections.

5. Copies of pertinent reports, data and other information included in minor revisions since the original submittal have been incorporated into the permit renewal application. Pertinent reports have been included as exhibits.
6. All permit maps, tables and figures have been updated or new ones made to show the most current information.

(2) A COPY OF THE NEWSPAPER NOTICE AND PROOF OF PUBLICATION OF SAME UNDER UMC 786.11(a); AND

RESPONSE:

In compliance with UMC 786.11(a), newspaper advertisements will be published in the Sun Advocate and Emery County Progress starting on October 1, 1986 and will appear four consecutive weeks. A copy of the proposed notice is provided as Exhibit 3, Proof of Publication. Proof of publication and copies of the notices will be filed with DOGM and made a part of the application when available.

(3) EVIDENCE THAT LIABILITY INSURANCE POLICY OR ADEQUATE SELF-INSURANCE UNDER UMC 806.14 WILL BE PROVIDED BY THE APPLICANT FOR THE PROPOSED PERIOD OF RENEWAL.

RESPONSE:

A copy of Certificate of Insurance is included as Exhibit 2, Certificate of Insurance. The term of the insurance is for a one year period, July 1 (current year) to July 1 of the following year. Renewal certificates will be forwarded to DOGM annually.

(b) PROCESSING AND REVIEW.

(1) COMPLETE APPLICATIONS FOR RENEWAL SHALL BE SUBJECT TO THE REQUIREMENTS OF PUBLIC NOTIFICATION AND PARTICIPATION CONTAINED IN UMC 786.11-786.14.

RESPONSE:

Public notification has been made in compliance with UMC 786.11(a).

(2) IF A COMPLETE APPLICATION FOR RENEWAL OF A PERMIT INCLUDES A PROPOSAL TO EXTEND THE MINING AND RECLAMATION OPERATION BEYOND THE BOUNDARIES AUTHORIZED IN THE EXISTING PERMIT, THE PORTION OF THE COMPLETE APPLICATION FOR RENEWAL OF A VALID PERMIT WHICH ADDRESSES ANY NEW LAND AREAS SHALL BE SUBJECT TO THE FULL STANDARDS APPLICABLE TO NEW PERMIT APPLICATIONS UNDER THE ACT, UMC 771, 782, 783, 784, 785, 786, 787, 788, and 789, SUBCHAPTER J OF THIS CHAPTER, AND THE REGULATORY PROGRAM.

(3) IF THE UNDERGROUND COAL MINING ACTIVITIES AUTHORIZED UNDER THE ORIGINAL PERMIT WERE NOT SUBJECT TO THE STANDARDS CONTAINED IN SECTIONS 40-10-11(2)(e)(i)-(ii) OF THE ACT AND SECTION UMC 785.19 OF THIS SUBCHAPTER, BECAUSE THE PERMITTEE COMPLIED WITH THE EXCEPTIONS TO 40-10-11(2)(e)(ii) OF THE ACT, THE PORTION OF THE APPLICATION FOR RENEWAL OF THE PERMIT WHICH ADDRESSES ANY NEW LAND AREAS PREVIOUSLY IDENTIFIED IN THE RECLAMATION PLAN SUBMITTED PURSUANT TO UMC 784 FOR THE ORIGINAL PERMIT SHALL NOT BE SUBJECT TO THE STANDARDS CONTAINED IN SECTIONS 40-10-11(2)(e)(i)-(ii) OF THE ACT AND SECTION UMC 785.19 OF THIS SUBCHAPTER.

RESPONSE:

This application does not include a proposal to extend mining and reclamation outside of the existing permit boundary.

(4) BEFORE FINALLY ACTING TO GRANT THE PERMIT RENEWAL, THE DIVISION SHALL REQUIRE ANY ADDITIONAL PERFORMANCE BOND NEEDED BY THE PERMITTEE TO COMPLY WITH THE REQUIREMENTS OF SECTION UMC 788.16(a)(4) TO BE FILED WITH THE DIVISION.

RESPONSE:

Bonding is discussed in response to UMC 805

PART UMC 805 - AMOUNT AND DURATION OF PERFORMANCE BOND

UMC 805.11 DETERMINATION OF BOND AMOUNT

(a) THE STANDARD APPLIED BY THE DIVISION IN DETERMINING THE AMOUNT OF PERFORMANCE BOND SHALL BE THE ESTIMATED COST TO THE DIVISION IF IT HAD TO PERFORM THE RECLAMATION, RESTORATION AND ABATEMENT WORK REQUIRED OF A PERSON WHO CONDUCTS UNDERGROUND COAL MINING ACTIVITIES UNDER THE ACT, THIS CHAPTER, THE REGULATORY PROGRAM, AND THE PERMIT, AND SUCH ADDITIONAL WORK AS WOULD BE REQUIRED TO ACHIEVE COMPLIANCE WITH THE GENERAL STANDARDS FOR REVEGETATION IN SECTION UMC 817.116(B)(3) IN THE EVENT THE PERMITTEE FAILS TO IMPLEMENT AN APPROVED ALTERNATIVE POSTMINING LAND USE PLAN WITHIN TWO YEARS REQUIRED BY SECTION UMC 817.116 (B)(3)(II). THIS AMOUNT SHALL BE BASED ON, BUT NOT LIMITED TO-

(1) THE ESTIMATED COSTS SUBMITTED BY THE PERMITTEE IN ACCORDANCE WITH UMC 784.13.

RESPONSE:

In response to UMC 784.13, PMC has determined a reclamation liability of \$2.92 million in 1986 dollars.

(2) THE ADDITIONAL ESTIMATED COSTS TO THE DIVISION WHICH MAY ARISE FROM APPLICABLE PUBLIC CONTRACTING REQUIREMENTS OR THE NEED TO BRING PERSONNEL AND EQUIPMENT TO THE PERMIT AREA AFTER ITS ABANDONMENT BY THE PERMITTEE TO PERFORM RECLAMATION, RESTORATION, AND ABATEMENT WORK.

RESPONSE:

DOGGM suggests a 10% contingency fee be added to this amount to include subcontractor and additional overhead fees; 0.29 million dollars was added to the \$2.92 million for a total estimated reclamation cost of \$3.21 million.

(3) ALL ADDITIONAL ESTIMATED COSTS NECESSARY, EXPEDIENT, AND

INCIDENT TO THE SATISFACTORY COMPLETION OF THE REQUIREMENTS IDENTIFIED IN THIS PARAGRAPH.

RESPONSE:

PMC is currently bonded with Aetna Casualty and Surety Company for \$3,407,222 for reclamation activities. This amount includes monitoring activities after initial seeding. A copy of the bonding form is presented as Exhibit 35, Reclamation Bond.

(4) AN ADDITIONAL AMOUNT BASED ON FACTORS OF COST CHANGES DURING THE PRECEDING 5 YEARS FOR THE TYPES OF ACTIVITIES ASSOCIATED WITH THE RECLAMATION TO BE PERFORMED; AND

RESPONSE:

The bond amount \$3,407,222 reflects the addition of all minor revisions to the permit application.

(5) SUCH OTHER COST INFORMATION AS MAY BE REQUIRED BY OR AVAILABLE TO THE DIVISION.

RESPONSE:

Detailed cost information for the bond calculations comprise Exhibit 36, Bond Calculations.

UMC 805.12 MINIMUM AMOUNT

THE AMOUNT OF THE BOND FOR UNDERGROUND COAL MINING ACTIVITIES SHALL BE \$10,000 AT A MINIMUM, FOR THE ENTIRE AREA UNDER ONE PERMIT AND BE SUFFICIENT TO ASSURE PERFORMANCE OF RECLAMATION, RESTORATION AND ABATEMENT WORK REQUIRED OF A PERSON WHO CONDUCTS UNDERGROUND COAL MINING ACTIVITIES UNDER THE ACT, THIS CHAPTER, THE REGULATORY PROGRAM, AND THE PROVISIONS OF THE PERMIT, IF THE WORK HAD TO BE PERFORMED BY THE DIVISION IN THE EVENT OF FORFEITURE.

RESPONSE:

The bond for \$3,407,222 will assure performance of reclamation, restoration and abatement work associated with PMC's underground coal mining activities.

UMC 805.13 PERIOD OF LIABILITY

(a) LIABILITY UNDER PERFORMANCE BOND(S) APPLICABLE TO A PERMIT SHALL CONTINUE UNTIL ALL RECLAMATION, RESTORATION AND ABATEMENT WORK REQUIRED OF PERSONS WHO CONDUCT UNDERGROUND COAL MINING ACTIVITIES UNDER REQUIREMENTS OF THE ACT, THIS CHAPTER, THE REGULATORY PROGRAM AND THE PROVISIONS OF THE PERMIT HAS BEEN COMPLETED, AND THE PERMIT TERMINATED BY RELEASE OF THE PERMITTEE FROM ANY FURTHER LIABILITY IN ACCORDANCE WITH PART UMC 807.

(b) IN ADDITION TO THE PERIOD NECESSARY TO ACHIEVE COMPLIANCE WITH ALL REQUIREMENTS OF THE ACT, THIS CHAPTER, THE REGULATORY PROGRAM AND THE PERMIT INCLUDING THE STANDARDS FOR THE SUCCESS OF REVEGETATION AS REQUIRED BY UMC 817.116, THE PERIOD OF LIABILITY UNDER PERFORMANCE BOND SHALL CONTINUE FOR A MINIMUM PERIOD BEGINNING WITH THE LAST YEAR OF AUGMENTED SEEDING, FERTILIZING, IRRIGATION OR OTHER WORK. THE MINIMUM PERIOD OF LIABILITY SHALL CONTINUE IN AREAS OF MORE THAN 26.0 INCHES AVERAGE ANNUAL PRECIPITATION, FOR NOT LESS THAN 5 YEARS OR IN AREAS OF 26 INCHES OR LESS AVERAGE ANNUAL PRECIPITATION, FOR NOT LESS THAN 10 YEARS. THE PERIOD OF LIABILITY SHALL BEGIN AGAIN WHENEVER AUGMENTED SEEDING, FERTILIZING, IRRIGATION OR OTHER WORK IS REQUIRED OR CONDUCTED ON THE SITE PRIOR TO BOND RELEASE.

RESPONSE:

The bond will remain in full force until the reclamation is completed as outlined in the approved Mining and Reclamation Plan. It is not anticipated that the bond will be fully released less than five years after seeding of the disturbed acreage.

(c) IF THE DIVISION APPROVES A LONG-TERM INTENSIVE AGRICULTURAL POST-MINING LAND USE, IN ACCORDANCE WITH UMC 817.133, THE APPLICABLE 5 OR 10-YEAR

PERIOD OF LIABILITY SHALL COMMENCE AT THE DATE OF INITIAL PLANTING FOR SUCH LONG-TERM INTENSIVE AGRICULTURAL LAND USE.

(d) THE DIVISION MAY, UPON A WRITTEN FINDING, AFTER APPROVING A LONG-TERM INTENSIVE AGRICULTURAL LAND USE, GRANT AN EXCEPTION TO THE REVEGETATION REQUIREMENTS OF UMC 817, BUT SHALL NOT GRANT EXCEPTION TO THE PERIOD OF LIABILITY IN THIS SECTION.

RESPONSE:

Long-term intensive agricultural post-mining land use is not anticipated on reclaimed acreage.

UMC 805.14 ADJUSTMENT OF AMOUNT

(a) THE AMOUNT OF THE PERFORMANCE BOND LIABILITY APPLICABILITY TO A PERMIT SHALL BE ADJUSTED BY THE DIVISION AS THE ACREAGE IN THE PERMIT AREA IS REVISED, METHODS OF MINING OPERATION CHANGE, STANDARDS OF RECLAMATION CHANGE OR WHEN THE COST OF FUTURE RECLAMATION, RESTORATION OR ABATEMENT WORK CHANGES. THE DIVISION SHALL NOTIFY THE PERMITTEE OF ANY PROPOSED BOND ADJUSTMENT AND PROVIDE THE PERMITTEE AN OPPORTUNITY FOR A CONFERENCE ON THE ADJUSTMENT. THE DIVISION SHALL REVIEW EACH OUTSTANDING PERFORMANCE BOND AT THE TIME THAT PERMIT REVIEWS ARE CONDUCTED UNDER UMC 788.11, AND RE-EVALUATE THOSE PERFORMANCE BONDS IN ACCORDANCE WITH THE STANDARDS IN SECTION UMC 805.11.

RESPONSE:

PMC agrees to re-evaluate the performance bond from time to time when the permit acreage is revised, standards of reclamation change, or when the cost of future reclamation work changes.

(b) A PERMITTEE MAY REQUEST REDUCTION OF THE REQUIRED PERFORMANCE BOND AMOUNT UPON SUBMISSION OF EVIDENCE TO THE DIVISION PROVING THAT THE PERMITTEE'S METHOD OF OPERATION OR OTHER CIRCUMSTANCES WILL REDUCE THE MAXIMUM ESTIMATED COST TO THE DIVISION TO COMPLETE THE RECLAMATION RESPONSIBILITIES AND THEREFORE WARRANT A REDUCTION OF THE BOND AMOUNT. THE

REQUEST SHALL BE CONSIDERED AS A REQUEST FOR PARTIAL BOND RELEASE IN ACCORDANCE WITH THE PROCEDURES OF PART UMC 807 OF THIS CHAPTER.

RESPONSE:

PMC will, from time to time, request reduction of the performance bond amount when circumstances warrant a reduction.

UMC 817.11 SIGNS AND MARKERS

(a) SPECIFICATIONS. SIGNS AND MARKERS REQUIRED UNDER THIS PART SHALL--

(1) BE POSTED, MAINTAINED, AND REMOVED BY THE PERSON WHO CONDUCTS THE UNDERGROUND COAL MINING ACTIVITIES;

(2) BE OF A UNIFORM DESIGN THROUGHOUT THE ACTIVITIES THAT CAN BE EASILY SEEN AND READ;

(3) BE MADE OF DURABLE MATERIAL; AND

(4) CONFORM TO LOCAL LAWS AND REGULATIONS.

(b) DURATION OF MAINTENANCE. SIGNS AND MARKERS SHALL BE MAINTAINED DURING THE CONDUCT OF ALL ACTIVITIES TO WHICH THEY PERTAIN.

(c) MINE AND PERMIT IDENTIFICATION SIGNS.

(1) IDENTIFICATION SIGNS SHALL BE DISPLAYED AT EACH POINT OF ACCESS FROM PUBLIC ROADS TO AREAS OF SURFACE OPERATIONS AND FACILITIES ON PERMIT AREAS FOR UNDERGROUND COAL MINING ACTIVITIES.

(2) SIGNS WILL SHOW THE NAME, BUSINESS ADDRESS, AND TELEPHONE NUMBER OF THE PERSON WHO CONDUCTS UNDERGROUND COAL MINING ACTIVITIES AND THE IDENTIFICATION NUMBER OF THE CURRENT REGULATORY PROGRAM PERMIT AUTHORIZING UNDERGROUND COAL MINING ACTIVITIES.

(3) SIGNS SHALL BE RETAINED AND MAINTAINED UNTIL AFTER THE RELEASE OF ALL BONDS FOR THE PERMIT AREA.

(d) PERIMETER MARKERS. EACH PERSON WHO CONDUCTS UNDERGROUND COAL MINING ACTIVITIES SHALL CLEARLY MARK THE PERIMETER OF ALL AREAS AFFECTED BY SURFACE OPERATIONS OR FACILITIES BEFORE BEGINNING MINING ACTIVITIES.

(e) BUFFER ZONE MARKERS. BUFFER ZONES ALONG STREAMS, WHEN REQUIRED BY SECTION UMC 817.57, SHALL BE CLEARLY MARKED TO PREVENT DISTURBANCE OF THE STREAM BY SURFACE OPERATIONS AND FACILITIES.

(f) BLASTING SIGNS. PERSONS WHO CONDUCT SURFACE BLASTING INCIDENTAL TO UNDERGROUND MINING ACTIVITIES SHALL,

(1) CONSPICUOUSLY FLAG OR POST, WITHIN THE IMMEDIATE VICINITY OF BLASTING ACTIVITIES, AS REQUIRED BY SECTION UMC 817.65(e);

(2) PLACE AT ALL ENTRANCES TO AREAS OF SURFACE OPERATIONS AND FACILITIES IN THE PERMIT AREA, FROM PUBLIC ROADS OR HIGHWAYS, CONSPICUOUS SIGNS WHICH STATE "WARNING: EXPLOSIVES IN USE."

(g) TOPSOIL MARKERS. WHERE TOPSOIL OR OTHER VEGETATION-SUPPORTING MATERIAL IS SEGREGATED AND STOCKPILED AS REQUIRED UNDER SECTION UMC 817.23, THE STOCKPILED MATERIAL SHALL BE CLEARLY MARKED.

RESPONSE:

Signs and markers will be posted, maintained, and removed by CPMC, and shall be made of durable material, and will be of a uniform design.

Signs and markers will be maintained during the conduct of the activities to which they pertain.

Identification signs showing CPMC's name, address, telephone number, and permit number will be posted at public access points to surface operations and facilities. These signs will be maintained until after the release of all bonds for the permit area.

Perimeter markers will be placed to mark the perimeter of the surface facilities area before beginning these facilities.

Buffer zone markers will be placed along streams to prevent disturbance of the stream.

Blasting signs will be posted in the vicinity of blasting operations. A warning sign will be posted at public access points to blasting areas.

Topsoil stockpile signs will be posted on all stockpiles.

UMC 817.24 TOPSOIL: REDISTRIBUTION

(a) AFTER FINAL GRADING AND BEFORE THE REPLACEMENT OF TOPSOIL AND OTHER MATERIALS SEGREGATED IN ACCORDANCE WITH SECTION UMC 817.23, REGRADED LAND SHALL BE TREATED AS REQUIRED BY THE DIVISION TO ELIMINATE SLIPPAGE SURFACES AND TO PROMOTE ROOT PENETRATION.

(b) TOPSOIL AND OTHER MATERIALS SHALL BE REDISTRIBUTED IN A MANNER THAT--

(1) ACHIEVES AN APPROXIMATE UNIFORM, STABLE THICKNESS CONSISTENT WITH THE POSTMINING LAND USES, SLOPES, AND SURFACE DRAINAGE SYSTEM;

(2) PREVENTS EXCESS COMPACTION OF THE TOPSOIL; AND

(3) PROTECTS THE TOPSOIL FROM WIND AND WATER EROSION BEFORE AND AFTER IT IS SEEDED AND PLANTED.

RESPONSE:

Topsoil stockpiles and volumes are shown on Map 78, Reclamation Map 1 and 2 of 2. Topsoil depths and areas to be topsoiled with stockpiled topsoil are also shown on this map.

The lower operations area will be reclaimed using topsoil and subsoil from three stockpiles as shown on Map 78. The subsoil stockpile consists of 277,227 cubic yards, the topsoil pile north of the main road consists of 8,300 cubic yards, and the topsoil stockpile at the silo area consists of 1,500 cubic yards. In addition, approximately 71,000 cubic yards of topsoil remains to be removed from the refuse pile expansion area.

The total amount of topsoil/subsoil available for reclamation of the lower operations area will be 358,027 cubic yards. The area consists of 156 acres, therefore, the topsoil depth will be approximately 17 inches.

The only other topsoil consists of 200 cubic yards of topsoil from the Corner Canyon Fan Deck, which is stockpiled at the pile north of the main road. The fan site consists of 0.44 acres, therefore, a topsoil depth at this location will be approximately 3.5 inches.

Some areas will be reclaimed with sidecast material as discussed in the response to UMC 784.13. These areas are shown on Map 78.

Soil samples will be taken of the Lion Deck Portal soil used for reclamation prior to reclamation.

PART UMC 817 - PERMANENT PROGRAM PERFORMANCE
STANDARDS - UNDERGROUND COAL MINING ACTIVITIES

Part 817 regulations not specifically addressed below, that apply to PMC, have been addressed in responses to Part 784.

UMC 817.41 HYDROLOGIC BALANCE: GENERAL REQUIREMENTS

(a) UNDERGROUND COAL MINING ACTIVITIES SHALL BE PLANNED AND CONDUCTED TO MINIMIZE CHANGES TO THE PREVAILING HYDROLOGIC BALANCE IN BOTH THE MINE PLAN AND ADJACENT AREAS, IN ORDER TO PREVENT LONG TERM ADVERSE CHANGES IN THAT BALANCE THAT COULD RESULT FROM THOSE ACTIVITIES.

(b) CHANGES IN WATER QUALITY AND QUANTITY, IN THE DEPTH TO GROUND WATER, AND IN THE LOCATION OF SURFACE WATER DRAINAGE CHANNELS SHALL BE MINIMIZED SO THAT THE APPROVED POSTMINING LAND USE OF THE PERMIT AREA IS NOT ADVERSELY AFFECTED.

(c) IN NO CASE SHALL STATE AND FEDERAL WATER QUALITY STATUTES, REGULATIONS, STANDARDS OR EFFLUENT LIMITATIONS BE VIOLATED.

(d) OPERATIONS SHALL BE CONDUCTED TO MINIMIZE WATER POLLUTION AND, WHERE NECESSARY, TREATMENT METHODS SHALL BE USED TO CONTROL WATER POLLUTION.

(1) EACH PERSON WHO CONDUCTS UNDERGROUND COAL MINING ACTIVITIES SHALL EMPHASIZE MINING AND RECLAMATION PRACTICES THAT PREVENT OR MINIMIZE WATER POLLUTION. CHANGES IN FLOW SHALL BE USED IN PREFERENCE TO THE USE OF WATER TREATMENT FACILITIES.

(2) ACCEPTABLE PRACTICES TO CONTROL AND MINIMIZE WATER POLLUTION INCLUDE BUT ARE NOT LIMITED TO-

(i) STABILIZING DISTURBED AREAS THROUGH LAND SHAPING;

- (ii) DIVERTING RUNOFF;
- (iii) ACHIEVING QUICKLY GERMINATING AND GROWING STANDS OF TEMPORARY VEGETATION;
- (iv) REGULATING CHANNEL VELOCITY OF WATER;
- (v) LINING DRAINAGE CHANNELS WITH ROCK OR VEGETATION;
- (vi) MULCHING;
- (vii) SELECTIVELY PLACING AND SEALING ACID-FORMING AND TOXIC-FORMING MATERIALS;
- (viii) DESIGNING MINES TO PREVENT GRAVITY DRAINAGE OF ACID WATERS;
- (ix) SEALING;
- (x) CONTROLLING SUBSIDENCE; AND
- (xi) PREVENTING ACID MINE DRAINAGE.

(3) IF THE PRACTICES LISTED AT PARAGRAPH (d)(2) OF THIS SECTION ARE NOT ADEQUATE TO MEET THE REQUIREMENTS OF THIS PART, THE PERSON WHO CONDUCTS UNDERGROUND COAL MINING ACTIVITIES SHALL OPERATE AND MAINTAIN THE NECESSARY WATER TREATMENT FACILITIES FOR AS LONG AS TREATMENT IS REQUIRED UNDER THIS PART.

RESPONSE:

PMC will submit a copy of the EPA or Utah State Health Department findings in response to PMC's request to modify the Mudwater Canyon Discharge TDS limit and the Sediment Pond Number 8 TDS limit within 30 days of receipt. If this request is denied, PMC will submit within 90 days documentation of procedure and plans established with the EPA or the Utah State Health Department to rectify the high TDS concentrations.

If discharges are required to be halted as a requirement of EPA or Utah State Health Department, CPMC will do so.

UMC 817.42 HYDROLOGIC BALANCE: WATER QUALITY STANDARDS AND EFFLUENT LIMITATIONS

(a)(1) ALL SURFACE DRAINAGE FROM THE DISTURBED AREA, INCLUDING DISTURBED AREAS THAT HAVE BEEN GRADED, SEEDED, OR PLANTED, SHALL BE PASSED THROUGH A SEDIMENTATION POND, A SERIES OF SEDIMENTATION PONDS, OR A TREATMENT FACILITY BEFORE LEAVING THE PERMIT AREA. ANY DISCHARGE OF WATER FROM UNDERGROUND WORKINGS TO SURFACE WATERS WHICH DOES NOT MEET THE EFFLUENT LIMITATIONS OF THIS SECTION SHALL ALSO BE PASSED THROUGH A SEDIMENTATION POND, A SERIES OF SEDIMENTATION PONDS, OR A TREATMENT FACILITY BEFORE LEAVING THE PERMIT AREA.

(2) SEDIMENTATION PONDS AND TREATMENT FACILITIES FOR SURFACE DRAINAGE FROM THE DISTURBED AREA SHALL BE MAINTAINED UNTIL THE DISTURBED AREA HAS BEEN RESTORED AND THE VEGETATION REQUIREMENTS OF UMC 817.111-817.117 ARE MET AND THE QUALITY OF THE UNTREATED DRAINAGE FROM THE DISTURBED AREA MEETS THE APPLICABLE STATE AND FEDERAL WATER QUALITY STANDARDS REQUIREMENTS FOR THE RECEIVING STREAM. SEDIMENTATION PONDS AND TREATMENT FACILITIES FOR DISCHARGES FROM UNDERGROUND WORKINGS SHALL BE MAINTAINED UNTIL EITHER THE DISCHARGE CONTINUOUSLY MEETS THE EFFLUENT LIMITATIONS OF THIS SECTION WITHOUT TREATMENT OR UNTIL THE DISCHARGE HAS PERMANENTLY CEASED.

(3) THE DIVISION MAY GRANT EXEMPTIONS FROM THESE REQUIREMENTS FOR SMALL AREAS ONLY IN ACCORDANCE WITH THE FOLLOWING--

(i) THE PERSON WHO CONDUCTS THE UNDERGROUND COAL MINING ACTIVITIES DEMONSTRATES, BY THE USE OF ALTERNATIVE SEDIMENT CONTROL MEASURES, THAT THE DRAINAGE WILL:

(A) EITHER MEET ALL APPLICABLE STATE AND FEDERAL EFFLUENT LIMITATION STANDARDS, OR

AMENDMENT TO

APPROVED Mining & Reclamation Plan
Approved, Division of Oil, Gas & Mining

by *for*
B. N. Madenick date *1/10/89*
817-3 Revised 12/20/88

Response:

There are ten areas where the drainage does not report to sedimentation ponds. These areas are designated as Alternative Sediment Control Areas 1 through 10, and are shown on Map 71, Mine Permit Area. Details of the areas are shown on the following maps: Area 1, 2, 5, 6, and 7 on Map 42, 2 of 3, Surface Water and Sedimentation Control Facilities - Map A; Area 3 on Map 67, Mud Water Canyon Reclamation Plan; and Area 4, Map 68, Corner Canyon Reclamation Plan; Areas 8, 9 and 10 on Map 42, 1 of 3, Surface Water and Sedimentation Control Facilities - Map A.

Alternative sediment control measures are used at the ten areas to prevent sediment from leaving the site, as shown on Table 95, Alternative Sediment Control Areas. Measures consist of straw bale or silt fabric silt traps, terraces, vegetation, sediment traps, sheet flow and total containment. Run-off data are presented on Table 95, Small Area Exemptions Run-off Data.

(B) NOT DEGRADE THE QUALITY OF RECEIVING WATERS, BASED ON A DETERMINATION OF WHETHER THE QUALITY OF RECEIVING WATERS WILL BE DEGRADED BY THE DRAINAGE USING APPLICABLE STATE AND FEDERAL WATER QUALITY STANDARDS.

Response:

The sediment controls discussed previously contain and treat the run-off to stop sediment from leaving the site. Routine maintenance of these structures ensures continual compliance.

(ii)(A) FOR DRAINAGE FROM AREAS AFFECTED BY SURFACE OPERATIONS AND FACILITIES, AN EXEMPTION MAY BE AUTHORIZED ONLY IF THE DISTURBED SURFACE DRAINAGE AREA WITHIN THE TOTAL DISTURBED SURFACE AREA IS SMALL AND THERE IS NO MIXTURE OF SURFACE DRAINAGE WITH A DISCHARGE FROM UNDERGROUND MINE WORKINGS;
OR

(B) FOR DRAINAGE FROM UNDERGROUND MINE WORKINGS, EXEMPTION MAY BE AUTHORIZED ONLY IF THERE IS NO MIXTURE OF THAT DRAINAGE WITH DRAINAGE FROM SURFACE AREAS.

APPROVE
Approved, Division

date 7/4/91
JK

(1) BE PASSED THROUGH APPROVED TREATMENT FACILITIES, AS NECESSARY, AND

(2) MEET ALL APPLICABLE STATE AND FEDERAL EFFLUENT LIMITATION STANDARDS, WHERE IT LEAVES THE PERMIT AREA.

(4) FOR THE PURPOSES OF THIS SECTION ONLY, DISTURBED AREA SHALL NOT INCLUDE THOSE AREAS AFFECTED BY SURFACE OPERATIONS IN WHICH ONLY DIVERSION DITCHES, SEDIMENTATION PONDS, OR ROADS ARE INSTALLED IN ACCORDANCE WITH THIS PART AND THE UPSTREAM AREA IS NOT OTHERWISE DISTURBED BY THE PERSON WHO CONDUCTS THE UNDERGROUND COAL MINING ACTIVITIES.

(5) SEDIMENTATION PONDS REQUIRED BY THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION UMC 817.46, IN APPROPRIATE LOCATIONS BEFORE BEGINNING ANY UNDERGROUND COAL MINING ACTIVITIES IN THE AFFECTED DRAINAGE AREA.

(6) WHERE THE SEDIMENTATION POND OR SERIES OF SEDIMENTATION PONDS IS USED SO AS TO RESULT IN THE MIXING OF DRAINAGE FROM THE DISTURBED AREAS WITH DRAINAGE FROM OTHER AREAS NOT DISTURBED BY CURRENT SURFACE COAL MINING AND RECLAMATION ACTIVITIES OR UNDERGROUND COAL MINING ACTIVITIES, THE PERMITTEE SHALL ACHIEVE THE EFFLUENT LIMITATIONS BELOW FOR ALL OF THE MIXED DRAINAGE WHEN IT LEAVES THE PERMIT AREA.

(b) DISCHARGES OF WATER FROM AREAS DISTURBED BY UNDERGROUND MINING ACTIVITIES SHALL BE MADE IN COMPLIANCE WITH ALL APPLICABLE STATE AND FEDERAL WATER QUALITY LAWS AND REGULATIONS AND WITH THE EFFLUENT LIMITATIONS FOR COAL MINING PROMULGATED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY SET FORTH IN 40 CFR PART 434.

Response:

Acreages of the ten Alternative Sediment Control Areas are shown on Table 95, Alternative Sediment Control Areas. The acreages are small compared to the total disturbed area, comprising only 6.77 percent of the total. Area 1 has the largest acreage of 5.93 acres, but this

area is controlled with run-off control terraces which are closed

APPROVED Mining & Reclamation Plan
Approved, Division of Oil, Gas & Mining

by JK date 1/4/91
817-3b

Revised 10/29/90

ended and essentially are long narrow ponds, by vegetation cover, and by a sediment trap. The other nine areas contain 0.83 acres, 0.88 acres, 0.35 acres, 0.16 acres, 0.40 acres, 1.64 acres, 1.52 acres, 0.009 acres, and 0.009 acres for Areas 2, 3, 4, 5, 6, 7, 8, 9, and 10, respectively.

Additional contributions of sediment above the levels in the naturally occurring waters of the receiving channels associated with the ten alternative sediment control areas will be prevented by the control measures used. The control measures used are the best technology currently available for controlling sedimentation. The control measures used are standard practice at the coal mines in Utah, and prevent, to the extent possible, additional sediment leaving the permit area.

Thunderstorm events in the Mine Plan Area are very unpredictable. Records show that storms are usually of short duration (median duration 38 minutes), and moderate to high intensity (median rainfall amount 0.135 inches). But, since the slopes in the area are very steep, runoff begins early in the storm events and peaks rapidly. Thunderstorms are also very isolated in extent; one small area of the property can be hit hard, while across the canyon very little rain falls.

Runoff from the Alternative Sediment Control Areas will be monitored while practicable for State and Federal effluent limitations. Realizing the difficulty of catching runoff from these small areas during the short duration storms, an effort will be made to monitor runoff.

UMC 817.44 HYDROLOGIC BALANCE: STREAM CHANNEL DIVERSIONS

(a) FLOW FROM PERENNIAL AND INTERMITTENT STREAMS, AND, EPHEMERAL STREAMS WITH DRAINAGE AREAS GREATER THAN ONE (1) SQUARE MILE, WITHIN THE PERMIT AREA, SHALL BE MONITORED, IF THE DIVERSIONS--
Approved, Division of Oil, Gas & Mining

AMENDMENT TO
APPROVED
Approved, Division of Oil, Gas & Mining
by JK date 1/4/91
817-3c

(1) ARE APPROVED BY THE DIVISION AFTER MAKING THE FINDINGS CALLED FOR IN SECTION UMC 817.57.

(2) COMPLY WITH OTHER REQUIREMENTS OF THIS SUBCHAPTER; AND

(3) COMPLY WITH LOCAL, STATE, AND FEDERAL STATUTES AND REGULATIONS.

(b) WHEN STREAM FLOW IS ALLOWED TO BE DIVERTED, THE STREAM CHANNEL DIVERSION SHALL BE DESIGNED, CONSTRUCTED, AND REMOVED, IN ACCORDANCE WITH THE FOLLOWING:

(1) THE LONGITUDINAL PROFILE OF THE STREAM, THE CHANNEL, AND THE FLOOD PLAIN SHALL BE DESIGNED AND CONSTRUCTED TO REMAIN STABLE AND TO PREVENT, TO THE EXTENT POSSIBLE USING THE BEST TECHNOLOGY CURRENTLY AVAILABLE, ADDITIONAL CONTRIBUTIONS OF SUSPENDED SOLIDS TO STREAMFLOW OR TO RUNOFF OUTSIDE THE PERMIT AREA. THESE CONTRIBUTIONS SHALL NOT BE IN EXCESS OF REQUIREMENTS OF STATE OR FEDERAL LAW. EROSION CONTROL STRUCTURES SUCH AS CHANNEL LINING STRUCTURES, RETENTION BASINS, AND ARTIFICIAL CHANNEL ROUGHNESS STRUCTURES SHALL BE USED IN DIVERSIONS ONLY WHEN APPROVED BY THE DIVISION AS BEING NECESSARY TO CONTROL EROSION. THESE STRUCTURES SHALL BE APPROVED FOR PERMANENT DIVERSIONS ONLY WHERE THEY ARE STABLE AND WILL REQUIRE INFREQUENT MAINTENANCE.

(2) THE COMBINATION OF CHANNEL, BANK, AND FLOOD-PLAIN CONFIGURATIONS SHALL BE ADEQUATE TO PASS SAFELY THE PEAK RUNOFF OF A 10-YEAR, 24-HOUR PRECIPITATION EVENT FOR TEMPORARY DIVERSIONS, A 100-YEAR, 24-HOUR

AMENDMENT TO
APPROVED Mining & Reclamation Plan
Approved, Division of Oil, Gas & Mining

by JK date 1/4/91

PRECIPITATION EVENT FOR PERMANENT DIVERSIONS, OR LARGER EVENTS, AS SPECIFIED BY THE DIVISION. HOWEVER, THE CAPACITY OF THE CHANNEL ITSELF SHOULD BE AT LEAST EQUAL TO THE CAPACITY OF THE UNMODIFIED STREAM CHANNEL IMMEDIATELY UPSTREAM AND DOWNSTREAM OF THE DIVERSION.

(c) WHEN NO LONGER NEEDED TO ACHIEVE THE PURPOSE FOR WHICH THEY ARE AUTHORIZED, ALL TEMPORARY STREAM CHANNEL DIVERSIONS SHALL BE REMOVED AND THE AFFECTED LAND REGRADED AND REVEGETATED, IN ACCORDANCE WITH THE SECTIONS UMC 817.24, 817.25, 817.101-817.106, AND 817.111-817.117. AT THE TIME DIVERSIONS ARE REMOVED, DOWNSTREAM WATER TREATMENT FACILITIES PREVIOUSLY PROTECTED BY THE DIVERSION SHALL BE MODIFIED OR REMOVED TO PREVENT OVERTOPPING OR FAILURE OF THE FACILITIES. THIS REQUIREMENT SHALL NOT RELIEVE THE PERSON WHO CONDUCTS THE UNDERGROUND COAL MINING ACTIVITIES FROM MAINTENANCE OF A WATER TREATMENT FACILITY OTHERWISE REQUIRED UNDER THIS PART OR THE PERMIT.

(d) WHEN PERMANENT DIVERSIONS ARE CONSTRUCTED OR STREAM CHANNELS RESTORED AFTER TEMPORARY DIVERSIONS, THE OPERATOR SHALL;

(1) RESTORE, ENHANCE WHERE PRACTICABLE, OR MAINTAIN NATURAL RIPARIAN VEGETATION ON THE BANKS OF THE STREAM;

(2) ESTABLISH OR RESTORE THE STREAM TO A NATURAL MEANDERING SHAPE OF AN ENVIRONMENTALLY ACCEPTABLE GRADIENT; AS DETERMINED BY THE DIVISION; AND

(3) ESTABLISH OR RESTORE THE STREAM TO A LONGITUDINAL PROFILE AND CROSS-SECTION, INCLUDING AQUATIC HABITATS (USUALLY A PATTERN OF RIFFLES, POOLS, AND DROPS RATHER THAN UNIFORM DEPTH) THAT APPROXIMATE NATURAL STREAM CHANNEL CHARACTERISTICS.

RESPONSE:

CHANNEL RECLAMATION

All eight sedimentation ponds and treatment facility located in conjunction with the Plateau Mining operation are temporary in nature and have been designed according to UMC 817.49 and 30 CFR 77.216-1 and

CFR 77.216-2 and will be removed or filled upon completion of the coal mining operation. As required by Federal and State regulations, such areas disturbed by temporary pond and channel diversion construction will be restored to match surrounding conditions, and the area will be stabilized with an effective vegetative cover as soon as possible after removal. This cover will be composed of native and other plants which are adaptable to the site and provide soil stability.

In addition, reclamation will be required on existing and proposed coal waste piles designed according to UMC 784.16(d) and (e). The original report dealing with coal waste piles was submitted in 1982 in Volume IV of the "Star Point Mines - Mining and Reclamation Plan" prepared for Plateau Mining Company. Section 13.2.6 of that report (see Exhibit 22, "Coal Processing Waste Pile Extension Plan and Feasibility Study") contains the completed plans for the waste piles including discussions related to runoff control, volume requirements, geotechnical considerations, vegetation, historic culture, wildlife, expansion, operation and reclamation. The plan basically calls for a three phase expansion of the existing pile, and an optional fourth phase to be located near the coal preparation plant. Completion of all four phases will allow the needed volume necessary for the disposal of all future projected mine wastes.

Stream channel reclamation design has been undertaken as required in Section 784 of the mining regulations. Subsequent to mining activities the mine plan area will enter into a reclamation phase wherein existing roadways (except the main mine access roadway which will be turned over to Carbon County upon reclamation) and the surface water conveyance facilities will be removed and the area restored where practical to pre-mined conditions, including revegetation of disturbed areas as specified in UMC 784. The plan includes the removal of culverts and temporary diversion facilities associated with mining activities and the restoration of surface contours. A preliminary plan showing the major culverts and channels to be restored, proposed restoration, and approximate post mining contouring is presented on Map 50, "Post Mining Channel Reclamation." Included

in the map are plans, profiles and sections illustrating reclaimed channel design.

From Map 50, "Post Mining Channel Reclamation" it is seen that the draw tributary to Culvert 4A will require restoration. In addition to this small draw, larger channels are to be restored including that tributary to Culvert 25C, and those through Sedimentation Ponds 6, 7, and 8. Sediment Ponds 1, 2, 3, 5, and 9 will be filled in upon final reclamation to the approximate contours as shown on the above referenced map. The area of Pond 2 is presently scheduled to be used as the soil disposal site for fill that is removed during restoration of the channels referenced above. The intent behind placing the soil removed from reclaimed channels at this location is to restore the surface contour within the vicinity of Pond 2 to an approximate pre-mined condition. Approximate final contours for the area are shown on Map 50, "Post Mining Channel Reclamation." Pond 4 will be removed during the construction of reclamation channel 25C.

RECLAMATION CHANNEL DESIGN

All channel designs were based on the assumption that existing surface disturbances such as roadways (except for the main mine access road) and channel diversions will be removed upon final reclamation and that surface runoff will follow natural flow paths approximating those which existed prior to mining. With flow paths defined, anticipated peak surface runoff rates were calculated using the Computerized SCS methodology. In accordance to the requirements of Section 784, upstream and downstream cross-sections have been taken (where possible) for the channels to be reclaimed and channel design has been completed to match natural conditions to the extent possible.

The riprap design methodologies presented earlier were generally used for mean riprap sizes less than 2.0 to 2.5 feet. When design is attempted beyond these values, the practicality of design and installation is taxed to the point that accuracy of design can not be reasonably determined. Riprap placement and gradation during

installation also becomes difficult when riprap sizes exceed the 2.0 to 2.5 foot limit. It should also be noted that the design of riprap according to the DOT method is usually limited to a slope not exceeding 20 percent.

Reclaimed channel design calculations for the mine permit area are shown in Exhibit 50, "Reclamation Channel Calculations," and as discussed above the resulting channel configurations and layouts are shown on Map 50, "Post Mining Channel Reclamation." As shown in the calculations for reclaimed channel 4A, natural channel slopes are far in excess (about 34 percent) of that allowable for existing erosion protection design methodologies using natural flexible linings such as rock riprap. Other methods for determining adequate erosion protection on slopes comparable to those found at the CPMC mine are not currently available and, therefore, it is not possible to design erosion protection for these areas.

All reclaimed channels will be constructed to conform as closely as possible to pre-mined upstream and downstream channel cross-sections. Natural existing cross-sections, as well as those intended to be used for channel reclamation, are shown on Map 50, "Post Mining Channel Reclamation."

All channels to be reclaimed will be surveyed at least 60 days prior to construction to evaluate slope stability.

UMC 817.47 HYDROLOGIC BALANCE: DISCHARGE STRUCTURES

DISCHARGE FROM SEDIMENTATION PONDS, PERMANENT AND TEMPORARY IMPOUNDMENTS, COAL PROCESSING WASTE DAMS AND EMBANKMENTS, AND DIVERSIONS SHALL BE CONTROLLED, BY ENERGY DISSIPATORS, RIPRAP CHANNELS, AND OTHER DEVICES, WHERE NECESSARY, TO REDUCE EROSION, TO PREVENT DEEPENING OR ENLARGEMENT OF STREAM CHANNELS, AND TO MINIMIZE DISTURBANCE OF THE HYDROLOGIC BALANCE. DISCHARGE STRUCTURES SHALL BE DESIGNED ACCORDING TO STANDARD ENGINEERING DESIGN PROCEDURES.

RESPONSE:

Silt fence type sediment traps are used at several locations

throughout the permit area to control sediment loss from roadside ditches. A typical design for these structures can be seen on Figure 44, Typical Silt Fence Sediment Trap Detail.

UMC 817.50 HYDROLOGIC BALANCE: UNDERGROUND MINE ENTRY AND ACCESS DISCHARGES

(a) SURFACE ENTRIES AND ACCESSES TO UNDERGROUND WORKINGS, INCLUDING ADITS AND SLOPES, SHALL BE LOCATED, DESIGNED, CONSTRUCTED, AND UTILIZED TO PREVENT OR CONTROL GRAVITY DISCHARGE OF WATER FROM THE MINE.

(b) GRAVITY DISCHARGE OF WATER FROM AN UNDERGROUND MINE, OTHER THAN A DRIFT MINE SUBJECT TO PARAGRAPH (c) OF THIS SECTION, MAY BE ALLOWED BY THE DIVISION, IF IT IS DEMONSTRATED THAT-

(1)(i) THE DISCHARGE, WITHOUT TREATMENT, SATISFIES THE WATER EFFLUENT LIMITATIONS OF UMC 817.42 AND ALL APPLICABLE STATE AND FEDERAL WATER QUALITY STANDARDS; AND

(ii) THAT DISCHARGE WILL RESULT IN CHANGES IN THE PREVAILING HYDROLOGIC BALANCE THAT ARE MINIMAL AND APPROVED POSTMINING LAND USES WILL NOT BE ADVERSELY AFFECTED; OR,

(2)(i) THE DISCHARGE IS CONVEYED TO A TREATMENT FACILITY IN THE PERMIT AREA IN ACCORDANCE WITH SECTION UMC 817.42(a);

(ii) ALL WATER FROM THE UNDERGROUND MINE DISCHARGED FROM THE TREATMENT FACILITY MEETS THE EFFLUENT LIMITATIONS OF SECTION UMC 817.42 AND ALL OTHER APPLICABLE STATE AND FEDERAL STATUTES AND REGULATIONS; AND

(iii) CONSISTENT MAINTENANCE OF THE TREATMENT FACILITY WILL OCCUR THROUGHOUT THE ANTICIPATED PERIOD OF GRAVITY DISCHARGE.

(c) NOTWITHSTANDING ANYTHING TO THE CONTRARY IN PARAGRAPHS (a) and (b) OF THIS SECTION, FOR A DRIFT MINE FIRST USED AFTER THE IMPLEMENTATION OF A STATE, FEDERAL, OR FEDERAL LANDS PROGRAM AND LOCATED IN ACID-PRODUCING

OR IRON-PRODUCING COAL SEAMS, SURFACE ENTRIES AND ACCESSES SHALL BE LOCATED IN SUCH MANNER AS TO PREVENT ANY GRAVITY DISCHARGE FROM THE MINE.

RESPONSE

CPMC will monitor mine discharges which may occur after mining for compliance with effluent standards of UMC 817.42 and other applicable State and Federal regulations. Monitoring will be conducted quarterly (as accessible).

CPMC will treat the discharge, if necessary, during the period of discharge or until bond release.

UMC 817.52 HYDROLOGIC BALANCE: SURFACE AND GROUND WATER MONITORING

(a) GROUND WATER.

(1) GROUND WATER LEVELS, INFILTRATION RATES, SUBSURFACE FLOW AND STORAGE CHARACTERISTICS, AND THE QUALITY OF GROUND WATER SHALL BE MONITORED IN A MANNER APPROVED BY THE DIVISION, TO DETERMINE THE EFFECTS OF UNDERGROUND COAL MINING ACTIVITIES ON THE QUANTITY AND QUALITY OF WATER IN GROUND WATER SYSTEMS IN THE MINE PLAN AND ADJACENT AREAS. HOWEVER, WHERE THERE EXISTS NO AQUIFER, AS DEFINED IN THIS CHAPTER, THE MONITORING THAT MAY BE REQUIRED BY THE DIVISION SHALL BE MINIMIZED.

(2) WHEN UNDERGROUND COAL MINING ACTIVITIES MAY AFFECT GROUND WATER SYSTEMS WHICH SERVE AS AQUIFERS WHICH SIGNIFICANTLY ENSURE THE HYDROLOGIC BALANCE OF WATER USE EITHER ON OR OFF THE MINE PLAN AREA, GROUND LEVELS AND GROUND WATER QUALITY SHALL BE PERIODICALLY MONITORED. MONITORING SHALL INCLUDE MEASUREMENTS FROM A SUFFICIENT NUMBER OF WELLS AND MINERALOGICAL AND CHEMICAL ANALYSES OF AQUIFER OVERBURDEN AND SPOIL THAT ARE ADEQUATE TO REFLECT CHANGES IN GROUND WATER QUANTITY AND QUALITY RESULTING FROM THOSE ACTIVITIES. MONITORING SHALL BE ADEQUATE TO PLAN FOR MODIFICATION OF THE UNDERGROUND COAL MINING ACTIVITIES IF NECESSARY TO MINIMIZE DISTURBANCE TO THE PREVAILING HYDROLOGIC BALANCE.

AMENDMENT TO

APPROVED Mining & Reclamation Plan
Approved, Division of Oil, Gas & Mining

ju for

817-4

by

B. W. Madamsk

date

1/14/89

Revised 4/15/87

(3) AS SPECIFIED AND APPROVED BY THE DIVISION, THE PERSON WHO CONDUCTS THE UNDERGROUND COAL MINING ACTIVITIES SHALL CONDUCT ADDITIONAL HYDROLOGIC TESTS, INCLUDING DRILLING, INFILTRATION TESTS AND AQUIFER TESTS, AND THE RESULTS SHALL BE SUBMITTED TO THE DIVISION TO DEMONSTRATE COMPLIANCE WITH SECTION UMC 817.50 AND THIS SECTION.

(b) SURFACE WATER.

(1) SURFACE WATER MONITORING SHALL BE CONDUCTED IN ACCORDANCE WITH THE MONITORING PROGRAM SUBMITTED UNDER UMC 784.14(b)(3) AND APPROVED BY THE DIVISION. THE DIVISION SHALL DETERMINE THE NATURE OF DATA, FREQUENCY OF COLLECTION, AND REPORTING REQUIREMENTS. MONITORING SHALL-

(i) BE ADEQUATE TO MEASURE ACCURATELY AND RECORD WATER QUANTITY AND QUALITY OF DISCHARGES FROM THE PERMIT AREA;

(ii) ALL CASES IN WHICH ANALYTICAL RESULTS OF THE SAMPLE COLLECTIONS INDICATE NONCOMPLIANCE WITH A PERMIT CONDITION OR APPLICABLE STANDARD HAS OCCURRED SHALL RESULT IN THE PERSON WHO CONDUCTS UNDERGROUND COAL MINING ACTIVITIES NOTIFYING THE DIVISION WITHIN 5 DAYS. WHERE A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT EFFLUENT LIMITATION NONCOMPLIANCE HAS OCCURRED, THE PERSON WHO CONDUCTS THE UNDERGROUND COAL MINING ACTIVITIES SHALL FORWARD THE ANALYTIC RESULTS CONCURRENTLY WITH THE WRITTEN NOTICE OF NONCOMPLIANCE.

(iii) RESULT IN QUARTERLY REPORTS TO THE DIVISION, TO INCLUDE ANALYTICAL RESULTS FROM EACH SAMPLE TAKEN DURING THE QUARTER. ANY SAMPLE RESULTS WHICH INDICATE A PERMIT VIOLATION WILL BE REPORTED IMMEDIATELY TO THE DIVISION. IN THOSE CASES WHERE THE DISCHARGE FOR WHICH WATER MONITORING REPORTS ARE REQUIRED IS ALSO SUBJECT TO REGULATION BY A NPDES PERMIT ISSUED UNDER THE CLEAN WATER ACT OF 1977 (30 U.S.C. Sec. 1252-1378) AND WHERE SUCH PERMIT INCLUDES PROVISIONS FOR EQUIVALENT REPORTING REQUIREMENTS AND REQUIRES FILING OF THE WATER MONITORING REPORTS WITHIN 90 DAYS OR LESS OF SAMPLE COLLECTION, THE FOLLOWING ALTERNATIVE PROCEDURE SHALL BE USED. THE PERSON WHO CONDUCTS THE UNDERGROUND COAL MINING ACTIVITIES SHALL SUBMIT TO THE

DIVISION ON THE SAME TIME SCHEDULE AS REQUIRED BY THE NPDES PERMIT, OR WITHIN 90 DAYS FOLLOWING SAMPLE COLLECTION, WHICHEVER IS EARLIER, EITHER-

(A) A COPY OF THE COMPLETED REPORTING FORM FILED TO MEET NPDES PERMIT REQUIREMENTS; OR

(B) A LETTER IDENTIFYING THE STATE OF FEDERAL GOVERNMENT OFFICIAL WITH WHOM THE REPORTING FORM WAS FILED TO MEET THE NPDES PERMIT REQUIREMENTS AND THE DATE OF FILING.

(2) SURFACE WATER FLOW AND QUALITY, INCLUDING DISCHARGES TO SURFACE WATERS FROM THE PERMIT AREA, AND RECEIVING WATERS, SHALL CONTINUE TO BE MONITORED AFTER BOTH THE CESSATION OF USE OF UNDERGROUND MINE WORKINGS AND AFTER SURFACE DISTURBED AREAS HAVE BEEN REGRADED AND STABILIZED ACCORDING TO THIS PART. DATA FROM THIS MONITORING MAY BE USED TO DEMONSTRATE THAT THE QUALITY AND QUANTITY OF RUNOFF WITHOUT TREATMENT IS CONSISTENT WITH THE REQUIREMENT OF THIS PART TO MINIMIZE DISTURBANCE TO THE PREVAILING HYDROLOGIC BALANCE AND TO ATTAIN THE APPROVED POSTMINING LAND USE. THESE DATA MAY ALSO PROVIDE A BASIS FOR APPROVAL BY THE DIVISION FOR REMOVAL OF WATER QUALITY OR FLOW CONTROL SYSTEMS.

(3) EQUIPMENT, STRUCTURES, AND OTHER DEVICES NECESSARY TO MEASURE AND SAMPLE ACCURATELY THE QUALITY AND QUANTITY OF SURFACE WATER DISCHARGES FROM THE SURFACE DISTURBED AREA AND FROM UNDERGROUND MINE WORKINGS SHALL BE PROPERLY INSTALLED, MAINTAINED, AND OPERATED AND SHALL BE REMOVED WHEN NO LONGER REQUIRED.

RESPONSE:

2 Map 72 shows spring locations, mine workings, subsidence, and faults. Information shown on this map was used to determine the Groundwater Monitoring Plan as discussed in response to UMC 784.14.

UMC 817.53 HYDROLOGIC BALANCE: TRANSFER OF WELLS

(a) AN EXPLORATORY OR MONITORING WELL MAY ONLY BE TRANSFERRED BY THE PERSON WHO CONDUCTS UNDERGROUND COAL MINING ACTIVITIES FOR FURTHER USE AS A WATER WELL WITH THE PRIOR APPROVAL OF THE DIVISION. THAT PERSON AND THE SURFACE OWNER OF THE LANDS WHERE THE WELL IS LOCATED SHALL JOINTLY SUBMIT A WRITTEN REQUEST TO THE DIVISION FOR THAT APPROVAL. ANY SUCH TRANSFER MUST BE IN ACCORDANCE WITH STATE WATER LAWS AND REGULATIONS AND APPROVED BY THE STATE WATER ENGINEER.

(b) UPON AN APPROVED TRANSFER OF A WELL, THE TRANSFEREE SHALL-

(1) ASSUME LIABILITY FOR DAMAGES TO PERSONS OR PROPERTY FROM THE WELL;

(2) PLUG THE WELL WHEN NECESSARY, BUT IN NO CASE LATER THAN ABANDONMENT OF THE WELL; AND

(3) ASSUME RESPONSIBILITY FOR COMPLIANCE WITH SECTIONS UMC 817.13-817.15 WITH RESPECT TO THE WELL.

(c) UPON AN APPROVED TRANSFER OF A WELL, THE TRANSFEROR SHALL BE SECONDARILY LIABLE FOR THE TRANSFEREE'S OBLIGATIONS UNDER SUBPARAGRAPHS (b)(2) AND (b)(3) OF THIS SECTION UNTIL FINAL RELEASE OF THE BOND OR OTHER EQUIVALENT GUARANTEE REQUIRED BY SUBCHAPTER J FOR THE AREA IN WHICH THE WELL IS LOCATED. ANY LEGAL LIABILITY OF THE TRANSFER OR FOR DAMAGE TO PERSONS OR PROPERTY FROM THE WELL SHALL BE DETERMINED IN ACCORDANCE WITH APPLICABLE LAW.

RESPONSE:

Exploration or monitoring wells will only be transferred after approval by the Division and in accordance with State water laws and regulations and after approval by the State Engineer.

UMC 817.61 USE OF EXPLOSIVES: GENERAL REQUIREMENTS

(a) SECTIONS UMC 817.61 THROUGH UMC 817.68 APPLY ONLY TO SURFACE BLASTING ACTIVITIES INCIDENT TO UNDERGROUND MINING. INCLUDING, BUT NOT LIMITED TO, INITIAL ROUNDS OF SLOPES AND SHAFTS.

(b) EACH PERSON WHO CONDUCTS UNDERGROUND COAL MINING ACTIVITIES SHALL COMPLY WITH ALL APPLICABLE STATE AND FEDERAL LAWS AND IN THE USE OF EXPLOSIVES.

(c) ALL BLASTING OPERATIONS SHALL BE CONDUCTED BY PERSONS WHO HAVE BEEN TRAINED, EXAMINED AND CERTIFIED AS PROVIDED BY 30 CFR 850 AND APPLICABLE REGULATIONS OF THE STATE INDUSTRIAL COMMISSION.

RESPONSE:

PMC will comply with all applicable State and Federal laws in the use of explosives. Persons conducting blasting will be properly certified.

UMC 817.62 USE OF EXPLOSIVES: PREBLASTING SURVEY

(a) ON THE REQUEST TO THE DIVISION BY A RESIDENT OR OWNER OF A DWELLING OR STRUCTURE THAT IS LOCATED WITHIN ONE-HALF MILE OF ANY SURFACE BLASTING ACTIVITY COVERED BY SECTIONS UMC 817.61-817.68, THE PERSON WHO CONDUCTS THE UNDERGROUND COAL MINING ACTIVITIES SHALL PROMPTLY CONDUCT A PREBLASTING SURVEY OF THE DWELLING OR STRUCTURE AND PROMPTLY SUBMIT A REPORT OF THE SURVEY TO THE DIVISION AND TO THE PERSON REQUESTING THE SURVEY. IF A STRUCTURE IS RENOVATED OR ADDED TO, SUBSEQUENT TO A PREBLAST SURVEY, THEN UPON REQUEST TO THE DIVISION A SURVEY OF SUCH ADDITIONS AND RENOVATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THIS SECTION.

(b) THE SURVEY SHALL DETERMINE THE CONDITION OF THE DWELLING OR STRUCTURE AND DOCUMENT ANY PREBLASTING DAMAGE AND OTHER PHYSICAL FACTORS THAT COULD REASONABLY BE AFFECTED BY THE BLASTING. ASSESSMENTS OF STRUCTURES SUCH AS PIPES, CABLES, TRANSMISSION LINES, AND WELLS AND OTHER WATER SYSTEMS SHALL BE LIMITED TO SURFACE CONDITION AND READILY AVAILABLE DATA. SPECIAL ATTENTION

UMC 817.51 HYDROLOGIC BALANCE: STREAM BUFFER ZONES

(a) NO LAND WITHIN 100 FEET OF A PERENNIAL OR AN INTERMITTENT STREAM AND WHICH CONTAINS A BIOLOGICAL COMMUNITY DETERMINED ACCORDING TO PARAGRAPH (c) BELOW AND DIVISION GUIDELINES, SHALL BE DISTURBED BY SURFACE (UNDERGROUND) COAL MINING ACTIVITIES, EXCEPT IN ACCORDANCE WITH SECTION SMC 816.43-816.44 (UMC 817.43-817.44), UNLESS THE DIVISION SPECIFICALLY AUTHORIZES SURFACE (UNDERGROUND) COAL MINING ACTIVITIES CLOSER TO OR THROUGH SUCH A STREAM UPON FINDING--

(1) THAT THE ORIGINAL STREAM CHANNEL WILL BE RESTORED; AND

(2) DURING AND AFTER THE MINING, THE WATER QUANTITY AND QUALITY FROM THE STREAM SECTION WITHIN 100 FEET OF THE UNDERGROUND COAL MINING ACTIVITIES SHALL NOT BE ADVERSELY AFFECTED.

(b) THE AREA NOT TO BE DISTURBED SHALL BE DESIGNATED A BUFFER ZONE AND MARKED AS SPECIFIED IN SECTION UMC 817.11.

(c) A STREAM WITH A BIOLOGICAL COMMUNITY SHALL BE DETERMINED BY THE EXISTENCE IN THE STREAM AT ANY TIME OF AN ASSEMBLAGE OF TWO OR MORE SPECIES OF ARTHROPODS OR MOLLUSCAN ANIMALS WHICH ARE--

(1) ADAPTED TO FLOWING WATER FOR ALL OR PART OF THEIR LIFE CYCLE;

(2) DEPENDENT UPON A FLOWING WATER HABITAT;

(3) REPRODUCING OR CAN REASONABLY BE EXPECTED TO REPRODUCE IN THE WATER BODY WHERE THEY ARE FOUND; AND

(4) LONGER THAN TWO MILLIMETERS AT SOME STAGE OR PART OF THEIR LIFE CYCLE SPENT IN THE FLOWING WATER HABITAT.

RESPONSE:

CPMC will notify the Division as soon as possible upon discovery of a crack or subsidence related impact to the NFRF Miller Creek.

CPMC will take the most appropriate action to mitigate any impacts to the NFRF Miller Creek stream. Mitigation measures will be in place, or a plan of action to initiate mitigation within seven days of discovery of a crack or subsidence related impact.

Figure 43, Typical Stream Diversion Structure, shows how the NFRF Miller Creek will be diverted over or past possible subsidence cracks.

SHALL BE GIVEN TO THE PREBLASTING CONDITION OF WELLS AND OTHER WATER SYSTEMS USED FOR HUMAN, ANIMAL, OR AGRICULTURAL PURPOSES AND TO THE QUANTITY AND QUALITY OF THE WATER.

(c) A WRITTEN REPORT OF THE SURVEY SHALL BE PREPARED AND SIGNED BY THE PERSON WHO CONDUCTED THE SURVEY. THE REPORT MAY INCLUDE RECOMMENDATIONS OF ANY SPECIAL CONDITIONS OR PROPOSED ADJUSTMENTS TO THE BLASTING PROCEDURE WHICH SHOULD BE INCORPORATED INTO THE BLASTING PLAN TO PREVENT DAMAGE. COPIES OF THE REPORT SHALL BE PROVIDED TO THE PERSON REQUESTING THE SURVEY AND TO THE DIVISION. IF THE PERSON REQUESTING THE SURVEY DISAGREES WITH THE RESULTS OF THE SURVEY, HE OR SHE MAY NOTIFY, IN WRITING, BOTH THE PERMITTEE AND THE DIVISION OF THE SPECIFIC AREAS OF DISAGREEMENT.

RESPONSE:

There are no dwellings within one-half mile of PMC operations.

UMC 817.65 USE OF EXPLOSIVES: SURFACE BLASTING REQUIREMENTS

(a) A RESIDENT OR OWNER OF A DWELLING OR STRUCTURE THAT IS LOCATED WITHIN ONE-HALF MILE OF ANY AREA AFFECTED BY SURFACE BLASTING ACTIVITIES SHALL BE NOTIFIED APPROXIMATELY 24 HOURS PRIOR TO ANY SURFACE BLASTING EVENT.

(b) ALL BLASTING SHALL BE CONDUCTED BETWEEN SUNRISE AND SUNSET.

(1) THE DIVISION MAY SPECIFY MORE RESTRICTIVE TIME PERIODS, BASED ON PUBLIC REQUESTS OR OTHER RELEVANT INFORMATION ACCORDING TO THE NEED TO ADEQUATELY PROTECT THE PUBLIC FROM ADVERSE NOISE.

(2) BLASTING MAY, HOWEVER, BE CONDUCTED BETWEEN SUNSET AND SUNRISE IF:

(i) A BLAST THAT HAS BEEN PREPARED DURING THE AFTERNOON MUST BE DELAYED DUE TO THE OCCURRENCE OF AN UNAVOIDABLE HAZARDOUS CONDITION AND CANNOT BE DELAYED UNTIL THE NEXT DAY BECAUSE A POTENTIAL SAFETY HAZARD WOULD RESULT THAT CANNOT BE ADEQUATELY MITIGATED.

(ii) IN ADDITION TO THE REQUIRED WARNING SIGNALS, ORAL NOTICES ARE PROVIDED TO PERSONS WITHIN ONE-HALF MILE OF THE BLASTING SITE; AND

(iii) A COMPLETE WRITTEN REPORT OF BLASTING AT NIGHT IS FILED BY THE PERSON CONDUCTING THE SURFACE BLASTING ACTIVITIES WITH THE DIVISION NOT LATER THAN 3 DAYS AFTER THE NIGHT BLASTING. THE REPORT SHALL INCLUDE A DETAILED DESCRIPTION OF THE REASON FOR THE DELAY IN BLASTING INCLUDING WHY THE BLASTING COULD NOT BE HELD OVER TO THE NEXT DAY, WHEN THE BLAST WAS ACTUALLY CONDUCTED, WHEN THE WARNING NOTICES WERE GIVEN, AND A COPY OF THE BLAST REPORT REQUIRED BY SECTION UMC 817.68.

(c) WARNING AND ALL-CLEAR SIGNALS OF DIFFERENT CHARACTER THAT ARE AUDIBLE WITHIN A RANGE OF ONE-HALF MILE FROM THE POINT OF THE BLAST SHALL BE GIVEN. EACH PERSON WITHIN THE PERMIT AREA AND EACH PERSON WHO RESIDES OR REGULARLY WORKS WITHIN ONE-HALF MILE OF THE PERMIT AREA SHALL BE NOTIFIED OF THE MEANING OF THE SIGNALS THROUGH APPROPRIATE INSTRUCTIONS. THESE INSTRUCTIONS SHALL BE PERIODICALLY DELIVERED OR OTHERWISE COMMUNICATED IN A MANNER WHICH CAN BE REASONABLY BE EXPECTED TO INFORM SUCH PERSONS OF THE MEANING OF THE SIGNALS. EACH PERSON WHO CONDUCTS SURFACE BLASTING INCIDENT TO UNDERGROUND COAL MINING ACTIVITIES SHALL MAINTAIN SIGNS IN ACCORDANCE WITH SECTION UMC 817.11(f).

(d) ACCESS TO AN AREA POSSIBLY SUBJECT TO FLYROCK FROM BLASTING SHALL BE REGULATED TO PROTECT THE PUBLIC AND LIVESTOCK. ACCESS TO THE AREA SHALL BE CONTROLLED TO PREVENT THE PRESENCE OF LIVESTOCK OR UNAUTHORIZED PERSONNEL DURING BLASTING UNTIL AN AUTHORIZED REPRESENTATIVE OF THE PERSON WHO CONDUCTS THE UNDERGROUND COAL MINING ACTIVITIES HAS REASONABLY DETERMINED-

(1) THAT NO UNUSUAL CIRCUMSTANCES, SUCH AS IMMINENT SLIDES OR UNDETONATED CHARGES, EXIST; AND

(2) THAT ACCESS TO AND TRAVEL IN OR THROUGH THE AREA CAN BE SAFELY RESUMED.

(e)(1) AIRBLAST SHALL BE CONTROLLED SO THAT IT DOES NOT EXCEED THE VALUES SPECIFIED BELOW AT ANY DWELLING, PUBLIC BUILDING, SCHOOL, CHURCH, OR

COMMERCIAL OR INSTITUTIONAL BUILDING, UNLESS SUCH STRUCTURE IS OWNED OR LEASED BY THE PERSON CONDUCTING THE UNDERGROUND COAL MINING ACTIVITIES AND IS NOT LEASED TO ANY OTHER PERSON. IF A BUILDING OWNED BY THE PERSON CONDUCTING THE UNDERGROUND COAL MINING ACTIVITIES IS LEASED TO ANOTHER PERSON, THE LESSEE MAY SIGN A WAIVER RELIEVING THE OPERATOR FROM MEETING THE AIRBLAST LIMITATIONS OF THIS PARAGRAPH.

Lower Frequency Limit of Measuring System, Hz (<u>±</u> 3 dB)	Maximum Level in dB
0.1 Hz or lower - flat response	135 peak
2 Hz or lower - flat response	132 peak
6 Hz or lower - flat response	130 peak
C-weighted, slow response	109 C

(2) IN ALL CASES EXCEPT THE C-WEIGHTED, SLOW RESPONSE, THE MEASURING SYSTEMS USED MUST HAVE A FLAT FREQUENCY RESPONSE OF AT LEAST 200 Hz AT THE UPPER END. THE C-WEIGHTED SHALL BE MEASURED WITH A TYPE 1 SOUND LEVEL METER THAT MEETS THE STANDARD ANSI S1.4-1971 SPECIFICATIONS.

THE ANSI S1.4-1971 IS HEREBY INCORPORATED BY REFERENCE AS IT EXISTS ON THE DATE OF ADOPTION OF THIS PART. NOTICES OF CHANGES MADE TO THIS PUBLICATION WILL BE PERIODICALLY PUBLISHED BY OSM IN THE FEDERAL REGISTER. ANSI S1.4-1971 IS ON FILE AND AVAILABLE FOR INSPECTION AT THE OSM CENTRAL OFFICE, U.S. DEPARTMENT OF THE INTERIOR, SOUTH INTERIOR BUILDING, WASHINGTON, D.C. 20240, AT EACH OSM REGIONAL OFFICE, DISTRICT OFFICE, AND FIELD OFFICE AND AT THE CENTRAL OFFICE OF THE DIVISION OF OIL, GAS, AND MINING, 4241 STATE OFFICE BUILDING, SALT LAKE CITY, UTAH 84114. COPIES OF THIS PUBLICATION MAY ALSO BE OBTAINED BY WRITING TO THE ABOVE LOCATIONS. A COPY OF THIS PUBLICATION WILL ALSO BE ON FILE FOR PUBLIC INSPECTION AT THE FEDERAL REGISTER LIBRARY, 1100 'L' STREET, N.W., WASHINGTON, D.C. INCORPORATION BY REFERENCE PROVISIONS APPROVED BY THE FEDERAL REGISTER FEBRUARY 7, 1979. THE FEDERAL REGISTER DIRECTOR'S APPROVAL OF THIS INCORPORATION BY REFERENCE EXPIRES ON FEBRUARY 7, 1980.

(3) THE PERSON WHO CONDUCTS BLASTING MAY SATISFY THE PROVISIONS OF THIS SECTION BY MEETING ANY ONE OF THE FOUR SPECIFICATIONS IN THE CHART IN PARAGRAPH (e)(1) OF THIS SECTION.

(4) THE DIVISION MAY REQUIRE AN AIRBLAST MEASUREMENT OF ANY OR ALL BLASTS, AND MAY SPECIFY THE LOCATION OF SUCH MEASUREMENTS.

(f) EXCEPT WHERE LESSER DISTANCES ARE APPROVED BY THE REGULATORY AUTHORITY BASED UPON A PREBLASTING SURVEY, SEISMIC INVESTIGATIONS, OR OTHER APPROPRIATE INVESTIGATIONS, BLASTING SHALL NOT BE CONDUCTED WITHIN-

(1) 1,000 FEET OF ANY BUILDING USED AS A DWELLING, SCHOOL, CHURCH, HOSPITAL, OR NURSING FACILITY; AND

(2) 500 FEET OF FACILITIES INCLUDING, BUT NOT LIMITED TO, DISPOSAL WELLS, PETROLEUM OR GAS-STORAGE FACILITIES, MUNICIPAL WASTER-STORAGE FACILITIES, FLUID-TRANSMISSION PIPELINES, GAS OR OIL-COLLECTION LINES, OR WATER AND SEWAGE LINES.

(g) FLYROCK, INCLUDING BLASTED MATERIAL TRAVELING ALONG THE GROUND, SHALL NOT BE CAST FROM THE BLASTING VICINITY MORE THAN HALF THE DISTANCE TO THE NEAREST DWELLING OR OTHER OCCUPIED STRUCTURE AND IN NO CASE BEYOND THE LINE OF PROPERTY OWNED OR LEASED BY THE PERMITTEE, OR BEYOND THE AREA OF REGULATED ACCESS REQUIRED UNDER PARAGRAPH (d) OF THIS SECTION.

(h) BLASTING SHALL BE CONDUCTED TO PREVENT INJURY TO PERSONS, DAMAGE TO PUBLIC OR PRIVATE PROPERTY OUTSIDE THE PERMIT AREA, ADVERSE IMPACTS ON ANY UNDERGROUND MINE, AND CHANGE IN THE COURSE, CHANNEL, OR AVAILABILITY OF GROUND OR SURFACE WATERS OUTSIDE THE PERMIT AREA.

(i) IN ALL BLASTING OPERATIONS, EXCEPT OTHERWISE AUTHORIZED IN THIS SECTION, THE MAXIMUM PEAK PARTICLE VELOCITY SHALL NOT EXCEED 1 INCH PER SECOND AT THE LOCATION OF ANY DWELLING, PUBLIC BUILDING, SCHOOL, CHURCH, OR COMMERCIAL OR INSTITUTIONAL BUILDING. PEAK PARTICLE VELOCITIES SHALL BE RECORDED IN 3 MUTUALLY PERPENDICULAR DIRECTIONS. THE MAXIMUM PEAK PARTICLE VELOCITY SHALL BE THE LARGEST OF ANY OF THE THREE MEASUREMENTS. THE DIVISION

MAY REDUCE THE MAXIMUM PEAK PARTICLE VELOCITY ALLOWED, IF IT DETERMINES THAT A LOWER STANDARD IS REQUIRED BECAUSE OF DENSITY OF POPULATION OR LAND USE, AGE OR TYPE OF STRUCTURE, GEOLOGY OR HYDROLOGY OF THE AREA, FREQUENCY OF BLASTS, OR OTHER FACTORS.

(j) IF BLASTING IS CONDUCTED TO PREVENT ADVERSE IMPACTS ON ANY UNDERGROUND MINE AND CHANGES IN THE COURSE, CHANNEL, OR AVAILABILITY OF GROUND OR SURFACE WATER OUTSIDE THE PERMIT AREA, THEN THE MAXIMUM PEAK PARTICLE VELOCITY LIMITATION OF PARAGRAPH (i) OF THIS SECTION SHALL NOT APPLY AT THE FOLLOWING LOCATIONS:

(1) AT STRUCTURES OWNED BY THE PERSON CONDUCTING THE MINING ACTIVITY, AND NOT LEASED TO ANOTHER PARTY.

(2) AT STRUCTURES OWNED BY THE PERSON CONDUCTING THE MINING ACTIVITY, AND LEASED TO ANOTHER PARTY. IF A WRITTEN WAIVER BY THE LESSEE IS SUBMITTED TO THE DIVISION PRIOR TO BLASTING.

(k) AN EQUATION FOR DETERMINING THE MAXIMUM WEIGHT OF EXPLOSIVES THAT CAN BE DETONATED WITHIN ANY 8-MILLISECOND PERIOD IS IN PARAGRAPH (1) OF THIS SECTION. IF THE BLASTING IS CONDUCTED IN ACCORDANCE WITH THIS EQUATION, THE PEAK PARTICLE VELOCITY SHALL BE DEEMED TO BE WITHIN THE 1-INCH-PER-SECOND LIMIT.

(1) THE MAXIMUM WEIGHT OF EXPLOSIVES TO BE DETONATED WITHIN ANY 8-MILLISECOND PERIOD MAY BE DETERMINED BY THE FORMULA $W = (D/60)^2$ WHERE W = THE MAXIMUM WEIGHT OF EXPLOSIVES, IN POUNDS, THAT CAN BE DETONATED IN ANY 8-MILLISECOND PERIOD, AND D = THE DISTANCE, IN FEET, FROM THE BLAST TO THE NEAREST DWELLING, SCHOOL, CHURCH, OR COMMERCIAL OR INSTITUTIONAL BUILDING.

(2) FOR DISTANCES BETWEEN 300 AND 5,000 FEET, SOLUTION OF THE EQUATION RESULTS IN THE FOLLOWING MAXIMUM WEIGHT:

Distance, in Feet (D)	Maximum Weight in Pounds (W)
300	25
350	34
400	44
500	69
600	100
700	136
800	178
900	225
1,000	278
1,100	336
1,200	400
1,300	469
1,400	544
1,500	625
1,600	711
1,700	803
1,800	900
1,900	1,002
2,000	1,111
2,500	1,736
3,000	2,500
3,500	3,403
4,000	4,444
4,500	5,625
5,000	6,944

RESPONSE:

Blasting will be conducted in accordance with this regulation.

UMC 817.67 USE OF EXPLOSIVES: SEISMOGRAPHIC MEASUREMENTS

(a) WHERE A SEISMOGRAPH IS USED TO MONITOR THE VELOCITY OF GROUND MOTION AND THE PEAK PARTICLE VELOCITY LIMIT OF 1 INCH PER SECOND IS NOT EXCEEDED, THE EQUATION IN SECTION UMC 817.65(1) NEED NOT BE USED. IF THAT EQUATION IS NOT USED BY THE PERSON CONDUCTING THE UNDERGROUND COAL MINING ACTIVITIES, A SEISMOGRAPHIC RECORD SHALL BE OBTAINED FOR EACH SHOT.

(b) THE USE OF A MODIFIED EQUATION FROM THAT SPECIFIED IN SECTION UMC 817.65(1), TO DETERMINE MAXIMUM WEIGHT OF EXPLOSIVES PER DELAY FOR BLASTING OPERATIONS AT A PARTICULAR SITE, MAY BE APPROVED BY THE DIVISION ON RECEIPT OF PETITION ACCOMPANIED BY REPORTS INCLUDING SEISMOGRAPH RECORDS OF TEST BLASTING ON THE SITE. IN NO CASE SHALL THE DIVISION APPROVE THE USE OF A MODIFIED EQUATION WHERE THE PEAK PARTICLE VELOCITY OF 1 INCH PER SECOND REQUIRED IN SECTION UMC 817.65(i) WOULD BE EXCEEDED.

(c) THE DIVISION MAY REQUIRE A SEISMOGRAPH RECORD OF ANY OR ALL BLASTS AND MAY SPECIFY THE LOCATION AT WHICH SUCH MEASUREMENTS ARE TAKEN.

RESPONSE:

Seismic monitoring will not be used.

UMC 817.68 USE OF EXPLOSIVES: RECORDS OF BLASTING OPERATIONS

A RECORD OF EACH BLAST, INCLUDING SEISMOGRAPH REPORTS, SHALL BE RETAINED FOR AT LEAST 3 YEARS AND SHALL BE AVAILABLE FOR INSPECTION BY THE DIVISION AND THE PUBLIC ON REQUEST. THE RECORD SHALL CONTAIN THE FOLLOWING DATA:

- (a) NAME OF THE OPERATOR CONDUCTING THE BLAST.
- (b) LOCATION, DATE, AND TIME OF BLAST.
- (c) NAME, SIGNATURE, AND LICENSE NUMBER OF BLASTER-IN-CHARGE.
- (d) DIRECTION AND DISTANCE, IN FEET, TO THE NEAREST DWELLING, SCHOOL, CHURCH, OR COMMERCIAL OR INSTITUTIONAL BUILDING EITHER-
 - (1) NOT LOCATED IN THE PERMIT AREA; OR
 - (2) NOT OWNED NOR LEASED BY THE PERSON WHO CONDUCTS THE UNDERGROUND COAL MINING ACTIVITIES.

(e) WEATHER CONDITIONS, INCLUDING TEMPERATURE, WIND DIRECTIONS, AND APPROXIMATE VELOCITY.

(f) TYPE OF MATERIAL BLASTED.

(g) NUMBER OF HOLES, BURDEN, AND SPACING.

(h) DIAMETER AND DEPTH OF HOLES.

(i) TYPES OF EXPLOSIVES USED.

(j) TOTAL WEIGHT OF EXPLOSIVES USED.

(k) MAXIMUM WEIGHT OF EXPLOSIVES DETONATED WITHIN ANY 8-MILLISECOND PERIOD.

(l) MAXIMUM NUMBER OF HOLES DETONATED WITHIN ANY 8-MILLISECOND PERIOD.

(m) INITIATION SYSTEM.

(n) TYPE AND LENGTH OF STEMMING.

(o) MATS OR OTHER PROTECTION USED.

(p) TYPE OF DELAY DETONATOR AND DELAY PERIODS USED.

(q) SKETCH OF THE DELAY PATTERN.

(r) NUMBER OF PERSONS IN THE BLASTING CREW.

(s) SEISMOGRAPHIC RECORDS, WHERE REQUIRED, INCLUDING THE CALIBRATION SIGNAL OF THE GAIN SETTING AND-

(1) SEISMOGRAPHIC READING, INCLUDING EXACT LOCATION OF SEISMOGRAPH AND ITS DISTANCE FROM THE BLAST;

(2) NAME OF THE PERSON TAKING THE SEISMOGRAPH READING; AND

(3) NAME OF PERSON AND FIRM ANALYZING THE SEISMOGRAPH RECORD.

RESPONSE:

Records of surface blasts will be filed at the mine site for 3 years and will contain the information required by the regulation.

UMC 817.71 DISPOSAL OF EXCESS SPOIL AND UNDERGROUND DEVELOPMENT WASTE:
GENERAL REQUIREMENTS

(j) VALLEY OR HEAD-OF-HOLLOW FILLS DEFINED IN UMC 700.5 SHALL NOT INCLUDE DISPOSAL OF COAL PROCESSING WASTE. COAL PROCESSING WASTE MAY BE DISPOSED OF IN AREAS WHERE THE STEEPEST SLOPE OF THE VALLEY OR HEAD-OF-HOLLOW FROM THE TOE OF THE FILL TO THE TOP OF THE FILL IS GREATER THAN 10 DEGREES AND THE DRAINAGE AREA ABOVE THE DISPOSAL AREA IS GREATER THAN ONE SQUARE MILE OR MAY BE DISPOSED OR WITH UNDERGROUND DEVELOPMENT WASTE OR IN OTHER EXCESS SPOIL FILLS, IF SUCH WASTE IS-

(1) PLACED IN A COAL WASTE BANK IN ACCORDANCE WITH UMC 817.85 OR WHERE THE DRAINAGE AREA ABOVE THE FILL IS GREATER THAN ONE SQUARE MILE AND THERE IS A POTENTIAL FOR THE FILL TO IMPOUND WATER, IN A DAM OR EMBANKMENT IN ACCORDANCE WITH UMC 817.91-93.

RESPONSE:

The refuse pile has been demonstrated to be stable as can be verified by reviewing Exhibit 33, Star Point Mines Refuse Pile Expansion - Operation and Monitoring Plan. The most recent refuse pile stability analysis can be reviewed in Exhibit 38, Refuse Pile Stability Analysis.

Samples of roof and floor rock from all three mineable seams have been obtained from cored drill holes and analyzed for potential acid or toxic-forming or alkalinity producing potential.

Sample locations can be seen on Map 4, Mine Plan - Hiawatha Seam, Map 5, Mine Plan - Third Seam, and Map 6, Mine Plan - Wattis Seam. Exhibit 51, An Evaluation of the Toxic and Acid Forming Properties of Overburden and Coal Refuse Materials, discusses the acid or toxic-forming potential of the roof and floor rock.

Exhibit 52, Response to Initial Completeness Review Comment UMC 784.14(a)(1), Permit Renewal - August 1987, discusses the groundwater impacts associated with the coal refuse pile.

Based on a production level of 1.7 million raw tons per year, waste rock production which becomes coal refuse will equal approximately one million tons during this permit term.

UMC 817.86 COAL PROCESSING WASTE: BURNING

COAL PROCESSING WASTE FIRE SHALL BE EXTINGUISHED BY THE PERSON WHO CONDUCTS THE UNDERGROUND COAL MINING ACTIVITIES, IN ACCORDANCE WITH A PLAN

Acid - 10/19

Sample locations can be seen on Map 1, Map 5, Mine Plan - Third Seam, and Map Exhibit 51, An Evaluation of the Toxic Overburden and Coal Refuse Materials, discusses the acid or toxic-forming potential of the roof and floor rock. *This is the stipulation for Stopford. Please read under PPT. FA.* Seam, Seam. ies of

Exhibit 52, Response to Initial Completeness Review Comment UMC 784.14(a)(1), Permit Renewal - August 1987, discusses the ground-water impacts associated with the coal refuse pile.

Based on a production level of 1.7 million raw tons per year, waste rock production which becomes coal refuse will equal approximately one million tons during this permit term.

Reclamation Plan

At least two years prior to topsoil redistribution the following program will be initiated:

- 1- A grid system encompassing the entire surface of the refuse pile will be laid on 300 foot centers, where samples of the refuse will be taken. If samples indicate acid and/or toxic or alkaline-producing materials are present, sub-samples will be taken at 150 foot intervals in those areas where acid and/or toxic forming materials are found.
- 2- At each sample site, the refuse will be sampled at 0-6 inches, 6-12 inches, 12-24 inches, 24-36 inches, and 36-48 inch depths.
- 3- The following constituents will be analyzed for in each sample: Selenium, Acid-Base Potential (including Pyritic-Sulfur percent and Organic-Sulfur percent), Electrical Conductivity, Sodium Absorption Ratio (SAR), Boron, and pH. Laboratory methods will be the approved methods at the time of analyses.
- 4- If acid and/or toxic or alkaline-producing materials are identified, a total depth of four feet of non-combustible, non-acid, non-alkaline producing material will be utilized to cover the materials.

5- Based on results of vegetation test plots, the upper 10 inches of the four feet of non-acid , non-toxic, and non-alkaline producing material will be comprised of topsoil. The total depth of topsoil may vary depending on results of vegetation test plots, and vegetation selenium testing.

UMC 817.86 COAL PROCESSING WASTE: BURNING

COAL PROCESSING WASTE FIRE SHALL BE EXTINGUISHED BY THE PERSON WHO CONDUCTS THE UNDERGROUND COAL MINING ACTIVITIES, IN ACCORDANCE WITH A PLAN

(2) NAME OF THE PERSON TAKING THE SEISMOGRAPH READING; AND

(3) NAME OF PERSON AND FIRM ANALYZING THE SEISMOGRAPH RECORD.

RESPONSE:

Records on surface blasts will be filed at the mine site for 3 years and will contain the information required by the regulation.

UMC 817.71 DISPOSAL OF EXCESS SPOIL AND UNDERGROUND DEVELOPMENT WASTE:

GENERAL REQUIREMENTS

(j) VALLEY OR HEAD-OF-HOLLOW FILLS DEFINED IN UMC 700.5 SHALL NOT INCLUDE DISPOSAL OF COAL PROCESSING WASTE. COAL PROCESSING WASTE MAY BE DISPOSED OF IN AREAS WHERE THE STEEPEST SLOPE OF THE VALLEY OR HEAD-OF-HOLLOW FROM THE TOE OF THE FILL TO THE TOP OF THE FILL IS GREATER THAN 10 DEGREES AND THE DRAINAGE AREA ABOVE THE DISPOSAL AREA IS GREATER THAN ONE SQUARE MILE OR MAY BE DISPOSED OR WITH UNDERGROUND DEVELOPMENT WASTE OR IN OTHER EXCESS SPOIL FILLS, IF SUCH WASTE IS-

(1) PLACED IN A COAL WASTE BANK IN ACCORDANCE WITH UMC 817.85 OR WHERE THE DRAINAGE AREA ABOVE THE FILL IS GREATER THAN ONE SQUARE MILE AND THERE IS A POTENTIAL FOR THE FILL TO IMPOUND WATER, IN A DAM OR EMBANKMENT IN ACCORDANCE WITH UMC 817.91-93.

RESPONSE:

The refuse pile has been demonstrated to be stable as can be verified by reviewing Exhibit 33, Star Point Mines Refuse Pile Expansion - Operation and Monitoring Plan. The most recent refuse pile stability analysis can be reviewed in Exhibit 38, Refuse Pile Stability Analysis.

UMC 817.86 COAL PROCESSING WASTE: BURNING

COAL PROCESSING WASTE FIRE SHALL BE EXTINGUISHED BY THE PERSON WHO CONDUCTS THE UNDERGROUND COAL MINING ACTIVITIES, IN ACCORDANCE WITH A PLAN

APPROVED BY THE DIVISION AND THE MINE SAFETY AND HEALTH ADMINISTRATION. THE PLAN SHALL CONTAIN, AS A MINIMUM, PROVISIONS TO ENSURE THAT ONLY THESE PERSONS AUTHORIZED BY THE OPERATOR, AND WHO HAVE AN UNDERSTANDING OF THE PROCEDURE TO BE USED, SHALL BE INVOLVED IN THE EXTINGUISHING OPERATIONS.

RESPONSE:

A plan to extinguish processing waste fires cannot be detailed because each fire is different depending on: location, weather conditions, access, severity and threat to firefighters. Generally, fires will be extinguished by the use of rock dust or heavy equipment. PMC reserves the right to extinguish fires using whatever means are available considering all of the above mentioned factors. Trained personnel are available to direct fire fighting efforts. The Carbon County Fire Department is available for back-up to PMC personnel.

UMC 817.87 COAL PROCESSING WASTE: BURNED WASTE UTILIZATION

BEFORE ANY BURNED COAL PROCESSING WASTE OR OTHER MATERIALS OR REFUSE IS REMOVED FROM A DISPOSAL AREA, APPROVAL SHALL BE OBTAINED FROM THE DIVISION. A PLAN FOR THE METHOD OF REMOVAL, WITH MAPS AND APPROPRIATE DRAWINGS TO ILLUSTRATE THE PROPOSED SEQUENCE OF THE OPERATION AND METHODS OF COMPLIANCE WITH THIS PART, SHALL BE SUBMITTED TO THE DIVISION. CONSIDERATION SHALL BE GIVEN IN THE PLAN TO POTENTIAL HAZARDS WHICH MAY BE CREATED BY REMOVAL TO PERSONS WORKING OR LIVING IN THE VICINITY OF THE STRUCTURE. THE PLAN SHALL BE CERTIFIED BY A QUALIFIED ENGINEER.

RESPONSE:

Before any burned coal processing waste or refuse is removed from the site, approval will be obtained from the Division. A plan with maps and appropriate drawings to illustrate the operation will be submitted to the Division.

UMC 817.99 SLIDES AND OTHER DAMAGE

AT ANY TIME A SLIDE OCCURS WHICH MAY HAVE A POTENTIAL ADVERSE EFFECT ON PUBLIC, PROPERTY, HEALTH, SAFETY, OR THE ENVIRONMENT, THE PERSON WHO CONDUCTS THE UNDERGROUND COAL MINING ACTIVITIES SHALL NOTIFY THE DIVISION BY THE FASTEST AVAILABLE MEANS AND COMPLY WITH ANY REMEDIAL MEASURES REQUIRED BY THE DIVISION.

RESPONSE:

At any time a slide occurs which may have a potential adverse effect on public property, health, safety, or the environment, PMC will notify the Division by the fastest available means and will comply with remedial measures required by the Division if those measures are considered to be sound and safe. PMC reserves the right to conduct clean-up operations using standard safety and construction procedures.

UMC 817.100 CONTEMPORANEOUS RECLAMATION

RECLAMATION EFFORTS, INCLUDING, BUT NOT LIMITED TO, BACKFILLING, GRADING, TOPSOIL REPLACEMENT AND REVEGETATION, OF ALL LAND THAT IS DISTURBED BY SURFACE OPERATIONS SHALL OCCUR AS CONTEMPORANEOUSLY AS PRACTICABLE WITH MINING OPERATIONS.

RESPONSE:

Map 34, Disturbed Area Vegetation Map, Sheets 5, 6, and 8, show the current extent of disturbance. Areas designated as "Current Extent of Disturbance" or "Disturbed Prior to 3 Aug. 1977" are the disturbed areas. All areas not used for buildings, roadway surfaces, coal piles, transportation facilities, refuse pile, and the like have been vegetated for interim reclamation. The areas where interim reclamation has been conducted are shown in Map 34. This map also shows areas reclaimed for final reclamation, with the year reclaimed.

UMC 817.106 REGRADING OR STABILIZING RILLS AND GULLIES

WHEN RILLS OR GULLIES DEEPER THAN 9 INCHES FORM IN AREAS THAT HAVE BEEN REGRADED AND TOPSOILED, THE RILLS AND GULLIES SHALL BE FILLED, GRADED, OR OTHERWISE STABILIZED AND THE AREA RESEEDED OR REPLANTED ACCORDING TO SECTIONS UMC 817.111-817.117. THE DIVISION SHALL SPECIFY THAT RILLS OR GULLIES OF LESSER SIZE BE STABILIZED AND THE AREA RESEEDED OR REPLANTED IF THE RILLS OR GULLIES ARE DISRUPTIVE TO THE APPROVED POSTMINING LAND USE OR MAY RESULT IN ADDITIONAL EROSION AND SEDIMENTATION.

RESPONSE:

When rills or gullies deeper than 9 inches form in areas that have been regraded and topsoiled, the rills and gullies will be filled, graded, or otherwise stabilized.

UMC 817.122 SUBSIDENCE CONTROL: PUBLIC NOTICE

THE MINING SCHEDULE SHALL BE DISTRIBUTED BY MAIL TO ALL OWNERS OF PROPERTY AND RESIDENTS WITHIN THE AREA ABOVE THE UNDERGROUND WORKINGS AND ADJACENT AREAS THAT WOULD BE AFFECTED BY SUBSIDENCE IF IT OCCURRED. EACH SUCH PERSON SHALL BE NOTIFIED BY MAIL AT LEAST SIX MONTHS PRIOR TO MINING BENEATH HIS OR HER PROPERTY OR RESIDENCE. THE NOTIFICATION SHALL CONTAIN, AS A MINIMUM:

- (a) IDENTIFICATION OF SPECIFIC AREAS IN WHICH MINING WILL TAKE PLACE;
- (b) DATES OF UNDERGROUND OPERATIONS THAT COULD CAUSE SUBSIDENCE AND AFFECT SPECIFIC STRUCTURES; AND
- (c) MEASURES TO BE TAKEN TO PREVENT OR CONTROL ADVERSE SURFACE EFFECTS.

RESPONSE:

PMC will notify surface owners of the mining schedule as required by this Part. For the purposes of Federal land, the Permit Application Package

UMC 817.101 BACKFILLING AND GRADING: GENERAL REQUIREMENTS

(b) BACKFILLING AND GRADING.

(5) THE PERSON WHO CONDUCTS UNDERGROUND COAL MINING ACTIVITIES SHALL--

(i) RETAIN ALL OVERBURDEN AND SPOIL ON THE SOLID PORTION OF EXISTING OR NEW BENCHES UNLESS ALL THE REQUIREMENTS OF 817.71 ARE MET; AND

(ii) BACKFILL AND GRADE TO THE MOST MODERATE SLOPE POSSIBLE, TO ELIMINATE OR REDUCE THE HIGHWALL WHICH DOES NOT EXCEED EITHER THE ANGLE OF REPOSE OR SUCH LESSER SLOPE AS IS NECESSARY TO ACHIEVE A MINIMUM STATIC SAFETY FACTOR OF 1.3. IN ALL CASES THE HIGHWALL SHALL BE ELIMINATED OR REDUCED, AS DETERMINED BY THE DIVISION.

RESPONSE:

An analysis of backfilled areas was conducted by Rollins, Brown and Gunnell, Inc., Professional Engineers, to demonstrate that a 1.3 static safety factor could be achieved on reclaimed areas. This analysis can be found as Exhibit 44, Static Safety Factor on Reclaimed Areas Investigation.

Retained highwalls will range from 100 feet to 2300 feet in length. Existing cliffs in the area are many thousands of feet long. Retained highwalls will range from 0 to 40 feet in height. Existing cliffs in the area range from 0 to 200 feet in height. The height and length of retained highwalls will be compatible with existing cliffs in the area. Retained highwalls can be seen on Map 47, Post-Disturbance Topography and Cross Section Locations, Sheets E-12, E-13, and F-12.

The retained highwalls will be similar in structural composition to the pre-existing cliffs and slopes in the surrounding area and will be compatible with visual attributes of the area. The surrounding area consists of sandstone cliffs, exposed mancos shale escarpments and talus slopes ranging from 5 percent to vertical. The retained highwalls will blend with the natural slopes and cliffs.

(i) THE WIDTH OF THE INDIVIDUAL TERRACE BENCH SHALL NOT EXCEED 20 FEET, UNLESS SPECIFICALLY APPROVED BY THE DIVISION AS NECESSARY FOR STABILITY, EROSION CONTROL, OR ROADS INCLUDED IN THE APPROVED POSTMINING LAND USE PLAN.

(ii) THE VERTICAL DISTANCE BETWEEN TERRACES SHALL BE AS SPECIFIED BY THE DIVISION TO PREVENT EXCESSIVE EROSION AND TO PROVIDE LONG-TERM STABILITY.

(iii) THE SLOPE OF THE TERRACE OUTSLOPE SHALL NOT EXCEED 1v:2h (50 PERCENT). OUTSLOPES WHICH EXCEED 1v:2h (50 PERCENT) MAY BE APPROVED, IF THEY HAVE A MINIMUM STATIC SAFETY FACTOR OF MORE THAN 1.3, PROVIDE ADEQUATE CONTROL OVER EROSION, AND CLOSELY RESEMBLE THE SURFACE CONFIGURATION OF THE LAND PRIOR TO MINING.

(iv) CULVERTS AND UNDERGROUND ROCK DRAINS MAY BE USED ON THE TERRACE ONLY WHEN APPROVED BY THE DIVISION.

(5) THE PERSON WHO CONDUCTS UNDERGROUND COAL MINING ACTIVITIES SHALL--

(i) RETAIN ALL OVERBURDEN AND SPOIL ON THE SOLID PORTION OF EXISTING OR NEW BENCHES UNLESS ALL THE REQUIREMENTS OF 817.71 ARE MET; AND

(ii) BACKFILL AND GRADE TO THE MOST MODERATE SLOPE POSSIBLE, TO ELIMINATE OR REDUCE THE HIGHWALL WHICH DOES NOT EXCEED EITHER THE ANGLE OF REPOSE OR SUCH LESSER SLOPE AS IS NECESSARY TO ACHIEVE A MINIMUM STATIC SAFETY FACTOR OF 1.3. IN ALL CASES THE HIGHWALL SHALL BE ELIMINATED OR REDUCED, AS DETERMINED BY THE DIVISION.

(6) SMALL DEPRESSIONS MAY BE CONSTRUCTED, IF THEY--

(i) ARE APPROVED BY THE DIVISION TO MINIMIZE EROSION, CONSERVE SOIL MOISTURE, OR PROMOTE VEGETATION;

(ii) DO NOT RESTRICT NORMAL ACCESS; AND

(iii) ARE NOT INAPPROPRIATE SUBSTITUTES FOR LOWER GRADES ON THE RECLAIMED LANDS.

(7) ALL FINAL GRADING, PREPARATION OF OVERBURDEN BEFORE REPLACEMENT OF TOPSOIL, AND PLACEMENT OF TOPSOIL, SHALL BE DONE ALONG THE CONTOUR TO MINIMIZE SUBSEQUENT EROSION AND INSTABILITY. IF SUCH GRADING, PREPARATION, OR PLACEMENT ALONG THE CONTOUR IS HAZARDOUS TO EQUIPMENT OPERATORS, THEN GRADING, PREPARATION, OR PLACEMENT IN A DIRECTION OTHER THAN GENERALLY PARALLEL TO THE CONTOUR MAY BE USED. IN ALL CASES, GRADING, PREPARATION, OR PLACEMENT SHALL BE CONDUCTED IN A MANNER WHICH MINIMIZES EROSION AND PROVIDES A SURFACE FOR REPLACEMENT OF TOPSOIL WHICH WILL MINIMIZE SLIPPAGE.

(8) THE DIVISION MAY ALLOW THE RETENTION OF HIGHWALLS WHEN THE CRITERIA IN (1) ABOVE ARE MET AND

(i) THE "RETAINED" HIGHWALL IS NOT SIGNIFICANTLY GREATER IN HEIGHT OR LENGTH THAN THE DIMENSIONS OF EXISTING CLIFFS IN THE SURROUNDING AREA;

(ii) THE RESIDUAL HIGHWALL IS SIMILAR IN STRUCTURAL COMPOSITION TO THE PRE-EXISTING CLIFFS IN THE SURROUNDING AREA AND IS COMPATIBLE WITH THE VISUAL ATTRIBUTES OF THE AREA, AND

(iii) THE RESIDUAL HIGHWALL IS COMPATIBLE WITH THE GEOMORPHIC PROCESSES OF THE AREA.

(c) THE FOLLOWING MATERIALS SHALL BE PREVENTED FROM BEING PLACED ON THE DOWNSLOPE OF A STEEP SLOPE AS DEFINED IN UMC 700.5, EXCEPT THAT NOTHING IN THIS SECTION SHALL PROHIBIT THE PLACEMENT OF MATERIAL IN ROAD AND PORTAL PAD EMBANKMENTS LOCATED ON THE DOWNSLOPE, SO LONG AS THE MATERIAL USED AND THE EMBANKMENT DESIGN COMPLY WITH THE APPLICABLE REQUIREMENTS OF UMC 817.150-817.180 AND THE MATERIAL IS MOVED AND PLACED IN A CONTROLLED MANNER.

(1) SPOIL,

(2) WASTE MATERIALS, INCLUDING WASTE MINERAL MATTER UNLESS DEMONSTRATED TO BE NON-ACID OR NON-TOXIC FORMING AND TO BE COMPATIBLE WITH THE STABILITY OF THE SLOPE,

(3) DEBRIS, INCLUDING THAT FROM CLEARING AND GRUBBING OF HAUL ROAD CONSTRUCTION OR PORTAL PAD CONSTRUCTION, AND

(4) ABANDONED OR DISABLED EQUIPMENT.

NOTHING IN THIS SUBSECTION (c) PROHIBITS PLACEMENT OF THE DURABLE ROCK IN AN ENGINEERED FILL IN ACCORDANCE WITH 817.71(e)(2).

RESPONSE:

An analysis of backfilled areas was conducted by Rollins, Brown and Gunnel, Inc., Professional Engineers, to demonstrate that a 1.3 static safety factor could be achieved on reclaimed areas. This analysis can be found as Exhibit 44, Static Safety Factor on Reclaimed Areas Investigation.

All areas to be reclaimed, except the refuse pile, are covered by Exhibit 44, Static Safety Factor on Reclaimed Areas Investigation. The refuse pile is addressed in response to UMC 784.16 on page 784-130. The refuse pile is constructed according to requirements as outlined in Exhibit 33, Star Point Mine's Refuse Pile Evaluation Operation and Monitoring Plan. The pile will be stable at final reclamation and will meet all requirements.

Retained highwalls will range from 100 feet to 2300 feet in length. Existing cliffs in the area are many thousands of feet long. Retained highwalls will range from 0 to 40 feet in height. Existing cliffs in the area range from 0 to 200 feet in height. The height and length of retained highwalls will be compatible with existing cliffs in the area.

The retained highwalls will be similar in structural composition to the pre-existing cliffs and slopes in the surrounding area and will be compatible with visual attributes of the area. The surrounding area consists of sandstone cliffs, exposed mancos shale escarpments and talus slopes ranging from 5 percent to vertical. The retained highwalls will blend with the natural slopes and cliffs.

The retained highwalls will be compatible with the geomorphic processes in the area in that they will weather very much like the natural slopes and cliffs. The natural terrain consists of exposed sandstone cliffs formed by outcropping due to erosion processes and talus slopes created by the same processes.

constitutes said notice since it includes all of the required information.

UMC 817.124 SUBSIDENCE CONTROL: SURFACE OWNER PROTECTION

(a) EACH PERSON WHO CONDUCTS UNDERGROUND COAL MINING ACTIVITIES SHALL ADOPT ALL MEASURES, TO THE EXTENT TECHNOLOGICALLY AND ECONOMICALLY FEASIBLE, APPROVED BY THE DIVISION UNDER UMC 784.20 TO REDUCE THE LIKELIHOOD OF SUBSIDENCE, TO PREVENT SUBSIDENCE CAUSING MATERIAL DAMAGE OR REDUCING THE VALUE OR REASONABLY FORESEEABLE USE OF SURFACE LANDS, AND TO MITIGATE THE EFFECTS OF ANY SUCH DAMAGE OR REDUCTION WHICH MAY OCCUR.

(b) EACH PERSON WHO CONDUCTS UNDERGROUND MINING WHICH RESULTS IN SUBSIDENCE THAT CAUSES MATERIAL DAMAGE OR REDUCES THE VALUE OR REASONABLY FORESEEABLE USE OF THE SURFACE LANDS SHALL, WITH RESPECT TO EACH SURFACE AREA AFFECTED BY SUBSIDENCE, EITHER-

(1) RESTORE, REHABILITATE, OR REMOVE AND REPLACE, TO THE EXTENT TECHNOLOGICALLY AND ECONOMICALLY FEASIBLE, EACH MATERIALLY DAMAGED STRUCTURE, FEATURE OR VALUE PROMPTLY AFTER THE MATERIAL DAMAGE FROM SUBSIDENCE IS SUFFERED, TO THE CONDITION IT WOULD BE IN IF NO SUBSIDENCE HAD OCCURRED AND RESTORE, TO THE EXTENT TECHNOLOGICALLY AND ECONOMICALLY FEASIBLE, THOSE SURFACE LANDS THAT WERE REDUCED IN REASONABLY FORESEEABLE USE AS A RESULT OF SUCH SUBSIDENCE TO A CONDITION CAPABLE OF SUPPORTING REASONABLY FORESEEABLE USES THAT SUCH LANDS WERE CAPABLE OF SUPPORTING BEFORE SUBSIDENCE; OR

(2) PURCHASE THE DAMAGED STRUCTURE OR FEATURE (EXCEPT STRUCTURES OR FEATURES OWNED BY THE PERSON WHO CONDUCTED THE UNDERGROUND COAL MINING ACTIVITIES) FOR ITS PRE-SUBSIDENCE FAIR MARKET VALUE. THE PERSON CONDUCTING THE UNDERGROUND COAL MINING OPERATION SHALL PROMPTLY, AFTER THE MATERIAL DAMAGE OR REDUCTION IN VALUE OR REASONABLY FORESEEABLE USE FROM SUBSIDENCE OCCURS, TO THE EXTENT TECHNOLOGICALLY AND ECONOMICALLY FEASIBLE, RESTORE THE PURCHASED STRUCTURE OR THE STRUCTURE OWNED BY THE PERSON CONDUCTING THE UNDERGROUND MINING OPERATIONS, RESTORE THOSE SURFACE LANDS THAT WERE MATERIALLY DAMAGED OR REDUCED IN VALUE OR REASONABLY FORESEEABLE USE BY SUCH SUBSIDENCE,

TO A CONDITION CAPABLE AND APPROPRIATE OF SUPPORTING THE STRUCTURE, AND ANY OTHER FORESEEABLE USES SUCH SURFACE LANDS WERE CAPABLE OF SUPPORTING BEFORE MINING. NOTHING IN THE PARAGRAPH SHALL BE DEEMED TO GRANT OR AUTHORIZE AN EXERCISE OF THE POWER OF CONDEMNATION OR THE RIGHT OF EMINENT DOMAIN BY ANY PERSON ENGAGED IN UNDERGROUND COAL MINING ACTIVITIES; OR

(3) COMPENSATE THE OWNER OF ANY SURFACE STRUCTURE IN THE FULL AMOUNT OF THE DIMINUTION IN VALUE RESULTING FROM SUBSIDENCE, BY PURCHASE PRIOR TO MINING OF A NONCANCELLABLE PREMIUM PREPAID INSURANCE POLICY OR OTHER MEANS APPROVED BY THE DIVISION AS ASSURING BEFORE MINING BEGINS THAT PAYMENTS WILL OCCUR; INDEMNIFY EVERY PERSON OWNING AN INTEREST IN THE SURFACE FOR ALL DAMAGES SUFFERED AS A RESULT OF THE SUBSIDENCE; AND, TO THE EXTENT TECHNOLOGICALLY AND ECONOMICALLY FEASIBLE, FULLY RESTORE THE LAND TO A CONDITION CAPABLE OF MAINTAINING REASONABLY FORESEEABLE USES WHICH IT COULD SUPPORT BEFORE SUBSIDENCE.

RESPONSE:

- (1) Where subsidence causes surface cracks that prove to be hazardous to grazing livestock or wildlife, PMC will undertake restoration measures to eliminate the hazard. Restoration measures that may be used include, but are not limited to: filling cracks, recontouring the affected land surface and revegetating the area with appropriate species. Measures will be undertaken to reduce the potential for erosion. These measures will be undertaken as appropriate and in conjunction with the surface management agency or owner and will be completed prior to bond release.

- (2) Where subsidence causes cracks or features on the land surface that prove to be hazardous to livestock, PMC will compensate surface owners at fair market value for loss of revenue that would be generated from those lands. Documentation of the lost revenue must be presented to PMC and the Board of Oil, Gas and Mining including: acres affected, proof of right of use of the land, numbers of animals grazed or AUM's allowed by the surface owner or managing agency, and proof that the hazards were of a magnitude and nature that prevented use of the land.

- (3) If livestock are proven to have been killed or injured as a direct result of subsidence caused surface hazards, CPMC will compensate the owner at fair market value for lost revenue from those animals.
- (4) Groundwater sources that receive material damage as a direct result of subsidence will be rehabilitated or mitigated. Rehabilitation and mitigation may include, but are not limited to: developing other sources in the vicinity to increase their flow or installing water harvesting facilities such as guzzlers.
- Land that receives material damage as a direct result of subsidence will be rehabilitated or mitigated. Rehabilitation and mitigation may consist of, but are not limited to: reclaiming or recontouring the area to restore value and revegetating the area with appropriate species.

CPMC will include in the annual subsidence reports as discussed in response to UMC 784.20 the following: An assessment of impacts (if they occur) of cliff failure and resulting talus slope formation on vegetation and wildlife, and a vegetation/mitigation plan to be implemented in the first season after significant subsidence and cliff failure ceases.

UMC 817.131 CESSATION OF OPERATIONS: TEMPORARY

(a) EACH PERSON WHO CONDUCTS UNDERGROUND COAL MINING ACTIVITIES SHALL EFFECTIVELY SUPPORT AND MAINTAIN ALL SURFACE ACCESS OPENINGS TO UNDERGROUND OPERATIONS, AND SECURE SURFACE FACILITIES IN AREAS IN WHICH THERE ARE NO CURRENT OPERATIONS, BUT OPERATIONS ARE TO BE RESUMED UNDER AN APPROVED PERMIT. TEMPORARY ABANDONMENT SHALL NOT RELIEVE A PERSON OF HIS OR HER OBLIGATION TO COMPLY WITH ANY PROVISIONS OF THE APPROVED PERMIT.

(b) BEFORE TEMPORARY CESSATION OF MINING AND RECLAMATION OPERATIONS FOR A PERIOD OF THIRTY DAYS OR MORE, OR AS SOON AS IT IS KNOWN THAT A TEMPORARY CESSATION WILL EXTEND BEYOND 30 DAYS, EACH PERSON WHO CONDUCTS UNDERGROUND MINING ACTIVITIES SHALL SUBMIT TO THE DIVISION A NOTICE OF INTENTION TO CEASE

OR ABANDON OPERATIONS. THIS NOTICE SHALL INCLUDE A STATEMENT OF THE EXACT NUMBER OF SURFACE ACRES AND THE HORIZONTAL AND VERTICAL EXTENT OF SUB-SURFACE STRATA WHICH HAVE BEEN IN THE PERMIT AREA PRIOR TO CESSATION OR ABANDONMENT, THE EXTENT AND KIND OF RECLAMATION OF SURFACE AREA WHICH WILL HAVE BEEN ACCOMPLISHED, AND IDENTIFICATION OF THE BACKFILLING, REGRADING, REVEGETATION, ENVIRONMENTAL MONITORING, UNDERGROUND OPENING CLOSURES AND WATER TREATMENT ACTIVITIES THAT WILL CONTINUE DURING THE TEMPORARY CESSATION.

RESPONSE:

CPMC commits to the requirements of UMC 817.131.

UMC 817.150-817.176 ROADS: CLASS I, CLASS II, AND CLASS III

RESPONSE:

CPMC commits to the requirements of UMC 817.165 on Class II roads.

Plan and profile views of all existing roads can be found on Map 44, Surface Facilities, and on Maps 74, 75, 76, and 77, Roads 'A', 'B', 'C', 'D', 'E', 'F', 'G', 'H', 'I', 'J', and 'K', Profiles and Cross Sections. Road specifications can be found on Table 94, Road Specifications.

Road maintenance is addressed on Page 784-1 and 817-24. Reclamation of roads is addressed on Page 784-26, and a typical reclamation cross section can be seen on Map 49, Reclamation Cross Sections.