

May 13, 2003

Wendell Owen, Mine Manager  
Co-Op Mining Company  
P.O. Box 1245  
Huntington, Utah 84528

Re: Results of the Midterm Permit Review, Co-Op Mining Company, Bear Canyon Mine, C/015/025-MT03, Outgoing File

Dear Mr. Owen:

The Division has completed a review of the Sunnyside Refuse and Slurry facility as required by R645-303-211. You should recall that the items under review were as follows:

1. An AVS check to ensure that Ownership and Control information is current and correct.
2. A review of the plan to ensure that the requirements of all permit conditions, division orders, notice of violation abatement plans, and permittee-initiated plan changes are appropriately incorporated into the plan document.
3. A review of the applicable portions of the permit to ensure that the plan contains commitments for application of the best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flows outside of the permit area.
4. A review of the bond to ensure that it is in order and that the cost estimate is accurate and is escalated to the appropriate year dollars.
5. The Division conducted a technical site visit on April 16, 2003 in conjunction with the assigned compliance inspector to document the status and effectiveness of operational, reclamation, and contemporaneous reclamation practices.

Page 2  
Wendell Owen  
C/015/025-MT03  
May 13, 2003

The results of the review are contained in the enclosed review document. You will note that there is one item that requires your further attention. Additional information will need to be provided in the form of an amendment to address the escalated bond adjustment. The amendment for the revised bond amount should be submitted by no later than June 16, 2003.

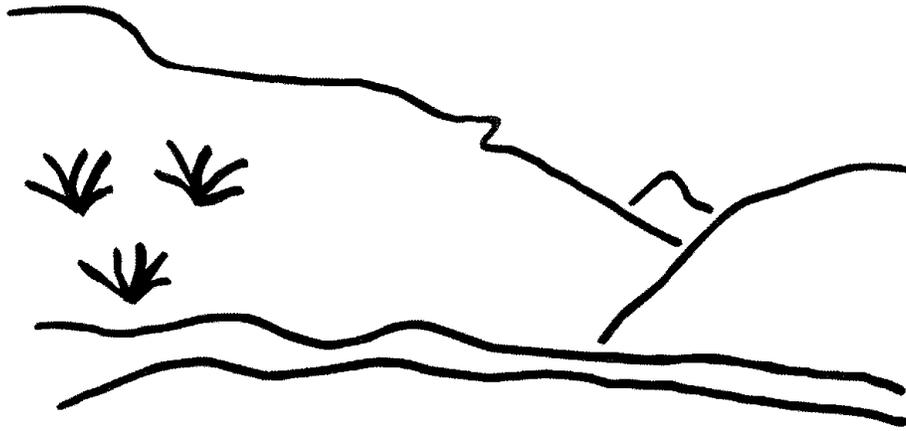
If you have any questions regarding these requirements or the Midterm Review please don't hesitate to call.

Sincerely,

Daron R. Haddock  
Permit Supervisor

an  
Enclosure:  
cc: Price Field Office  
O:\015025.BCN\FINAL\DEFMT03.DOC

# State of Utah



## Utah Oil Gas and Mining

### Coal Regulatory Program

Bear Canyon Mine  
Midterm Review  
C/015/025-MT03  
Technical Analysis  
May 9, 2003



## TECHNICAL ANALYSIS

The Division ensures compliance with the Surface Mining Control and Reclamation Act of 1977(SMCRA). When mines submit a Permit Application Package or an amendment to their Mining and Reclamation Plan, the Division reviews the proposal for conformance to the R645-Coal Mining Rules. This Technical Analysis is such a review. Regardless of these analyses, the permittee must comply with the minimum regulatory requirements as established by SMCRA.

Readers of this document must be aware that the regulatory requirements are included by reference. A complete and current copy of these regulations and a copy of the Technical Analysis and Findings Review Guide can be found at <http://ogm.utah.gov/coal>

This Technical Analysis (TA) is written as part of the permit review process. It documents the Findings that the Division has made to date regarding the application for a permit and is the basis for permitting decisions with regard to the application. The TA is broken down into logical section headings, which comprise the necessary components of an application. Each section is analyzed and specific findings are then provided which indicate whether or not the application is in compliance with the requirements.

Often the first technical review of an application finds that the application contains some deficiencies. The deficiencies are discussed in the body of the TA and are identified by a regulatory reference, which describes the minimum requirements. In this Technical Analysis we have summarized the deficiencies at the beginning of the document to aid in responding to them. Once all of the deficiencies have been adequately addressed, the TA will be considered final for the permitting action.

It may be that not every topic or regulatory requirement is discussed in this version of the TA. Generally only those sections are analyzed that pertain to a particular permitting action. TA's may have been completed previously and the revised information has not altered the original findings. Those sections that are not discussed in this document are generally considered to be in compliance.



---

## INTRODUCTION

---

# INTRODUCTION

On March 19, 2003 by way of correspondence, the Division notified Co-op Mining Company of its intent to conduct a Midterm review of the Bear Canyon mine.

The following items were chosen for review:

1. An AVS check to ensure that Ownership and Control information is current and correct.
2. A review of the plan to ensure that the requirements of all permit conditions, division orders, notice of violation abatement plans, and permittee-initiated plan changes are appropriately incorporated into the plan document.
3. A review of the applicable portions of the permit to ensure that the plan contains commitments for application of the best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flows outside of the permit area.
4. A review of the bond to ensure that it is in order and that the cost estimate is accurate and is escalated to the appropriate year dollars.
5. The review included a technical site visit on April 16, 2003 in conjunction with the assigned compliance inspector to document the status and effectiveness of operational, reclamation, and contemporaneous reclamation practices.

The Bear Canyon Mine is permitted by Co-Op Mining Company and operated by CW Mining Company. Much of the permitted and adjacent area includes pre-SMCRA disturbance. Bear Creek is a small perennial stream. Big Bear Spring, located just south of the permit area, is an important source of culinary water for the Castle Valley Special Services District (CVSSD).

Portals were constructed on the west side of Bear Canyon to access the Hiawatha and Blind Canyon Seams (#1 Mine) and the Tank Seam (#2 Mine). Up to the storage area above the Blind Canyon pad, the access road is identified on maps as the Primary Portal Access Road, and beyond the storage area it is identified on maps as the Primary Tank Seam Access Road.

The #2 Mine portal has been sealed and the pad and Primary Tank Seam Access Road are being reclaimed. The Hiawatha and Blind Canyon seams are being retreat-mined in the #1 Mine. Ground water collected in a sump in the #2 Mine is distributed throughout the Bear Canyon Mine property for culinary and mining use.

## INTRODUCTION

---

In a large tributary canyon on the east side of Bear Canyon, a new portal has been opened in the Wild Horse Ridge extension to mine the Blind Canyon seam (#3 Mine), and a portal to the Tank Seam is being built (#4 Mine). A suspended conveyor system has been built to transport coal from these Wild Horse Ridge mines to the existing tipples in Bear Canyon. The road to the #3 Mine is labeled on maps as the Primary #3 Mine Access Road, and the branch of the road that goes to the #4 Mine site is, at least for now, identified as the Pre-mining Recreational Road. Primary Conveyor Access Roads #1 and #2 serve the conveyor system.

The Blind Canyon Mine was inspected on April 16, 2003 as part of the mid-term permit review. The main hydrologic issue considered during this inspection was use of best technology currently available (BTCA) to control sedimentation and prevent, to the extent possible, additional contributions of sediment to streamflow or to precipitation runoff outside the permit area.

---

GENERAL CONTENTS

---

## GENERAL CONTENTS

### IDENTIFICATION OF INTERESTS

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

#### Analysis:

The Division conducted an examination of the Applicant Violator System for the Co-Op Mining Company by examining the organizational family tree on April 17, 2003.

The permittee submitted an Annual Report of Officers as submitted to the Utah Department of Commerce as part of the 2002 Annual Report, **APPENDIX C** to the Division on April 17, 2003.

A review of the currently approved mining and reclamation plan **Volume 1, Chapter 2, Ownership and Control, page 2-4, section 2.2.6, Business Designation**, designates C.W. Mining a corporation in the State of Utah, and the payer of the abandoned mine reclamation fee. A Federal identification number of the corporation is listed as 87-0399230.

The Officers and Directors listed within this same section of the mining and reclamation plan are identical to the information found in both the AVS check and the 2002 Annual Report of Officers to the Utah Department of Commerce.

#### Findings:

The Ownership and Control information listed with the current mining and reclamation plan meets the minimum regulatory requirements of R645-301-112.

### VIOLATION INFORMATION

Regulatory Reference: 30 CFR 773.15(b); 30 CFR 773.23; 30 CFR 778.14; R645-300-132; R645-301-113

#### Analysis:

There is one notice of violation pending # N03-40-01-01 related to the monitoring of wells SDH-2, SDH-3, MW114, and MW117. There are no abatement plans required by the notice other than to monitor in accordance with the approved MRP by no later than May 12, 2003. The notice of violation does not require any information to be incorporated into the approved MRP. There have been no coal mining and reclamation operations in the name of Co-

op Mining Company neither revoked or suspended nor has there been a performance bond forfeited in the five years preceding this review.

**Findings:**

The Bear Canyon Mine facility has met the regulatory requirements for this portion (item #2) of the midterm review.

**SPECIAL CONDITIONS OR STIPULATIONS TO THE PERMIT APPROVAL**

Regulatory References: 30 CFR773.17; R645-300-140; R645-300-145.

**Analysis:**

The permit was renewed on November 02, 2000 and expires November 02, 2005. Three stipulations were attached to the permit.

**Findings:**

There are three permit conditions associated with the Bear Canyon Mine permit; the first is that Federal mine plan approval is required prior to the initiation of coal extraction activities in leases designated as U-038727 and U-0020668. Federal mine plan approval was received from the Department of Interior, Office of Surface Mining, on February 2, 2002.

The second permit condition is that the permittee must submit water-monitoring information to the Division's electronic database. This has been, and continues to be, accomplished on a quarterly basis.

The third permit condition is that the pumping of mine water to the old mine workings north of Big Bear and Birch Spring will be controlled and monitored as stipulated by the Division with revision of that procedure only as directed by the Division and with the prior approval of the Division. According to Mr. Reynolds, the permittee drilled an in-mine borehole between the Blind Canyon and the Hiawatha seams in July of 2002 to drain that water into the lower seam such that it could be used. Thus, the requirement that the permittee must control and monitor that volume is no longer necessary and the permit condition has been satisfied.

The permittee-initiated plan changes have been incorporated into the plan document. The Trail Mountain Mine facility has met the regulatory requirements for this portion (item#2) of the midterm review.

---

OPERATION PLAN

---

## OPERATION PLAN

### HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

#### Analysis:

##### Groundwater Monitoring

Piezometers SDH-2, SDH-3, MW-114, AND MW-117 have not been monitored for a year. NOV #NO3-40-1-1 was issued on February 21, 2003 for failure to monitor these piezometers. SDH-2 and SDH-3 were not monitored because of equipment problems, and monitoring equipment had not been installed on MW-114 and MW-117. The inspector's statement for the NOV states:

When it came time to report water monitoring data, the permittee reported "No Access" at the four wells, and this was done for three consecutive quarters, which included the five months such data was required. The "No Access" designation was not accurate since the four wells in question were accessible during the months of June, July, August, September, and October.

The permittee did not communicate with the Division to indicate problems with the well monitoring equipment or with gathering data. This was not done at this mine. A simple alternative would have been to use a measuring tape with a weight on the end to determine well water levels when the monitoring equipment failed.

These repairs were not completed for over nine months. The Permittee now has the parts to repair SDC-2 and SDH-3, and repairs will be done by May 12, 2003, the abatement date for the NOV.

MW-114 and MW-117 were bored by Cyprus Plateau during an exploration program in 1991 or 1992. They were completed with casing and screen at that time, but were not outfitted with monitoring equipment. EarthFax Engineering obtained baseline water-depth data using a tape, but the Permittee thought that operational monitoring was not required, even though these piezometers were in the approved water-monitoring plan in the MRP. MW-114 and MW-117 will also have monitoring equipment installed by or soon after 12 May and regular operational monitoring will begin.

## **Sediment Control Measures**

Under R645-301-742.110, sediment control measures are to be designed, constructed, and maintained using the best technology currently available (BTCA). One of the purposes of the mid-term review is to ensure that the MRP commits to application of the BTCA to prevent additional contributions of suspended solids to stream flows outside of the permit area.

According to the Coal Mining Rules, sediment control measures consist of utilization of proper mining and reclamation methods and sediment-control practices and include siltation structures such as sedimentation ponds and other treatment facilities – which can include underground sumps; diversions; and road drainage. Sediment control measures listed in the Coal Mining Rules also include methods using straw dikes, riprap, check dams, mulches, vegetative sediment filters, dugout ponds, and other measures that reduce overland flows, reduce runoff volumes, or trap sediment.

There are 24 designated areas at the Bear Canyon Mine that are treated by methods other than siltation structures: except that there is no H or R, these are named BTCA Areas A through Z. Most of these BTCA areas were visited and evaluated during the April 17 inspection. Appendix 7-K contains fairly detailed descriptions of these alternate sediment control areas (ASCA), which utilize berms, silt fence, straw bales, erosion-control matting, catch basins, vegetation, and a metal pan beneath the Wild Horse conveyor. The attached table summarizes the information from Appendix K.

BTCA Area C, approximately 0.36 acre, extends down the slope between the Primary Portal Access Road (just below the Blind Canyon portal pad) and the junction of the Primary Tipple Access Road with the Primary Portal Access Road. Sediment control is from silt fencing at the entry of culvert C-7U. Most of this steep slope has vegetative cover, but rills have formed on one section where vegetation is very sparse. Rocks were placed in the rills and reseeded was done in 1991. The rilled section still has sparse vegetation, but based on observation over a number of years, the Permittee's assessment is that erosion has stopped. Mt Nebo Scientific concluded that living plant cover at areas C, D, and F equaled or exceeded that of background or natural conditions and that sediment control structures could be removed. During the inspection Division personnel recommended further seeding of the rilled area, but because of the steepness, any work should be done with minimal surface disturbance.

Part of the topsoil pile at BTCA Area O has been used to reclaim the #2 Mine Tank Seam Portal. The berm around the pile was not intact at the time of the April 17 inspection, but a subsequent inspection by Pete Hess found that the Permittee had reestablished this berm (as well as the berm around a temporary soil pile at the first switchback of the Primary Portal Access Road, by BTCA Area G).

Appendix K indicates that erosion-control matting as the designated sediment control measure at BTCA areas I, J, K, M, O, Q, and S along the Primary Tank Seam Road, and that the

---

**OPERATION PLAN**

---

matting will be maintained. The matting has not been maintained, and at many of these areas the matting has degraded to the point that it is no longer functioning, nor even evident. Vegetation has become established at these areas, and Charles Reynolds stated during the inspection that Patrick Collins of Mt. Nebo Scientific, Inc. has determined the vegetative cover is adequate - the same as the reference area - to control sediment runoff from these areas.

Attachment A of Appendix K is the report of Patrick Collins' August 2001 study, which was specific to Areas C, D, F, and K. The conclusion of the study was that living plant cover at areas C, D, and F equaled or exceeded that of background or natural conditions and that sediment control structures could be removed. Conditions at Area K were borderline and removal could not be recommended. (A study of BTCA Area G by Mt. Nebo Scientific in 1994 concluded that vegetation was providing adequate sediment and erosion control at that site.) The 2001 study made no recommendations regarding other BTCA areas.

Nevertheless, there are no evident signs of erosion at Areas I, J, K, M, O, Q, and S. Living plant cover and rock and vegetative litter appear to be controlling sedimentation and preventing, to the extent possible, additional contributions of sediment to streamflow or to precipitation runoff outside the permit area. The lack of maintenance to the matting has not created on- or off-site impacts. Also, if these areas are reclaimed during the summer of 2003 as scheduled, replacing the matting now would provide little or no benefit.

BTCA Areas L, V, W, X, Y, and Z control sediment along the Wild Horse conveyor system and access roads. Area W consists of 5 sub-areas. Sub-area 1 is the conveyor pan that extends to the Lump Coal Storage Area and drains to ditch D-3D - near the Lump Coal Storage Area, which in turn reports to Pond A. Sub-area 2 includes a section of the conveyor pan, the disturbed surface around the conveyor tunnel, and the disturbed surface outside the berm around the Wild Horse topsoil stockpile (BTCA Area Y). Sub-area 2 reports to catch basin 1, and should any water overflow the berm around the topsoil stockpile, that runoff will also report to catch basin 1. Sub-areas 3 and 4 are sections of conveyor pan plus some disturbed surface around the conveyor tunnel: these also report to catch basin 1. Sub-area 5, which includes part of the conveyor pan as well as the area around the Coal Storage Bin, reports to catch basin 2. These catch basins are designed and constructed as complete-containment sedimentation ponds, and they will be inspected quarterly and cleaned when necessary.

There is a BTCA Area V that controls sediment along Primary Conveyor Access Road #2, but there is also a BTCA Area V for the #4 Mine pad and adjacent Primary Tank Seam Access Road. Charles Reynolds said this indicates these areas use the same sediment control measures. Appendix 7-K describes both BTCA areas. Part of BTCA Area V at the #4 Mine and access road has been reclaimed and the remainder is due to be reclaimed this coming summer (2003), so soon there will no longer be two areas with the same designation; however, until that work is completed, this system for naming and describing these areas is potentially confusing.

There are small areas at the base of several of the towers supporting the Wild Horse conveyor system that are temporarily protected by erosion-control matting while vegetation becomes reestablished. They are not designated as BTCA areas in the MRP and are not shown on maps. However, these sediment control measures appear to be effectively preventing additional contributions of suspended solids to stream flows outside of the permit area.

Drainage from most roads is not treated by sediment control measures. Sections of the road to #3 and #4 Mines are still under construction and the surface is easily eroded. Berms and ditches keep water on the road and direct it to specific points where it discharges to the stream. The outslope of the berms along most of the road has been stabilized with erosion-control matting. A catch basin and straw bales treat runoff from at least one section of the road before it enters the stream: even when construction is completed and the road surface is more stable, the catch basins and straw bales will probably need to be retained as sediment control measures because this road will not be paved.

The road to the #2 Mine is to be reclaimed this coming summer (2003). Most drainage from this relatively long, sinuous road reports to undisturbed drainages by way of numerous culverts without any sediment control measures, but some sections of road have been routed to one of the sedimentation ponds to facilitate road construction or maintenance.

#### **Siltation Structures: Sedimentation Ponds**

Sedimentation ponds are the main siltation structures at the Bear Canyon Mine. Ponds A, B, and C have been in place for several years. Pond D is a new pond at the Wild Horse #3 Mine portal pad.

Sedimentation pond D is being relocated, requiring a realignment of undisturbed bypass culvert C-33U. The relocation is necessary because the portals, and consequently the pond, could not be located as originally planned due to burnt coal. The pond is incised into the up-canyon end of the pad, the pad itself forming the pond embankment, and the pad is graded to drain to this pond. The pond decants through a pipe that parallels C-33U under the pad and discharges to the stream at the downstream edge of the pad. Certified as-built drawings will be provided upon completion of the work.

#### **Siltation Structures: Other Treatment Facilities**

Ground water is collected into a sump in the #2 Mine, and the sump helps clarify the water. Water is piped from the sump to a pump-house, where it is metered and distributed throughout the Bear Canyon Mine property for culinary and mining use. Excess water is discharged to Bear Canyon Creek at UPDES point UTG040006-004.

**OPERATION PLAN**

**Siltation Structures: Exemptions**

There are no exempt areas. Runoff from all disturbed areas is treated by sedimentation ponds or alternate sediment control methods.

**Findings:**

Best technology currently available (BTCA) is being used at the Bear Canyon Mine to control sedimentation and prevent, to the extent possible, additional contributions of sediment to streamflow or to precipitation runoff outside the permit area.

BTCA Name	Location	Description	Method	Map
A	Ball Field	Outslope of the Ball Field.	Vegetation, straw bales, and silt fence	7-1A
B	Main Topsoil Storage Pile	Topsoil Pile by the UPDES mine discharge point.	Berm	7-1C
C	Downcast ravine near the Hiawatha portal	Steep slope below Primary Portal Access Road and the beginning of Primary Tipple Access Road. Upper end abuts Area D.	Vegetation and silt fence	7-1C
D	Upper Primary Portal Access Road	Outslope of the section of road by the Hiawatha portal.	Originally matting, now vegetation*.	7-1C, 7-1D
E	“Lamphouse” pad	Outslope of the Blind Canyon portal pad.	Silt fence in D-2U.	7-1C, 7-1D
F	Storage Area overcast material.	The slope inside the curve in the road and the “plunge pool” at the base of the cliff.	Originally matting, now vegetation*.	7-1C
G	Primary Portal Access Road switchback	Steep slope inside the switch-back– small area exemption.	Vegetation	7-ID
H				
I	Lower Primary Tank Seam access Road (#2 Mine)	Outslope across from D-15U.	Erosion-control matting and berm.	7-1E
J	Lower Primary Tank Seam Access Road (#2 Mine)	Outslope across from upper D-15U.	Erosion-control matting and berm.	7-1E
K	Lower Primary Tank Seam Access Road (#2 Mine)	Outslope of fill area around C-15U.	Erosion-control matting and berm.	7-1E

**OPERATION PLAN**

L	Wild Horse Ridge Pre-mining Recreational Road (#4 Mine).	Outslope of road before the first switchback, at outlet of C-37U, and upslope of road above the switchback.	Erosion-control matting.	7-1G
M	Lower Primary Tank Seam Access Road (#2 Mine).	Outslope, fill over C-16U.	Erosion-control matting and berm.	7-1E
N	Wild Horse Ridge Pre-mining Recreational Road (#4 Mine).	Outslope of fill – 2 <sup>nd</sup> switchback and hunting cabin turnoff.	Erosion-control matting and berm.	7-1E, 7-1G
O	Primary Tank Seam Access Road (#2 Mine).	Outslope at the switchback.	Erosion-control matting*, berm.	7-1E
P	Primary Tank Seam Road Topsoil Pile (#2 Mine).	Inside the switchback – some soil has been used to reclaim the Tank Seam portal.	Berm	7-1E
Q	Upper Primary Tank Seam Access Road (#2 Mine).	Outslope below 18D-U	Erosion-control matting, berm.	7-1E
R				
S	Upper Primary Tank Seam Access Road (#2 Mine).	Outslope and fill over C-18U, C-19U, and C-20U.	Erosion-control matting, berm.	7-1E
T	Wild Horse Ridge topsoil stockpile.	Topsoil stockpile at #4 Mine pad (under construction).	Berm	7-1E, 7-1G
U	Tank Seam portal pad (#2 Mine).	Portal and pad reclaimed.	NA	7-1E
V	Tank Seam portal pad (#2 Mine)	Outslope of the portal pad and adjacent road, including spillage down the upslope. Part of this area has been reclaimed, the remainder is to be reclaimed in 2003.	Erosion-control matting, berm	7-1E
	Wild Horse Ridge Conveyor Access Road #2.	Outslope		7-1G
	Wild Horse Ridge Blind Canyon portal pad (#3 Mine).	Outslope of pad		7-1G

**OPERATION PLAN**

W	Wild Horse Conveyor System, undisturbed.	5 basically undisturbed areas below the suspended conveyor, and the disturbed surface around the Coal Storage Bin.	Metal pan beneath the conveyor, catch basins 1 and 2. Silt fence if needed	7-1C, 7-1F, 7-1G
X	Wild Horse Conveyor System, disturbed.	Disturbed area at the end of Conveyor Access Road #1.	Silt fence	7-1F
Y	Wild Horse Road Topsoil Pile.	Between conveyor and Conveyor Access Road #1.	Berm and catch basin 1.	7-1F
Z	Wild Horse Tank Seam portal pad (#4 Mine).		Berm and catch basin 3.	7-1G



## RECLAMATION PLAN

### BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

#### Analysis:

##### Determination of Bond Amount

The Division reviewed the reclamation cost estimates for the Bear Canyon Mine and found that there is sufficient information to determine the bond amount. The current bond amount for the Bear Canyon Mine is \$1,825,000 and the reclamation amount determined by the Division is \$1,913,000.

One reason why the reclamation cost estimate is more than the bond amount is that the Division is now escalating bonds at the midterm instead of the permit renewal. Because the difference between the reclamation cost estimate and the bond amount is approximately 5%, the Division needs the Permittee to increase the bond amount.

The Division now requires the Permittee to incorporate the Division bond amount into the MRP. The Division will give the Permittee a copy of the bond calculations and the Permittee must incorporate them into the MRP. The bond information in the MRP must match the bond amount and the information in the MRP must be adequate to show how the bond was determined.

If the Permittee has any questions about the bond, they may discuss them with the Division.

#### Findings:

The bond amount is not sufficient to ensure reclamation in the event of bond forfeiture. The Permittee must provide additional bond in accordance with:

**R645-301-830.200**, The Permittee will need to post a bond for \$1,913,000 for the reclamation of the Bear Canyon Mine facility.