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*Governor*

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February 20, 2004

John Gefferth, Permit Coordinator  
Consolidation Coal Company  
P. O. Box 566  
Sesser, Illinois 62884

Re: Conditional Approval of Abatement Plan for N03-39-1-1, Consolidation Coal Company, Emery Deep Mine, C/015/0015, Task ID #1819, Outgoing File

Dear Mr. Gefferth:

The information received January 27, 2004 and via email on February 18, 2004 to abate N03-39-1-1 was reviewed and is hereby conditionally approved, pending the receipt of five clean copies and an accompanying C1C2 form. The Technical Analysis dated February 18, 2004, is attached for your review. As a result of this review, the Division understands that the disturbed area is 66.7 acres (and the permit area is 5,060 acres).

The success of Phase I dust control will be determined objectively through opacity measurements and surface percent cover east of the permit area. A non-biased third party, such as the Natural Resource Conservation Service, will establish the baseline for percent cover. The monitoring will be conducted only during active operations when production, stockpile accumulation and/or truck haulage is ongoing. The monitoring period will last for a cumulative time of one and one half years (periods of inactivity as a result of no truck haulage, no stockpile or no production will not count towards the cumulative one and one half years of monitoring.). If monitoring of Phase I indicates an increase above baseline in the percent cover outside the permit area, the Phase II dust control plan must be implemented.

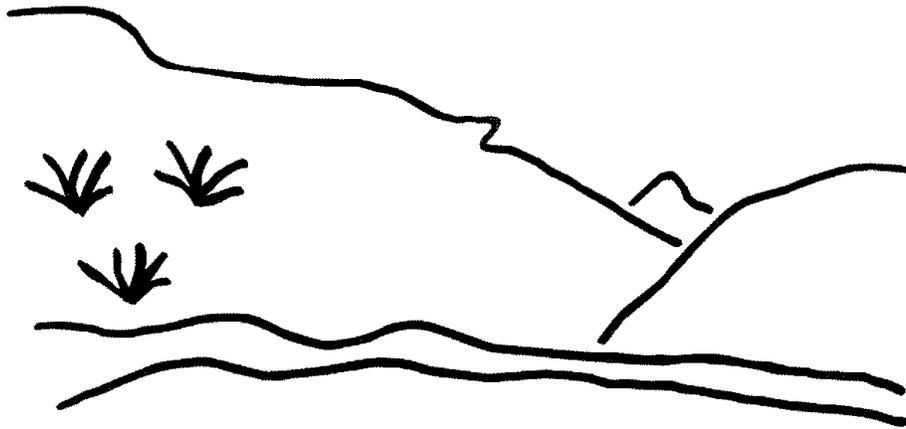
The Division commends your patience and tenacity in pursuing the positive developments described in this submittal. The commitment to implement Phase I of the Norwest dust control plan followed by Phase II, should Phase I be unsuccessful, is critical to the Division's goal of no off-site impacts. If you have any questions, please call Priscilla Burton at (801) 538-5288 or me at (801) 538-5268.

Sincerely,

Pamela Grubaugh-Littig  
Permit Supervisor

an  
cc: Price Field Office  
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# State of Utah



## Utah Oil Gas and Mining

### Coal Regulatory Program

Emery Deep Mine  
Abatement to N03-39-1-1  
C/015/0015 – Task #1819  
Technical Analysis  
February 18, 2003



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## TECHNICAL ANALYSIS

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# TECHNICAL ANALYSIS

The Division derives its authority from the Surface Mining Control and Reclamation Act of 1977(SMCRA). When companies 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 that 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 reveals some deficiencies in the application. The deficiencies are discussed in the body of the Draft TA and are identified by a regulatory reference that describes the minimum requirements. In this Draft TA 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 for this permitting action will be finalized.

Not every topic or regulatory requirement is discussed in this TA. Only those sections are analyzed that pertain to the particular permitting action, in this case the abatement of N-03-39-1-1, Task ID #1819. Those sections that are not discussed in this document are generally considered to be in compliance. Previously completed TA's for the Emery Mine, would be the source of "findings" for any section not discussed herein.

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February 18, 2004

**TECHNICAL ANALYSIS**

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## INTRODUCTION

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## INTRODUCTION

The 4<sup>th</sup> East Portal development is in Section 27, T. 22 S. R. 6 E. Salt Lake Meridian. The bonded area associated with the 4<sup>th</sup> East portal is 16.5 acres. The bonded acreage for the Emery Mine is shown on Exhibit III-9. It includes the existing and future disturbance acreage of 442.5 acres as outlined in Table III-1.

The Division approved the construction of the 4<sup>th</sup> East Portal area in 1990, however construction did not begin until May 2002. The mine was issued a Notice of Violation N03-39-1-1 (January 9, 2003) for impacting adjacent undisturbed areas with coal fine accumulations. The Permittee submitted a response to the Notice of Violation (NOV) in April 2003. Many of the mitigation measures listed in that amendment were implemented prior to completion of the Division's June 9, 2003 Technical Analysis, Task AM03B. Some measures (drop chute from the conveyor to the pile and the crusher by-pass) have been effective. Others have been plagued with difficulty (water sprays at transfer points, vacuuming and wind fence construction). In all, the initial measures have not been completely effective.

After a series of meetings between the Division and Consol Energy, the Permittee submitted a second dust control plan in response to N03-39-1-1 (September 12, 2003). The dust control plan (Appendix X.C-3) included several strategies for wind reduction and dust control and included the addition of 1.5 acres to the permit area. A Technical Analysis of this plan was dated October 10, 2003, Task ID #1692.

On October 31, 2003, the Division received a response to the deficiencies outlined in the October 10, 2003 Technical Analysis. The dust control plan remains as previously described in Appendix X. C-3, including a wind fence, water sprays at transfer points, water cannons, crusher replacement, concrete barriers, and dust suppressant. The plan also reroutes the haul truck traffic to enter the site from the County Road east of the existing disturbed and permit boundary (adding 1.5 acres) and exiting through the existing north access spur. A Technical Analysis of this plan was dated December 10, 2003, Task ID #1762.

On January 27, 2004, the Division received a response to the deficiencies outlined in the December 10, 2003 Technical Analysis. The response outlines the details of the commitment to measure Phase I dust control and implement Phase 2, should Phase 1 allow fugitive dust to accumulate off-site. This Technical Analysis reviews the information received January 27, 2004 and that received via email by Pam Grubaugh-Littig on February 11, 2004. The application includes:

## INTRODUCTION

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1. An objective measurement of the success of Phase I will be accomplished through twice weekly opacity readings taken of fugitive dust leaving the permit boundary and monthly soil surface monitoring east of the permit boundary, for a period of one year.
2. A description of the additional measures to be employed during Phase II is the installation of a chemical additive to the water sprays.

The success of Phase I dust control will be determined objectively through opacity measurements and surface percent cover east of the permit area. A non-biased third party, such as the Natural Resource Conservation Service, will establish the baseline for percent cover. The monitoring will be conducted only during active operations when production, stockpile accumulation and/or truck haulage is ongoing. The monitoring period will last for a cumulative time of one and one half years. (Periods of inactivity as a result of no truck haulage, no stockpile or no production will not count towards the cumulative one and one half years of monitoring.) If monitoring of Phase I indicates an increase above baseline in the percent cover outside the permit area, the Phase II dust control plan must be implemented.

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## GENERAL CONTENTS

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# GENERAL CONTENTS

## IDENTIFICATION OF INTERESTS

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

### **Analysis:**

Ownership and control information (Chapter I, Page 6 and Appendix I-1) has been updated with this application. The Emery Mine is wholly owned by Consol Energy, Inc. There are nineteen sister companies also owned by Consol Energy Inc. Consol Energy is owned by Rheinbraun AG of Germany and publically held stock. Rheinbraun AG is owned by RWE AG of Germany. Current information on all the office holders in the aforementioned companies and employer identification numbers are found in Appendix I-1.

All permits held by the associated companies are listed in Chapter I, Appendix I-3. Permits are listed for the following states: Virginia, Ohio, Kentucky, West Virginia, Pennsylvania, Illinois, North Dakota, New Mexico, Tennessee, and Wyoming.

The applicant is listed as Consolidation Coal Company; Pittsburgh, PA. (The Sessor, Illinois office is no longer referenced.) The Resident Agent is listed as CT Corporation System; Salt Lake City, UT.

### **Findings:**

The information provided meets the regulatory requirements for Identification of Interests.

## VIOLATION INFORMATION

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

### **Analysis:**

Current violation information is provided in Appendix I-4 of Chapter I. In the last three years, the associated companies received 204 violations of which 157 were abated and terminated, 13 were withdrawn, and 34 are pending. Six violations were written for dust control

in the last three years. One in West Virginia (U-1025-92 (9), issued 4/28/03, is still pending. The Utah violation N-03-39-1-1 is being addressed with this application.

**Findings:**

The information provided meets the requirements of the Regulations.

**RIGHT OF ENTRY**

Regulatory Reference: 30 CFR 778.15; R645-301-114

**Analysis:**

The right of entry is established in the MRP Appendix I-2 and Plate I-1. The owners of record are listed in order of Section, Township and Range. Documents supporting the right of Entry for surface activities for the road and monitoring facilities north of the topsoil and subsoil stockpiles on land owned by Glendon E. Johnson and the Right of Entry for a portion of the main mine facilities shown as disturbance on land owned by M. Robertson have been identified in Appendix I-2.

**Findings:**

The information provided in the MRP and in the Exhibit D of the Reclamation Agreement is adequate to establish Right of Entry.

**LEGAL DESCRIPTION AND STATUS OF UNSUITABILITY CLAIMS**

Regulatory Reference: 30 CFR 778.16; 30 CFR 779.12(a); 30 CFR 779.24(a)(b)(c); R645-300-121.120; R645-301-112.800; R645-300-141; R645-301-115.

**Analysis:**

The Planning and Zoning Commission meeting in Green River on September 10, 2003 included the following agenda item: "6. Consol Conditional Use Permit Action Item" (construction on County road 915 at the Emery Deep Mine site as described in this amendment). A copy of the advertisement for the public notice of the road construction and mining operation within 100 feet of the public road was enclosed with the application. The notice appeared on October 14, 2003. The Division has not received any comments from the public concerning this activity.

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## GENERAL CONTENTS

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The County encroachment permit #200331 dated September 16, 2003 has been included in the MRP.

### **Findings:**

The information provided meets the requirements of the Regulations.

## **PERMIT TERM**

Regulatory References: 30 CFR 778.17; R645-301-116.

### **Analysis:**

The permit was issued, effective January 8, 2001 and will expire in January of 2006. According to the 2001 Administrative Overview the permit was issued for 5,180 acres. However the MRP relates that the Emery Deep Mine permit area is 5,060 acres (Chap IV p 1). This change occurred as part of Amendment 95B and was incorporated in December 1997. The 120 acres deleted from the permit is a result of a lease relinquishment in the southwest corner of the permit area and subsequent revised R2P2. The area removed from the permit forms an upside-down "L" shape in the southwest corner of the permit boundary (personal communication with John Gefferth and Tim Kirschbaum, October 10, 2003).

### **Findings:**

The information provided meets the requirements of the Regulations.

## **PUBLIC NOTICE AND COMMENT**

Regulatory References: 30 CFR 778.21; 30 CFR 773.13; R645-300-120; R645-301-117.200.

### **Analysis:**

An affidavit of publication for the legal notice concerning the construction along the County Road and plans for operations within 100 feet of the County Road has been included in the MRP.

### **Findings:**

The information provided meets the requirements of the Regulations.

## **PERMIT APPLICATION FORMAT AND CONTENTS**

Regulatory Reference: 30 CFR 777.11; R645-301-120.

### **Analysis:**

The September 12, 2003 amendment referred to cool and warm season interim seed mixes. The two seed mixes did not contain entirely cool or warm season species, but contained a combination of warm and cool season species. At the request of the Division, the Permittee changed the title of the “warm” season mix to “native” mix and removed yellow sweet clover – a non-native from the mix. The Permittee also changed the title of the “cool” season mix to “non-native” mix. The amendment no longer contains “warm” or “cool” season wording.

The amendment referred to native final seed mixes (Chap. III, pg. 21; Chap. IV, pg. A-2a). None of the three final seed mixes (Arid, Mesic, and Riparian) contains entirely native species. The Permittee changed the native final seed mix references to read “appropriate seed mix”. The Permittee will use the appropriate seed mix for final reclamation according to the vegetation habitat-type of the project area.

Chapter X, Part C, Appendix X.C-3, Appendix F shows steel poles for the wind fence framing system, which is consistent with the Permittee’s technical description on page 13 (Chapter X, Part C).

### **Findings:**

Information provided in the application is considered adequate to meet the minimum Permit Application Format and Contents section of the General Contents regulations.

## **REPORTING OF TECHNICAL DATA**

Regulatory Reference: 30 CFR 777.13; R645-301-130.

### **Analysis:**

Dr. Patrick Collins of Mt. Nebo Scientific, Inc. evaluated the 1.5-acre area east of the 4<sup>th</sup> east portal in the spring of 2003(Appendix VIII 3).

Montgomery Archaeological Consultants surveyed 40 acres east of the 4<sup>th</sup> east portal in 2003.

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## GENERAL CONTENTS

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Norwest Corporation developed the CONSOL Energy: Fugitive Dust Control Plan for the 4<sup>th</sup> east portal area of the Emery Mine. The qualifications of the Norwest Corporation accompany the dust control plan.

### **Findings:**

The information provided in the application meets the requirements for Reporting of Technical Data.

## **MAPS AND PLANS**

Regulatory Reference: 30 CFR 777.14; R645-301-140.

### **Analysis:**

Maps accompanying the application include County Road 907 that was completed in 2002.

### **Findings:**

The information provided in the application meets the requirements outlined in the Regulations for maps.

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**GENERAL CONTENTS**

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**ENVIRONMENTAL RESOURCES INFORMATION**

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## **ENVIRONMENTAL RESOURCE INFORMATION**

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

### **PERMIT AREA**

Regulatory Requirements: 30 CFR 783.12; R645-301-521.

#### **Analysis:**

The permit area is 5,060 acres. Permit Boundaries Map, Plate III-9 shows the entire permit boundary. In addition, Plate III-9 shows surface areas affected by date. Plate III-9 also shows the bonded area. The acreage of the bonded area equals 442.5 acres which includes the 66.7 acres of existing disturbance and the 375.8 acres of Potential Surface Operations Area (see Table III-1 of Chapter III for a breakdown of the acreages).

The Permittee will add 1.5 acres to the permit area of which 1.0 acre will be disturbed. The pre-disturbed contours are shown on Plate III-5, 4<sup>th</sup> East Portal Site Pre & Postmining Topography Plane View. The map is adequate to show the addition of the 1.5 acres at the 4<sup>th</sup> East Portal site.

Chapter III, page 2, Table III-1 lists the Existing and Future Surface Disturbance Acres at the Emery Mine. This table shows that the disturbed area at the 4<sup>th</sup> East Portal has increased by 1.00 acre to 16.0 acres. The Proposed Near Future Disturbance Area category has been deleted from this table. The "proposed near future disturbance" acreages have been added into the Potential Surface Operations Area which is now listed as 375.8 acres. The Total Existing and Future Disturbance Area is listed as 442.5 acres. The location of these areas are shown on Plates III-1 through III-4A. The bonded area equals the Total Existing and Future Disturbance Area (442.5 acres) as shown on Plate III-9. The Division calculates from Table III-1 that there are 66.7 acres of existing disturbance at the Emery Mine.

The Division will re-evaluate the potential size of the Emery Mine disturbed area after the reclamation investigation described on page 4a, Chapter III is completed. (See discussion under Operations Vegetation).

#### **Findings:**

The information provided in the application meets the requirements of the Regulations.

## HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.12; R645-301-411.

### **Analysis:**

Montgomery Archeological Consultants surveyed 40 acres of the Emery Mine including the 4<sup>th</sup> east portal as well as powerline corridor in 2002. The same firm surveyed an additional 40 acres east of the 4<sup>th</sup> east portal that includes the 1.5 acre expansion area in March 2003 (Chapter X, Part A, Appendix 5-7, DOGM Confidential File). The 2003 Montgomery results show a site east of the Emery Mine permit boundary. The site number is 42EM2961 and consists of lithic debitage and tools of rock and stone (survey, pg. 6). This site is considered eligible to the NRHP (survey, pg. 7).

The historic site 42EM2961 is near two county roads and may be easily seen from the roads. Plate X-A-1 (Chap. X, Part A) shows all cultural sites near the Emery Mine including 42EM2961. Chapter X, Part A, Appendix 5-7 also provides a map (Figure 1) specifically showing the cultural site 42EM2961. The consultants installed a fence surrounding the 42EM2961 site to help protect this historic site. The fence is marked with fluorescent ribboning. The Division discussed the need of the ribboning with the consultant on October 14, 2003. The consultant stated that ribboned-off areas are less susceptible to vandalism than unribboned areas.

The consultants determined that there is "No Historic Properties Affected" because of the fence surrounding 42EM 2961. The State Historic Preservation Officer reviewed DOGM's comments concerning the site and recommends a determination of No Adverse Effect for the undertaking.

Portions of the Emery Mine permit area is part of the National Trails System in 2002. The amendment refers to Plate X-A-1 (DOGM Confidential Files) to see this designated trail. The map provides a narrative piece discussing this trail.

The entire Part A of Chap X has been relocated to DOGM's confidential files (Task #1761).

### **Findings:**

Information provided in the application meets the minimum Historic and Archeological Resource Information of the Environmental Resource Information requirements.

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## ENVIRONMENTAL RESOURCES INFORMATION

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### CLIMATOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.18; R645-301-724.

#### **Analysis:**

The Permittee installed a weather station at the main Emery Mine facilities and initial data were anticipated by January 2003 (Chap. X, Part B, page 5). This weather station collects rainfall, snowfall and record wind speed and direction as well as barometric pressure and temperature. Data collected from this station during May 2003 through October 2003 is included in Chapter X Part B of the application.

The Division analyzed the raw data and found that the wind speeds at the site usually fall between 0-5 mph with speeds of up to 10 mph frequently occurring. Wind speeds higher than 10 mph occurred only 12 times in the 6 month period of recording. Wind speeds of 35 mph never occurred. This site specific information has a direct bearing on the 35 mph wind speed indicated as the trigger for the water cannons. See further discussion under Support Facilities and Installations.

#### **Findings:**

The information provided meets the minimum requirements for Climatological Information.

### VEGETATION RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.19; R645-301-320.

#### **Analysis:**

Dr. Patrick Collins of Mt. Nebo Scientific, Inc. evaluated the 1.5-acre area east of the 4<sup>th</sup> east portal in 2003 (Appendix VIII 3). The consultant added the 1.5-acre site to the 4<sup>th</sup> east portal vegetation map that shows primary plant communities. The consultant did not visit the 1.5-acre site to assign plant communities, but assigned the communities by reviewing photos of the site. Dr. Collins reasoned that colored photographs of the site were adequate to evaluate such a small parcel of land. The primary plant community of the 1.5-acre is shadscale. There is a small portion in the northern corner of the proposed site that is a greasewood community.

**Findings:**

Information provided in the application is considered adequate to meet the minimum Vegetation Resource Information section of the Environmental Resource Information regulations.

**FISH AND WILDLIFE RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 784.21; R645-301-322.

**Analysis:**

Dr. Patrick Collins of Mt. Nebo Scientific, Inc. evaluated the 1.5-acre area east of the 4<sup>th</sup> east portal for Threatened and Endangered Species (TES) plant species in the spring of 2003 (Chap. VIII, Appendix VIII 3). Dr. Collins did not conduct an official survey for TES animal species, but looked for signs of prairie dog activity.

The Permittee agreed to participate in the DWR annual raptor survey starting in 2002 (Ch. 8 Biological Impact Analysis, pg. 5). The 2002 raptor survey information is available from the DWR, although it was not included in the 2002 Annual Report. The application states that “after the 2002 flyover, the DWR recommended no subsequent raptor surveys” unless new areas were developed (page 3, Appendice VIII-3).

JBR Environmental Consultants conducted a fish and macroinvertebrate survey for Emery Mine in 2002 and 2003. The report for 2003 is more comprehensive than the 2002 report. The contractor will submit the report at the end of 2003 or in 2004. The Division does not require the 2003 report to review the current dust control plan.

**Findings:**

Information provided in the application is adequate to meet the minimum Fish and Wildlife Resource Information section of the Environmental Resource Information regulations.

**SOILS RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 783.21; 30 CFR 817.22; 30 CFR 817.200(c); 30 CFR 823; R645-301-220; R645-301-411.

**ENVIRONMENTAL RESOURCES INFORMATION**

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**Analysis:**

Appendix VII-3 summarizes the information known about the 4<sup>th</sup> East Portal site from the 1981 survey conducted by James P. Walsh & Associates, Inc. of Boulder Colorado.

Addendum 1 to Appendix VII-3 documents a 4<sup>th</sup> East Portal site survey conducted on May 31, 2003 by Mr. James Nyenhuis, Certified Professional Soil Scientist. This survey revised the original soils map, Plate VII-1, for the 4<sup>th</sup> East Portal Area. The revised map showed less rockland and larger areas covered by Castle Valley soils (now called Hideout Series). The map also included areas of Montwell series soils and Begay series soils.

This submittal provides Appendix VII-4, "Letter from Mt. Nebo Consultants – Append 1.45 Ac Area to 4<sup>th</sup> East Portal Area." The Appendix VII-4 describes Mr. Nyenhuis' March 13, 2003 site visit to survey and map the soils eastward to the County Road. (Note: the revised soil map contains soil series names that differ slightly from those in the consultant's letter of March 26, 2003.)

The following soil series were mapped by Mr. Nyenhuis:

Hideout Soil Series = Loamy, mixed, superactive, calcareous, mesic Lithic Ustic Torriorthents;  
Montwel Soil Series = Fine-loamy, mixed, superactive, calcareous, mesic Typic Torriorthents;  
Begay Soil Series = Coarse-loamy, mixed, superactive, mesic Ustic Haplocambids;  
Persayo Soil Series = Loamy, mixed, calcareous, mesic, shallow Typic Torriorthents;  
Chipeta Soil Series = Clayey, mixed, active, calcareous, mesic, shallow Typic Torriorthents.

The area of boundary extension is dominated by Castle Valley soils, but includes the Persayo Series and a pocket of Montwel Series (App VII-4 Soils Map). [The Castle Valley series has been renamed Hideout by the Natural Resources Conservation Service (NRCS).] Appendix C of Appendix VII-3 describes the Hideout and Persayo Series.

**HIDEOUT SERIES:** Depth of the surface horizon is between 2 and 4 inches. Rock is encountered between six and twenty inches at the 4<sup>th</sup> East Portal. Specific depths to bedrock were recorded on the Soils Map, Addendum 1 to Appendix VII-3. These shallow soils are particularly susceptible to the extremes of temperature imposed by coal fine accumulations.

**PERSAYO SERIES:** A four inch topsoil layer is underlain by an eleven inch C layer. Calcareous weathered shale and siltstone is expected at fourteen inches. Coarse fragments are range from 0 - 15 percent. **These soils are dry in all parts of the moisture control section for**

**more than three-fourths of the time that the soil temperature is above 41 degrees F. Peak periods of precipitation occur during late summer.**

MONTWEL SERIES: This is a deep soil for the mine site. The two inch surface horizon is underlain by a 34 inches of C horizon soil. Fractured shale is expected at three feet (pages C-11 through C-13 of Appendix C of Appendix VII). The Montwel series soil describes the moisture as follows: **“Soil moisture falls evenly through the year with a slight increase in the late summer and fall.”**

**Findings:**

The information provided meets the minimum requirements for Environmental Resource Soils.

**LAND-USE RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 783.22; R645-301-411.

**Analysis:**

This submittal proposes adds an additional 1.5 acres of rangeland to the permit area. The 1.5 acres falls under the category of “semi-desert shallow loam range site” described on page 3 of Chapter X, Part D.

**Findings:**

The information provided meets the requirements of the Regulations.

**ALLUVIAL VALLEY FLOORS**

Regulatory Reference: 30 CFR 785.19; 30 CFR 822; R645-302-320.

**Analysis:**

**Alluvial Valley Floor Determination**

The 1.5 acres to be added to the permit area falls in Section 27 of T22S, R6E in the headwaters of Christiansen Wash.

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**ENVIRONMENTAL RESOURCES INFORMATION**

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Chapter XI of the MRP details the Permittee's analysis of the existence of alluvial valley floors (AVF) within the permit boundary (Chap XI, page 2). The study indicates that the two soils of agricultural importance are the Ravola loam and the Penoyer loam, both with 1 – 3% slopes (Chap XI, page 20). The study further indicates that Christiansen Wash is so incised as to be useless for flood irrigation and that Christiansen Wash receives its flow predominantly from diverted agricultural return flows from Muddy Creek (Chap XI, page 6).

The conclusion reached earlier by the Division that AVF's do not exist along Christiansen Wash remains unchanged (February 25, 1985, Technical Analysis, p 28). In the same document the Division concluded that there were AVF's in areas I and II shown on Plate XI-1.

**Findings:**

The Division determined in 1985 that an AVF exists in Sections 19 and 30 T. 22 S. R. 6 E. Salt Lake Meridian. There is not an AVF in the NE1/4 of Section 27, T. 22 S. R. 6 E. Salt Lake Meridian, where the 4<sup>th</sup> East Portals are located.

**PRIME FARMLAND**

Regulatory Reference: 30 CFR 785.16, 823; R645-301-221, -302-270.

**Analysis:**

The area has shallow soils without irrigation and could not support farming. The addition of this 1.5 acres does not change the Division's assessment of the existence of prime farmlands within the permit area in Sections 20, 22, 29, 30 and 31 of T22S, R6E (February 25, 1985, Technical Analysis, p 41). These locations were shown on Plate 8-3 of the 1981 permit application. Plate 8-3 showed the 4<sup>th</sup> East Portal location as being Wildlife and Grazing with pasture land immediately north of the disturbed area. Plate 8-3 has been superceded by Plate VIII-1.

**Findings:**

The Division finds that there are prime farmlands within the permit area, but not within the area of 4<sup>th</sup> East Portal development, NE1/4 of Section 27, T. 22 S. R. 6 E. Salt Lake Meridian. The information provided meets the requirements of the regulations for the 1.5 acre addition to the permit area.

## **MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

### **Analysis:**

#### **Affected Area Boundary Maps**

The Permittee shows the location of future expansion of the mine workings on the operational maps. Other than a change in the permit boundary, those maps will not be affected.

#### **Archeological Site Maps**

Plate X-A-1 shows all cultural sites near the Emery Mine. This plate is located in DOGM's confidential files.

#### **Existing Structures and Facilities Maps**

There are no existing structures or facilities in the permit expansion area.

#### **Existing Surface Configuration Maps**

Plate IV-3b sheet 1 of 2 and 2 of 2 show the pre and post mining topography for the 4<sup>th</sup> East Portal area. The map scale is 1 inch equals 100 feet. The scale is adequate for the Division to use to assess the pre-mining conditions.

#### **Mine Workings Maps**

There are no changes to the mine working areas.

#### **Permit Area Boundary Maps**

The location of the additional permit and disturbed area is shown on Plate III-9.

### **Findings:**

Information provided in the amendment is considered adequate to meet the minimum requirements of this section of the regulations.

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## MINING OPERATIONS AND FACILITIES

Regulatory Reference: 30 CFR 784.2, 784.11; R645-301-231, -301-526, -301-528.

Appendix X.C-3 outlines a plan to control coal fines by modifying existing structures and adding new ones as follows:

- Modify the topsoil stockpile and berm
- Add an access/haul road
- Jersey barriers
- Wind fence
- Water Cannon
- Water sprays
- Cattle guard

Specifics of the dust control plan are discussed under the heading of Support Facilities and Installations.

A commitment to employ Phase II measures, should Phase I be unsuccessful, is stated on page 25 of Chapter II.

From the cover letter “Responses to DOGM...” attachment dated October 30, 2003, the Division understands that Phase II will involve conversion of water sprays to a dust suppressant system at the three water spray locations, namely the crusher inlet, the crusher outlet and the stacker discharge. Supporting equipment to be installed in Phase II will be the dust suppressant storage tank, heated equipment enclosure, piping, wiring, etc. The additional measures to be employed in Phase II are described on page 25 of Chapter II.

The method for measurement of the success of Phase I is presented on page 5b of Chapter X-C of the application. To objectively monitor the fugitive dust leaving the site, the Permittee will keep records of twice weekly opacity measurements of fugitive dust leaving the permit area and record monthly soil surface monitoring east of the site for percent cover as described in the Field Book for Describing and Sampling Soils available on line at <http://soils.usda.gov/technical/>

The opacity measurements will begin when production resumes and will be taken by a certified “smoke school” graduate, once every 15 seconds for a period of six minutes. The

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opacity readings will be reduced to once a week if there are no soil surface accumulations noted east of the permit area.

The success of Phase I dust control will be determined objectively through opacity measurements and surface percent cover east of the permit area. A non-biased third party, such as the Natural Resource Conservation Service, will establish the baseline for percent cover. The monitoring will be conducted only during active operations when production, stockpile accumulation and/or truck haulage is ongoing. The monitoring period will last for a cumulative time of one and one half years. If monitoring of Phase I indicates an increase above baseline in the percent cover outside the permit area, the Phase II dust control plan will be implemented.

### **Findings:**

The information provided in the amendment adequate to meet the minimum requirements of the Regulations

### **EXISTING STRUCTURES:**

Regulatory Reference: 30 CFR 784.12; R645-301-526.

### **Analysis:**

There are no existing structures within the area that the Permittee wants to add to the disturbed area.

### **Findings:**

The information provided in the amendment is adequate to meet the minimum requirements of the regulations.

### **PROTECTION OF PUBLIC PARKS AND HISTORIC PLACES**

Regulatory Reference: 30 CFR784.17; R645-301-411.

### **Analysis:**

There are no public parks or places of historic interest within the proposed 1.5 acre addition to the permit area (Chapter X, Appendix 5-7).

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### **Findings:**

The information provided meets the requirements of the Regulations.

### **RELOCATION OR USE OF PUBLIC ROADS**

Regulatory Reference: 30 CFR 784.18; R645-301-521, -301-526.

### **Analysis:**

The Permittee does not propose to relocate or use a public road within the disturbed area. The Permittee does propose to add a mine access/haul road that will join the county road known as "Cowboy Mine Road No.915 as shown on Plate IV-3b.

The Permittee does propose to extend the disturbed area so that disturbed area will be adjacent to part of the Cowboy Mine Road. The strip of land to be added to the disturbed area is triangular in shape and 490 feet long. The north 260 feet of the proposed disturbed area is already within 100 feet of the county road.

The only activities scheduled for construction in the newly disturbed area are: salvaging topsoil, removing coal fines, and reclaiming the area during final reclamation. The Permittee has already made a commitment to use flagman during activities that are within 100 feet of a public road. The Division believes that procedure is adequate to protect the public.

The Permittee has obtained the necessary permits to construct the turnoff and conduct mining within 100 feet of a public road (County Encroachment Permit # 200331 issued September 16, 2003).

### **Findings:**

The information provided in the amendment is adequate to meet the minimum requirements of this section of the Regulations.

### **AIR POLLUTION CONTROL PLAN**

Regulatory Reference: 30 CFR 784.26, 817.95; R645-301-244, -301-420.

**Analysis:**

The facility will include a screening/crusher building, and a 10,000 ton processed coal stockpile along with associated conveyors. The facility will handle a capacity of approximately 1,300,000 tons of coal per year (page 17b, Chapter II).

MRP Appendix X.C-2 contains the Air Quality Approval Order (AO) DAQE-117-95 from the Division of Air Quality dated August 5, 2002. The AO itemizes following at the 4<sup>th</sup> East portal site.

- The production limit of 1,300,000 tons/yr should not be exceeded
- The ROM surge pile may contain 1500 tons maximum.
- The maximum time period of operation for the 425 hp diesel generator should be 300 hours of operation /12 mo period (using #2 diesel fuel oil).
- Visible emissions from conveyor transfer points should not exceed 10% opacity and emissions from all other sources should not exceed 20% opacity. Observations of opacity are to be made in accordance with 40 CFR 60.11 (b) and 40 CFR 60, Appendix A, Method 9.

Attached to the cover letter are the only opacity readings taken by the Permittee (two separate occasions in June and July of 2003) of the conveyor transfer points. Fugitive dust from the coal pile itself was not evaluated. At the time of the readings, the wind was between 0 – 2 nauts and there was no exceedence of the opacity requirement. Chapter II, page 25 includes a statement that “opacity readings will be conducted as required by the modified approval order.” The air quality approval order specifies 20% or less opacity at the facility. The AO requires that a certified individual take the opacity readings

The Permittee will designate an individual who will be certified in Method 9, stationed at the Emery Mine, to be responsible for on-going monitoring of opacity. Continual monitoring of opacity in concert with soil surface evaluations will be the means of measuring success of the dust control strategy (pg 5b, Chap X-C.)

The Permittee submitted a Notice of Intent (NOI) to modify the AO dated November 5, 2003 to the DAQ. (A copy was received by the Division on November 6, 2003). The DAQ has evaluated the new crusher installation and requested further information on the dust control plan (meeting between DOGM and DAQ 12/04/2003).

**Findings:**

The information provided meets the minimum requirements for Air Pollution Control Plan monitoring at the 4<sup>th</sup> East Portal.

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### SUBSIDENCE CONTROL PLAN

Regulatory Reference: 30 CFR 784.20, 817.121, 817.122; R645-301-521, -301-525, -301-724.

#### **Analysis:**

##### **Subsidence Control Plan**

The new permit and disturbed area are outside the subsidence limits. Therefore, the subsidence plan does not have to be modified.

#### **Findings:**

The information provided in the amendment meets the minimum regulatory requirements of this section of the regulations.

### FISH AND WILDLIFE INFORMATION

Regulatory Reference: 30 CFR Sec. 784.21, 817.97; R645-301-322, -301-333, -301-342, -301-358.

#### **Analysis:**

##### **Protection and Enhancement Plan**

Increasing the disturbance area by 1.5 acres will include the removal of the topsoil and native vegetation and animal life. This removal certainly will not protect the environment, as it existed prior to removal. If the Permittee's dust control plan is not effective, then the area of impact will widen to the soil, vegetation, and wildlife east of County Road 915. (R645-301-358). Monitoring of the coal fine accumulations east of the County Road 915 is warranted.

It is critical for the Division to adequately determine whether abatement measures are effective for the protection of vegetation and wildlife. The Permittee plans to conduct monthly monitoring of the area east of the permit area. Mine personnel will accompany DOGM inspectors on monthly visits to assess the percent soil cover occupied by coal dust. A baseline will be established by an objective third party (the Natural Resources Conservation Service) before production begins through the observation and establishment of three transects and three sample locations on each transect (Chapter X-C, page 5b).

**Findings:**

Information provided in the application is adequate to meet the minimum Fish and Wildlife Information section of the Operation Plan regulations.

**TOPSOIL AND SUBSOIL**

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

**Analysis:**

**Topsoil Removal and Storage**

Previously Conducted Removal and Storage Activities:

The location and method of topsoil salvage is described in Chap IV, page 7 and Plate III-1. Seeding with two different seed mixes and irrigation is described on pages 7 and 7a of Chapter IV.

Chapter II, page 17a indicates that the topsoil storage pile and associated berms holds 7,900 cu yds of topsoil. The berms along the north and west sides of the excavated material pile and the west side of the disturbed area (Figure IV-16) contain 1,400 cu yds of topsoil (page 17a Chap II). (The soil profile between the berm and the west fenceline is undisturbed. However, the soil surface was affected by vehicle traffic during construction of the west fence.)

Supplemental topsoil handling after topsoil pile construction is also described on page IV-7 and 7a and Figure IV-15. As described on page IV-7, the western outside edge of the topsoil stockpile berm was reseeded on August 19, 2003. Not described in the application is the seeding of the south fence line of the disturbed area (disturbed by vehicle traffic during the installation of a transmission line). This area was broadcast seeded and hydromulched (personal observation and communication with James Byar on 8/21/03, see also images E\_N03-38-1-1jb). The seed mix used is outlined on page VIII-20 Section VIII.C.3 of the MRP, except that yellow sweet clover was omitted from the mix. A copy of the seed tag for the August 19, 2003 seeding was received from the Permittee on September 22, 2003. This same mix was used on the 4<sup>th</sup> East portal topsoil stockpile southern berm.

Proposed Activities:

Chapter III Reclamation Plan, page 21 indicates that an average of nine inches topsoil (or 1200 yards) will be removed from the additional acre to be disturbed east of the existing permit boundary fenceline (Plate III-1). The soil map in Appendix VII-4 supports this evaluation,

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although an average of ten inches of soil over rock may be available, bringing the volume to 1344 cu yds. Since every yard of topsoil is needed, the Permittee has committed to employing a qualified soils specialist to direct the topsoil salvage operation (Chap IV, pg 7a).

Chapter IV page 7a describes a process of harvesting existing cryptogams from the surface of the 1.0 acres before disturbance and before topsoil salvage. The cryptogams will be manually collected and placed on the topsoil stockpile and the location(s) marked and recorded for future evaluation. The existing soil berm (seeded August 19, 2003) will be crowded into the topsoil stockpile. Soil between the water tank and the topsoil stockpile will be picked up and placed in the topsoil stockpile. Soil salvaged from the 1.0 acre disturbance will be used to rebuild the west topsoil berm. The affected areas of the topsoil stockpile and the berm will be gouged, mulched and seeded. (Consequently the information on Chap IV page 7 concerning the topsoil stockpile berm seeding on August 19, 2003 will be superceded.)

The Permittee is reminded that the soils that are currently on the eastern half of the south topsoil berm must not be disturbed as they are part of an ongoing reclamation treatment study (R645-301-234.240).

### **Findings:**

The information provided meets the minimum requirements for Topsoil and Subsoil Salvage.

## **VEGETATION**

Regulatory Reference: R645-301-330, -301-331, -301-332.

### **Analysis:**

The Permittee stabilized the topsoil stockpile at the 4<sup>th</sup> East Portal by gouging the top (only) of the topsoil stockpile, hydroseeding, and mulching (Ch. IV, p. 7a). The Permittee hydroseeded the top and sides of the topsoil stockpile with the non-native interim seed mix, and broadcast seeded 1/3 of the southern berm with the native interim seed mix. The table below shows the species used for both mixes.

<b>NATIVE - INTERIM MIX</b> (formerly "Warm Season" Chap VIII, pg. 20)
Shadscale
Fourwing saltbush
Castle valley clover

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Streambank wheatgrass
Scarlet globe mallow
Winterfat
Blue grama
Indian rice grass
Alkali sacaton
<b>NON-NATIVE - INTERIM MIX</b>
Formerly (“Cool Season” ChapVIII, pg. 20)
Crested wheatgrass
Fourwing saltbush
Russian wildrye

Chapter III, page 4b shows a third interim seed mix: crested wheatgrass, western wheatgrass, Indian ricegrass, galleta, streambank wheatgrass, and fourwing saltbush. The Permittee used this mix for the contemporaneous reclamation of the road to borehole pump #1 in 1982 (Chap. III, pg. 4b). The amendment no longer lists this seed mix as one of the temporary seed mixes on page 20 (Chap. VIII).

The Permittee seeded the eastern portion of the southern perimeter topsoil berm in 2002 with the native interim seed mix (Chapter VIII, pg. 20) supplemented with Castle Valley clover. The Permittee must maintain the integrity of the berm to monitor the application of this mix as part of the Emery Mine reclaimability study.

The Permittee relocated a topsoil berm along the northern half of the eastern fence line (Chap. IV, pg 7). The soil is now part of the southwestern berm of the topsoil stockpile (Chap. IV, “Reconfigured topsoil stockpile map”). The new site will help protect the soil from further coal-fine contamination. This temporary reclamation project also included hydroseeding with the native interim seed mix (Chapter VIII, pg. 20) and tackifying that part of the berm.

For the 1.0-acre additional disturbed area, the Permittee will relocate the vacuumed topsoil (coal fines vacuumed; July 22, 2003). The Division will assist the Permittee in determining the presence of cryptogams of this soil prior to removal. If cryptogams are present, the Permittee will separately remove and transplant cryptogams to a topsoil stockpile (Chap. III, pg. 21; Chap. IV, pg. 7a). The cryptogam project will include relocating the cryptogams to a small confined area along the western edge of sloped surfaces of gouge depressions. The strategy of this location is to provide protection for the cryptogams against prevailing winds.

The Permittee will relocate the topsoil of the 1.5-acre site to the berm of the topsoil stockpile. The reclamation project includes gouging the surface, seeding with the native interim

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seed mix, and mulching with noxious weed free hay or straw. The application rate is at 1-2 tons per acre. (Chap. IV, pg. 7a).

The MRP discusses standard revegetation methods for final reclamation. In 20 years, Emery Mine has not successfully vegetated any disturbed site within the permit area. Because of this problem, the Permittee committed to follow a four-phase vegetation study (Chapter III, Page 4b of the MRP). The Division determined that demonstrating that reclamation of disturbances is important to obtaining future approval for site disturbance. The Division may require live transplants, irrigation and/or soil amendments to establish vegetation. The Permittee must show repeated and continuous efforts to establish vegetation at Hidden Valley Mine and Emery Mine. The Division may require innovative revegetation procedures and additional materials based on the results of the four-phase vegetation study.

In phase I of the vegetation study, the Permittee will investigate and summarize past reclamation sites and practices at the Emery and Hidden Valley Mines. In phase II of the vegetation study, based on those investigations, and in consultation with the Division, the permittee will implement the best techniques (demonstrated to be most successful) on existing topsoil piles and upcoming reclamation at the main mine site and Hidden Valley. In phase III of the vegetation study, the applied techniques will be evaluated qualitatively (annually) and quantitatively (between the 4<sup>th</sup> and 6<sup>th</sup> year). These evaluations will be correlated to the precipitation data results obtained from an on-site weather station and incorporated into the annual report. Results of the phase III evaluations may result in additional field trials.

The Permittee submitted a scope of work for only phase I of this study on April 1, 2003. The Permittee will submit the results of the study in late fall of 2003 or winter of 2004. **To date, the Division has not received the results from Dr. Collins survey.** After this submittal is received, the Permittee, contractor, and Division will determine the steps and procedures for Phase II.

### **Findings:**

Information provided in the application is considered adequate to meet the minimum Vegetation requirements of the Operations Plan regulations. However, the Permittee must act in accordance with the following requirements set by the Division.

1. The Emery Mine has not been successful in revegetating disturbed land, previously. When the Division approved the modified 4<sup>th</sup> east portal construction plan (AM02B), it was agreed that the Permittee would conduct a four-phase revegetation study. The Permittee must continue to follow the steps in the four phases, irrespective of the sale of the Emery Mine. The Division reminds the Permittee that we have not received the results from Dr. Collins survey. In order to continue with the four-phase evaluation plan,

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the Division requires time to evaluate the results and coordinate/plan Phase II before implementation of reclamations projects.

2. The Permittee must also maintain the integrity of the topsoil berm at the 4<sup>th</sup> east portal to monitor the application of the mix as part of the Emery Mine reclaimability study (R645-301-234.240).

## **ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES**

Regulatory Reference: 30 CFR Sec. 784.24, 817.150, 817.151; R645-301-521, -301-527, -301-534, -301-732.

### **Analysis:**

#### **Road Classification System**

The Permittee has classified the new section of the coal loadout road as primary. This is consistent with the regulation for road classification and the existing plan.

#### **Plans and Drawings**

The Permittee has shown the addition to the coal loadout road on several maps including Plate IV-3b. The Permittee did not show any new road designs. The Division assumes that the Permittee will use the existing road designs.

Appendix X. C-3, prepared by Norwest Corp., shows a typical cross-section for the new haul road. The cross-section was not certified but is similar to the current road configuration.

#### **Performance Standards**

The Permittee will be required to operate in accordance with all performance standards.

#### **Primary Road Certification**

The location of the new haul road is shown on several maps that have been certified, including Plate II-3, 4<sup>th</sup> East Portal Surface Facilities. The typical cross-sections for the road are shown in the MRP.

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### **Other Transportation Facilities**

The Permittee does not propose to change the basic layout for the conveyor system. They do propose to replace the existing crusher with a roller crusher to reduce dust and to enclose the transfer point. Those changes are stated in the text but would not show up on the maps.

#### **Findings:**

The information provided in this amendment is adequate to meet the minimum requirements of this section of the Regulations.

### **SPOIL AND WASTE MATERIALS**

Regulatory Reference: 30 CFR Sec. 701.5, 784.19, 784.25, 817.71, 817.72, 817.73, 817.74, 817.81, 817.83, 817.84, 817.87, 817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

#### **Analysis:**

The Permittee does not propose to change how waste materials are handled. There will be no spoil produced because of the addition of the 1.5 acres.

#### **Findings:**

The Permittee has met the minimum requirements for this section of the regulations.

### **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:**

##### **General**

As part of the N03-39-1-1 mitigation plan the Permittee proposes to add an additional 1.5 acres on the northeast side of the permit. Only one acre will be disturbed. The pre-disturbed contours are shown on Plate III-5, Coal trucks will enter the permit addition on the southeast side

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and loop around to the north to reduce coal dust disturbance. Currently, the coal trucks are routed around the coal stockpile where they can stir up coal fines that are then carried away from the disturbed area.

### **Diversions: Miscellaneous Flows**

The mitigation plan adds 1.5 acres to the permit. Plate II-3 illustrates the change. Plans are not clear about the road construction on County Road 915, however. County Road 915 is outside the disturbed area and not in the permit area. A berm will prevent runoff from the county road entering the disturbed area.

The south end of the 1.5 acre addition slopes toward the natural drainage channel, so no berm is needed on the south end to prevent undisturbed drainage entering the permit area.

The 1.5 acre addition will drain to an 18 inch culvert, then to the sedimentation pond. The Permittee has submitted designs for the culvert, which show the culvert to be of sufficient size to easily transmit the flow and sediment from the 1.5 acres.

### **Ponds, Impoundments, Banks, Dams, and Embankments**

The Permittee plans to route runoff from the 1.5 acres into Sedimentation Pond #9. Runoff from a total area of 4.9 acres will flow to the pond from the 4<sup>th</sup> East Portal site. Updated calculations were submitted showing the pond will contain the 10 yr-24 hr precipitation event. The Permittee plans to change the size of the decant pipe from 12 inches to 15 inches. The dewatering will take place from the 15 inch CMP, which will be closed at all times except when the pond is being dewatered. The open channel emergency spillway will transmit flows above the 10 yr-24 hr precipitation event and will be constructed .9 foot above the peak pool of the 10 yr. 24 hr design storm at an elevation of 6054.55. Dewatering will take place after 24 hours of settling.

### **Findings:**

The information provided in the application is adequate to meet the Hydrologic Information section requirements of the Operation Plan Regulations.

## **SUPPORT FACILITIES AND UTILITY INSTALLATIONS**

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### Analysis:

The prevailing winds at the Emery Mine are westerly, therefore, coal fines blow from the coal pile to the east including the 1.5 acres proposed in this amendment. Coal fines blowing from the coal pile to undisturbed areas east of the permit resulted in N03-39-1-1. The amount of fines on the ground at the time of the Division's field visit on May 8, 2003 was significantly greater than the amount approximated during the January 2003 inspection that resulted in N03-39-1-1 (visual observation). The depth of accumulated coal fines on May 8, 2003 was over two inches in places within the 1.5 acre area. In January and July of 2003, the Permittee vacuumed a portion of the 1.5 acre area, where most of the coal fines had accumulated. Since then the Permittee has ceased mining operations at the 4<sup>th</sup> east portal, and has removed the coal stockpile.

Norwest Corp. developed the Fugitive Dust Control Plan for the 4<sup>th</sup> east portal area of the Emery Mine and informally presented Phase I of the proposed dust-control strategy to the Division on August 26, 2003. The Norwest Inc. dust control plan was included in the pending N03-39-1-1 Abatement plan as Chap X, Part C, Appendix X.C-3 (reviewed under Tasks #1692 and #1762 and currently as Task #1819).

The mine superintendent will implement the dust control plan. As the stockpile manager, he will be responsible for maintenance and repair of the equipment. The supervisor would direct on-site training to familiarize personnel with the dust control strategies. The following facilities (shown on Plate II-3) will be added to the 4<sup>th</sup> East Portal area:

- Re-route haul traffic, adding 1.5 acres to the disturbed area east of the loadout operation pad, upgrading part of county road 915 and adding an extension road from 915 heading west to the loadout.
- Jersey barriers - keep the coal within the storage areas.
- Wind fence - should reduce the wind speeds and the coal particles that become windborne.
- Water cannon – (one or more) to moisten the stockpile and reduce the amount of coal particles that become windborne, with a means of providing a working demonstration during inspections (App X.C-3, pp 9 & 23).
- Cattle guard - reduce the amount of coal that is spread by truck tires, by removing the material from the tires.
- Three water sprays at transfer points to be implemented in Phase I (App X.C-3, p17 and Fig 10) using Benetech technology for ease of conversion to Benetech dust suppressant system in Phase II.
- Crusher with a double-roller or other type of non-pulverizing device.

In addition, the Permittee will apply MgCl dust suppressant in operational areas; vacuum accumulations of fugitive dust; and implement a monitoring and maintenance plan (Appendix I

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of App X.C-3), including a training program and weekly repair logs for all components of the dust control plan.

The Permittee will designate a person responsible for wind data collection and maintenance (Chapter X-B, pg 5).

The Permittee has determined a means to objectively measure of the success of Phase I dust control strategies. If Phase I controls are “inadequate,” then the Phase II dust control will be implemented (Chapter II, page 25 and Appendix X.C-3). The Permittee understands that Phase I dust control will be inadequate when off-site impacts of fugitive dust are noted above baseline conditions (personal communication with John Gefferth February 13, 2004).

All comments in this section refer to text and appendices in Appendix X.C-3.

### *Cattle Guard*

The Permittee plans to install a cattle guard at the 4<sup>th</sup> East Portal exit spur to county road-915. The cattle guard is a strategy to prevent coal fines from exiting the site via tires. The idea is that the full trucks will travel over the cattle guard and coal fines will fall off the tires into the collection basin below the guard. If the cattle guard does not work, then truck tires will transport the fines to County road-915. Vehicle traffic would then transport the coal dust to the intersection with county road-907, as well. A continued transport of fines to either county road will contribute to the problem spreading coal fines in undisturbed areas. Consequently, it will be imperative for the Permittee to strictly conform to the maintenance plan.

### *Haul Road Relocation*

The Permittee plans to relocate and stockpile the topsoil prior to upgrading the county road. The road project will also include blading and regrading the road for flow to the sediment pond, applying 6” of gravel on 915 and the extension, placing signage for a 10 MPH speed limit, and applying MgCl<sub>2</sub> and TARBT dust suppressants to the road surfaces.

The main principle behind relocating the haul road is to reduce the length of road surface where coal fines persist. The amendment provides EPA’s support for reducing road length to decrease dust. However, the proposed road would increase the total surface of roads for mining operations (Figure 14). More road surface would not only disturb more area, but also increase the possibility of haul trucks generating dust. Furthermore, the addition of the proposed haul road may exacerbate the disturbance to the east of the County Road 915. Hence the need for an objective measurement of Phase I controls.

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### *Water Cannons*

The Norwest plan states that the project will include one or more water cannons near the coal stockpile (Chap. X, Norwest Report, pg. 9). Figures 5 and 14 show two cannons that would spray most of the pile. As shown, there is one section north of the loadout belt not covered by the water spray pattern of two cannons. If the Permittee installs only a single cannon, the spray pattern will not adequately cover the pile. The Permittee states that “probably” two nozzles/cannons placed on stands at “probably” several feet in height will adequately cover the pile. Since the nozzles are adjustable, the Permittee supports Norwest’s contention that the water cannons can be fine-tuned to provide a spray pattern that adequately covers the stockpile.

The Division was concerned that if the water cannon-nozzle size and water pressure is adequate to completely cover the stockpile on “normal” days, then, on days with high evaporation rates, the water could evaporate before much of the water reaches the stockpile. The Permittee states that the nozzles are capable of delivering water in a “curtain” that will blanket the stockpile. The Division notes that an override-manual control system should also allow the Permittee to adjust the system to guarantee coverage. John Gefferth (personal communication; October 8, 2003) confirmed that the entire coal stockpile will be sprayed, irrespective of equipment quantity, size, or location.

The application states that the water cannons will activate when wind speeds are greater than 12 miles per hour and remain active for up to 15 minutes. The Permittee obtained the current activation setting from a generalized example provided by the U.S. EPA (AP-42 Compilation of Air Pollution Emission Factors, Section 13.2 [<http://www.epa.gov/ttn/chief/ap42/ch13/>]) and from the recommendation of NORWEST consultants. The Division evaluated the site specific wind data collected from May to October 2003 and found that normal wind speeds at the site are between 0 – 5 mph, with frequent winds occurring up to 10 mph. The highest wind speeds never exceed 25 mph. Therefore, the Division is in agreement with this 12 mph wind-speed trigger point. The wind speed trigger point will be adjusted according the mine site weather station data (Appendix X.C-3, page 9)

A wind-activation control system will control the water cannons activation/deactivation cycles. This system includes an independent anemometer and electronic control box designed by Roberts and Schaeffer ([www.R-S.com/projects](http://www.R-S.com/projects)). The control system for the water cannons will have automatic and manual control programs. The automatic program will *automatically* operate during non-working hours (e.g., 5:00 PM – 7:00 AM). The manual program will *automatically* operate during working hours (e.g., 7:00 AM – 5:00 PM). During the manual phase of the program, when winds reach trigger points, an alarm system will warn the workers to move away from the stockpile. The Permittee will then manually turn on the water cannons until the stockpile is adequately wet. This *automatic* dual program system will allow the Permittee to prevent workers and equipment from getting wet.

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During the automatic phase of the program, the water cannons will remain activated long enough to insure adequate wetting, yet prevent runoff. The cannons are supposed to operate in all weather conditions and wet the surface without runoff. The cycle of activation and deactivation of water during periods of persistent high winds will be pre-set (e.g., no more than one activation per hour).

A suggestion was made that the Permittee use opacity readings to trigger the water cannons (meeting between DOGM and DAQ December 4, 2003). If the Permittee decides to use opacity to trigger the cannons or monitoring, then the opacity reader must maintain a current smoke school certification. However, opacity must not be the sole means for triggering the cannons because the opacity reader will not be at the site 24 hours a day – 7 days a week. The Permittee may use opacity only in combination with a mechanical/electrical control device.

### *Water Sprays*

Another related abatement measure includes modifying and updating the existing water spray system for the coal conveyor system. The crusher inlet, crusher outlet, and stacker discharge are the spray point locations. Updating the existing spray system includes the use of Benetech hardware (Chap II, pg 25). If phase I controls are not adequate, the Benetech dust suppressant will be added to the system in phase II.

During a conference call with CONSOL, Norwest, and DOGM (October 8, 2003), the Division noted a concern of high precipitates in the mine water. Since the water sprays will use mine water, the water will likely plug the nozzles, if the spray nozzles are not adequately sized or properly maintained. The weekly maintenance program should prevent or correct problems that may arise from plugged nozzles.

The Division has two other concerns related to the water control strategies. Firstly, the U.S. EPA states that water provides only temporary dust control. They recommend that chemicals provide longer control, but warn that chemical may affect plant and animals. NORWEST has recommended on page 24, Appendix X.C-3, Chapter X, Part C, sampling of the areas treated with dust suppressant (outlined in Figure 14) and the Permittee has adopted this adopted this recommendation (see page 11 Chap III.C.1).

Secondly, after mining operations resume and the water control strategies are in operation, the Permittee must recalculate the water balance totals. The Permittee provided the totals in the last midterm review, but did not include water consumption from dust control strategies. The Division believes that the Permittee will be able to provide more accurate mining operation consumption totals once operations resume.

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## OPERATION PLAN

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### *Wind Fence*

The Permittee plans to install a Raring Corp. wind fence along the western edge of the coal stockpile. The project will include a 400'L x 45' H wind fence attached to steel poles spaced 15' apart. Chapter X, Part C, Appendix X.C-3, Appendix F shows steel poles for the wind fence framing system, which is consistent with the Permittee's technical description on page 13 (Chapter X, Part C).

The wind fence should help deflect and reduce speed of the prevailing wind that channels around the excavation material stockpile. The rating for fabric aerodynamic porosity is 36%. The wind fence height is approximately 5' higher than the bottom of the coal radial stacker drop chute. The best technology for the site includes installing the wind fence near ground level. In Appendix X.C-3, the narrative on page 13 and Figure 7 state that the Permittee will install the wind fence near ground level. The Permittee will not install the fence with a 7' gap as shown on the drawing in Appendix F of Appendix X.C-3.

The large wind fence may create boundary layer turbulence and eddy effects. This additional air movement may displace coal fines. The other dust-control strategies, however, should dampen any effects from this added displacement.

### *Measurement of Success*

If Phase I dust control strategies fail to attain required results (no offsite impacts), then CONSOL Energy has implied agreement to implement Phase II strategies (page 25, Chapter II). Determining whether the dust control measures are effective for the protection of vegetation and wildlife is critical to the decision to implement Phase II.

The Permittee will conduct monthly monitoring of the area east of the permit boundary for coal fines and twice weekly opacity readings at the permit boundary (Chap. X, Part B, Pg. 5b). As expected, the Permittee must also adhere to all other points presented monitoring and maintenance plan (Appendix I).

Without coal operations or the coal stockpile, it will be difficult to determine the effectiveness of the dust control strategies. The Division expects that the proposed monitoring will be ongoing when:

- Coal operations are up to the activity level and capacity existing the time of N03-39-1-1 issuance (January 2003).
- Coal stockpile is built up to a size similar to the size that existed at the time of N03-39-1-1 issuance.

## **OPERATION PLAN**

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The success of Phase I dust control will be determined objectively through opacity measurements and surface percent cover east of the permit area. A non-biased third party, such as the Natural Resource Conservation Service, will establish the baseline for percent cover. The monitoring will be conducted only during active operations when production, stockpile accumulation and/or truck haulage is ongoing. The monitoring period will last for a cumulative time of one and one half years. (Periods of inactivity as a result of no truck haulage, no stockpile or no production will not count towards the cumulative one and one half years of monitoring.) If monitoring of Phase I indicates an increase above baseline in the percent cover outside the permit area, the Phase II dust control plan must be implemented.

### **Findings:**

The information provided meets the requirements of the Regulations.

## **SIGNS AND MARKERS**

Regulatory Reference: 30 CFR Sec. 817.11; R645-301-521.

### **Analysis:**

The plan indicates that all topsoil stored in berms will be clearly marked (Chap IV, page 7a).

### **Findings:**

The information provided meets the requirements of the Regulations.

## **MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS**

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

### **Analysis:**

#### **Affected Area Maps**

The affected area is the permit area plus any additional areas that the Permittee, Consolidation Coal Company, plans of permitting in the future. The permit was been or will be transferred. Therefore, the issue of future expansion areas is mute. The permit area will be considered the affected area at this time.

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### **Mining Facilities Maps**

The Permittee has supplied maps showing the surface facilities, Plate II-3, and Surface Control Plan, Plate VI-10a. Plate II-3 shows a berm to be constructed along the County Road 915 at the east perimeter of the disturbed area.

### **Mine Workings Maps**

No changes will be made to the mine workings maps because of this amendment.

### **Monitoring and Sampling Location Maps**

Once sampling transects and sample points are established, their location will be included in the MRP (Chapter X-C, page 5b).

### **Findings:**

The information in the amendment meets the minimum requirements of this section of the regulations.



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## POSTMINING LAND USES

Regulatory Reference: 30 CFR Sec. 784.15, 784.200, 785.16, 817.133; R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275.

### Analysis:

The post mining land use will be grazing/wildlife habitat as described in Chapter X., Part D. Section 5.

### Findings:

The information provided meets the requirements of the Regulations.

## APPROXIMATE ORIGINAL CONTOUR RESTORATION

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

### Analysis:

On Plate III-5, 4<sup>th</sup> East Portal Site Pre & Postmining Topography Plan View, the Permittee shows the postmining contours. The map scale is 1 inch equals 200 feet. Because of the scale, the Division is unable to make a complete evaluation of the reclamation plan for the 1.5-acre addition.

The information on Plate III-5 shows that the pre and postmining topography will be similar. The existing topography is flat and the Permittee proposes to restore the area to the approximate pre-mining conditions.

The Division requires that the Permittee include maps of the pre and post-mining topography that are at a scale of 1 inch equals 100 feet or smaller in other sections of the TA. To prevent redundancy on deficiencies the Division address that issue in another section. If the new maps show that a problem exist the Division will address the issue at that time.

Spoil piles and highwalls will not be located on the 1.5-acre addition. Restoring the hydrology of the area for AOC purposes will be met if the Permittee can demonstrate that all hydrology issues have been addressed.

The Division did a complete evaluation of how the site would be reclaimed to AOC during the initial approval for the 4<sup>th</sup> East Portals. The addition of the 1.5 acres of which 1.0 acres will be disturbed is a minor adjustment to the reclamation plan that should not affect the Permittee's ability to restore the complete site to AOC.

### **Findings:**

The Permittee has met the minimum requirements of this section of the regulations.

## **BACKFILLING AND GRADING**

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

### **Analysis:**

#### **General**

Plate III-5 4 East Portal Site Pre & Postmining Topography Plan View includes the additional 1.5 acre disturbed area.

The Worksheet in Appendix IV.B.1 indicates that the area of topsoil salvage will have topsoil replaced and the surface gouged to a depth of 6 inches to a foot (page A-12). The area where topsoil was stored in place will be ripped to a depth of 1.5 feet on two foot centers (page A-9). This will likely promote areas of increased erosion along the ripped zones without alleviating compaction between the ripped zones. The Division will require that the entire site is gouged to a six inch to a foot depth.

Chapter III, page 21 indicates that the topsoiled surface will be roughened (gouged). Although this does not clearly state that **the entire site** will be roughened (gouged), the Worksheet 4B Earthwork Quantity in Appendix IV-B.1 indicates roughening of 16 acres of re-topsoil area. (Sixteen acres is the entire disturbed area at the present time.) Worksheet 10 Productivity for Hydraulic Excavator Use in Appendix IV-B.1 has been adjusted accordingly.

The Division did a complete analysis of the backfilling and grading plan during the initial permitting of the 4<sup>th</sup> East Portal area. The addition of 1.5 acres of which 1.0 acre will be disturbed will not alter the overall backfilling and grading plan.

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The backfilling and grading plan calls for the 1.0-acre area to be restored to the topography that existed before disturbance. The main reclamation activities for the site will be road removal and topsoil placement. Those issues will be address in other sections of the TA.

### **Previously Mined Areas**

No previously mined areas exist within the 1.5-acre addition. Note: this section has to do with highwalls and no highwalls are associated with this area of the 4<sup>th</sup> East Portal facility.

### **Findings:**

The information provided meets the requirements of the Regulations.

## **TOPSOIL AND SUBSOIL**

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

### **Analysis:**

#### **Redistribution**

Chapter III Reclamation Plan, page 21 describes the manual replacement of cryptogams over the surface at reclamation, as a final step.

Page A-2a of Appendix VI.B.1 also indicates that cryptogams will be salvaged from the topsoil stockpile and manually replaced in gouges of the reclaimed site. Locations will be marked for record keeping.

In Appendix IV-7-G of the MRP, the reader is referred to Appendix X.C-3 for further information on the use of dust suppressants. In Appendix X.C-3, NORWEST recommends that areas receiving repeated applications of dust suppressant (MgCl) as shown in Figure 14 of Appendix X.C-3 be sampled and analyzed for SAR, pH and EC prior to final reclamation grading (page 24 Appendix X.C-3). The Permittee has committed to implementing the recommendations of Appendix X.C-3 in a statement on page 11 of Chap III.C.1.

### **Findings:**

The information provided meets the requirements of the Regulations.

## **ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES**

Regulatory Reference: 30 CFR Sec. 701.5, 784.24, 817.150, 817.151; R645-100-200, -301-513, -301-521, -301-527, -301-534, -301-537, -301-732.

### **Analysis:**

#### **Reclamation**

The Permittee did not specifically address the reclamation of the road and cattle guard in the amendment. In the MRP, the Permittee committed to remove all roads and associated structures. The postmining maps show that the road and other structures will be removed. The Division believes that information is adequate to determine that the new access road will be removed and reclaimed according to the approved plan.

#### **Retention**

The Permittee does not propose to retain any roads associated with the 1.5-acre addition.

### **Findings:**

The information given in the amendment is adequate to meet the minimum requirements of this section of the regulations.

## **REVEGETATION**

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

### **Analysis:**

Vegetation reference areas were established and quantitatively sampled in 1980 by Stoecher-Keammerer & Associates of Boulder, Colorado. The mixed desert shrub reference area had a vegetative cover of 10.6 percent (Ch. VIII, pg. 19). The raw data is not included in the Mining and Reclamation Plan (MRP). Eleven percent vegetative cover is low from the Division experience in observing vegetative cover on other adjacent sites. However, the reference area and 4<sup>th</sup> East Portal disturbed area compare equally based on the Division's visual observations. The vegetative cover of the reference area will be re-measured at the same time as the reclaimed disturbed area by the same observer according to the revegetation guidelines.

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## RECLAMATION PLAN

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### **Findings:**

Information provided in the application is considered adequate to meet the minimum Revegetation requirements of the Reclamation Plan regulations

### **STABILIZATION OF SURFACE AREAS**

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

### **Analysis:**

Page 4b of Chapter III describes the interim reclamation measures that were undertaken in conjunction with the abatement of N03-38-1-1 (August 5, 2003), interim seeding and hydromulching of the 1.0 acre area now proposed for use as a new haul route.

On page 4b, Chapter III, the interim reclamation measures taken to date to stabilize areas along the fence lines affected by vehicle traffic has also been mentioned:

1. the area disturbed by vehicle traffic during the installation of the transmission lines ( along the south fence line) seeded on August 19, 2003;
2. the area disturbed by vehicle traffic during construction of the west fence line (hydromulched only during the fall of 2002);
3. and the area along the southeast fence line affected by vehicle traffic during installation of the transmission lines and repairs to transmission lines (hydromulched only during the fall of 2002).

### **Findings:**

The information provided meets the requirements for clear and concise reporting of interim reclamation

### **MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS**

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

**Analysis:**

**Bonded Area Map**

The bonded area is considered by the Division to be the same as the disturbed area for the 4<sup>th</sup> East Portal facilities. That area is shown on several maps including Plate II-3.

**Reclamation Backfilling And Grading Maps**

The Permittee update the backfilling and grading cross-sections so that they show the additional 1.0-acres of disturbed area.

**Reclamation Facilities Maps**

No facilities that will be retained after reclamation is finished.

**Final Surface Configuration Maps**

The final surface configuration is shown on Plate III-5, 4<sup>th</sup> East Portal Site Pre & Postmining Topography Plan View. The map's scale is adequate for the Division to evaluate the final surface configuration.

**Certification Requirements.**

All reclamation maps that need to be certified have been by a registered professional engineer.

**Findings:**

The information in the submittal is adequate to meet the minimum requirements of this section of the regulations.

**BONDING AND INSURANCE REQUIREMENTS**

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

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### Analysis:

#### Determination of Bond Amount

The Division reviewed the bond calculation worksheets for the 4<sup>th</sup> East portal (Appendix IV.B.1) and notes the following:

- Worksheet 5 pp A-7 and A-7a, calculate costs associated with 1) boxcut –5% at 200 feet and 2) ventilation shaft and sediment pond at +2% grade and distance of 100 feet.
- Worksheet 8 page A-11, provides the calculations used to determine truck haulage time assuming a 2 – 3% grade existing in the boxcut.
- On page A-4, the equipment for reclaiming the boxcut includes a loader, trucks and a compactor. On page A-5, it is noted that ¼ of the fill will be moved by a D8N dozer. The productivity for this additional dozer work is calculated in Worksheet 5 on page A-7A and the cost is itemized on Worksheet 13, page A-17.
- The reclamation plan for the 4<sup>th</sup> East portal reflects 16 acres of gouging in worksheets 4b, 10 and 17 of Appendix IV.B.1.

The bond was reviewed in 2003 as Task #1693. This application revises the bond calculated for the sixteen acre 4<sup>th</sup> East Portal disturbed site as \$691,478.00 and increases the bonding for the entire 66.7 acre disturbed site by \$106,549.00. The bond calculated for the 66.7 acre disturbed site is now \$1,780,464.00 (Chap III, pg 6)

### Findings:

The information available in the MRP meets the requirements of the Regulations.