

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

December 10, 2003

TO: Internal File

THRU: Priscilla Burton, Environmental Scientist/Soil/Team Lead

FROM: Jerriann Ernstsens, Ph.D., Environmental Scientist/Biology

RE: 4th East Portal (abatement to N03-39-1-1), Consolidation Coal Company, Emery Deep Mine, C/015/0015, Task ID #1762

SUMMARY:

The Division approved the construction of the 4th East Portal area in 1990. The mine received a Notice of Violation (January 2003) for allowing coal fines to blow onto undisturbed areas. The Permittee submitted a response to the NOV in April 2003. The Permittee, however, had implemented many of the mitigation measures listed in that amendment, prior to the Division review in June 2003. To date, the mitigation measures are not effective.

The Permittee submitted, in September 2003, a second dust control plan in response to the NOV. The dust control plan includes wind fences, watering devices, crusher replacement, operation enclosures, and maintenance plans. The plan also includes relocating the haul truck route within a 1.5-acre area expansion site located east of the existing disturbed and permit boundary. The Division reviewed the September submittal and returned the associated TA on October 10, 2003.

The Permittee submitted a third dust control plan on October 31, 2003. This memo provides review results of the dust control plan received October 31, 2003.

Without coal operations or the coal stockpile, it will be difficult to determine the effectiveness of the abatement strategies. The Division must wait on approval of the effectiveness of the abatement strategies until:

- Coal operations are up to the capacity prior to the closing of operations at the 4th east portal in summer/fall 2003.
- Coal stockpile is built up to a size similar to the size that existed prior to CONSOL relocating the coal pile in the summer/fall of 2003.

TECHNICAL MEMO

It is critical for the Division to adequately determine whether abatement measures are effective for the protection of vegetation and wildlife. The Permittee must install some type of measuring system to track coal fines. This system may include PM10 readers, coal fine collection boxes, and soil analysis to measure changes in the amount of fugitive fines and dust that leaves the permit area. The Division has consulted with the Division of Air Quality or other agencies to determine effective methods for data collection and analysis. The Division discusses these strategies as possibilities elsewhere in the TA.

The Permittee agrees to follow a four-phase evaluation of revegetation plans. Patrick Collins worked on Phase I during the summer of 2003. The Permittee should submit the results for Phase I sometime in the fall of 2003 or winter of 2004. At that time, the Division will work with the Permittee to proceed with Phase II.

TECHNICAL ANALYSIS:

GENERAL CONTENTS

PERMIT APPLICATION FORMAT AND CONTENTS

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

Analysis:

The September 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. 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 refers 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 must either change native final seed mix references to reflect the appropriate seed mix or remove all non-native species from the three final seed mixes (R645-301-121.200).

Chapter X, Part C, Appendix X.C-3, Appendix F shows steel poles for the wind fence framing system, however the text (pg. 13) states wooden poles. The Permittee must clarify whether steel or wood poles will frame the wind fence (R645-301-121.200; deficiency noted in

Operation Plan, Support Facilities). Furthermore, the Permittee must modify the figures in Appendix F to show the bottom of the fabric will be near ground level (R645-301-121.200; deficiency detailed in Operation Plan, Support Facilities).

Findings:

Information provided in the application is not considered adequate to meet the minimum Permit Application Format and Contents section of the General Contents regulations. Prior to approval, the Permittee must act in accordance with the following:

R645-301-121.200, The Permittee must either change native final seed mix references to reflect the appropriate seed mix or remove all non-native species from the three final seed mixes. The Permittee must clarify whether steel or wood poles will frame the wind fence. The Permittee must modify the figures in Appendix F to show the bottom of the fabric will be near ground level.

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 4th east portal for TES plant species in the spring of 2003(Chap. VIII, Appendix VIII 3).

Montgomery Archaeological Consultants surveyed 40 acres east of the 4th east portal in 2003 (Chapter X, Part A, Appendix 5-7, DOGM Confidential File).

Norwest Corporation provided the CONSOL Energy: Fugitive Dust Control Plan for the 4th east portal area of the Emery Mine. The consultants informally presented the proposed dust control plan on August 26, 2003. The Permittee incorporated Norwest's plan in this amendment (Chapter X, Part C – Air Quality).

Findings:

Information provided in the application is considered adequate to meet the minimum Reporting of Technical Data section of the General Contents regulations.

ENVIRONMENTAL RESOURCE INFORMATION

TECHNICAL MEMO

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 4th east portal as well as powerline corridor in 2002. The same firm surveyed an additional 40 acres east of the 4th 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 vanalism than unribboned areas.

The consultants determined that there is “No Historic Properties Affected” because of the fence surrounding 42EM 2961. In accordance to R645-301-411.142, the Division will seek to obtain clearance by SHPO (State Historic Preservation Officer) for site. The area of impact caused by coal fines, however could possibly include this historic site 42EM2961. The Division will investigate possible impacts to the site caused by fugitive coal fines.

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.

Findings:

Information provided in the application is considered adequate to meet the minimum Historic and Archeological Resource Information of the Environmental Resource Information requirements.

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 4th east portal in 2003(Appendix VIII 3). The consultant added the 1.5-acre site to the 4th 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 reasons that colored photographs of the site is 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 4th east portal for 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 report states that the Permittee participates in the DWR raptor survey (pg. 3). This report, however, did not include the results of the 2003 survey. The Permittee must either clarify the statement or provide the results of the raptor survey conducted in 2003 (R645-301-322.210).

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 not considered adequate to meet the minimum Fish and Wildlife Resource Information section of the Environmental Resource Information regulations. Prior to approval, the Permittee must act in accordance with the following:

TECHNICAL MEMO

R645-301-322.210, The Permittee must either clarify the statement or provide the results of the raptor survey conducted in 2003.

OPERATION PLAN

SUPPORT FACILITIES AND UTILITY INSTALLATIONS

Regulatory Reference: 30 CFR Sec. 784.30, 817.180, 817.181; R645-301-526.

Analysis:

Coal fines blow from the coal pile to undisturbed areas east of the permit area. The depth of the coal fines increased since January when the NOV was written (visual observation). The measures that the Permittee has implemented to address the NOV in the past have not been adequate. The amount of coal fines on May 8th 2003 was over 2” in certain points within the 1.5-acre area (Division field visit). This amount of fines is significantly greater than the amount approximated during the January 2003 field visit.

The Permittee vacuumed the area, in July of 2003, where most of the coal fines had increased. Since then the Permittee ceased mining operations at the 4th east portal, except the removal/relocation of the coal stockpile, and opted to sell the Emery Mine.

Since the summer of 2003, CONSOL contracted the Norwest Corporation to comprehensively and adequately respond to the NOV. Norwest provided the CONSOL Energy: Fugitive Dust Control Plan for the 4th east portal area of the Emery Mine. The consultants informally presented the proposed phase I and II dust-control strategies on August 26, 2003. The Permittee incorporated Norwest’s phase I plan in this amendment (Chapter X, Part C – Air Quality, Appendix X.C-3). All comments in this section refer to text and appendices in Appendix X.C-3.

The phase I dust control strategies includes wind fences, watering devices, crusher replacement, operation enclosures, and maintenance plans. The strategies also include relocating the haul truck route within a 1.5-acre area expansion site located east of the existing disturbed and permit boundary. If phase I dust control strategies fail to attain DOGM’s expected results, then CONSOL Energy agrees to implement phase II strategies. (This memo does not address phase II strategies.)

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. The Permittee installed a weather station in January 2003 and is supposedly collecting data at this time. Earlier in the year, the Permittee mentioned that the stations had not been operating for some period. On

August 26, 2003, the Permittee confirmed that the station was back in operation. It would have been helpful in designing the proposed dust control plan if the data had been taken continually since January 2003.

The Permittee is requesting to enlarge the disturbed area to include an additional 1.5 acres directly to the east of the loadout operation pad. The Permittee plans to reroute haul trucks using one acre of this proposed 1.5 acres. The project will include upgrading part of county road 915 and adding an extension road from 915 heading west to the loadout.

The main principle behind relocating the haul road is to reduce the length of road surface where coal fines persist. The amendment provides supporting evidence of EPA's approval of rerouting roads. However, EPA's support is for rerouting roads to reduce road length to decrease dust. The proposed road would increase the total surface of roads for mining operations. Figure 14 of the Norwest plan shows that the rerouted road is possibly longer than the existing haul road. A greater length of road surface will increase the possibility of haul trucks pulverizing even more coal fines to dust if the coal fine problem persists. Furthermore, the addition of the proposed haul road may increase the acreage of coal fines blown to the east of the existing permit area.

The Permittee plans to install a cattle guard at the 4th East Portal exit to county road-907. The cattle guard is the only 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 the county road-907, an undisturbed area. Furthermore, trucks traveling from county road-907 to the loadout will pick up fines and transport them the county road-915. A continued transport of fines to either county road will contribute to the problem of coal fines spreading to undisturbed areas. It will be imperative for the Permittee to strictly conform to the maintenance plan.

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 MgCl₂ and TARBT dust suppressants to the road surfaces.

It will be difficult to determine the effectiveness of the proposed haul truck road if there are no trucks. The Division must wait on approval of the effectiveness of the abatement strategies until coal operations are near capacity that existed prior to CONSOL ceasing operations in the summer/fall of 2003.

The Norwest plan states that the project will include one or more water cannons near the coal stockpile. Figures 5 and 14 show two cannons that would spray most of the pile. There is one section north of the loadout belt not covered by the water spray pattern of two cannons. If

TECHNICAL MEMO

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. Adjustable trajectory angle of the nozzles may allow the Permittee to fine-tune the system to adequately spray the pile. The Permittee supports that installation of the water “cannons” will provide a spray pattern that adequately covers the stockpile. (Chap. X, Norwest Report, pg. 9).

The Division is concerned if the water cannon-nozzle size and water pressure is adequate to completely cover the stockpile on “normal” days, could the water evaporate before much of the water reaches the stockpile on days with high evaporation rates. 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) supports that the entire coal stockpile will be sprayed irrespective of equipment quantity, size, or location.

The consultants state that the water cannons will activate when wind speeds are, for example, greater than 35 MPH for over 15 minutes. The Permittee, however, must decrease the wind-speed trigger point from 35 mph to an elevated wind speed more typical for the site, such as 10 mph. The duration of sustained wind must also be more reflective of the duration of elevated wind speeds typical for the area. The Permittee must prepare and analyze a wind rose, specific to the site, to scientifically determine the elevated wind speed and duration typical for the site. (R645-301-526).

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). 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, especially during winter months.

During the automatic phase of the program, the water cannons will remain activated for a duration 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. A pre-set cycle (e.g., no more than one activation per hour) will activate/deactivate the water during periods of persistent high winds.

At a meeting with DAQ (December 4, 2003), DAQ suggested that the Permittee could

use opacity readings to trigger the water cannons. The Permittee may decide to use opacity readings for this as well as other requirements, such as monitoring the success of Phase I. If the Permittee decides to use opacity to trigger the cannons or monitoring, then the opacity reader must maintain a current smoke school certification. Furthermore, 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.

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 Benetech installing new sprayers. Benetech will install sprayers designed for compatibility with phase II adjustments if phase I controls are not adequate.

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

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. Appendix F shows steel poles for the frame, however the text (Norwest plan, pg. 13) states wooden poles. The Permittee must clarify whether steel or wood poles will frame the wind fence (R645-301-121.200; see Permit Application Format and Contents for deficiency).

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 plan shows two different fence designs. The plan states, "A wind fence, as shown in Figure 7, will be installed..." (Pg. 13). This accompanying figure shows the bottom of the fabric is near ground level. The figures in Appendix F must also reflect that the bottom of the fabric is near ground level. The Permittee must modify the figures in Appendix F to show the bottom of the fabric will be near ground level (R645-301-121.200; see Permit Application Format and Contents for deficiency).

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.

Appendix I provides the Norwest monitoring and maintenance plan for phase I strategies. Norwest recommends weekly logs and maintenance activities for all strategies. As expected, the

TECHNICAL MEMO

Permittee must also adhere to all other points presented monitoring and maintenance plan.

It will be difficult for the Division to determine the effectiveness of the phase I dust control strategies without a coal pile. The Division must wait on approval of the effectiveness of the abatement strategies until coal operations have built up a pile similar in size to the size that existed prior to CONSOL relocating the coal pile in the summer/fall of 2003.

Without coal operations or the coal stockpile, it will be difficult to determine the effectiveness of the abatement strategies. The Division must wait on approval of the effectiveness of the abatement strategies until:

- Coal operations are up to the capacity prior to the closing of operations at the 4th east portal in summer/fall 2003.
- Coal stockpile is built up to a size similar to the size that existed prior to CONSOL relocating the coal pile in the summer/fall of 2003.

It is critical for the Division to adequately determine whether abatement measures are effective for the protection of vegetation and wildlife. The Permittee must install some type of measuring system to track coal fines. This system may include coal fine collection boxes to measure changes in the amount of fugitive fines and dust that leaves the permit area. The Permittee and Division may want to consult with the Division of Air Quality or other agencies to determine the most effective method for data collection and analysis.

Findings:

Information provided in the application is not considered adequate to meet the minimum Fish and Wildlife Information requirements of the Operations Plan regulations.

Without coal operations or the coal stockpile, it will be difficult to determine the effectiveness of the abatement strategies. The Division must wait on approval of the effectiveness of the abatement strategies until:

- Coal operations are up to the capacity prior to the closing of operations at the 4th east portal in summer/fall 2003.
- Coal stockpile is built up to a size similar to the size that existed prior to CONSOL relocating the coal pile in the summer/fall of 2003.

It is critical for the Division to adequately determine whether abatement measures are effective for the protection of vegetation and wildlife. The Permittee must install some type of measuring system to track coal fines. This system may include PM10 readers, coal fine collection boxes, and soil analysis to measure changes in the amount of fugitive fines and dust that leaves the permit area. The Division has consulted with the Division of Air Quality or other agencies to determine effective methods for data collection and analysis. The Division discusses

these strategies as possibilities elsewhere in the TA.

R645-301-526, The Permittee must decrease the wind-speed trigger point from 35 mph to an elevated wind speed more typical for the site, such as 10 mph. The duration of sustained wind must also be more reflective of the duration of elevated wind speeds typical for the area. The Permittee must prepare and analyze a wind rose, specific to the site, to scientifically determine the elevated wind speed and duration typical for the site.

VEGETATION

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

Analysis:

The Permittee stabilized the topsoil stockpile at the 4th 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.

NATIVE - INTERIM MIX (“WARM SEASON” Chapter VIII, pg. 20)
Shadscale
Fourwing saltbush
Castle valley clover
Streambank wheatgrass
Scarlet globe mallow
Winterfat
Blue grama
Indian rice grass
Alkali sacaton
NON-NATIVE - INTERIM MIX (“COOL SEASON” Chapter VIII, 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

TECHNICAL MEMO

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 as listed on page 20 (Chap. VIII).

The Permittee seeded the eastern portion of the southern perimeter 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 from the 1.0-acre site to the berm of the topsoil stockpile. The reclamation project includes gouging the surface, seeding with the native interim 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, the Permittee will investigate and summarize past reclamation sites and practices at the Emery and Hidden Valley Mines. In phase II, based on those investigations, and in consultation with the Division, the permittee will implement the best techniques demonstrated to be successful. In phase III, the applied techniques will be evaluated qualitatively annually and

quantitatively between the 4th and 6th 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. At that time, 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.

The Emery Mine has not been successful in revegetating disturbed land, previously. When the Division approved the 4th east portal, it was agreed that the Permittee would conduct a four-phase revegetation study. 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. At that time, the Permittee, contractor, and Division will determine the steps and procedures for phase II. The Permittee must continue to follow the steps in the four phases, irrespective of the sell of the Emery Mine. The Permittee must also maintain the integrity of the topsoil berm at the 4th east portal to monitor the application of the mix as part of the Emery Mine reclaimability study.

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.

TECHNICAL MEMO

Findings:

Information provided in the application is not considered adequate to meet the minimum Fish and Wildlife Information section of the Operation Plan regulations. Prior to approval of this amendment, the Permittee must act in accordance with the following:

R645-301-358, The Permittee's measure of success of the Phase 1 controls must include monitoring in the area east of the permit boundary.

RECLAMATION PLAN

REVEGETATION

Regulatory Reference: 30 CFR 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:

General Requirements

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 4th 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.

Findings:

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

RECOMMENDATIONS:

Do not approve the application until all deficiencies have been addressed.