

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

June 30, 2004

OK

TO: Internal File

FROM:  Priscilla Burton, Environmental Scientist III/Soils.

RE: MRP Rewrite, Andalex Resources, Inc, Tower Division. Wildcat Loadout, C/007/0033, Task ID #1911.

SUMMARY:

The site of the Wildcat Loadout is found on the "Standardville" U.S. Geological Survey 7.5 minute quadrangle map in Township 13 South, Range 9 East, Section 33 (see also Figure 1, Section 2). The site is located three miles west of highway 6 on the Consumer's Road, within a BLM Right of Way granted in 1992. Andalex has held the permit for the Wildcat Loadout since 1985. The permit area covers 91 acres of which 56.1 acres are disturbed and 12.5 acres are under lease to the Utah Railway by the BLM (Section 2, page 1-2 and Section 4, pg 3-4). Effective May 1994, Exhibit A of the permit describes a bonded area of 63.7 acres.

This submittal does not revise any maps and plans, but does re-organize the text with the following change: the facility can now handle 5 million tons per year through-put of coal (Section 2, pg 1-3). In this review, I have compared the existing and revised text for consistency and made recommendations for changes to outdated information presented in the revised text as follows:

- Section 2, Legal and Financial, needs to be updated with current ownership and control information as well as current violation information.
- Appendix B to Section 2 requires updating with a right of entry sub-lease agreement with AMCA Coal Leasing, Inc. and an updated Table of Contents.
- The narrative in the submittal describes the calculations for the 1988 bond and should be updated to show calculations for the bond of \$651,000 accepted by the Division in February 2004.
- 30 yr old climatological information should be replaced with current information that can be downloaded from the internet using the following web sites <http://climate.usu.edu/UCCinstructions.html> or <http://www.wrcc.dri.edu/summary>

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- Information on prevailing winds was omitted from the plan in the revision and should be re-inserted.
- The Addendum to Appendix D, a soil survey conducted under the direction of Mr. James Nyenhuis for Mt. Nebo Scientific in March 2003, should be included in the application as it provides valuable information on soil within the permit area
- Provide in Appendix D the refuse analyses referenced in Section 8 R645-301-711.100 Groundwater Monitoring page 7-4. (These analyses were included in the 1994 Annual Report.)
- The narrative (R645-301-212, p 2-3) should account for the volume of all stockpiles currently in existence on site: A, B, E, & F, rather than accounting for stockpiles that previously existed on site (A, B, C, D, E).
- Include in the application the quantity of coal preparation waste stored on site in the coal preparation storage area and in fills.
- The application must account for the existing acreage of storage piles on site and the existing miles of haul roads.
- The graded surface should not be compacted as indicated in the reclamation plan, rather the last lifts should be loosely applied, such that a four foot rooting zone is achieved.
- Test plots indicate that the gouging method is superior than discing for vegetation establishment. The site should be gouged after grading.

TECHNICAL ANALYSIS:

**REQUIREMENTS FOR PERMITS FOR SPECIAL
CATEGORIES OF MINING**

**COAL PREPARATION PLANTS NOT LOCATED WITHIN THE PERMIT
AREA OF A MINE**

Regulatory Reference: 30 CFR Sec. 785.21, 827; R645-302-110, R645-302-260, et seq.

Analysis:

As outlined in the subsequent sections of this technical analysis, the application was reviewed under the Utah Rules for Coal Processing Plants Not Located Within the Permit Area of a Mine, R645-302-260. All provisions of R645-300 and R645-301 apply to this category of mining unless otherwise specified under R645-302.

Findings:

As discussed in this Technical Analysis, the information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. The Division's Findings are outlined under the R645-301 headings that follow.

GENERAL CONTENTS

IDENTIFICATION OF INTERESTS

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

Analysis:

The revised mining and reclamation plan (MRP) (Task 1911) has been submitted by the Michael Glasson, Resident Agent for the Permittee, Andalex Resources, Inc, Tower Division, a Delaware corporation (Section 2, pp1-4 and 1-5). The application indicates in Section 2, page Andalex Resources Inc. is 100% owned and controlled by Andalex Resources B.V., a Netherlands organization. Correspondence on file with the Division dated August 26, 2002 and December 18, 2003 notes that Andalex Resources Inc., is owned by Andalex Hungary, Ltd.; Andalex Hungary, Ltd. is owned by Andalex Investments BV; Andalex Investments BV is owned by Misland (Cyprus) Investments Limited and A&A investments Ltd.; and A&A Investments Ltd is owned by the Mitchell Green Family Trust. As a result, changes to the principal shareholders listed under R645-301-112.300 and R645-301-112.320 are necessary.

Andalex Resources, Inc., Tower Division is affiliated with the following United States coal mining operations (p 1-7):

1. Andalex Resources, Inc., the Cimarron Division;
2. Andalex Resources, Inc., Little Creek Division;
3. AMCA Coal Leasing, Inc.; and
4. West Ken Coal Corporation.

The Resident Agent, Michael Glasson, is also affiliated with the Centennial Mines (C/007/019). The MRP mistakenly identifies the Mr. Glasson as the Resident Agent for the Centennial Mine but not the Wildcat Loadout (C/007/033) in Section R645-301-112.200 page 1-5.

Section 2, page 1-6 of the MRP lists present and past corporate personnel of Andalex Resources, Inc. Ronald C. Beedie has been Director since 1988. Peter B. Green has also been

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with the corporation since 1988 and now serves as Director, Chairman and CEO of Andalex Resources, Inc. John Bradshaw has been Vice President (Finance) since 1990 and is also Secretary. Douglas H. Smith is the current President and Director since 1994. Samuel C. Quigley is Vice President (Operations) since 1995. The address given for all of the above is 45 West 10000 South; Sandy, UT 84070. The employer identification number is provided in Section 2, page 1-7

Correspondence with the Division dated August 26, 2002 notes one change to those listed on page 1-6 of the MRP: Alexander Harold Samuel Mitchell Green assumed the position of Director on January 11, 2002.

Legal and financial information provided in the application must include any coal mining and reclamation operation owned or controlled by either the applicant or by any person who owns or controls the applicant. Correspondence in the Division files dated December 18, 2003 confirms that Andalex Resources Inc. Tower Division also operates the Centennial Mine (007019) and has a connection with Genwal Resources, Inc. (Crandall Canyon Mine) and West Ridge Resources, Inc. (Westridge Mine).

Findings

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following, in accordance with:

R645-302-263 and R645-301-112.220, The MRP identifies the Mr. Glasson as the Resident Agent for the Centennial Mines, but not the Wildcat Loadout (C/007/033) in Section R645-301-112.200 page 1-5.

R645-302-263 and R645-301-112.300, (1) According to correspondence in the Division files, Alexander Harold Samuel Mitchell Green assumed the position of Director on January 11, 2002 and he should be included in the list of persons controlling the Applicant, Section 2, page 1-6. **(2)** Changes to the principal shareholders of Andalex Resources, Inc. listed under R645-301-112.300 and R645-301-112.320 is necessary as detailed in correspondence on file with the Division dated August 26, 2002 and December 18, 2003 wherein ownership of Andalex Resources, Inc is through multiple parent companies. **(3)** Ownership and control information must include officers and directors of all parent companies. **(4)** The list of affiliated companies should be updated as necessary. i.e. Andalex Resources, Inc Cimarron Division, Andalex Resources, Inc Little Creek Division, AMCA Coal Leasing Inc., and West Ken Coal Corp.

R645-302-263 and R645-301-112.400, Legal and financial information provided in the application must include any coal mining and reclamation operation owned or controlled by either the applicant or by any person who owns or controls the applicant. i.e Centennial Mine; Genwal Resources, Inc. (Crandall Canyon Mine); and West Ridge Resources, Inc. (Westridge Mine).

VIOLATION INFORMATION

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

Analysis:

Section 2, pages 1-8 and 1-9 state that violation for Andalex Resources, Inc. Tower Division and affiliates is found in Appendix B and that neither Andalex Resources, Inc. Tower Division nor its affiliates have had a permit revoked or suspended in the last five years or a bond forfeited.

Appendix B contains a list of violations that were incurred by Andalex Resources, Inc. Tower Division in the years 1984 – 1988 and an Addendum dated January 26, 2004 indicating that there were no violations received in the previous three years for either the Centennial Mine (C/007/019) or the Wildcat Loadout (C/007/033).

Division records indicate that there was a violation written by Karl Houskeeper at the Wildcat Loadout on January 23, 2004 at the Centennial Mines. Violations written to the Permittee, Andalex Resources, Inc. Tower Division, in the three years preceding the date of this application (April 8, 2004) must be listed with the application as per R645-301-113.300. Any unabated cessation orders and unabated air and water quality violation notices received by the Permittee **and affiliates** must also be disclosed. An Applicant Violator System check on May 4, 2004 indicated that there were there were no outstanding NOV's or CO's or any bond forfeitures of sites associated with the Andalex Resources, Inc. Tower Division (permit renewal document dated 5/5/2004, Outgoing 0012.pdf), but the Division should check the AVS system for the United States affiliates of Andalex Resources, Inc. Tower Division as listed on page 1-7 of the submittal.

Alternatively, the Permittee may restate in this application that Appendix B contains a listing of all violations received by Andalex Resources, Inc. Tower Division and affiliated companies, within the last three years prior to the date of this application (April 8, 2004).

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Findings:

An Applicant Violator System check on May 4, 2004 indicated that there were there were no outstanding NOV's or CO's or any bond forfeitures of sites associated with the Andalex Resources, Inc. Tower Division (permit renewal document dated 5/5/2004, Outgoing 0012.pdf), but the Division should check the AVS system for the United States affiliates of Andalex Resources, Inc. Tower Division as listed on page 1-7 of the submittal.

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following, in accordance with:

R645-302-263 and R645-301-113.300, The application must include a listing of all violations received within the last three years prior to the date of this application (April 8, 2004) by Andalex Resources, Inc. Tower Division and any unabated violations or cessation orders written to affiliated companies or alternatively, the Permittee may state in the application that there have been no violations incurred by Andalex Resources, Inc. Tower Division and no unabated violations or cessation orders to affiliated companies during the three years preceding the date of the current application (April 8, 2004).

RIGHT OF ENTRY

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

Analysis:

The permit area comprises 91 acres, of which 12.5 acres are under a right of way agreement between the Utah Railway and the Bureau of Land Management. The remaining acreage (approximately 87.5 acres) is BLM land utilized under Right of Way agreements U-48027 and U-52810. Andalex Resources, Inc. holds the rights to enter these federal lands through a sub-lease agreement with AMCA Coal Leasing, Inc. (Section 2, pg 1-12). An Agreement between Andalex Resources, Inc. and Beaver Creek Coal Co. has been in effect since 1988 (Appendix B).

A surface lease agreement with the Utah Railway has been in place since 1981 (Appendix B). The U.S. Department of the Interior, Bureau of Land Management Right of Way Agreement has been in effect since 1982 (Section 2, page 1-12 and Appendix B).

Findings:

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following, in accordance with:

R645-302-263 and R645-301-114, The sub-lease agreement between AMCA Coal Leasing, Inc. and Andalex Resources, Inc., described in the MRP narrative Section 2, pg 1-12 must include the date of execution of the document and the complete names of the parties to the sub-lease or alternatively, the document could be included in Appendix B.

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:

Lands designated unsuitable area defined in 30 CFR 761.11 as lands within National Parks, Wildlife Refuge Systems, National System of Trails, National Wilderness Preservation System, Wild and Scenic Rivers System, National Recreation Areas, National Forest, National Historic Register of Historic Places, or within 100' of a public road (excepting the intersection with a mine haul road); within 300 ft of an occupied dwelling, public park, school, church or any public building; within 100' of a cemetery.

Section 2, page 1-13 indicates that the land within the permit area is not unsuitable for due to any of the above reasons. The land is owned by the federal government and managed by the Bureau of Land Management (BLM). The land has been historically used for a wash plant and loading facility (page 1-24). The operation is 100 ft distant from the County Road.

The 56.1 acre disturbed area (pg 3-4) for the Wildcat site is shown on Plate 1. The permit area is shown on Figure I-1.

Findings:

The information provided meets the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine.

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PERMIT TERM

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

Analysis:

Andalex Resources, Inc. was issued a permanent program permit for this site on May 5, 1989, which was successively renewed on May 5, 1994 and May 5, 1999 and May 5, 2004. The current permit expires May 5, 2009.

The permit area comprises 91 acres, of which 12.5 acres are under a right of way agreement between the Utah Railway and the Bureau of Land Management (Section 2, pg 1-2). The remaining acreage (approximately 87.5 acres) is also BLM land, utilized under Right of Way agreements U-48027 and U-52810. Within the permit area, 56.1 acres are disturbed of those acres, 36.1 acres are pre-SMCRA (Section 4, pg 3-4), although no differentiation is made in the application for the reclamation of these lands (Section 2, pg 1-25).

Effective May 1994, Exhibit A of the permit describes a surface disturbance of 63.7 acres.

Findings:

Andalex Resources Inc. holds a valid State of Utah mining permit that expires May 5, 2009.

PUBLIC NOTICE AND COMMENT

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

Analysis:

The Office of Surface Mining determined that this action does not constitute a mining plan revision (letter dated May 24, 2004). The application received on April 8, 2004 is a reorganization of the existing mining and reclamation plan and does not require public notice. Public comment on the permit renewal for the Wildcat Loadout was sought through legal notice in the Sun Advocate during the month of February 2004.

Findings:

Public notice is not required for this submittal.

PERMIT APPLICATION FORMAT AND CONTENTS

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

Analysis:

Acid and Toxic Forming Materials R645-301-731.300 should refer the reader to sampling information found on page 7-4 under R645-301-711.100 rather than R645-301-512.240 (sediment pond information).

Appendix B could use a new table of contents.

The statement on page 2-9 that the new test plots are located adjacent to topsoil pile F is inaccurate according to Plate 1.

The plan indicates that a detailed cost of reclamation is provided in Appendix 8-1 (pg 2-20), but Appendix 8-1 could not be found. The Division found this information in Section 6, beginning on page 5-134.

Date of topsoil salvage (1988?), as well as date of topsoil pile F test plot construction and seeding (1993?), should be indicated in the narrative under R645-301-231.400. Clarification is requested in the narrative under R645-301-231.400 as to whether the seed mix for use on test plots given on page 2-23 of the MRP as revised September 17, 1993, was used on the topsoil pile F testplots or whether the seed was a mix of grass and shrubs as described on page 2-4 of the MRP was used as Mr. Collins indicated in his 1997 evaluation of the plots.

Section R645-301-212, pp 2-6 and 2-21, incorrectly identify Appendix D, rather than Appendix N, as the location of spoil plot information.

The plan indicates in Section R645-301-240 that slopes greater than 10% will be staked (pg 2-19). The Division is uncertain as to the purpose of the staking. Will it show where drill seeding will end and hydroseeding begins.

Findings:

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following, in accordance with:

R645-302-263 and R645-301-121.120, (1) Acid and Toxic Forming Materials R645-301-731.300 should refer the reader to sampling information found on page 7-4 under R645-301-711.100 rather than R645-301-512.240 (sediment pond

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information). (2) An updated Table of Contents for Appendix B would be helpful for electronic review and hard copy. (3) Please correct the statement on page 2-9 indicating that the new test plots are located adjacent to topsoil pile F to read that the 1994 test plots were established on topsoil pile B adjacent to topsoil pile E (according to Plate 1). (4) Accurately state the location of the Reclamation Cost and Bonding information (page 2-20). (5) Date of topsoil salvage (1988?), as well as date of topsoil pile F test plot construction and seeding (1993?), should be indicated in the narrative under R645-301-231.400. (6) Clarification is requested in the narrative under R645-301-231.400 as to whether the seed mix for use on test plots given on page 2-23 of the MRP as revised September 17, 1993, was used on the topsoil pile F testplots or whether the seed was a mix of grass and shrubs as described on page 2-4 of the MRP was used as Mr. Collins indicated in his 1997 evaluation of the plots. (7) Section R645-301-212, pp2-6 and 2-21 incorrectly identify Appendix D, rather than Appendix N, as the location of spoil plot information. (8) Please specify in Section R645-301-240 the purpose of designating slopes greater than 10% through staking (page 2-21). Ie. Will this show where drill seeding ends and hydroseeding begins?

REPORTING OF TECHNICAL DATA

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

Analysis:

Individuals and firms that contributed to the mining and reclamation plan are listed in Section 2, R645-301-130.

Findings:

The information provided meets the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine.

ENVIRONMENTAL RESOURCE INFORMATION

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

PERMIT AREA

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

Analysis:

The site is on federal land managed by the Bureau of Land Management. The permit area covers 91 acres of which 56.1 are within the disturbed area boundary. Of these disturbed acres, 36.1 acres are pre-SMCRA (Section 4, pg 3-4). Also within the permit area are 12.5 acres of land under lease to the Utah Railway by the BLM (Section 2, page 1-2 and Section 4, pg 3-4). The total acreage within the disturbed area would then be $56.1 + 12.5 = 68.6$ acres.

There appears to be a discrepancy between the information provided in the MRP (as described in the above paragraph) and Exhibit A Surface Disturbance included in the 1989, 1994 and 2004 Permits which indicates 63.7 acres of disturbance within the bonded area and Section R645-301-240, page 2-22 which indicates that Plate 9 shows a seeded area of 66 acres.

Findings:

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following, in accordance with:

R645-302-263 and R645-301-521, Please explain the discrepancy between the information provided in the MRP Section 4, page 3-4 (56.1 acre disturbance) and Exhibit A Surface Disturbance of the 1989, 1994 and 2004 Permit which indicates 63.7 acres of disturbance within the bonded area and Section R645-301-240, page 2-22 which indicates that Plate 9 shows a seeded area of 66 acres.

CLIMATOLOGICAL RESOURCE INFORMATION

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

Analysis:

Information found under heading R645-301-724.400 duplicates that found under Chapter 3 Section F in the existing MRP, except that Figure III-3 Price Climatological Summary [sic] has been omitted as well as Section 3.3 Winds.

All information provided is for the period 1936 to 1976 from the Price Weather Station. This information is 30 years old and should be updated and can be downloaded from the internet using the following web sites <http://climate.usu.edu/UCCinstructions.html> or <http://www.wrcc.dri.edu/summary>

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Findings:

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following:

R645-302-263 and R645-301-724.412, Information on the prevailing winds must be retained in the reformatted MRP.

- **R645-302-263 and R645-301-121.100 and R645-301-724.400**, Thirty year old climatological information should be replaced with current information that can be downloaded from the internet using the following web sites
<http://climate.usu.edu/UCCinstructions.html> or <http://www.wrcc.dri.edu/summary>

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.

Analysis:

Soil Resources are described in Section 3 of the MRP. Appendix D contains the Soil Survey information for the site as well as the topsoil mass balance and soil chemistry information. Plate 11 provides a Soil Conservation Service Order III soil survey. Plate 13 summarizes topsoil storage.

The Carbon County soil survey classifies the undisturbed soils in the Wildcat area as Map Unit 52, Hernandez family 3-8% slopes. These deep soils can supply a lot more than six or twelve inches of topsoil.

The Wildcat soil was described twenty years ago by Earl Jensen, retired soil scientist with the NRCS. (The location for his pit is generally given as the intersection of the Gordon Creek road and Utah Railroad.) He classified the soil as fine loamy mixed mesic Ustollic Calciorthis with a map unit name of Abra loam. He indicated that there was 60 inches of available topsoil. He also indicated that there was a layer of calcium carbonate accumulation from 9 – 12 inches. And that adjacent soils did not have this layer of accumulation. The Abra loam is an official series name on the NRCS soil survey web site <http://wwwsoils.usda.gov> go into classification and official series descriptions, view by series names. The NRCS changed the classification of this series to fine loamy, superactive, mesic, Ustic Haplocalcid. The “superactive” designation pertains to the ratio of the electrical conductivity and the percent clay. There can be a calcic horizon in the soil.

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The 1988 SCS soil survey for Carbon County maps the soils of the site as the Hernandez Series (Map Unit 55) and classifies the soils as fine-loamy, mixed, superactive, mesic Ustic Haplocalcid (similar to the Abra loam, described above). This is a deep soil that is capable of high production if an adequate amount of water is supplied.

Substitute topsoil has also been evaluated in four fill slopes of the site through the use of test plots described in Appendix N. These plots were installed in 1989 (Plate 1) and last evaluated by Patrick Collins, PhD, of Mt. Nebo Scientific Research & Consulting in 1991. Mr. Collins reported that the plots were dominated by Russian thistle (Salsola iberica) and summer cypress (Kochia scoparia) weeds, with the exception of spoil plot B that contained a sizeable community of Western wheatgrass (Agropyron smithii) and Indian ricegrass (Oryzopsis hymenoides).

The Wildcat site currently has a deficit of 30,000 cu yds of topsoil to achieve the goal of six inches topsoil replacement depth over the 56.1 acres (Section R645-301-224, pg 2-8 and R645-301-240 "Soil Testing and Preparation" pg 2-21). The areas of substitute topsoil are outlined as revegetation test plot locations A – D on Plate 1 and described in Appendix N and Section R645-301-212. The plan indicates on page 2-21 that the volumes represented by each location A-D will be added to the topsoil pile summary (found on page 2-3). The plan does not provide an indication of how much material will be gathered from the substitute topsoil locations by depth, area or volume.

Information on file with the Division (2003 Incoming Amendment folder) includes an Addendum to Appendix D, a soil survey conducted under the direction of Mr. James Nyenhuis for Mt. Nebo Scientific in March 2003. This amendment was subsequently withdrawn, and so the information is not in the MRP. However, the information collected substantiates a twenty four inch soil salvage depth in future expansions and the use of subsoils to be collected as needed to cover the coal mine waste at reclamation. This soil survey provides valuable information on substitute topsoils and should be included in the Soils Resource Information regardless of whether the expansion takes place at the site.

Findings:

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following:

R645-302-263 and R645-301-222 and R645-301-224, The Addendum to Appendix D, a soil survey conducted under the direction of Mr. James Nyenhuis for Mt. Nebo Scientific in March 2003, should be included in the application as it provides valuable information on soils within the permit area.

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R645-302-263 and R645-301-233.200, The plan indicates on page 2-21 that the volumes represented by each location A-D will be added to the topsoil pile summary (found on page 2-3). This summation of area, depth of salvage and volume for each of the substitute topsoil locations denoted on Plate 1 must be included in the topsoil pile summary .

ALLUVIAL VALLEY FLOORS

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

Analysis:

Alluvial Valley Floor Determination

Geology information is found in Section 7. Hydrology is found in Section 8. No new information has been presented.

Findings:

The Division previously determined in the May 5, 1989 Technical Analysis of the Wildcat Loadout that no alluvial valley floors exist within or in close proximity to the proposed permit area.

PRIME FARMLAND

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

Analysis:

There has been no change in the status of prime farmland. Appendix D contains a determination from the Soil Conservation Service in 1988. Although the Carbon County soil survey classifies the undisturbed soils in the Wildcat area as Map Unit 52, Hernandez family 3-8% slopes (a prime farmland soil), there is no water source within the permit area (Section 8).

Findings:

The Division is in agreement with the Soil Conservation Service that there are no important farmlands in the permit area.

OPERATION PLAN

AIR POLLUTION CONTROL PLAN

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

Analysis:

The January 5, 2000 Air Quality Approval Order (DAQE-005-00) is found in Appendix B as noted in Section R645-301-420 Air Quality. The AO is predicated on Andalex Resources, Inc. operating according to the Notice of Intent submitted to the DAQ on May 14, 1999, and additional information submitted to the DAQ on October 22, 1999. This AO replaces the AO dated October 25, 1996 (DAQE-998-96).

The following equipment was approved with AO DAQE-005-00:

- Three below ground hoppers equipped with water sprays for truck unloading.
- Two coal crushers rated at 250 Tons/hr and enclosed as per condition #9
- Three sets of screens, each set rated at 500 Tons/hr
- Three radial stackers
- One under-pile reclaim system (conveyor)
- Railcar loadout consisting of a tower and an extendable chute for loading railcars
- Associated stockpiles
- Associated conveyors, covered as per condition #9.
- Associated mobile equipment.
- 0.21 miles of haul road, posted speed limit 5 mph, as per General Condition #11.

The requirements of the AO include:

- annual training of employees;
- control of disturbed or stripped areas through treatment (condition #12);
- maintenance of 4.0% moisture content of the fines (by weight) (condition #14);
- total combined area of all stockpiles not to exceed 16.5 acres (condition #15)
- watering storage piles, as conditions warrant (condition #15);
- visible emissions limits (20% opacity);
- application of water sprays or chemical treatment to areas used by mobile equipment and haul roads (condition #10)

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- maintainence of the surface of unpaved roads and pad areas in a damp/moist condition (condition #10);
- a production limit of **5,000,000 tons of coal** per rolling 12 month period (condition #7);
- a consumption limit of 80,000 gallons of diesel fuel per rolling 12 month period (condition #7);
- use of #1 or #2 diesel fuel oil only (condition #16); and
- sulfur content of fuel oil or diesel is not to exceed 0.5% by weight (condition #17).

Section R645-301-423.200 also refers to Appendix B for the fugitive dust control plan. The only dust control plan noted in Appendix B is the Air Quality Order described above, which relies upon the application of moisture to stockpiles and open disturbed areas as well as a limited haul road length and vehicle speed to control fugitive dust. The fugitive dust control must be applied when monitoring indicates greater than 20% opacity. Monitoring is the responsibility of the Permittee. Furthermore, the requirements of R645-301-423.100 and 423.200 apply to this surface activity with production greater than 1,000,000 Tons of coal per year. This means that the Permittee must conduct monitoring to provide sufficient data to evaluate the effectiveness of the fugitive dust control practices proposed in the plan.

Control of fugitive dust between Sediment ponds A and B will be via straw berms along the road way (R645-301-420, p 4-8). Coal fines or fugitive dust have accumulated to depths greater than three inches in this area on undisturbed soils (Patrick Collins report March 2003, Division Incoming Amendment Folder record 0001). These coal fines may be from any one of the six existing stockpiles on site that contain coal from Genwal and West Ridge Mines. The plan indicates in Section R645-301-212, page 2-4 that coal fines will be vacuumed if deemed necessary. Vacuuming has been found to be very disruptive to undisturbed soils and is in itself a disturbance. The Permittee is encouraged closely monitor the wind blown coal fine deposition on adjacent undisturbed soils and use moisture on the stockpile(s) to reduce fugitive dust as well as water sprays or chemical treatment on areas used by mobile equipment and haul roads (condition #10) as required by the January 5, 2000 Approval Order (DAQE-005-00) General Condition #15.

Findings:

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following, in accordance with:

- R645-302-263 and 645-301-422, (1)** The application must account for the existing acreage of storage piles on site in the narrative and if the acreage is in exceedence

of the Item 15 of the Air Quality Approval Order, the application must include correspondence with the Executive Secretary of the Utah Air Quality Board concerning the acreage of the site dedicated to storage piles. (2) Plate 1 shows greater than 0.21 miles of haul road and this is in violation of general condition #11 of the Air Quality Approval Order, the application must include correspondence with the Executive Secretary of the Utah Air Quality Board concerning the mileage of haul roads.

R645-302-263 and 645-301-422, The requirements of R645-301-423.100 and 423.200 apply to this surface activity with production greater than 1,000,000 Tons of coal per year. This means that the Permittee must conduct monitoring to provide sufficient data to evaluate the effectiveness of the fugitive dust control practices described in the plan.

TOPSOIL AND SUBSOIL

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

Analysis:

Topsoil Removal and Storage

Topsoil handling is described in Section 3, pages 2-1 through 2-4. Topsoil was removed to a depth of six inches from twenty acres. The year of topsoil salvage is not indicated in the plan, but was likely 1988. Grab samples were taken from stockpiled soil in 1988 (R645-301-212, pg 2-2 and Appendix D). This analytical information provides valuable information on the quality of the pre-existing surface soil.

Approximately 419,823 ft³ of topsoil (15,549 CY) is stored in five stockpiles labeled A through E (R645-301-212, p 2-3). However, only four stockpiles were noted on Plates 1 & 2. The stockpiles shown on the plates are A, B, E, & F. The volume of soil in stockpile F is not included in the narrative, but is reported to be 44,636 cubic ft on Plate 13.

The topsoil was reseeded in 1989 and 1990 (1989 Correspondence folders, memo from Henry Sauer dated April 25, 1989 and January 23, 1990) using a modified interim mix (memo from Lynn Kunzler dated November 17, 1989).

Section 3, page 2-3 describes transfer of topsoil piles B, C, and D to the west side of Wildcat for protection against wind blown coal fines (in 1994). The transferred topsoil was seeded with an interim seed mix described on page 2-4. Where topsoil piles were removed, the ground was drill seeded with the mixture described on page 2-4.

TECHNICAL MEMO

Topsoil B was recently reseeded in December 2002. Topsoil A was recently reseeded in June 2002 (see inspection reports). Topsoil B used to have test plots on its surface. The test plots were installed in 1994 as described in Chapter III, Part I, Section 1, page 52 and Chapter IV, Part F, Section 5.3, page 86 of the MRP. Mr. Glasson provided the Division with a copy of the 1997 evaluation of these test plots (incoming folder 3/11/03). **In the future, whenever reseeded and recontouring of topsoil piles is undertaken, it should be done in consultation with the Division soils specialist, so that the history of successes and failures is documented and used to develop the reclamation plan.**

The existing stockpiles are located on the west, south and north perimeters of the disturbed area. The prevailing winds are from west to east. Topsoil piles E and B are upwind of the site. Topsoil Pile A is located southeast of the coal stockpile and may be affected by wind blow coal fines. **Plate 13 illustrates the existing topsoil storage piles, although the limited information provided on the plate does not allow the Division to confirm volumes stored in the piles. Plate 13 was not previously reviewed by the Division soil scientist prior to its approval and incorporation into the plan. Topsoil storage maps must be certified by a professional engineer.**

Coal fines or fugitive dust have accumulated to depths greater than three inches on adjacent, undisturbed soils within the permit area (Patrick Collins report March 2003 included with submittal AM03A). These coal fines may be from any one of the six existing stockpiles on site that contain coal from Genwal and West Ridge Mines. The plan indicates in Section 3, page 2-4 that coal fines will be vacuumed if deemed necessary. Vacuuming has been found to be very disruptive to undisturbed soils and is in itself a disturbance. The Permittee is encouraged to closely monitor the wind blown coal fine deposition and use moisture on the stockpile(s) to reduce fugitive dust as required by the January 5, 2000 Approval Order (DAQE-005-00) General Condition #15.

Topsoil Substitutes and Supplements

Stipulation UMC 817.22-(1)-(HS) of the 1989 Technical Analysis required the Permittee to establish test plots to determine the suitability of the fill as substitute topsoil. The Permittee established four plots in 1989 for this purpose (Section 3, R645-301-224). The information in the files and the MRP reveals the following:

- Four spoil plots were selected within the disturbed area: A, B, C, D (see Plate 1 of MRP).
- Spoil samples from the four plots were analyzed by Utah State University Plant & Water Analysis Lab in December 1988, analyses were received by the Division on February 15, 1989 (Incoming File).

TECHNICAL MEMO

- Spoil plots were ripped to a depth of six inches and 1 Ton/acre alfalfa hay was incorporated to the same depth (MRP Appendix D), this tilling and mulching with straw was confirmed by Division Inspection Reports dated November 2, 1989 and December 19, 1989.
- Spoil plots may have been left rough with pitting (MRP, Appendix D) and may have been fertilized with 40 lbs K₂O; 60 lbs P₂O₅; and 60 lbs N (as Urea: ½ in Fall of 1989 and ½ in Spring of 1990 (MRP, Appendix D).
- Spoil plots were hand broadcast with a **modified** interim seed mix (December 19, 1989b Inspection Report). The approved modification was to delete Needle and Thread Grass and all shrub species and to include *Elymus cinereus* Basin Wildrye (3 lbs/acre) and *Agropyron trachycaulum* Slender wheatgrass (2.5 lbs/ac) (Lynn Kunzler, Memo to file dated November 17, 1989).
- The MRP describes in Appendix D a monitoring program for the spoil plots. The plots were to have been monitored in years 1, 2, 3, 5, 9, and 10.
- Spoil plots were surveyed in 1991, two years after seeding, by Patrick Collins (Appendix N). No further monitoring has been conducted.

The 1991 survey report (1991, Appendix N) shows that all the plots were weedy and many of the seeded species were not present. Plot B showed the most positive result with 30% of its 52% cover attributed to the seeded grasses. Plot B is near the substation, east of the railroad tracks. The Division biologist (Jerriann Ernstsens) briefly examined Plot B during a field visit (January 30, 2003) and the plot is still dominated by grasses (species unidentified) and without shrubs.

1988 samples of the spoils that were taken in six inch depth increments shed some light on the success of spoil plot B vegetation. Spoil plot B soils are loam in texture with pH values between 8.0 and 8.3, Electrical Conductivity values between 3.3 mmhos/cm decreasing to 0.9 mmhos/cm in the profile; and Sodium Adsorption Ratio (SAR) values from 1.3 falling to 0.4 within the profile. Spoil Plot B had the most desirable characteristics of the spoils sampled. Although spoil Plot A soils were also low in SAR, they were more sandy and would have had less water holding ability in the drought years after the seeding, described by Mr. Collins 1991 survey. Spoil Plots D and E both are loam texture, but have EC values increasing down the profile to a high value of 4.0 mmhos/cm for spoil D and 3.0 for spoil E. The SAR values for spoil plots D & E are correspondingly high (from 2.8 to 6.6 for spoil D and from 1.6 to 8.5 for spoil E).

In addition to the spoil plots, there were four topsoil testplots were established on topsoil pile B. Date of establishment of these test plots is not indicated in the MRP, but they probably were completed in 1993 as part of the commitment stated on page 2-8 to implement test plots if the spoil plots were unsuccessful. The treatments on these test plots were

- irrigation vs. no irrigation;
- incorporation of 3 to 4 tons alfalfa hay vs 1 ton alfalfa hay;

TECHNICAL MEMO

- 1 ton alfalfa hay incorporated and 1.5 tons straw anchored with netting vs. 1 ton alfalfa hay incorporated and 1.5 tons oat or barley straw anchored with mesh and staples.

The topsoil pile B test plots were seeded in 1994, according to Patrick Collins in his July 1997 Evaluation of the Test Plots (Division 2003 Incoming Record 0001). Although, a seed mix for use on test plots is given on page 2-23 of the MRP as revised September 17, 1993, it is not likely that this mix was used. Mr. Collins indicates that the seed was a mix of grass and shrubs as described on page 2-4 of the MRP. Two and ½ years after seeding, Mr. Collins provided the following conclusions:

- Excluding forbs which were all weedy, the percent cover ranged from 38.75% to 43.33%.
- Seeded *Kochia prostrata* (prostrate kochia) and *Agropyron cristatum* (Fairway crested wheatgrass) accounted for most of the cover.
- Mulch incorporation at 3 – 4 Tons/ac greatly increased establishment of *Kochia prostrata* (a woody shrub) at the expense of grasses. This trend was also noted at lower levels of mulch incorporation.
- Irrigated plots favored grasses.
- Fairway crested wheatgrass (an introduced species) did much better than the native grasses and although it did not exclude the natives, may have created competition limiting their establishment.

The plan provides some parameters to be tested in future plots (page 2-8): native and local seed, different fertilizing techniques (including no fertilizer) and different seedbed preparation. The 1997 Collins analysis suggests that Fairway Crested wheat seed should be eliminated from the interim seed mix in order to encourage greater diversity in the establishment of grasses.

The Division concurs with Mr. Collins evaluation and recommends that the seed applied to the topsoil stockpiles has Fairway crested wheatgrass removed from the mix. The Division would also suggest the following techniques be evaluated in future seeding activity: covering the seed by raking (increase shrub germination), employing wood-fiber hydromulch, eliminating fertilizer, and changing the timing of seeding to late summer.

Rather than go to the extreme of pursuing additional area for disturbance (page 2-8), the Division recommends that Andalex commits to a salvage depth of twenty-four inches in any future expansion plans, with another thirty inches of subsoil to be salvaged and stockpiled separately for use as substitute topsoil during final reclamation (based upon the soil survey conducted in March 2003, by Mr. Jim Nyenhuis).

Findings:

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following, in accordance with:

R645-302-263 and R645-301-121.200, (1) The plan should indicate the year that soil was salvaged from the 20 acres of disturbance in the narrative of Section R645-301-212. **(2)** The narrative (R645-301-212, p 2-3) should account for the volume of all stockpiles currently in existence on site: A, B, E, & F, rather than accounting for stockpiles that previously existed on site (A, B, C, D, E). i.e. The narrative should indicate approximately 419,823 cubic ft of topsoil (15,549 CY) is stored in three stockpiles labeled A, B, & E and provide a volume for the soil in stockpile F.

R645-302-263 and R645-301-231.400, The submittal should include a revision of plates for the topsoil stockpiles relocated in 1994, including as-built cross-sections of the topsoil piles.

R645-302-263 and R645-301-233.100, The plan indicates in Section 3, R645-301-224, p 2-8 that if the test plots were unsuccessful, Andalex would either develop more test plots or to pursue a BLM right of way for the purpose of obtaining substitute topsoil. Rather than go to the extreme of pursuing additional area for disturbance, the Division recommends that Andalex commits to a salvage depth of twenty-four inches in any future expansion plans, with another thirty inches of subsoil to be salvaged and stockpiled separately for use as substitute topsoil during final reclamation (based upon the soil survey conducted in March 2003, by Mr. Jim Nyenhuis).

R645-302-263 and R645-301-231.400 and R645-301-521.165, Plate 13 is not adequate to confirm the volumes stored in the topsoil piles. Plate 13 should include cross sections of the piles and contours within 20 feet of the pile on all sides of each pile. Plate 13 must be prepared by or under the direction of and certified by a qualified, registered, professional engineer.

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.

TECHNICAL MEMO

Analysis:

Coal processing waste was used (along with subsoils) to create a foundation for the stockpiles and in construction of sediment ponds (R645-301-212 p 2-2; R645-301-512.230 p 5-7; R645-301-512.240 p 5-10)).

Refuse Piles

Refuse or bony is stored on the west side of the railroad tracks (Plate 1). This refuse was sampled once in 1993 as described in Section 8 R645-301-711.100 Groundwater Monitoring page 7-4. The results of this sampling could not be found in Appendix D, but the December 1993 leachate analysis was found in the 1994 Annual Report.

A source of confusion to the reader is the statement on page 7-5 indicating there will be annual leachate sampling as well as an acid/base accounting analysis of the coal stored at the site. These annual leachate analyses and the acid/base accounting analysis were not found in the MRP or with the annual reports and it is the Division's impression that this statement is not accurate.

Plate 1 indicates a storage location for coal preparation waste material. The quantity of material stored in this location was not found in the MRP. Refuse material has been used as fill to create a foundation for the areas of previous expansion as noted in R645-301-512.230 p 5-7. The quantity of refuse used as fill was not found in the MRP.

Findings:

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following, in accordance with:

R645-302-264.300 and R645-301-731.311, (1) Include in the application the quantity of coal preparation waste stored on site in the coal preparation storage area and in fills. (2) Provide in Appendix D the refuse analyses referenced in Section 8 R645-301-711.100 Groundwater Monitoring page 7-4. (These analyses were included in the 1994 Annual Report.) (3) Please clarify whether the statement indicating there will be annual leachate sampling as well as an acid/base accounting analysis of the coal stored at the site is accurate (R645-301-711.100 page 7-5).

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, -300-148, -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:

Acid- and Toxic-Forming Materials and Underground Development Waste

Acid and Toxic Forming Materials R645-301-731.300 should refer the reader to sampling information found on page 7-4 under R645-301-711.100 rather than R645-301-512.240 (sediment pond information).

Section 645-301-512.230 page 5-7 discusses the use of coal mine waste as substitute fill during operations with separate handling and disposal of the coal mine waste under four feet of subsoil.

Findings:

The information provided meets the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine.

RECLAMATION PLAN

GENERAL REQUIREMENTS

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

Analysis:

Reclamation techniques are being investigated at the site. A topsoil test plot study was installed on Topsoil Pile B in 1994 to address the questions of which reclamation treatments provide the most favorable condition for seed germination and plant growth on topsoil. In 1997 by Patrick Collins of Mt. Nebo Scientific evaluated the topsoil test plots (see discussion under Operation Plan Topsoil and Subsoil).

TECHNICAL MEMO

Findings:

The information provided meets the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. The Division expects to continue refining the reclamation plan for this site in cooperation with the Permittee.

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

Final reclamation contours and cross section locations are shown on Plate 9. Plate 10, Reclamation profiles indicates that the reclaimed site will gently slope from west to east at a grade between 20h:1v (cross-section C) to 26h:1v (cross-section D).

Phase I reclamation will involve grading 74,000 cu yds of material (Section R645-301-240, page 2-16 and Tables II-1 Mass Balance Summary). Ponds B and E will be removed and Ponds A, C, E and F will remain until Phase 2 of the reclamation (p 2-16 and 2-19). The plan indicates that soil will be moved at an optimum moisture content, i.e. water will be added if the soil is too dry (pg 2-20). Section R645-301-512.230 page 5-7 describes the burial of coal mine waste underneath four feet of subsoil.

The reclamation plan indicates that the fill will be compacted and scarified (page 2-19). The plan previously described compaction of fills on page 2-5. The Division recommends that no extraordinary compaction is applied to the last few lifts so that a rooting zone of four feet is left relatively loose. This loose application of fill should eliminate the requirement for ripping (scarification) of the graded fill prior to topsoil placement (pg 2-19).

Phase II is the removal of ponds A, C, D, and F and removal of the fence surrounding the permit area. Phase II again refers to concurrent compaction and scarification (page 2-19). The upper and lower cell of the permanent impoundment shown on Plate 9 will remain. The outsoles of these impoundments are vegetated.

Findings:

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following, in accordance with:

R645-302-264.300 and R645-301-242.200, In Section R645-301-242.200, the plan should indicate that no extraordinary compaction will be applied to the last few lifts so that a rooting zone of four feet is left relatively loose. This loose application of fill should eliminate the requirement for ripping (scarification) of the graded fill prior to topsoil placement (pg 2-19).

TOPSOIL AND SUBSOIL

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

Analysis:

Redistribution

Subsoil will be scarified (pg 2-19). As mentioned under Backfilling and Grading, a loose application of fill should eliminate the requirement for ripping (scarification) of the graded fill prior to topsoil placement.

R645-301-243 indicates soil nutrients will be applied as needed. Section R645-301-240 page 2-21 indicates topsoil will be sampled for fertility and amended as recommended by the regulatory authority. Unless deficiencies are extreme, the Division discourages the use of fertilizer, and has noted that nitrogen fertilization encourages weedy species in The Practical Guide to Reclamation in Utah, DOGM, 2000, available on the web at www.utah.gov

Topsoil will be replaced to a depth of six inches over a 56.10 acre area (page 2-5, R645-301-242 p 2-25). However, section R645-301-242.300 indicates topsoil will not be replaced on the embankments of permanent impoundments (shown on plates 1 and 9 on the west side of the railroad tracks) and R645-301-212 indicates that topsoil will not be applied to the Small Area Exemption located on the east side of the permit area (pg 2-6). Plate 2 illustrates alternate sediment control areas (ASCA), three of which are on the east side of the permit area. Further clarification of which ASCA's have been regraded and revegetated and will not receive topsoil is requested. Topsoil placement will occur in the Fall (pg 2-20). Topsoil will be replaced using dump trucks and graders (pg 2-20). Seed will be applied to a 66 acre area shown on Plate 9 (Section R645-301-240, pg 2-22).

Findings:

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following, in accordance with:

TECHNICAL MEMO

R645-302-264.300 and R645-301-242, (1) The statement made in this section is contradicted by statements made in R645-301-242.300 and R645-301-212 (pg 2-6) indicating that topsoil will not be replaced in an Small Area Exemption on the east side of the permit area and on the embankments of the permanent impoundment on the west side of the permit area. **(2)** Plate 2 illustrates alternate sediment control areas (ASCA), three of which are on the east side of the permit area, therefore, further clarification of which ASCA's have "been regraded and revegetated" and will not receive topsoil is requested.

STABILIZATION OF SURFACE AREAS

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

Analysis:

The plan does not indicate gouging of the surface for water collection and wind reduction. Rather, the plan indicates gentle slopes that are graded smooth and disced using farm equipment and seed will be spread by a rangeland drill (pp 2-5, 2-19, 2-21)

These techniques were not very successful in their use on the spoil plots. But the gouging technique used on the topsoil test plot was successful. Based on this information and previous successful application of the technique, the Division recommends that the Permittee evaluate the replacement of the discing/crimping/drill-seeding with gouging, hydroseeding and hydromulching. If gouging is adopted, then the bonding costs will require re-adjustment.

All seeded areas (illustrated on Plate 9) will be treated with either straw mulch or hydromulch (1 Ton/ac) to stabilize the regraded soil. Straw mulch would be crimped using dozers (Section R645-301-240, pg 2-21).

The embankments of permanent impoundments may be stabilized with riprap (Section R645-301-242.320).

"All rills and gullies greater than nine inches will be filled, graded or otherwise stabilized and the area re-seeded or replanted if the rills or gullies are disruptive to the approved postmining land use or result in additional erosion and sedimentation (Section R645-301-212, p 2-6)."

Findings:

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine and Reclamation Stabilization of Surface

Areas requirements of the Regulations. Prior to approval, the Permittee must provide the following, in accordance with:

R645-302-264.300 and R645-301-244.200, The Permittee should evaluate the replacement of discing/crimping/drill-seeding stabilization treatments described on pages 2-21 and 2-22 with gouging, a treatment that was successful in the topsoil testplots.

BONDING AND INSURANCE REQUIREMENTS

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

Analysis:

General

The bond was reduced by letter dated September 5, 1997 from \$813,795 down to \$698,000 in year 2000 dollars.

Form of Bond

The Division accepted an Irrevocable Letter of Credit in the amount of \$651,000 on February 2, 2004. The Irrevocable Letter of Credit is dated December 9, 2003.

Determination of Bond Amount

The bond was originally calculated to be \$726,335 in 1988. The submittal includes a narrative describing the bond calculation in Section 6, beginning on page 5-134. In the submittal, the bond is calculated at \$662,900 (1990 dollars) escalating to \$797,000 (1999 dollars).

The bond was recalculated in 1997 and determined to be \$655,784 with an escalation factor of 2.52% reaching a cost of \$698,000 in the year 2000 (letter from Daron Haddock to Mike Glasson dated September 5, 1997). The reason for the bond reduction was the savings in concrete demolition costs when a 125 horsepower excavator equipped with a hydraulic hammer replaced the 50 horsepower backhoe.

The Division accepted an Irrevocable Letter of Credit in the amount of \$651,000 on February 2, 2004. The reason that the Division accepted a letter of credit for \$651,000 is not explained in the files. The Permittee should update the bonding section of the narrative to provide an accounting for the current bond of \$651,000.

TECHNICAL MEMO

Terms and Conditions for Liability Insurance

A certificate of insurance was issued by Riddle Insurance Company, dated June 27, 2003, and was received by the Division January 15, 2004 as part of the permit renewal information. This certificate expires July 1, 2004

Findings:

The information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. Prior to approval, the Permittee must provide the following, in accordance with:

R645-302-263 and R645-301-800, The bond calculations presented in Section 6, beginning on page 5-143 must be updated to reflect the bond accepted by the Division in February 2004. i.e. Letter of Credit in the amount of \$651,000.

RECOMMENDATIONS:

The rationale behind the current bond calculation should be placed in the Division files.

Several recommendations were made to make the re-formatted plan reflect current conditions at the site and to apply information gained from test plots to the reclamation plan.

The plan refers to a 56.1 acre disturbed area, a 66 acre seeded area and Exhibit A of the Reclamation Agreement describes a 63.7 acre area. These varying acreages should be explained in the plan.

Approval is not recommended at this time.