

September 7, 2004

Mike Glasson, Resident Agent
Andalex Resources, Inc.
P.O. Box 902
Price, Utah 84501

Re: MRP Rewrite, Andalex Resources, Inc. Tower Division. Wildcat Loadout, C/0070033, Task ID #1911. Outgoing File

Dear Mr. Glasson:

The revised Wildcat Loadout Mining and Reclamation plan has been reviewed. The attached Technical Analysis (TA) outlines deficiencies with the revision that must be adequately addressed prior to approval. A copy of our Technical Analysis is enclosed for your information. In order for us to continue to process your application, please respond to these deficiencies within 90 days of the date of this letter.

The Division staff would like to discuss the information outlined in the TA document with you, at your convenience. Please call me at (801) 538-5268 or Priscilla Burton at (801) 538-5288 to set a time and place for such a meeting.

Sincerely,

Pamela Grubaugh-Littig
Permit Supervisor

Pwb:an
Enclosure
cc: Price Field Office
O:\007033.WCL\FINAL\TA\TA_1911.DOC

State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Wild Cat Loadout
Andalex Resources, Inc, Tower Division
MRP Rewrite
C/0070033, Task ID #1911
Technical Analysis
September 1, 2004

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TECHNICAL ANALYSIS

TECHNICAL ANALYSIS

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

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

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

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

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

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Task ID #1911
September 1, 2004

TECHNICAL ANALYSIS

INTRODUCTION

INTRODUCTION

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.

Andalex originally applied for a mining permit for the Wildcat Loadout in 1988. The currently approved Mining and Reclamation Plan (MRP) is formatted and organized to match the Coal Mining Rules that were in effect at that time.

The Division received this revised MRP amendment April 8, 2004. The amendment mainly reorganizes information in the Wildcat Loadout MRP so that it more closely matches the format and organization of the current R645 Coal Mining Rules. No changes have been made to the appendices, figures, or maps, but does re-organize the text. A single change in the text was noted: the facility can now handle 5 million tons per year throughput of coal (Section 2, pg 1-3). The currently approved MRP and the revised MRP was reviewed for consistency.

The Division has made recommendations to remove outdated information from the revised text including, but not limited to:

- Section 2, Legal and Financial, ownership and control and violation information.
- Chapter 5 bonding should outline 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>
- 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).

And to include required information missing from the text, including but not limited to:

- Information on prevailing winds was omitted from the plan in the revision and should be re-inserted.
- Appendix B to Section 2 right of entry sub-lease agreement with AMCA Coal Leasing, Inc. and an updated Table of Contents.

INTRODUCTION

- 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.)
- 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.

Finally, some recommendations for changes to the reclamation plan are set forth, based upon the results of the test plots conducted to date:

- 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.

R645-301-526.300 requires that the Permittee include in the narrative of the MRP the design specification of specific controls already in place or planned for fugitive dust coming from coal stockpiles, roadways, and other disturbed areas. Such information is currently lacking in the MRP and will be addressed by Division Order rather than a deficiency of the MRP Rewrite Task 1911.

SUMMARY OF DEFICIENCIES

SUMMARY OF DEFICIENCIES

The Technical analysis of the proposed permit changes cannot be completed at this time. Additional information is requested of the permittee to address deficiencies in the proposal. A summary of deficiencies is provided below. Additional comments and concerns may also be found within the analysis and findings made in this Draft Technical Analysis. Upon finalization of this review, any deficiencies will be evaluated for compliance with the regulatory requirements. Such deficiencies may be conditioned to the requirements of the permit issued by the division, result in denial of the proposed permit changes, or may result in other executive or enforcement action and deemed necessary by the Division at that time to achieve compliance with the Utah Coal Regulatory Program.

Accordingly, the permittee must address those deficiencies as found within this Draft Technical Analysis and provide the following, prior to approval, in accordance with the requirements of:

Regulations

- R645-301-322; -333, -358.100**, The Permittee must provide water consumption values for all operations including dust control..... 36

- R645-301-353.120**, Omit the following species from the interim and final seed mixes: crested wheatgrass, Russian wildrye, forage kochia, alfalfa, and yellow sweetclover as well as reduce seed rate of whitestem rabbitbrush. The Permittee must present the seed mix lists in table format, which include botanical and common names, pure live seed per foot, pure live seed per acre, total pure live seed per foot, total pure live seed per acre..... 52

- R645-301-411.144**, Relocate any archeological survey reports to the confidential file. Copies of the correspondence letters (Appendix B) with SHPO should accompany the reports. 24

- 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..... 35

SUMMARY OF DEFICIENCIES

R645-302-263 and R645-301- 727, *The information in UMC 7873.17 Alternative Water Supply Information needs to be included in the reformatted MRP under section 727.* 31

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. 14

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. .. 14

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)..... 14

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)..... 16

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..... 16

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> 25

SUMMARY OF DEFICIENCIES

R645-302-263 and R645-301-121.120, (1) Update the correct number of plates in the table of contents. (2) Address the formatting issues outlined in the bulleted list found in the analysis section above (3) The Acid and Toxic Forming Materials Section R645-301-731.300 should refer the reader to sampling information found on page 7-4 under R645-301-711.100 and the information found in Section R645-301-528.300, rather than R645-301-512.240. (4) An updated Table of Contents for Appendix B would be helpful for electronic review and hard copy. (5) 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). (6) Accurately state the location of the Reclamation Cost and Bonding information (page 2-20). (7) 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. (8) 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. (9) Section R645-301-212, pp2-6 and 2-21 incorrectly identify Appendix D, rather than Appendix N, as the location of spoil plot information. (10) Please specify in Section R645-301-240 the purpose of designating slopes greater than 10% through staking (page 2-21). I.e. Will this show where drill seeding ends and hydroseeding begins?..... 21

R645-302-263 and R645-301-121.200, There is no Figure III-2, which should show the location of the Garley Canyon Spring, no Figure VII-1 to show the general stratigraphy, and no Figure VII-3, which should show temperature information. Figures showing details of diversion design, the culvert nomograph, pond outlet protection, emergency spillways, ditch configurations, and riprap sizing are not in the reformatted MRP. The Permittee needs to include all figures and tables in the reformatted MRP. Because numbering of figures and tables in the new format is different from that in the existing MRP, figures need to be clearly numbered and identified. 31

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. 40

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..... 28

SUMMARY OF DEFICIENCIES

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..... 41

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..... 40

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). 40

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 28

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..... 23

R645-302-263 and R645-301-711.100, The Permittee needs to update the last paragraph of section 711.100 - Surface Water Quality - which feebly addresses baseline water quality but it is so out-of-date as to be almost nonsense. The paragraph is taken verbatim from the current MRP, except the end, the statement on the monitoring plan, was replaced with "XX". 31

R645-302-263 and R645-301-723, The Permittee needs to clarify the location of information on Sampling and Analysis: there is no Section R645-301-712.240 in the current or revised MRP. There is some water-monitoring information in section 512.240 – Impoundments, but no discussion of either the "Standard Methods for the Examination of Water and Wastewater" or the methodology in 40 CFR Parts 136 and 434. 31

R645-302-263 and R645-301-724.400, Tables VII-3, VII- 4, and VII-6 need to be included in the reformatted MRP..... 25

SUMMARY OF DEFICIENCIES

- R645-302-263 and R645-301-724.412**, The Permittee needs to provide data on the direction and velocity of prevailing winds..... 25
- R645-302-263 and R645-301-724.413**, The Permittee needs to include a figure equivalent to Figure III-3 in the current MRP, which shows temperature information. 25
- R645-302-263 and R645-301-800**, (1) 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. (2) Permittee must include a copy of the Division’s bond calculations in the MRP. (The Division will provide a copy of the calculations to the Permittee)..... 55
- R645-302-264.300 and R534-301-744**, Figure V-2A in the new MRP has only the title Sediment Pond Outlet Protection at the top with no drawing or other information on the sheet: Figure IV-2A in the current MRP shows Sediment Pond Outlet Protection information. The Permittee needs to include the Sediment Pond Outlet Protection drawing in the MRP..... 46
- 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..... 51
- 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).50
- 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..... 53
- R645-302-264.300 and R645-301-731.211**, The Permittee needs to clarify the location of information on the ground-water monitoring plan. R645-301-731.211 refers to 512.240 as the location for the water-monitoring plan, but ground-water monitoring is actually discussed in R645-301-711.100 on page 7-4 (there is no ground-water monitoring)..... 45
- 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

SUMMARY OF DEFICIENCIES

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)..... 42

R645-302-264.300 and R645-301-751, A copy of the NPDES permit is in Appendix K: this is not the current UPDES permit. A copy of the current permit needs to be added to this appendix..... 46

SPECIAL CATEGORIES

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.

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Task ID #1933
September 1, 2004

SPECIAL CATEGORIES

GENERAL CONTENTS

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 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).

GENERAL CONTENTS

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).

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.

GENERAL CONTENTS

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.

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:

Page xviii of the table of contents references twenty seven plates. The Permittee must update the table of contents to reference the correct number of plates.

The revised MRP refers the reader of sections 301-311 through 301-322, 301-232, and 301-322 through 301-358 to appendices or to sections 301-310 and 301-240 or assigns the term “not applicable”. As a consequence of this approach,

1. the new format references material unrelated to the section regulation, or

GENERAL CONTENTS

2. referenced material is missing from sections/appendices, or
3. referenced material is incorrectly labeled as not applicable (NA).

This problem is not specific to the biology sections, but is common throughout the MRP.

The Permittee must address the formatting issues outlined in the bulleted list below to present the narrative more clearly:

- Relocate the letter from NRCS from the back of Chapter 4 to an appendix and reference the new location in related sections (soils and vegetation).
- 310-321-200 refers to Appendix I, which does not provide productivity values (see pg. 4 of Appendix I).
- Pg. 3.10 refers incorrectly to “Chapter IV”.
- Information in the Fish and Wildlife Plan is more appropriate for sections in Operations.
- Fish and Wildlife Source Data information is apparently missing from Chapter 3 (referenced on pg. 3.4).
- 301-313 refers to 301-240, which does not address regulation 301-313.
- 301-322.300 refers to Appendix F, which does not provide correspondence with the USFWS who oversees TES species. (UDWR is not the regulating agency.)
- Appendix F does not address section 301-342.210.
- Pest management information belongs in the 301-357.320 series.
- Most discussions on success standards belong at least in the 301-356 series.
- Equation on page 3.25 is misleading – $(dx)^2$ belongs in the equation.
- 301-356.100 through 301-356.200 should reference page 3.25.
- 301-240 and 301-331 do not directly address 301-356.120, 301-356.200, and 301-356.210.
- 301-240 does not address or directly address the following:
 - 301-356.230 series.
 - 301-357.311 and 301-357.312.
 - 301-357.340 series.
 - 301-357.360 series.
- Briefly, address why husbandry practices and bonding are not applicable for this application (301-357.300 through 301-357.310).
- No response for 301-357.310.
- Information related to 301-357.350 is in 301-240.
- Direct quotes from the Utah Coal Regulations do not substitute for addressing the following sections. Provide brief reasons how the Permittee plans to address related requirements (such as provided for 301-354).
 - 301-353.120: Exactly where are non-natives necessary?
 - 301-353.130: Which area - the reference area?

GENERAL CONTENTS

- 301-353.140: The rates must be in plants per square foot to determine adequate stabilization. Modify the units for final see mix table.
- 301-353.210: Species Y are great for the proposed PMLU of...
- 301-353.220: Are some cool and warm season species?
- 301-353.240: Some of the selected species may not be compatible e.g., alfalfa or sweetclover (see Reclamation section for direction).
- 301-353.250: Fax seed tag to the Division.
- 301-232 refers to a map/aerial photo in Appendix F, which is missing.

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 requires 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:

GENERAL CONTENTS

R645-302-263 and R645-301-121.120, (1) Update the correct number of plates in the table of contents. (2) Address the formatting issues outlined in the bulleted list found in the analysis section above (3) The Acid and Toxic Forming Materials Section R645-301-731.300 should refer the reader to sampling information found on page 7-4 under R645-301-711.100 and the information found in Section R645-301-528.300, rather than R645-301-512.240. (4) An updated Table of Contents for Appendix B would be helpful for electronic review and hard copy. (5) 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). (6) Accurately state the location of the Reclamation Cost and Bonding information (page 2-20). (7) 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. (8) 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. (9) Section R645-301-212, pp2-6 and 2-21 incorrectly identify Appendix D, rather than Appendix N, as the location of spoil plot information. (10) Please specify in Section R645-301-240 the purpose of designating slopes greater than 10% through staking (page 2-21). I.e. 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.

The contents in the technical reports are the same and remain in the appendices of the MRP.

Findings:

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

MAPS AND PLANS

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

Analysis:

Biological and cultural maps are the same and remain in the appendices of the MRP or the folder with Plates.

Findings:

Information provided in the application is adequate to meet the minimum Maps and Plans section of the General Contents regulations.

COMPLETENESS

Regulatory Reference: 30 CFR 777.15; R645-301-150.

Analysis:

Minor problems with the new format relate to completeness parameters. (See R645-301-121.200 for deficiency.)

Findings:

Information provided in the application is not adequate to meet the minimum Completeness section of the General Contents regulations. (See R645-301-121.200 for deficiency.)

ENVIRONMENTAL RESOURCE INFORMATION

ENVIRONMENTAL RESOURCE INFORMATION

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

PERMIT AREA

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

Analysis:

The 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.

HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION

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

Analysis:

All matters concerning Historic and Archeological Resources are the same in the newly formatted version. The Permittee must relocate any historical and archeological survey reports to the confidential file (R645-301-411.144).

Findings:

Information provided in the application is not adequate to meet the minimum Historic and Archeological Resource Information section of the Environmental Resource Information regulations. Prior to approval, the Permittee must act in accordance with the following:

R645-301-411.144, Relocate any archeological survey reports to the confidential file. Copies of the correspondence letters (Appendix B) with SHPO should accompany the reports.

CLIMATOLOGICAL RESOURCE INFORMATION

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

Analysis:

Information in 724.400 was taken from UMC 7873.18 Climatological Information in the current MRP. The reformatted MRP has no figure equivalent to Figure III-3, which shows temperature information, in the current MRP. Space has been left in the revised MRP for Tables VII-3, VII- 4, and VII-6 but the tables need to be inserted.

Section R645-301-724.412 of the proposed amendment indicates wind data are included in the information under R645-301-724.400, but there are no data on prevailing wind speed and direction: the information in Section 3.3 of the current MRP was not included in the proposed amendment.

Other than the missing figure and tables, Section R645-301-724.400 of the revised MRP contains baseline data on seasonal precipitation and temperature. Data appear not to have been updated since the original permit application in 1988. 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>

ENVIRONMENTAL RESOURCE INFORMATION

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, The Permittee needs to provide data on the direction and velocity of prevailing winds.

R645-302-263 and R645-301-724.413, The Permittee needs to include a figure equivalent to Figure III-3 in the current MRP, which shows temperature information.

R645-302-263 and R645-301-724.400, Tables VII-3, VII- 4, and VII-6 need to be included 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>

VEGETATION RESOURCE INFORMATION

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

Analysis:

Minor problems with the new format relate to vegetation resource – environmental information criteria. (See R645-301-121.200 for deficiency.)

Findings:

Information provided in the application is not adequate to meet the minimum Vegetation Resource Information section of the Environmental Resource Information regulations. (See R645-301-121.200 for deficiency.)

FISH AND WILDLIFE RESOURCE INFORMATION

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

Analysis:

Minor problems with the new format relate to fish and wildlife resource – environmental information criteria. (See R645-301-121.200 for deficiency.)

The Permittee must address the deficiencies (TA July 8, 2003) related to threatened and endangered species (TES). The Division will discuss this pending issue with the Permittee at a later date.

Findings:

Information provided in the application is not adequate to meet the minimum Fish and Wildlife Resource Information section of the Environmental Resource Information regulations. (See R645-301-121.200 for deficiency.)

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 Calciorthids 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

ENVIRONMENTAL RESOURCE INFORMATION

“superactive” designation pertains to the ratio of the electrical conductivity and the percent clay. There can be a calcic horizon in the soil.

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.

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).

ENVIRONMENTAL RESOURCE INFORMATION

Findings:

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

GEOLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR 784.22; R645-301-623, -301-724.

Analysis:

Geologic information appears under R645-301-611.100. GEOLOGY WITHIN AND ADJACENT TO THE PERMIT AREA is taken verbatim from section UMC 783.14 Geology Description of the current MRP.

Findings:

Geologic Resource Information in the reformatted MRP is sufficient to meet the requirements of the Coal Mining Rules.

HYDROLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 701.5, 784.14; R645-100-200, -301-724.

Analysis:

UMC 783.13 Description of Hydrology and Geology: General Requirements in Chapter III of the current MRP is under 711.100 in the reformatted MRP. The sedimentation and control plan, including impoundments, diversions and water monitoring plans are discussed in the Engineering Chapter 5 under 512.240: information in section 512.240 was taken from UMC 784.16 Reclamation Plan: Ponds, Impoundments, Banks, Dams, and Embankments.

Figures and tables are referenced throughout the MRP. Not all figures and tables have been included with the reformatted MRP. There is no Figure III-2, which should show the location of the Garley Canyon Spring, no Figure VII-1 to show the general stratigraphy, and no Figure VII-3, which should show temperature information. Figures showing details of diversion design, the culvert nomograph, pond outlet protection, emergency spillways, ditch configurations, and riprap sizing are not in the reformatted MRP. The Permittee needs to include all figures and tables in the reformatted MRP. Numbering of figures and tables in the new

format is different from that in the existing MRP, so figures and tables need to be clearly numbered and identified.

Alternative Water Supply Information

The information in UMC 7873.17 Alternative Water Supply Information has not been included in the reformatted MRP under section 727. Rather, "N/A" has been entered.

Sampling and Analysis

Section R645-301-712.240 is given as the location for information on Sampling and Analysis. There is no Section R645-301-712.240 in the current or revised MRP, but some water-monitoring information is located in 512.240 - Impoundments. There is no commitment to follow either the "Standard Methods for the Examination of Water and Wastewater" or the methodology in 40 CFR Parts 136 and 434.

Baseline Information

Baseline information, such as it is, is in Appendix M. This site is very dry and other than "no flow" reports there has been very little additional water-quality or -quantity data collected in the intervening years.

The last paragraph of section 711.100 feebly addresses baseline water quality, but it is so out-of-date as to be almost nonsense. The paragraph is taken verbatim from the current MRP.

Baseline Cumulative Impact Area Information

The Division prepared a CHIA in 1989 and there has been no update. The proposed amendment makes no changes that require the CHIA be redone.

Modeling

No modeling was done for the Wildcat Loadout MRP.

Probable Hydrologic Consequences Determination

The PHC determination is in Appendix J. The effects of mine operation on surface and ground water are briefly discussed in section R645-301-711.100.

ENVIRONMENTAL RESOURCE INFORMATION

Groundwater Monitoring Plan

Section R645-301-731.211 refers to 512.240 as the location for the water-monitoring plan. Ground-water monitoring is actually discussed in Section R645-301-711.100 on page 7-4. The monitoring plan there is the same as in the current MRP. Ground water is not monitored.

Surface-Water Monitoring Plan

Section R645-301-731.211 refers to 512.240 as the location for the water-monitoring plan. The monitoring plan there is the same as in the current MRP.

Findings:

R645-302-263 and R645-301- 727, The information in UMC 7873.17 Alternative Water Supply Information needs to be included in the reformatted MRP under section 727.

R645-302-263 and R645-301-121.200, There is no Figure III-2, which should show the location of the Garley Canyon Spring, no Figure VII-1 to show the general stratigraphy, and no Figure VII-3, which should show temperature information. Figures showing details of diversion design, the culvert nomograph, pond outlet protection, emergency spillways, ditch configurations, and riprap sizing are not in the reformatted MRP. The Permittee needs to include all figures and tables in the reformatted MRP. Because numbering of figures and tables in the new format is different from that in the existing MRP, figures need to be clearly numbered and identified.

R645-302-263 and R645-301-723, The Permittee needs to clarify the location of information on Sampling and Analysis: there is no Section R645-301-712.240 in the current or revised MRP. There is some water-monitoring information in section 512.240 – Impoundments, but no discussion of either the "Standard Methods for the Examination of Water and Wastewater" or the methodology in 40 CFR Parts 136 and 434.

R645-302-263 and R645-301-711.100, The Permittee needs to update the last paragraph of section 711.100 - Surface Water Quality - which feebly addresses baseline water quality but it is so out-of-date as to be almost nonsense. The paragraph is taken verbatim from the current MRP, except the end, the statement on the monitoring plan, was replaced with "XX".

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

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

Analysis:

Information in this section is the same as the old MRP, both sections refer to missing material.

Findings:

Information provided in the application is not adequate to meet the minimum Maps, Plans, and Cross Section Resource Information section of the Environmental Resource Information regulations. (See R645-301-121.200 for deficiency.)

OPERATION PLAN

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 (AO) 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)
- maintenance of the surface of unpaved roads and pad areas in a damp/moist condition (condition #10);

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- 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 refers to Appendix B for a fugitive dust control plan. The 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 AO requires that fugitive dust control is applied when monitoring indicates greater than 20% opacity. Monitoring is the responsibility of the Permittee.

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 to closely monitor the wind blown coal fine deposition on adjacent undisturbed soils, using 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 as required by the January 5, 2000 Approval Order (DAQE-005-00) General Conditions #10 and #15.

The AO makes continuous reference to the Executive Secretary or the Executive Secretary's Representative. The AO document is enforced by the Division of Air Quality and is provided within the MRP as required under R645-301-422. The Utah Division of Air Quality makes approximately one visit per annum, and that inspection generally involves an evaluation of coal dust emissions from a conveyor transfer/stockpile perspective. A completed inspection form is kept in the Permittee's records. An inspection of the haul roads is not ordinarily conducted, or at least is not documented relative to fugitive dust concentrations. This annual inspection by Air Quality personnel is inadequate to ensure that haul roads are being maintained relative to the control of fugitive dust. Control of fugitive dust is not only important from the perspective of protecting employees from excessive dust concentrations, but also from the perspective of protecting topsoil resources and wildlife in the area.

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The Division of Oil, Gas and Mining derives its regulatory authority relative to the control of fugitive dust emissions from R645-301-526.220 *et seq.*. This Regulation requires design drawings and specifications of each support facility sufficient to demonstrate how each facility will comply with applicable performance standards, including the protection of fish, wildlife, and related environmental values; and minimization of contributions of suspended solids to streamflow or runoff outside the permit area. The Permittee is required to maintain and operate support facilities and to use the best technology available to minimize damage to fish, wildlife and related environmental values as well. Division personnel have the authority to monitor and enforce information provided under R645-301-526.220 in the MRP narrative.

In order to meet the requirements of R645-301-526.220, the Permittee must include in the narrative of the MRP the design specification of specific controls already in place or planned for fugitive dust coming from coal stockpiles, roadways, and other disturbed areas. Such information is currently lacking in the MRP and will be addressed by Division Order rather than a deficiency of the MRP Rewrite Task 1911.

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.

FISH AND WILDLIFE INFORMATION

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

Analysis:

Minor problems with the new format relate to fish and wildlife – operations criteria. (See R645-301-121.200 for deficiency.)

Protection and Enhancement Plan

No changes to the information from the old MRP. One of the largest problems that Wildcat faces still faces, is the build up of coal fines off the permit boundary. The Permittee must address this issue in the near future.

Endangered and Threatened Species

The Permittee must address the possible adverse effects to the four Colorado River endangered fish species: the Colorado pikeminnow, the humpback chub, the bonytail chub, and the razorback sucker(R645-301-322; -333, -358.100). Calculate the amount of water used by operations including: evaporation from ventilation; dust control; coal preparation; sediment pond evaporation; postmining inflow to workings; coal moisture loss; and direct diversions. The U.S. Fish and Wildlife Service require mitigation if the loss is greater than 100 acre-feet per year.

Findings:

Information provided in the application is not adequate to meet the minimum Fish and Wildlife Information section of the Operation Plan regulations. Prior to approval, the Permittee must address the deficiency in Permit Application Format and Contents and address the following:

R645-301-322; -333, -358.100, The Permittee must provide water consumption values for all operations including dust control.

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.

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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.

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).
- 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

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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;
- 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 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.

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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).

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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.

VEGETATION

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

Analysis:

Minor problems with the new format relate to vegetation – operations parameters. (See R645-301-121.200 for deficiency.)

No changes to the information from the old MRP. The Permittee must still address questions concerning the substitution of topsoil with fill material.

Findings:

Information provided in the application is not adequate to meet the minimum Vegetation section of the Operation Plan regulations. (See R645-301-121.200 for deficiency.)

SPOIL AND WASTE MATERIALS

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

Analysis:

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, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

General

The sedimentation and control plan, including impoundments, diversions and water monitoring plans are discussed in the Engineering Chapter 5 under Section R645-301-512.240.

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R645-301-731 refers to R645-301-511.100 for General Hydrologic Operation Information. The discussion of Reclamation Hydrology begins on page 5-65.

Ground Groundwater Monitoring Plan

Section R645-301-731.211 refers to 512.240 as the location for the water-monitoring plan. Ground-water monitoring is actually discussed in Section R645-301-711.100 on page 7-4. The monitoring plan there is the same as in the current MRP: ground water is not monitored.

Surface-Water Monitoring Plan

Section R645-301-731.211 refers to 512.240 as the location for the water-monitoring plan. The monitoring plan there is the same as in the current MRP.

Acid- and Toxic-Forming Materials and Underground Development Waste

There is no underground development waste at this site. The plan for dealing with potential acid- and toxic-forming materials is on page 7-6. Further information is found in 528.300 on page 5-113.

The Acid and Toxic Forming Materials Section R645-301-731.300 should refer the reader to sampling information found on page 7-4 under R645-301-711.100 and the information found in Section R645-301-528.300, rather than R645-301-512.240 (sediment pond information), see deficiency written as item #3 under R645-301-121.120.

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.

Transfer of Wells

No transfer of wells has taken place, nor is any transfer anticipated (page 7-27).

Discharges Into An Underground Mine

N/A

Gravity Discharges From Underground Mines

N/A

Water-Quality Standards And Effluent Limitations

A copy of the NPDES permit is in Appendix K. This is not the current UPDES permit. A copy of the current permit should be added to this appendix.

Diversions: General

Section R645-301-742.310 refers to 512.240 as the location for general information on diversions. The discussion of diversions begins on page 7-38.

Diversions: Perennial and Intermittent Streams

All drainages within and adjacent to the permit area are ephemeral. There are no perennial or intermittent streams.

Diversions: Miscellaneous Flows

Under the definitions of the Coal Mining Rules, all flows at the Wildcat Loadout are miscellaneous. All impoundments and diversions are discussed in 512.240.

Stream Buffer Zones

As there are no perennial or intermittent streams, this section of the Coal Mining Rules does not apply to then Wildcat Loadout.

Sediment Control Measures

There are six sedimentation ponds and seven ASCAs at the Wildcat Loadout.

Siltation Structures: General

ASCAs are discussed on pages 5-8 and 5-62 of 512.240. Design and operation of the sedimentation ponds are discussed on pages 5-9 through 5-27.

Siltation Structures: Sedimentation Ponds

Design and operation of the sedimentation ponds are discussed on pages 5-9 through 5-27.

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Siltation Structures: Other Treatment Facilities

There are no Other Treatment Facilities at the Wildcat Loadout.

Siltation Structures: Exemptions

There are no exemptions to the requirements for Siltation Structures in the Wildcat Loadout MRP.

Discharge Structures

Control of discharge from impoundments, sedimentation ponds, culverts, and diversions is discussed in section 512.240, particularly on pages 10 and 36 - 61. Sediment Pond Outlet Protection is supposed to be shown on Figure V-2A, but this figure in the new MRP has only the title Sediment Pond Outlet Protection at the top with no drawing or other information on the sheet: Figure IV-2A in the current MRP shows Sediment Pond Outlet Protection information. The Permittee needs to clarify the name and location of this figure in the MRP.

Impoundments

There is a 2-celled pond called the Permanent Impoundment. Design and construction are described on Plate 18 and in 512.240, particularly pages 5-8 through 5-9, 5-26 through 5-28, 5-35 through 5-36 and 5-65.

Ponds, Impoundments, Banks, Dams, and Embankments

There are no coal processing banks, dams, or embankments. Design, construction, and maintenance of embankments that were built as part of roads and sedimentation ponds are described in sections discussing those structures.

Findings:

The information provided does not meet the minimum hydrologic information requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine.

R645-302-264.300 and R645-301-731.211, The Permittee needs to clarify the location of information on the ground-water monitoring plan. R645-301-731.211 refers to 512.240 as the location for the water-monitoring plan, but ground-water monitoring is actually discussed in R645-301-711.100 on page 7-4 (there is no ground-water monitoring).

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R645-302-264.300 and R645-301-751, A copy of the NPDES permit is in Appendix K: this is not the current UPDES permit. A copy of the current permit needs to be added to this appendix.

R645-302-264.300 and R534-301-744, Figure V-2A in the new MRP has only the title Sediment Pond Outlet Protection at the top with no drawing or other information on the sheet: Figure IV-2A in the current MRP shows Sediment Pond Outlet Protection information. The Permittee needs to include the Sediment Pond Outlet Protection drawing in the MRP.

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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).

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

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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:

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.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

Analysis:

Hydrologic Reclamation Plan

The current MRP includes UMC 784.16 Reclamation Plan: Ponds, Impoundments, Banks, Dams, and Embankments: the reformatted MRP has the same information under

512.240. Impoundments, which begins on page 5-8. Information on Post-mining Hydrology, including reclamation hydrology, begins on page 5-64 in section 512.240: this information was taken from page 147A, 147B, and 147C in the current MRP. Reclamation water monitoring is discussed on page 5-65.

Findings:

Hydrologic Reclamation Information is adequate to meet the requirements of the Coal Mining Rules.

REVEGETATION

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

Analysis:

Revegetation: General Requirements

Minor problems with the new format relate to vegetation-related parameters for reclamation. (See R645-301-121.200 for deficiency.)

The Permittee must modify the interim and final seed mix in the MRP to exclude non-natives or overly aggressive species (R645-301-353.120).

Findings:

Information provided in the application is not adequate to meet the minimum General Requirements section of the Reclamation Plan regulations. Prior to approval, the Permittee must address the deficiency in Permit Application Format and Contents and address the following:

R645-301-353.120, Omit the following species from the interim and final seed mixes: crested wheatgrass, Russian wildrye, forage kochia, alfalfa, and yellow sweetclover as well as reduce seed rate of whitestem rabbitbrush. The Permittee must present the seed mix lists in table format, which include botanical and common names, pure live seed per foot, pure live seed per acre, total pure live seed per foot, total pure live seed per acre.

STABILIZATION OF SURFACE AREAS

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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

Andalex Resources Inc. Tower Division posted a reclamation bond for \$651,000, 2006 dollars. The reclamation bond was based on a cost analysis done by the Division in 2003, as required by R645-301-830.110.

Bond calculations in the MRP are outdated and not based on the Division's bond calculations. The Permittee must revise the bond section of the MRP. The revised bond section must include a copy of the Division reclamation cost estimate and a narrative about the bond calculations. The Division will provide the bond calculations to the Permittee.

The Division is unaware of any changes to the reclamation plan that would involve changes to the bond. Therefore, the Division considers the reclamation bond amount to be adequate.

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. The Division found that form of the bond was adequate when the bond was adjusted in 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 amount in the MRP was based on calculations done in 1990 and escalated to 1999. The reclamation cost estimate in the MRP was \$797,000 in 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.

As noted above, the Permittee should update the bonding section of the narrative to provide an accounting for the current bond of \$651,000.

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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, (1) 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. **(2)** Permittee must include a copy of the Division's bond calculations in the MRP. (The Division will provide a copy of the calculations to the Permittee).