

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

May 11, 2005

TO: Internal File

THRU: Pamela Grubaugh-Littig, Permit Supervisor, Task Manager
Priscilla W. Burton, Environmental Scientist III/Soils, Team Lead

FROM: Peter H. Hess, Environmental Scientist III/Engineering

RE: Division Order-Design Drawings and Specifications, Andalex Resources, Inc., Wildcat Loadout, C/007/033, Task ID #2182

SUMMARY:

The Wildcat Loadout is a coal storage / train loading facility located between Price City and Helper City, Utah, in an area known as Wildcat (west of U.S. Highway 6 in Wildcat Canyon / Consumers Wash). The loading facility is located on the main line of the Utah Railway, incorporating sidings for car storage and secondary loading. The history of Wildcat dates back to at least the 1950's, when it was used by the Swisher and Beaver Creek Coal Companies to put coal on rail. Thus, the area has seen impacts from wind borne coal fines over many years.

Due to previous concerns aired by the Utah Division of Wildlife Resources relative to impacts from coal fines on soils and vegetation east of the Wildcat permit area, the Division issued the Permittee Division Order DO-04 (12/9/2004) requesting that specific information contained within the Utah DEQ / Division of Air Quality Approval Order # DAQE-998-96 be incorporated into the C/007/033 Mining and Reclamation Plan (MRP).

The Division acknowledged receipt of the Permittee's response to DO-04 on March 15, 2005. The review of the Permittee's response relative to its adequacy will be identified for record keeping purposes within the Division as Task ID #2182. This memo will address the requirements of the engineering discipline as they relate to the control of fugitive dust within the Wildcat disturbed area perimeter.

Due to the fact that the currently approved mining and reclamation plan is written under the Utah Mining Code (UMC) format, the Division asked the Permittee to update the MRP to cite the R645 Rules. The review of that application (Task ID #2277) is ongoing.

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TECHNICAL ANALYSIS:

OPERATION PLAN

MINING OPERATIONS AND FACILITIES

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

Analysis:

The Permittee's currently approved mining and reclamation plan contains a copy of the original air quality approval order issued in 1982 for a throughput of 960,000 tons coal per year. The most recent Air Quality Approval Order (DAQE-AN0113007-04) for the site is dated December 3, 2004 is for 5,500,000 tons coal per year. The most recent permit incorporated into the MRP is DAQE-005-00 (issued January 5, 2000). DAQE-AN0113007-04 supercedes DAQE-005-00. The General Conditions in DAQE-005-00 were the same, but not necessarily in the same sequence, as those listed in the more recent AO DAQE-IN0113007-04.

The site has operated under an AO from DEQ since 1982. The memorandum of understanding between the DEQ and DOGM states that DEQ is the regulatory authority responsible for the enforcement and compliance of its permits (AO's), and DEQ will coordinate with the Division to ensure that the appropriate controls are incorporated into environmental permits.

As stated in the Division Order (DO-04), The Division derives its regulatory authority relative to the control of coal fine accumulation from wind blown sources from R645-301-526.220 *et seq.* As such, the Division has required the Permittee to incorporate fugitive dust controls into the MRP, separately from those required by the AO's found in Appendix B.

Information received from the Permittee on March 15, 2005 in response to DO-04, includes a revised p. 4-9 in Chap. 4, "Land Use and Air Quality, Fugitive Dust Control Plan," Section R645-301-423.200. The added text gives a very brief history of the pre-SMCRA operations that existed in the area. Follow-up text refers to the transfer of operations to Andalex Resources, Inc., the permitting of the site under SMCRA, and the procurement of AO's from the DEQ. The fugitive dust control methods listed in Chap. 4 are similar to (although not verbatim to) those controls listed on pages 4 and 5 of DAQE-IN0113007-04.

With the addition of information requested below, the incorporation of the fugitive dust control methods/mechanisms into the MRP p. 4-9 will comply with R645-301-526.220 *et seq* and outlines methods/techniques for control of fugitive dust to be employed at the site.

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Control #11, as listed on p. 4-10 of the information received in response to DO-04 stipulates the following; “Coal moisture is maintained at a minimum of 6% overall.” Based upon this moisture specification, the Division would like to know the following:

- 1) How does the Permittee confirm that this moisture specification is being maintained?
- 2) At what location and at what intervals are moisture analyses performed? Does the Permittee have automatic moisture analyzers located on stockpile conveyors to continuously monitor the moisture content of the coal reporting to these stockpiles? Are the analyses performed in the Wildcat laboratory?
- 3) Does the Permittee maintain records of these analyses? Does a Professional Engineer certify the analyses or does the Permittee take a sample to a State certified laboratory for verification?

Control #12 (p. 4-10) states that “the moisture content of the material passing a #40 U. S. Standard Sieve (<0.635 MM in diameter) is at least 4 % by weight.” This control measure is similar to item 18, on p. 5 of DAQE-IN0113007-04, except that the AO requires that; “**the moisture content of the material passing a #40 U.S. Standard Sieve shall be maintained at a minimum of 4.0% by weight.**” The AO also states the following; “the moisture content shall be tested **if directed by the Executive Secretary** using the appropriate American Society of Testing and Methods (ASTM) method.”

The Division requires the following information from the Permittee:

- 1) What percentage of the coal volumes reporting to the open stockpile locations is smaller than 0.635 MM in diameter (i.e., < #40 U.S. Standard Sieve mesh)?
- 2) How does the Permittee maintain the < #40 mesh material at 4% moisture content by weight?
- 3) How and where does the Permittee apply moisture to the coal to maintain the 4 % moisture content? A schematic depicting moisture application points is required to adequately answer this question. Information on conveyor(s) capacity is also needed to determine what volume of water must be added to the coal volume conveyed to meet the 4% by weight moisture content requirement.

Division staff has never observed the watering of open coal stockpiles at the site. Yet, General Condition #19, p. 5 of DAQE-IN0113007-04 states the following; “**the storage piles shall be watered to minimize generation of fugitive dusts, as dry conditions warrant or as determined necessary by the Executive Secretary. Records of water and/or chemical treatment shall be kept for all periods when the plant is in operation. The total combined area of all storage piles shall not exceed 20.0 acres.**” Although the information received in

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response to DO-04 does not contain this fugitive dust control mechanism, the Division believes that it is critical to maintaining the minimum 4% moisture content for the open stockpile storage areas, particularly on the surface areas of these conical shapes. The weight added to the coal material by the moisture is important in reducing levels of air borne transportation of coal fines. Consequently, the Division requests that General Condition #19, p. 5 of DAQE-IN0113007-04 is included in the Chap 4 of the MRP.

The initiation of watering of the stockpiles “as dry conditions warrant, or as determined necessary by the Executive Secretary” does not establish adequate specifications/criteria for the Division to monitor or the Permittee to initiate this method of suppression of coal fines. Therefore, the Division requests that the Permittee establish specific relative humidity ranges and specific wind velocities to trigger watering of the stockpile areas. The Permittee must provide the following information in the MRP:

- 1) How does the Permittee water the open stockpile storage areas? A description including text, schematics and drawings is necessary in order to adequately respond to this question.
- 2) Is sampling and moisture analysis of the coal within the stockpile performed? If so, are moisture content records maintained? Will they be available during Division inspections?
- 3) What criterion is used when determining whether or not it is necessary for the Permittee to water the storage piles? What range of relative humidity percentile is used to determine when watering is necessary? Is there a minimum wind velocity established at which the Permittee will initiate watering of the stockpiles?

Recognizing that coal moisture content is a critical factor included in coal contract specifications, and that excessive moisture in coal loaded for sale can generate penalties which can affect the coal producing company’s profit/loss margin, the Division recommends that for the record, the Permittee provide a general description of the penalty for excessive moisture in the coal being shipped from the Wildcat Loadout facility (specific coal contract information is not being requested).

Page 4-10 of the information received in response to DO-04 makes the statement that in spite of all the controls implemented to control wind borne coal fine deposition, “it is impossible to completely eliminate them.” The Division agrees with this statement. However, the Division feels justified in requesting more information from the Permittee.

Findings:

Information provided in the plan does not meet the minimum Operations Plan Mine Structures and Facilities design specifications information. Prior to approval, the Permittee must act in accordance with the following in accordance with:

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R645-301-526.220 et seq and R645-303-220, •Control #11, as listed on p. 4-10 of the information received in response to DO-04 stipulates the following; “Coal moisture is maintained at a minimum of 6% overall.” Based upon this moisture specification, the Division would like to know the following:

- 1 How does the Permittee confirm that this moisture specification is being maintained?
- 2 At what location and at what intervals are moisture analyses performed? Does the Permittee have automatic moisture analyzers located on stockpile conveyors to continuously monitor the moisture content of the coal reporting to these stockpiles? Are the analyses performed in the Wildcat laboratory?
- 3 Does the Permittee maintain records of these analyses? Does a Professional Engineer certify the analyses or does the Permittee take a sample to a State certified laboratory for verification?

•Control #12 (p. 4-10) states that “the moisture content of the material passing a #40 U. S. Standard Sieve (<0.635 MM in diameter) is at least 4 % by weight.” The Division requires the following information from the Permittee:

- 1 What percentage of the coal volumes reporting to the open stockpile locations is smaller than 0.635 MM in diameter (i.e., < #40 U.S. Standard Sieve mesh)?
- 2 How does the Permittee maintain the < #40 mesh material at 4 % moisture content by weight?
- 3 How and where does the Permittee apply moisture to the coal to maintain the 4 % moisture content? A schematic depicting moisture application points is required to adequately answer this question. Information on conveyor(s) capacity is also needed to determine what volume of water must be added to the coal volume conveyed to meet the 4 % by weight moisture content requirement.

Along with the information requested above, the Permittee might want to include a general description of the penalty for excessive moisture in the coal being shipped from the Wildcat Loadout facility (specific contract information is not requested).

•The Division requests that General Condition #19, p. 5 of DAQE-IN0113007-04 is included in the text of Chap 4 of the MRP.

•The Division requests that the Permittee establish specific relative humidity ranges and specific wind velocities to trigger watering of the stockpile areas. The Permittee must also provide the following information in the MRP:

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- 1 How does the Permittee water the open stockpile storage areas? A description including text, schematics and drawings is necessary in order to adequately respond to this question.
- 2 Is sampling and moisture analysis of the coal within the stockpile performed? If so, are moisture content records maintained? Will they be available during Division inspections?
- 3 What criterion is used when determining whether or not it is necessary for the Permittee to water the storage piles? What range of relative humidity percentile is used to determine when watering is necessary? Is there a minimum wind velocity established at which the Permittee will initiate watering of the stockpiles?

RECOMMENDATIONS:

The amendment should not be approved until above deficiencies are addressed.