



## State of Utah

### Department of Natural Resources

MICHAEL R. STYLER  
*Executive Director*

### Division of Oil, Gas & Mining

JOHN R. BAZA  
*Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

July 29, 2005

Ken May, Mine Manager  
Canyon Fuel Company, LLC  
397 South 800 West  
Salina, Utah 84654

Subject: SITLA Muddy Tract Lease Amendment, Canyon Fuel Company, LLC, SUFCO Mine, C/041/0002, Task ID #2157, Outgoing File

Dear Mr. May:

The Muddy Tract Amendment, Task ID #2157, has been reviewed by our technical staff. The application was received on February 11, 2005. The proposed lease areas include 2,134.19 acres. Addition of the leases to the permit area will result in a total permit area of 26,766.95 acres. No new surface disturbance is proposed as for the SITLA Lease addition.

Before the Division can approve this amendment, the Permittee must provide the information outlined in the attached deficiencies, in accordance with the R645 Coal Mining Rules cited. For clarification or more information, you can contact the Division specialist whose initials are at the end of each deficiency.

pwb	Priscilla Burton	801-538-5288
dwd	Dave Darby	801-538-5341
smf	Steve Fluke	801-538-5259
jch	Joe Helfrich	801-538-5290
whw	Wayne Western	801-538-5263

Technical Memos prepared by each of the reviewers are available upon request. A draft Technical Analysis (TA) is being prepared that includes pertinent information from the Technical Memos. The final TA is a findings document by the Division for the entire approved permit and will not be completed until all technical deficiencies for this amendment have been resolved.

Sincerely,

D. Wayne Hedberg  
Permit Supervisor

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Attachment  
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## TECHNICAL DEFICIENCIES

**R645-301-121.100**, Section 3.3 and Map 4 of Volume 3 must be revised to illustrate the current status of reclaimed, active and topsoil salvage areas at the refuse site and the current volume of waste stored at the refuse site to date must be indicated. The expected volume of waste material from the mine in Lease ML-49443 must be discussed in the application. [pwb]

**R645-301-121.200**, Section 112.500 of the application must indicate that the Lessee for SITLA Lease ML-49443 is Ark Land Company and Arch Coal Inc.; Cityplace One, Suite 300; St. Louis MO 63141. [pwb]

**R645-301-121.200**, Provide an accurate 30 CFR citation in Section 2.2.1 of the MRP or reword the statement without using the citation. [pwb]

**R645-301-121.200**, The plan states in Section 4.1.1.1 that one of the premining land uses of the area within State lease ML-49443 is “transportation corridor.” The next two paragraphs describe the study of roadless areas in the Muddy Tract. The pre-mining land use section must be re-written:

- (1) To provide a clear indication of the existing traffic in the transportation [travel or access] corridor by vehicle type and frequency.
- (2) To indicate the condition of the road in language consistent with forest management direction i.e. Level 1, 2 or 3 roads.
- (3) To state the author and date of the re-inventory of the roadless areas as well as the location of the roadless areas in relation to the transportation corridor and the lease boundary. [pwb]

**R645-301-121.200**, The legend on Plate 4-1b, Land Uses – Pines and SITLA Muddy Tract -must be improved, as it is difficult to understand, since the same abbreviations are used for different meanings in the two lease areas. [pwb]

**R645-301-140**, The boundaries of the SITLA Muddy Lease Tract need to be clearly identified on Plates 3-1, 2, and 3. [jch]

There are many plant communities in such a small area that it was very difficult to clearly identify the various communities in the field. Some appeared to be correct, some appeared to be incorrect, and some appeared to be in a different location than as depicted on the map, and some were indiscernible. The Permittee needs to revise the vegetation map so that it is clearly legible, coincides with the vegetative communities on the ground and includes the riparian areas within the Muddy Tract. This includes portions of Cowboy Creek, and springs and their associated reaches within the tract. [jch]

The land use designations for big game on Plate 4-1B need to coincide with those on Plates 3-2 and 3-3. [jch]

The permit area boundaries need to be clearly identified on all plates. [jch]

**R645-301-320**, The Permittee needs to include a description of the vegetation types located within the proposed lease tract and a discussion on the potential subsidence related impacts from mining. The Permittee refers to a portion of an EIS that is not included in the application nor does it appear to be a part of the MRP. On page 3-18 of the application there is a red line reference to the T, E, & S plant species listed in Appendix 3-11. Table 10 in Appendix 3-11 includes fish, birds, mammals, and amphibians but does not include plants. The Permittee needs to include a list of possible threatened, endangered and candidate plant species identified in the U. S. Fish and Wildlife Service, (USFWS) current listing. Table 3-1 on page 3-14 of the MRP provides a 2003 listing of the plant species. The Permittee needs to include a reference to this table and the table needs to be updated to include the current 2005 plant listings in order for the Division to make a finding that the information contained in the application meets the requirements of this section of regulations. The list of species will be e-mailed to the Permittee. [jch]

**R645-301-322**, A current raptor inventory needs to be included in the application. The Permittee needs to include a discussion on how the potential impacts from subsidence during mining operations will be minimized. [jch]

**R645-301-322, -301-333, -301-342, and -301-358**, the Permittee needs to address these sections of the regulations. They include:

**A protection and enhancement Plan,**

The Permittee needs to include a protection and enhancement plan for minimizing impacts to wildlife and livestock as a result of the effects of subsidence. [jch]

**Endangered and Threatened Species;**

The Permittee does not address potential water depletions from mining operations that may have an effect on endangered fish species identified in pertinent fish recovery programs. Volumes of water consumed in mining processes in excess of 100 acre-feet/year require mitigation with the USFWS. The Permittee needs to include calculations of current water depletions from mining activities. [jch]

**Bald and Golden Eagles and;**

As noted in the Fish and Wildlife Resource Information section a current raptor survey should be included to update the status of Golden Eagles in the Muddy Tract lease area. [jch]

**Wetlands and Habitats of Unusually High Value for Fish and Wildlife**

The Permittee needs to include a description of these areas including a discussion that addresses how impacts from subsidence during mining operations will be minimized. [jch]

**R645-301-330, -301-331, -301-332**, The Permittee needs to include a description of the vegetation types located within the proposed lease tract and a discussion on the potential subsidence related impacts from mining. The application refers to a portion of an EIS that is not included in the application; the relevant portions of the EIS need to be included in the application. [jch]

**R645-301-522**, The Permittee will be required to submit information explaining why reserves cannot be mined in the northern part of the Muddy Tract Lease. [dwd]

**R645-301-522**, The Permittee must show how they will conduct mining in order to maximize the economic recovery of coal. [whw]

**R645-301-525.130**, The Permittee must include a water quality and quantity survey for state appropriated water within the Muddy Tract area. If the information is in another section of the MRP, then the Permittee must reference that area in the subsidence section. [whw]

**R645-301-525.440**, The Permittee must update the subsidence monitoring section or the MRP (page 5-30) to show that Table 5-2 has been updated since 1991. In addition, the Permittee must also update Table 5-2 if needed. Also, the MRP does not contain Plate 5-10; the MRP does contain Plate 5-10A, Plate 5-10B and Plate 5-10C. The Permittee needs to update the text to show that the subsidence is shown on three maps. [whw]

**R645-301-525.480**, The Permittee must include a detailed description of the methods that they can use to mitigate and replace any adversely affected State appropriated water supplies. In addition, the Permittee must make a commitment that they will submit a mitigation plan before they do full extraction mining under Cowboy Creek. [whw]

**R645-301- 624.300**, The Permittee is required to provide chemical analyses of roof, floor and coal seam from Upper Hiawatha coal seam in the Muddy Tract Lease, identifying the levels of acid-and toxic forming materials (including pyretic sulfur) for the parameters listed in Table 6 of the 1988 Guidelines for the Management of Topsoil and Overburden. [pwb, dwd]

**R645-301- 632**, The Permittee must describe the location of surface fracturing from subsidence and any relationship it may have with the local fracture pattern.[dwd]

**R645-301-724**, The Permittee needs to include the hydrologic baseline data presented in “Muddy Creek Tract: Surface and Groundwater Technical Report” prepared by Cirrus Ecological Solutions, LC, for the Manti-La Sal National Forest. Although the lease amendment references the report in Section 7.3.1.2, Water Monitoring, the baseline data is not presented in the MRP. The baseline data for the SITLA Muddy Tract should be included in the MRP; ideally as part of a separate appendix that includes a determination of Probable Hydrologic Consequences (PHC) for the SITLA Muddy Creek Tract. [smf]

**R645-301-728**, The Permittee needs to update the PHC to include the addition of the SITLA Muddy Tract. The amendment should contain a determination of PHC based on the baseline hydrologic information provided in the report prepared by Cirrus Ecological Solutions, LC. Ideally, the PHC determination along with the baseline data for the SITLA Muddy Creek Tract should be included in the MRP as a separate appendix. [smf]

**R645-301-728.310, -728.334**, The Permittee needs to update the Probable Hydrologic Consequences (PHC) Determination to include more up-to-date current and long-term mine water discharge rates. Accurate mine water discharge information is needed in order for the PHC to make findings on: whether adverse impacts may occur to the hydrologic balance; and what impact the proposed coal mining will have on groundwater and surface water availability. This updated discharge information is also needed for the update of the Quitchupah-Muddy Creek CHIA. [smf]

**R645-301-724.100, 724.210**, At the request of the Manti-La Sal Forest Service, the Permittee needs to update the groundwater monitoring plan to include additional spring monitoring sites located further downgradient of the Muddy Creek Tract. The Forest Service requests the additional monitoring of spring M-SP18 and either one or two out of four springs located in Greens Hollow; M-SP01, M-SP02, M-SP12, and M-SP45. The additional groundwater monitoring should be based on a PHC determination for the Muddy Creek Tract. [smf]

**R645-301-722.300**, The Permittee needs to update Plate 7-3, Hydrologic Monitoring Stations, with the additional hydrologic monitoring sites for springs in Greens Hollow and spring M-SP18 located in a drainage north of Greens Hollow. [smf]

**R645-301-729**, The Permittee needs to address the hydrologic deficiencies listed in this technical memo (Task ID #2157) before the Division can update the Quitchupah-Muddy Creek, Cumulative Hydrologic Impact Area with information regarding the addition of the SITLA Muddy Creek Tract. [smf]