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State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

July 23, 1992

Mr. J. T. Paluso
Soldier Creek Coal Company
P. O. Box I
Price, Utah 84501

Dear Mr. Paluso

Re: Division Order Deficiencies, Soldier Creek Coal Company, Soldier Canyon Mine, ACT/007/018-92A, Folder #2, Carbon County, Utah

The Division has completed a review of materials received on May 8, 1992 intended to satisfy requirements under R645-301-200 (soils). At this time it appears that you have successfully addressed the following deficiencies: R645-301-222 #2 & #3, R645-301-222.400 #2, R645-301-224 #1 through #6, R645-301-230 #3 and #4, R645-301-242 #2. There are, however, a number of deficiencies that remain unresolved. Please review the attached technical memo which discusses the remaining issues and provide a response to the remaining deficiencies by September 8, 1992, the date you have previously scheduled to complete Division Order #92A.

Appropriate numbers of copies should be submitted (please see conclusions section of technical memo).

If you have any questions please, please call me or Priscilla Burton, Reclamation Soils Specialist.

Sincerely,

A handwritten signature in cursive script that reads "Daron R. Haddock".

Daron R. Haddock
Permit Supervisor

jbe Attachment
cc: P. Burton
SOLDCREE.92A
an equal opportunity employer



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July 23, 1992

TO: Daron Haddock, Permit Supervisor

FROM: *PB* Priscilla Burton, Soils Reclamation Specialist

RE: Permit Renewal Deficiencies, Responses received 5/8/92 regarding R645-301-200 (Soils). Soldier Creek Coal Co., Soldier Canyon Mine, ACT/007/018-DO92A, Folder #2, Carbon County, Utah

SUMMARY

The R645-301-200 section of deficiencies from the permit renewal document (1/28/92) are rewritten below in italics. A brief status of the requested information is listed immediately after each deficiency. Where there may be an issue of non-compliance, a more elaborate discussion follows the deficiency and the deficiency has been restated.

This submittal does not address all of the R645-301-200 deficiencies. During a March 5, 1992 meeting with SC3 representatives, indications of a timetable for compliance was given. These time frames are also reported under the deficiencies when appropriate.

ANALYSIS:

R645-301-222. Soil Survey.

Deficiencies:

1. *Include information in Appendix 10 regarding the Fan #3 exploration soils data gathered by the SCS. Include the volumes of topsoil stored at the Topsoil Storage site from the Fan #3 exploration.*

Proposal:

620 yd³ were salvaged and stored from the Fan #3 exploration.

Analysis:

Figure 2 of Appendix 2-E is missing from the submittal. The Table of Contents submitted for Appendix 10 inadvertently omits illustrations 10.7-1 and 10.7.1-2.

Deficiency:

Figure 2 of Appendix 2-E and a corrected Appendix 10 Table of Contents must be received to come into compliance with this deficiency.

2. *Mention in the narrative on pg. 2-3, Soil Survey, that the location of the soil samples taken of the topdressing is on Figure 3.7-2. These samples are summarized in Table 2.22-2*

Proposal:

The Applicant is in compliance.

3. *A commitment is required in the MRP that the development plans for future disturbance (adjacent or distant from the central mine site) will include depth segregated soil sampling which will be logged in the field according to the National Cooperative Soil Survey and analyzed by horizon according to Table 1 of the Division's "Guidelines" for topsoil. Methodologies of the labs will be made available to the Division with the laboratory analysis sheets.*

Proposal:

The Applicant is in compliance.

Analysis:

The National Cooperative Soil Survey information may be obtained from the local Soil Conservation Service office (telephone 637-0041), the Division library, or the National Cooperative Soil Survey (telephone 402-437-5363). Request Title 430 (the National Soils Handbook), Agricultural Handbook #18 (Soil Survey Manual), and Agricultural Handbook #436 (Soil Survey Investigations Report #1). All technical work must be conducted by a qualified individual.

4. *An Order 1 soil survey map of the surface disturbed mine facilities area must be prepared before construction of Fan #3. This map will consolidate the*

information provided in Appendix 10 (Vol. 5) and Chapter 2, and Fan #3 exploration. Locations of all previous sample pits and auger holes, and dates of sampling will be provided on the map. The map must show all soil types from available information. Areas disturbed prior to August 1977 will be delineated.

Proposal:

During a meeting on 3/5/92, D Spillman and T Paluso of SC3 presented their intention to comply with this deficiency when construction on Fan Site #3 occurs, possibly in 1993.

Analysis:

The Division accepted this delay in compliance.

Deficiency:

Item #4 of R645-301-222, Soil Survey, remains deficient. The Applicant must complete this survey information prior to gaining approval of construction on Fan Site #3.

R645-301-222.400. Present and Potential Productivity of Existing Soils.

Deficiencies:

1. *Clarify the number of reference areas and mention on pg. 3-22 and pg. 5 of Appendix. 3-B the figures which show location of vegetation reference areas.*

Proposal:

Revised Page 3-22 was not found with the submittal. Other information received is in compliance.

Deficiency:

Page 3-22 must be submitted.

2. *Provide the map which is referred to on pg. 5 (Appendix. 3-B, Vol. 2 of the 1990 Mt. Nebo Scientific Vegetation Analysis Report.*

Proposal:

The map referred to is 3.7-2. The Applicant is in compliance.

R645-301-224. Substitute Topsoil.

Deficiencies:

1. *Provide a description in Section 2-24 for location of the crib wall test plot, a description of the treatments employed on this plot, and the evaluations of the plot to date.*

Proposal:

The Applicant has eliminated reference to this non-existent test plot. The Applicant is in compliance.

2. *Include the crib wall test plot on the Central Mine Facilities Map 5.21-1.*

Proposal:

The test plot does not exist. The Applicant is in compliance.

3. *Clarify the description of the location of soil sample #2 (pg.2-19 of Vol 1 of the MRP) and the storage location of the soils represented by sample #2 (pg. 2-32 of vol 1 of the MRP).*

Proposal:

The topsoil referred to is located in an active storage yard which is covered with a gravel cap (Exhibit 5.21-1). The Applicant is in compliance with this stipulation.

Analysis:

This material has been classified as substitute topsoil. The storage of this material and other pad material is not adequate to provide a dynamic biosphere upon reclamation. Due to the fact that the disturbance is pre-SMCRA and there is no other available cover, this material (although it is subject to compaction and contamination from operations) will remain the designated substitute topsoil material. The adverse impacts of the storage conditions of this soil may be mitigated through compliance with Item #3 of R645-301-234. Thus, a positive response to item #3 of R645-301-234 is requested.

4. *Clarify the yardage of all substitute topsoil presently stored in fills by completion of the table presented in this technical analysis under this rule.*

Proposal:

The Applicant is in compliance, 10,522 yd³ of cover material is stored in fills at the mine site.

5. *Present a commitment in the MRP to resample all designated substitute topsoil locations prior to final reclamation, refer to the deficiencies under R645-301-234 for specifics.*

Proposal:

SC3 has committed to resampling the designated substitute topsoil areas at the time of final reclamation (see page 2-24a and 2-29). The depth and quantity of samples will be determined with Division assistance at the time of final reclamation.

Analysis:

The Division's recommendation is for a minimum 3 depth segregated samples for each storage location, please refer to the discussion provided under item #2 of R645-301-234.

Deficiency:

The deficiency is stated under item #2 of R645-301-234.

6. *Present a plan for isolating and protecting the substitute topsoil during the backfilling and grading of final reclamation.*

Proposal:

The Applicant is in compliance. The material will be removed and stockpiled after sampling and identification (pg 2-29).

R645-301-230. Operation Plan.

Deficiencies:

1. *All topsoil storage locations at the mine site must be specified on Map 5.21-1, Central Mine Facilities Map, estimate total and individual yardage.*

Proposal:

A total of 10,522 yd³ of cover material can be salvaged from the locations sampled in 1984 and shown on Exhibit 5.21-1 (revised 3/11/92).

Analysis:

The soil sampling areas are not identified as substitute topsoil on Exhibit 5.21-1. The Applicant is not in compliance.

Deficiency:

The substitute topsoil locations must be identified on Exhibit 5.21-1.

2. *The method of determining volumes of material must be stated, since cross-section of all topsoil piles and substitute topsoil piles which are stored at the topsoil storage site were not included with the MRP.*

Proposal:

Cross-sections of the topsoil and subsoil located at the topsoil storage site were provided.

Analysis:

Figure 2 of Appendix 2-E is missing from the submittal.

Deficiency:

Figure 2 of Appendix 2-E must be submitted with the proposal.

3. *Include the yardage of topsoil salvaged from Fan #3 exploration site.*

Proposal:

620 yd³ was salvaged and is shown on Figure 3. SC3 is in compliance.

4. *State definitively in the MRP that berms at the topsoil storage site are constructed of topsoil and that the road accessway has not been stripped of topsoil.*

Proposal:

This information is provided on page 2-36. SC3 is in compliance.

R645-301-234. Topsoil Storage.

Deficiencies:

1. *Locate all the designated substitute topsoil and all the topsoil storage areas on Central Mine Facilities Map 5.21-1 of the MRP.*

Proposal:

Revised exhibits 5.21-1 and 3.7-2, submitted on 3/11/92 show soil sampling locations at the central facilities area.

Analysis:

The locations of substitute topsoil and all topsoil storage areas are not identified in the legend or on the map.

Deficiency:

The locations of substitute topsoil and all topsoil storage areas at the central mine facilities must be identified on Exhibit 5.21-1 to come into compliance with this stipulation.

2. *Amend the MRP to state that the pre-SMCRA surface will be covered with the best substitute topsoil material in the permit area as determined by testing of depth segregated samples for total and nitrate nitrogen, phosphorus, potassium, and total petroleum hydrocarbons, SAR, electrical conductivity, pH, percentage rock fragments, organic carbon, boron and selenium at the time of final reclamation.*

Proposal:

Pages 2-24, 2-24a, and 2-29 discuss a resampling program.

Analysis:

The parameters to be measured are identified, however the depth of sampling and quantity of samples to be taken are not specified. The Division would like to avoid last-minute bargaining at the time of reclamation and therefore requests that a sample program would entail, at a minimum, 3 depth segregated samples for each storage location (samples from 0-12", 12-24", 24-36", and 36-48"...*ad infinitum* to the depth of recovery.)

Deficiency:

2. In addition to the parameters to be evaluated, the MRP must specify the sampling frequency and depths for the substitute topsoil prior to its isolation and protection during the regrading process (pages 2-24, 2-24a, 2-29). The Division's recommends a minimum of 3 depth segregated samples for each storage location and that depth segregation is in foot intervals down to the proposed depth of recovery.
3. *Amend the plan to state that organic matter such as composted manure, digested sewage sludge, composted sawmill waste or other available material will be incorporated into the substitute topsoil upon reclamation to inject microbial activity into the rhizosphere. Methodology to be used will be based upon the test plots developed at the permanent topsoil storage site, using subsoil excavated from the refuse disposal site.*

Proposal:

The response does not address this stipulation.

Analysis:

The soil will benefit from additions of organic matter to inject microbial life into the rhizosphere of the sterile growth medium that has been stored for so long in operational pads.

Deficiency:

A commitment for the addition (upon reclamation) of some form of organic matter to soils which have been designated cover material, but have been stored within the operations pad must be included within the MRP to remain in compliance with this stipulation

R645-301-242. Soil Redistribution.

Deficiencies:

1. *Differentiate between the substitute topsoil and backfill from each location on the reclamation volumes Map 5.42a.*

Proposal:

There is 10,522 yd³ of fill available for cover material from the parking lot, the upper storage yard, the crib wall, sediment pond and fan #2. Exhibit 5-21-1 identifies these areas.

Analysis:

Exhibit 5.42a depicts the reclamation volumes to be derived from the same areas. This stipulation attempts to address the reduction in fill which will be available due to use of material from the same location as designated, suitable cover (page 2-29). Whether SC3 has already factored this into their calculations is unclear.

Deficiency:

Differentiate between the substitute topsoil volumes and backfill volumes from each location on the Reclamation Volumes Map 5.42a.

2. *Identify the soil recovery map referred to on pg. 5-45 and 5-46 by the exhibit number.*

Proposal:

Reference to this map was deleted from the plan. SC3 is in compliance.

3. *Describe the method of sampling which will enable determination of unsuitable material which will be placed against the highwall. i.e., frequency of sampling, the depths of sampling, the analyses to be performed, etc. Will the sampling, as described in Deficiency #3 of R645-301-234, be conducted?*

Proposal:

The plan states that sampling of the substitute topsoil material will be undertaken prior to segregation of the material (pages 2-24, 2-24a, 2-29). The plan does not cover the sampling of the graded fill for acid/toxic parameters which would require burial of offensive material.

Analysis:

To avoid last minute confusion, the Division recommends that the following guidelines are incorporated into the MRP for determination of the acid/toxic properties of the graded fill (R645-301-731.311). After removal and safe storage of substitute topsoil, and following grading of the fill, random sampling will be conducted at a frequency of 1 sample/2.5 acres prior to applying substitute topsoil or topsoil cover material. Composite samples from 0 - 4' will be tested according to Table 6 of the Division Guidelines. Table 6 covers most of the acidic/toxic parameters that the Division will evaluate during final reclamation. However, in areas where surface activities included a repair shop and fuel storage the list of parameters would also include Gas and Diesel/ Oil and Grease Total Petroleum Hydrocarbons (USEPA methods 8015 modified and 418.1 or 413.1) and BTEX (N), that is benzene, toluene, ethylene, xylene and naphthalene (USEPA method 8020 or 602). Parameters found to be in exceedence of the Division guidelines for Overburden will be buried deeper into the fill.

Deficiency

3. Describe the method of sampling which will enable identification of unsuitable

material to be buried in the fill as per R645-301-731.311. i.e., frequency of sampling, the depths of sampling, the analyses to be performed, etc.

CONCLUSIONS

The submittal received on 5/8/92 supplies adequate responses to some, but not all of the stipulations placed on the permit in the context of the R645-301-200 regulations. Compliance with a single stipulation (Item #4 of R645-301-222 Soil Survey) has been postponed until construction of the Fan #3 project. All other outstanding deficiencies must be addressed in a timely manner. The next submittal from SC3 is expected on or before September 8, 1992. It is recommended that the information requested herein be included with that submittal.

Maps 5.21-1 and 3.7-2 and Appendix 2B (prime farmland) were referred to within the submittal as having been supplied to the Division on 3/11/92. Only one copy of each map and appendix was received. Ten copies must be received with the next submittal to supplement the information presently stored at the Division and awaiting distribution to other Agencies.

Figure 2 of Appendix 2-E is missing from this submittal. Appendix 10 inadvertently omits illustrations 10.7-1 and 10.7.1-2 from the Table and must be revised. Ten copies each of Figure 2 and revised Appendix 10 must be included in the September 8, 1992 submittals.

RENEWAL.STP