



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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September 20, 1989

TO: Susan C. Linner, Permit Supervisor

FROM: Henry Sauer, Reclamation Soils Specialist *HS*

RE: Mid-Term Review and Organizational Suggestions, U.S. Fuel Company, Hiawatha Mine Complex, ACT/007/011, Folder #2, Carbon County, Utah

SYNOPSIS

The Hiawatha Mining and Reclamation Plan (MRP) is poorly organized and pertinent information which is imperative for the determination of completeness and/or technical adequacy is missing and/or insufficient. The following review is relevant towards the general requirements of Utah's Coal Mining and Reclamation Regulatory Program. Therefore the following recommendations should be reviewed as a preliminary evaluation only. A completeness review will ensue when the applicant submits a clear and concise MRP as required under UMC 771.23 Permit Applications - General Requirement for Format and Content.

ANALYSIS

UMC 783.14 Geology Description

The applicant must submit plans to periodically collect (sampling frequency based on time or volume of material excavated) roof, floor, coal, midseam, and refuse samples. Sample location and constituents analyzed must be specified (i.e. appropriate mine plan map and the Division Guidelines for Management of Topsoil and Overburden, Table 6). All sampling procedures must fully describe field and laboratory methodologies employed. Results of analyses may be submitted in the annual report.

UMC 783.21 Soil Resource Information

The applicant must delineate soil types, sample locations, soil description pits, topsoil borrow pit areas, refuse and slurry samples on one set of maps (i.e. Hiawatha Soil Slurry Map, Middle Fork of Miller Creek Soils Survey Map, etc.) of a scale of at least 1":6000" (1":500').

The applicant must update the soil survey of the permit area to reflect the new, published Soil Survey of Carbon Area, Utah.

Soil interpretations, and limitation tables, definitions, etc. found on pages 48-99 may be omitted from the mine plan.

Each and every soil described and delineated in the soil survey of the permit area must have a present and potential productivity statement.

The reclamation cost estimates (Table III-17, etc.) should be incorporated into the bonding section of the MRP.

Where the applicant proposes to use selected overburden, pad and existing fill materials as a supplement or substitute for topsoil, the applicant shall substantiate its use and provide results of analyses, trials and revegetation test plots as required under UMC 817.22(e)(1).

UMC 783.25 Cross-Sections, Maps and Plans

The applicant must provide as-built surveys of all topsoil stockpiles. The surveys must include: volumes of stored material; minimum and maximum slopes and all pertinent dimensions and elevations.

UMC 783.27 Prime Farmland Investigation

The applicant must obtain written verification from the State Soils Scientist (Soil Conservation Service) regarding a prime farmland determination for the lands within the disturbed area.

UMC 784.13 Reclamation Plan: General Requirements

The applicant must provide a detailed timetable for the completion of each major step in the Reclamation plan and any contemporaneous reclamation planned.

All disturbed areas to be reclaimed must have a plant growth medium allocated to that particular site of disturbance. The applicant must provide a comprehensive topsoil mass balance table to include the following: area of disturbance, required volume to redistribute topsoil upon disturbance, depth of planned topsoil redistribution; particular locations and acreage to receive topsoil; particular locations and acreage to utilize substitute topsoil material (i.e. overburden, pad and fill material); area and volume of topsoil borrow pits; source area for required topsoil;

UMC 817.21-817.25 Soil: General Requirements

The following information must be included in the PAP to meet the requirements of UMC 817.21 - 817.25.

1. Methods and equipment employed to ensure proper implementation of a soil removal plan:
 - (a) vegetation removal, and
 - (b) method utilized to exact depth of soil removal.
2. Methods and equipment employed to ensure proper implementation of a soil storage plan:
 - (a) erosion protection (berm, mulch, contour-furrowing, seed mixture, etc.).
 - (b) compaction mitigation, and
 - (c) fertilizer/amendments to ensure revegetation success.
3. Methods and equipment employed to ensure proper implementation of a soil redistribution plan:
 - (a) compaction mitigation.
 - (b) soil/spoil scarification (i.e., depth, machinery),
 - (c) method used to ensure proper topsoil redistribution depth.
 - (d) fertilizer assessment sampling plan,
 - (e) management to prevent erosion between topsoil redistribution and reseedling.
 - (f) time between regrading and retopsoiling, and
 - (g) seedbed preparation.

UMC 817.48 Hydrologic Balance: Acid-Forming and Toxic-Forming Materials

The applicant must provide description of measures employed to insure that all acid- and/or toxic-forming materials are identified and disposed of in accordance with UMC 817.48, UMC 8178.85 and UMC 817.103.

The following exhibits and table could not be located in the MRP:

Exhibit VIII-4A
Exhibit III-4B

Table VIII-9
Table VIII-11

RECOMMENDATIONS

In responding to the above comments, the applicant should discuss each issue in Chapter III of the MRP, outlining the methods, analyses, plans, equipment, etc., pertinent to fulfilling the requirements of each section. The reclamation plan should be presented as a continuum of sequential steps, specifically describing provisions and/or sampling procedures which will be accomplished concurrently to reclamation procedures and/or normal operational procedures. Data (lab analyses, soil descriptions, maps, technical reports, etc.) should be presented in Chapter VIII of the MRP. Explicit plans which reflect collected data may also be included in Chapter VIII.

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BT37/38-41



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August 24, 1989

TO: Susan Linner, Permit Supervisor
FROM: Mike DeWeese, Reclamation Hydrologist *MD*
RE: Diversion Designs, United States Fuel Company, Hiawatha Mine Complex, ACT/007/011, Folder #2, Carbon County, Utah

SUMMARY:

The operator has submitted survey results of channel material in the three Diversion channels addressed in TDN 88-2-116-2. This data was used to determine the adequacy of the existing diversions. The operator has now submitted both riprap material and check dam.

ANALYSIS:

The operator conducted a channel bed material survey using an unbiased representative sampling method recommended by the Division. Survey results were used to determine the adequacy of the existing bed material to provide channel protection during the 50 year-6 hour storm as per the approved permit. Results of the Division's calculations are as follows:

<u>Diversion</u>	<u>Existing d₅₀ (in)</u>	<u>Required d₅₀ (in)</u>
Middle Fork	2.3	<2.0
South Fork	3.6	<3.0
Upper Rail Yard	7.0	2.0

These results demonstrate that the existing channels are stable. Riprap check dams in addition to adequate bed material provide sufficient stability to meet the design requirements.

RECOMMENDATIONS:

The Division recommends that the operator's submittal regarding the diversion designs be granted final approval.

cc: B Team
BT98/77