

0010

FEDERAL
(April 1987)

Permit Number ACT/007/011, March 13, 1992
(Renewal)

**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**

This permit, ACT/007/011, is issued for the state of Utah by the Utah Division of Oil, Gas and Mining (DOGM) to:

**United States Fuel Company
P. O. Box A
Hiawatha, Utah 84527
(801) 637-2252**

for the Hiawatha Mines Complex. United States Fuel Company is the lessee of federal coal leases SL-025431, SL-069985, U-058261, U-026583 and U-51923. Most of the remainder of the coal in the life of mine area is owned by U. S. Fuel Company. A performance bond is filed with the DOGM in the amount of \$3,779,000.00, of which \$1,450,000 is a surety bond and \$2,329,000 is a self bond, payable to the state of Utah, Division of Oil, Gas and Mining and the Office of Surface Mining Reclamation and Enforcement (OSMRE). DOGM must receive a copy of this permit signed and dated by the permittee.

Sec. 1 STATUTES AND REGULATIONS - This permit is issued pursuant to the Utah Coal Mining and Reclamation Act of 1979, Utah Code Annotated (UCA) 40-10-1 et seq, hereafter referred to as the Act.

Sec. 2 PERMIT AREA - The permittee is authorized to conduct underground coal mining activities on the following described lands (as shown on the map appended as Attachment B) within the permit area at the Hiawatha Mines Complex situated in the state of Utah, Carbon and Emery Counties, and located:

**T. 15 S., R. 7 E., SLM, Secs. 13, 24-25, 36
T. 15 S., R. 8 E., SLM, Secs. 17-21, 26-35
T. 16 S., R. 8 E., SLM, Secs. 3-6, 8-9**

This legal description is for the permit area (as shown on Attachment B) of the Hiawatha Mines Complex. The permittee is authorized to conduct underground coal mining activities on the foregoing described property subject to the conditions of the leases, including all conditions of the previous permit term and all other applicable conditions, laws and regulations.

The designated permit area described above excludes 55 acres for the town of Hiawatha in:

T. 15 S., R. 8 E., SLM, Secs. 27, 34; as shown on Attachment B.

- Sec. 3 PERMIT TERM - This renewed permit becomes effective on March 14, 1992 and expires on March 14, 1997.
- Sec. 4 ASSIGNMENT OF PERMIT RIGHTS - The permit rights may not be transferred, assigned or sold without the approval of the Director, DOGM. Transfer, assignment or sale of permit rights must be done in accordance with applicable regulations, including but not limited to 30 CFR 740.13(e) and R645-303.
- Sec. 5 RIGHT OF ENTRY - The permittee shall allow the authorized representative of the DOGM, including but not limited to inspectors, and representatives of OSMRE, without advance notice or a search warrant, upon presentation of appropriate credentials, and without delay to:
- A. have the rights of entry provided for in 30 CFR 840.12, R645-400-110, 30 CFR 842.13 and R645-400-220; and,
 - B. be accompanied by private persons for the purpose of conducting an inspection in accordance with R645-400-100, R645-400-200 and 30 CFR 842, when the inspection is in response to an alleged violation reported by the private person.
- Sec. 6 SCOPE OF OPERATIONS - The permittee shall conduct underground coal mining activities only on those lands specifically designated as within the permit area on the maps submitted in the mining and reclamation plan and permit application and approved for the term of the permit and which are subject to the performance bond.
- Sec. 7 ENVIRONMENTAL IMPACTS - The permittee shall minimize any adverse impact to the environment or public health and safety through but not limited to:
- A. accelerated monitoring to determine the nature and extent of

noncompliance and the results of the noncompliance;

- B. immediate implementation of measures necessary to comply; and
- C. warning, as soon as possible after learning of such noncompliance, any person whose health and safety is in imminent danger due to the noncompliance.

Sec. 8 DISPOSAL OF POLLUTANTS - The permittee shall dispose of solids, sludge, filter backwash or pollutants in the course of treatment or control of waters or emissions to the air in the manner required by the approved Utah State Program and the Federal

Lands Program which prevents violation of any applicable state or federal law.

Sec. 9 CONDUCT OF OPERATIONS - The permittee shall conduct its operations:

- A. in accordance with the terms of the permit to prevent significant, imminent environmental harm to the health and safety of the public; and
- B. utilizing methods specified as conditions of the permit by DOGM in approving alternative methods of compliance with the performance standards of the Act, the approved Utah State Program and the Federal Lands Program.

Sec. 10 AUTHORIZED AGENT - The permittee shall provide the names, addresses and telephone numbers of persons responsible for operations under the permit to whom notices and orders are to be delivered.

Sec. 11 COMPLIANCE WITH OTHER LAWS - The permittee shall comply with the provisions of the Water Pollution Control Act (33 USC 1151 et seq,) and the Clean Air Act (42 USC 7401 et seq), UCA 26-11-1 et seq, and UCA 26-13-1 et seq.

Sec. 12 PERMIT RENEWAL - Upon expiration, this permit may be renewed for areas within the boundaries of the existing permit in accordance with the Act, the approved Utah State Program and the Federal Lands Program.

Sec. 13 CULTURAL RESOURCES - If during the course of mining operations, previously unidentified cultural resources are discovered, the permittee shall ensure that the site(s) is not disturbed and shall notify DOGM. DOGM, after coordination with OSMRE, shall inform the permittee of necessary actions required. The permittee shall implement the mitigation measures required by DOGM within the time frame specified by DOGM.

Sec. 14 APPEALS - The permittee shall have the right to appeal as provided for under R645-300.

Sec. 15 SPECIAL CONDITIONS - In addition to the general obligations and/or requirements set out in the leases and this permit, the permittee shall comply with the Division Order appended hereto as Attachment A.

The above conditions (Sections 1-15) are also imposed upon the permittee's agents and employees. The failure or refusal of any of these persons to comply with these conditions shall be deemed a failure of the permittee to comply with the terms of this permit and the lease. The permittee shall require his agents, contractors and subcontractors involved in activities concerning this permit to include these conditions in the contracts between and among them. These conditions may be revised or amended, in writing, by the mutual consent of DOGM and the permittee at any time to adjust to changed conditions or to correct an oversight. DOGM may amend these conditions at any time without the consent of the permittee in order to make them consistent with any new federal or state statutes and any new regulations.

THE STATE OF UTAH

By: _____

Deanne R. Nielson

Date: _____

3-13-92

I certify that I have read, understand and accept the requirements of this permit and any special conditions attached.

Authorized Representative of the Permittee

Date: _____

ATTACHMENT A

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

PERMITTEE

Mr. Michael W. Baum
President/Director
U. S. Fuel Company
P. O. Box A
Hiawatha, Utah 84527

Hiawatha Mines Complex
Carbon County

Permit Number ACT/007/011
Division Order # 92-A

DIVISION ORDER AND FINDINGS
of
PERMIT DEFICIENCY

PURSUANT to R645-303-212, the DIVISION hereby ORDERS the PERMITTEE, U. S. Fuel Company to make the permit changes enumerated in the FINDINGS OF PERMIT DEFICIENCY in order to be in compliance with the State Coal Program. These Findings of Permit Deficiency are to be remedied in accordance with the requirements of R645-303-220.

FINDINGS OF PERMIT DEFICIENCY

Based on a review of U. S. Fuel Company's recently submitted Permit Renewal Application a number of deficiencies have been determined. They are enumerated below:

- 1) U. S. Fuel Company must adequately address all outstanding issues discussed in the Division's Technical Deficiency Review dated March 4, 1992. (See list of outstanding issues.)

- 2) U. S. Fuel Company must provide evidence that all responses to the 1987 permit conditions have been incorporated into the Newly submitted Renewal Application Package and commit to continue to comply with those conditions.
- 3) U. S. Fuel Company must justify changes or discrepancies in permit boundaries as shown on Permit area map, Subsurface ownership map, and Surface ownership map.
- 4) U. S. Fuel Company must submit an additional eleven (11) copies of the newly reformatted Mining and Reclamation Plan for distribution to other agencies with a commitment to correct any deficiency brought up by their review of the plan.

ORDER

It is hereby ORDERED that U. S. Fuel Company make the requisite permit changes in accordance with R645-303-220 and submit a complete application for permit change, addressing the FINDINGS OF PERMIT DEFICIENCY by no later than June 12, 1992.

So ORDERED, this 13th day of March, 1992, by the Division of Oil, Gas and Mining.



Dianne R. Nielson, Director
Division of Oil, Gas and Mining

OUTSTANDING ISSUES (March 4, 1992)
UNITED STATES FUEL COMPANY
HIAWATHA MINES COMPLEX
ACT/007/011

R645-301-120. Permit Application Format and Contents.
R645-301-121. The permit application will:
R645-301-121.200. Be clear and concise; and

1. Describe pedons for all borrow site sample pit locations.
2. Review pedon descriptions at the borrow sample sites for accuracy, especially page 12 of the MRP for borrow Area D, as per item #2 of R645-301-121.200 technical deficiency.
3. Correct the numbering of the Tables included in Chapter II. Provide complete information in all Tables, particularly Table II-6 and II-7. Be consistent throughout the narrative, Exhibits and Tables when identifying samples and Areas sampled, especially in Tables II-13, II-14, II-15, and II-16.
4. Clarify the status of the unit-train loadout disturbance and update sections of the plan accordingly.
5. Consolidate all topsoil pile information in one location under the Table of Contents heading R645-301-231.400.
6. Correct the reference (page 63 of the MRP) for the location of the seed mix and earthwork calculations for North Fork operations and reclamation. Please clarify all references to cut and fill volumes and reclamation contour maps in Chapter II of the narrative. Correctly identify their location in Chapter VIII.
7. Please correct the discrepancy between the acreage provided in Chapter VIII and Chapter II and Chapter III concerning acreage to be reclaimed.
8. Correlate areas of soil salvage and in Middle and South Forks with the activities described in the Table of Reclamation Cost Estimates in Chapter VIII and with the substitute topsoil locations identified in Chapter II. Correlate the areas of topsoil redistribution described in Chapter II with those described in the seed mix Tables of Chapter III.
9. Please correlate the narrative profile description for Borrow Area C on page 10 of Chapter II and the profile described in Table II-4 for a test pit located in Borrow Area C. Evaluate the profile description provided on page 12 of the MRP for Borrow Area D for its accuracy and completeness.

R645-301-122. Referenced Materials.

1. Include a 'Literature Cited' section in the narrative and Table of Contents for Chapter II.

R645-301-130. Reporting of Technical Data.

1. Present the original laboratory analysis reports for each set of information presented in the Tables in Chapter II.
2. Reference laboratory methodology for each sample parameter on each sample date.
3. Calculate and correct the reported SAR values using the following formula:

$$\text{SAR} = [\text{Na meq/L}] \div \sqrt{([\text{Ca meq/L}] + [\text{Mg meq/L}]) \div 2}$$

R645-301-200. SOILS.

R645-301-221. Prime Farmland Investigation.

1. Submit the map which accompanied this evaluation of the mine operations areas.
2. Evaluate the borrow areas for prime farmland potential.

R645-301-222. Soil Survey.

1. Update the soil survey information found in Appendix II-1 of the 1992 permit document according to R645-301-222, R645-301-122.100 and R645-301-122.200. Remove excess information and present the most accurate, concise portrayal of the soils within the permit area and disturbed area boundaries (including borrow areas North Fork fan, and Unit-train overpass) using the methodology prescribed in the National Soil Survey Handbook 460 and the information available through the 1988 published SCS soil survey. Include a description of all soil profiles located on the accompanying Exhibits.
2. Revise Exhibit II-1, II-2, and II-3 to correspond with the new survey information provided in item #1 above. Include on the revised exhibits all

sample pit locations described in the narrative. The information required under R645-301-140, including North arrow, Township, Range and Section numbers and the certification of a registered, professional engineer are also required on these Exhibits.

3. Present in the MRP additional exhibits which expand the information presented on the existing soil maps, according to R645-301-222, R645-301-122.100 and R645-301-122.200. The additional exhibits will correspond with the new soil survey information for South and Middle Forks, Hiawatha/Preparation Plant/Slurry Pond Area, and the Borrow area. Locate on these maps the topsoil storage piles, borrow areas, revegetation test plots (Appendix. III-5), and interim revegetation test areas (Appendix III-4). These additional exhibits will be drawn on a scale of 1" = 100' or 1'=200' to match the corresponding surface facilities map. The maps will have Township, Range, and Section markings, include disturbed area and permit area boundaries where appropriate, have a North arrow, and the certification of a registered, professional engineer.
4. Locate Slurry Pond 3 and associated test pits on Exhibit II-1. Include on Exhibit II-1 the location of sample site 8 in the upper storage yard.
5. Include in the expanded survey maps described in item #3 of R645-301-222, the information gathered from the borrow areas.
6. Present recent productivity information for the reference areas at the mine site and tie these in to the soil types present in the reference areas, see also deficiency #2 under R645-301-321.

R645-301-224. Substitute Topsoil.

1. See further discussion under R645-301-233.
2. Specify the expected acreage at the South Fork loadout which is to receive borrowed topsoil.
3. Develop test plots in conjunction with the Division that have the objective of determining that 2 feet of cover is as adequate as four feet over the coal mine waste. Develop test plots in conjunction with the Division that have the objective of determining that the C3 and C4 horizons of Hernandez loam and

Haverdad loam can be reclaimed using the methodologies described in the MRP. Provide for adequate evaluation and statistical analysis based on a reference area comparison.

R645-301-230. Operation Plan.

1. Provide a commitment in the MRP to gouge the surface, reseed, fertilize and mulch any topsoil piles which do not have adequate cover as compared with the reference area for the location.
2. Clarify whether the unit train topsoil was salvaged and stored as described. Indicate whether Pond #5 stockpile includes soil salvaged from the unit train overpass. Revise total yardage in Slurry Pond #5 topsoil pile accordingly. Submit the table of analytical results for this unit train topsoil.
3. Clarify the amount of topsoil redistributed on the 1.1 acre disturbance at North Fork. Indicate the seed mix used for interim reclamation of this site. Provide soil survey information for North Fork as per deficiencies under R645-301-222.
4. Include information on the seed mix used on topsoil stockpiled by Slurry Pond #5 and #4.
5. Revise the plan to state that the berm/ditch will surround the stockpile located below Slurry Pond #4 and the lower storage yard as per general descriptions on page 4 of Chapter II of the MRP.
6. Commit to improving vegetation on the surface of the lower storage yard topsoil pile through gouging the top and slopes, fertilizing, seeding, and mulching this pile early in the spring of 1992, and placing a berm around the base of the pile which will also be vegetated, but not gouged.
7. Indicate the depth of the lower storage yard topsoil pile.
8. Include with the information on page 4 of Chapter II of the MRP a total volume of all topsoil stored in piles at Hiawatha.
9. Specify details concerning the analysis of topsoil and substitutes after redistribution, prior to seeding on page 4 of Chapter II of the MRP. How many

samples/acre per location will be taken? What parameters will be measured?

R645-301-233.300. Results of Physical and Chemical Analyses of Overburden and Topsoil

1. Potential toxicity to plant growth from SAR and aluminum must be avoided. The soil must be resampled by depth at the time of final reclamation to determine which areas will become backfill and which may be suitable for topdressing. The top six inches should not be sampled. Sampling should begin from 6" down to 4'. These samples should be analyzed for nitrogen; phosphorus; potassium; aluminum using the method described as 16-3 in the American Association of Agronomy monograph No 9. Methods of Soil Analysis. Part 2, 2nd Ed., page 281; water soluble sodium, magnesium and calcium; and hot water soluble selenium. Methods not specifically mentioned above are described in the Division's "Guidelines for the Use and Management of Topsoil and Overburden," Table #1 and Table #6.
2. Provide field notes with profile descriptions for each pit in each borrow area. Provide complete profile descriptions in the narrative.
3. In Area A, what is the texture and quality of the soils from 78 to 102 inches? What is the depth to bedrock or an impermeable layer?
4. Describe Area D soils down to at least 58 inches so that the reclamation environment for the soils is known.
5. Evaluate alternative plans for borrow material sources and borrow reclamation techniques.

R645-301-240. Reclamation Plan.

1. The reclamation plan must include unconsolidated material placement on top of the compacted fill to a depth of 18 inches prior to six inches of topsoil placement for all reclamation sites, leaving a total of two feet of uncompacted growth medium.
2. Please clarify the areas to receive topsoil in all reclamation locations on the

exhibit specified in deficiency #3 under R645-301-222.

3. Locate on the map request under deficiency #3 of R645-301-222 the area to receive 6" of topsoil removal followed by 1.5' of soil salvage at the Hiawatha preparation plant.
4. Identify a ripping depth of 18 to 24 inches for all surfaces, including roads and slopes, prior to topsoil redistribution. Commit to gouging of slopes greater than 3h:1v for erosion control.
5. Commit to fertilization of all reclaimed sites prior to seeding.
6. Revise the reclamation plan for the Hiawatha slurry and refuse sites to include methods a, b, and c below and supporting test trials (as outlined in deficiency #3 under R645-301-224):
 - a. a minimum of 24" of cover over the slurry and refuse areas
and
 - b. 1.5 T/ac of topmulch (per consultant's recommendation in Attachment I of Appx. II-3), or mulch treatment #2 as described in Appendix III-4.
and
 - c. irrigation, if the above treatments are unsuccessful and reseeding is required.

R645-301-321

Vegetation Information

1. The Applicant must provide subspecific and specific information for sagebrush (Artemisia tridentata) and sedges (Carex sp.) occurring in the reference areas and disturbed areas.
2. The reference areas must be evaluated by the Soil Conservation Service for range condition and productivity during the next growing season, and an evaluation of alternatives for improving their condition must be made if any are still in poor condition. See also deficiency 6 under R645-301-222.
3. The plan must include baseline vegetative cover data by species

for reference areas MBR1, MCR2, and PJR5.

4. Complete woody species density figures must be provided for reference areas MBR1, MCR2, and PJR5.
5. Reference area RR13 must be evaluated for woody species density, species and cover composition, and productivity. Alternatively, the Applicant may propose changing sampling site RA13 to a reference area if this area has not and will not be disturbed and if it can be shown to be representative of other riparian areas.
6. The vegetation in topsoil borrow sites must be correlated with vegetation sampling areas and reference areas or new sampling in these areas must be performed.

R645-301-322 Fish and Wildlife Information

1. The Applicant must include all available information on raptor nests in the permit area, particularly in the area of surface disturbance.
2. The Applicant must identify populations of canyon sweetvetch (Hedysarum occidentale var. canone) within and near areas that have been disturbed.

R645-301-323 Maps and Aerial Photographs

1. Exhibit III-3 must be revised to give expanded names of the abbreviations in the legend.

R645-301-341.100 Revegetation: Timing

1. The planting schedule or methods must be revised to show dormant season planting of tree and shrub nursery stock or must show other methods to establish transplants, such as irrigation during the late spring and summer.

R645-301-341.210 Species and Quantities of Seeds and Seedlings

1. Seed and planting mixes must be revised to reflect results of the test plots and of species identification performed on big sagebrush and sedges. Species shown in the seed and planting mixes must either be available commercially or U. S. Fuel must show how seed and plants of species not normally available through commercial channels will be obtained.
2. The use of the planting mixes in Table III-9 in association with the seed and planting mixes in Tables III-3 through III-6 must be discussed more clearly. These tables should be consolidated as far as possible.
3. U. S. Fuel must show where various seeding and planting treatments will be used, preferably on a map.
4. The application must show methods of establishing plants of important components of the riparian areas, i.e. sedges, rushes, and bulrushes, which are not normally available commercially.
5. The application must include transplant and seed handling procedures that will protect these materials until they are used.
6. U. S. Fuel must include a commitment not to accept seed sold in violation of the Utah Seed Act and to attempt to obtain adapted ecotypes through using origin verified seed, certified seed of adapted varieties, or seed labeled to show county and elevation of collection.
7. The Applicant must show methods to obtain adapted dormant nursery materials.

R645-301-341.220 Planting and Seeding Methods

1. This section of the application must include criteria for determining which planting method will be used.

2. Any references in the plan to mixing mulch or fertilizer with seed in hydroseeding mixtures must be deleted. Fertilizing, seeding, and mulching must be done in three separate operations.
3. The application must show how trees and shrubs will be clumped, including minimum and maximum sizes of clumps and spacing within clumps, for each habitat type.

R645-301-341.230 Mulching Techniques

1. Where straw or hay mulch is used, U. S. Fuel must use certified noxious weed free straw or hay.
2. The application must include general criteria for determining which mulching technique will be used. Any site that will have hay or straw mulch crimp-disced to anchor it must not be scarified through discing beforehand.
3. Slopes greater than 3h:1v must be scarified by gouging.
4. The Applicant must use mulching methods which have been proven to be most successful at U. S. Fuel's test plots or in other similar areas. The use of 1.5 tons per acre of anchored straw or hay, or of 0.5 tons per acre of hydraulically-applied straw mulch overlain by nylon netting and 0.5 tons per acre of hydromulch are suggested methods that have been shown to be successful.

R645-301-341.240 Irrigation and Pest and Disease Control

1. The application must contain contingency plans for disease and pest control and for irrigating transplants in case there are unforeseen problems with pests, diseases, or drought.

R645-301-341.250 Success Determination Measures

1. Typographical errors on pages 63 and 64 must be corrected.
2. The plan must include tree and shrub density standards as specified.
3. The application must contain methods of evaluating the diversity, utility, effectiveness, and seasonality of reestablished vegetation including quantitative measures of diversity and similarity to reference areas.

R645-301-341.300. Field Trials

1. U. S. Fuel must either present results of seventh year test plot monitoring or the MRP must state that seventh year monitoring was not performed.

R645-301-350 Performance Standards

1. The application must state the appropriate extended responsibility period under R645-301-357 and in Tables II-22 through II-25 and II-29.

R645-301-411 Environmental Description

1. The application must discuss the cemetery within the Town of Hiawatha and public parks within and adjacent to and units of the National System of Trails or the Wild and Scenic Rivers within the permit area.

R645-301-412 Reclamation Plan

1. The proposed post-mining land use for the roads must be identified in the plan and must be consistent within the plan.

If the Applicant proposes to retain the roads, further information must be provided on what water supply system facilities need to be maintained by the town of Hiawatha.

2. The plan must contain copies of comments concerning the proposed post-mining land use by the legal or equitable owners of record of the surface of the proposed permit area and Utah and local governments agencies which would have to initiate, implement, approve, or authorize the proposed use of the land following reclamation.
3. Wording on page 8 which implies that no reclamation will occur after mining has ceased must be revised. Also, the reclamation plan section of this chapter must restate the intended land uses for all parts of the permit area.

R645-301-420 Air Quality

1. The Applicant must submit a copy for insertion into the plan of the most current Air Quality Approval Order.

**R645-301-500 ENGINEERING.
R645-301-512 Certification.**

1. The Applicant needs to submit a copy of drawing V-13c that has been stamped and signed by a qualified registered professional engineer. The Applicant needs to either submit maps and cross-sections that are required under R645-301-512.260 for variance from approximate original contours.

**R645-301-513 Compliance with MSHA Regulations and MSHA Approvals.
R645-301-513.100 Coal Processing and Waste Dams and Embankments**

1. The Applicant needs to include the names and MSHA identification numbers associated with the three slurry ponds in the permit text. The Applicant also needs to analyze the structures on more than one failure surface to insure that design standards are met. An alternative to meeting design standards is to meet

performance standards.

R645-301-513.200 Impoundments and Sedimentation Ponds

1. The Applicant needs to identify the structures in the text by name and MSHA identification numbers and give the reference to the maps that show the location of the underground reservoir. The Applicant needs to show that several potential failure surfaces meet either the design or performance standards.

R645-301-513.300 Underground Development Waste, Coal Processing Waste and Excess Spoil

1. The Applicant needs to commit that the disposal of any waste or spoil underground will be done in accordance with a plan approved by MSHA and the Division and current practices will not be in violation of MSHA regulations.

R645-301-513.400 Refuse Piles

1. The Applicant needs to identify the refuse piles by name and MSHA identification number in the text. The Applicant also needs to provide maps, cross-sections and engineering calculations used to design and construct the piles.

R645-301-513.500 Capping and Sealing of Mine Openings

1. The Applicant appears to be in compliance with this section. Surface maps should be provided to show those portals that must meet SMCRA closure standards.

R645-301-513.600 Discharges into Underground Mines

1. The Applicant appears to be in compliance for this section.

R645-301-514 Inspections
R645-301-514.100 Excess Spoil

1. The Applicant is not in compliance. The Applicant either needs to commit to not generating any spoils that will be disposed of on the surface or submit an inspection plan for placing spoils in surface facilities.

R645-301-520 Operation Plan
R645-301-521 General

1. The Applicant has not stated what maps and cross-sections have been submitted to meet the requirements of R645-301-521.100 through R645-301-521.190. The Applicant needs to submit a map that shows the entire permitted area and the location of the five areas. The five areas are: 1) North (Right) Fork of Miller Creek Surface facilities; 2) Middle Fork of Miller Creek Surface Facilities; 3) South Fork of Miller Creek Surface Facilities, 4) Hiawatha Processing Plant and Waste Disposal Sites; and 5) Substitute Topsoil Borrow Site. The Applicant needs to submit a map(s) that shows the location of all surface facilities that were closed or abandoned prior to the enactment of SMCRA.
2. The Applicant needs to address the signs and markers requirements set forth in R645-301-521.100 through R645-301-521.270

R645-301-522 Coal Recovery

1. The Applicant is not in compliance because no reference is made to the resource recovery protection plan, nor does the recovery plan take into account the anticipated annual production.

R645-301-523 Mining Methods

1. The Applicant needs to note any changes in the mining methods that have or will result from the decreased production rates.

R645-301-524 Blasting and Explosives

1. The Applicant needs to commit to follow all of the regulations in Section R645-301-524 that would apply to his operation.

R645-301-525 Subsidence

1. The Applicant will provide a map that shows the extent of possible subsidence and the location of any nonrenewable resources.
2. Provide geologic data and a model to support claims about subsidence; and 3) surface surveying of monuments and subsidence stations over areas of pillar extraction will be conducted at least every two years.

R645-301-527 Transportation Facilities

1. The Applicant needs to provide the geotechnical analysis for steep road cuts.

R645-301-528 Handling and Disposal of Coal, Overburden, Excess Spoil and Coal Mine Waste

R645-301-528.100 Coal Removal, Handling, Storage, Cleaning and Transportation Areas and Structures

1. The Applicant either needs to state the information required in this section or site the specific references where that information can be found.

R645-301-528.200 Overburden

1. The Applicant needs to commit to not removing any additional overburden without first submitting a plan and receiving the Division's approval.

R645-301-528.310 Excess Spoil

1. The Applicant needs to commit to not conducting any activities that could generate excess spoil unless they submit a plan and receive approval from the Division.

R645-301-528.321 Return of Coal Processing Waste to Abandoned Underground Mines

1. The Applicant needs to commit that no coal processing waste will be disposed of in underground mine workings without the express approval of the Division and MSHA.

R645-301-528.330 Noncoal Waste

1. The Applicant is not in compliance with this regulation until it is determined that the permanent waste storage site is a state approved landfill.

R645-301-529 Management of Mine Openings

1. The Applicant needs to provide the Division with a list of mine and mine openings and state which ones fall under the jurisdiction of SMCRA.

R645-301-530 Operational Design Criteria and Plans

1. The Applicant needs to adequately address the requirements of this section.

R645-301-540 Reclamation Plan

1. The Applicant needs to provide maps of the permitted area and outline the pre-SMCRA disturbed area. The Applicant needs to either modify his plans so that 4 feet of material will be placed on the refuse piles or show that a lesser amount is justified.

R645-301-600. GEOLOGY
R645-301-620. Environmental Description
R645-301-622. Cross-Sections, Maps and Plans

1. Locations of all test borings should be shown on at least one map. Accurate elevation information for all borings should be either on a plan, a map, cross-sections, or in a table. Locations and elevations for all core samplings should

be shown; if there are none, except those shown in Table VI-2, this should be clarified.

2. If they are available, then measured vertical sections of outcrops, geophysical logs, descriptions of borehole cuttings, and core samples should be used to compile information on nature, depth, and thickness of strata overlying and immediately beneath the coal seams in the permit area. If the necessary detailed information is not available in the permit area, then the reasons for using data from an adjacent area should be stated, along with assumptions and potential pitfalls in applying these data to the permit area.
3. Locations of the cross-sections on Exhibits VII-5 and -6 should be shown on a map.

R645-301-623. Geologic Information - detail

1. All analytical data on toxic-forming materials need to be included in the plan, especially for coal and strata overlying and underlying the seams to be mined. At least one sample from the cores or from the coal refuse should be analyzed for both acid/base potential and toxic-forming material. If all analytical results are included in Chapters II and VI, then the statement about analysis of the cores for toxic-forming materials needs to be clarified.
2. The permit area needs to be expanded to include all potentially impacted surface areas.
3. Determination should be made that there are sufficient quantities of suitable material available at the borrow sites to cover the slurry piles and to accomplish reclamation of the borrow sites and the covered slurry piles.

R645-391-624. Geologic Information - Minimum

1. References should be listed at the end of the Chapter, or a single master reference list should be located at a logical place somewhere in the Plan.
2. Any specific geologic practices, techniques, etc. used to derive the information in this Chapter should be at least briefly described; e.g., Is the geologic map

based on field mapping or taken from another source? Are Figures 2 through 5 based on cutting descriptions, core descriptions, geophysical logs, outcrops, or a combination of sources?

3. Locations of persistent and measurable in-mine flows should be shown on a map or plan and appropriate cross-sections. Water quality and quantity, including seasonal variations, should be listed for these locations.

R645-301-630. **Operation Plan**
R645-301-640. **Performance Standards**

1. Commit to follow Utah Code Section 73-3-25 and Utah Rules for Water Well Drillers for groundwater monitoring well installation and abandonment.

R645-301-700. **HYDROLOGY**
R645-301-720. **Environmental Description**
R645-301-721. **General Requirements**
R645-301-722. **Cross-Sections and Maps**
R645-301-722.100. **Location and extent of subsurface water... areal and vertical distribution of aquifers, and portrayal of seasonal differences of head in different aquifers on cross-sections and contour maps;**

1. The locations of cross-sections VII-5 and -6 should be on a map in Chapter VII because the boreholes used to construct these sections are not on Exhibit VI-1 and there are already cross-sections labeled AA and BB on Exhibit VI-1. Any information on groundwater that was encountered in these holes should be included either on the cross-sections or in the narrative.
2. The aquifers above the coal seams in the permit area should be identified, at least by reference to Section 724.600, and their areal and vertical distribution should be on maps or cross-sections.
3. Locations of groundwater flow into the mine workings should be located on maps and cross-sections. If the information is available and a practical portrayal can be made, seasonal variations in quantity and quality should be shown.

R645-301-723. Sampling and Analysis

1. The laboratory(ies) used to perform these analyses should be listed in the text or in the tables with the results.

R645-301-724. Baseline Information.

R645-301-724.100. Ground Water Information. The location and ownership for the permit and adjacent areas of existing wells, springs and other ground-water resources, seasonal quality and quantity of ground water, and usage. Water quality descriptions will include, at a minimum, total dissolved solids or specific conductance corrected to 25 degrees C, Ph, total iron and total manganese. Ground-water quantity descriptions will include, at a minimum, approximate rates of discharge or usage and depth to the water in the coal seam, and each water-bearing stratum above and potentially impacted stratum below the coal seam.

1. Analyze ground water samples from all ground water monitoring stations for all parameters listed on Table 3 of the DOGM Guidelines for Establishment of Surface and Ground Water Monitoring Programs for Coal Mining and Reclamation Operations. The water samples should be taken during low flow, but in no case should the sampling be done later than September 15, 1992.
2. Any information on water sources within the mine should be given, such as elevations and locations, mine level or coal seam, geology, measured or estimated flows, water analyses, etc.
3. The reference for Price and Waddell, 1973 needs to be added to the References.
4. Include information and analysis from studies of local bedrock flow, in an appropriate place in this or other sections, to the extent such information applies directly to this mine permit or adjacent areas.

R645-301-724.200. Surface water information. The name, location, ownership and description of all surface-water bodies such as streams, lakes and impoundments, the location of any discharge into any surface-water body in the proposed permit and adjacent areas, and information on

surface-water quality and quantity sufficient to demonstrate seasonal variation and water usage. Water quality descriptions will include, at a minimum, baseline information on total suspended solids, total dissolved solids or specific conductance corrected to 25 degrees C, pH, total iron and total manganese. Baseline acidity and alkalinity information will be provided if there is a potential for acid drainage from the proposed mining operation. Water quantity descriptions will include, at a minimum, baseline information on seasonal flow rates.

1. Analyze surface water samples from all surface water monitoring stations for all parameters listed on Table 1 of the DOGM Guidelines for Establishment of Surface and Ground Water Monitoring Programs for Coal Mining and Reclamation Operations. One sample each should be taken at low flow and at high flow, but in no case should the sampling be done later than September 15, 1992.

R645-301-724.300. **Geologic Information.** Each application will include geologic information in sufficient detail, as given under R645-301-624, to assist in:

R645-301-724.310. Determining the probable hydrologic consequences of the operation upon the quality and quantity of surface and ground water in the permit and adjacent areas, including the extent to which surface- and ground-water monitoring is necessary; and

R645-301-724.320. Determining whether reclamation as required by the R645 Rules can be accomplished and whether the proposed operation has been designed to prevent material damage to the hydrologic balance outside the permit area.

1. The reference to Geology actually reads "Chapter VII" instead of Chapter VI; this typo error should be corrected.
2. Information on the depth, quality, and geologic setting of groundwater beneath the slurry ponds and borrow sites, from piezometers, excavations or any other source, should be included and used in developing the reclamation plan.

R645-301-724.600. Survey of Renewable Resource Lands. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, the Applicant will provide a survey that shows whether aquifers or areas for the recharge of aquifers exist within the permit and adjacent area and whether subsidence, if it occurred, could cause material damage or diminution of reasonably foreseeable use of aquifers or areas for the recharge of aquifers. Renewable resource survey information will be incorporated into the subsidence control plan listed under R645-301-525.

1. Recharge areas in or adjacent to the permit area are not identified, so the effect of mining and subsidence can not be determined. See Section 724.100; if studies of local flow apply to this permit area, the information should be included to help understand recharge.

R645-301-725. Baseline Cumulative Impact Area Information

R645-301-725.100. Hydrologic and geologic information for the cumulative impact area necessary to assess the probable cumulative hydrologic impacts of the proposed coal mining and reclamation operation and all anticipated coal mining and reclamation operations on surface- and ground-water systems as required by R645-301-729 will be provided to the Division if available from appropriate federal or state agencies.

R645-301-725.200. If this information is not available from such agencies, then the Applicant may gather and submit this information to the Division as part of the permit application.

R645-301-725.300. The permit will not be approved until the necessary hydrologic and geologic information is available to the Division.

1. Deficiencies in data have been noted in previous sections and will be noted in following sections where appropriate.

R645-301-727. Alternative Water Source Information. If the probable hydrologic consequences determination required by R645-301-728 indicates that the proposed SURFACE COAL MINING AND RECLAMATION ACTIVITY may proximately result in contamination, diminution, or interruption of an underground or surface source of water within

the proposed permit or adjacent areas which is used for domestic, agricultural, industrial or other legitimate purpose, then the application will contain information on water availability and alternative water sources, including the suitability of alternative water sources for existing premining uses and approved postmining land uses.

1. The language in this section needs to make clear that DOGM may give an opinion on the availability and suitability of alternative water supplies but that the settlement of any disputes will be between the owner/user of the affected water, the Division of Water Rights, and the mine Operator.
2. The volume of water intercepted in the mine workings should be determined and a consistent, realistic number used throughout the MRP.
3. The right to use the portion of water from the Mohrland Tunnel that is proposed for the alternative water supply needs to be clarified. The effects of diverting this water from its present use may need to be discussed.

R645-301-728. Probable Hydrologic Consequences (PHC) Determination

R645-301-728.100. The permit application will contain a determination of the PHC of the proposed coal mining and reclamation operation upon the quality and quantity of surface and ground water under seasonal flow conditions for the proposed permit and adjacent areas.

R645-301-728.200. The PHC determination will be based on baseline hydrologic, geologic and other information collected for the permit application and may include data statistically representative of the site.

1. Make certain that flow rates in streams and the springs that feed them are consistent and logical. Clarify water rights as opposed to actual flow in Tables VII-42 and -43 and in the narrative.
2. Include an analysis of where the 22 gpm from the South and Middle Forks of Miller Creek are going and the possible effects of subsidence.
3. Correct the typo errors at the top of page 120.

R645-301-730. Operation Plan.
R645-301-731. General Requirements.
R645-301-731.100. Hydrologic-Balance Protection.
R645-301-731.200. Water Monitoring.

1. Surface and groundwater monitoring data for 1991 need to be included.
2. A description of how these data may be used to determine the impacts of the operation on the hydrologic balance should be included.
3. A commitment must be made to notify DOGM and other appropriate Federal and State agencies if a sample indicates noncompliance with applicable water laws and regulations.
4. A commitment must be made to remove all equipment, structures, and other devices used in conjunction with monitoring when they are no longer needed.

1987 Permit Conditions
U. S. Fuel Company
Hiawatha Mines Complex

Condition No. 1

Prior to the initiation of any ground disturbance activities, the Permittee shall contact OSMRE, Utah DOGM, and SHPO concerning the need for a cultural resources inventory of the impact area. If an inventory is required, the Operator shall ensure that all cultural resources are properly evaluated in terms of National Register of Historic Places eligibility criteria. Where a significant site will be affected by mining, the Permittee will consult with OSMRE, Utah DOGM, and the SHPO to develop and implement appropriate impact mitigation measures according to a mutually agreed upon schedule.

Condition No. 2

Within sixty (60) days of the effective date of this permit, the Permittee must submit a revised surface-water monitoring program to include alkalinity, dissolved iron, and oil and grease. Streams will be monitored monthly during the period of April through October in accordance with Utah DOGM's abbreviated sampling analytical schedule. Measurements of turbidity may be substituted for the measurement of total suspended solids following the development of an adequate site-specific relationship between the two parameters. Twice per year, the full suite of water-quality parameters will be analyzed using the comprehensive analytical schedule developed by Utah DOGM.

Condition No. 3

Within sixty (60) days of the effective date of this permit, the Permittee must submit to the RA a revised plan demonstrating adequate runoff storage for Slurry Pond 5A. Slurry Pond 5A is not to be used to contain runoff from the undisturbed areas flowing through culverts Nos. 2 and 12 until a revised plan is submitted and approved by the regulatory authority.

Condition No. 4

Within sixty (60) days of the effective date of this permit, the Permittee must submit to the RA a plan for a physical inspection of each seal impounding the underground reservoir and a contingency plan if inspections identify a possibility of failure. Starting in September 1987, each curved bulkhead must be inspected at least annually using the following as a minimum:

- 1) Photo monitor each curved bulkhead abutment using permanent picture points and camera mounts.
- 2) Establish survey net to monitor horizontal and vertical movement at several selected points in and around each bulkhead. This net should be to second order survey accuracy.
- 3) Establish a bulkhead leakage monitoring system that measures the water flow through each bulkhead and adjacent materials to measure leakage. This escaping water must be less than 0.25 gallons of water per bulkhead per 24 hour period. This item must be monitored monthly.

Condition No. 5

Within sixty (60) days of the effective date of this permit, the Permittee must revise and submit to the RA for approval a revised spring monitoring schedule and must include in its monitoring program the USFS spring (Water Right 91-1633).

Condition No. 6

Within sixty (60) days of the effective date of this permit, the Permittee must revise the in-mine ground water monitoring program in consultation with Utah DOGM. This monitoring program shall be submitted to the regulatory authority for final approval.

Condition No. 7

Within sixty (60) days of the effective date of this permit, the Permittee must provide results of sampling to a minimum of seven feet and laboratory analyses of soil from the equipment storage yard confirming that the projected quantity and quality of soil are accurate.

Condition No. 8

Within ninety (90) days of the effective date of this permit, the Permittee must provide the results of sampling and laboratory analysis of the soils in the nonrefuse portion of the preparation plant area to insure that a minimum of 18 inches of suitable subsoil material is available for redistribution after backfilling and grading.

Condition No. 9

Within sixty (60) days of the effective date of this permit, the Permittee must provide the location (exhibit) and proposed protective measures to be used for any and all substitute topsoil stockpiles in the nonrefuse portion of the preparation plant area.

Condition No. 10

The Permittee must, by July 1, 1987, submit the necessary data collected during 1985, that reevaluates the cover value for all vegetation reference areas. Discussions evaluating the new data and how it relates to the vegetation type must also be provided.

Condition No. 11

As a condition of the U. S. Fish and Wildlife Service's Windy Gap analysis for impacts to threatened and endangered species, the Permittee must implement within thirty (30) days of the effective date of this permit the mitigation measures identified in the USFWS letter dated August 13, 1984, and submit proof of such compliance to the regulatory authority.

Condition No. 12

Prior to initiating soil salvage activities in Area D borrow area or developing the existing access road through the adjacent riparian zone, the Permittee shall consult with the regulatory authority to determine whether any design changes are required due to changes in the condition of the stream crossing. At such time, at a minimum, the disturbance to established riparian vegetation, topsoil salvage, the need for temporary culverts, and spillage in the perennial stream shall be considered.

Condition No. 13

The Permittee shall comply with all terms of the Reclamation Fee Installment Agreement entered into on November 11, 1985, by and between U. S. Fuel Company and OSMRE, U. S. Department of the Interior. OSMRE may immediately suspend or revoke the Permittee's permit or right to mine if the U. S. Fuel Company fails to comply with any of the terms of the agreement.

Condition No. 14

The Applicant shall commit, within thirty (30) days of the permit approval, to restoring areas impacted by subsidence-caused surface cracks or other subsidence features such as escarpments (not to include naturally occurring escarpments which are not a result of mining) which are of a size or nature that could, in the Division's determination, either injure or kill grazing livestock or wildlife. Restoration shall include recontouring of the affected land surface including measures to prevent rilling, and revegetation in accordance with the approved permanent revegetation plan in the MRP. Restoration shall be undertaken after annual subsidence survey data indicate that the surface has stabilized, but in all cases restoration and revegetation shall be completed prior to bond release.

Condition No. 15

The Applicant shall commit, within thirty (30) days of permit approval, to compensate surface owners (except for land owned by the Applicant) for lands which cannot be safely grazed due to hazards caused by surface effects of subsidence, with land (in close proximity) of comparable size and grazing capacity to be used for grazing until restoration of the damaged land is achieved.

Condition No. 16

The Applicant shall commit, within thirty (30) days of permit approval, to compensate at a fair market value, owners of livestock which are injured or killed as a direct result of surface hazards caused by subsidence.

Condition No. 17

The Permittee shall replace any water demonstrated to have been lost or adversely affected by mining operations with water from an alternate source in sufficient quantity and quality to maintain the current and postmining land use. The Permittee will advise the regulatory authority of the loss or adverse occurrence within two (2) working days of becoming aware that it has occurred, and within fourteen (14) days of notification shall submit to the regulatory authority for approval a plan to replace the affected water. Upon acceptance of the plan by the regulatory authority, the plan shall be implemented in the time-frame dictated by the regulatory authority's approval notification.

Condition No. 18

Existing raptor nests adversely affected by mine related subsidence shall be replaced or otherwise mitigated by the Permittee in consultation with the U. S. Fish and Wildlife Service and the Utah Division of Wildlife Resources according to the requirements of UMC 784.21 and UMC 817.97. Notification of the loss to the above-named agencies and the regulatory authority shall take place within two (2) working days of the Permittee becoming aware that the loss has occurred.

Condition No. 19

At least sixty (60) days prior to beginning second seam mining inside a perennial stream buffer zone, as defined by a 20 degree angle of draw from vertical, measured from the limit of mining in the lowest seam to the center of the stream channel, the Permittee shall present a detailed evaluation of the anticipated effects of multiple seam mining on perennial streams to the regulatory authority for review and approval as required by UMC 817.126(a). This evaluation must be based upon subsidence monitoring information collected on multiple seam mining in areas with similar overburden depth and surface topography.