



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

October 31, 1983

Mr. Kenneth Alkema
Department of Health
Division of Environmental Health
P. O. Box 2500
Salt Lake City, Utah 84116

RE: Determination of Completeness
(DOC) Document
U. S. Fuel Company
Hiawatha Complex
ACT/007/011, Folder No. 2
Carbon County, Utah

Dear Mr. Alkema:

Enclosed please find (1) one copy of the joint Office of Surface Mining/
Division of Oil, Gas and Mining (OSM/DOGM) Determination of Completeness (DOC)
document for U. S. Fuel Company's Hiawatha Complex. The Division is forwarding
this copy to update your files and to solicit any comment. Please provide
appropriate comments to this Division by November 11, if possible.

Should you have any questions or problems pertaining to this information,
please call me or D. Wayne Hedberg of the Division staff.

Sincerely,

A handwritten signature in cursive script, appearing to read "James W. Smith, Jr.", written in dark ink on a white background.

JAMES W. SMITH, JR.
COORDINATOR OF MINED
LAND DEVELOPMENT

JWS/DWH:btb

Enclosures



STATE OF UTAH
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Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

October 31, 1983

Mr. Douglas F. Day, Director
Division of Wildlife Resources
1596 West North Temple
Salt Lake City, Utah 84116

RE: Determination of Completeness
(DOC) Document
U. S. Fuel Company
Hiawatha Complex
ACT/007/011, Folder No. 2
Carbon County, Utah

Dear Mr. Day:

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JAMES W. SMITH, JR.
COORDINATOR OF MINED
LAND DEVELOPMENT

JWS/DWH:btb

Enclosures



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4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

October 31, 1983

Mr. Dee C. Hansen
State Engineer
Division of Water Rights
1636 West North Temple
Salt Lake City, Utah 84116

RE: Determination of Completeness
(DOC) Document
U. S. Fuel Company
Hiawatha Complex
ACT/007/011, Folder No. 2
Carbon County, Utah

Dear Mr. Hansen:

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Sincerely,

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JAMES W. SMITH, JR.
COORDINATOR OF MINED
LAND DEVELOPMENT

JWS/DWH:btb

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4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

October 31, 1983

Mr. Melvin T. Smith
State Historic Preservation Officer
Division of State History
307 West 200 South, Suite 100
Salt Lake City, Utah 84101

RE: Determination of Completeness
(DOC) Document
U. S. Fuel Company
Hiawatha Complex
ACT/007/011, Folder No. 2
Carbon County, Utah

Dear Mr. Smith:

Enclosed please find (1) one copy of the joint Office of Surface Mining/
Division of Oil, Gas and Mining (OSM/DOGM) Determination of Completeness (DOC)
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JAMES W. SMITH, JR.
COORDINATOR OF MINED
LAND DEVELOPMENT

JWS/DWH:btb

Enclosures



STATE OF UTAH
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Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

October 31, 1983

Mr. Robert Jacobsen
Field Supervisor
U. S. Fish & Wildlife Service
1426 Federal Building
125 South State Street
Salt Lake City, Utah 84138

RE: Determination of Completeness
(DOC) Document
U. S. Fuel Company
Hiawatha Complex
ACT/007/011, Folder No. 2
Carbon County, Utah

Dear Mr. Jacobsen:

Enclosed please find (1) one copy of the joint Office of Surface Mining/
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Should you have any questions or problems pertaining to this information,
please call me or D. Wayne Hedberg of the Division staff.

Sincerely,

A handwritten signature in cursive script, appearing to read "James W. Smith, Jr.", written in black ink.

JAMES W. SMITH, JR.
COORDINATOR OF MINED
LAND DEVELOPMENT

JWS/DWH:btb

Enclosures



STATE OF UTAH
NATURAL RESOURCES
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Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

October 31, 1983

Mr. Reed C. Christensen
Forest Supervisor
U. S. Forest Service
Manti-LaSal National Forest
599 West Price River Drive
Price, Utah 84501

RE: Determination of Completeness
(DOC) Document
U. S. Fuel Company
Hiawatha Complex
ACT/007/011, Folder No. 2
Carbon County, Utah

Dear Mr. Christensen:

Enclosed please find (1) one copy of the joint Office of Surface Mining/
Division of Oil, Gas and Mining (OSM/DOGM) Determination of Completeness (DOC)
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appropriate comments to this Division by November 11, if possible.

Should you have any questions or problems pertaining to this information,
please call me or D. Wayne Hedberg of the Division staff.

Sincerely,

A handwritten signature in black ink, appearing to read "James W. Smith, Jr.", written over a horizontal line.

JAMES W. SMITH, JR.
COORDINATOR OF MINED
LAND DEVELOPMENT

JWS/DWH:btb

Enclosures

Ford, Bacon & Davis
Incorporated
Engineers - Constructors



File ACT/007/011
Folder No. 2
Copy to Wayne,
Mary

JIM
NOV 09 1983

October 27, 1983

UC-528-301

Ms. Sarah Bransom
Office of Surface Mining
Reclamation and Enforcement
Brooks Tower
1020 15th Street
Denver, Colorado 80202

Dear Ms. Bransom:

As you are aware, Ford, Bacon & Davis, Incorporated has been retained by U.S. Fuel Company to assist them to prepare U.S. Fuels's response to the OSM Determination of Adequacy. Your letter to Utah DOGM specifying the required clarifications and modifications was dated 20 October 1983 and the U.S Fuel response is due on 7 November. The large number of inadequacies (32 pages) precludes the possibility of fully answering all comments in that short time frame; even with the human resources available in a firm of our size. Therefore, I wish to request an extension of 30 calendar days in which to fully address the issues. Otherwise we will be forced to provide you with incomplete responses, plus an approach and timetable describing how and when the questions will be answered.

We would appreciate your timely consideration of our request. Please contact me if you have additional questions.

Sincerely,

FORD, BACON & DAVIS, INCORPORATED

Jack A. Elder, Ph.D.
Project Manager

/km

bc: Jim Smith, Oil Gas & Mining

RECEIVED
NOV 9 1983

DIVISION OF
OIL, GAS & MINING



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

October 27, 1983

Mr. Errol Gardiner
Vice-President
U. S. Fuel Company
Hiawatha, Utah 84527

RE: Final Determination of
Completeness Document
Hiawatha Complex
ACT/007/011, Folder No. 2
Carbon County, Utah

Dear Mr. Gardiner:

The following document is the final draft of a joint Office of Surface Mining/Utah Division of Oil, Gas and Mining (OSM/UDOGM) Determination of Completeness (DOC) review which is based upon U. S. Fuel Company's recent July 14, 1983 Apparent Completeness Review (ACR) submission.

This draft incorporates minor changes which resulted from a meeting between representatives of U. S. Fuel Company, the OSM and the UDOGM on October 13, 1983. Specifically the following sections have been revised or supplemented with additional clarification for the applicant:

OSM compliance with E. O. 11593 and the National Preservation Act;
UMC 771.23; UMC 782.13; UMC 782.15; UMC 782.17; UMC 783.24; UMC 784.11;
UMC 784.13(b)(5); UMC 784.21; and UMC 784.23.

This document is being forwarded to other pertinent state and federal agencies for their comment on the identified deficiencies. If significant comments are received from these agencies they will be forwarded to U. S. Fuel Company for an appropriate response.

As you are aware, the OSM has established a November 7, 1983 deadline for receipt of a response to these outstanding deficiencies. Upon receipt, the OSM will determine the adequacy of the resubmission and render a preliminary decision on the permit application in accordance with UMC 786.19 (Findings of Compliance).

Compliance is necessary to enable the regulatory authority (RA) to make the required findings prior to issuance of any permit.

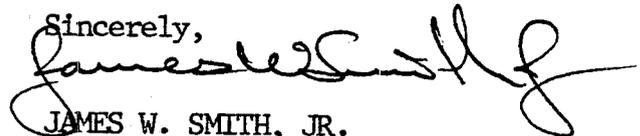
The operator is reminded, that the deficiencies identified by Division letter (September 30, 1983) for the proposed Ventilation/Beltline portal(s) and new coal conveyor system as proposed for the Middlefork mine yard (August 30, 1983 revision), have not been addressed to date.

Mr. Errol Gardiner
ACT/007/011
October 26, 1983
Page 2

These preliminary deficiencies must be answered before the regulatory authority can proceed with an indepth review of this proposal. The responses should be included as part of the overall response to the attached DOC/DOA document.

Should you have any questions, please contact myself or D. Wayne Hedberg to discuss the matter further.

Sincerely,



JAMES W. SMITH, JR.
COORDINATOR OF MINED
LAND DEVELOPMENT

JWS/DWH:btb

cc: Allen Klein, OSM
Sarah Bransom, OSM
D. Wayne Hedberg, DOGM



STATE OF UTAH
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Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
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4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

October 26, 1983

Ms. Sarah Bransom
Technical Project Officer
Western Technical Center
Office of Surface Mining
Brooks Towers
1020 15th Street
Denver, Colorado 80202

RE: King VI Stipulation Response
Package U. S. Fuel Company
Hiawatha Complex
ACT/007/011, Folder No. 2
Carbon County, Utah

Dear Sarah:

Enclosed is a copy of the November 20, 1981 submission from U. S. Fuel Company (Sharon Steel Corporation) which we could not locate during your latest trip to the Division offices (October 24, 1983). A request may need to be made to the Company to obtain the maps which accompanied the package. We received only one copy of the submission and maps.

The maps by reference are numbered accordingly:

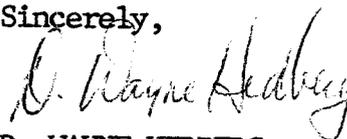
1. Map SK-1, Job EFC-133, General Arrangement with Diversion Ditch Path and Details - King VI dated August 3, 1981 to address Stipulations 7-81-4, 7-81-5G, 7-81-9. (enclosed)
2. Map SK-2, EFC-133, Re-Grading Plan-King VI dated December 23, 1981.
3. Map ---, EFC-133, Watershed Delineation South Fork Canyon of Miller Creek-King VI, dated August 25, 1981 to address Stipulation 7-81-5.
4. Map G-5, EFC-133, General Arrangement Overland Conveyor Elevation - King VI Truckload out, dated August 11, 1981 to address Stipulation 7-81-4.

Ms. Sarah Bransom
ACT/007/011
October 27, 1983
Page 2

5. Map G-21, EFC-133, Deer Passage General Arrangement - King VI,
dated July 22, 1981 to address Stipulation 7-81-4.

Should you have any need for additional information please call.

Sincerely,



D. WAYNE HEDBERG
RECLAMATION HYDROLOGIST

DWH/jvb

cc: Bob Eccli, U. S. Fuel Company

To Wayne
File
ACT/007/011
Folder No. 2

October 19, 1983

JIM
OCT 26 1983

Mr. Errol Gardiner
Vice President
U.S. Fuel Company
Hiawatha, Utah 84527

Dear Mr. Gardiner:

As a result of the October 13, 1983 meeting between the Office of Surface Mining (OSM), the Utah Division of Oil, Gas and Mining (UDOGM), and representatives of the U.S. Fuel Company, the September 29, 1983 Determination of Adequacy (DOA) for the Hiawatha mines complex has been revised and is enclosed for your immediate attention. Specifically, the following sections have been revised or supplemented with additional clarification for the applicant: OSM compliance with E.O. 11593 and the National Historic Preservation Act; UMC 771.23; UMC 782.13; UMC 782.15; UMC 782.17; UMC 783.24; UMC 784.11; UMC 784.13(b)(5); UMC 784.21; and UMC 784.23.

The UDOGM is currently reviewing the revised DOA and will forward a final copy to you as soon as possible. As stated in the UDOGM's October 4, 1983 letter to you, the deadline for your response to the DOA is November 7, 1983.

If you have any questions or require assistance in order to respond to the DOA, please contact Sarah Bransom or Walter Swain at (303) 837-3606.

Sincerely,

Allen D. Klein
Administrator
Western Technical Center

Enclosure

cc: James Smith, UDOGM

BRANSOM:rjm:10/19/83

RECEIVED
OCT 23 1983

MAD

MAD

MAD

ADMIN

DIVISION OF
OIL, GAS & MINING



United States Department of the Interior

OFFICE OF SURFACE MINING
Reclamation and Enforcement
BROOKS TOWERS
1020 15TH STREET
DENVER, COLORADO 80202

File
ACT/007/011
Folder No. 2
~~Copy to name~~
~~S. Mary~~

October 19, 1983

RECEIVED
OCT 21 1983

Mr. James Smith
Coordinator of Mined Land Department
Division of Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

DIVISION OF
OIL, GAS & MINING
JIM

OCT 25 1983

Dear Mr. Smith:

As a result of our joint meeting on October 13, 1983 with the U.S. Fuel Company, the September 29, 1983 Determination of Adequacy (DOA) for the Hiawatha mines complex has been revised. Specifically, the following sections have been revised or supplemented with additional clarification for the applicant: OSM compliance with E.O. 11593 and the National Historic Preservation Act; UMC 771.23; UMC 782.13; UMC 782.15; UMC 782.17; UMC 783.24; UMC 784.11; UMC 784.13(b)(5); UMC 784.21; and UMC 784.23.

As discussed at the October 13, 1983 meeting, an advance copy of the revised DOA has been sent to the applicant. (Please see enclosed cover letter.) The UDOGM should review the enclosed DOA and forward the final document to the applicant as soon as possible.

If you have any questions, please feel free to call Sarah Bransom or Walter Swain at (303) 837-3806.

Sincerely,

Allen D. Klein
Administrator
Western Technical Center

Enclosure

U. S. FUEL'S HIAWATHA MINES COMPLEX

DETERMINATION OF ADEQUACY

OSM Compliance with EO11593 and the National Historic Preservation Act

Revised to provide further clarification:

The applicant must submit the following information for OSM to be in compliance with Federal cultural resources legislation and to allow the preparation of the Technical and Environmental Analyses on U. S. Fuel's application:

Although the applicant has provided a research and inventory report for 50 to 60 acres of expansion area in Cedar Creek, a pedestrian inventory for cultural resources of the following areas in which disturbance has been proposed (page III--1, Volume 1) must be completed:

1. Middle Fork of Millers Creek surface facilities;
2. North Fork of Millers Creek ventilation shaft;
3. Hiawatha Processing Plant and Waste Disposal sites;
4. South Fork of Millers Creek surface facilities;
5. Substitute topsoil locations (Exhibit VIII-4A); and
6. Any other areas in which ground surface disturbance will occur.

Because it is likely that at least some of the previously disturbed areas in the vicinities of the above facilities are historic mining sites, pedestrian inventory of all areas which will be disturbed by construction proposed under this permit must be completed. The pedestrian inventory must

be completed prior to the initiation of any ground surface disturbance at or near previously disturbed areas (including historic mine portals and other facilities, foundations and other structural remains, etc.) If construction/ground surface disturbances has been completed in any of the above areas, inventory will not be required. The applicant must, however, state that ground disturbing activities have been completed and whether or not any historic mining remains exist within or near the construction areas.

The applicant shall conduct or cause to be conducted, historic research of the Town of Hiawatha. The objective of this research will be to provide an historic narrative outlining the community's role in the historic development of the region (similar to that provided for Old Mohrland in the Neilson and Merrill report). The information is necessary to allow OSM to justify a decision regarding the eligibility or ineligibility of the permit area as a National Register district.

The subsidence monitoring plan has been determined adequate. It should be assumed that long wall mining will result in some degree of uniform subsidence and pillar removal following completion of room-and-pillar mining will result in surface tension cracking and a rapid lowering of the land surface. If subsidence within the underground mining areas as documented through the monitoring program appears sufficient to threaten cultural site integrity, or if archeology sites that are sensitive to subsidence (rock art, rock shelters, multicomponent sites) are located in these areas, OSM and/or the SHPO may require additional inventory of lands above underground workings, beyond that specifically required for the approval of this permit.

APPLICANT'S COMPLIANCE WITH UTAH'S PERMANENT PROGRAM

UMC 761.11 Areas Where Mining is Prohibited or Limited

Pedestrian inventory for cultural sites has not been conducted within all proposed direct impact areas (areas in which disturbance will occur). The remaining inventory requirements must be completed prior to ground surface disturbance within the permit area (see "OSM Compliance with E011593 and the National Historic Preservation Act").

The Town of Mohrland site (42 EM 1642) has been recommended as eligible for nomination to the National Register of Historic Places (NRHP), and the additional pedestrian inventory (see "OSM compliance with E011593 and the National Historic Preservation Act") may result in the identification of other NRHP-eligible sites. If 42 EM 1642 or any other cultural sites are determined eligible, disturbance of the site will be prohibited until impact mitigation procedures sufficient to allow a Determination of No Adverse Effect have been completed.

UMC 783.12 (b)

Pedestrian inventory for cultural sites must be completed and approved prior to initiation of ground disturbance within the permit area (see 761.11).

UMC 784.17 Protection of Public Parks and Historic Places

See comments under 761.11.

UMC 786.19(e) Criteria for Permit Approval or Denial

See Comments under 761.11.

UMC 771.23 Permit Applications

* Revised as per the applicant's explanation of maps (10/13/83):

The applicant has provided a map (Exhibit IV-3) to cover all requested information; however, questions remain regarding this map as detailed in the following comments.

UMC 782.13 Identification of Interests

Revised:

Exhibit IV-3 shows an area crossed by the words "Manti-LaSal National Forest" as U.S. Fuel Corporation fee land, which conflicts with the property boundaries found on the USGS topographic maps. The surface ownership must be more clearly defined on this map.

(3) The reviewer is referred to Appendicies II-1 and II-2 for the holders of record of any leasehold interest in areas to be affected by surface operations or facilities and the holders of record of any leasehold interest in the coal to be mined. Appendix II-1 does not explain what it is supposed to demonstrate. A subheading of Appendix II-1 is labeled "acres" and is divided into give other unexplained subdivisions. An apparent legend (unreferenced) at the end of the table has seven designations. The table has no sections with seven divisions. The addition of the numbers provided in the table

includes categories (i.e. surface and subsurface rights) which should not add up to the total permit area as shown in the table. Apparently no other leaseholders besides U.S. Fuel have interest in the areas, but this is not specified. Appendix II-2 does not apply to this regulation because it relates to unsuitability for mining. These problems must be resolved in order to analyze the plan.

(b). The permit application does not state whether the applicant is a corporation, partnership, single proprietorship, association or other business entity. This must be specified.

(d) The applicant lists Carpenter Town Coal and Coke Co. under 782.13(b)(3) but does not relate any permits to mine coal under that name as being held or applied for. The applicant must list any current or previous coal mining permits in the United States which Carpenter Town Coal and Coke and Sharon Steel have held since 1970.

Revised:

(e) The reviewer is referred to Exhibit IV-3 for information on contiguous area ownership. This exhibit does not appear to provide information on contiguous coal ownership and corresponding addresses. This information must be provided.

UMC 782.15 Right of Entry and Operation Information

Revised:

(a) The applicant refers the reader to a table (Appendix II-1) for information on its right of entry documents. A section of the table is labeled "Area" with the numbers 1-5 below that as discussed in the comments

under UMC 782.13(3). The appendix table does not list lessors. The applicant must clarify what is involved in the table before a complete evaluation can be made of its right to enter and mine. The applicant must provide a list of lessors in order to establish its right of entry.

UMC 782.16 Relationship to Areas Designated Unsuitable for Mining

(b) The applicant must state whether or not there is an administrative proceeding to designate the area unsuitable for mining.

(c) The applicant must state whether or not surface operations or facilities will be located within 300 feet of an occupied dwelling. If a dwelling will be so affected, a waiver from its owner must be included.

UMC 782.17 Permit Term Information

Revised:

The applicant must provide the estimated termination dates for all of the mines being permitted, and vertical extent of the mine workings as required by UMC 783.23. Exhibits III-6A through III-15 give the length and width (horizontal) but not the vertical. These maps also show the year of startup for mines, but do not give the estimated termination dates.

UMC 782.18 Personal Injury and Property Damage Insurance

The company's insurance policy expired 5/31/83, although the policy says the insurance will remain in force until the completion of reclamation. Evidence that the policy is still in effect must be provided.

UMC 782.19 Identification of Other Licenses and Permits

The applicant does not provide addresses of the permitting agencies or identification numbers of the permits. This information must be provided.

UMC 782.21 Newspaper Advertisement and Proof of Publication

The applicant must provide the newspaper advertisement which will be published once the application is determined to be complete (requirements for the advertisement are under 786.11).

UMC 783.16 Surface Water Information

U.S. Fuel must commit to expanding their water monitoring program in order for the regulatory authority to show compliance with UMC 817.52 (Hydrologic Balance: Surface and Ground Water Monitoring). Specifically, U.S. Fuel must commit to including station ST3-A, S74-A, and S76-A in their permanent monitoring program. Monitoring at these stations must be performed in accordance with the initial comprehensive schedule (Table VII-7) until the regulatory authority approves use of the routine schedule (Table VII-3).

UMC 783.17 Alternate Water Supply Information

* The ACR (November 8, 1982) requested a description (including quality and quantity) of water available as an alternate source in the event that a water supply is affected by the mine. The applicant responded that mine water from the Mohrland Portal in Cedar Creek Canyon could be used as an alternate source of water. U. S. Fuel Company has a water right to use .446 cfs (U.W.C. CERT.

#4148) from the Mohrland Portal mine water discharge (Table VII-2). U.S. Fuel must provide the comparison of the amount of water available from this water right compared to the revised assessment of probable hydrologic consequences (with respect to UMC 784.14) in order to assure that all potential water losses can be replaced.

* U.S. Fuel must include all ground water intercepted in the mine that would otherwise be consumed by other water users. In addition, the consumptive use of water during the mining operation, including ventilation evaporation losses, must be included as part of the water right not available for replacement to other affected users.

UMC 783.15 Ground Water Information

*The applicant has described the ground water system in the vicinity of the Hiawatha Complex-King Mines in very general terms with very little data to substantiate the narrative. To show compliance with 783.15 the applicant must provide the following information:

- * 1. A discussion of all drill hole logs in the area showing the continuity or discontinuity of potential water bearing zones (i.e. sandstone strata), and cross sections with drill hole data points to substantiate the interpretation of potential water bearing zones.
- * 2. A spring inventory that shows all springs within 2 miles of the adjacent area of the King mines and a discussion of what strata or geologic structures that springs are associated with. The applicant must also provide a discussion of the use being made of the springs, and other water sources, including wildlife utilization. (See also 817.97)

- * 3. A more thorough discussion of the ground water flow system associated with the Bear Canyon Fault. This fault zone most likely will account for the majority of water that will be encountered in the King Mines. What areas recharge this fault system and what discharge zones (i.e. springs) are specifically connected to the Fault zone?

UMC 783.19 Vegetation

- * The application contains several maps (ACR Responses, Chapter IX) that lack basic map features. Specifically, Figures 2 through 6 lack coordinates (i.e. township and range), and map location references. Figure 1's scale (1:24,000) is incorrect. The actual measured scale as depicted in Figure 1 is 1:50,000 which is unacceptable according to UMC 771.23 (e). Figure 2 is missing a scale and north indicator. Figure 3 has Reference Area 3 placed outside the limits of the map. Figure 4 is lacking a north indicator, and Figures 5 and 6 are at different scales than Figures 3 and 4. The applicant should correct Figure 1 through 6, correct the scale to 1:6,000 for areas disturbed and proposed disturbed areas and indicate the permit area boundaries as required by UMC 771.23 (e) and 783.24.

UMC 783.24 Maps: General Requirements

Revised:

- * The permit application includes an Exhibit IV-3 which shows a "perimeter boundary line" surrounding the mining operation. As discussed at the October 13, 1983 meeting, the applicant must define this boundary as the permit boundary or mine plan boundary, whichever is appropriate. In addition, the following list of maps must provide adequate coordinates or reference points so that they (i.e. the facilities and resources) can be located on Exhibit IV-3:

Original Application

III-1A through 2
III-4B through IV-2
VI-1 through 5
VII-1 and 2
VIII-1 through 3B
IX-1 through 5
XIII-1A through 1E
XIV-1 through 5

ACR Responses

III-5A, 5B, 6A, 6B, 12A, 13, 14, 15
IV-3, 3A, 4
VII-1, 19, 20
XIII-2A through 4

In addition, wildlife resource maps (Exhibits X-1 through X-3) must clearly show specific wildlife information relative to the mine plan area at a scale of at least 1:24,000 as required by UMC 771.23(e).

UMC 784.11 Operational Plan: General Requirements

* Maps No. 1, No. 2, and No. 3 furnished for the non-coal waste storage and disposal areas must be replaced with adequate copies bearing title blocks, scale of map, direction arrow, and must be presented in a clear, neat, and legible copy.

* Additional information is required in the permit application to evaluate the operation plans for King mines 7 and 8. The applicant must provide a narrative that describes the proposed facilities, construction activities, use, maintenance and removal of the following for King mines 7 and 8 as required by UMC 784.11:

Revised:

1. Overburden, topsoil handling and storage areas and structures;
2. Coal removal, hauling, storage, cleaning, and transportation areas and structures; and
3. Mine facilities (i.e., conveyors for the Mohrland portal and IV and V portals, bathhouse, warehouse, etc.).

See comments under 784.23.

UMC 784.12 Operation and Plan: Existing Structures

* The application fails to provide cross-sectional drawings for the entire length of the existing overland conveyor system at King mine VI. The application must provide cross-sectional drawings to supplement Drawing EFC-133,G-21 for the existing overland conveyor system at King mine VI. These cross-sections must show the clearance between the ground level and the lowest portion of the structure as built (UMC 784.12(a)).

* U. S. Fuel states (p.VII-15B) that water from the left fork of the North Fork of Miller Creek is diverted from the creek to an underground storage reservoir in the old Hiawatha #2 mine. In order for us to demonstrate compliance with section UMC 817.55, U.S. Fuel must provide the following information: 1) rates and quality of water at the diversion; and 2) approval

of the Mine Safety and Health Administration for the diversion of water into the old Hiawatha #2 mine; 3) design of the diversion structure and associated conveyance structures; and 4) the relationship between water storage (i.e. in the mine workings) versus pressures observed at the bulkhead (UMC 817.55).

UMC 784.13(a) Reclamation Plan

* The application fails to provide specific reclamation plans for the four locations to be used for substitute topsoil. The applicant must provide detailed reclamation plans that provide: 1) a detailed timetable for completion of each step in the reclamation plan; 2) a detailed estimate of costs for reclamation (as required by UMC 800-808); a plan for backfilling, soil stabilization, compaction, and grading with appropriate contour map and cross-sections (as required by UMC 817.100-817.106); 3) a plan for removal, storage, distribution of topsoil, equipment and facilities, and supplemental nutrient and soil amendments (as required by UMC 817.21-817.25); 4) a plan for revegetation (as required by UMC 784.13(b)(5) and 817.111-817.116); and 5) a description of steps to mitigate impacts to air quality resulting from fugitive dust and to control water quality impacts from erosion to Miller Creek, as required by the Clean Air Act, Clean Water Act and UMC 817.45.

UMC 784.13(b)(1) and (b)(2) Reclamation Plan

* The applicant must provide a detailed timetable showing the completion of each major step in the reclamation plan including but not limited to the following operations, as required by UMC 784.13(b)(1) and (5)(i):

1. Equipment and facility removal.
2. Portal sealing.
3. Backfilling and grading.
4. Topsoil operations
 - a. vegetation removal from the proposed topsoil borrow site
 - b. topsoil removal and distribution over backfilled and graded spoil material
 - c. topsoil redistribution over topsoil borrow site
 - d. soil nutrient tests
5. Revegetation operations
 - a. topsoil preparation (i.e., scarification)
 - b. seeding and planting
 - c. mulching
 - d. fertilization

(b)(2) The applicant has submitted an ACR response that provides detailed cost estimates for reclaiming the mining operations in the three forks of the Miller Creek, Mohrland area and the processing plant and loadout facilities in Hiawatha. However, the proposed topsoil borrow sites have not been included in the reclamation cost estimates. Operating the topsoil borrow site is considered a part of the reclamation plan. The applicant must provide the same level of detailed cost estimates for operating and reclaiming the topsoil borrow sites as required by 784.13 (b)(2).

UMC 784.13(b)(4) Reclamation Plan: Topsoil

* The application provides a general topsoil handling plan for what is assumed to be the entire Hiawatha Complex. The only specific topsoil handling

description is found in a July, 1982 report located in the back of Chapter VIII of the ACR responses. The applicant must provide specific topsoil handling plans for King 4 & 5, King 7 & 8, the preparation plant, and the substitute topsoil source sites. These plans must provide a map of the depths and sources of replaced topsoil, calculations, of substitute material volumes and stockpile and topsoil volumes for reclamation of each facility, and specific methods to prevent excess compaction and reduction of erosion to determine feasibility of reclamation as required by UMC 786.19.

UMC 784.13(b)(3) Reclamation Plan: General Requirements

* Map Exhibits F III-11 through F III-15 show the outlines of portions of the mine complex disturbed by filling, excavating and topsoil placement for reclamation of the mine entrance sites. It is not readily determinable whether the material available on the sites is enough to satisfy the fill requirements. If it is not, then additional material must be borrowed from somewhere. Conversely, if excess material must be wasted, then additional spoil areas must be developed. In order to determine the case with reasonable accuracy, finished contours should be shown on the maps, and additional cross-sections plotted. From these sections, a reasonable calculation of fill/waste balance may be made. It is also necessary for the applicant to demonstrate, through calculation of storm runoff, that the sectional area of the proposed diversion of South Fork of Miller Creek is adequate for the anticipated storm water flow.

To resolve those questions, the applicant must provide contour maps of the mine portal sites together with additional post-mining contours showing the

conditions intended upon completion of reclamation work. Also, it is necessary for the applicant to furnish cross-sections, cut and fill volume/balance calculations, and storm water run-off/capacity calculations of the proposed Miller Creek restoration to demonstrate that the stream channel erosional stability will be maintained. The submittals shall be in compliance with the requirements of UMC 784.13-784.25, and UMC 783.24.

UMC 784.13 (b)(5) Revegetation

* The application must provide specific seed mixtures (including pounds of pure live seed by species) that are designed for site specific conditions at all disturbed and proposed disturbed areas. (Volume III, Chapter X, Appendix B). Also, the application must provide planting techniques (i.e. spacing and arrangement) or type of stock for planting shrubs and tree species as required by UMC 784.13 (b)(5)(iii) and 817.117(c)(2). The application does not specify the seeding rate as required by 784.13(b)(5)(ii). Tables 1 through 12 referenced in the ACR response (page III-31B) provide a range in total rates based on the severity of disturbance. The applicant must commit to specific seeding rates to be used in final revegetation as required by UMC 784.13(b)(5)(ii). (Also see UMC 817.57 and 817.97.)

* The ACR response (page III-31D) states that the applicant does not intend to reclaim previously disturbed areas, currently used or proposed for use during this permit, to a vegetative cover at least equal in extent of cover to the natural vegetation of the surrounding area as required by UMC 817.111(b)(3). The applicant must achieve the standards for successful revegetation as required by UMC 817.116 and 817.117 for all areas proposed for use by surface mining activities under this permit application.

Clarification:

Further clarification of the review comment regarding the applicant's proposed approach to restore vegetative cover on previously disturbed areas is required. The applicant appears to propose (ACR response, page III-31D) to revegetate previously disturbed areas to a cover condition that is at least equivalent to the ground cover that existed on the disturbed area before the new disturbance occurred. UMC 817.111 (b)(3) requires that vegetative cover restored on disturbed areas be at least equal in extent (equivalent) to the cover of the natural vegetation of the area. Cover of natural vegetation of the area, which has not been disturbed by past mining and cover of volunteer vegetation that has developed on previously disturbed areas probably will not be equivalent because of the residual effects of mining on the kind, rate, and extent of vegetative cover. Vegetative cover on previously disturbed areas may only constitute a small proportion of the original cover assumed to be the same as nearby natural vegetation. Therefore, the extent of the proposed restored cover should be at least equal to the cover of the undisturbed natural vegetation found in the reference areas. The applicant should make future comparisons of the restored cover on previously disturbed areas with the cover on reference areas in undisturbed natural vegetation and not with whatever cover was present on the previously disturbed areas prior to new disturbances. The applicant must commit to following the same revegetation procedures and applying the same success standards on previously disturbed areas as were proposed for previously undisturbed areas (ACR responses page III-31C).

UMC 784.14 Reclamation Plan: Protection of Hydrologic Balance

The ACR (section UMC 783.24(g)) requested a map describing the water rights for surface and ground water in adjacent areas within a minimal two mile radius of the permit boundry. U.S. Fuel responded by locating some of their water rights on Exhibit VII-1. A review of the water rights in the area show over 35 springs within water rights (mostly owned by the U.S. Forest Service) within a two mile radius of the permit boundry. Six of these springs are within the permit boundary.

* U. S. Fuel must document these water rights. Documentation should include a table listing the water use claim numbers, owner, source (including the geologic formation from which the spring issues), flow, purpose (e.g. stockwatering), and period of use. U. S. Fuel must locate these springs and all of their water rights on a map as required by UMC 784.14.

The applicant states that significant quantities of water have been and will continue to be encountered in the mine from the Bear Fault. In addition, the discussion of mine subsidence (ACR Responses Chapter VII-19) indicate that surface and ground water resources could be affected by the mine. The discussion of probable hydrologic effects with respect to the previously mentioned potential impacts is very general. For example, regarding the effects of mine subsidence, the following statements are made: "Fractures resulting from subsidence as well as natural fractures encountered in mining could contribute to changes in existing water patterns. Springs, seeps, and stream flows could possibly be affected and changes in drainage patterns could result...The effects of past mining on water resources is not known, except

that significant flows have resulted from contact with major fractures such as the Bear Canyon Fault. Large areas of the King 1 and King 2 mines were mined out from 10 to 50 years ago by room and pillar methods, yet numerous springs and seeps overlying these mines are still flowing. Whether or not they have diminished as a result of mining is unknown.

The previous narrative is not an acceptable description of probable hydrologic consequences. The regulatory authority must know to what degree specific water resources may be affected by mining in order to determine what the probable hydrologic consequences of mining will be. This information will be used to determine if material damage will occur to the hydrologic balance in the permit and adjacent areas. Therefore, the applicant must provide the following information:

- * 1. An assessment of the effects of mine subsidence on the geomorphic stability of the overlying landscapes. More specifically, discuss the effect of mine subsidence on stream gradients and corresponding erosional stability.

- * 2. An assessment of changes in streamflow that may result from mining at the King Mines. Changes in stream flow that must be considered include losses resulting from subsidence or from interception of ground water in the mines that otherwise would provide baseflow to streams.

- * 3. An assessment of springs or wells that may be affected by the King Mines (including additional springs located per requirements under UMC 783.15). The assessment must detail what water users (including wildlife) will be impacted by losses of springs and stream flow. Particular emphasis should be placed on the major water bearing zone observed to date, the Bear Fault Zone. The applicant must describe what springs are related to the fault zone and how their flow may be diminished by the interception of ground water flow in the mine.

- * 4. An assessment of post mining ground water quality, using existing data for waters flowing from old mine workings. Also provide a comparison of post-mining ground water quality with streams and springs that will receive the ground water discharge.

- * 5. With respect to each of the coal refuse piles and associated slurry ponds the applicant must provide the following information:
 - A. Quality of water in the slurry ponds representative of seepage that may be lost from the ponds;
 - B. Quality of runoff from the coal embankments;
 - C. If the analyses of waters associated with the slurry ponds and refuse piles indicate that these waters would degrade the water quality of nearby surface or ground water resources, then a water balance on water leaving the ponds and refuse piles is necessary. The water balance should consider runoff and percolation losses from the areas in question. The amount and quality of water leaving the site should be mass balanced with receiving surface or ground waters.

UMC 784.15 - Reclamation Plan: Postmining Land Use (Wildlife)

* The applicant should directly and clearly state in this section what the postmining land use will be and that wildlife habitat will be a primary post mining land use as it is implied in the applicant's response to comments on UMC 784.21 (Chapter X, pp. X-6C, July 1983). Including this statement in the post mining land use section would reduce a substantial amount of uncertainty about the applicant's future intentions. (See also 817.97)

UMC 784.19 - Underground Development Waste

* On the presumption that underground development waste will at some time be wasted on surface areas, the permittee must furnish full data on the geotechnical investigation, design, construction, operation, maintenance and removal, as appropriate for disposal of this waste as required under UMC 784.19 of the regulations and in accordance with the ACR comments.

UMC 784.21 - Fish and Wildlife Plan

* The applicant's Fish and Wildlife Plan still remains seriously deficient. The original ACR comments from OSM and from DOGM (dated Nov. 8, 1982) identified numerous significant deficiencies in the Fish and Wildlife Plan caused by: (1) an absence of detailed information on how the applicant would comply with the requirements of this regulation and with UMC 817.97, and (2) a lack of commitment to comply with the recommendations of the Utah Department of Wildlife Resources. (UDWR). The recent responses to the ACR (July 1983) do commit the applicant to certain protection measures, however, the applicant's responses to the ACT requiring specific description of methods

(Chapter X, ACR Responses Volume, July 1983 pp. X-6A to X6C and Appendix D) still do not adequately address many of the major issues raised by the ACR. The applicant's responses still lack specific detail on implementation of the following issues:

- 1) What mitigation measures will be used to protect wildlife and how these measures will be employed; (Chapter X, pp. X-6B, ACR Volume, July, 1983);
- 2) How high value wildlife areas will be avoided, restored, and/or enhanced. (pp. X-6B);
- 3) How impacts to riparian areas will be reduced or avoided, and how damaged habitat will be restored (pp. X-6C);
- 4) How road crossing impacts to aquatic communities will be minimized (pp. X-6C);
- 5) How wildlife habitat will be restored during the reclamation phases of the mine operation (pp. X-6C);
- 6) How much acreage of wildlife habitat will be lost or seriously degraded by mining operations (OSM ACR dated Nov. 8, 1982);

- 7) Description of wildlife use of the springs, seeps, and streams in the permit area and a prediction of mining impacts on these wildlife habitat features (OSM ACR dated Nov. 8, 1982). An analysis that supports the applicant's conclusion that no detrimental effects will be caused should be provided.

* The applicant must provide the detailed and site-specific information related to topics listed in items 1-7 above. The descriptions must include detailed explanations of: (1) what specific procedures will be used; (2) how the applicant will implement the procedures; (3) what areas of the permit area will be involved, and (4) detailed drawings of any facilities modified or constructed to accommodate wildlife. All mining areas, including the proposed portals 7 and 8 areas, must be included.

Revised:

The applicant must also provide the following information:

- 1) Documentation of the U.S. Fish and Wildlife Service raptor survey findings as described in Chapter X, pp. X-6A, July 1983;

- 2) Documentation from the UDWR that a minimum of 1 meter clearance on the conveyor systems in Middle Fork and at Mohrland will provide passage for big game, regardless of location (pp. X-6B, July, 1983);

- 3) Entire route alignments and general cross-sectional drawings showing minimum clearance along the total length of the proposed conveyor belt system for King Mines 4 and 5, and proposed portals 7 and 8. Also, supplemental cross-sectional drawings for those portions of the existing conveyor belt at King Mine 6 not shown on drawing EFC-133, G-21 as well as cross-sectional and plan drawings for adjacent barriers such as guard rails (UMC 784.23(b)(8) and 784.12(a));

- 4) Mapping of wildlife resources shown in Exhibits X-1 to X-3, Vol. 3, Chapter X at a scale of 1:24,000 as required by UMC 771.23(e)(1). The mapping of critical wildlife resources provided as Exhibits X-1 to X-3 is at a scale too large to allow a technical evaluation of the effects of mining facilities on critical wildlife resources. UMC 771.23(e)(1) requires these features to be mapped at a scale between 1:6000 and 1:24,000. Also provide legends for defining map symbols in Exhibits XI to X3;

- 5) A commitment that wildlife habitats will be restored to premining species composition, species distribution, and frequency as emphasized by UDWR (Vol. 3, Chapter X, p. X-9). A method for implementing this commitment must be provided;

- 6) A description of acreages and condition of critical and high-priority big game wildlife areas on the permit area as requested by the UDWR (Vol. 3, Chapter X, pp. X-12 and X-13);

- 7) Estimates of the average number of elk that use each of the following key habitats within the mine permit areas as shown in Exhibit X-2, Vol. 3. Estimates can probably be obtained from the UDWR.
- . Critical elk winter range
 - . High-priority elk winter range
 - . High-priority elk summer range
- 8). Estimates of the average number of mule deer that use each of the following key habitats within the mine permit area as shown in Exhibit X-1, Vol. 3. Estimates can probably be obtained from the UDWR.
- . Critical deer winter range
 - . High-priority deer summer range.

UMC 784.22 - Diversions

U. S. Fuel has been previously asked for a design of the exiting trash racks for the stream diversion under the portal at King No. 4 and 5. U. S. Fuel must provide this information.

The reclamation plan for the diversion (p. VII - 15B) lacks sufficient detail. U. S. Fuel should demonstrate that the restored channel will safely convey the runoff resulting from 100-year, 24-hour precipitation event (including the channel, bank, and floodplain). U. S. Fuel should also demonstrate that the channel gradient will be stable. If channel stabilizing material will be used (e.g., rip rap), then U. S. Fuel should give the size and gradation of the material. A reclamation plan describing the seed and shrub mixture and soil stabilizing practices should also be presented with the goal of restoring natural riparian vegetation on the banks of the stream.

UMC 784.23 - Operation Plan: Maps and Plans

* (b) U. S. Fuel has failed to provide maps, plans, and cross sections for King mines 7 & 8 that show all of the proposed surface facilities. Exhibits III-5A and III-5B must be revised to comply with UMC 784.23 that include, at a minimum, the following:

Revised:

- 1) Buildings and facilities (including conveyors) to be used;
- 2) Coal storage, processing and loading areas;
- 3) Topsoil, spoil, coal waste, underground development waste, and noncoal storage areas;
- 4) Facilities to be used to protect and enhance fish and wildlife related values;
- 5) Explosive storage and handling facilities; and
- 6) Location of each facility that will remain as a permanent feature, after completion of underground mining.

* (b)(6) The conveyance devices for the water storage facilities in the King VI area (Exhibit II-4a) and the Mohrland area (Exhibit III-5b) are not clearly described on these maps. Legends for all exhibits are essential. Exhibits III-4a and III-5b must be redrawn to indicate the water conveyance from the King VI mine and the Mohrland are to the storage facilities near the town of Hiawatha.

* (b)(7) U. S. Fuel must provide a map indicating the disposal of each source of coal processing waste and each waste disposal facility in relation to the proposed permit area.

* (b)(13) The applicant must provide maps and plans for the location of each facility that will remain on the permit area as a permanent feature.

785.19 - Alluvial Valley Floors

* The ACR (November 8, 1982) requested information regarding Miller Creek and Cedar Creek and their potential to be alluvial valley floors (AVFs). The applicant responded in the ACR Response (July, 1983) that artificial flood irrigation practices are practiced on both valley floors approximately four miles below the mine. Clearly the lower valleys are AVFs. The applicant did not define the limit of this AVF study as the "adjacent area", but rather used a two mile limit around the Hiawatha mine. Within the two mile limit on Miller Creek and Cedar Creek there are no recent irrigation practices; however, water from a small pond on Miller Creek had been pumped up onto higher terraces in the past. The presence of historic irrigation (i.e., pumping from stream level) suggests that sufficient water is also available for flood irrigation activities in the upper part of the valley. The applicant considers the Miller Creek and Cedar Creek valleys within two miles of the mine to be too small, irregular, and to have unsuitable slopes for irrigation development. In addition, subirrigated areas were interpreted (i.e., where meadow grasses and rushes were present) to be present only along the active flood plain and stream banks incised below the valley floor. The following information is requested in order to clarify issues concerning AVFs:

1. The lower valleys of Miller Creek and Cedar Creek have active flood irrigation operations. By comparison, what makes the upper valleys within the two mile radius of the mine unsuitable for irrigation activities? Provide specific information that would preclude these areas from being irrigated (i.e., less than 10 acres in size, less than 50 feet wide, insufficient water supply, etc.);

2. Regarding the floodplain areas that are considered subirrigated to agriculturally useful species of plants, provide the width and size of these areas.

UMC 786.19 Criteria For Permit Approval or Denial

The ACR response (page III-31D) states that interim revegetation has been accomplished at King VI coal loading facility, King IV ventilation tunnel and various other sites. The applicant must provide a summary of data collected from these areas to demonstrate that reclamation can be feasibly accomplished under the proposed reclamation plan contained in the application as required by UMC 786.19(b).

The applicant must provide a plan to demonstrate the capabilities of the proposed topsoil substitute material for use in interim and final reclamation. The applicant must develop field test plots, based on soil analysis, to demonstrate the feasibility of using the applicant's proposed topsoil plan and the proposed seed mixtures. The applicant must consult with the Division prior to developing this plan to fully understand the purpose and scope of the information required to demonstrate the feasibility of reclamation.

UMC 817.52 - Ground Water Monitoring

In order to better document ground water resources in the area and the potential impacts of the Hiawatha Complex Mines to these ground water resources, U.S. Fuels must develop and implement an in-mine ground-water monitoring program for the approval by the regulatory agency. The in mine ground water monitoring plan must include a map of all ground water seepage points in the mine. Monthly measurements of flow and field quality (i.e. specific conductance, temperature and pH) must be taken of all seepage into the mine that occurs at flow rates greater than 1 gallon per minute. If the number of leakers flowing greater than 1 gpm becomes excessive, negotiations with the regulatory authority may allow U.S. Fuel to limit the number of monitoring points. For seepage zones with flows less than 1 gallon per minute, monthly measurements of field water quality parameters are sufficient. Quarterly, water quality samples must be taken from areas with inflow rates greater than 1 gallon per minute and analyzed for the complete suite of parameters listed in the UDOGM guidelines for establishment of surface and ground-water monitoring programs. U.S. Fuels shall notify the regulatory agency as soon as possible upon encountering a source of ground water inflow greater than 50 gallons per minute. This flow and quality monitoring data should be submitted to the regulatory agency on a quarterly basis. In addition, U.S. Fuels must account for all ground water consumption in the mine (i.e. used in mining or consumed by evaporation) and all ground water pumped out of the mine. The map locating all ground water seepage points should also locate all sumps used to collect ground water in the mine.

UMC 817.57 Hydrologic Balance: Stream Buffer Zones

The results of the applicant's aquatic survey of upper Cedar Creek (Chapter X, Appendix D, Responses to ACR Comments, July 1983) indicate that this regulation will apply to future road construction and other mining activities associated with portals 7 and 8.

The current mine plan is deficient because it does not: (1) provide detailed road alignments and sizes that recognize the need to protect the buffer zone along Cedar Creek; and (2) provide a detailed plan for protecting and/or restoring the riparian habitat within the buffer zone as required by UMC 817.44(d)(1).

The mine plan must provide the following information:

- *1. A detailed map showing the proposed road alignment, size, and right-of-way width for portals 7 and 8 in relation to riparian habitat and the stream buffer zones.
- *2. A detailed description of how riparian habitat will be protected from road construction and/or if some riparian habitat is destroyed, how it will be restored. The description should include:
 - . Species composition of the replacement plants
 - . Seed Stock
 - . Seed mixture (pounds per acre Pure Live Seed)
 - . Seeding Schedule
 - . Planting methods

- . Planting Stock
- . Planting schedule
- . Maintenance provisions
- . Total acreage to be replaced

(See UMC 784.13(6)(5))

UMC 817.62 through 817.68 Use of Explosives

The application indicates that explosives are used in construction of surface facilities (ACR Response, page VIII-1) at the Hiawatha Complex. The application must provide blasting information required by 817.62 through 817.68 and indicate on a map the storage and handling facilities for explosives required by 784.23(b)(9).

UMC 817.97 Protection of Fish, Wildlife, and Related Environmental Values

Serious deficiencies still exist with the responses to ACR comments dated July, 1983. The major concerns focus on the lack of detailed site-specific information on how the applicant will comply with the commitments made in responses to UMC 784.21 (Chap. X, pp. X-6A to X-6). Most of the areas of primary concern were already identified and discussed as part of the UMC 784.21 analyses (items 1 to 7) and will not be repeated here. In addition to those requirements, the following information must be provided in accordance with this regulation:

- *1. The applicant should describe which seed mixes listed in Chapter X, Appendix B, Tables 1-12 will actually be used and where. The tables provided by UDWR offer a series of options which the applicant may select depending on site-specific characteristics and the intended habitat restoration plan. The applicant must specify which seed mixtures, seeding rates, and species compositions are proposed for the areas designated for wildlife habitat restoration. (This concern was initially identified in UDOGM ACR comments dated Nov. 8, 1982, p. 15). The areas designated for wildlife habitat restoration should also be mapped. (See UMC 784.13(b)(5), and UMC 817.57)
- *2. The applicant should describe how it will be determined that the conveyor systems do or do not create a wildlife barrier and/or demonstrate that there are no migration routes where the conveyor system creates a barrier to wildlife. (UDOGM ACR p.15 dated Nov. 8, 1982).
- *3. Provide documentation of the extent of utilization of water sources (springs and stockponds) by wildlife as required by UMC 783.15.

UMC 817.100 Contemporaneous Reclamation

The application mentions reclaimed areas in the vicinity of the portals, specifically King VI mine. The applicant should provide a map (or maps) at a scale of 1:6,000 depicting past interim reclamation and proposed final reclamation in relation to the post mining contours. These maps (or an additional table) should relate directly to the reclamation time table and revegetation schedule requested under UMC 784.13(b) to demonstrate contemporaneous reclamation under UMC 817.100.

U. S. Fuel Co. has not addressed the following ACR comments of November 8, 1982:

UMC 817.93 Coal Processing Waste: Dams and Embankments: Design and Construction

* (2) The minimum safety factors are given for slurry impoundment #1 and #5. The same information must be submitted for all other impoundments.

UMC 817.99 Slides and Other Damage

A commitment is needed to agree to notifying the Division by the fastest available means and comply with any remedial measures required by the Division anytime a slide occurs which may have a potential adverse effect on public, property, health, safety or the environment.

UMC 817.101 Backfilling and Grading: General Requirements

* No specific address is made to this item other than general backfilling and grading mentioned in the reclamation plan. U. S. Fuel must address specific areas in conjunction with UMC 817.101-106.

UMC 817.103 Backfilling and Grading: Covering Coal and Acid- and Toxic-forming Materials.

* The applicant has addressed the grading of refuse banks only in the most general terms. Provide the following information on the final grade of all areas of refuse storage: 1) depth and volume of cover; and 2) and the source of material.

Indications from research on refuse piles indicate a tendency of refuse piles at the minesite to become acidic. U. S. Fuel must address the acid and toxic potential of this refuse materials, and propose appropriate cover and other mitigation.

How will the stability of these refuse disposal areas be ensured? Provide cross-sections and relevant engineering data detailing slope stability factors.

UMC 817.150-.176 ROADS: CLASS I

The proposed Mohrland road has been submitted as one alternative. The specific plans pursuant to UMC 784.24 of the road to be constructed should be submitted.

UMC 817.153-.163 Roads: Class I and III: Drainage

(c) Culverts must be sized to pass the peak flow from a 10-year, 24-hour precipitation event. Culvert size computations presented in the Vaughn Hansen report are for the 25-year, 6-hour storm; how do the two storm sizes compare? The applicant must demonstrate that the peak flow from the 25-year, 6-hour storm is equal to or greater than the peak flow generated from the 10-year, 24-hour storm. Provide computations for the 10-year, 24-hour storm.

Socioeconomics

Please clarify whether or not the employment numbers submitted by U.S. Fuels in the July 1983 ACR response included the proposed 7 and 8 portals. If so, please delineate that portion of the total employment forecast that would be required to construct and operate portal areas 7 and 8.



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

October 4, 1983

Mr. Errol Gardiner
Vice-President
U. S. Fuel Company
Hiawatha, Utah 84527

RE: Determination of Completeness
Hiawatha Complex
ACT/007/011, Folder No. 2
Carbon County, Utah

Dear Mr. Gardiner:

Enclosed are the results of the joint Office of Surface Mining/Division of Oil, Gas and Mining (OSM/DOGM) Determination of Completeness (DOC) review of U. S. Fuel Company's July 1983 response to the Division's Apparent Completeness Review (ACR) document dated November 8, 1982. The OSM has contracted the assistance of Engineering Sciences, Inc., in preparing the draft response.

There is considerable lack of detail in four principal areas, the most significant being a lack of hydrologic information upon which to base the findings required by UMC 786.19(c).

These deficient areas include:

1. basic hydrologic data (UMC 783.15, 783.16, 784.14);
2. plans for revegetation and reclamation (UMC 784.13);
3. protection and mitigation plans for fish and wildlife resources (UMC 784.21, 817.97);
4. overall lack of sufficient information for proposed portal areas VII and VIII and the associated facilities. To avoid jeopardizing the decision on the overall permit application, the operator must provide the required information with the next response, or delete these areas from the application and adjust the permit boundaries accordingly.

Mr. Errol Gardiner
ACT/007/011
October 4, 1983
Page 2

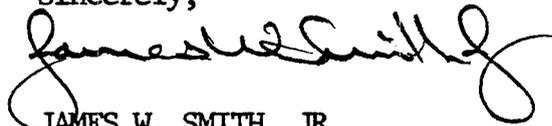
Due to the amount of remaining deficiencies, the permit application cannot be determined "complete." Many deficiencies still remain from the November 8, 1982 ACR (e.g., UMC 761.11, 783.16, 784.13[b][5], 784.21, 784.22 817.57, 817.101 and 817.153).

The Division has established a tentative date of October 13, 1983 to meet with representatives from U. S. Fuel to discuss any questions. If the operator wishes to arrange another date or believes the meeting is unnecessary, the Division should be contacted as soon as possible.

In accordance with the June 13, 1983 letter sent to U. S. Fuel from OSM and the Division, responses would be required by October 28, 1983 in order to remain on track with the established permit review schedule. However, due to the unexpected delay in reviewing U. S. Fuel Company's latest response and completing this review document, the response deadline is extended to November 7, 1983. Failure to respond with complete and adequate information will result in loss of your interim permit and cessation of all mining activity.

If you have any questions, please feel free to contact me or D. Wayne Hedberg of the Division staff.

Sincerely,



JAMES W. SMITH, JR.
COORDINATOR OF MINED
LAND DEVELOPMENT

JWS/DWH:btb

Enclosures

cc: Allen D. Klein, OSM
Sarah Branson, OSM
Mike Bishop, ES
D. Wayne Hedberg, DOGM
D. Lof, DOGM
J. Whitehead, DOGM
T. Portle, DOGM
L. Kunzler, DOGM

U. S. FUEL'S HIAWATHA MINES COMPLEX

DETERMINATION OF ADEQUACY

OSM Compliance with EO11593 and the National Historic Preservation Act

The applicant must submit the following information for OSM to be in compliance with Federal cultural resources legislation and to allow the preparation of the Technical and Environmental Analyses on U. S. Fuel's application:

Although the applicant has provided a research and inventory report for 50 to 60 acres of expansion area in Cedar Creek, a pedestrian inventory for cultural resources of the following areas in which disturbance has been proposed (page III--1, Volume 1) must be completed:

1. Middle Fork of Millers Creek surface facilities;
2. North Fork of Millers Creek ventilation shaft;
3. Hiawatha Processing Plant and Waste Disposal sites;
4. South Fork of Millers Creek surface facilities;
5. Substitute topsoil locations (Exhibit VIII-4A); and
6. Any other areas in which ground surface disturbance will occur.

Because it is likely that at least some of the previously disturbed areas in the vicinities of the above facilities are historic mining sites, pedestrian inventory of all areas which will be disturbed by construction proposed under this permit must be completed. The pedestrian inventory must be completed prior to the initiation of any ground surface disturbance at or near previously disturbed areas.

The applicant shall conduct or cause to be conducted, historic research of the Town of Hiawatha. The objective of this research will be to provide an historic narrative outlining the community's role in the historic development of the region (similar to that provided for Old Mohrland in the Neilson and Merrill report). The information is necessary to allow OSM to justify a decision regarding the eligibility or ineligibility of the permit area as a National Register district.

The subsidence monitoring plan has been determined adequate. It should be assumed that long wall mining will result in some degree of uniform subsidence and pillar removal following completion of room-and-pillar mining will result in surface tension cracking and a rapid lowering of the land surface. If subsidence within the underground mining areas as documented through the monitoring program appears sufficient to threaten cultural site integrity, or if archeology sites that are sensitive to subsidence (rock art, rock shelters, multicomponent sites) are located in these areas, OSM and/or the SHPO may require additional inventory of lands above underground workings, beyond that specifically required for the approval of this permit.

APPLICANT'S COMPLIANCE WITH UTAH'S PERMANENT PROGRAM

UMC 761.11 Areas Where Mining is Prohibited or Limited

Pedestrian inventory for cultural sites has not been conducted within all proposed direct impact areas (areas in which disturbance will occur). The remaining inventory requirements must be completed prior to ground surface disturbance within the permit area (see "OSM Compliance with E011593 and the National Historic Preservation Act").

The Town of Mohrland site (42 EM 1642) has been recommended as eligible for nomination to the National Register of Historic Places (NRHP), and the additional pedestrian inventory (see "OSM compliance with E011593 and the National Historic Preservation Act") may result in the identification of other NRHP-eligible sites. If 42 EM 1642 or any other cultural sites are determined eligible, disturbance of the site will be prohibited until impact mitigation procedures sufficient to allow a Determination of No Adverse Effect have been completed.

UMC 783.12 (b)

Pedestrian inventory for cultural sites must be completed and approved prior to initiation of ground disturbance within the permit area (see 761.11).

UMC 784.17 Protection of Public Parks and Historic Places

See comments under 761.11.

UMC 786.19(e) Criteria for Permit Approval or Denial

See Comments under 761.11.

UMC 771.23 Permit Applications

* The applicant has provided a "Subsurface Ownership Map (Exhibit IV-2) and a table with property and subsurface ownership (Appendix II-1). Numerous discrepancies exist between the two sources. Legal descriptions listed on the

table do not match the information on the map and visa versa. The applicant must provide a complete and accurate list of all coal ownership within the permit area with accurate legal descriptions and a current and accurate map of the coal ownership within and adjacent to the permit area as required by UMC 771.23 (b), 782.15(a), and 783.24(a) and (b).

UMC 782.13 Identification of Interests

Exhibits IV-1 and IV-2 show different mine plan area north and east boundaries. These maps do not delineate the mining sequence as required by UMC 771.23 (2). They also show an area crossed by the words "Manti-LaSal National Forest" as U.S. Fuel Corp. fee land. Neither the maps or the text provide addresses of land/or mineral owners. All of these discrepancies must be cleared up.

(3) The reviewer is referred to Appendicies II-1 and II-2 for the holders of record of any leasehold interest in areas to be affected by surface operations or facilities and the holders of record of any leasehold interest in the coal to be mined. Appendix II-1 does not explain what it is supposed to demonstrate. A subheading of Appendix II-1 is labeled "acres" and is divided into give other unexplained subdivisions. There is no explanation of whether the table applies to surface or subsurface areas. Apparently no other leaseholders besides U.S. Fuel have interest in the areas, but this is not specified. Appendix II-2 does not apply to this regulation because it relates to unsuitability for mining. These problems must be resolved in order to analyze the plan.

(b). The permit application does not state whether the applicant is a corporation, partnership, single proprietorship, association or other business entity. This must be specified.

(d) The applicant lists Carpenter Town Coal and Coke Co. under 782.13(b)(3) but does not relate any permits to mine coal under that name as being held or applied for. The applicant must list any current or previous coal mining permits in the United States which Carpenter Town Coal and Coke or Sharon Steel has held since 1970.

(e) The reviewer is referred to Exhibits IV-1 and IV-2 for information on contiguous area ownership. These exhibits do not provide addresses. A block to the east of the mine plan area in T15S, R8E, Sec 35, is listed as "numerous private owners." These owners must be identified and the addresses of all owners of contiguous land and coal must be provided.

UMC 782.15 Right of Entry and Operation Information

(a) The applicant refers the reader to a table (Appendix II-1) for information on its right of entry documents. A section of the table is labeled "Area" with the numbers 1-5 below that. The land within the permit area is apparently separated into these five divisions. There is no explanation, however, of what that section of the table represents. The appendix table does not list lessors. The applicant must clarify what is involved in the table before a complete evaluation can be made of its right to enter and mine. The applicant must provide a list of lessors in order to establish its right of entry.

UMC 782.16 Relationship to Areas Designated Unsuitable for Mining

(b) The applicant must state whether or not there is an administrative proceeding to designate the area unsuitable for mining.

(c) The applicant must state whether or not surface operations or facilities will be located within 300 feet of an occupied dwelling. If a dwelling will be so affected, a waiver from its owner must be included.

UMC 782.17 Permit Term Information

The applicant must provide anticipated startup dates for King portals 7 and 8, the estimated termination dates for all of the mines being permitted, and maps showing surface acres to be affected, and horizontal and vertical extent of the mine working as required by UMC 783.23.

UMC 782.18 Personal Injury and Property Damage Insurance

The company's insurance policy expired 5/31/83, although the policy says the insurance will remain in force until the completion of reclamation. Evidence that the policy is still in effect must be provided.

UMC 782.19 Identification of Other Licenses and Permits

The applicant does not provide addresses of the permitting agencies or identification numbers of the permits. This information must be provided.

UMC 782.21 Newspaper Advertisement and Proof of Publication

The applicant must provide the newspaper advertisement which will be published once the application is determined to be complete (requirements for the advertisement are under 786.11).

UMC 783.16 Surface Water Information

U.S. Fuel must commit to expanding their water monitoring program in order for the regulatory authority to show compliance with UMC 817.52 (Hydrologic Balance: Surface and Ground Water Monitoring). Specifically, U.S. Fuel must commit to including station ST3-A, S74-A, and S76-A in their permanent monitoring program. Monitoring at these stations must be performed in accordance with the initial comprehensive schedule (Table VII-7) until the regulatory authority approves use of the routine schedule (Table VII-3).

UMC 783.17 Alternate Water Supply Information

* The ACR (November 8, 1982) requested a description (including quality and quantity) of water available as an alternate source in the event that a water supply is affected by the mine. The applicant responded that mine water from the Mohrland Portal in Cedar Creek Canyon could be used as an alternate source of water. U. S. Fuel Company has a water right to use .446 cfs (U.W.C. CERT. #4148) from the Mohrland Portal mine water discharge (Table VII-2). U.S. Fuel must provide the comparison of the amount of water available from this water right compared to the revised assessment of probable hydrologic consequences (with respect to UMC 784.14) in order to assure that all potential water losses can be replaced.

* U.S. Fuel must include all ground water intercepted in the mine that would otherwise be consumed by other water users. In addition, the consumptive use of water during the mining operation, including ventilation evaporation losses, must be included as part of the water right not available for replacement to other affected users.

UMC 783.15 Ground Water Information

*The applicant has described the ground water system in the vicinity of the Hiawatha Complex-King Mines in very general terms with very little data to substantiate the narrative. To show compliance with 783.15 the applicant must provide the following information:

- * 1. A discussion of all drill hole logs in the area showing the continuity or discontinuity of potential water bearing zones (i.e. sandstone strata), and cross sections with drill hole data points to substantiate the interpretation of potential water bearing zones.
- * 2. A spring inventory that shows all springs within 2 miles of the adjacent area of the King mines and a discussion of what strata or geologic structures that springs are associated with. The applicant must also provide a discussion of the use being made of the springs, and other water sources, including wildlife utilization. (See also 817.97)
- * 3. A more thorough discussion of the ground water flow system associated with the Bear Canyon Fault. This fault zone most likely will account for the majority of water that will be encountered in the King Mines. What

areas recharge this fault system and what discharge zones (i.e. springs) are specifically connected to the Fault zone?

UMC 783.19 Vegetation

* The application contains several maps (ACR Responses, Chapter IX) that lack basic map features. Specifically, Figures 2 through 6 lack coordinates (i.e. township and range), and map location references. Figure 1's scale (1:24,000) is incorrect. The actual measured scale as depicted in Figure 1 is 1:50,000 which is unacceptable according to UMC 771.23 (e). Figure 2 is missing a scale and north indicator. Figure 3 has Reference Area 3 placed outside the limits of the map. Figure 4 is lacking a north indicator, and Figures 5 and 6 are at different scales than Figures 3 and 4. The applicant should correct Figure 1 through 6, correct the scale to 1:6,000 for areas disturbed and proposed disturbed areas and indicate the permit area boundaries as required by UMC 771.23 (e) and 783.24.

UMC 783.24 Maps: General Requirements

* The permit application includes only two maps (Vol. I, Exhibits III-3 and 4A) displaying a portion of the permit boundaries in relation to the facilities and resources. The U.S. Fuels' permit area boundaries that are proposed in this application should be well defined and indicated on each of the following Exhibits:

Original Application

III-1A through 2

III-4B through IV-2

VI-1 through 5

VII-1 and 2

VIII-1 through 3B

IX-1 through 5

XIII-1A through 1E

XIV-1 through 5

ACR Responses

III-5A, 5B, 6A, 6B, 12A, 13, 14, 15

IV-3, 3A, 4

VII-1, 19, 20

XIII-2A through 4

In addition, wildlife resource maps (Exhibits X-1 through X-3) must clearly show specific wildlife information relative to the mine plan area at a scale of at least 1:24,000 as required by UMC 771.23(e).

UMC 784.11 Operational Plan: General Requirements

* Maps No. 1, No. 2, and No. 3 furnished for the non-coal waste storage and disposal areas must be replaced with adequate copies bearing title blocks, scale of map, direction arrow, and must be presented in a clear, neat, and legible copy.

* Additional information is required in the permit application to evaluate the operation plans for King mines 7 and 8. The applicant must provide a narrative that describes the proposed facilities, construction activities, use, maintenance and removal of the following for King mines 7 and 8 as required by UMC 784.11:

1. Overburden, topsoil handling and storage areas and structures;
2. Coal removal, hauling, storage, cleaning, and transportation areas and structures; and
3. Mine facilities (i.e., slopes, bathhouse, warehouse, etc.).

UMC 784.12 Operation and Plan: Existing Structures

* The application fails to provide cross-sectional drawings for the entire length of the existing overland conveyor system at King mine VI. The application must provide cross-sectional drawings to supplement Drawing EFC-133,G-21 for the existing overland conveyor system at King mine VI. These cross-sections must show the clearance between the ground level and the lowest portion of the structure as built (UMC 784.12(a)).

* U. S. Fuel states (p.VII-15B) that water from the left fork of the North Fork of Miller Creek is diverted from the creek to an underground storage reservoir in the old Hiawatha #2 mine. In order for us to demonstrate compliance with section UMC 817.55, U.S. Fuel must provide the following information: 1) rates and quality of water at the diversion; and 2) approval

of the Mine Safety and Health Administration for the diversion of water into the old Hiawatha #2 mine; 3) design of the diversion structure and associated conveyance structures; and 4) the relationship between water storage (i.e. in the mine workings) versus pressures observed at the bulkhead (UMC 817.55).

UMC 784.13(a) Reclamation Plan

* The application fails to provide specific reclamation plans for the four locations to be used for substitute topsoil. The applicant must provide detailed reclamation plans that provide: 1) a detailed timetable for completion of each step in the reclamation plan; 2) a detailed estimate of costs for reclamation (as required by UMC 800-808); a plan for backfilling, soil stabilization, compaction, and grading with appropriate contour map and cross-sections (as required by UMC 817.100-817.106); 3) a plan for removal, storage, distribution of topsoil, equipment and facilities, and supplemental nutrient and soil amendments (as required by UMC 817.21-817.25); 4) a plan for revegetation (as required by UMC 784.13(b)(5) and 817.111-817.116); and 5) a description of steps to mitigate impacts to air quality resulting from fugitive dust and to control water quality impacts from erosion to Miller Creek, as required by the Clean Air Act, Clean Water Act and UMC 817.45.

UMC 784.13(b)(1) and (b)(2) Reclamation Plan

* The applicant must provide a detailed timetable showing the completion of each major step in the reclamation plan including but not limited to the following operations, as required by UMC 784.13(b)(1) and (5)(i):

1. Equipment and facility removal.
2. Portal sealing.
3. Backfilling and grading.
4. Topsoil operations
 - a. vegetation removal from the proposed topsoil borrow site
 - b. topsoil removal and distribution over backfilled and graded spoil material
 - c. topsoil redistribution over topsoil borrow site
 - d. soil nutrient tests
5. Revegetation operations
 - a. topsoil preparation (i.e., scarification)
 - b. seeding and planting
 - c. mulching
 - d. fertilization

(b)(2) The applicant has submitted an ACR response that provides detailed cost estimates for reclaiming the mining operations in the three forks of the Miller Creek, Mohrland area and the processing plant and loadout facilities in Hiawatha. However, the proposed topsoil borrow sites have not been included in the reclamation cost estimates. Operating the topsoil borrow site is considered a part of the reclamation plan. The applicant must provide the same level of detailed cost estimates for operating and reclaiming the topsoil borrow sites as required by 784.13 (b)(2).

UMC 784.13(b)(4) Reclamation Plan: Topsoil

* The application provides a general topsoil handling plan for what is assumed to be the entire Hiawatha Complex. The only specific topsoil handling

description is found in a July, 1982 report located in the back of Chapter VIII of the ACR responses. The applicant must provide specific topsoil handling plans for King 4 & 5, King 7 & 8, the preparation plant, and the substitute topsoil source sites. These plans must provide a map of the depths and sources of replaced topsoil, calculations, of substitute material volumes and stockpile and topsoil volumes for reclamation of each facility, and specific methods to prevent excess compaction and reduction of erosion to determine feasibility of reclamation as required by UMC 786.19.

UMC 784.13(b)(3) Reclamation Plan: General Requirements

* Map Exhibits F III-11 through F III-15 show the outlines of portions of the mine complex disturbed by filling, excavating and topsoil placement for reclamation of the mine entrance sites. It is not readily determinable whether the material available on the sites is enough to satisfy the fill requirements. If it is not, then additional material must be borrowed from somewhere. Conversely, if excess material must be wasted, then additional spoil areas must be developed. In order to determine the case with reasonable accuracy, finished contours should be shown on the maps, and additional cross-sections plotted. From these sections, a reasonable calculation of fill/waste balance may be made. It is also necessary for the applicant to demonstrate, through calculation of storm runoff, that the sectional area of the proposed diversion of South Fork of Miller Creek is adequate for the anticipated storm water flow.

To resolve those questions, the applicant must provide contour maps of the mine portal sites together with additional post-mining contours showing the

conditions intended upon completion of reclamation work. Also, it is necessary for the applicant to furnish cross-sections, cut and fill volume/balance calculations, and storm water run-off/capacity calculations of the proposed Miller Creek restoration to demonstrate that the stream channel erosional stability will be maintained. The submittals shall be in compliance with the requirements of UMC 784.13-784.25, and UMC 783.24.

UMC 784.13 9(b)(5) Revegetation

* The application must provide specific seed mixtures (including pounds of pure live seed by species) that are designed for site specific conditions at all disturbed and proposed disturbed areas. (Volume III, Chapter X, Appendix B). Also, the application must provide planting techniques (i.e. spacing and arrangement) or type of stock for planting shrubs and tree species as required by UMC 784.13 (b)(5)(iii) and 817.117(c)(2). The application does not specify the seeding rate as required by 784.13(b)(5)(ii). Tables 1 through 12 referenced in the ACR response (page III-31B) provide a range in total rates based on the severity of disturbance. The applicant must commit to specific seeding rates to be used in final revegetation as required by UMC 784.13(b)(5)(ii). (Also see UMC 817.57 and 817.97.)

* The ACR response (page III-31D) states that the applicant does not intend to reclaim previously disturbed areas, currently used or proposed for use during this permit, to a vegetative cover at least equal in extent of cover to the natural vegetation of the surrounding area as required by UMC 817.111(b)(3). The applicant must achieve the standards for successful revegetation as required by UMC 817.116 and 817.117 for all areas proposed for use by surface mining activities under this permit application.

The ACR (section UMC 783.24(g)) requested a map describing the water rights for surface and ground water in adjacent areas within a minimal two mile radius of the permit boundry. U.S. Fuel responded by locating some of their water rights on Exhibit VII-1. A review of the water rights in the area show over 35 springs within water rights (mostly owned by the U.S. Forest Service) within a two mile radius of the permit boundry. Six of these springs are within the permit boundary.

* U. S. Fuel must document these water rights. Documentation should include a table listing the water use claim numbers, owner, source (including the geologic formation from which the spring issues), flow, purpose (e.g. stockwatering), and period of use. U. S. Fuel must locate these springs and all of their water rights on a map as required by UMC 784.14.

The applicant states that significant quantities of water have been and will continue to be encountered in the mine from the Bear Fault. In addition, the discussion of mine subsidence (ACR Responses Chapter VII-19) indicate that surface and ground water resources could be affected by the mine. The discussion of probable hydrologic effects with respect to the previously mentioned potential impacts is very general. For example, regarding the effects of mine subsidence, the following statements are made: "Fractures resulting from subsidence as well as natural fractures encountered in mining could contribute to changes in existing water patterns. Springs, seeps, and stream flows could possibly be affected and changes in drainage patterns could result...The effects of past mining on water resources is not known^r, except

that significant flows have resulted from contact with major fractures such as the Bear Canyon Fault. Large areas of the King 1 and King 2 mines were mined out from 10 to 50 years ago by room and pillar methods, yet numerous springs and seeps overlying these mines are still flowing. Whether or not they have diminished as a result of mining is unknown.

The previous narrative is not an acceptable description of probable hydrologic consequences. The regulatory authority must know to what degree specific water resources may be affected by mining in order to determine what the probable hydrologic consequences of mining will be. This information will be used to determine if material damage will occur to the hydrologic balance in the permit and adjacent areas. Therefore, the applicant must provide the following information:

- * 1. An assessment of the effects of mine subsidence on the geomorphic stability of the overlying landscapes. More specifically, discuss the effect of mine subsidence on stream gradients and corresponding erosional stability.

- * 2. An assessment of changes in streamflow that may result from mining at the King Mines. Changes in stream flow that must be considered include losses resulting from subsidence or from interception of ground water in the mines that otherwise would provide baseflow to streams.

- * 3. An assessment of springs or wells that may be affected by the King Mines (including additional springs located per requirements under UMC 783.15). The assessment must detail what water users (including wildlife) will be impacted by losses of springs and stream flow. Particular emphasis should be placed on the major water bearing zone observed to date, the Bear Fault Zone. The applicant must describe what springs are related to the fault zone and how their flow may be diminished by the interception of ground water flow in the mine.

- * 4. An assessment of post mining ground water quality, using existing data for waters flowing from old mine workings. Also provide a comparison of post-mining ground water quality with streams and springs that will receive the ground water discharge.

- * 5. With respect to each of the coal refuse piles and associated slurry ponds the applicant must provide the following information:
 - A. Quality of water in the slurry ponds representative of seepage that may be lost from the ponds;
 - B. Quality of runoff from the coal embankments;
 - C. If the analyses of waters associated with the slurry ponds and refuse piles indicate that these waters would degrade the water quality of nearby surface or ground water resources, then a water balance on water leaving the ponds and refuse piles is necessary. The water balance should consider runoff and percolation losses from the areas in question. The amount and quality of water leaving the site should be mass balanced with receiving surface or ground waters.

UMC 784.15 - Reclamation Plan: Postmining Land Use (Wildlife)

* The applicant should directly and clearly state in this section what the postmining land use will be and that wildlife habitat will be a primary post mining land use as it is implied in the applicant's response to comments on UMC 784.21 (Chapter X, pp. X-6C, July 1983). Including this statement in the post mining land use section would reduce a substantial amount of uncertainty about the applicant's future intentions. (See also 817.97)

UMC 784.19 - Underground Development Waste

* On the presumption that underground development waste will at some time be wasted on surface areas, the permittee must furnish full data on the geotechnical investigation, design, construction, operation, maintenance and removal, as appropriate for disposal of this waste as required under UMC 784.19 of the regulations and in accordance with the ACR comments.

UMC 784.21 - Fish and Wildlife Plan

* The applicant's Fish and Wildlife Plan still remains seriously deficient. The original ACR comments from OSM and from DOGM (dated Nov. 8, 1982) identified numerous significant deficiencies in the Fish and Wildlife Plan caused by: (1) an absence of detailed information on how the applicant would comply with the requirements of this regulation and with UMC 817.97, and (2) a lack of commitment to comply with the recommendations of the Utah Department of Wildlife Resources. (UDWR). The recent responses to the ACR (July 1983) do commit the applicant to certain protection measures, however, the applicant's responses to the ACT requiring specific description of methods

(Chapter X, ACR Responses Volume, July 1983 pp. X-6A to X6C and Appendix D) still do not adequately address many of the major issues raised by the ACR. The applicant's responses still lack specific detail on implementation of the following issues:

- 1) What mitigation measures will be used to protect wildlife and how these measures will be employed; (Chapter X, pp. X-6B, ACR Volume, July, 1983);
- 2) How high value wildlife areas will be avoided, restored, and/or enhanced. (pp. X-6B);
- 3) How impacts to riparian areas will be reduced or avoided, and how damaged habitat will be restored (pp. X-6C);
- 4) How road crossing impacts to aquatic communities will be minimized (pp. X-6C);
- 5) How wildlife habitat will be restored during the reclamation phases of the mine operation (pp. X-6C);
- 6) How much acreage of wildlife habitat will be lost or seriously degraded by mining operations (OSM ACR dated Nov. 8, 1982);

- 7) Description of wildlife use of the springs, seeps, and streams in the permit area and a prediction of mining impacts on these wildlife habitat features (OSM ACR dated Nov. 8, 1982). An analysis that supports the applicant's conclusion that no detrimental effects will be caused should be provided.

* The applicant must provide the detailed and site-specific information related to topics listed in items 1-7 above. The descriptions must include detailed explanations of: (1) what specific procedures will be used; (2) how the applicant will implement the procedures; (3) what areas of the permit area will be involved, and (4) detailed drawings of any facilities modified or constructed to accommodate wildlife. All mining areas, including the proposed portals 7 and 8 areas, must be included.

The applicant must also provide the following information:

- 1) Documentation of the U.S. Fish and Wildlife Service raptor survey findings as described in Chapter X, pp. X-6A, July 1983;
- 2) Documentation from the UDWR that a minimum height of 1 m beneath the existing King VI conveyor system does not pose a barrier; (pp. X-6B, July, 1983);
- 3) Documentation from the UDWR that the conveyor systems in Middle Fork and at Mohrland will provide a minimum of 1 m clearance for big game passage, regardless of location (pp. X-6B, July, 1983);

- 4) Entire route alignments and general cross-sectional drawings showing minimum clearance along the total length of the proposed conveyor belt system for King Mines 4 and 5, and proposed portals 7 and 8. Also, supplemental cross-sectional drawings for those portions of the existing conveyor belt at King Mine 6 not shown on drawing EFC-133, G-21 as well as cross-sectional and plan drawings for adjacent barriers such as guard rails (UMC 784.23(b)(8) and 784.12(a));

- 5) Mapping of wildlife resources shown in Exhibits X-1 to X-3, Vol. 3, Chapter X at a scale of 1:24,000 as required by UMC 771.23(e)(1). The mapping of critical wildlife resources provided as Exhibits X-1 to X-3 is at a scale too large to allow a technical evaluation of the effects of mining facilities on critical wildlife resources. UMC 771.23(e)(1) requires these features to be mapped at a scale between 1:6000 and 1:24,000. Also provide legends for defining map symbols in Exhibits XI to X3;

- 6) A commitment that wildlife habitats will be restored to premining species composition, species distribution, and frequency as emphasized by UDWR (Vol. 3, Chapter X, p. X-9). A method for implementing this commitment must be provided;

- 7) A description of acreages and condition of critical and high-priority big game wildlife areas on the permit area as requested by the UDWR (Vol. 3, Chapter X, pp. X-12 and X-13);

- 8) Estimates of the average number of elk that use each of the following key habitats within the mine permit areas as shown in Exhibit X-2, Vol. 3. Estimates can probably be obtained from the UDWR.
- . Critical elk winter range
 - . High-priority elk winter range
 - . High-priority elk summer range
- 9). Estimates of the average number of mule deer that use each of the following key habitats within the mine permit area as shown in Exhibit X-1, Vol. 3. Estimates can probably be obtained from the UDWR.
- . Critical deer winter range
 - . High-priority deer summer range.

UMC 784.22 - Diversions

U. S. Fuel has been previously asked for a design of the exiting trash racks for the stream diversion under the portal at King No. 4 and 5. U. S. Fuel must provide this information.

The reclamation plan for the diversion (p. VII - 15B) lacks sufficient detail. U. S. Fuel should demonstrate that the restored channel will safely convey the runoff resulting from 100-year, 24-hour precipitation event (including the channel, bank, and floodplain). U. S. Fuel should also demonstrate that the channel gradient will be stable. If channel stabilizing material will be used (e.g., rip rap), then U. S. Fuel should give the size and gradation of the material. A reclamation plan describing the seed and shrub mixture and soil stabilizing practices should also be presented with the goal of restoring natural riparian vegetation on the banks of the stream.

UMC 784.23 - Operation Plan: Maps and Plans

* (b) U. S. Fuel has failed to provide maps, plans, and cross sections for King mines 7 & 8 that show all of the proposed surface facilities. Exhibits III-5A and III-5B must be revised to comply with UMC 784.23 that include, at a minimum, the following:

- 1) Buildings and facilities to be used;
- 2) Coal storage, processing and loading areas;
- 3) Topsoil, spoil, coal waste, underground development waste, and noncoal storage areas;
- 4) Facilities to be used to protect and enhance fish and wildlife related values;
- 5) Explosive storage and handling facilities; and
- 6) Location of each facility that will remain as a permanent feature, after completion of underground mining.

* (b)(6) The conveyance devices for the water storage facilities in the King VI area (Exhibit II-4a) and the Mohrland area (Exhibit III-5b) are not clearly described on these maps. Legends for all exhibits are essential. Exhibits III-4a and III-5b must be redrawn to indicate the water conveyance from the King VI mine and the Mohrland area to the storage facilities near the town of Hiawatha.

* (b)(7) U. S. Fuel must provide a map indicating the disposal of each source of coal processing waste and each waste disposal facility in relation to the proposed permit area.

* (b)(13) The applicant must provide maps and plans for the location of each facility that will remain on the permit area as a permanent feature.

785.19 - Alluvial Valley Floors

* The ACR (November 8, 1982) requested information regarding Miller Creek and Cedar Creek and their potential to be alluvial valley floors (AVFs). The applicant responded in the ACR Response (July, 1983) that artificial flood irrigation practices are practiced on both valley floors approximately four miles below the mine. Clearly the lower valleys are AVFs. The applicant did not define the limit of this AVF study as the "adjacent area", but rather used a two mile limit around the Hiawatha mine. Within the two mile limit on Miller Creek and Cedar Creek there are no recent irrigation practices; however, water from a small pond on Miller Creek had been pumped up onto higher terraces in the past. The presence of historic irrigation (i.e., pumping from stream level) suggests that sufficient water is also available for flood irrigation activities in the upper part of the valley. The applicant considers the Miller Creek and Cedar Creek valleys within two miles of the mine to be too small, irregular, and to have unsuitable slopes for irrigation development. In addition, subirrigated areas were interpreted (i.e., where meadow grasses and rushes were present) to be present only along the active flood plain and stream banks incised below the valley floor. The following information is requested in order to clarify issues concerning AVFs:

1. The lower valleys of Miller Creek and Cedar Creek have active flood irrigation operations. By comparison, what makes the upper valleys within the two mile radius of the mine unsuitable for irrigation activities? Provide specific information that would preclude these areas from being irrigated (i.e., less than 10 acres in size, less than 50 feet wide, insufficient water supply, etc.);

2. Regarding the floodplain areas that are considered subirrigated to agriculturally useful species of plants, provide the width and size of these areas.

UMC 786.19 Criteria For Permit Approval or Denial

The ACR response (page III-31D) states that interim revegetation has been accomplished at King VI coal loading facility, King IV ventilation tunnel and various other sites. The applicant must provide a summary of data collected from these areas to demonstrate that reclamation can be feasibly accomplished under the proposed reclamation plan contained in the application as required by UMC 786.19(b).

The applicant must provide a plan to demonstrate the capabilities of the proposed topsoil substitute material for use in interim and final reclamation. The applicant must develop field test plots, based on soil analysis, to demonstrate the feasibility of using the applicant's proposed topsoil plan and the proposed seed mixtures. The applicant must consult with the Division prior to developing this plan to fully understand the purpose and scope of the information required to demonstrate the feasibility of reclamation.

UMC 817.52 - Ground Water Monitoring

In order to better document ground water resources in the area and the potential impacts of the Hiawatha Complex Mines to these ground water resources, U.S. Fuels must develop and implement an in-mine ground-water monitoring program for the approval by the regulatory agency. The in mine ground water monitoring plan must include a map of all ground water seepage points in the mine. Monthly measurements of flow and field quality (i.e. specific conductance, temperature and pH) must be taken of all seepage into the mine that occurs at flow rates greater than 1 gallon per minute. If the number of leakers flowing greater than 1 gpm becomes excessive, negotiations with the regulatory authority may allow U.S. Fuel to limit the number of monitoring points. For seepage zones with flows less than 1 gallon per minute, monthly measurements of field water quality parameters are sufficient. Quarterly, water quality samples must be taken from areas with inflow rates greater than 1 gallon per minute and analyzed for the complete suite of parameters listed in the UDOGM guidelines for establishment of surface and ground-water monitoring programs. U.S. Fuels shall notify the regulatory agency as soon as possible upon encountering a source of ground water inflow greater than 50 gallons per minute. This flow and quality monitoring data should be submitted to the regulatory agency on a quarterly basis. In addition, U.S. Fuels must account for all ground water consumption in the mine (i.e. used in mining or consumed by evaporation) and all ground water pumped out of the mine. The map locating all ground water seepage points should also locate all sumps used to collect ground water in the mine.

UMC 817.57 Hydrologic Balance: Stream Buffer Zones

The results of the applicant's aquatic survey of upper Cedar Creek (Chapter X, Appendix D, Responses to ACR Comments, July 1983) indicate that this regulation will apply to future road construction and other mining activities associated with portals 7 and 8.

The current mine plan is deficient because it does not: (1) provide detailed road alignments and sizes that recognize the need to protect the buffer zone along Cedar Creek; and (2) provide a detailed plan for protecting and/or restoring the riparian habitat within the buffer zone as required by UMC 817.44(d)(1).

The mine plan must provide the following information:

- *1. A detailed map showing the proposed road alignment, size, and right-of-way width for portals 7 and 8 in relation to riparian habitat and the stream buffer zones.

- *2. A detailed description of how riparian habitat will be protected from road construction and/or if some riparian habitat is destroyed, how it will be restored. The description should include:
 - . Species composition of the replacement plants
 - . Seed Stock
 - . Seed mixture (pounds per acre Pure Live Seed)
 - . Seeding Schedule
 - . Planting methods

- . Planting Stock
- . Planting schedule
- . Maintenance provisions
- . Total acreage to be replaced

(See UMC 784.13(6)(5))

UMC 817.62 through 817.68 Use of Explosives

The application indicates that explosives are used in construction of surface facilities (ACR Response, page VIII-1) at the Hiawatha Complex. The application must provide blasting information required by 817.62 through 817.68 and indicate on a map the storage and handling facilities for explosives required by 784.23(b)(9).

UMC 817.97 Protection of Fish, Wildlife, and Related Environmental Values

Serious deficiencies still exist with the responses to ACR comments dated July, 1983. The major concerns focus on the lack of detailed site-specific information on how the applicant will comply with the commitments made in responses to UMC 784.21 (Chap. X, pp. X-6A to X-6). Most of the areas of primary concern were already identified and discussed as part of the UMC 784.21 analyses (items 1 to 7) and will not be repeated here. In addition to those requirements, the following information must be provided in accordance with this regulation:

- *1. The applicant should describe which seed mixes listed in Chapter X, Appendix B, Tables 1-12 will actually be used and where. The tables provided by UDWR offer a series of options which the applicant may select depending on site-specific characteristics and the intended habitat restoration plan. The applicant must specify which seed mixtures, seeding rates, and species compositions are proposed for the areas designated for wildlife habitat restoration. (This concern was initially identified in UDOGM ACR comments dated Nov. 8, 1982, p. 15). The areas designated for wildlife habitat restoration should also be mapped. (See UMC 784.13(b)(5), and UMC 817.57)
- *2. The applicant should describe how it will be determined that the conveyor systems do or do not create a wildlife barrier and/or demonstrate that there are no migration routes where the conveyor system creates a barrier to wildlife. (UDOGM ACR p.15 dated Nov. 8, 1982).
- *3. Provide documentation of the extent of utilization of water sources (springs and stockponds) by wildlife as required by UMC 783.15.

UMC 817.100 Contemporaneous Reclamation

The application mentions reclaimed areas in the vicinity of the portals, specifically King VI mine. The applicant should provide a map (or maps) at a scale of 1:6,000 depicting past interim reclamation and proposed final reclamation in relation to the post mining contours. These maps (or an additional table) should relate directly to the reclamation time table and revegetation schedule requested under UMC 784.13(b) to demonstrate contemporaneous reclamation under UMC 817.100.

U. S. Fuel Co. has not addressed the following ACR comments of November 8, 1982:

UMC 817.93 Coal Processing Waste: Dams and Embankments: Design and Construction

* (2) The minimum safety factors are given for slurry impoundment #1 and #5. The same information must be submitted for all other impoundments.

UMC 817.99 Slides and Other Damage

A commitment is needed to agree to notifying the Division by the fastest available means and comply with any remedial measures required by the Division anytime a slide occurs which may have a potential adverse effect on public, property, health, safety or the environment.

UMC 817.101 Backfilling and Grading: General Requirements

* No specific address is made to this item other than general backfilling and grading mentioned in the reclamation plan. U. S. Fuel must address specific areas in conjunction with UMC 817.101-106.

UMC 817.103 Backfilling and Grading: Covering Coal and Acid- and Toxic-forming Materials.

* The applicant has addressed the grading of refuse banks only in the most general terms. Provide the following information on the final grade of all areas of refuse storage: 1) depth and volume of cover; and 2) and the source of material.

Indications from research on refuse piles indicate a tendency of refuse piles at the minesite to become acidic. U. S. Fuel must address the acid and toxic potential of this refuse materials, and propose appropriate cover and other mitigation.

How will the stability of these refuse disposal areas be ensured? Provide cross-sections and relevant engineering data detailing slope stability factors.

UMC 817.150-.176 ROADS: CLASS I

The proposed Mohrland road has been submitted as one alternative. The specific plans pursuant to UMC 784.24 of the road to be constructed should be submitted.

UMC 817.153-.163 Roads: Class I and III: Drainage

(c) Culverts must be sized to pass the peak flow from a 10-year, 24-hour precipitation event. Culvert size computations presented in the Vaughn Hansen report are for the 25-year, 6-hour storm; how do the two storm sizes compare? The applicant must demonstrate that the peak flow from the 25-year, 6-hour storm is equal to or greater than the peak flow generated from the 10-year, 24-hour storm. Provide computations for the 10-year, 24-hour storm.

Socioeconomics

Please clarify whether or not the employment numbers submitted by U.S. Fuels in the July 1983 ACR response included the proposed 7 and 8 portals. If so, please delineate that portion of the total employment forecast that would be required to construct and operate portal areas 7 and 8.

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OCT 06 1983

DIVISION OF
OIL, GAS & MINING

(ES) October 4, 1983

MEMORANDUM

TO: Acting Deputy Administrator
Office of Surface Mining
Denver, Colorado
ATTN: Sara Branson

FROM: Field Supervisor, Ecological Services
Salt Lake City, Utah

SUBJECT: Review of U.S. Fuel Company's Hiawatha Complex Mine Plan
ALT/007/011

DIVISION OF

OIL, GAS & MINING

Copy to ^{with}
Wayne, Mary,
Lynn,

JIM

OCT 06 1983

We have reviewed the Hiawatha Mine Plan and have found the plan deficient in several areas. The apparent completeness reviews (ACR) by the Office of Surface Mining (OSM) and the Utah Division of Oil, Gas and Mining (DOG M) reflect most of our specific concerns under Sections 817.07 and 724.21. Our comments will, therefore, address the problems with the plan in general.

The original wildlife data was totally inadequate. The wildlife section was nothing more than the general information provided by the Utah Division of Wildlife Resources (DWR) for the area. U.S. Fuel Company attempted to rectify this problem by employing biologists to collect information in the field on two occasions. The data provided does not constitute a fish and wildlife plan as recommended in the OSM-FWS "Handbook for Meeting Fish and Wildlife Information Needs to Surface Mine Coal (FWS/OBS - 79/48.3.5)." As stated in the DOGM and OSM ACR, the Company does not give any details as to "how" it intends to mitigate the wildlife losses and "what" specific responses it intends to use to perform that mitigation. Listing the recommended procedures for mitigation provided by Utah DWR does not sufficiently address the requirements of a wildlife mitigation plan.

This completes our review of the Hiawatha Complex Mine Plan. Please contact our staff at the Salt Lake City, Utah field office (FTS 588-5649) if you have any questions regarding our comments.



cc: DWR, SLC, Utah
DWR Reg. Office, Price, Utah
DOG M, SLC, Utah
RO (MR), Denver, Colorado



United States Department of the Interior
OFFICE OF SURFACE MINING
Reclamation and Enforcement
BROOKS TOWERS
1020 15TH STREET
DENVER, COLORADO 80202

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Tom T., Tom P.,
John

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SEP 30 1983

Mr. James Smith
Coordinator of Mined Land Development
Division of Oil, Gas and Mining
4241 State Office Building
Salt Lake City, UT 84114

DIVISION OF
OIL, GAS & MINING

JIM

OCT 03 1983

Dear Mr. Smith:

Enclosed is the final Determination of Adequacy for U. S. Fuel's Hiawatha Complex. The final document incorporates the changes discussed at the meeting between your staff, OSM and Engineering Sciences on September 23, 1983. Specifically, the following sections have been revised: UMC 783.17, 783.15, 783.19, 784.12, 784.13(a), 784.13(b)(4), 784.13(b)(3), 784.14, 784.21, 786.19, 817.52, 817.57, 817.97, and 817.93. In addition, Kris Kranzush of Engineering Sciences, contacted Jim Dykman, Division of State History, to get his comments on the cultural resources sections.

It was decided at the September 23 meeting that a copy of the deficiency letter would be forwarded by the Division to the applicant as soon as possible. Wayne Hedberg indicated that he would arrange a meeting between the applicant, OSM, and the Division to discuss the Determination of Adequacy document the week of October 3, 1983.

If you have any questions, please feel free to contact Sarah Bransom or Walt Swain at (303) 837-3806.

Sincerely,

Richard E. Dawes

for Allen D. Klein
Administrator
Western Technical Center



United States Department of the Interior
OFFICE OF SURFACE MINING

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Divisio
4241 S
Salt La

(copies already made)

DIVISION OF
STATE HISTORY & MINING

JIM

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Dear M

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If you have any quest
at (303) 837-3806.

To Jim: 10-3-83

ransom or Walt Swain

*I've made 6
copies for the
Staff. Will attach
our cover letter &
send to US Fuel. File
when you are thru
perusing. Wayne*

Dawes

Center

U. S. FUEL'S HIAWATHA MINES COMPLEX

DETERMINATION OF ADEQUACY

OSM Compliance with E011593 and the National Historic Preservation Act

The applicant must submit the following information for OSM to be in compliance with Federal cultural resources legislation and to allow the preparation of the Technical and Environmental Analyses on U. S. Fuel's application:

Although the applicant has provided a research and inventory report for 50 to 60 acres of expansion area in Cedar Creek, a pedestrian inventory for cultural resources of the following areas in which disturbance has been proposed (page III--1, Volume 1) must be completed:

1. Middle Fork of Millers Creek surface facilities;
2. North Fork of Millers Creek ventilation shaft;
3. Hiawatha Processing Plant and Waste Disposal sites;
4. South Fork of Millers Creek surface facilities;
5. Substitute topsoil locations (Exhibit VIII-4A); and
6. Any other areas in which ground surface disturbance will occur.

Because it is likely that at least some of the previously disturbed areas in the vicinities of the above facilities are historic mining sites, pedestrian inventory of all areas which will be disturbed by construction proposed under this permit must be completed. The pedestrian inventory must be completed prior to the initiation of any ground surface disturbance at or near previously disturbed areas.

The applicant shall conduct or cause to be conducted, historic research of the Town of Hiawatha. The objective of this research will be to provide an historic narrative outlining the community's role in the historic development of the region (similar to that provided for Old Mohrland in the Neilson and Merrill report). The information is necessary to allow OSM to justify a decision regarding the eligibility or ineligibility of the permit area as a National Register district.

The subsidence monitoring plan has been determined adequate. It should be assumed that long wall mining will result in some degree of uniform subsidence and pillar removal following completion of room-and-pillar mining will result in surface tension cracking and a rapid lowering of the land surface. If subsidence within the underground mining areas as documented through the monitoring program appears sufficient to threaten cultural site integrity, or if archeology sites that are sensitive to subsidence (rock art, rock shelters, multicomponent sites) are located in these areas, OSM and/or the SHPO may require additional inventory of lands above underground workings, beyond that specifically required for the approval of this permit.

APPLICANT'S COMPLIANCE WITH UTAH'S PERMANENT PROGRAM

UMC 761.11 Areas Where Mining is Prohibited or Limited

Pedestrian inventory for cultural sites has not been conducted within all proposed direct impact areas (areas in which disturbance will occur). The remaining inventory requirements must be completed prior to ground surface disturbance within the permit area (see "OSM Compliance with E011593 and the National Historic Preservation Act").

The Town of Mohrland site (42 EM 1642) has been recommended as eligible for nomination to the National Register of Historic Places (NRHP), and the additional pedestrian inventory (see "OSM compliance with E011593 and the National Historic Preservation Act") may result in the identification of other NRHP-eligible sites. If 42 EM 1642 or any other cultural sites are determined eligible, disturbance of the site will be prohibited until impact mitigation procedures sufficient to allow a Determination of No Adverse Effect have been completed.

UMC 783.12 (b)

Pedestrian inventory for cultural sites must be completed and approved prior to initiation of ground disturbance within the permit area (see 761.11).

UMC 784.17 Protection of Public Parks and Historic Places

See comments under 761.11.

UMC 786.19(e) Criteria for Permit Approval or Denial

See Comments under 761.11.

UMC 771.23 Permit Applications

* The applicant has provided a "Subsurface Ownership Map (Exhibit IV-2) and a table with property and subsurface ownership (Appendix II-1). Numerous discrepancies exist between the two sources. Legal descriptions listed on the

table do not match the information on the map and visa versa. The applicant must provide a complete and accurate list of all coal ownership within the permit area with accurate legal descriptions and a current and accurate map of the coal ownership within and adjacent to the permit area as required by UMC 771.23 (b), 782.15(a), and 783.24(a) and (b).

UMC 782.13 Identification of Interests

Exhibits IV-1 and IV-2 show different mine plan area north and east boundaries. These maps do not delineate the mining sequence as required by UMC 771.23 (2). They also show an area crossed by the words "Manti-LaSal National Forest" as U.S. Fuel Corp. fee land. Neither the maps or the text provide addresses of land/or mineral owners. All of these discrepancies must be cleared up.

(3) The reviewer is referred to Appendicies II-1 and II-2 for the holders of record of any leasehold interest in areas to be affected by surface operations or facilities and the holders of record of any leasehold interest in the coal to be mined. Appendix II-1 does not explain what it is supposed to demonstrate. A subheading of Appendix II-1 is labeled "acres" and is divided into give other unexplained subdivisions. There is no explanation of whether the table applies to surface or subsurface areas. Apparently no other leaseholders besides U.S. Fuel have interest in the areas, but this is not specified. Appendix II-2 does not apply to this regulation because it relates to unsuitability for mining. These problems must be resolved in order to analyze the plan.

(b). The permit application does not state whether the applicant is a corporation, partnership, single proprietorship, association or other business entity. This must be specified.

(d) The applicant lists Carpenter Town Coal and Coke Co. under 782.13(b)(3) but does not relate any permits to mine coal under that name as being held or applied for. The applicant must list any current or previous coal mining permits in the United States which Carpenter Town Coal and Coke or Sharon Steel has held since 1970.

(e) The reviewer is referred to Exhibits IV-1 and IV-2 for information on contiguous area ownership. These exhibits do not provide addresses. A block to the east of the mine plan area in T15S, R8E, Sec 35, is listed as "numerous private owners." These owners must be identified and the addresses of all owners of contiguous land and coal must be provided.

UMC 782.15 Right of Entry and Operation Information

(a) The applicant refers the reader to a table (Appendix II-1) for information on its right of entry documents. A section of the table is labeled "Area" with the numbers 1-5 below that. The land within the permit area is apparently separated into these five divisions. There is no explanation, however, of what that section of the table represents. The appendix table does not list lessors. The applicant must clarify what is involved in the table before a complete evaluation can be made of its right to enter and mine. The applicant must provide a list of lessors in order to establish its right of entry.

UMC 782.16 Relationship to Areas Designated Unsuitable for Mining

(b) The applicant must state whether or not there is an administrative proceeding to designate the area unsuitable for mining.

(c) The applicant must state whether or not surface operations or facilities will be located within 300 feet of an occupied dwelling. If a dwelling will be so affected, a waiver from its owner must be included.

UMC 782.17 Permit Term Information

The applicant must provide anticipated startup dates for King portals 7 and 8, the estimated termination dates for all of the mines being permitted, and maps showing surface acres to be affected, and horizontal and vertical extent of the mine working as required by UMC 783.23.

UMC 782.18 Personal Injury and Property Damage Insurance

The company's insurance policy expired 5/31/83, although the policy says the insurance will remain in force until the completion of reclamation. Evidence that the policy is still in effect must be provided.

UMC 782.19 Identification of Other Licenses and Permits

The applicant does not provide addresses of the permitting agencies or identification numbers of the permits. This information must be provided.

UMC 782.21 Newspaper Advertisement and Proof of Publication

The applicant must provide the newspaper advertisement which will be published once the application is determined to be complete (requirements for the advertisement are under 786.11).

UMC 783.16 Surface Water Information

U.S. Fuel must commit to expanding their water monitoring program in order for the regulatory authority to show compliance with UMC 817.52 (Hydrologic Balance: Surface and Ground Water Monitoring). Specifically, U.S. Fuel must commit to including station ST3-A, S74-A, and S76-A in their permanent monitoring program. Monitoring at these stations must be performed in accordance with the initial comprehensive schedule (Table VII-7) until the regulatory authority approves use of the routine schedule (Table VII-3).

UMC 783.17 Alternate Water Supply Information

* The ACR (November 8, 1982) requested a description (including quality and quantity) of water available as an alternate source in the event that a water supply is affected by the mine. The applicant responded that mine water from the Mohrland Portal in Cedar Creek Canyon could be used as an alternate source of water. U. S. Fuel Company has a water right to use .446 cfs (U.W.C. CERT. #4148) from the Mohrland Portal mine water discharge (Table VII-2). U.S. Fuel must provide the comparison of the amount of water available from this water right compared to the revised assessment of probable hydrologic consequences (with respect to UMC 784.14) in order to assure that all potential water losses can be replaced.

* U.S. Fuel must include all ground water intercepted in the mine that would otherwise be consumed by other water users. In addition, the consumptive use of water during the mining operation, including ventilation evaporation losses, must be included as part of the water right not available for replacement to other affected users.

UMC 783.15 Ground Water Information

*The applicant has described the ground water system in the vicinity of the Hiawatha Complex-King Mines in very general terms with very little data to substantiate the narrative. To show compliance with 783.15 the applicant must provide the following information:

- * 1. A discussion of all drill hole logs in the area showing the continuity or discontinuity of potential water bearing zones (i.e. sandstone strata), and cross sections with drill hole data points to substantiate the interpretation of potential water bearing zones.
- * 2. A spring inventory that shows all springs within 2 miles of the adjacent area of the King mines and a discussion of what strata or geologic structures that springs are associated with. The applicant must also provide a discussion of the use being made of the springs, and other water sources, including wildlife utilization. (See also 817.97)
- * 3. A more thorough discussion of the ground water flow system associated with the Bear Canyon Fault. This fault zone most likely will account for the majority of water that will be encountered in the King Mines. What

areas recharge this fault system and what discharge zones (i.e. springs) are specifically connected to the Fault zone?

UMC 783.19 Vegetation

* The application contains several maps (ACR Responses, Chapter IX) that lack basic map features. Specifically, Figures 2 through 6 lack coordinates (i.e. township and range), and map location references. Figure 1's scale (1:24,000) is incorrect. The actual measured scale as depicted in Figure 1 is 1:50,000 which is unacceptable according to UMC 771.23 (e). Figure 2 is missing a scale and north indicator. Figure 3 has Reference Area 3 placed outside the limits of the map. Figure 4 is lacking a north indicator, and Figures 5 and 6 are at different scales than Figures 3 and 4. The applicant should correct Figure 1 through 6, correct the scale to 1:6,000 for areas disturbed and proposed disturbed areas and indicate the permit area boundaries as required by UMC 771.23 (e) and 783.24.

UMC 783.24 Maps: General Requirements

* The permit application includes only two maps (Vol. I, Exhibits III-3 and 4A) displaying a portion of the permit boundaries in relation to the facilities and resources. The U.S. Fuels' permit area boundaries that are proposed in this application should be well defined and indicated on each of the following Exhibits:

Original Application

III-1A through 2

III-4B through IV-2

VI-1 through 5

VII-1 and 2

VIII-1 through 3B

IX-1 through 5

XIII-1A through 1E

XIV-1 through 5

ACR Responses

III-5A, 5B, 6A, 6B, 12A, 13, 14, 15

IV-3, 3A, 4

VII-1, 19, 20

XIII-2A through 4

In addition, wildlife resource maps (Exhibits X-1 through X-3) must clearly show specific wildlife information relative to the mine plan area at a scale of at least 1:24,000 as required by UMC 771.23(e).

UMC 784.11 Operational Plan: General Requirements

* Maps No. 1, No. 2, and No. 3 furnished for the non-coal waste storage and disposal areas must be replaced with adequate copies bearing title blocks, scale of map, direction arrow, and must be presented in a clear, neat, and legible copy.

* Additional information is required in the permit application to evaluate the operation plans for King mines 7 and 8. The applicant must provide a narrative that describes the proposed facilities, construction activities, use, maintenance and removal of the following for King mines 7 and 8 as required by UMC 784.11:

1. Overburden, topsoil handling and storage areas and structures;
2. Coal removal, hauling, storage, cleaning, and transportation areas and structures; and
3. Mine facilities (i.e., slopes, bathhouse, warehouse, etc.).

UMC 784.12 Operation and Plan: Existing Structures

* The application fails to provide cross-sectional drawings for the entire length of the existing overland conveyor system at King mine VI. The application must provide cross-sectional drawings to supplement Drawing EFC-133,G-21 for the existing overland conveyor system at King mine VI. These cross-sections must show the clearance between the ground level and the lowest portion of the structure as built (UMC 784.12(a)).

* U. S. Fuel states (p.VII-15B) that water from the left fork of the North Fork of Miller Creek is diverted from the creek to an underground storage reservoir in the old Hiawatha #2 mine. In order for us to demonstrate compliance with section UMC 817.55, U.S. Fuel must provide the following information: 1) rates and quality of water at the diversion; and 2) approval

of the Mine Safety and Health Administration for the diversion of water into the old Hiawatha #2 mine; 3) design of the diversion structure and associated conveyance structures; and 4) the relationship between water storage (i.e. in the mine workings) versus pressures observed at the bulkhead (UMC 817.55).

UMC 784.13(a) Reclamation Plan

* The application fails to provide specific reclamation plans for the four locations to be used for substitute topsoil. The applicant must provide detailed reclamation plans that provide: 1) a detailed timetable for completion of each step in the reclamation plan; 2) a detailed estimate of costs for reclamation (as required by UMC 800-808); a plan for backfilling, soil stabilization, compaction, and grading with appropriate contour map and cross-sections (as required by UMC 817.100-817.106); 3) a plan for removal, storage, distribution of topsoil, equipment and facilities, and supplemental nutrient and soil amendments (as required by UMC 817.21-817.25); 4) a plan for revegetation (as required by UMC 784.13(b)(5) and 817.111-817.116); and 5) a description of steps to mitigate impacts to air quality resulting from fugitive dust and to control water quality impacts from erosion to Miller Creek, as required by the Clean Air Act, Clean Water Act and UMC 817.45.

UMC 784.13(b)(1) and (b)(2) Reclamation Plan

* The applicant must provide a detailed timetable showing the completion of each major step in the reclamation plan including but not limited to the following operations, as required by UMC 784.13(b)(1) and (5)(i):

1. Equipment and facility removal.
2. Portal sealing.
3. Backfilling and grading.
4. Topsoil operations
 - a. vegetation removal from the proposed topsoil borrow site
 - b. topsoil removal and distribution over backfilled and graded spoil material
 - c. topsoil redistribution over topsoil borrow site
 - d. soil nutrient tests
5. Revegetation operations
 - a. topsoil preparation (i.e., scarification)
 - b. seeding and planting
 - c. mulching
 - d. fertilization

(b)(2) The applicant has submitted an ACR response that provides detailed cost estimates for reclaiming the mining operations in the three forks of the Miller Creek, Mohrland area and the processing plant and loadout facilities in Hiawatha. However, the proposed topsoil borrow sites have not been included in the reclamation cost estimates. Operating the topsoil borrow site is considered a part of the reclamation plan. The applicant must provide the same level of detailed cost estimates for operating and reclaiming the topsoil borrow sites as required by 784.13 (b)(2).

UMC 784.13(b)(4) Reclamation Plan: Topsoil

* The application provides a general topsoil handling plan for what is assumed to be the entire Hiawatha Complex. The only specific topsoil handling

description is found in a July, 1982 report located in the back of Chapter VIII of the ACR responses. The applicant must provide specific topsoil handling plans for King 4 & 5, King 7 & 8, the preparation plant, and the substitute topsoil source sites. These plans must provide a map of the depths and sources of replaced topsoil, calculations, of substitute material volumes and stockpile and topsoil volumes for reclamation of each facility, and specific methods to prevent excess compaction and reduction of erosion to determine feasibility of reclamation as required by UMC 786.19.

UMC 784.13(b)(3) Reclamation Plan: General Requirements

* Map Exhibits F III-11 through F III-15 show the outlines of portions of the mine complex disturbed by filling, excavating and topsoil placement for reclamation of the mine entrance sites. It is not readily determinable whether the material available on the sites is enough to satisfy the fill requirements. If it is not, then additional material must be borrowed from somewhere. Conversely, if excess material must be wasted, then additional spoil areas must be developed. In order to determine the case with reasonable accuracy, finished contours should be shown on the maps, and additional cross-sections plotted. From these sections, a reasonable calculation of fill/waste balance may be made. It is also necessary for the applicant to demonstrate, through calculation of storm runoff, that the sectional area of the proposed diversion of South Fork of Miller Creek is adequate for the anticipated storm water flow.

To resolve those questions, the applicant must provide contour maps of the mine portal sites together with additional post-mining contours showing the

conditions intended upon completion of reclamation work. Also, it is necessary for the applicant to furnish cross-sections, cut and fill volume/balance calculations, and storm water run-off/capacity calculations of the proposed Miller Creek restoration to demonstrate that the stream channel erosional stability will be maintained. The submittals shall be in compliance with the requirements of UMC 784.13-784.25, and UMC 783.24.

UMC 784.13 9(b)(5) Revegetation

* The application must provide specific seed mixtures (including pounds of pure live seed by species) that are designed for site specific conditions at all disturbed and proposed disturbed areas. (Volume III, Chapter X, Appendix B). Also, the application must provide planting techniques (i.e. spacing and arrangement) or type of stock for planting shrubs and tree species as required by UMC 784.13 (b)(5)(iii) and 817.117(c)(2). The application does not specify the seeding rate as required by 784.13(b)(5)(ii). Tables 1 through 12 referenced in the ACR response (page III-31B) provide a range in total rates based on the severity of disturbance. The applicant must commit to specific seeding rates to be used in final revegetation as required by UMC 784.13(b)(5)(ii). (Also see UMC 817.57 and 817.97.)

* The ACR response (page III-31D) states that the applicant does not intend to reclaim previously disturbed areas, currently used or proposed for use during this permit, to a vegetative cover at least equal in extent of cover to the natural vegetation of the surrounding area as required by UMC 817.111(b)(3). The applicant must achieve the standards for successful revegetation as required by UMC 817.116 and 817.117 for all areas proposed for use by surface mining activities under this permit application.

UMC 784.14 Reclamation Plan: Protection of Hydrologic Balance

The ACR (section UMC 783.24(g)) requested a map describing the water rights for surface and ground water in adjacent areas within a minimal two mile radius of the permit boundry. U.S. Fuel responded by locating some of their water rights on Exhibit VII-1. A review of the water rights in the area show over 35 springs within water rights (mostly owned by the U.S. Forest Service) within a two mile radius of the permit boundry. Six of these springs are within the permit boundary.

* U. S. Fuel must document these water rights. Documentation should include a table listing the water use claim numbers, owner, source (including the geologic formation from which the spring issues), flow, purpose (e.g. stockwatering), and period of use. U. S. Fuel must locate these springs and all of their water rights on a map as required by UMC 784.14.

The applicant states that significant quantities of water have been and will continue to be encountered in the mine from the Bear Fault. In addition, the discussion of mine subsidence (ACR Responses Chapter VII-19) indicate that surface and ground water resources could be affected by the mine. The discussion of probable hydrologic effects with respect to the previously mentioned potential impacts is very general. For example, regarding the effects of mine subsidence, the following statements are made: "Fractures resulting from subsidence as well as natural fractures encountered in mining could contribute to changes in existing water patterns. Springs, seeps, and stream flows could possibly be affected and changes in drainage patterns could result...The effects of past mining on water resources is not knowm, except

that significant flows have resulted from contact with major fractures such as the Bear Canyon Fault. Large areas of the King 1 and King 2 mines were mined out from 10 to 50 years ago by room and pillar methods, yet numerous springs and seeps overlying these mines are still flowing. Whether or not they have diminished as a result of mining is unknown.

The previous narrative is not an acceptable description of probable hydrologic consequences. The regulatory authority must know to what degree specific water resources may be affected by mining in order to determine what the probable hydrologic consequences of mining will be. This information will be used to determine if material damage will occur to the hydrologic balance in the permit and adjacent areas. Therefore, the applicant must provide the following information:

- * 1. An assessment of the effects of mine subsidence on the geomorphic stability of the overlying landscapes. More specifically, discuss the effect of mine subsidence on stream gradients and corresponding erosional stability.

- * 2. An assessment of changes in streamflow that may result from mining at the King Mines. Changes in stream flow that must be considered include losses resulting from subsidence or from interception of ground water in the mines that otherwise would provide baseflow to streams.

- * 3. An assessment of springs or wells that may be affected by the King Mines (including additional springs located per requirements under UMC 783.15). The assessment must detail what water users (including wildlife) will be impacted by losses of springs and stream flow. Particular emphasis should be placed on the major water bearing zone observed to date, the Bear Fault Zone. The applicant must describe what springs are related to the fault zone and how their flow may be diminished by the interception of ground water flow in the mine.

- * 4. An assessment of post mining ground water quality, using existing data for waters flowing from old mine workings. Also provide a comparison of post-mining ground water quality with streams and springs that will receive the ground water discharge.

- * 5. With respect to each of the coal refuse piles and associated slurry ponds the applicant must provide the following information:
 - A. Quality of water in the slurry ponds representative of seepage that may be lost from the ponds;
 - B. Quality of runoff from the coal embankments;
 - C. If the analyses of waters associated with the slurry ponds and refuse piles indicate that these waters would degrade the water quality of nearby surface or ground water resources, then a water balance on water leaving the ponds and refuse piles is necessary. The water balance should consider runoff and percolation losses from the areas in question. The amount and quality of water leaving the site should be mass balanced with receiving surface or ground waters.

UMC 784.15 - Reclamation Plan: Postmining Land Use (Wildlife)

* The applicant should directly and clearly state in this section what the postmining land use will be and that wildlife habitat will be a primary post mining land use as it is implied in the applicant's response to comments on UMC 784.21 (Chapter X, pp. X-6C, July 1983). Including this statement in the post mining land use section would reduce a substantial amount of uncertainty about the applicant's future intentions. (See also 817.97)

UMC 784.19 - Underground Development Waste

* On the presumption that underground development waste will at some time be wasted on surface areas, the permittee must furnish full data on the geotechnical investigation, design, construction, operation, maintenance and removal, as appropriate for disposal of this waste as required under UMC 784.19 of the regulations and in accordance with the ACR comments.

UMC 784.21 - Fish and Wildlife Plan

* The applicant's Fish and Wildlife Plan still remains seriously deficient. The original ACR comments from OSM and from DOGM (dated Nov. 8, 1982) identified numerous significant deficiencies in the Fish and Wildlife Plan caused by: (1) an absence of detailed information on how the applicant would comply with the requirements of this regulation and with UMC 817.97, and (2) a lack of commitment to comply with the recommendations of the Utah Department of Wildlife Resources. (UDWR). The recent responses to the ACR (July 1983) do commit the applicant to certain protection measures, however, the applicant's responses to the ACT requiring specific description of methods

(Chapter X, ACR Responses Volume, July 1983 pp. X-6A to X6C and Appendix D) still do not adequately address many of the major issues raised by the ACR. The applicant's responses still lack specific detail on implementation of the following issues:

- 1) What mitigation measures will be used to protect wildlife and how these measures will be employed; (Chapter X, pp. X-6B, ACR Volume, July, 1983);
- 2) How high value wildlife areas will be avoided, restored, and/or enhanced. (pp. X-6B);
- 3) How impacts to riparian areas will be reduced or avoided, and how damaged habitat will be restored (pp. X-6C);
- 4) How road crossing impacts to aquatic communities will be minimized (pp. X-6C);
- 5) How wildlife habitat will be restored during the reclamation phases of the mine operation (pp. X-6C);
- 6) How much acreage of wildlife habitat will be lost or seriously degraded by mining operations (OSM ACR dated Nov. 8, 1982);

- 7) Description of wildlife use of the springs, seeps, and streams in the permit area and a prediction of mining impacts on these wildlife habitat features (OSM ACR dated Nov. 8, 1982). An analysis that supports the applicant's conclusion that no detrimental effects will be caused should be provided.

* The applicant must provide the detailed and site-specific information related to topics listed in items 1-7 above. The descriptions must include detailed explanations of: (1) what specific procedures will be used; (2) how the applicant will implement the procedures; (3) what areas of the permit area will be involved, and (4) detailed drawings of any facilities modified or constructed to accommodate wildlife. All mining areas, including the proposed portals 7 and 8 areas, must be included.

The applicant must also provide the following information:

- 1) Documentation of the U.S. Fish and Wildlife Service raptor survey findings as described in Chapter X, pp. X-6A, July 1983;
- 2) Documentation from the UDWR that a minimum height of 1 m beneath the existing King VI conveyor system does not pose a barrier; (pp. X-6B, July, 1983);
- 3) Documentation from the UDWR that the conveyor systems in Middle Fork and at Mohrland will provide a minimum of 1 m clearance for big game passage, regardless of location (pp. X-6B, July, 1983);

- 4) Entire route alignments and general cross-sectional drawings showing minimum clearance along the total length of the proposed conveyor belt system for King Mines 4 and 5, and proposed portals 7 and 8. Also, supplemental cross-sectional drawings for those portions of the existing conveyor belt at King Mine 6 not shown on drawing EFC-133, G-21 as well as cross-sectional and plan drawings for adjacent barriers such as guard rails (UMC 784.23(b)(8) and 784.12(a));

- 5) Mapping of wildlife resources shown in Exhibits X-1 to X-3, Vol. 3, Chapter X at a scale of 1:24,000 as required by UMC 771.23(e)(1). The mapping of critical wildlife resources provided as Exhibits X-1 to X-3 is at a scale too large to allow a technical evaluation of the effects of mining facilities on critical wildlife resources. UMC 771.23(e)(1) requires these features to be mapped at a scale between 1:6000 and 1:24,000. Also provide legends for defining map symbols in Exhibits XI to X3;

- 6) A commitment that wildlife habitats will be restored to premining species composition, species distribution, and frequency as emphasized by UDWR (Vol. 3, Chapter X, p. X-9). A method for implementing this commitment must be provided;

- 7) A description of acreages and condition of critical and high-priority big game wildlife areas on the permit area as requested by the UDWR (Vol. 3, Chapter X, pp. X-12 and X-13);

- 8) Estimates of the average number of elk that use each of the following key habitats within the mine permit areas as shown in Exhibit X-2, Vol. 3. Estimates can probably be obtained from the UDWR.
- . Critical elk winter range
 - . High-priority elk winter range
 - . High-priority elk summer range
- 9). Estimates of the average number of mule deer that use each of the following key habitats within the mine permit area as shown in Exhibit X-1, Vol. 3. Estimates can probably be obtained from the UDWR.
- . Critical deer winter range
 - . High-priority deer summer range.

UMC 784.22 - Diversions

U. S. Fuel has been previously asked for a design of the exiting trash racks for the stream diversion under the portal at King No. 4 and 5. U. S. Fuel must provide this information.

The reclamation plan for the diversion (p. VII - 15B) lacks sufficient detail. U. S. Fuel should demonstrate that the restored channel will safely convey the runoff resulting from 100-year, 24-hour precipitation event (including the channel, bank, and floodplain). U. S. Fuel should also demonstrate that the channel gradient will be stable. If channel stabilizing material will be used (e.g., rip rap), then U. S. Fuel should give the size and gradation of the material. A reclamation plan describing the seed and shrub mixture and soil stabilizing practices should also be presented with the goal of restoring natural riparian vegetation on the banks of the stream.

UMC 784.23 - Operation Plan: Maps and Plans

* (b) U. S. Fuel has failed to provide maps, plans, and cross sections for King mines 7 & 8 that show all of the proposed surface facilities. Exhibits III-5A and III-5B must be revised to comply with UMC 784.23 that include, at a minimum, the following:

- 1) Buildings and facilities to be used;
- 2) Coal storage, processing and loading areas;
- 3) Topsoil, spoil, coal waste, underground development waste, and noncoal storage areas;
- 4) Facilities to be used to protect and enhance fish and wildlife related values;
- 5) Explosive storage and handling facilities; and
- 6) Location of each facility that will remain as a permanent feature, after completion of underground mining.

* (b)(6) The conveyance devices for the water storage facilities in the King VI area (Exhibit II-4a) and the Mohrland area (Exhibit III-5b) are not clearly described on these maps. Legends for all exhibits are essential. Exhibits III-4a and III-5b must be redrawn to indicate the water conveyance from the King VI mine and the Mohrland are to the storage facilities near the town of Hiawatha.

* (b)(7) U. S. Fuel must provide a map indicating the disposal of each source of coal processing waste and each waste disposal facility in relation to the proposed permit area.

* (b)(13) The applicant must provide maps and plans for the location of each facility that will remain on the permit area as a permanent feature.

785.19 - Alluvial Valley Floors

* The ACR (November 8, 1982) requested information regarding Miller Creek and Cedar Creek and their potential to be alluvial valley floors (AVFs). The applicant responded in the ACR Response (July, 1983) that artificial flood irrigation practices are practiced on both valley floors approximately four miles below the mine. Clearly the lower valleys are AVFs. The applicant did not define the limit of this AVF study as the "adjacent area", but rather used a two mile limit around the Hiawatha mine. Within the two mile limit on Miller Creek and Cedar Creek there are no recent irrigation practices; however, water from a small pond on Miller Creek had been pumped up onto higher terraces in the past. The presence of historic irrigation (i.e., pumping from stream level) suggests that sufficient water is also available for flood irrigation activities in the upper part of the valley. The applicant considers the Miller Creek and Cedar Creek valleys within two miles of the mine to be too small, irregular, and to have unsuitable slopes for irrigation development. In addition, subirrigated areas were interpreted (i.e., where meadow grasses and rushes were present) to be present only along the active flood plain and stream banks incised below the valley floor. The following information is requested in order to clarify issues concerning AVFs:

1. The lower valleys of Miller Creek and Cedar Creek have active flood irrigation operations. By comparison, what makes the upper valleys within the two mile radius of the mine unsuitable for irrigation activities? Provide specific information that would preclude these areas from being irrigated (i.e., less than 10 acres in size, less than 50 feet wide, insufficient water supply, etc.);
2. Regarding the floodplain areas that are considered subirrigated to agriculturally useful species of plants, provide the width and size of these areas.

UMC 786.19 Criteria For Permit Approval or Denial

The ACR response (page III-31D) states that interim revegetation has been accomplished at King VI coal loading facility, King IV ventilation tunnel and various other sites. The applicant must provide a summary of data collected from these areas to demonstrate that reclamation can be feasibly accomplished under the proposed reclamation plan contained in the application as required by UMC 786.19(b).

The applicant must provide a plan to demonstrate the capabilities of the proposed topsoil substitute material for use in interim and final reclamation. The applicant must develop field test plots, based on soil analysis, to demonstrate the feasibility of using the applicant's proposed topsoil plan and the proposed seed mixtures. The applicant must consult with the Division prior to developing this plan to fully understand the purpose and scope of the information required to demonstrate the feasibility of reclamation.

UMC 817.52 - Ground Water Monitoring

In order to better document ground water resources in the area and the potential impacts of the Hiawatha Complex Mines to these ground water resources, U.S. Fuels must develop and implement an in-mine ground-water monitoring program for the approval by the regulatory agency. The in mine ground water monitoring plan must include a map of all ground water seepage points in the mine. Monthly measurements of flow and field quality (i.e. specific conductance, temperature and pH) must be taken of all seepage into the mine that occurs at flow rates greater than 1 gallon per minute. If the number of leakers flowing greater than 1 gpm becomes excessive, negotiations with the regulatory authority may allow U.S. Fuel to limit the number of monitoring points. For seepage zones with flows less than 1 gallon per minute, monthly measurements of field water quality parameters are sufficient. Quarterly, water quality samples must be taken from areas with inflow rates greater than 1 gallon per minute and analyzed for the complete suite of parameters listed in the UDOGM guidelines for establishment of surface and ground-water monitoring programs. U.S. Fuels shall notify the regulatory agency as soon as possible upon encountering a source of ground water inflow greater than 50 gallons per minute. This flow and quality monitoring data should be submitted to the regulatory agency on a quarterly basis. In addition, U.S. Fuels must account for all ground water consumption in the mine (i.e. used in mining or consumed by evaporation) and all ground water pumped out of the mine. The map locating all ground water seepage points should also locate all sumps used to collect ground water in the mine.

UMC 817.57 Hydrologic Balance: Stream Buffer Zones

The results of the applicant's aquatic survey of upper Cedar Creek (Chapter X, Appendix D, Responses to ACR Comments, July 1983) indicate that this regulation will apply to future road construction and other mining activities associated with portals 7 and 8.

The current mine plan is deficient because it does not: (1) provide detailed road alignments and sizes that recognize the need to protect the buffer zone along Cedar Creek; and (2) provide a detailed plan for protecting and/or restoring the riparian habitat within the buffer zone as required by UMC 817.44(d)(1).

The mine plan must provide the following information:

- *1. A detailed map showing the proposed road alignment, size, and right-of-way width for portals 7 and 8 in relation to riparian habitat and the stream buffer zones.
- *2. A detailed description of how riparian habitat will be protected from road construction and/or if some riparian habitat is destroyed, how it will be restored. The description should include:
 - . Species composition of the replacement plants
 - . Seed Stock
 - . Seed mixture (pounds per acre Pure Live Seed)
 - . Seeding Schedule
 - . Planting methods

- . Planting Stock
- . Planting schedule
- . Maintenance provisions
- . Total acreage to be replaced

(See UMC 784.13(6)(5))

UMC 817.62 through 817.68 Use of Explosives

The application indicates that explosives are used in construction of surface facilities (ACR Response, page VIII-1) at the Hiawatha Complex. The application must provide blasting information required by 817.62 through 817.68 and indicate on a map the storage and handling facilities for explosives required by 784.23(b)(9).

UMC 817.97 Protection of Fish, Wildlife, and Related Environmental Values

Serious deficiencies still exist with the responses to ACR comments dated July, 1983. The major concerns focus on the lack of detailed site-specific information on how the applicant will comply with the commitments made in responses to UMC 784.21 (Chap. X, pp. X-6A to X-6). Most of the areas of primary concern were already identified and discussed as part of the UMC 784.21 analyses (items 1 to 7) and will not be repeated here. In addition to those requirements, the following information must be provided in accordance with this regulation:

- *1. The applicant should describe which seed mixes listed in Chapter X, Appendix B, Tables 1-12 will actually be used and where. The tables provided by UDWR offer a series of options which the applicant may select depending on site-specific characteristics and the intended habitat restoration plan. The applicant must specify which seed mixtures, seeding rates, and species compositions are proposed for the areas designated for wildlife habitat restoration. (This concern was initially identified in UDOGM ACR comments dated Nov. 8, 1982, p. 15). The areas designated for wildlife habitat restoration should also be mapped. (See UMC 784.13(b)(5), and UMC 817.57)

- *2. The applicant should describe how it will be determined that the conveyor systems do or do not create a wildlife barrier and/or demonstrate that there are no migration routes where the conveyor system creates a barrier to wildlife. (UDOGM ACR p.15 dated Nov. 8, 1982).

- *3. Provide documentation of the extent of utilization of water sources (springs and stockponds) by wildlife as required by UMC 783.15.

UMC 817.100 Contemporaneous Reclamation

The application mentions reclaimed areas in the vicinity of the portals, specifically King VI mine. The applicant should provide a map (or maps) at a scale of 1:6,000 depicting past interim reclamation and proposed final reclamation in relation to the post mining contours. These maps (or an additional table) should relate directly to the reclamation time table and revegetation schedule requested under UMC 784.13(b) to demonstrate contemporaneous reclamation under UMC 817.100.

U. S. Fuel Co. has not addressed the following ACR comments of November 8, 1982:

UMC 817.93 Coal Processing Waste: Dams and Embankments: Design and Construction

* (2) The minimum safety factors are given for slurry impoundment #1 and #5. The same information must be submitted for all other impoundments.

UMC 817.99 Slides and Other Damage

A commitment is needed to agree to notifying the Division by the fastest available means and comply with any remedial measures required by the Division anytime a slide occurs which may have a potential adverse effect on public, property, health, safety or the environment.

UMC 817.101 Backfilling and Grading: General Requirements

* No specific address is made to this item other than general backfilling and grading mentioned in the reclamation plan. U. S. Fuel must address specific areas in conjunction with UMC 817.101-106.

UMC 817.103 Backfilling and Grading: Covering Coal and Acid- and Toxic-forming Materials.

* The applicant has addressed the grading of refuse banks only in the most general terms. Provide the following information on the final grade of all areas of refuse storage: 1) depth and volume of cover; and 2) and the source of material.

Indications from research on refuse piles indicate a tendency of refuse piles at the minesite to become acidic. U. S. Fuel must address the acid and toxic potential of this refuse materials, and propose appropriate cover and other mitigation.

How will the stability of these refuse disposal areas be ensured? Provide cross-sections and relevant engineering data detailing slope stability factors.

UMC 817.150-.176 ROADS: CLASS I

The proposed Mohrland road has been submitted as one alternative. The specific plans pursuant to UMC 784.24 of the road to be constructed should be submitted.

UMC 817.153-.163 Roads: Class I and III: Drainage

(c) Culverts must be sized to pass the peak flow from a 10-year, 24-hour precipitation event. Culvert size computations presented in the Vaughn Hansen report are for the 25-year, 6-hour storm; how do the two storm sizes compare? The applicant must demonstrate that the peak flow from the 25-year, 6-hour storm is equal to or greater than the peak flow generated from the 10-year, 24-hour storm. Provide computations for the 10-year, 24-hour storm.

Socioeconomics

Please clarify whether or not the employment numbers submitted by U.S. Fuels in the July 1983 ACR response included the proposed 7 and 8 portals. If so, please delineate that portion of the total employment forecast that would be required to construct and operate portal areas 7 and 8.



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Spradl, Division Director

4221 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

September 22, 1983

Ms. Jean Semborski
U. S. Fuel Company
Hiawatha, Utah 84527

RE: Policy Regarding Operator Responses
to Division Reviews of Permanent
Program Permit Applications
Hiawatha Complex
ACT/007/011, Folder Nos. 2 and 6
Carbon County, Utah

Dear Ms. Semborski:

In order that the Division of Oil, Gas and Mining can meet its statutory obligations of permitting all coal mining operations under the permanent regulatory program, it has become necessary for the Division to adopt and enforce a strict policy regarding allowable time to respond to Division requests for additional information.

All responses to Division requests for information must be complete and furnished within time frames established by the Division. Individual circumstances will be considered, wherever possible, in setting the maximum allowable time for a particular request, but the overall goal of issuing a permanent program permit within a fixed time period remains to be of paramount importance.

Failure to comply with this policy and meeting the established deadlines with complete and adequate information will result in suspension of your interim permit, placement of the application in a lower review priority and cessation of operations until such time as a permanent program permit is issued.

It is unfortunate that we have to take this position, but there appears to be no other alternative in resolving the problem of not receiving timely responses to permit reviews.

Ms. Jean Semborski
ACT/C07/011
September 22, 1983
Page 2

We are very eager to issue you a permit, as I know you are eager to receive one--but it can't be done unless both parties work together as a team and cooperate to resolve this impasse.

Sincerely,

A handwritten signature in cursive script, appearing to read "Jim Spingzi". The signature is written in dark ink and is positioned above the typed name.

Dr. G. A. "Jim" Spingzi
Director

JS/JWS:btb

cc: Allen Klein, OSM, Denver
Robert Hagen, OSM, Albuquerque



United States Department of the Interior

OFFICE OF SURFACE MINING

Reclamation and Enforcement

BROOKS TOWERS

1020 15TH STREET

DENVER, COLORADO 80202

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DIVISION OF
OIL, GAS & MINING
SEP 21 1983

Mr. James Smith
Coordinator of Mined Land Development
Division of Oil, Gas and Mining
4241 State Office Building
Salt Lake City, UT 84114

Dear Mr. Smith:

Enclosed are the results of OSM's Determination of Adequacy review of the U.S. Fuel Hiawatha Complex permit application. OSM has completed this review with the assistance of Engineering Sciences, Inc. The review focused on the applicant's July, 1983 response to the state's November 8, 1982 Apparent Completeness Review, using the September 20, 1982 revision of the Utah regulations including those provisions previously suspended or remanded by the Board, but now found to be in effect by OSM.

There is considerable lack of detail in three principal areas, the most significant being a lack of hydrologic information required by UMC 786.19(c).

In summary, these areas include:

1. Basic hydrology
2. Plans for revegetation
3. Protection and reclamation (UMC 784.21, 784.22, 817.57, 817.101 and 817.153).

In addition, there is an overall concern regarding the applicant's proposed portal area which could be jeopardizing the decision on the permit. To avoid this, the required information or delete the information from the permit boundaries accordingly.

We have identified (by asterisk) the critical items which the company should immediately begin working on, as these items will be the most time consuming in providing a response. Due to the nature and extent of the identified deficiencies, at this time the permit application should not be deemed "complete". Many of these deficiencies were previously identified in the state's November 8, 1982 ACR, (e.g. UMC 761.11, 783.16, 784.13(b)(5), 784.21, 784.22, 817.57, 817.101 and 817.153).

*File ACT/007/011
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There is considerable lack of detail in three principal areas, the most significant being a lack of hydrologic information upon which to base the findings required by UMC 786.19(c).

In summary, these areas include:

1. Basic hydrologic data (UMC 783.16, 783.15 and 784.14);
2. Plans for revegetation and reclamation (UMC 784.13); and
3. Protection and mitigation plans for fish and wildlife resources (UMC 784.21, 817.97).

In addition, there is an overall lack of sufficient information concerning the applicant's proposed portal areas VII and VIII and associated facilities. To avoid jeopardizing the decision on this application, the applicant must provide the required information or delete this area from the permit application and adjust the permit boundaries accordingly.

We have identified (by asterisk) the critical items which the company should immediately begin working on, as these items will be the most time consuming in providing a response. Due to the nature and extent of the identified deficiencies, at this time the permit application should not be deemed "complete". Many of these deficiencies were previously identified in the state's November 8, 1982 ACR, (e.g. UMC 761.11, 783.16, 784.13(b)(5), 784.21, 784.22, 817.57, 817.101 and 817.153).

A tentative meeting has been scheduled by Wayne Hedberg and Sarah Bransom for September 23, 1983 to discuss any questions or comments you may have on the enclosed document. A preliminary draft was forwarded from Sarah Bransom to Wayne Hedberg on August 15, 1983. We anticipate that the final deficiency letter will be forwarded by the Division to the applicant the week of September 26th.

In accordance with the June 13, 1983 letter sent from OSM and the Division to the applicant advising him of the permit review schedule, responses to the deficiencies should be submitted by October 28, 1983. A meeting should be scheduled with the applicant the week of October 3rd to discuss any questions regarding the deficiency document.

If you have any questions regarding this matter, please feel free to contact Sarah Bransom or Walter Swain at (303) 837-3806.

Sincerely,

Russell F. Klein
for
Allen D. Klein

Administrator
Western Technical Center

U.S. FUEL'S HIAWATHA MINES COMPLEX
DETERMINATION OF ADEQUACY

OSM Compliance with E011593 and the National Historic Preservation Act

The applicant must submit the following information for OSM to be in compliance with Federal cultural resources legislation and to allow the preparation of the Technical and Environmental Analyses on U.S. Fuel's application:

Although the applicant has provided a research and inventory report for 50 to 60 acres of expansion area in Cedar Creek, a pedestrian inventory for cultural resources of the following areas in which disturbance has been proposed (page III--1, Volume 1) must be completed:

1. Middle Fork of Millers Creek surface facilities;
2. North Fork of Millers Creek ventilation shaft;
3. Hiawatha Processing Plant and Waste Disposal sites;
4. South Fork of Millers Creek surface facilities;
5. Substitute topsoil locations (Exhibit VIII-4A); and
6. Any other areas in which ground surface disturbance will occur.

Because it is likely that at least some of the previously disturbed areas in the vicinities of the above facilities are historic mining sites, pedestrian inventory of all areas which will be disturbed by construction proposed under this permit must be completed. The pedestrian inventory must be completed prior to the initiation of any ground surface disturbance at or near previously disturbed areas.

The applicant shall conduct or cause to be conducted, historic research of the Town of Hiawatha. The objective of this research will be to provide an historic narrative outlining the community's role in the historic development of the region (similar to that provided for Old Mohrland in the Neilson and Merrill report). The information is necessary to allow OSM to justify a decision regarding the eligibility or ineligibility of the permit area as a National Register district.

The subsidence monitoring plan has been determined adequate. It should be assumed that long wall mining will result in some degree of uniform subsidence and pillar removal following completion of room-and-pillar mining will result in surface tension cracking and a rapid lowering of the land surface. If subsidence within the underground mining areas as documented through the monitoring program appears sufficient to threaten cultural site integrity, or if archeology sites that are sensitive to subsidence (rock art, rock shelters, multi-component sites) are located in these areas, OSM and/or the SHPO may require additional inventory of lands above underground workings, beyond that specifically required for the approval of this permit.

APPLICANT'S COMPLIANCE WITH UTAH'S PERMANENT PROGRAM

UMC 761.11 Areas Where Mining is Prohibited or Limited

Pedestrian inventory for cultural sites has not been conducted within all proposed direct impact areas (areas in which disturbance will occur). The remaining inventory requirements must be completed prior to ground surface disturbance within the permit area (see "OSM Compliance with E011593 and the National Historic Preservation Act").

The Town of Mohrland site (42 EM 1642) has been recommended as eligible for nomination to the National Register of Historic Places (NRHP), and the additional pedestrian inventory (see "OSM compliance with E011593 and the National Historic Preservation Act") may result in the identification of other NRHP-eligible sites. If 42 EM 1642 or any other cultural sites are determined eligible, disturbance of the site will be prohibited until impact mitigation procedures sufficient to allow a Determination of No Adverse Effect have been completed.

UMC 783.12(b)

Pedestrian inventory for cultural sites must be completed and approved prior to initiation of ground disturbance within the permit area (see 761.11).

UMC 784.17 Protection of Public Parks and Historic Places

See comments under 761.11.

UMC 786.19(e) Criteria for Permit Approval or Denial

See Comments under 761.11.

UMC 771.23 Permit Applications

* The applicant has provided a "Subsurface Ownership Map (Exhibit IV-2) and a table with property and subsurface ownership (Appendix II-1). Numerous discrepancies exist between the two sources. Legal descriptions listed on the table do not match the information on the map and visa versa. The applicant must provide a complete and accurate list of all coal ownership within the permit area with accurate legal descriptions and a current and accurate map of the coal ownership within and adjacent to the permit area as required by UMC 771.23(b), 782.15(a), and 783.24(a) and (b).

UMC 782.13 Identification of Interests

Exhibits IV-1 and IV-2 show different mine plan area north and east boundaries. These maps do not delineate the mining sequence as required by UMC 771.23(2). They also show an area crossed by the words "Manti-LaSal National Forest" as U.S.Fuel Corp. fee land. Neither the maps or the text provide addresses of land/or mineral owners. All of these discrepancies and deficiencies must be cleared up.

(3) The reviewer is referred to Appendices II-1 and II-2 for the holders of record of any leasehold interest in areas to be affected by surface operations or facilities and the holders of record of any

leasehold interest in the coal to be mined. Appendix II-1 does not explain what it is supposed to demonstrate. A subheading of Appendix II-1 is labeled "acres" and is divided into five other unexplained subdivisions. There is no explanation of whether the table applies to surface or subsurface areas. Apparently no other leaseholders besides U. S. Fuel have interest in the area, but this is not specified. Appendix II-2 does not apply to this regulation because it relates to unsuitability for mining. These problems must be resolved in order to analyze the plan.

(b) The permit application does not state whether the applicant is a corporation, partnership, single proprietorship, association or other business entity. This must be specified.

(d) The applicant lists Carpenter Town Coal and Coke Co. under 782.13(b)(3) but does not relate any permits to mine coal under that name as being held or applied for. The applicant must list any current or previous coal mining permits in the United States which Carpenter Town Coal and Coke or Sharon Steel has held since 1970.

(e) The reviewer is referred to Exhibits IV-1 and IV-2 for information on contiguous area ownership. These exhibits do not provide addresses. A block to the east of the mine plan area in T15S, R8E, Sec 35, is listed as "numerous private owners". These owners must be identified and the addresses of all owners of contiguous land and coal must be provided.

UMC 782.15 Right of Entry and Operation Information

(a) The applicant refers the reader to a table (Appendix II-1) for information on its right of entry documents. A section of the table is labeled "Area" with the numbers 1-5 below that. The land within the permit area is apparently separated into these five divisions. There is no explanation, however, of what that section of the table represents. The appendix table does not list lessors. The applicant must

clarify what is involved in the table before a complete evaluation can be made of its right to enter and mine. The applicant must provide a list of lessors in order to establish its right of entry.

UMC 782.16 Relationship to Areas Designated Unsuitable for Mining

(b) The applicant must state whether or not there is an administrative proceeding to designate the area unsuitable for mining.

c) The applicant must state whether or not surface operations or facilities will be located within 300 feet of an occupied dwelling. If a dwelling will be so affected, a waiver from its owner must be included.

UMC 782.17 Permit Term Information

The applicant must provide anticipated startup dates for King portals 7 and 8, the estimated termination dates for all of the mines being permitted, and maps showing surface acres to be affected and horizontal and vertical extent of the mine working as required by UMC 784.23..

UMC 782.18 Personal Injury and Property Damage Insurance

The company's insurance policy expired 5/31/83, although the policy says the insurance will remain in force until the completion of reclamation. Evidence that the policy is still in effect must be provided.

UMC 782.19 Identification of Other Licenses and Permits

The applicant does not provide addresses of the permitting agencies or identification numbers of the permits. This information must be provided.

UMC 782.21 Newspaper Advertisement and Proof of Publication

The applicant must provide the newspaper advertisement which will be published once the application is determined to be complete (requirements for the advertisement are under UMC 786.11).

UMC 783.16 Surface Water Information

U.S. Fuel must commit to expanding their water monitoring program in order for the regulatory authority to show compliance with UMC 817.52 (Hydrologic Balance: Surface and Ground Water Monitoring). Specifically, U.S. Fuel must commit to including station ST3-A S74-A, and S76-A in their permanent monitoring program. Monitoring at these stations must be performed in accordance with the initial comprehensive schedule (Table VII-7) until the regulatory authority approves use of the routine schedule (Table VII-3).

UMC 783.17 Alternate Water Supply Information

* The ACR (November 8, 1982) requested a description (including quality and quantity) of water available as an alternate source in the event that a water supply is affected by the mine. The applicant responded that mine water from the Mohrland Portal in Cedar Creek Canyon could be used as an alternate source of water. U. S. Fuel Company has a water right to use .446 cfs (U.W.C CERT. #4148) from the Mohrland Portal mine water discharge (Table VII-2). U.S. Fuel must

provide the comparison of the amount of water available from this water right compared to the revised assessment of probable hydrologic consequences (with respect to UMC 784.14) in order to assure that all potential water losses can be replaced.

* U.S. Fuel must consider all ground water intercepted in the mine that would otherwise be consumed by other water users. In addition, the consumptive use of water during the mining operation including evaporation must be considered part of the water right not available for replacement to other affected users.

UMC 783.15 Ground Water Information

* The applicant has described the ground water system in the vicinity of the Hiawatha Complex-King Mines in very general terms with very little data to substantiate the narrative. To show compliance with 783.15 the applicant must provide the following information:

- * 1. A discussion of all well logs in the area showing the continuity or discontinuity of potential water bearing zones (i.e. sandstone strata), and cross sections with drill hole data points to substantiate the interpretation of potential water bearing zones.
- * 2. A spring inventory that shows all springs within 2 miles of the adjacent area of the King mines and a discussion of what strata or geologic structures the springs are associated with. The applicant must also provide a discussion of the use being made of the springs, including wildlife utilization.
- * 3. A more thorough discussion of the ground water flow system associated with the Bear Canyon Fault. This fault zone most likely will account for the majority of water that will be encountered in the King Mines. What areas recharge this fault system and what discharge zones (i.e. springs) are specifically connected to the Fault zone? What are the

hydraulic characteristics of the faulted zone (i.e. transmissivity and storage) that would define how far mining impacts may reach.

UMC 783.19 Vegetation

* The application contains several maps (ACR Responses, Chapter IX) that lack basic map features. Specifically, Figures 2 through 6 lack coordinates (i.e. township and range), and map location references. Figure 1's scale (1:24,000) is incorrect. The actual measured scale as depicted in Figure 1 is 1:50,000 which is unacceptable according to UMC 771.23(e). Figure 2 is missing a scale and north indicator. Figure 3 has Reference Area 3 placed outside the limits of the map. Figure 4 is lacking a north indicator, and Figures 5 and 6 are at different scales than Figures 3 and 4. The applicant should correct Figures 1 through 6 and indicate the permit area boundaries as required by UMC 771.23(e) and 783.24.

The ACR response (page III-31D) states that interim revegetation has been accomplished at King VI coal loading facility, King IV ventilation tunnel and various other sites. The applicant must provide a summary of data collected from these areas to demonstrate that reclamation can be feasibly accomplished under the proposed reclamation plan contained in the application (UMC 786.19(b)).

UMC 783.24 Maps: General Requirements

* The permit application includes only two maps (Vol. I, Exhibits III-3 and 4A) displaying a portion of the permit boundaries in relation to the facilities and resources. The U.S. Fuels' permit area boundaries that are proposed in this application should be well defined and indicated on each of the following Exhibits:

Original Application

III-1A through 2
III-4B through IV-2
VI-1 through 5
VII-1 and 2
VIII-1 through 3B
IX-1 through 5
XIII-1A through 1E
XIV-1 through 5

ACR Responses

III-5A, 5B, 6A, 6B, 12A, 13, 14, 15
IV-3, 3A, 4
VII-1, 19, 20
XIII-2A through 4

In addition, wildlife resource maps (Exhibits X-1 through X-3) must clearly show specific wildlife information relative to the mine plan area at a scale of at least 1:24,000 as required by UMC 771.23(e).

UMC 784.11 Operational Plan: General Requirements

* Maps No. 1, No. 2, and No. 3 furnished for the non-coal waste storage and disposal areas must be replaced with adequate copies bearing title blocks, scale of map, direction arrow, and must be presented in a clear, neat, and legible copy.

* Additional information is required in the permit application to evaluate the operation plans for King mines 7 and 8. The applicant must provide a narrative that describes the proposed facilities, construction activities, use, maintenance and removal of the following for King mines 7 and 8 as required by UMC 784.11:

1. Overburden, topsoil handling and storage areas and structures;

2. Coal removal, hauling, storage, cleaning, and transportation areas and structures; and
3. Mine facilities (i.e., slopes, bathhouse, warehouse, etc.).

UMC 784.12 Operation and Plan: Existing Structures

* The application fails to provide cross-sectional drawings for the entire length of the existing overland conveyor system at King mine VI. The application must provide cross-sectional drawings to supplement Drawing EFC-133,G-21 for the existing overland conveyor system at King mine VI. These cross-sections must show the clearance between the ground level and the lowest portion of the structure as built (UMC 784.12(a)).

UMC 784.13(a) Reclamation Plan

* The application fails to provide specific reclamation plans for the four locations to be used for substitute topsoil. The applicant must provide detailed reclamation plans that provide: 1) a detailed timetable for completion of each step in the reclamation plan; 2) a detailed estimate of costs for reclamation (as required by UMC 800-808); a plan for backfilling, soil stabilization, compaction, and grading with appropriate contour map and cross-sections (as required by UMC 817.100-817.106); 3) a plan for removal, storage and distribution of topsoil (as required by UMC 817.21-817.25); 4) a plan for revegetation (as required by UMC 784.13(b)(5) and 817.111-817.116); and 5) a description of steps to comply with Clean Air Act, Clean Water Act, and other applicable air and water quality laws, regulations, and standards.

UMC 784.13 (b)(1) and (b)(2) Reclamation Plan

* The applicant must provide a detailed timetable showing the completion of each major step in the reclamation plan including but not limited to the following operations, as required by UMC 784.13 (b)(1) and (5)(i):

1. Equipment and facility removal.
2. Portal sealing.
3. Backfilling and grading.
4. Topsoil operations
 - a. vegetation removal from the proposed topsoil borrow site
 - b. topsoil removal and distribution over backfilled and graded spoil material
 - c. topsoil redistribution over topsoil borrow site
 - d. soil nutrient tests
5. Revegetation operations
 - a. topsoil preparation (i.e., scarification)
 - b. seeding and planting
 - c. mulching
 - d. fertilization

(b)(2) The applicant has submitted an ACR response that provides detailed cost estimates for reclaiming the mining operations in the three forks of the Miller Creek, Mohrland area and the processing plant and loadout facilities in Hiawatha. However, the proposed topsoil borrow sites have not been included in the reclamation cost estimates. Operating the topsoil borrow site is considered a part of the reclamation plan. The applicant must provide the same level of detailed cost estimates for operating and reclaiming the topsoil borrow sites as required by 784.13(b)(2).

UMC 784.13(b)(4) Reclamation Plan: Topsoil

* The application provides a general topsoil handling plan for what is assumed to be the entire Hiawatha Complex. The only specific topsoil handling description is found in a July, 1982 report located in the back of Chapter VIII of the ACR responses. The applicant must provide specific topsoil handling plans for King 4 & 5, King 7 & 8, the preparation plant, and the substitute topsoil source sites. These plans must provide the depths, sources, volumes of substitute material and stockpiled topsoil volumes for reclamation of facilities, and specific methods to prevent excess compaction and reduction of erosion to determine feasibility of reclamation as required by UMC 786.19.

UMC 784.13 (b)(3) Reclamation Plan: General Requirements

* Map Exhibits F III-11 through F III-15 show the outlines of the areas disturbed by filling, excavating and topsoil placement for reclamation of the mine entrance sites. It is not readily determinable whether the material available on the sites is enough to satisfy the fill requirements. If it is not, then additional material must be borrowed from somewhere. Conversely, if excess material must be wasted, then additional spoil areas must be developed. In order to determine the case with reasonable accuracy, finished contours should be shown on the maps, and additional cross-sections plotted. From these sections, a reasonable calculation of fill/waste balance may be made. It is also necessary for the applicant to demonstrate, through calculation of storm runoff, that the sectional area of the proposed ditch is adequate for the anticipated storm water flow.

To resolve those questions, the applicant must provide contour maps of the mine portal sites together with additional post-mining contours showing the conditions intended upon completion of reclamation work. Also, it is necessary for the applicant to furnish cross-sections, volume/balance calculations, and storm water run-off/capacity

calculations of the proposed stream restoration. The submittals shall be in compliance with the requirements of UMC 784.13-784.25, and UMC 783.24.

UMC 784.13(b)(5) Revegetation

* The application does not clearly and concisely state which of the Division of Wildlife Resources' recommended seed mixtures (Volume III, Chapter X, Appendix B) will be used for final reclamation. Also, the application does not provide planting techniques (i.e. spacing and arrangement) or type of stock for planting shrubs and tree species as required by UMC 784.13(b)(5)(iii) and 817.117(c)(2). The application does not specify the seeding rate as required by 784.13(b)(5)(ii). Tables 1 through 12 referenced in the ACR response (page III-31B) provide a range in total rates based on the severity of disturbance. The applicant must commit to specific seeding rates to be used in final revegetation as required by UMC 784.13(b)(5)(ii).

* The ACR response (page III-31D) states that the applicant does not intend to reclaim previously disturbed areas, currently used or proposed for use during this permit, to a vegetative cover at least equal in extent of cover to the natural vegetation of the surrounding area as required by UMC 817.111(b)(3). The applicant must achieve the standards for successful revegetation as required by UMC 817.116 and 817.117 for all areas proposed for use by surface mining activities under this permit application.

UMC 784.14 Reclamation Plan: Protection of Hydrologic Balance

The ACR (section UMC 783.24(g)) requested a map describing the water rights for surface and ground water in adjacent areas within a minimal two mile radius of the permit boundary. U. S. Fuel responded by locating some of their water rights on Exhibit VII-1. A review of the water rights in the area show over 35 springs within water rights

(mostly owned by the U. S. Forest Service) within a two mile radius of the permit boundary. Six of these springs are within the permit boundary.

* U. S. Fuel must document these water rights. Documentation should include a table listing the water use claim numbers, owner, source (including the geologic formation from which the spring issues), flow, purpose (e.g. stockwatering), and period of use. U. S. Fuel must locate these springs and all of their water rights on a map as required by UMC 784.14.

The applicant states that significant quantities of water have been and will continue to be encountered in the mine from the Bear Fault. In addition, the discussion of mine subsidence (ACR Responses Chapter VII-19) indicate that surface and ground water resources could be affected by the mine. The discussion of probable hydrologic effects with respect to the previously mentioned potential impacts is very general. For example, regarding the effects of mine subsidence, the following statements are made, "Fractures resulting from subsidence as well as natural fractures encountered in mining could contribute to changes in existing water patterns. Springs, seeps, and stream flows could possibly be affected and changes in drainage patterns could result...The effects of past mining on water resources is not known, except that significant flows have resulted from contact with major fractures such as the Bear Canyon Fault. Large areas of the King 1 and King 2 mines were mined out from 10 to 50 years ago by room and pillar methods, yet numerous springs and seeps overlying these mines are still flowing. Whether or not they have diminished as a result of mining is unknown."

The previous narrative is not an acceptable description of probable hydrologic consequences. The regulatory authority must know to what degree specific water resources may be affected by mining, in order to determine what the probable hydrologic consequences of mining will be. This information will be used to determine if material damage will occur to the hydrologic balance in the permit and adjacent areas. Therefore, the applicant must provide the following information.

- * 1. An assessment of the effects of mine subsidence on the geomorphic stability of the overlying landscapes. More specifically, discuss the effect of mine subsidence on stream gradients and corresponding erosional stability.
- * 2. An assessment of changes in streamflow that may result from mining at the King Mines. Changes in stream flow that must be considered include losses resulting from subsidence or from interception of ground water in the mines that otherwise would provide baseflow to streams.
- * 3. An assessment of springs or wells that may be affected by the King Mines (including additional springs located per requirements under UMC 783.15). The assessment must detail what water users (including wildlife) will be impacted by losses of springs and stream flow. Particular emphasis should be placed on the major water bearing zone observed to date, the Bear Fault Zone. The applicant must describe what springs are related to the fault zone and how their flow may be diminished by the interception of ground water flow in the mine.
- * 4. An assessment of post mining ground water quality, using existing data for waters flowing from old mine workings. Also provide a comparison of post-mining ground water quality with streams and springs that will receive the ground water discharge.
- * 5. With respect to each of the coal refuse piles and associated slurry ponds the applicant must provide the following information:
 - A. Quality of water in the slurry ponds;
 - B. Quality of runoff and leachate water associated with the coal refuse piles;
 - C. If the analyses of waters associated with the slurry ponds and refuse piles indicate that these waters would degrade the water quality of nearby surface or ground water resources, then a water balance on water leaving the ponds

and refuse piles is necessary. The water balance should consider runoff and percolation losses from the areas in question. The amount and quality of water leaving the site should be mass balanced with receiving surface or ground waters.

UMC 784.15 - Reclamation Plan: Postmining Land Use (Wildlife)

* The applicant should directly and clearly state in this section what the postmining land use will be and that wildlife habitat will be a primary post mining land use as is implied in the applicant's response to comments on UMC 784.21 (Chapter X, pp. X-6C, July 1983). Including this statement in the post mining land use section would reduce a substantial amount of uncertainty about the applicant's future intentions.

UMC 784.21 - Fish and Wildlife Plan

* The applicant's Fish and Wildlife Plan still remains seriously deficient. The original ACR comments from OSM and from DOGM (dated Nov. 8, 1982) identified numerous significant deficiencies in the Fish and Wildlife Plan caused by: (1) an absence of detailed information on how the applicant would comply with requirements of this regulation and with UMC 817.97 and (2) a lack of commitment to comply with the recommendations of the Utah Department of Wildlife Resources (UDWR). The recent responses to the ACR (July 1983) do commit the applicant to certain protection measures, however, the applicant's responses to the ACR requiring specific descriptions of methods (Chapter X, ACR Responses Volume, July 1983 pp. X-6A to X-6C and Appendix D) still do not adequately address many of the major issues raised by the ACR. The applicant's responses still lack specific detail on implementation of the following issues:

- 1) What mitigation measures will be used to protect wildlife and how these measures will be employed; (Chapter X, pp. X-6B, ACR Volume, July, 1983);
- 2) How high value wildlife areas will be avoided, restored, and/or enhanced (pp. X-6B);
- 3) How impacts to riparian areas will be reduced or avoided, and how damaged habitat will be restored (pp. X-6C);
- 4) How road crossing impacts to aquatic communities will be minimized (pp. X-6C);
- 5) How wildlife habitat will be restored during the reclamation phases of the mine operation (pp. X-6C);
- 6) How much acreage of wildlife habitat will be lost or seriously degraded by mining operations (OSM ACR dated Nov. 8, 1982);
- 7) Description of wildlife use of the springs, seeps, and streams in the permit area and a prediction of mining impacts on these wildlife habitat features (OSM ACR dated Nov. 8, 1982). An analysis that supports the applicant's conclusion that no detrimental effects will be caused should be provided.

* The applicant must provide the detailed and site-specific information related to topics listed in items 1-7 above. The descriptions must include detailed explanations of: (1) what specific procedures will be used; (2) how the applicant will implement the procedures; (3) what areas of the permit area will be involved, and (4) detailed drawings of any facilities modified or constructed to accommodate wildlife. All mining areas, including the proposed portals 7 and 8 areas, must be included.

The applicant must also provide the following information:

- 1) Documentation of the U.S. Fish and Wildlife Service raptor survey findings as described in Chapter X, pp. X-6A, July, 1983.

- 2) Documentation from the UDWR approving a minimum height of 1 m beneath the existing King VI conveyor system (pp. X-6B, July, 1983);
- 3) Documentation from the UDWR that the conveyor systems in Middle Fork and at Mohrland will provide a minimum of 1 m clearance for big game passage, regardless of location (pp. X-6B, July, 1983);
- 4) Entire route alignments and general cross-sectional drawings showing minimum clearance along the total length of the proposed conveyor belt system for King Mines 4 and 5, and proposed portals 7 and 8. Also, supplemental cross-sectional drawings for those portions of the existing conveyor belt at King Mine 6 not shown on drawing EFC-133, G-21 as well as cross-sectional and plan drawings for adjacent barriers such as guard rails (UMC 784.23(b)(8) and 784.12(a)).
- 5) Mapping of wildlife resources shown in Exhibits X-1 to X-3, Vol. 3, Chapter X at a scale of 1:24,000 as required by UMC 771.23(e)(1). The mapping of critical wildlife resources provided as Exhibits X-1 to X-3 is at a scale too large to allow a technical evaluation of the effects of mining facilities on critical wildlife resources. UMC 771.23(e)(1) requires these features to be mapped at a scale between 1:6000 and 1:24,000.
- 6) A commitment that wildlife habitats will be restored to premining species composition, species distribution, and frequency as emphasized by UDWR (Vol. 3, Chapter X, p. X-9). A method for implementing this commitment must be provided.
- 7) A description of acreages and condition of critical and high-priority big game wildlife areas on the permit area as requested by the UDWR (Vol. 3, Chapter X, pp. X-12 and X-13).
- 8) Estimates of the average number of elk that use each of the following key habitats within the mine permit areas as shown in Exhibit X-2, Vol. 3. Estimates can probably be obtained from the UDWR.

- . Critical elk winter range
 - . High-priority elk winter range
 - . High-priority elk summer range
- 9) Estimates of the average number of mule deer that use each of the following key habitats within the mine permit area as shown in Exhibit X-1, Vol. 3. Estimates can probably be obtained from the UDWR.
- . Critical deer winter range
 - . High-priority deer summer range.

UMC 784.22 - Diversions

U.S. Fuel has been previously asked for a design of the exiting trash racks for the stream diversion under the portal at King No. 4 and 5. U.S. Fuel must provide this information.

The reclamation plan for the diversion (p. VII - 15B) lacks sufficient detail. U.S. Fuel should demonstrate that the restored channel will safely convey the runoff resulting from 100-year, 24-hour precipitation event (including the channel, bank, and floodplain). U.S. Fuel should also demonstrate that the channel gradient will be stable. If channel stabilizing material will be used (e.g., rip rap), then U.S. Fuel should give the size and gradation of the material. A reclamation plan describing the seed and shrub mixture and soil stabilizing practices should also be presented with the goal of restoring natural riparian vegetation on the banks of the stream.

UMC 784.23 - Operation Plan: Maps and Plans

* (b) U.S. Fuel has failed to provide maps, plans, and cross sections for King mines 7 and 8 that show all of the proposed surface facilities. Exhibits III-5A and III-5B must be revised to comply with UMC 784.23 that include at a minimum the following:

- 1) Buildings and facilities to be used;
- 2) Coal storage, processing and loading areas;
- 3) Topsoil, spoil, coal waste, underground development waste, and noncoal storage areas;
- 4) Facilities to be used to protect and enhance fish and wild-life related values;
- 5) Explosive storage and handling facilities; and
- 6) Location of each facility that will remain as a permanent feature, after completion of underground mining.

* (b)(6) The conveyance devices for the water storage facilities in the King VI area (Exhibit III-4a) and the Mohrland area (Exhibit III-5b) are not clearly described on these maps. Legends for all exhibits are essential. Exhibits III-4a and III-5b must be redrawn to indicate the water conveyance from the King VI mine and the Mohrland area to the storage facilities near the town of Hiawatha.

* (b)(7) U.S. Fuel must provide a map indicating the disposal of each source of coal processing waste and each waste disposal facility in relation to the proposed permit area.

* (b)(13) The applicant must provide maps and plans for the location of each facility that will remain on the permit area as a permanent feature.

785.19 - Alluvial Valley Floors

* The ACR (November 8, 1982) requested information regarding Miller Creek and Cedar Creek and their potential to be alluvial valley floors (AVFs). The applicant responded in the ACR Response (July, 1983) that artificial flood irrigation practices are practiced on both valley floors approximately four miles below the mine. Clearly the lower valleys are AVFs. The applicant did not define the limit of this AVF study as the "adjacent area", but rather used a two mile limit around the Hiawatha mine. Within the two mile limit on Miller Creek and Cedar

Creek there are no recent irrigation practices; however, water from a small pond on Miller Creek had been pumped up onto higher terraces in the past. The presence of historic irrigation (i.e., pumping from stream level) suggests that sufficient water is also available for flood irrigation activities in the upper part of the valley. The applicant considers the Miller Creek and Cedar Creek valleys within two miles of the mine to be too small, irregular, and to have unsuitable slopes for irrigation development. In addition, subirrigated areas were interpreted (i.e., where meadow grasses and rushes were present) to be present only along the active flood plain and stream banks incised below the valley floor. The following information is requested in order to clarify issues concerning AVFs:

1. The lower valleys of Miller Creek and Cedar Creek have active flood irrigation operations. By comparison, what makes the upper valleys within the two mile radius of the mine unsuitable for irrigation activities? Provide specific information that would preclude these areas from being irrigated (i.e., less than 10 acres in size, less than 50 feet wide, insufficient water supply, etc.);
2. Regarding the floodplain areas that are considered subirrigated to agriculturally useful species of plants, provide the width and size of these areas.

UMC 817.55 - Hydrologic Balance: Discharge of Water Into an Underground Mine

* U. S. Fuel states (p VII-15B) that water from the left fork of the North Fork of Miller Creek is diverted from the creek to an underground storage reservoir in the old Hiawatha #2 mine. In order for us to demonstrate compliance with section UMC 817.55, U. S. Fuel must provide the following information: 1) rates and quality of water at the diversion; and 2) approval of the Mine Safety and Health Administration for the diversion of water into the old Hiawatha #2 mine.

UMC 817.57 Hydrologic Balance: Stream Buffer Zones

The results of the applicant's aquatic survey of upper Cedar Creek (Chapter X, Appendix D, Responses to ACR Comments, July 1983) indicate that this regulation will apply to future road construction and other mining activities associated with portals 7 and 8.

The current mine plan is deficient because it does not: (1) provide detailed road alignments and sizes that recognize the need to protect the buffer zone along Cedar Creek; and (2) provide a detailed plan for protecting and/or restoring the riparian habitat within the buffer zone as required by UMC 817.44(d)(1).

The mine plan must provide the following information:

- *1. A detailed map showing the proposed road alignment, size, and right-of-way width for portals 7 and 8 in relation to riparian habitat and the stream buffer zones.
- *2. A detailed description of how riparian habitat will be protected from road construction and/or if some riparian habitat is destroyed, how it will be restored. The description should include:
 - . List and percent composition of the replacement plant species
 - . Planting density
 - . Planting schedule
 - . Maintenance provisions
 - . Total acreage to be replaced

UMC 817.62 through 817.68 Use of Explosives

The application indicates that explosives are used in construction of surface facilities (ACR Response, page VIII-1) at the Hiawatha Complex. The application must provide blasting information required by 817.62 through 817.68 and indicate on a map the storage and handling facilities for explosives required by 784.23(b)(9).

UMC 817.97 Protection of Fish, Wildlife, and Related Environmental Values

Serious deficiencies still exist with the responses to ACR comments dated July, 1983. The major concerns focus on the lack of detailed site-specific information on how the applicant will comply with the commitments made in responses to UMC 784.21 (Chap. X, pp. X-6A to X-6). Most of the areas of primary concern were already identified and discussed as part of the UMC 784.21 analyses (items 1 to 7) and will not be repeated here. In addition to those requirements, the following information must be provided in accordance with this regulation.

- *1. The applicant should describe which seed mixes listed in Chapter X, Appendix B, Tables 1-12 will actually be used and where. The tables provided by UDWR offer a series of options which the applicant may select depending on site-specific characteristics and the intended habitat restoration plan. The applicant must specify which seed mixtures, seeding rates, and species compositions are proposed for the areas designated for wildlife habitat restoration. (This concern was initially identified in UDOGM ACR comments dated Nov. 8, 1982, p. 15). The areas designated for wildlife habitat restoration should also be mapped.

- *2. The applicant should describe how it will be determined that the conveyor systems do or do not create a wildlife barrier and what mitigation measures will be instituted, if the conveyor system creates a barrier (UDOGM ACR p. 15 dated Nov. 8, 1982).

UMC 817.100 Contemporaneous Reclamation

The application mentions reclaimed areas in the vicinity of the portals, specifically King VI mine. The applicant should provide a map (or maps) at a scale of 1:6,000 depicting past interim reclamation and proposed final reclamation in relation to the post mining contours. These maps (or an additional table) should relate directly to the reclamation time table and revegetation schedule requested under UMC 784.13(b) to demonstrate contemporaneous reclamation under UMC 817.100.

U. S. Fuel Co. has not addressed the following ACR comments of November 8, 1982:

UMC 817.93 Coal Processing Waste: Dams and Embankments: Design and Construction

- * (2) The minimum safety factors are given for slurry impoundment #1. The same information must be submitted for the other impoundments.

UMC 817.99 Slides and Other Damage

A commitment is needed to agree to notifying the Division by the fastest available means and comply with any remedial measures required by the Division anytime a slide occurs which may have a potential adverse effect on public, property, health, safety or the environment.

UMC 817.101 Backfilling and Grading: General Requirements

* No specific address is made to this item other than general backfilling and grading mentioned in the reclamation plan. U.S. Fuel must address specific areas in conjunction with UMC 817.101-106.

UMC 817.103 Backfilling and Grading: Covering Coal and Acid- and Toxic-forming Materials.

* The applicant has addressed the grading of refuse banks only in the most general terms. Provide the following information on the final grade of all areas of refuse storage: 1) depth and volume of cover; and 2) and the source of material.

Indications from research on refuse piles indicate a tendency of refuse piles at the minesite to become acidic. U.S. Fuel must address the acid and toxic potential of this refuse materials, and propose appropriate cover and other mitigation.

How will the stability of these refuse disposal areas be ensured? Provide cross-sections and relevant engineering data detailing slope stability factors.

UMC 817.150-.176 ROADS: CLASS I

The proposed Mohrland road has been submitted for one alternative. The specific plans pursuant to UMC 784.24 of the road to be constructed should be submitted.

UMC 817.153-.163 Roads: Class I and III: Drainage

(c) Culverts must be sized to pass the peak flow from a 10-year, 24-hour precipitation event. Culvert size computations presented in the Vaughn Hansen report are for the 25-year, 6-hour storm; how do the

two storm sizes compare? The applicant must demonstrate that the peak flow from the 25-year, 6-hour storm is equal to or greater than the peak flow generated from the 10-year, 24-hour storm. Provide computations for the 10-year, 24-hour storm.

Socioeconomics

Please clarify whether or not the employment numbers submitted by the U.S. Fuel in the July 1983 ACR response included the proposed 7 and 8 portals. If so, please delineate that portion of the total employment forecast that would be required to construct and operate portal areas 7 and 8.

U.S. FUEL CO
HIAWATHA CO. PLEX
DEFICIENCY LETTER (ACR/DOC)
(Engineering Sciences/OSM)

ACT/007/011
Folder # 2
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OSM Compliance with E011593 and the National Historic Preservation Act

The applicant must submit the following information for OSM to be in compliance with Federal cultural resources legislation and to allow the preparation of the Technical and Environmental Analyses on U.S. Fuel's application:

Although the applicant has provided a research and inventory report for 50 to 60 acres of expansion area in Cedar Creek, a pedestrian inventory for cultural resources of the following areas in which disturbance has been proposed (page III--1, Volume 1) must be completed:

- RECEIVED**
SEP 20 1983
DIVISION OF
OIL, GAS & MINING
1. Middle Fork of Millers Creek surface facilities;
North Fork of Millers Creek ventilation shaft;
Hiawatha Processing Plant and Waste Disposal sites;
South Fork of Millers Creek surface facilities;
 2. Substitute topsoil locations (Exhibit VIII-4A); and
 6. Any other areas in which ground surface disturbance will occur.

Because it is likely that at least some of the previously disturbed areas in the vicinities of the above facilities are historic mining sites, pedestrian inventory of all areas which will be disturbed by construction proposed under this permit must be completed. The pedestrian inventory must be completed prior to the initiation of any ground surface disturbance at or near previously disturbed areas.

The applicant shall conduct or cause to be conducted, historic research of the Town of Hiawatha. The objective of this research will be to provide an historic narrative outlining the community's role in the historic development of the region (similar to that provided for Old Mohrland in the Neilson and Merrill report). The information is necessary to allow OSM to justify a decision regarding the eligibility or ineligibility of the permit area as a National Register district.

The subsidence monitoring plan has been determined adequate. It should be assumed that long wall mining will result in some degree of

uniform subsidence and pillar removal following completion of room-and-pillar mining will result in surface tension cracking and a rapid lowering of the land surface. If subsidence within the underground mining areas as documented through the monitoring program appears sufficient to threaten cultural site integrity, OSM and/or the SHPO may require additional inventory of lands above underground workings, beyond that specifically required for the approval of this permit.

APPLICANT'S COMPLIANCE WITH UTAH'S PERMANENT PROGRAM

UMC 761.11 Areas Where Mining is Prohibited or Limited

Pedestrian inventory for cultural sites has not been conducted within all proposed direct impact areas (areas in which disturbance will occur). The remaining inventory requirements must be completed prior to ground surface disturbance within the permit area (see "OSM Compliance with E011593 and the National Historic Preservation Act").

The Town of Mohrland (42 EM 1642) has been recommended as eligible for nomination to the National Register of Historic Places (NRHP), and the additional pedestrian inventory (see "OSM compliance with E011593 and the National Historic Preservation Act") may result in the identification of other NRHP-eligible sites. If 42 EM 1642 or any other cultural sites are determined eligible, disturbance of the site will be prohibited until impact mitigation procedures sufficient to allow a Determination of No Adverse Effect have been completed.

UMC 783.12(b)

^ePedestrian inventory for cultural sites must be completed and approved prior to initiation of ground disturbance within the permit area (see 761.11).

UMC 784.17 Protection of Public Parks and Historic Places

See comments under 761.11.

UMC 786.19(e) Criteria for Permit Approval or Denial

See Comments under 761.11.

UMC 771.23 Permit Applications

* The applicant has provided a "Subsurface Ownership Map (Exhibit IV-2) and a table with property and subsurface ownership (Appendix II-1). Numerous discrepancies exist between the two sources. Legal descriptions listed on the table do not match the information on the map and visa versa. The applicant must provide a complete and accurate list of all coal ownership within the permit area with accurate legal descriptions and a current and accurate map of the coal ownership within and adjacent to the permit area as required by UMC 771.23(b), 782.15(a), and 783.24(a) and (b).

UMC 782.13 Identification of Interests

Exhibits IV-1 and IV-2 show different mine plan area north and east boundaries. These maps do not delineate the mining sequence as required by UMC 771.23(2). They also show an area crossed by the words "Manti-LaSal National Forest as USFC fee land. Neither the maps or the text provide addresses of land/or mineral owners. All of these discrepancies and deficiencies must be cleared up.

(3) The reviewer is referred to Appendices II-1 and II-2 for the holders of record of any leasehold interest in areas to be affected by surface operations or facilities and the holders of record of any

leasehold interest in the coal to be mined. Appendix II-1 does not explain what it is supposed to demonstrate. A subheading of Appendix II-1 is labeled "acres" and is divided into five other unexplained subdivisions. There is no explanation of whether the table applies to surface or subsurface areas. Apparently no other leaseholders besides U. S. Fuel have interest in the area, but this is not specified. Appendix II-2 does not apply to this regulation because it relates to unsuitability for mining. These problems must be resolved in order to analyze the plan.

(b) The permit application does not state whether the applicant is a corporation, partnership, single proprietorship, association or other business entity. This must be specified.

(d) The applicant lists Carpenter Town Coal and Coke Co. under 782.13(b)(3) but does not relate any permits to mine coal under that name as being held or applied for. The applicant must list any current or previous coal mining permits in the United States which Carpenter Town Coal and Coke or Sharon Steel has held since 1970.

(e) The reviewer is referred to Exhibits IV-1 and IV-2 for information on contiguous area ownership. These exhibits do not provide addresses. A block to the east of the mine plan area in T15S, R8E, Sec 35, is listed as "numerous private owners". These owners must be identified and the addresses of all owners of contiguous land and coal must be provided.

UMC 782.15 Right of Entry and Operation Information

(a) The applicant refers the reader to a table (Appendix II-1) for information on its right of entry documents. A section of the table is labeled "Area" with the numbers 1-5 below that. The land within the permit area is apparently separated into these five divisions. There is no explanation, however, of what that section of the table represents. The appendix table does not list lessors. The applicant must

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clarify what is involved in the table before a complete evaluation can be made of its right to enter and mine. The applicant must provide a list of lessors in order to establish its right of entry.

UMC 782.16 Relationship to Areas Designated Unsuitable for Mining

(b) The applicant must state whether or not there is an administrative proceeding to designate the area unsuitable for mining.

c) The applicant must state whether or not surface operations or facilities will be located within 300 feet of an occupied dwelling. If a dwelling will be so affected, a waiver from its owner must be included.

UMC 782.17 Permit Term Information

(a) The applicant does not provide startup or termination dates, surface acres to be affected, horizontal and vertical extent of the mine workings, or life of mine. This information must be provided in order to make the necessary findings. If the proposed permit area covers the anticipated life of mine, a statement to that effect is sufficient with reference to the appropriate maps for the horizontal and vertical extents of mining. See also comments under 783.24 if the proposed permit area does not cover the anticipated life of mine, the total additional acres to be affected as well as information on the horizontal and vertical extents of mining. The applicant must provide anticipated startup dates for King portals 7 and 8 and the estimated termination dates for all of the mines being permitted.

UMC 782.18 Personal Injury and Property Damage Insurance

The company's insurance policy expired 5/31/83, although the policy says the insurance will remain in force until the completion of

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reclamation. Evidence that the policy is still in effect must be provided.

UMC 782.19 Identification of Other Licenses and Permits

The applicant does not provide addresses of the permitting agencies or identification numbers of the permits. This information must be provided.

UMC 782.21 Newspaper Advertisement and Proof of Publication

The applicant does not provide the newspaper advertisement which will be published once the application is determined to be complete (requirements for the advertisement are under UMC 786.11).

UMC 783.16 Surface Water Information

U.S. Fuel must commit to expanding their water monitoring program. The regulatory authority needs this information to show compliance with UMC 817.52 (Hydrologic Balance: Surface and Ground Water Monitoring):

1. U.S. Fuel must commit to including station ST3-A S74-A, and S76-A in their permanent monitoring program. Monitoring at these stations must be performed in accordance with the initial comprehensive schedule (Table VII-7) until the regulatory authority approves use of the routine schedule (Table VII-3).
2. The U.S. Forest Service has asked (letter of July 23, 1981) that alkalinity be added to the sampling schedule OSM supports this request. U.S. Fuel should commit to adding alkalinity to both their routine and their initial comprehensive schedule.

UMC 783.17 Alternate Water Supply Information

* - The ACR (November 8, 1982) requested a description (including quality and quantity) of water available as an alternate source in the event that a water supply is affected by the mine. The applicant responded that mine water from the Mohrland Portal in Cedar Creek Canyon could be used as an alternate source of water. U. S. Fuel Company has a water right to use .446 cfs (U.W.C CERT. #4148) from the Mohrland Portal mine water discharge (Table VII-2).

* U.S. Fuel must provide the comparison of the amount of water available from this water right compared to the revised assessment of probable hydrologic consequences (with respect to UMC 784.14) in order to assure that all potential water losses can be replaced.

* U.S. Fuel must consider all ground water intercepted in the mine that would otherwise be consumed by other water users. In addition, the consumptive use of water during the mining operation including evaporation must be considered part of the water right not available for replacement to other affected users.

UMC 783.15 Ground Water Information

* The applicant has described the ground water system in the vicinity of the Hiawatha Complex-King Mines in very general terms with very little data to substantiate the narrative. To show compliance with 783.15 the applicant must provide the following information:

- * 1. A discussion of all well logs in the area showing the continuity or discontinuity of potential water bearing zones (i.e. sandstone strata), and cross sections with drill hole data points to substantiate the interpretation of potential water bearing zones.
- * 2. A spring inventory that shows all springs within 2 miles of the adjacent area of the King mines and a discussion of what strata or geologic structures the springs are associated

with. The applicant must also provide a discussion of the use being made of the springs, including wildlife utilization.

- * 3. A more thorough discussion of the ground water flow system associated with the Bear Canyon Fault. This fault zone most likely will account for the majority of water that will be encountered in the King Mines. What areas recharge this fault system and what discharge zones (i.e. springs) are specifically connected to the Fault zone? What are the hydraulic characteristics of the faulted zone (i.e. transmissivity and storage) that would define how far mining impacts may reach.

UMC 783.19 Vegetation

* The application contains several maps (ACR Responses, Chapter IX) that lack basic map features. Specifically, Figures 2 through 6 lack coordinates (i.e. township and range), and map location references. Figure 1's scale (1:24,000) is incorrect. The actual measured scale as depicted in Figure 1 is 1:50,000 which is unacceptable according to UMC 771.23(e). Figure 2 is missing a scale and north indicator. Figure 3 has Reference Area 3 placed outside the limits of the map. Figure 4 is lacking a north indicator, and Figures 5 and 6 are at different scales than Figures 3 and 4. The applicant should correct Figures 1 through 6 and indicate the permit area boundaries as required by UMC 771.23(e) and 783.24.

The ACR response (page III-31D) states that interim revegetation has been accomplished at King VI coal loading facility, King IV ventilation tunnel and various other sites. The applicant must provide a summary of data collected from these areas to demonstrate that reclamation can be feasibly accomplished under the proposed reclamation plan contained in the application (UMC 786.19(b)).

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UMC 783.24 Maps: General Requirements

* The permit application includes only two maps (Vol. I, Exhibits III-3 and 4A) and these show only a small portion of the proposed permit area in relation to the facilities and resources. The U.S. Fuels' permit area boundaries that are proposed in this application should be well defined and indicated on each of the following Exhibits:

Original Application

III-1A through 2
III-4B through IV-2
VI-1 through 5
VII-1 and 2
VIII-1 through 3B
IX-1 through 5
XIII-1A through 1E
XIV-1 through 5

ACR Responses

III-5A, 5B, 6A, 6B, 12A, 13, 14, 15
IV-3, 3A, 4
VII-1, 19, 20
XIII-2A through 4

Also, wildlife resource maps (Exhibits X-1 through X-3) are of too small a scale. Wildlife resource maps must clearly show specific wildlife information relative to the mine plan area at a scale of at least 1:24,000 as required by UMC 771.23(e).

UMC 784.11 Operational Plan: General Requirements

* Maps No. 1, No. 2, and No. 3 furnished for the non-coal waste storage and disposal areas must be replaced with adequate copies bearing title blocks, scale of map, direction arrow, and must be presented in a clear, neat, and legible copy.

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* Additional information is required in the permit application to evaluate the operation plans for King mines 7 and 8. The applicant must provide a narrative that describes the proposed facilities, construction activities, use, maintenance and removal of the following for King mines 7 and 8 as required by UMC 784.11.

1. Overburden and topsoil handling and storage areas and structures;
2. Coal removal, hauling, storage, cleaning, and transportation areas and structures; and
3. Mine facilities (i.e., slopes, bathhouse, warehouse, etc.).

UMC 784.12 Operation and Plan: Existing Structures

* The application fails to provide cross-sectional drawings for the entire length of the existing overland conveyor system at King mine VI. The application must provide cross-sectional drawings to supplement Drawing EFC-133,G-21 for the existing overland conveyor system at King mine VI. These cross-sections must show the clearance between the ground level and the lowest portion of the structure as built (UMC 784.12(a)).

UMC 784.13(a) and Reclamation Plan

* The application fails to provide specific reclamation plans for the four locations to be used for substitute topsoil. The applicant must provide detailed reclamation plans that provide: 1) a detailed timetable for completion of each step in the reclamation plan; 2) a detailed estimate of costs for reclamation (as required by UMC 800-808); a plan for backfilling, soil stabilization, compaction, and grading with appropriate contour map and cross-sections (as required by UMC 817.100-817.106); 3) a plan for removal, storage and distribution of topsoil (as required by UMC 817.21-817.25); 4) a plan for revegeta-

tion (as required by UMC 784.13(b)(5) and 817.111-817.116); and 5) a description of steps to comply with Clean Air Act, Clean Water Act, and other applicable air and water quality laws, regulations, and standards.

UMC 784.13 (b)(1) and (b)(2) Reclamation Plan

(b)(1) The applicant fails to provide a detailed timetable showing the time requirements for completion of each major step in the reclamation plan. The applicant must provide a detailed timetable showing the completion of each major step in the reclamation plan including but not limited to the following operations. As required by UMC 784.13 (b)(1) and (5)(i):

1. Equipment and facility removal.
2. Portal sealing.
3. Backfilling and grading.
4. Topsoil operations
 - a. vegetation removal from the proposed topsoil borrow site
 - b. topsoil removal and distribution over backfilled and graded spoil material
 - c. topsoil redistribution over topsoil borrow site
 - d. soil nutrient tests
5. Revegetation operations
 - a. topsoil preparation (i.e., scarification)
 - b. seeding and planting
 - c. mulching
 - d. fertilization

(b)(2) The applicant has submitted an ACR response that provides detailed cost estimates for reclaiming the mining operations in the three forks of the Miller Creek, Mohrland area and the processing plant

and loadout facilities in Hiawatha. However, the proposed topsoil borrow sites have not been included in the reclamation cost estimates. Operating the topsoil borrow site is considered a part of the reclamation plan. The applicant must provide the same level of detailed cost estimates for operating and reclaiming the topsoil borrow sites as required by 784.13(b)(2).

UMC 784.13(b)(4) Reclamation Plan: Topsoil

* The application provides a general topsoil handling plan for what is assumed to be the entire Hiawatha Complex. The only specific topsoil handling description is found in a July, 1982 report located in the back of Chapter VIII of the ACR responses. The applicant must provide specific topsoil handling plans for King 4 & 5, King 7 & 8, the preparation plant, and the substitute topsoil source sites. These plans must provide the depths, sources, volumes of substitute material and stockpiled topsoil volumes for reclamation of facilities, and specific methods to prevent excess compaction and reduction of erosion to determine feasibility of reclamation as required by UMC 786.19.

UMC 784.13 (b)(3) Reclamation Plan: General Requirements

* Map Exhibits F III-11 through F III-15 show the outlines of the areas disturbed by filling, excavating and topsoil placement for reclamation of the mine entrance sites. It is not readily determinable whether the material available on the sites is enough to satisfy the fill requirements. If it is not, then additional material must be borrowed from somewhere. Conversely, if excess material must be wasted, then additional spoil areas must be developed. In order to determine the case with reasonable accuracy, finished contours should be shown on the maps, and additional cross-sections plotted. From these sections, a reasonable calculation of fill/waste balance may be made. It is also necessary for the applicant to demonstrate through

calculation of storm runoff that the sectional area of the proposed ditch is adequate for the anticipated storm water flow.

To resolve those questions, the applicant must provide contour maps of the mine portal sites together with additional post-mining contours showing the conditions intended upon completion of reclamation work. Also, it is necessary for the applicant to furnish cross-sections, volume/balance calculations, and storm water run-off/capacity calculations of the proposed stream restoration. The submittals shall be in compliance with the requirements of UMC 784.13-784.25, and UMC 783.24.

UMC 784.13(b)(5) Revegetation

* The application does not clearly and concisely state which of the Division of Wildlife Resources' recommended seed mixtures (Volume III, Chapter X, Appendix B) will be used for final reclamation. Also, the application does not provide planting techniques (i.e. spacing and arrangement) or type of stock for planting shrubs and tree species as required by UMC 784.13(b)(5)(iii) and 817.117(c)(2). The application does not specify the seeding rate as required by 784.13(b)(5)(ii). Tables 1 through 12 referenced in the ACR response (page III-31B) provide a range in total rates based on the severity of disturbance. The applicant must commit to specific seeding rates to be used in final revegetation as required by UMC 784.13(b)(5)(ii).

* The ACR response (page III-31D) states that the applicant does not intend to reclaim previously disturbed areas, currently used or proposed for use during this permit, to a vegetative cover at least equal in extent of cover to the natural vegetation of the surrounding area as required by UMC 817.111(b)(3). The applicant must achieve the standards for successful revegetation as required by UMC 817.116 or 817.117 for all areas proposal for use by surface mining activities under this permit application.

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UMC 784.14 Reclamation Plan: Protection of Hydrologic Balance

The ACR (section UMC 783.24(g)) requested a map describing the water rights for surface and ground water in adjacent areas within a minimal two mile radius of the permit boundary. U. S. Fuel responded by locating some of their water rights on Exhibit VII-1. A review of the water rights in the area show over 35 springs with water rights (mostly owned by the U. S. Forest Service) with a two mile radius of the permit boundary. Six of these springs are within the permit boundary.

* U. S. Fuel must document these water rights. Documentation should include a table listing the water use claim numbers, owner, source (including the geologic formation from which the spring issues), flow, purpose (e.g. stockwatering), and period of use. U. S. Fuel must locate these springs and all of their water rights on a map as required by UMC 784.14.

The mine permit application and the response to the apparent completeness review for the Hiawatha Complex-King Mine mentions that significant quantities of water have been and will continue to be encountered in the mine from the Bear Fault. In addition, the discussion of mine subsidence (ACR Responses Chapter VII-19) indicate that surface and ground water resources could be affected by the mine. The discussion of probable hydrologic effects with respect to the previously mentioned potential impacts is very general. For example, regarding the effects of mine subsidence, the following statements are made, "Fractures resulting from subsidence as well as natural fractures encountered in mining could contribute to changes in existing water patterns. Springs, seeps, and stream flows could possibly be affected and changes in drainage patterns could result...The effects of past mining on water resources is not known, except that significant flows have resulted from contact with major fractures such as the Bear Canyon Fault. Large areas of the King 1 and King 2 mines were mined out from 10 to 50 years ago by room and pillar methods, yet numerous springs and seeps overlying these mines are still flowing. Whether or not they have diminished as a result of mining is unknown."

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The previous narrative is not an acceptable description of probable hydrologic consequences. The regulatory authority must know to what degree specific water resources may be affected by mining, in order to determine what the probable hydrologic consequences of mining will be. This information will be used to determine if material damage will occur to the hydrologic balance in the permit and adjacent areas. Therefore, the applicant must provide the following information.

- * 1. An assessment of the effects of mine subsidence on the geomorphic stability of the overlying landscapes. More specifically, discuss the effect of mine subsidence on stream gradients and corresponding erosional stability.
- * 2. An assessment of changes in streamflow that may result from mining at the King Mines. Changes in stream flow that must be considered include losses resulting from subsidence or from interception of ground water in the mines that otherwise would provide baseflow to streams.
- * 3. An assessment of springs or wells that may be affected by the King Mines (including additional springs located per requirements under UMC 783.15). The assessment must detail what water users (including wildlife) will be impacted by losses of springs and stream flow. Particular emphasis should be placed on the major water bearing zone observed to date, the Bear Fault Zone. The applicant must describe what springs are related to the fault zone and how their flow may be diminished by the interception of ground water flow in the mine.
- * 4. An assessment of post mining ground water quality, using existing data from waters issuing from old mine workings. Also provide a comparison of post-mining ground water quality with streams and springs that will receive the ground water discharge.
- * 5. With respect to each of the coal refuse piles and associated slurry ponds the applicant must provide the following information:

- A. Quality of water in the slurry ponds;
- B. Quality of runoff and leachate water associated with the coal refuse piles;
- C. If the analyses of waters associated with the slurry ponds and refuse piles indicate that these waters would degrade the water quality of nearby surface or ground water resources, then a water balance on water leaving the ponds and refuse piles is necessary. The water balance should consider runoff and percolation losses from the areas in question. The amount and quality of water leaving the site should be mass balanced with receiving surface or ground waters.

UMC 784.15 - Reclamation Plan: Postmining Land Use (Wildlife)

* The applicant should directly and clearly state in this section that wildlife habitat will be a primary post mining land use as is implied in the applicant's response to comments on UMC 784.21 (Chapter X, pp. X-6C, July 1983). Including this statement in the post mining land use section would reduce a substantial amount of uncertainty about the applicant's future intentions.

UMC 784.19 - Underground Development Waste

* On the presumption that underground development waste will at some time be wasted on surface areas, the permittee must furnish full data on the geotechnical investigation, design, construction, operation, maintenance and removal, as appropriate for disposal of this waste as required under UMC 784.19 of the regulations and in accordance with the ACR comments.

UMC 784.21 - Fish and Wildlife Plan

The applicant's Fish and Wildlife Plan still remains seriously deficient. The original ACR comments from OSM and from DOGM (dated Nov. 8, 1982) identified numerous significant deficiencies in the Fish and Wildlife Plan caused by: (1) an absence of detailed information on how the applicant would comply with requirements of this regulation and with UMC 817.97 and (2) a lack of commitment to comply with the recommendations of the Utah Department of Wildlife Resources (UDWR). The recent responses to the ACR (July 1983) do commit the applicant to certain protection measures, however, the applicant's responses to the ACR requiring specific descriptions of methods (Chapter X, ACR Responses Volume, July 1983 pp. X-6A to X-6C and Appendix D) still do not adequately address many of the major issues raised by the ACR. The applicant's responses still lack specific detail on implementation of the following issues:

- * 1) What mitigation measures will be used to protect wildlife and how these measures will be employed; (Chapter X, pp. X-6B, ACR Volume, July, 1983);
- * 2) How high value wildlife areas will be avoided, restored, and/or enhanced (pp. X-6B);
- * 3) How impacts to riparian areas will be reduced or avoided, and how damaged habitat will be restored (pp. X-6C);
- * 4) How road crossing impacts to aquatic communities will be minimized (pp. X-6C);
- * 5) How wildlife habitat will be restored during the reclamation phases of the mine operation (pp. X-6C);
- * 6) How much acreage of wildlife habitat will be lost or seriously degraded by mining operations (OSM ACR dated Nov. 8, 1982);
- * 7) Description of wildlife use of the springs, seeps, and streams in the permit area and a prediction of mining impacts on these wildlife habitat features (OSM ACR dated Nov. 8,

1982). An analysis that supports the applicant's conclusion that no detrimental effects will be caused should be provided.

The applicant must provide the detailed and site-specific information related to topics listed in items 1-7 above. The descriptions must include detailed explanations of: (1) what specific procedures will be used; (2) how the applicant will implement the procedures; (3) what areas of the permit area will be involved, and (4) detailed drawings of any facilities modified or constructed to accommodate wildlife. All mining areas, including the proposed portals 7 and 8 areas, must be included.

The applicant must also provide the following information:

- * 1) Documentation of the U.S. Fish and Wildlife Service raptor survey findings as described in Chapter X, pp. X-6A, July, 1983.
- * 2) Documentation from the UDWR approving a minimum height of 1 m beneath the existing King VI conveyor system (pp. X-6B, July, 1983);
- * 3) Documentation from the UDWR that the conveyor systems in Middle Fork and at Mohrland will provide a minimum of 1 m clearance for big game passage, regardless of location (pp. X-6B, July, 1983);
- * 4) Entire route alignments and general cross-sectional drawings showing minimum clearance along the total length of the proposed conveyor belt system for King mines 4 and 5, and proposed portals 7 and 8. Also, supplemental cross-sectional drawings for those portions of the existing conveyor belt at King Mine 6 not shown on drawing EFC-133, G-21 as well as cross-sectional and plan drawings for adjacent barriers such as guard rails (UMC 784.23(b)(8) and 784.12(a)).
- * 5) Mapping of wildlife resources shown in Exhibits X-1 to X-3, Vol. 3, Chapter X at a scale of 1:24,000 as required by UMC 771.23(e)(1). The mapping of critical wildlife resources provided as Exhibits X-1 to X-3 is at a scale too large to

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allow a technical evaluation of the effects of mining facilities on critical wildlife resources. UMC 771.23(e)(1) requires these features to be mapped at a scale between 1:6000 and 1:24,000.

- * 6) A commitment that wildlife habitats will be restored to premining species composition, species distribution, and frequency as emphasized by UDWR (Vol. 3, Chapter X, p. X-9). A method for implementing this commitment must be provided.
- * 7) A description of acreages and condition of critical and high-priority big game wildlife areas on the permit area as requested by the UDWR (Vol. 3, Chapter X, pp. X-12 and X-13).
- * 8) Individual estimates of the average number of elk that use each of the following key habitats within the mine permit areas as shown in Exhibit X-2, Vol. 3. Estimates can probably be obtained from the UDWR.
 - . Critical elk winter range
 - . High-priority elk winter range
 - . High-priority elk summer range
- * 9) Individual estimates of the average number of mule deer that use each of the following key habitats within the mine permit area as shown in Exhibit X-1, Vol. 3. Estimates can probably be obtained from the UDWR.
 - . Critical deer winter range
 - . High-priority deer summer range.

UMC 784.22 - Diversions

U.S. Fuel has been previously asked for a design of the exiting trash racks for the stream diversion under the portal at King No. 4 and 5. U.S. Fuel must provide this information.

The reclamation plan for the diversion (p. VII - 15B) lacks sufficient detail. U.S. Fuel should demonstrate that the restored channel will safely convey the runoff resulting from 100-year, 24-hour

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precipitation event (including the channel, bank, and floodplain). U.S. Fuel should also demonstrate that the channel gradient will be stable. If channel stabilizing material will be used (e.g., rip rap), then U.S. Fuel should give the size and gradation of the material. A reclamation plan describing the seed and shrub mixture and soil stabilizing practices should also be presented with the goal of restoring natural riparian vegetation on the banks of the stream.

UMC 784.23 - Operation Plan: Maps and Plans

* (b) U.S. Fuel has failed to provide maps, plans, and cross sections for King mines 7 and 8 that show all of the proposed surface facilities. Exhibits III-5A and III-5B must be revised to comply with UMC 784.23 and include at a minimum the following:

- 1) Buildings and facilities to be used;
- 2) Coal storage, processing and loading areas;
- 3) Topsoil, spoil, coal waste, underground development waste, and noncoal storage areas;
- 4) Facilities to be used to protect and enhance fish and wild-life related values;
- 5) Explosive storage and handling facilities; and
- 6) Location of each facility that will remain as a permanent feature, after completion of underground.

* (b)(6) The conveyance devices for the water storage facilities in the King VI area (Exhibit III-4a) and the Mohrland area (Exhibit III-5b) are not clearly described on these maps. Legends for all exhibits are essential. Exhibits III-4a and III-5b must be redrawn to indicate the water conveyance from the King VI mine and the Mohrland area to the storage facilities near the town of Hiawatha.

* (b)(7) U.S. Fuel has failed to provide a map indicating the disposal of coal processing waste in relation to the proposed permit area. Each source of waste and each waste disposal facility relating

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to coal processing must be shown on a map indicating the proposed permit area.

* (b)(13) The applicant must provide maps and plans for the location of each facility that will remain on the permit area as a permanent feature.

785.19 - Alluvial Valley Floors

* The ACR (November 8, 1982) requested information regarding Miller Creek and Cedar Creek and their potential to be alluvial valley floors (AVFs). The applicant responded in the ACR Response (July, 1983) that artificial flood irrigation practices are practiced on both valley floors approximately four miles below the mine. Clearly the lower valleys are AVFs. The applicant did not define the limit of this AVF study as the "adjacent area", but rather used a two mile limit around the Hiawatha mine. Within the two mile limit on Miller Creek and Cedar Creek there are no recent irrigation practices; however, water from a small pond on Miller Creek had been pumped up onto higher terraces in the past. The presence of historic irrigation (i.e., pumping from stream level) suggests that sufficient water is also available for flood irrigation activities in the upper part of the valley. The applicant considers the Miller Creek and Cedar Creek valleys within two miles of the mine to be too small, irregular, and to have unsuitable slopes for irrigation development. In addition, subirrigated areas were interpreted (i.e., where meadow grasses and rushes were present) to be present only along the active flood plain and stream banks incised below the valley floor. The following information is requested in order to clarify issues concerning AVFs:

1. The lower valleys of Miller Creek and Cedar Creek have active flood irrigation operations. By comparison what makes the upper valleys within the two mile radius of the mine unsuitable for irrigation activities? Provide specific information

that would preclude these areas from being irrigated (i.e., less than 10 acres in size, less than 50 feet wide, insufficient water supply, etc.);

2. Regarding the floodplain areas that are considered subirrigated to agriculturally useful species of plants, provide the width and size of these areas.

UMC 817.55 - Hydrologic Balance: Discharge of Water Into an Underground Mine

* U. S. Fuel states (p VII-15B) that water from the left fork of the North Fork of Miller Creek is diverted from the creek to an underground storage reservoir in the old Hiawatha #2 mine. In order for us to demonstrate compliance with section UMC 817.55, U. S. Fuel must provide the following information: 1) rates and quality of water at the diversion; and 2) approval of the Mine Safety and Health Administration for the diversion of water into the old Hiawatha #2 mine.

UMC 817.57 Hydrologic Balance: Stream Buffer Zones

The results of the applicant's aquatic survey of upper Cedar Creek (Chapter X, Appendix D, Responses to ACR Comments, July 1983) indicate that this regulation will apply to future road construction and other mining activities associated with portals 7 and 8.

The current mine plan is deficient because it does not: (1) provide detailed road alignments and sizes that recognize the need to protect the buffer zone along Cedar Creek; and (2) provide a detailed plan for protecting and/or restoring the riparian habitat within the buffer zone as required by UMC 817.44(d)(1).

The mine plan must provide the following information:

- *1. A detailed map showing the proposed road alignment, size, and right-of-way width for portals 7 and 8 in relation to riparian habitat and the stream buffer zones.
- *2. A detailed description of how riparian habitat will be protected from road construction and/or if some riparian habitat is destroyed, how it will be restored. The description should include:
 - . List and percent composition of the replacement plant species
 - . Planting density
 - . Planting schedule
 - . Maintenance provisions
 - . Total acreage to be replaced

UMC 817.62 through 817.68 Use of Explosives

The application indicates that explosives are used in construction of surface facilities (ACR Response, page VIII-1) at the Hiawatha Complex. The application must provide blasting information required by 817.62 through 817.68 and indicate on a map the storage and handling facilities for explosives required by 784.23(b)(9).

UMC 817.97 Protection of Fish, Wildlife, and Related Environmental Values

Serious deficiencies still exist with the responses to ACR comments dated July, 1983. The major concerns focus on the lack of detailed site-specific information on how the applicant will comply

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with the commitments made in responses to UMC 784.21 (Chap. X, pp. X-6A to X-6). Most of the areas of primary concern were already identified and discussed as part of the UMC 784.21 analyses (items 1 to 7) and will not be repeated here. In addition to those requirements, the following information must be provided in accordance with this regulation.

- *1. The applicant should describe which seed mixes listed in Chapter X, Appendix B, Tables 1-12 will actually be used and where. The tables provided by UDWR offer a series of options which the applicant may select depending on site-specific characteristics and the intended habitat restoration plan. The applicant must specify which seed mixtures, seeding rates, and species compositions are proposed for the areas designated for wildlife habitat restoration. (This concern was initially identified in UDOGM ACR comments dated Nov. 8, 1982, p. 15). The areas designated for wildlife habitat restoration should also be mapped.
- *2. The applicant should describe how it will be determined that the conveyor systems do or do not create a wildlife barrier and what mitigation measures will be instituted, if the conveyor system creates a barrier (UDOGM ACR p. 15 dated Nov. 8, 1982).

UMC 817.100 Contemporaneous Reclamation

The application mentions reclaimed areas in the vicinity of the portals, specifically King VI mine. The applicant should provide a map (or maps) at a scale of 1:6,000 depicting past interim reclamation and proposed final reclamation in relation to the post mining contours. These maps (or an additional table) should relate directly to the reclamation time table and revegetation schedule requested under UMC 784.13(b) to demonstrate contemporaneous reclamation under UMC 817.100.

DRAFT

U. S. Fuel Co. has not addressed the following ACR comments of November 8, 1982:

UMC 817.93 Coal Processing Waste: Dams and Embankments: Design and Construction

* (2) The minimum safety factors are given for slurry impoundment #1. The same information must be submitted for the other impoundments.

UMC 817.99 Slides and Other Damage

A commitment is needed to agree to notifying the Division by the fastest available means and comply with any remedial measures required by the Division anytime a slide occurs which may have a potential adverse effect on public, property, health, safety or the environment.

UMC 817.101 Backfilling and Grading: General Requirements

* No specific address is made to this item other than general backfilling and grading mentioned in the reclamation plan. Please address specific areas in conjunction with UMC 817.101-106.

UMC 817.103 Backfilling and Grading: Covering Coal and Acid- and Toxic-forming Materials.

* The applicant has addressed the grading of refuse banks only in the most general terms. Provide the following information on the final grade of all areas of refuse storage: 1) depth and volume of cover; and 2) and the source of material.

Indications from research on refuse piles indicate a tendency of refuse piles at the minesite to become acidic. Have the potential

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ramifications of this tendency on the revegetation of these areas been addressed?

How will the stability of these refuse disposal areas be ensured? Provide cross-sections and relevant engineering data detailing slope stability factors.

UMC 817.150-.176 ROADS: CLASS I

The proposed Mohrland road has been submitted for one alternative. The specific plans pursuant to UMC 784.24 of the road to be constructed should be submitted in compliance with this section.

UMC 817.153-.163 Roads: Class I and III: Drainage

(c) Culverts must be sized to pass the peak flow from a 10-year, 24-hour precipitation event. Culvert size computations presented in the Vaughn Hansen report are for the 25-year, 6-hour storm; how do the two storm sizes compare? The applicant must demonstrate that the peak flow from the 25-year, 6-hour storm is equal to or greater than the peak flow generated from the 10-year, 24-hour storm. Provide computations for the 10-year, 24-hour storm.

The November 8, 1982 ACR comments must receive a response in order for a determination of completeness to be made.

Socioeconomics

Please clarify whether or not the employment numbers submitted by the U.S. Fuel in the July 1983 ACR response included the proposed 7 and 8 portals. If so, please delineate that portion of the total employment forecast that would be required to construct and operate portal areas 7 and 8.



September 19, 1983

U.S. Fuel Company
 Mr. Bob Eccli
 Hiawatha, Utah 84527

RE: Revegetation Monitoring
 King Mines
 ACT/007/011, Folder No. 2
 Carbon County, Utah

Dear Mr. Eccli:

As discussed with you on the phone this morning, the Division has re-evaluated the monitoring data that was submitted on August 16, 1983 based on what was observed in the field by Reclamation Biologist Lynn Kunzler. The revegetation showed that the total vegetation cover reported was representative of actual conditions observed by Mr. Kunzler. However, data was not adequate to establish a good baseline for tracking the success and competitiveness of individual species, or to provide justification (as per UMC 817.112) for the use of the several introduced species for final (permanent) reclamation. By supplying frequency data as discussed below, the Division would then have sufficient data to satisfy the monitoring requirements of stipulation 7-81-2.

Frequency data should be collected as follows: for each area, ten, 1/4 meter square (50 cm X 50 cm) quadrats should be placed along a transect every five to ten feet. (Distance between quadrats along the same transect should be the same.) For each quadrat, identify by the number of plants of each specie observed. Frequency is then calculated for each transect of 10 quadrats (samples) as:

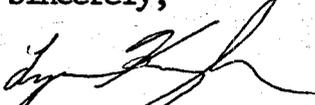
$$\begin{aligned} \text{Species frequency} &= \frac{\text{number of Individual plants of a species}}{\text{total number of plants}} \times 100. \\ \text{Sample frequency} &= \frac{\text{number of quadrats containing species N}}{10} \times 100 \end{aligned}$$

Mr. Bob Eccli
ACT/007/011
September 20, 1983
Page 2

Please submit a copy of all data sheets and a narrative describing how the data was collected. Also, collect one specimen of each species (including enough of the root to determine if the plant has rhizomes.) Arrange each plant in a folded piece of newspaper, place between two flat surfaces and apply pressure for two days. Then submit them to the Division. It may also be beneficial to take several photographs of each area.

Please submit the data and report prior to September 30, 1983. Should you have any questions, please don't hesitate to call.

Sincerely,



LYNN KLINZLER
RECLAMATION BIOLOGIST

LK/jvb
cc: Allen Klein, OSM
Mary Boucek, DOGM
Wayne Hedberg, DOGM

File
ACT/007/011
Folder No. 2
Copy to Wayne,
Mary, Lynn

UNITED STATES FUEL COMPANY

HIAWATHA, UTAH 84527

August 25, 1983

RECEIVED
AUG 29 1983

Mr. James W. Smith
Coordinator of Mined Land Development
State of Utah Natural Resources
Oil, Gas & Mining
4241 State Office Building
Salt Lake City, Utah 84114

**DIVISION OF
OIL, GAS & MINING**

JIM

SEP 02 1983

Dear Mr. Smith;

In response to Mr. Lynn Kunzler's letter of August 23, 1983 relating to revegetation monitoring at the King VI mine near Hiawatha, the following concerns and comments are submitted.

1) The wording of Mr. Kunzler's letter seems to imply a certain favoritism on the part of the Division in regard to one consultant over another. We appreciate Bio/West's consultation with the Division on our behalf, however, it is our policy to bid projects to several companies and cost is of some importance.

2) Although Ms. Boucek's letter of June 9, 1983 was based on a conversation with Bio/West, it was directed specifically to us. The letter states in part: "The operator is advised to qualitatively assess by ocular estimate, total cover by vegetation, rock, litter and bare ground to the best of your professional ability" (underlining added). We interpret this statement literally, that is, that company personnel could do the monitoring to the best of their professional ability. Not being vegetation specialists, though respecting Ms. Boucek's confidence in our judgement and integrity, we elected to have the work done by someone with more experience in this field and to be assured of satisfying her requirements.

3) Mr. Kunzler's letter states that additional data must be collected to make the monitoring report acceptable. He states that a minimum of ten quadrats per acre are required. This would surely contradict Ms. Boucek's concern for damage to newly established vegetation during this first crucial year. He also states that quadrat size should be no larger than 0.5 m². Please note that Ms. Boucek's letter waived this requirement.



4) We wonder why the simple and apparently adequate sampling process requested by Ms. Boucek and accomplished by us at considerable expense should be later criticized and complicated by stipulations and demands over and above our monitoring plan and her letter. We do not wish to sound offensive but does every employee of the Division have unlimited authority to impose stipulations at will and at any time? Does anyone review these stipulations and authoratative requests as to their severity and appropriateness?

5) We feel the required monitoring has been accomplished in accordance with the intent of Ms. Boucek's modified plan requirements and respectfully request that you re-examine these additional requests in view of their necessity to you and cost to us.

Sincerely,

Robert Eccli

Robert Eccli
Sr. Mining Engineer

RE:lj

RECEIVED
AUG 29 1983



SCOTT M. MATHESON
GOVERNOR



STATE OF UTAH
DEPARTMENT OF COMMUNITY AND
ECONOMIC DEVELOPMENT

August 16, 1983

DIVISION OF
OIL, GAS & MINING

Division of
State History
(UTAH STATE HISTORICAL SOCIETY)

MELVIN T. SMITH, DIRECTOR
300 RIO GRANDE
SALT LAKE CITY, UTAH 84101-1182
TELEPHONE 801/533-5755

ACT/007/011
#2

James W. Smith, Jr.
Coordinator of Mined
Land Development
Division of Oil, Gas & Mining
4241 State Office Building
Salt Lake City, Utah 84114

Attn: D. Wayne Hedberg

RE: Apparent Completeness Review Response, U.S. Fuel Company,
Hiawatha Complex, ACT/007/011, Carbon County

Dear Mr. Hedberg:

The Utah Preservation Office has received a copy of the apparent completeness review response from the Division of Oil, Gas & Mining, U.S. Fuel Company. After review of the material provided, our office would concur with the determination of eligibility for the Mormon Mine site and a preliminary determination of eligibility for the archeological shelter found in the project area.

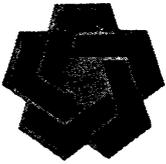
Since our office at this time has no knowledge of the effect of the actual mine plan on the sites, our office cannot comment on the proposed effect or mitigation. We would, however, point out that some preliminary determinations have been made by the contractor and that those recommendations may need to be submitted to the Office of Surface Mining.

The above is provided on request as information or assistance. We make no regulatory requirement, since that responsibility rests with the federal agency official. However, if you have questions or need additional assistance, please let us know. Contact Jim Dykman at 533-7039.

Sincerely,

Wilson G. Martin
Deputy State Historic
Preservation Officer

JLD:jrc:E409/6794c



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

August 23, 1983

REGISTERED RETURN RECEIPT REQUESTED

Mr. Robert Eccli
Sr. Mining Engineer
U. S. Fuel Co.
P. O. Box A
Hiawatha, Utah 84527

RE: Revegetation Monitoring
King VI Mine
ACT/007/011
Folders No. 2 & 4
Carbon County, Utah

Dear Mr. Eccli:

The Division is in receipt of your August 16, 1983 letter which transmitted your 1983 Revegetation Monitoring Report.

After reviewing this report, the Division finds that it does not meet the requirements of stipulation 7-81-2 of the King VI Reclamation Plan or the Division's June 9, 1983 letter for the following reasons:

1. Although the requirement for meeting statistical adequacy at the 90% confidence/10% precision level for the first year was waived (see the June 9, 1983 letter), one sample point (quadrat) per area is not acceptable. A minimum of 10 plots per area should be sampled.
2. Large quadrat size (ie. $1m^2$) creates paralax problems when visually estimating cover. U. S. Fuel was to use a $.5m^2$ quadrat as per the approved monitoring plan.
3. When estimating cover by species, total vegetative cover is not additive - ie, if there is overlap, this practice could, and often does add to over 100% cover, even when total vegetation cover is less than 40%. U. S. Fuel must supply total vegetation cover as well as cover by species.
4. Percent Composition is a "relative" term and has been incorrectly applied in your report. Percent Composition should always add to

Mr. Eccli
August 22, 1983
Page 2

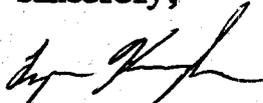
100% and indicates what percent of the total cover, (total cover may be only 10%), production, or whatever is contributed by the various species.

5. With regard to the variances to certain procedures in the approved monitoring plan for first year sampling (See the June 9, 1983 letter), the Division was of the understanding that U. S. Fuel had contracted with Bio-West Inc. to perform the work. Bio-West had made several contacts with the Division regarding the sampling procedures. The June 9, 1983 letter was in response to what they had planned. EIS made no contact with the Division that I can document and from the submitted report it appears that they did not understand what was to be done.
6. Of a minor note, several species names were misspelled - causing some confusion as to what species were actually observed. Also several introduced wheatgrasses were on the seed mix, yet the monitoring report has lumped them all together (ie, Agropyron spp.) If U. S. Fuel intends to use the monitoring data as justification for these (or any other) introduced species, the data must be provided for each species.

In conclusion, it is necessary for U. S. Fuel to collect additional data to make the monitoring report acceptable. Please resample the various areas prior to September 9, 1983 and submit a revised report prior to September 30, 1983. A minimum of ten quadrats per area should be used. Quadrat size should be consistent on each area but must be no larger than $.5m^2$ or smaller than 20cm X 50cm in size. Species observed in each area should be reported even though they may not be observed in the various quadrats. Cover by species (including overlap) as well as total cover of vegetation (excluding overlap), litter, rock and bare ground should be reported. Data for individual species should be reported by genus and species name and not grouped together as a type (ie, Agropyron spp.)

Please have your consultant contact me prior to field work to help ensure an acceptable report. Should you have any questions, please don't hesitate to call.

Sincerely,



LYNN KURZER
RECLAMATION BIOLOGIST

LK/jvb

cc: Allen Klein, OSM
Mary Boucek, DOGM
David Lof, DOGM

UNITED STATES FUEL COMPANY

HIAWATHA, UTAH 84527

August 16, 1983

RECEIVED

AUG 19 1983

**DIVISION OF
OIL GAS & MINING**

Mary M. Boucek
Reclamation Biologist
State of Utah Natural Resources
Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

Dear Ms. Boucek;

In connection with Stipulation 7-81-2 of our Reclamation Plan for the King VI mine area and your letter of June 9, 1983, please find enclosed, a vegetation monitoring report for the 1983 season.

Sincerely,

Robert Eccli

Robert Eccli
Sr. Mining Engineer

RE:lj



OCULAR ESTIMATES OF VEGETATIVE COVER BY SPECIES ON:

U.S FUELS KING MINE VI

VEGETATIVE TEST PLOTS

SCOPE:

On August 7, 1983, Mel Coonrod, Larry Germain, and Paige Waldvogel of E.I.S. and Jean Semborski of U.S Fuel, conducted a randomized square meter ocular estimate of cover on a number of test plots. The purpose was to determine first year successes of 4 different reclamation procedures which were implemented in cooperation with Bio-West and B.&R. Reclamation during October of 1982.

METHODOLOGY:

As each test area was approached, a random number between 1 and 10 was selected then paced off into the plot. At the point that the individuals foot struck the ground on the pre-selected number, a square meter was measured out. Within this meter, each individual in the group made an ocular estimate of total vegetative cover, bare ground, rock, and litter. Each individual indicated his or her estimates, justifications, reasoning, etc. With this dialogue, a consensus was reached for each variable. A species list was determined and cover by species was similarly determined.

Seven different plots could be determined on the ground and the procedure was duplicated. (Note attached map for each location). The results of each sample are attached herein:

August 7, 1983

U.S. Fuel - King VI Mine

Lambs Traylor - Straw mulch, nylon netting (treatment #3)

<u>Scientific Name</u>	<u>Common Name</u>	<u>Percent Composition</u>
Avena falva	oat	5
* Hordeum vulgane	barley	10
* Agropyron intermedium & other species	wheatgrass	15
** Bromus tectorum	japanese brome	2
Kochia americana	kochia	1
* Melilotus officinalis	yellow sweet clover	<1
Chenopodium album	lambsquarter	1
Trayopogon dubius	salsify	<1
Salsola kali	russian thistle	<u>1</u>
		35%
Bareground	15%	
Rock	2%	
Litter	48%	

Lambs Traylor - Topsoil stockpile, wood fiber only (treatment #4)

* Agropyron spp.	wheatgrass	1
** Dactylis glomerata	orchard grass	1
Salsola kali	russian thistle	30
Kochia americana	kochia	5
Cleome serrulata	bee plant	10
Descurainia pinnata	tansy mustard	7
Chenopodium album	lambsquarter	3
Helianthus spp.	sunflower	1
Chenopodiaiea spp. (annuals)		<u>2</u>
		60%
Bareground	30%	
Rock	5%	
Litter	5%	

* denotes having been included in the seed mixture

** denotes having been historically in previous seedings

Sediment Pond - Strawmulch, nylon netting (treatment #3)

* <i>Hordium vulgane</i>	barley	10
<i>Avena falva</i>	wildoat	<1
* <i>Agropyron</i> spp.	wheatgrass	<1
<i>Kochia scoparia</i>	kochia	6
<i>Descurainia pinnata</i>	tanseymustard	<1
<i>Cleome serrulata</i>	bee plant	2
<i>Helianthus</i> spp.	sunflower	2
<i>Salsola kali</i>	russian thistle	8
<i>Chenopodiaieae</i> spp.		<u>2</u>
Bare ground	25%	30%
Rock	10%	
Litter	35% (straw)	

Sediment Pond - Wood fiber and netting (treatment #4)

* <i>Hordeum vulgare</i>	barley	4
<i>Avena falva</i>	oats	<1
** <i>Dactylis glomerata</i>	orchard grass	2
* <i>Agropyron</i> spp.	wheatgrass	2
<i>Salsola kali</i>	russian thistle	2
* <i>Melilotus officinalis</i>	yellow sweet clover	<1
<i>Helianthus</i> spp.	sunflower	2
<i>Chenopodium album</i>	lambsquarter	4
<i>Rosa woodsii</i>	woods rose	<1
<i>Prunus virginiana</i>	chokecherry	<u>2</u>
		18%
Bare ground	50%	
Rock	30%	
Litter	2%	

Conveyor - Wood fiber & nylon netting (treatment #1)

* Agropyron intermedium	intermediate wheatgrass	}	all equaled only 2% cover
** Phleum pratense	timothy		
Oryzopsis hymenoides	indian rice grass		
* Agropyron spp.	wheatgrass - species		
Helianthus spp.	sunflower		
Berberis repins	oregon grape		
Salsola kali	russian thistle		
Bare ground	49%		
Rock	49%		

Conveyor - Straw & wood fiber, nylon netting (treatment #2)

Avena falva	oat	1
* Hordeum vulgare	barley	3
** Bromus inermis	smooth brome	2
** Phleum pratense	timothy	5
** Dactylis glomerata	orchard grass	5
Bromus tectorum	cheatgrass	< 1
* Agropyron spp.	wheatgrass	5
Kochia scoparia	kochia	2
Descurainia pinnata	tansey mustard	< 1
Helianthus spp.	sunflower	1
Chenopodium spp.		< 1
* Melilotus officinalis	sweet yellow clover	1
Artemisia ludoviciana		< 1
Oenothera sp	primrose	< 1
		<u>25%</u>
Bare ground	25%	
Rock	25%	
Litter	25%	

Conveyor/Stacker finger - Strawmulch & nylon netting (treatment #3)
 Second growing season

* Agropyron intermedium	intermediate wheatgrass	12
** Bromus inermis	smooth brome	2
** Phleum pratense	timothy	1
Oryzopsis hymenoides	indian rice grass	1
** Dactylis glomerata	orchard grass	5
Bromus tectorum	cheatgrass	1
** * Poa pratensis	kentucky bluegrass	1
* Hedysarum boreale	northern sweetvetch	<1
Chemopodium spp.		2
Berberis repens	oregon grape	<1
Aphaeralcea coccinea	scarlet globemallow	<1
		<u>25%</u>
Bare ground	40%	
Rock	10%	
Litter	25%	

Conveyor belt line - 2nd growing season - hand broadcasted at that time

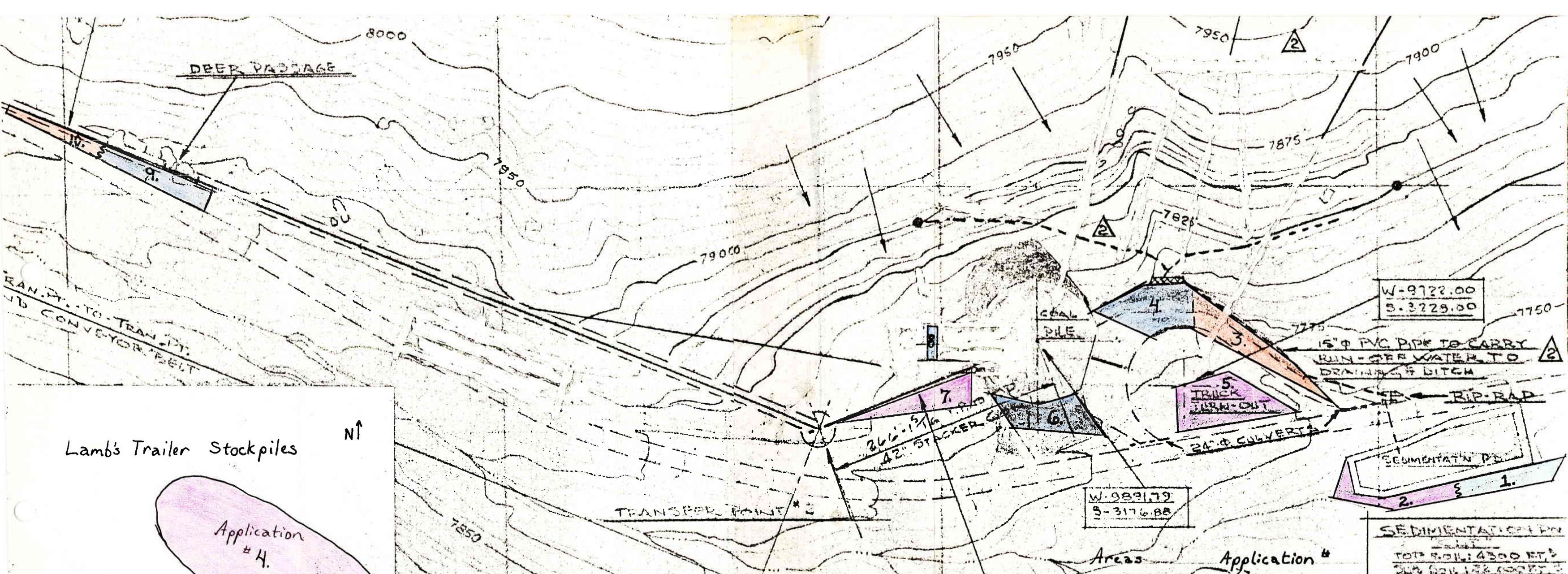
Plants growing in this area & appearing to be doing very well:

Oryzopsis hymenoides	indian rice grass
Agropyron elongatum	tall wheatgrass
** Agropyron intermedium	intermediate wheatgrass
** Dactylis glomerata	orchard grass
** Hedysorum spp.	sweetvetch
Salsola kali	russian thistle
** Medicago sativa	alfalfa
Pinus ponderosa seedling	ponderosa pine

CONCLUSIONS:

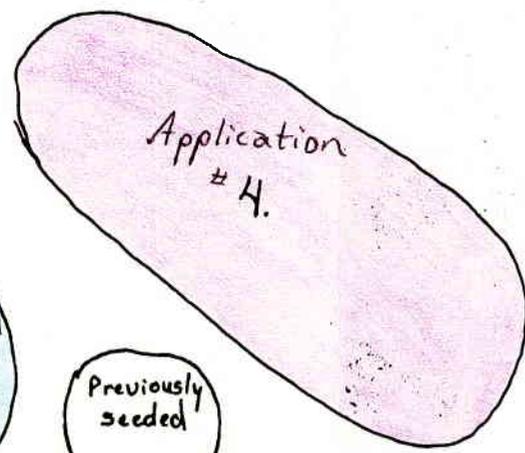
Considering the severity of the sites, and the fact that the results are first year estimates, I feel that all methods employed have yielded excellent results. It would appear that application #3 (strawmulch and tackifyer overlaid with nylon netting), produced the best results based on vegetative cover of desired species; Application #2 (straw mulch, tackifyer, and netting, oversprayed with wood fiber and tackifyer), produced next best results with little or no difference between applications #1 and #4.

However, I do not feel that any valid conclusions can be drawn at this point. I am quite confident that third year results will be much more conclusive, and that any formal evaluation of results based on any first year results is highly subjective and speculative at best.



Lamb's Trailer Stockpiles

N↑



- 1. Nylon netting oversprayed with wood fiber mulch & chemical tackifier.
- 2. Straw mulch & chemical tackifier overlaid with nylon netting oversprayed with wood fiber mulch & chemical tackifier.
- 3. Straw mulch & chemical tackifier overlaid with nylon netting
- 4. Wood fiber mulch with chemical tackifier

Areas	Application #
1.	1.
2.	4.
3.	1.
4.	2.
5.	4.
6.	2.
7.	4.
8.	2.
9.	2.
10.	1.

W-9891.72
S-3176.88

W-9722.00
S-3229.00

SEDIMENTATION POND
 TOP SOIL: 4500 FT.
 SUB SOIL: 122,000 FT.
 TRIP SOIL: 1800 FT.
 TOT. D. PILE: 2300 FT.
 SUB SOIL: 14,000 FT.
 TO YARD: 18,000 FT.

N↑



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

August 2, 1983

Ms. Jean Semborski
U. S. Fuel Company
Hiawatha, Utah 84527

RE: Certificate of Liability Insurance
Hiawatha Complex
ACT/007/011, Folder No. 2
Carbon County, Utah

Dear Ms. Semborski:

Please find enclosed a form which involves the certification of liability insurance for your operation. This form certifies that the applicant has an adequate public liability insurance policy in force for its coal mining activities and that it shall be maintained in full force during the life of the permit, including any renewals and completion of all reclamation operations.

Please note that if there are substantive changes, including cancellation, failure to renew or other material changes, the Division must be notified at least 30 days prior to the effective date of change.

In order to update our files, please return the completed form by August 31, 1983. Your cooperation is appreciated. Thank you.

Respectfully,

A handwritten signature in cursive script, appearing to read "James W. Smith, Jr.".

JAMES W. SMITH, JR.
COORDINATOR OF MINED
LAND DEVELOPMENT

JWS/PGL:btb

Enclosure



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

July 18, 1983

Mr. Douglas F. Day, Director
Division of Wildlife Resources
1596 West North Temple
Salt Lake City, Utah 84116

ATTENTION: Southeastern Regional Office

RE: Apparent Completeness
Review Response
U. S. Fuel Company
Hiawatha Complex
ACT/007/011
Folder No. 2
Carbon County, Utah

Dear Mr. Day:

Enclosed please find one copy of U. S. Fuel Company's response to the Division's initial Apparent Completeness Review (ACR) for the Mining and Reclamation Plan (MRP) referenced above. This ACR Response is forwarded for review by the Division of Wildlife Resources (DWR) in accordance with our Divisions' Memorandum of Understanding (MOU).

As you may recall, the MOU between our Divisions' calls for the following:

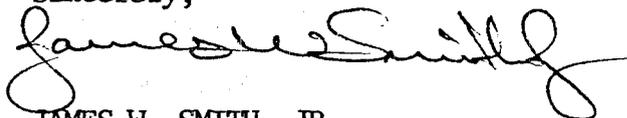
B. Mine Plan Review

1. Upon submission of a mining and reclamation plan to DOGM, the DOGM will notify the DWR in writing of the need for consultation in evaluation of the plan with respect to fish and wildlife resources as required by MC 786.17(a)(2). DOGM will provide a copy of such plan to DWR when available.
2. The DWR will respond to DOGM in writing within 60 days of receipt of the plan with an evaluation of the adequacy or inadequacy of the fish and wildlife plan submitted by the operator to avoid, ameliorate or mitigate impacts of the proposed operation on wildlife resources.

Mr. Douglas F. Day Director
ACT/007/011
July 18, 1983
Page Two

The Division appreciates your cooperation and asks that all comments and communications, regarding the mining and reclamation plan review, be channeled through this office to allow a single set of stipulations and requirements to be sent to the operator. If you have any questions, please contact myself or D. Wayne Hedberg of my staff.

Sincerely,



JAMES W. SMITH, JR.
COORDINATOR OF MINED
LAND DEVELOPMENT

JWS/DWH:btb

Enclosure: MRP, copy 3 of 6



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

July 18, 1983

Mr. Dee C. Hansen
State Engineer
Division of Water Rights
1636 West North Temple
Salt Lake City, Utah 84116

RE: Apparent Completeness
Review Response
U. S. Fuel Company
Hiawatha Complex
ACT/007/011
Folder No. 2
Carbon County, Utah

Dear Mr. Hansen:

Enclosed please find one copy of U. S. Fuel Company's response to the Division's initial Apparent Completeness Review (ACR) for the Mining and Reclamation Plan (MRP) referenced above. This ACR Response is being forwarded for review by the Dam Safety and Water Rights sections of your office in accordance with our Divisions' Memorandum of Understanding (MOU).

As you will recall, the MOU between our Divisions' calls for the following for the Dam Safety Section:

B. Mine Plan Review:

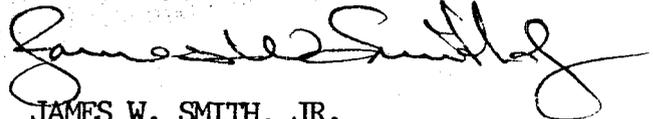
1. Upon submission of a mining and reclamation plan to DOGM, the DOGM will forward a copy of the mining and reclamation plan to Dam Safety. If information additional to that contained in the operator's submission is required, Dam Safety is responsible for contacting the operator to obtain such information. Copies of such requests and also copies of the company's submittal in response to the request will be submitted to DOGM.
2. Within 30 days of receipt of the mining and reclamation plan, Dam Safety shall contact DOGM with their final response to the agency's proposed action on the operator's application.

Mr. Dee C. Hansen
ACT/007/011
July 18, 1983
Page Two

3. If Dam Safety proposes to reject the plan for failure to meet water retention safety standards, the DOGM will call a conference between the state and the operator at the earliest possible date.

The Division appreciates your cooperation and asks that all comments and communications, regarding the mining and reclamation plan review, be channeled through this office to allow a single set of stipulations and requirements to be sent to the operator. If you have any questions, please contact myself or D. Wayne Hedberg of my staff.

Sincerely,



JAMES W. SMITH, JR.
COORDINATOR OF MINED
LAND DEVELOPMENT

JWS/DWH:btb

Enclosures: MRP, copy 5 of 6



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

July 18, 1983

Mr. Kenneth Alkema
Department of Health
Division of Environmental Health
P. O. Box 2500
Salt Lake City, Utah 84101

RE: Apparent Completeness
Review Response
U. S. Fuel Company
Hiawatha Complex
ACT/007/011
Folder No. 2
Carbon County, Utah

Dear Mr. Alkema:

Enclosed please find one copy of U. S. Fuel Company's response to the Division's initial Apparent Completeness Review (ACR) for the above referenced Mining and Reclamation Plan (MRP). This ACR Response is being forwarded for review by the Division of Environmental Health of your office.

As you will recall, the MOU between our Divisions' calls for the following:

B. Mine Plan Review.

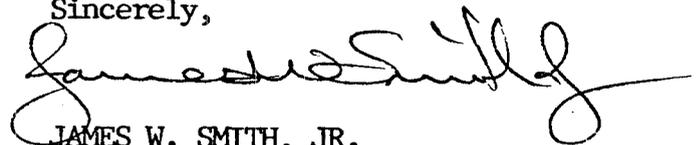
1. Upon submission of a mining and reclamation plan to DOGM, the DOGM, shall, in consultation with DOH, review the operator's list of licenses, permits or approvals to determine whether or not approvals from DOH have been issued.
2. If any permits or approvals from the DOH have not been issued, the DOGM will submit to the DOH those parts of the permit application containing matters within the DOH's jurisdiction or interest for review and response and inform the operator in writing that he must contact DOH for the appropriate permits and approvals.
3. If additional information is required by DOH for any permit or approval, the DOH shall contact the operator for such information. Copies of any such requests and the operator's response to such request shall be forwarded by DOH to DOGM.

Mr. Kenneth Alkema
ACT/007/011
July 18, 1983
Page Two

4. Within two weeks of receipt by DOGM of the mining operator's submission and any additional information requested, each DOH bureau shall contact the DOGM with preliminary written notification of the status of any outstanding permits or approvals. If DOH determines to reject the operator's permit application or has any major problems with the operator's mine plan, the DOGM may convene a conference between the state agencies and the operator as soon as possible.
5. The DOH will make every effort to have their response to the mine plan and any other DOH permits and approvals finally completed within 60 days of the DOH receipt for the operator's complete application for DOH permits and approvals.

The Division appreciates your cooperation and asks that all comments and communications, regarding the mining and reclamation plan review, be channeled through this office to allow a single set of stipulations and requirements to be sent to the operator. If you have any questions, please contact myself or D. Wayne Hedberg of my staff.

Sincerely,



JAMES W. SMITH, JR.
COORDINATOR OF MINED
LAND DEVELOPMENT

JWS/DWH:btb

Enclosure: MRP, copy 6 of 6



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

July 18, 1983

Mr. Melvin T. Smith
State Historic Preservation Officer
Division of State History
307 West 200 South, Suite 100
Salt Lake City, Utah 84101

RE: Apparent Completeness
Review Response
U. S. Fuel Company
Hiawatha Complex
ACT/007/011
Folder No. 2
Carbon County, Utah

Dear Mr. Smith:

Enclosed please find a copy of U. S. Fuel Company's response to the Division's initial Apparent Completeness Review (ACR) for the cultural and historic portions of the Mining and Reclamation Plan (MRP) referenced above. This ACR Response is forwarded for review by the Division of State History in accordance with our Memorandum of Understanding (MOU).

As you may recall, the MOU between our Divisions' calls for the following:

B. Mining Plan:

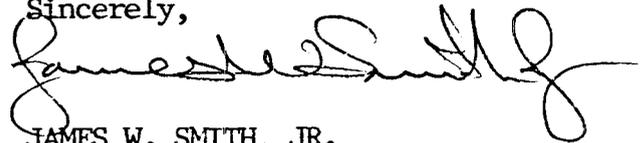
1. Upon submission of a coal mining and reclamation plan to the Division of Oil, Gas & Mining, the Division of Oil, Gas & Mining will notify the SHPO in writing of the need for consultation and evaluation of the plan with respect to historic and cultural resources. The Division of Oil, Gas & Mining will provide a copy of the relevant portion of the plan to the SHPO.
2. The SHPO will respond to the Division of Oil, Gas & Mining in writing within 30 days of receipt of the notification. The SHPO will include in such response an evaluation of the adequacy or inadequacy of the plan submitted by the operator to avoid, ameliorate or mitigate impacts of the proposed operation on historic and cultural resources.

Mr. Melvin T. Smith
ACT/007/011
July 18, 1983
Page Two

3. Where the proposed mining plan, will, in the judgment of the SHPO, adversely effect sites listed on, or potentially eligible for listing on the National Register of Historic Places, the SHPO shall proceed pursuant to 36 CFR 800. The SHPO will further assist the Division of Oil, Gas & Mining in its requirements set forth in MC 761.12(f) of the Coal Mining Regulations and make recommendations for survey and mitigation as appropriate.

The Division appreciates your cooperation and asks that all comments and communications, regarding the mining and reclamation plan review, be channeled through this office to allow a single set of stipulations and requirements to be sent to the operator. If you have any questions, please contact myself or D. Wayne Hedberg of my staff.

Sincerely,



JAMES W. SMITH, JR.
COORDINATOR OF MINED
LAND DEVELOPMENT

JWS/DWH:btb

Enclosure: MRP, copy 4 of 6

UNITED STATES FUEL COMPANY

HIAWATHA, UTAH 84527

File
ACT/007/011
Folder No. 2
Wayne, Mary

July 13, 1983

Mr. James W. Smith
Coordinator of Mined Land Development
State of Utah Natural Resources
Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

JIM
JUL 14 1983

Re: Response to Apparent
Completeness Review
U.S. Fuel Co.
Hiawatha Complex
ACT/007/001

Dear Mr. Smith;

Enclosed, please find, six (6) copies of U.S. Fuel Company's response to State and O.S.M. Apparent Completeness Review deficiencies relating to our Mining and Reclamation Permit application.

Due to lack of space in ring binders, each copy of this response comprises three (3) separate submittals described as follows:

1. Four inch ring binder divided into chapters corresponding to DOGM organizational format (Miscellaneous information not relating to organizational guidelines is included in the front cover pocket of the binder).
2. Separate binder for Chapter V submittal (Cultural Resources information).
3. Separate binder for Chapter IX submittal (Vegetation Resources information).

Sincerely,

Robert Eccli

Robert Eccli
Sr. Mining Engineer

RECEIVED
JUL 14 1983

RE:lj

cc: Walter C. Swain, OSM, Denver

Enclosure



DIVISION OF
OIL, GAS & MINING



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

June 13, 1983

Ms. Jean Semborski
U. S. Fuel Company
Hiawatha, Utah 84527

RE: Hiawatha Complex
ACT/007/011
Folder No. 2
Carbon County, Utah

Dear Ms. Semborski:

The Utah State Regulatory Program, approved January 21, 1981, required that all existing mines file an application for a permit within two months of the program approval date. All applications were to have been acted upon within eight months (September 21, 1981) of the program approval date; however, an administrative delay provision within the Utah Program allows continued operations during extended permit application review.

It is now 20 months after the date by which all permits were to have been approved, and the Office of Surface Mining (OSM) is requiring that a decision be made on your permit. OSM plans to make a decision on your permit application in March 1984. This decision will be made in accordance with the written findings of compliance requirements of UMC 786.19. These findings can be made only on the basis of a complete application, and cannot be addressed through the use of permit stipulations. Therefore, it is essential that you respond to any deficiencies found during the review of your application within the time period stated in the deficiency letter.

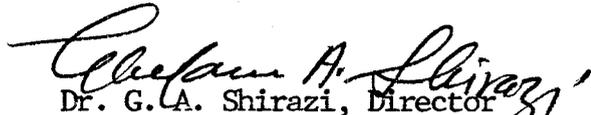
OSM has assumed the primary responsibility for reviewing your application for a permit. This is largely due to the existence of Federal lands involved in your operation. The change in responsibility to OSM rather than the Utah Division of Oil, Gas and Mining (UDOGM) in no way changes the status of the Utah program. OSM is the regulatory authority on Federal lands in Utah until a cooperative agreement has been finalized. Until then OSM will continue to issue permits on Federal lands. Once the regulatory authority has made a

Ms. Jean Semborski
ACT/007/011
June 13, 1983
Page Two

decision on your permit application, your authorization to continue operation under administrative delay is ended. This means that in order to approve your permit application, we must have the information necessary to make all of the required findings on schedule.

Please work with us to assure a timely decision on your permit application. If you have any questions, please contact Steve Manger or Walter Swain at OSM (303) 837-5421.

Sincerely,


Dr. G. A. Shirazi, Director
Division of Oil, Gas and Mining
Utah Department of Natural Resources


Allen D. Klein, Administrator
Western Technical Center
Office of Surface Mining



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

June 10, 1983

Mr. Robert Eccli
Senior Mining Engineer
U. S. Fuel Company
P. O. Box A
Hiawatha, Utah 84527

RE: Administrative Completeness
Hiawatha Complex
ACT/007/011
Folder Nos 2 and 3
Carbon County, Utah

Dear Mr. Eccli:

U. S. Fuel Company's May 19, 1983 response to the Division's Administrative Completeness Review letter of May 9, 1983 has satisfied our request for additional information not addressed in the original permanent program permit application. Therefore, the Division hereby finds the mine plan permit application to be administratively complete, in that all areas of concern appear to have been addressed.

This determination will allow U. S. Fuel Company to temporarily continue mining operations under the existing interim State permit according to provisions of Federal and State statutes and regulations until such time as the review of your company's permanent permit application is completed.

As you are aware, an in-depth Apparent Completeness Review (ACR) has been conducted in order to determine the sufficiency of the application and the Division is currently awaiting your response to the deficiencies noted in the ACR in order to proceed with the review process according to an established priority schedule.

Though no further response to the cursory administrative completeness review, nor a publication of completeness, is required at this time, the Division would appreciate being notified in writing of any significant circumstances that may exist or develop in the near future which could affect the Division's review priorities that have been established. Your continued cooperation is appreciated. If you have any questions, please don't hesitate to call.

Sincerely,

JAMES W. SMITH, JR.
COORDINATOR OF MINED
LAND DEVELOPMENT

JWS/MMB:btb
cc: Allen Klein, OSM, Denver



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

June 9, 1983

Mr. Robert Eccli
Senior Mining Engineer
U. S. Fuel Company
P. O. Box A
Hiawatha, Utah 84527

RE: Revegetation Monitoring
U. S. Fuel Company
King VI Mine
ACT/007/011
Folder Nos. 2 and 4
Carbon County, Utah

Dear Mr. Eccli:

On June 7, 1983, John Rice of Bio/West, Inc., contacted the Division concerning revegetation monitoring plans for the King VI Mine area as per Stipulation 7-81-2. This letter will serve to summarize the conversation and document some changes, with which the Division concurs, regarding the monitoring plans for the 1983 field season.

As originally detailed (June 1982), the approved monitoring plans call for annual monitoring during the first five years after planting, to be conducted during the peak production period. Percent ground cover by vegetation, rock, litter and bare ground are to be ocularly estimated by use of a 0.5 m² rectangular quadrat, percent plant cover is to be estimated for each individual species and the sample size for each treatment is to be based on a 90 percent confidence limit with 10 percent precision according to the formula $n = s^2 t^2/d^2$.

The Division agrees that, during this first crucial year of plant establishment, it may be deleterious to the newly established vegetation (particularly on steeper slopes) to conduct the thorough quantitative sampling as outlined. Therefore, for monitoring during the 1983 season, the following changes to the original plan are approved:

Mr. Robert Eccli
ACT/007/011
June 9, 1983
Page 2

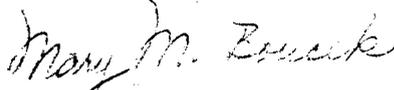
The necessity of quantitative sampling employing a 0.5 m² rectangular plot and statistical confidence at 90 percent with 10 percent precision is waived. The operator is advised to qualitatively assess, by ocular estimate, total cover by vegetation, rock, litter and bare ground to the best of your professional ability.

Plant cover by individual species should be qualitatively estimated, i.e., statistical quantification is not necessary during this monitoring period.

Monitoring should still be conducted during the peak of production (or growing season). However, production sampling (e.g., clipping) is not warranted.

Should you have any questions regarding this matter, please contact the Division.

Sincerely,



MARY M. BOUCEK
RECLAMATION BIOLOGIST

MMB/btb

cc: John Rice, Bio/West, Inc.
Allen Klein, OSM
J. Smith, DOGM
D. W. Hedberg, DOGM

UNITED STATES FUEL COMPANY

HIAWATHA, UTAH 84527

File
ACT/007/011
Folder No. 2
Copy to
Wayne

May 19, 1983

JIM

MAY 23 1983

Mr. James W. Smith
Coordinator of Mined Land Development
State of Utah Natural Resources
Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

RE: Administrative Completeness
Review. United States Fuel
Company ACT/007/011

Dear Mr. Smith:

In response to your letter of May 9, 1983, relating to the administrative completeness of United States Fuel Company's permanent program permit application, please find the following information enclosed:

- 1- Verification of the permit application as required by UMC 771.27.
- 2- Alternative water supply information as required by UMC 783.17.
- 3- Prime farmland investigation information as required by UMC 783.27 and UMC 785.17.

Sincerely,

Robert Eccli

Robert Eccli
Senior Mining Engineer

Enclosure

RECEIVED
MAY 23 1983



DIVISION OF
OIL, GAS & MINING

UMC 771.27 VERIFICATION OF APPLICATION

United States Fuel Company

Permit No. ACT/007/011

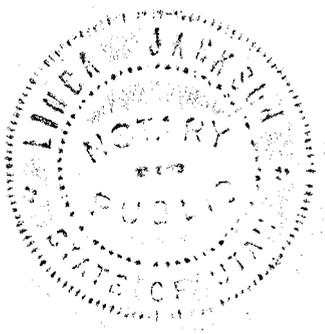
Errol M. Gardiner being first duly sworn, upon oath deposes and says that he is the Vice President and General Manager of United States Fuel Company and that he has reviewed and knows the contents of U.S. Fuel Company's Mining and Reclamation Plan submitted to the Utah Division of Oil, Gas and Mining and the Federal Office of Surface Mining in March of 1981.

I verify that the above mentioned plan is true and correct to the best of my information and belief.



Errol M. Gardiner
Vice President and General Manager

Subscribed and sworn to before me this 19 day of May, 1983.



Notary Public

5-21-84

UMC 783.17 ALTERNATIVE WATER SUPPLY INFORMATION

Underground mining operations could affect surface and ground water sources. Depending on coal extraction methods used, subsidence could more or less result in fractures through the strata above the Star Point sandstone formation. Fractures resulting from subsidence, as well as natural fractures encountered in mining could contribute to changes in existing water patterns. Springs, seeps, and stream flows could possibly be affected, and changes in drainage patterns could result. Since no mining is proposed to be done below the Hiawatha coal seam which lies immediately on top of the Star Point sandstone, strata below that elevation should not be affected.

The effects of past mining on water sources is not known, except that significant flows have resulted from contact with major fractures such as, the Bear Canyon fault. Large areas of the King 1 and King 2 mines were mined out from 10 to 50 years ago by room and pillar methods, yet numerous springs and seeps overlying these mines are still flowing. Whether or not they have diminished as a result of mining is not known.

Since the dip of beds in the mine plan area is toward the south west and since all existing mine workings are more or less interconnected, all water encountered in mining tends to flow to the most southerly mine opening which at this time is the old Mohrland Portal (King 2 portal) in Cedar Creek Canyon.

Diminution of existing surface and ground water sources could possibly affect some livestock and wildlife watering sites at higher elevations. Water presently being used for municipal, domestic, industrial, and irrigation purposes should not be diminished to any great extent since water diverted into the ground would most likely return to mine openings,

springs, and streams near the Star Point sandstone which is well above municipal, domestic, industrial and irrigation points of use. Water quality should not be significantly affected by mining as evidenced by the consistent high quality of mine water presently being discharged.

- A hydrologic monitoring plan has been implemented since 1977.

Springs, streams and discharges are being monitored at specific intervals to assess the effects of mining operations on water quality and quantity. Also, a subsidence monitoring program, which includes serial photography, is being carried out in cooperation with the Forest Service to assess the effects of mining on forest land.

In the event that an alternative water supply is needed, mine water from the Mohrland Portal in Cedar Creek Canyon is proposed as a reliable, good quality source. This source should not diminish or be contaminated by mining operations. It is presently being used for municipal, domestic and industrial purposes at Hiawatha and for irrigation at ranches along Cedar Creek and Miller Creek.

UMC 783.27 PRIME FARMLAND INVESTIGATION

An investigation of the areas proposed to be affected by surface operations or facilities was conducted by the U.S.D.A. Soil Conservation Service in January 1983. They have determined that there are no prime farmland soils in the areas. Appendix VIII-1 is a copy of their letter giving this determination.

Based on this investigation, which meets the requirements of UMC 783.27 (b) (5), United States Fuel Company requests that a negative determination relating to prime farmland be assigned.



United States
Department of
Agriculture

Soil
Conservation
Service

P. O. Box 11350
Salt Lake City, UT 84147

REGULATIONS:

Umc-783.27

osm.

January 17, 1983

Charles J. Jahne
Sharon Steel - Mining Division
19th Floor, University Club Building
136 East South Temple
Salt Lake City, UT 84111

Dear Mr. Jahne:

Mr. Keith Beardall, District Conservationist, Price, Utah has made a field review of the areas for which you requested information concerning prime farmland.

The absence of irrigation eliminates these soils from the prime farmland category. Because of the arid climatic conditions, irrigation would be essential.

We have retained the maps which you furnished with your letter for any future reference.

According to his observations and data available in soil survey reports, there are no prime farmland soils in the area in question.

If we can be of further assistance, please call us.

Sincerely,

FERRIS P. ALLGOOD
State Soil Scientist



SHARONSTEEL • Mining Division

AN **NVE** COMPANY

SHARON STEEL CORPORATION

19th Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111
Telephone (801) 355-5301

REGISTRATIONS!

UMC-783.27

January 5, 1983

OSM-

Soil Conservation Service
350 North 400 East
Price, Utah 84501

Attention: Mr. Keith Beardall, District Conservationist

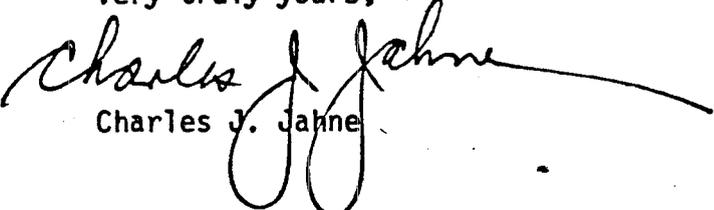
Gentlemen:

In March of 1981, Sharon Steel Corporation/United States Fuel Company submitted an application for Permit to Mine Coal at the Hiawatha, Utah site of United States Fuel Company. Recently, we received the comments on the application from the Utah Division of Oil, Gas and Mining (UDOGM). One of the comments was a request for a statement either establishing the existence or absence of prime farmland within the boundaries of the Hiawatha complex. Corroboration with the Utah State office of the Soil Conservation Service was required.

I am enclosing a map showing the boundaries of the United States Fuel Company mining area near Hiawatha, Utah. Would you please provide for us a determination of the existence or absence of prime farmland in that area.

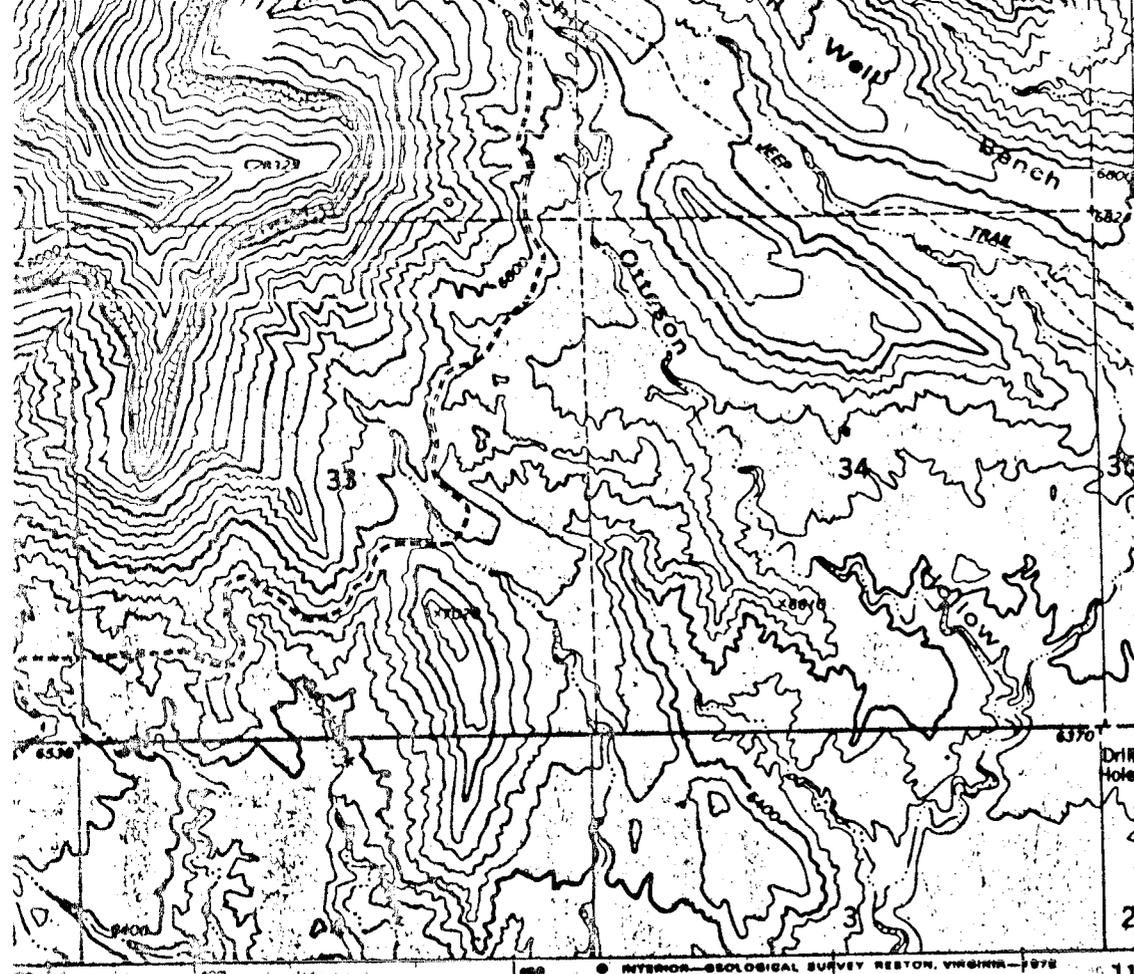
Thank you.

Very truly yours,


Charles J. Jahne

CJJ:jrs

Enclosure



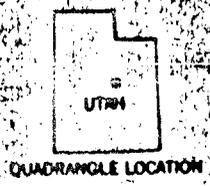
UNITED STATES FUEL COMPANY HIAWATHA, UTAH

COPY OF TITLE BLOCK OR MAP
 SENT TO SOIL CONSERVATION
 SERVICE 1-5-83
 (HUNTINGTON)

- U.S. Fuel Co. Boundary
- Disturbed Area
- Area of Proposed Disturbance

- ### VEGETATION TYPES
- A = Aspen
 - B = Barren Land
 - G = Grassland
 - MC = Mixed Conifer
 - MC-A = Mixed Conifer - Aspen
 - MB = Mountain Brush
 - PJ = Pinyon-Juniper Woodland
 - R = Riparian
 - SI = Sagebrush
 - SZ = High Elevation Sagebrush-Grass

- ### ROAD CLASSIFICATION
- Primary highway, hard surface —————
 - Secondary highway, hard surface —————
 - Light-duty road, hard or improved surface —————
 - Unimproved road —————
 - Interstate Route (Shield)
 - U. S. Route (Circle)
 - State Route (Circle)



HIAWATHA, UTAH
 NE 1/4 HIAWATHA 18' QUADRANGLE
 N3922.5-W11100/7.5

1978

Formerly Hiawatha NE (66)
 Huntington Co-op (Utah) Utah (6221)
 B. Barth & Assoc. Inc.
 Salt Lake City, Utah

- = Reference Area
- = Sampling Site in Area of Proposed Disturbance

FIGURE 1.

UNITED STATES FUEL COMPANY *copy to*

HIAWATHA, UTAH 84527

*File
ACT/007/011
Folders No. 2, 13
Wayne, Mary
Shannon, Doug M.
Tom P., Joe H.
Dave L.*

May 17, 1983

JIM

MAY 20 1983

Mr. James W. Smith, Jr. Coordinator of
Mined Land Development
State of Utah, Natural Resources
Division of Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

Dear Mr. Smith:

United States Fuel Company has received the copy of your May 9, 1983 letter to Mr. Jahne defining a July 15, 1983 deadline for our response to the Division's Apparent Completeness Review.

The response to the Administrative Deficiencies also outlined in that letter are being prepared and should reach your office shortly.

As Mr. Jahne will no longer head the Apparent Completeness Review response after the end of this month, all future correspondence concerning or relating to the Apparent Completeness Review should be sent to Mr. Robert Eccli, Senior Mining Engineer at the following address: P.O. Box A, Hiawatha, Utah 84527. This will facilitate a smooth coordination of activities with our staff and avoid correspondence gaps between our company and your office. It would be most appreciated if you would advise others involved with our ACR as well.

Th

Betty,

5-20-83

*Please note that
Chuck Jahne is no
larger contact person
at U.S. Fuel. Change
files accordingly. Thx.
Jim*

eral Manager

EG/js



DIVISION OF
GAS & MINING

File
ACT/007/011
Folders No. 2, 13
UNITED STATES FUEL COMPANY Copy to

HIAWATHA, UTAH 84527

May 17, 1983

Wayne, Mary
Shannon, Doug M.
Tom P., Joe H.,
Dave L.

JIM

MAY 20 1983

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State of Utah, Natural Resources
Division of Oil, Gas and Mining
4241 State Office Building
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Thank you.

Sincerely,



E.M. Gardiner
Vice President and General Manager

EG/js

RECEIVED

MAY 19 1983

**DIVISION OF
OIL, GAS & MINING**



File
#13 ACT/007/011
Folders No. 2, 1

UNITED STATES FUEL COMPANY copy to

HIAWATHA, UTAH 84527

Wayne, Mary
Shannon, Doug M
Tom P., Joe H.
Dave L.

May 17, 1983

JIM

MAY 20 1983

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Mined Land Development
State of Utah, Natural Resources
Division of Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

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Thank you.

Sincerely,

E.M. Gardiner
Vice President and General Manager

EG/js



RECEIVED
MAY 20 1983

DIVISION OF
OIL, GAS AND MINING



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

May 9, 1983

Mr. Charles J. Jahne
Sharon Steel Corporation
19 Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111

RE: Administrative Completeness Review
of Permanent Program Permit
U. S. Fuel Company
Hiawatha Complex
ACT/007/011
Folder Nos. 2 and 3
Carbon County, Utah

Dear Mr. Jahne:

The Division of Oil, Gas and Mining technical staff has performed a cursory review to determine the administrative completeness of U. S. Fuel Company's Hiawatha Complex permanent program permit application and mining and reclamation plan and has found it to be administratively incomplete, in that all areas of concern have not been addressed.

As you are aware, the Division has also performed an in-depth Apparent Completeness Review (ACR) in which numerous items were found to be deficient or lacking, thus prohibiting the Division from proceeding with a Technical Analysis review (TA). It should be clarified that the cursory administrative completeness review and the in-depth Apparent Completeness Review are not the same.

In order to continue operations under the interim permit, it is imperative that U. S. Fuel Company immediately address those items outlined below thus rendering the mining and reclamation plan administratively complete:

1. UMC 771.27 Verification of Application
2. UMC 783.17 Alternative Water Supply Information
3. UMC 783.27 Prime Farmland Investigation
4. UMC 785.17 Prime Farmlands (as related to UMC 783.27)

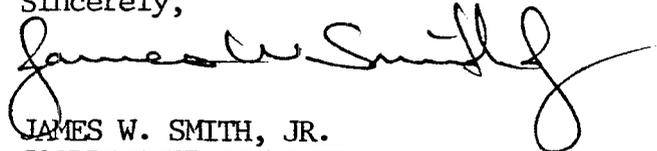
Mr. Charles J. Jahne
ACT/007/011
May 9, 1983
Page 2

A written response to the above items, furnishing the required information, must be submitted to the Division within 30 days of receipt of this letter.

Concerning the in-depth Apparent Completeness Review, which was completed in November 1982, the Division is requesting that, for the sake of continuity, U. S. Fuel Company respond to the ACR in a consolidated manner, i.e., assemble all responses into one comprehensive submittal. This will eliminate the "piecemeal" approach and potential confusion on the parts of both the applicant and the Division and should facilitate the review process. The applicant's complete ACR response must be received by the Division no later than July 15, 1983 in order to continue the review process according to a strict review priority schedule.

Your continued cooperation in these matters is appreciated. If you have any questions, please contact the Division.

Sincerely,



JAMES W. SMITH, JR.
COORDINATOR OF MINED
LAND DEVELOPMENT

JWS/btb

cc: Jean Semborski, U. S. Fuel Company
Allen Klein, OSM
D. Wayne Hedberg, DOGM

Scott M. Matheson
Governor



STATE OF UTAH
DEPARTMENT OF
DIVISION OF ENVIRONMENT
150 West North Temple, P.O. Box 2500, Salt

File ACT/007/011
copy to site # ~~XXXX~~
219
+ to Wayne

James O. Mason, M.D., Dr.P.H.
Executive Director
801-533-6111

DIVISIONS

Community Health Services
Environmental Health
Family Health Services
Health Care Financing

OFFICES

Administrative Services
Community Health Nursing
Management Planning
Medical Examiner
State Health Laboratory

January 20, 1983
533-6108

Charles J. Jahne
Sharon Steel Corporation
136 East South Temple
Salt Lake City, Utah 84111

RE: U.S. Fuel, Co., Hiawatha, Utah
Site, Compliance to UACR

Dear Mr. Jahne:

This letter is in response to your letter dated January 5, 1983, requesting verification of compliance of the U.S. Fuel Company's Hiawatha site with the Utah Air Conservation Regulations (UACR).

The State Bureau of Air Quality did not find the Hiawatha site in violation of the UACR during the last inspection on August 17, 1982. The plant was evaluated for visible emissions from point sources, fugitive sources, and area sources as required by Sections 3.1 (5/22/81 approval order) and 4.5 (fugitive dust) of the UACR.

The Hiawatha site is inspected on a regular basis by personnel from this office.

Sincerely,

Brent C. Bradford
Director
Bureau of Air Quality

LRM:wml
cc: O, G & M (Jim Smith)
2248

RECEIVED
JAN 25 1983
JAN 18 1983
DIVISION OF
OIL, GAS & MINING

Scott M. Matheson
Governor



STATE OF UTAH
DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH

150 West North Temple, P.O. Box 2500, Salt Lake City, Utah 84110-2500

Marv H. Maxell, Ph.D., Acting Director
Room 474 801-533-6121

James O. Mason, M.D., Dr.P.H.
Executive Director
801-533-6111

DIVISIONS

Community Health Services
Environmental Health
Family Health Services
Health Care Financing

OFFICES

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Community Health Nursing
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Medical Examiner
State Health Laboratory

January 20, 1983
533-6108

Charles J. Jahne
Sharon Steel Corporation
136 East South Temple
Salt Lake City, Utah 84111

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Site, Compliance to UACR

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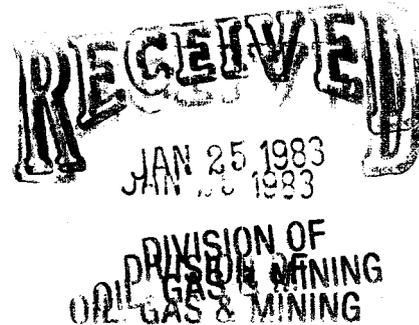
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Brent C. Bradford
Director
Bureau of Air Quality

LRM:wml
cc: O, G & M (Jim Smith)
2248



Scott M. Matheson
Governor



STATE OF UTAH
DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH
150 West North Temple, P.O. Box 2500, Salt Lake City, Utah 84110-2500

Marv H. Maxell, Ph.D., Acting Director
Room 474 801-533-6121

James O. Mason, M.D., Dr.P.H.
Executive Director
801-533-6111

DIVISIONS

Community Health Services
Environmental Health
Family Health Services
Health Care Financing

OFFICES

Administrative Services
Community Health Nursing
Management Planning
Medical Examiner
State Health Laboratory

January 20, 1983
533-6108

Charles J. Jahne
Sharon Steel Corporation
136 East South Temple
Salt Lake City, Utah 84111

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Site, Compliance to UACR

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Brent C. Bradford
Director
Bureau of Air Quality

LRM:wml
cc: O, G & M (Jim Smith)
2248

RECEIVED

JAN 28 1982

DIVISION OF OIL, GAS & MINING



SCOTT M. MATHESON GOVERNOR

DC ED

JIM

EB 03 1982

STATE OF UTAH DEPARTMENT OF COMMUNITY AND ECONOMIC DEVELOPMENT

Division of State History (UTAH STATE HISTORICAL SOCIETY)

MELVIN T. SMITH, DIRECTOR 300 RIO GRANDE SALT LAKE CITY, UTAH 84101 TELEPHONE 801/533-5755

January 13, 1982

Mr. James Smith Division of Oil, Gas & Mining 1588 West North Temple Salt Lake City, Utah 84116

Attn: Wayne Hedburg

RE: King Mine, Carbon and Emery Counties, U. S. Fuel Company - ACT/007/011

Dear Mr. Smith:

The Office of the Utah State Historic Preservation Officer has received for consideration and review the mine plan for the King Mine, Carbon and Emery Counties, Utah. As outlined by a memorandum between the Division of Oil, Gas & Mining, and the Division of State History, our office has reviewed the mine plan concerning cultural resources.

The King Mine Complex is a consolidation of the original King, Hiawatha, Blackhawk and Mohrland underground mines, which have been active since the 1890's. This application includes continuation of the existing mines, and redevelopment of some applications. From our review, there are apparently five permit areas with new, disturbed surfaces being considered.

After review of Part V, the Cultural Resource Section, our office feels that the Office of Surface Mining may have one concern about the report. This concern is related to the analysis of how it was determined that the project would have minimized and negligible impact on the town of Hiawatha.

The mining company previously asked for information on known sites in the area. We provided them with an informational letter signed by Jim Dykman saying none were known. No survey has been conducted and the potential for sites in the area is high.

This information may be used by Oil, Gas, & Mining in determining, with the Office of Surface Mining, whether the report is complete. Our office makes no requirements on the company.

Mr. James Smith
January 13, 1982
Page 2

If you have any questions or concerns, please contact this
office at 533-7039.

Sincerely,

A handwritten signature in cursive script, appearing to read "Melvin T. Smith". The signature is written in dark ink and is positioned above the typed name.

Melvin T. Smith
Director and
State Historic Preservation Officer

JLD:jr:E408/1838c

File
ACT/007/011
Folder No. 2

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

APPARENT COMPLETENESS REVIEW
OF
MINING AND RECLAMATION PLANS
FOR
UNDERGROUND COAL MINING

Applicant: United States Fuel Company / Sharon Steel Corporation ^{Subsidiary of:}

Address: 19th Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111

Contact Person: Mr. A. T. Forrest

Title: Executive Vice President

Phone: 801-355-5301

Type of Mining:

- Underground-Room & Pillar Possibly Underground-Longwell
- Concurrent with Surface in Future Auger
- In-situ Other

Name of Mine(s): Hiawatha Complex

Legal Location: * See Attached list :

Section(s) _____, Township _____, Range _____

Section(s) _____, Township _____, Range _____

County(ies) _____

Application Received: March 23, 1981

Apparent Completeness Review Completed: November 8, 1982

Apparent Completeness Review Completed By: D. Wayne Hedberg
Q.O. - Jan. 13, 1983

Section	Required Item	<i>Not Included in Application</i>	Included In Application	Found to Comply; No Additional Info Required	Inadequate; More Info Required
771.23	General Requirements for Format & Contents		X		X
771.25	Permit Fee (\$5.00 on submission)		X	X	
771.27	Verification of Application (under oath)	(X)			X
782.13	Identification of Interests	---	X		X
782.14	Compliance Information		X		X
782.15	Right of Entry & Operation Information		X	X	
782.16	Relation to Areas Designated Unsuitable		X	X	
782.17	Permit Term Information		X		X
782.18	Insurance Information		X		X
782.19	Identification of Other Licenses & Permits		X		X
782.20	Identification of Public Office for Filing of Application		X	X	
782.21	Newspaper Advertisement & Proof of Publication		X	X	
783.11	Premining Environmental Resources Description		X	X	
783.12	General Environmental Resources Information		X	X	
783.13	Hydrology and Geology Description		X	X	
783.14	Geology Description		X		X
783.15	Ground Water Information		X		X
783.16	Surface Water Information		X		X
783.17	Alternative Water Supply Information	(X)			X
783.18	Climatological Information		X	X	
783.19	Vegetation Information		X		X
783.20*	Fish & Wildlife Information		X		X
783.21*	Soil Resources Information		X		X
783.22	Land-Use Information		X		X
783.24	Maps: General Requirements		X		X
783.25	Cross-Sections, Maps and Plans		X		X
783.27	Prime Farmland Investigation	(X)			X

Lease Tract No. 1

- T. S., R.7 E., SLM, Utah - Emery County
 - Section 25, SW1/4
 - Section 26, S1/2
 - Section 35, All
 - Section 36, W1/2
- T.16 S., R.8 E., SLM, Utah - Emery County
 - Section 1, SW1/4, S1/2 NW1/4, lots 3, 4
 - Section 2, All

Lease Tract No. 2

- T.16 S., R.8 E., SLM, Utah - Emery County
 - Section 19, E1/2 SE1/4, SE1/4 NE1/4
 - Section 20, W1/2 SW1/4, SW1/4 NW1/4, SE1/4 SW1/4
 - Section 21, S1/2 SE1/4
 - Section 28, SW1/4, W1/2, NW1/4, N1/2 N1/2 NE1/4
 - Section 29, NW1/4, SE1/4 SE1/4
 - Section 30, NE1/4 NE1/4
 - Section 33, N1/2 NW1/4, SW1/4 NW1/4

Lease Tract No. 3

- T.14 S., R.5 E., SLM, Utah - Emery County
 - Section 23, W1/2 NE1/4, NW1/4, SE1/4, SE1/4, E1/2 SW1/4
 - Section 26, E1/2
 - Section 35, N1/2 NE1/4, E1/2 W1/2, E1/2 SE1/4
 - Section 36, W1/2
- T.15 S., R.6 E., SLM, Utah - Emery County
 - Section 1, W1/2
 - Section 2, lots 1-3, SE1/4 NW1/4, NW1/4 SE1/4 E1/2 SE1/4 SE1/4 NE1/4
 - Section 11, E1/2, E1/2 W1/2
 - Section 12, W1/2 W1/2, E1/2 NW1/4, NE1/4 SW1/4

Also:

United States Fuel Company has applied for a short term, by-pass coal lease on 160 acres of federal coal in the NW1/4 of Section 20, T.15S., R.8E., SLB&M.

Section	Required Item	NOT INCLUDED IN APPLICATION	Included In Application	Found to Comply; No Additional Info Required	Inadequate; More Info Required
784.11	Operation Plan: General Requirements		X		X
784.12	Operation Plan: Existing Structures		X		X
784.13	Reclamation Plan: General Requirements		X		X
784.14	Reclamation Plan: Protection of Hydrologic Balance		X		X
784.15	Reclamation Plan: Postmining Land-Uses		X		X
784.16	Reclamation Plan: Ponds, Impoundments, Banks, Dams and Embankments		X	X	
784.17	Protection of Public Parks & Historic Places		X	X	
784.18	Relocation or Use of Public Roads		X		X
784.19	Underground Development Waste		X	X(?)	
784.20	Subsidence Control Plan		X		X
784.21*	Fish & Wildlife Plan		X		X
784.22	Diversions		X		X
784.23	Operation Plan: Maps and Plans		X		X
784.24	Transportation Facilities		X		X
784.25	Return of Coal Processing Waste to Underground		X	X	
784.26	Air Pollution Control Plan		X		X
<u>Special Categories of Mining (if applicable)</u>					
785.13	Experimental Practices		NA		
785.17	Prime Farmlands	(X)	NA (?)		
785.19	Alluvial Valley Floors		X		X
785.21	Off-site Support Facilities		NA		
785.22	In-situ Processing		NA		

*Though these sections have been remanded for revision, their inclusion is warranted in order to adequately assess compliance with Performance Standards at a later date during the review process.