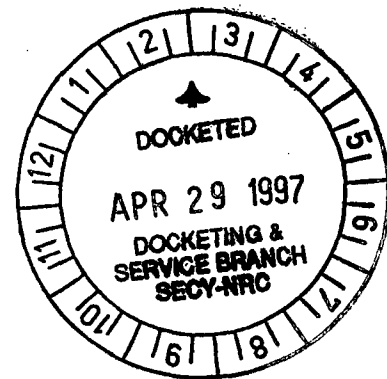




UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

April 28, 1997



MEMORANDUM TO: B. Paul Cotter, Jr.  
Chief Administrative Judge  
Atomic Safety and Licensing Board Panel

FROM: *John C. Hoyle*  
John C. Hoyle, Secretary

SUBJECT: REQUEST FOR HEARING SUBMITTED  
BY THE NATIVE AMERICAN PEOPLES  
HISTORICAL FOUNDATION

Attached is a request for hearing dated April 16, 1997, submitted by the Native American Peoples Historical Foundation (Foundation). The hearing request, which is styled as a "request for standing", was faxed to the Executive Director for Operations and referred to the Office of the Secretary on April 18, 1997. The request is for a hearing on an amendment to the Source Material License of Energy Fuels Nuclear (Docket No. 40-8681) to allow receipt and processing of uranium-bearing material. The license amendment was granted by the Nuclear Regulatory Commission staff on April 2, 1997. Additional attachments include a letter from the Foundation dated April 25, 1997, clarifying its desire for an adjudicatory hearing and background material provided by the staff.

The request for hearing is being referred to you for appropriate action in accordance with 10 C.F.R. §2.1261.

Attachments: As stated

cc: Commission Legal Assistants  
OGC  
CAA  
OPA  
EDO  
NMSS  
Michelle R. Rehmann  
Energy Fuels Nuclear, Inc.  
Winston M. Mason  
Native American Peoples  
Historical Foundation

SECY-EAD-008

DS 03

18284

**ATTACHMENT 1**

# **FAX**

**APRIL 16, 1997**

**TO: MR. HUGH L. THOMPSON, JR.,  
NUCLEAR REGULATORY COMMISSION  
FAX (301) 415-2162**

**FROM: NATIVE AMERICAN PEOPLES HISTORICAL FOUNDATION  
Telephone (801) 678-2805  
Box Avikan  
Blanding, Uah 84511**

**SUBJECT: REQUEST FOR STANDING**

"IN HONOR OF THE GREAT CREATOR"

# GREAT AVIKAN™ HOUSE

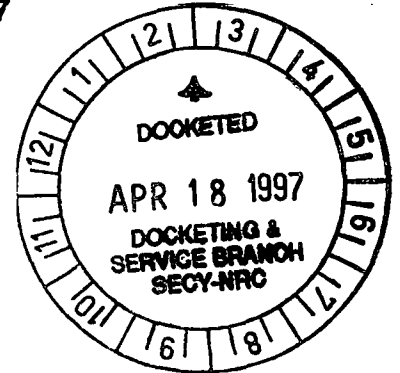
NATIVE AMERICAN PEOPLES HISTORICAL FOUNDATION

3 East Center Street Box AVIKAN= Blanding, Utah 84511 (801) 678-2805

April 16, 1997

COPY

Ms. Shirley Jackson, Chairperson  
Nuclear Regulatory Commission  
11555 Rockville Place  
Rockville, MD. 20555



Dear Ms. Jackson:

We are hereby petitioning for standing in the matter of your agency's consideration of Energy Fuels Nuclear's requests for license amendments allowing the transporting, re-milling, and waste storage of the Cotter Concentrates, which contain mixed wastes of radionuclides and other hazardous constituents, at its White Mesa Uranium Mill. The mill lies adjacent to the sacred traditional land upon which our organization is building the all tribes Native American historical archive called the Great Avikan House. We are made aware through our Native American benefactors, as well as others, that such approval on your part would place this valuable project in jeopardy; therefore, we are requesting standing.

We are aware that the Cotter Concentrate has been reclassified from a Regulated Solid Waste to "Feedstock Material," in order to comply with Energy Fuels Nuclear's request to dispose of this hazardous material in their tailings ponds. We are also aware that a 1996 report indicates that the said concentrates cannot be stabilized.

Energy Fuels Nuclear has requested that this license amendment be granted this month (April 1997), and they also intend to start shipping the Cotter Concentrates this month, without any public hearings or awareness; therefore, time is of the essence. We are also aware that following the successful deployment of their plan, they are intent on requesting license amendments for permission to bring thousands of tons of hazardous wastes from Fernald and other Department of Energy sites.

Since Energy Fuels Nuclear is currently in the process of restructuring and renaming their company "International Uranium (USA) Corporation" (IUC), therefore we must state that, no matter the name of the company involved, we are hereby requesting standing in all issues which are now before you, or which might come

before you in the future, regarding changing the dispositions of Nuclear's wastes and other hazardous constituents in order to justify bringing them to the White Mesa Mill tailings ponds.

As an all tribes historical agency, we are also aware of the significance of the land upon which the White Mesa Mill was originally built. It is a sacred Ute Burial ground, as well as an ancient Anasazi site containing numerous human burials, as well as ceremonial kivas. The Mill sits adjacent to the Ute Reservation community of White Mesa which has over 300 residents. The White Mesa community was not even mentioned in the original environment impact studies conducted on behalf of Energy Fuels Nuclear prior to building the mill. Therefore, in addition to our own interests, we also officially support this Native American community in their plight.

We hereby request standing, and demand that public hearings be implemented in this, and other matters affecting the people and property of this area, before any decisions are either made or implemented.

Sincerely,



Winston M. Mason  
Head of Council

cc: Governor Michael Leavitt, Governor, State of Utah  
Mr. Hugh L. Thompson, Jr., Acting Executive Director for Operations, NRC  
Mr. William Sinclair, Secretary, Utah Division of Radiation Control  
Mr. Preston Truman, Public Representative, Utah Division of Radiation Control  
Members of Utah's Congressional Delegation

"IN HONOR OF THE GREAT CREATOR"

# GREAT AVIKAN™ HOUSE

DOCKETED  
USMRC

NATIVE AMERICAN PEOPLES HISTORICAL FOUNDATION

3 East Center Street Box AVIKAN™ Blanding, Utah 84511 (801) 678-2805 '97 APR 28 P4:52

April 25, 1997

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

Ms. Shirley Jackson, Chairperson  
Nuclear Regulatory Commission  
11555 Rockville Place  
Rockville, MD. 20555

Dear Ms. Jackson:

At the request of your office, by a telephone call on April 24, 1997, we are clarifying our original petition for standing which was faxed to you on April 16, 1997.

As to the type of hearing, we are requesting an Adjudicatory Hearing before your Atomic Licensing Committee. If, for some reason, this request is denied, we hereby request a Commission Hearing at the NRC in Washington. If this is not granted we would request a Staff Meeting to be held in Blanding, Utah.

Thank you for your assistance in this matter.

Sincerely,



Winston M. Mason  
Head of Council

cc: Governor Michael Leavitt, Governor, State of Utah  
Mr. Hugh L. Thompson, Jr., Acting Executive Director for Operations, NRC  
Mr. William Sinclair, Secretary, Utah Division of Radiation Control  
Mr. Preston Truman, Public Representative, Utah Division of Radiation Control  
Members of Utah's Congressional Delegation  
Mr. Cullen Battle, Esq., Attorney at Law

FAXED

4/28/97

(301) 415-1757

(301) 415-2162

**ATTACHMENT 2**



# energy fuels nuclear, inc.

three park central • suite 900  
1515 arapahoe street • denver, colorado 80202

303-623-8317  
twx 910-931-2561  
fax 303-595-0930

March 17, 1997

Mr. Joseph J. Holonich, Branch Chief  
High Level Waste and Uranium Recovery  
Projects Branch  
Division of Waste Management  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
2 White Flint North, Mail Stop T-7J9  
11545 Rockville Pike  
Rockville, MD 20852

Re: Addendum to Amendment Request to Process on Alternate Feed at White Mesa Uranium  
Mill dated March 5, 1997  
Source Material License SUA-1358  
Docket No. 40-8681

Dear Mr. Holonich:

Energy Fuels Nuclear, Inc. ("EFN") hereby requests that the referenced Amendment Request be modified by replacing the copyrighted copy of alternate feed guidance included (as Attachment 1 of Enclosure 1) in Attachment 3 with the enclosed photocopy of the same guidance, which EFN received in a package of Materials from the NRC. In addition, EFN requests that the information identified as "confidential" contained in the Amendment Request be maintained by the NRC as confidential until March 15, 2000. EFN also reserves the right to reevaluate this proposed release date as circumstances may change over the course of the proposed three year period. [Note: address actions completed or date reached which allow NRC to release the entire amendment request to the Public Document Room].

I can be reached at (303) 899-5647.

9704110172 970317  
PDR ADOCK 04008681  
C PDR

Sincerely,

*Michelle R. Rehmann*  
Michelle R. Rehmann  
Environmental Manager  
*by Debra Medina*

MRR/pl  
Attachment

*Change*  
*NRC PDR*    *1*    *1*    *PROP*  
*Ltr ENCL*    *w/o*







# energy fuels nuclear, inc.

three park central • suite 900  
1515 arapahoe street • denver, colorado 80202

303-623-8317  
twx 910-931-2561  
fax 303-595-0930

March 5, 1997

Mr. Joseph J. Holonich, Branch Chief  
High Level Waste and Uranium Recovery  
Projects Branch  
Division of Waste Management  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
2 White Flint North, Mail Stop T-7J9  
11545 Rockville Pike  
Rockville, MD 20852

Re: Revised Amendment Request to Process an Alternate Feed at White Mesa Uranium Mill  
Source Material License SUA-1358  
Docket No. 40-8681

Dear Mr. Holonich:

Energy Fuels Nuclear, Inc. ("EFN") hereby submits the enclosed revised request to amend Source Material License SUA-1358 to authorize receipt and processing of [ ] known as the [ ] ("uranium material"). The uranium material will be shipped to the EFN White Mesa Mill ("the Mill") by [ ], the "material owner".

The uranium material has been stored at the owner's facility, the [ ] since November, 1987. The uranium material is currently stored in approximately [ ] fifty-five gallon drums. The weight of the uranium material is approximately [ ] pounds. The material owner estimates an average uranium content of [ ].

The processing of the uranium material will not increase the mill's production to exceed the License Condition No. 12 limit of 4,380 tons of  $U_3O_8$  per calendar year. As production will remain within the limits assessed in the original Environmental Assessment, and as the process will be essentially unchanged, this amendment will result in no significant environmental impact beyond those originally evaluated.

Mr. Joseph J. Holonich  
March 5, 1997  
Page 2

Complete details are provided in the attached request to amend, which includes the following sections:

- 1.0 Material Composition and Volume
  - 1.1 Radiochemical Data
  - 1.2 Review of Hazardous Constituent Data
  - 1.3 Regulatory Considerations
  - 1.4 Shipping
- 2.0 Process
- 3.0 Safety Measures
  - 3.1 Control of Airborne Contamination
  - 3.2 Radiation Safety
  - 3.3 Vehicle Scan
- 4.0 Certification

Attachment 1 [ ]

Attachment 2 [ ]

Attachment 3 [ ]

Attachment 3a [ ]

Attachment 4 Energy Fuels Nuclear, Inc. White Mesa Mill Equipment Release/Radiological Survey Procedure

To ensure that all pertinent information is included in this submittal, the following guidelines were used in preparing this request to amend:

- U.S. Nuclear Regulatory Commission ("NRC") Final Position and Guidance on the Use of Uranium Mill Feed Material Other Than Natural Ores (Federal Register Volume 60, No. 184, September 22, 1995).
- EFN request to the NRC for the amendment to process uranium-bearing potassium diurate ( $K_2U_2O_7$ ) in a solution of potassium hydroxide/potassium fluoride in water ("KOH Amendment").
- NRC and State of Utah comments and requests for information relative to the KOH Amendment.

Mr. Joseph J. Holonich  
March 5, 1997  
Page 3

- EFN request to NRC for the Rhone-Poulenc alternate feed amendment.
- NRC and State of Utah comments and requests for information relative to the EFN request for the Rhone-Poulenc alternate feed amendment.

We believe that use of these guidance materials, supported by our discussions with the NRC, has allowed us to prepare a complete, concise submittal. Therefore, as we discussed with our Project Manager, Jim Park, at White Mesa Mill on January 16, 1997, EFN requests that the NRC please attempt to reply to this request within 30 days of this transmittal date. Please note that in the attached Affidavit, EFN requests that bracketed portions of this revised application, and selected attachments, be treated as confidential. This letter and enclosed application are hereby transmitted as two versions:

1. Complete text with brackets indicating portions of text and the selected attachments to be withheld as confidential; and
2. An edited version of (1) with bracketed text deleted and selected attachments removed. This version is meant to be used for the Public Document Room.

I can be reached at (303) 899-5647.

Sincerely,

*Michelle R. Rehmann*

Michelle R. Rehmann  
Environmental Manager

by

*Rich A. Munson*

MRR/pl  
Attachments

Request to Amend  
Source Material License SUA-1358  
White Mesa Mill  
Docket No. 40-8681

Revision of March 5, 1997

Prepared by:  
Energy Fuels Nuclear, Inc.  
1515 Arapahoe Street, Suite 900  
Denver, CO 80202

Contact: Michelle R. Rehmann, Environmental Manager  
Phone: (303) 899-5647

Submitted to:

United States Nuclear Regulatory Commission  
2 White Flint North, Mail Stop T-7J9  
11545 Rockville Pike  
Rockville, MD 20852

9704110173 970317  
PDR ADOCK 04008681  
C PDR

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1.2 Review of Hazardous Constituent Data .....	2
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### List of Attachments

Attachment 1	[ ]
Attachment 2	[ ]
Attachment 3	[ ]
Attachment 3a	[ ]
Attachment 4	Energy Fuels Nuclear, Inc. White Mesa Mill Equipment Release/Radiological Survey Procedure.

## INTRODUCTION

Energy Fuels Nuclear, Inc. ("EFN") operates an NRC-licensed uranium mill located approximately six miles south of Blanding, Utah. The mill processes natural (native, raw) uranium ores and feed materials other than natural ores. These alternate feed materials are generally processing products from other extraction procedures, which EFN will process primarily for the source material content. All waste associated with this processing is, therefore, 11e.(2) byproduct material; or, as stated in the alternate feed analysis noticed in Federal Register Volume 57, No. 93:

"The fact that the term 'any ore' rather than 'unrefined and unprocessed ore' is used in the definition of 11e.(2) byproduct material implies that a broader range of feed materials could be processed in a mill, with the wastes still being considered as 11e.(2) byproduct material".

This application to amend NRC Source Material License SUA-1358 requests an amendment to allow EFN to process a specific alternate feed primarily for its source material content, and to dispose of the associated 11e.(2) byproduct material.

### 1.0 MATERIAL COMPOSITION AND VOLUME

The "material owner", [ ] will overpack and load for shipping material described as [ ], designated as the [ ] "uranium material". The uranium material is currently contained in approximately [ ] 55-gallon drums, and weighs approximately [ ]. The material owner estimates the average uranium content to be [ ] percent. Physically, the uranium material consists of a moist solid (up to 50 percent moisture). Descriptions of the uranium material, including analytical data showing uranium concentrations ranging from [ ] percent, are included as Attachment 1.

#### 1.1 Radiochemical Data

The analytical data listed on Table II of Attachment 1 show average uranium content to range from [ ] percent. The material owner estimates the average uranium content of the uranium material to be approximately [ ] percent. This uranium content justifies processing this material to extract uranium.

## 1.2 Review of Hazardous Constituent Data

NRC guidance suggests that if a proposed feed material consists of hazardous waste, listed under subpart D §§261.30-33 of 40 CFR (or comparable RCRA authorized State regulations), it would be subject to EPA (or State) regulation under RCRA. To avoid the complexities of NRC/EPA dual regulation, such feed material may not be approved for processing at a licensed mill. If the licensee can show that the proposed feed material does not consist of a listed hazardous waste, this issue is resolved. NRC guidance further states that feed material exhibiting only a characteristic of hazardous waste (ignitable, corrosive, reactive, toxic) would not be regulated as hazardous waste and could therefore be approved for recycling and extraction of source material. The NRC Alternate Feed Guidance also states that NRC staff may consult with EPA (or the State) before making a determination of whether the feed material contains hazardous waste.

The material owner has determined that the uranium material exhibits two characteristics of hazardous waste. Sampling and analysis has established that the material includes selenium above the TCLP regulatory threshold and a pH in excess of 12.5. However, NRC guidance quoted above states that these characteristics do not prohibit the material from being approved for recycling and extraction of source material. Furthermore, the material owner has reviewed all available data and process knowledge to ensure that the material does not contain listed hazardous waste, and has coordinated such review with the State in which the uranium material is located [ ]. The State [ ] ("State") Division of Environmental Protection has been granted final authorization from EPA for the State-administered RCRA program.

Attachment 2 is a letter from the material owner which transmits to EFN letters from the material owner to the State [ ] Division of Environmental Protection and from the State to the material owner, respectively, (Attachments 3 and 3a) in which the material owner proposes, and the State concurs, that the uranium material does not contain listed hazardous waste. The State has indicated that until the material owner can demonstrate that the uranium material can be used as an alternate feedstock, the State is requiring the material owner to manage it on site as has a characteristic hazardous waste at the material owner's facility. Once it is conclusively demonstrated that the uranium material has a beneficial use, the State has agreed to declare the uranium material a non-RCRA regulated material. In the State's opinion, this will be demonstrated with this amendment to the license.

### **1.3 Regulatory Considerations**

According to NRC guidance, for the tailings and wastes from the proposed processing to qualify as 11e.(2) byproduct material, the feed material must qualify as "ore." NRC has stated alternate feed material is determined to be ore, by the following definition:

"Ore is a natural or native matter that may be mined and treated for the extraction of any of its constituents or any other matter from which source material is extracted in a licensed uranium or thorium mill".

#### Classification as Alternate Feed

As described under 1.2 above, the uranium material as alternate feed to a licensed uranium mill, would not be subject to regulation as a hazardous waste as defined in the Resource Conservation and Recovery Act, as amended, 42 U.S.C. §6901-6991 and its implementing regulations, or comparable State laws or regulations governing the regulation of hazardous wastes. In Section 4.0, below, EFN certifies that the feed material is to be processed primarily for the recovery of uranium and for no other primary purpose. EFN justifies the certification on the basis of the high uranium content of the feed material.

### **1.4 Shipping**

The material will be shipped to the White Mesa Mill in DOT 17-H, 55-gallon drums. The 55-gallon drums will be packaged in 85-gallon steel drums to ensure prevention of any leakage or contamination to the environment.

The material will be shipped as LSA (low specific activity) Radioactive Hazard Class 7 Hazardous Material as defined by DOT regulations. The material owner will be responsible for properly labeling, placarding and manifesting the shipments in addition to selecting a vendor licensed to transport the material. Each shipment will be exclusive use (i.e., the only material on the shipment will be the uranium material).



## 2.0 PROCESS

The uranium material will be added to the mill circuit in a manner similar to that used for processing the calcium fluoride material in 1996. The uranium material will either be dumped into a small batch tank, slurried, then pumped to the No. 2 Pulp Storage Tank, or it will be processed through the SAG mill before being pumped to No. 2 Pulp Storage.

The pH adjustment will begin in Pulp Storage Tank No. 2 with the addition of sulfuric acid. After initial pH adjustment, the slurry will be pumped to the leach circuit, where it will be mixed with tailings solution for final pH adjustment. Additional sulfuric acid will be added as necessary for pH control in the leach circuit. The solution will then be transferred to the CCD circuit for washing.

The solution will be advanced through the remainder of the mill circuitry with no anticipated modifications to either the circuit or recovery process.

### **3.0 SAFETY MEASURES**

This section describes how the uranium material will be introduced into the mill circuit, and the safety measures to be employed.

Material transported in drums will be either dumped into the mix transfer tank, or processed through the grizzly into the SAG mill, then pumped to the leach circuit. There are no process changes to the mill circuit and the extraction process sequence is identical to processing conventional uranium ore.

Employee exposure potential during initial material handling operations is expected to be no more significant than what is normally encountered during conventional milling operations. Employees will be provided with personal protective equipment including full-face respirators. Airborne particulate samples will be collected and analyzed for gross alpha concentrations. If uranium airborne concentrations exceed 25 percent of the DAC, full-face respiratory protection will be implemented during the entire sequence of material dumping operations. Spills and splashed material that may be encountered during this initial material processing shall be wetted and collected during routine work activity. Sample material of the uranium material indicates it is a [ ]. Therefore, it is anticipated that no unusual PPE apparel will be required other than coveralls and rubber gloves during material handling activities. Respiratory protection will be implemented as determined.

#### **3.1 Control of Airborne Contamination**

EFN does not anticipate unusual or extraordinary airborne contamination dispersion when processing the uranium material. The contamination potential is expected to be less than what is normally encountered when processing conventional uranium ore. The material will be contained in 55-gallon drums. The successive extraction process circuitry from CCD through solvent extraction and into precipitation are all liquid processes, and the potential for airborne contamination dispersion is minimal.

Uranium extraction proceeds through the mill circuit as if the process material were uranium ore. As the material is dumped onto the ore transfer belt, water is sprayed into the grizzly enclosure, which minimizes dust dispersion. As the material is transferred through the ore transfer tunnel into the SAG mill, a water spray system along the length of the transfer belt is activated. If it becomes more practicable to dump individual 55-gallon drums into the mix transfer tank as in

bulk processing, a water spray system on top of the mix tank will be activated. The material is a moist cake as received (moisture content > 5 percent). Nevertheless, water spray provisions are provided when handling individual drums or bulk material processing.

The efficiency of airborne contamination control measures during the material handling operations will be assessed in the immediate vicinity of the mix tank and next to the grizzly enclosure. Airborne particulate samples and breathing zone samples will be collected in those areas during initial material processing activities and analyzed for gross alpha. The results will establish health and safety guidelines which will be implemented throughout the material processing operations.

Personal protective equipment, including respiratory protection, will be provided to those individuals engaged in material processing. Additional environmental air samples will be taken at nearby locations in the vicinity of material processing activities to ensure adequate contamination control measures are effective and that the spread of uranium airborne particulates has been prevented.

### **3.2 Radiation Safety**

The radiation safety program which exists at the White Mesa Mill, pursuant to the conditions and provisions of NRC License Number SUA-1358, and applicable Regulations of the Code of Federal Regulations, Title 10, is adequate to ensure the maximum protection of the worker and environment, and is consistent with the principle of maintaining exposures of radiation to individual workers and to the general public to levels As Low As Reasonably Achievable (ALARA).

### **3.3 Vehicle Scan**

As uranium material arrives at the White Mesa Mill site, an initial radiation survey will be made of the vehicle and contents to ensure the cargo has not sustained any leakage or rupture of contents during transportation, and that the radiation levels are consistent with DOT requirements. After the cargo has been offloaded at the mill site, a radiation survey of the vehicle and any returned overpack drums will be performed consistent with standard mill procedures (Attachment 4). In general, radiation levels are in accordance with applicable values contained in the NRC "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material." If radiation levels indicate values in excess of the above limits, appropriate decontamination procedures would be implemented. However, these limits are appropriate for materials and equipment released for unrestricted use only, and do not apply to restricted exclusive use shipments. As stated in Section

1.4 above, the shipments of uranium material to and from the White Mesa Mill will be dedicated, exclusive loads; therefore, radiation surveys and radiation levels consistent with DOT requirements will be applied to returning vehicles and cargo.

#### **4.0 CERTIFICATION**

Laboratory analysis indicates the uranium material contains approximately [ ] percent uranium. Processing costs to recover the uranium content from the uranium material are minimal, and the processing of this material will be profitable to EFN. Following is the Certification that the material is being processed primarily for recovery of uranium.

**Certification of Energy Fuels Nuclear, Inc.  
(the "Licensee")**

I, Richard A. Munson, the undersigned, for and on behalf of the Licensee, do hereby certify as follows:

1. The Licensee intends to require from the [ ] a Contract under which the Licensee will acquire certain material, in the form of certain residues, to process at the White Mesa Uranium Mill for the recovery of uranium. The Licensee hereby certifies and affirms that such residue material is being processed primarily for the recovery of uranium and for no other primary purpose.

2. The Licensee further certifies and affirms that such residue material, as alternate feed to a licensed uranium mill, is not subject to regulation as a hazardous waste as defined in the Resource Conservation and Recovery Act, as amended, 42 U.S.C. §6901-6991 and its implementing regulations, or comparable State laws or regulations governing the regulation of hazardous wastes. The Licensee is obtaining such residue material as an alternate feed, consistent with NRC guidance, for the uranium recovery process being conducted at the White Mesa Mill.

  
Signature

March 5, 1997  
Date

Richard A. Munson  
Corporate Counsel  
Energy Fuels Nuclear, Inc.

## AFFIDAVIT

I, Richard A. Munson, Corporate Counsel of Energy Fuels Nuclear, Inc. ("EFN") do swear that the enclosed request to the U.S. Nuclear Regulatory Commission ("NRC"), revised as of March 5, 1997, for an Amendment to Source Material License SUA-1358, contains confidential commercial and/or financial information held in confidence by EFN and that it meets the criteria as listed under §63.2 of the Government Records and Access Act, and 10 CFR 2.790(b).

In support of the claim of confidentiality, the following is submitted:

### IDENTITY OF DOCUMENT OR PART SOUGHT TO BE WITHHELD:

- a. The parts of the cover letter transmitting the Request for Amendment to be withheld as confidential are set forth in brackets on pages 1-3 of the letter;
- b. The parts of the body of the Request for Amendment to be withheld as confidential are set forth in brackets on pages 1-9 of the Request;
- c. Attachment 1 is to be withheld;
- d. Attachment 2 is to be withheld;
- e. Attachment 3 is to be withheld;
- f. Attachment 3a is to be withheld.

### STATEMENT OF REASONS:

#### General Statement

EFN understands that the policy of the Commission concerning commercial or financial information, believed by EFN to be confidential, is to achieve an effective balance between legitimate concerns for protection of competitive positions and the right of the public to be fully apprised as to the basis for and effects of licensing actions. EFN further understands that it is within the discretion of the Commission to withhold confidential commercial or financial information.

EFN is actively seeking alternative feedstocks of material containing commercial quantities of uranium that can be recovered at the White Mesa Mill. EFN has invested significant time and monies in developing information and contacts necessary to achieve the market position EFN is developing for such recovery projects. The alternative feedstocks are an integral piece of EFN's long term business plan and they play a role in maintaining jobs and activity at the White Mesa Mill.

Initially, EFN did not appreciate the value that its contacts represented. However, as evidenced by the interest shown in industry publications following the submittal of the Request for Amendment filed for the alternative feedstock commonly referred to as the "KOH Material", EFN now realizes that its contacts and business arrangements with those contacts has significant intrinsic value much like "customer lists" developed by retail or publishing businesses which are recognized, and closely guarded, as confidential and proprietary information.

Consistent with this realization of EFN's place in the marketplace and the value of its customer list, EFN is requesting that (i) information related to the source of the alternative feedstock, and (ii) information concerning how EFN has structured its arrangement with the source of the material, be withheld from public disclosure because disclosure of such information is likely to cause substantial harm to the competitive position of EFN.

#### Specific Points

- The confidential information is currently held in confidence by EFN.
- As described above, the confidential information is currently information of the type that is normally held in confidence by EFN.
- The confidential information is being transmitted to the NRC in confidence.
- While the confidential information contains some data available from public sources, EFN's claim of confidentiality is based on the fact that if the confidential information is divulged in this licensing process, EFN's competitors will obtain such data in a format and context that is different than would be available from the public agencies. That is to say that disclosure of the confidential information as a collection of information from many sources would provide those competitors with knowledge of EFN's business arrangement that could significantly harm the competitive position of EFN. While EFN's competitors could obtain some of the data from public agencies, they would have to go to several different agencies and search in several sets of records. EFN has already performed this work which has been an integral part of EFN obtaining this business arrangement and its market share. To divulge this work in its "packaged" form, as included in this Request for Amendment, will provide EFN's competitors with information that they could use to interfere with this business arrangement and EFN's competitive position.



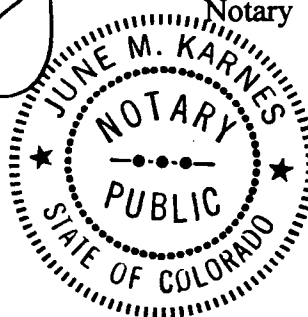
I hereby certify to the Commission that I have been specifically delegated the function of reviewing the information sought to be withheld and that I am authorized to apply for its withholding on behalf of Energy Fuels Nuclear, Inc.

STATE OF COLORADO )  
  )  
COUNTY OF DENVER )

Richard A. Munson  
Richard A. Munson  
Corporate Counsel  
Energy Fuels Nuclear, Inc.

On this 5th day of March 1997, personally appeared before me Richard A. Munson, who being duly sworn, did say that he is the Corporate Counsel of Energy Fuels Nuclear, Inc., and that the said instrument was signed on behalf of said corporation.

My Commission expires March 13, 1998

June M. Karnes  
Notary  


# **ATTACHMENT 4**

**Energy Fuels Nuclear, Inc.  
White Mesa Mill  
Equipment Release/Radiological Survey Procedure**

Attachment 4

## **2.1 Release of Equipment**

All materials, equipment and scrap which are intended for release from the mill site for unrestricted use, are surveyed for radiological contamination levels in accordance with the limits set forth in NRC document, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of License for Byproduct of Source Materials", dated September, 1984. The instructions in this guide in conjunction with Table I specify the radioactivity and Radiation exposure rate limits which are used in accomplishing the decontamination and survey of surfaces and equipment prior to abandonment or release for unrestricted use.

### **2.1.1. Materials and Scrap**

Scrap material and equipment such as pumps, process equipment, etc. which require repair services are cleaned appropriately in an effort to eliminate residual contamination prior to surveying for radiological contamination levels. Radioactivity on the surface of equipment and materials is measured by surveying for alpha contamination, using the appropriate, portable, calibrated alpha survey instruments, such as Eberline Model ESP-1 "Portable Smartmeter" surveying instrument equipped with an AC-3-7 alpha scintillation probe, or other equivalent instrument. Radiation exposure rate measurements are made on these materials using calibrated exposure rate instruments such as a Ludlum Model 3 Beta-Gamma survey meter and probe or equivalent instrument. Materials and equipment are released from the mill site for unrestricted use if the total alpha contamination concentration and exposure rate measurements are less than the applicable limits contained in Table I of the NRC Guide.

### **2.1.2. Procedure**

- 1. Obtain appropriate calibrated alpha survey instrument from radiological lab.**
- 2. Check meter performance and function using Th-230 calibration source.**
- 3. Survey items on surface for alpha contamination at numerous locations sufficient to determine average and potential maximum contamination levels.**
- 4. Slowly scan over surface of each item @ 1 cm height and determine average and maximum exposure rate measurements.**

### 2.1.2 continued

5. Contamination levels exercised at the mill site for release of equipment for unrestricted use is a total alpha contamination level of 1000 disintegrations per minute per 100 cm<sup>2</sup> (dpm/100 cm<sup>2</sup>), and a radiation exposure limit of 0.2 millirad per hour (mr/hr) with a maximum not to exceed 1.0 mr/hr.
6. In the event these limits are exceeded, the item is decontaminated by appropriate means and re-surveyed.
7. If the limits for a total alpha contamination is again exceeded, an alpha smear survey over 100 cm<sup>2</sup> area is taken to determine removable alpha contamination. In addition, a fixed alpha measurement of the area is made using an alpha meter. If the limits of Table I NRC Guide are exceeded, a more rigorous decontamination method is applied.

### 2.1.3 Vehicle and Mobile Equipment Release

Vehicle and mobile equipment release proceeds on a similar basis as material and equipment release. An alpha survey is made and an exposure survey is made on the interior and exterior surfaces of the vehicle, particularly the tires and exposed undercarriage, if the conveyance is non-dedicated for exclusive use transport. Paying particular attention to the tires and undercarriage during a survey determines whether a vehicle has become contaminated while crossing in and through the mill Restricted Area. The applicable criteria for contamination limits, decontamination, procedures, surveys / re-surveys and ultimate release are identical to those in paragraph 2.1.2.

If a vehicle is classified as exclusive use whose single transport purpose is intended specifically for hauling radioactive materials on a continued basis, then, only the exterior surface and tires of the transport vehicle are surveyed when leaving the restricted area. Examples of these transport vehicles include: ore haulage trucks and closed bulk transport tankers. Applicable alpha contamination and exposure rate levels are those specified in 49 CFR 173.441 and 173.442. The mill site exercises an alpha contamination control level of 1000 dpm/100 cm<sup>2</sup> protocol for the transport vehicle tires only upon exiting the mill site. No internal alpha surveys are done on the internal surfaces of closed transport tankers dedicated for exclusive use until these vehicles become decommissioned.

**ATTACHMENT 3**



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

April 2, 1997

Energy Fuels Nuclear, Inc.  
ATTN: Mr. Richard Munson,  
Corporate Counsel  
1515 Arapahoe Street, Suite 900  
Denver, Colorado 80202

SUBJECT: REQUEST FOR WITHHOLDING INFORMATION FROM PUBLIC DISCLOSURE,  
ENERGY FUELS NUCLEAR, INC., SOURCE MATERIAL LICENSE SUA-1358

Dear Mr. Munson:

By your affidavit dated March 5, 1997, amended by letter dated March 17, 1997, you submitted commercial information and requested that it be withheld from public disclosure pursuant to 10 CFR 2.790. Your affidavit was transmitted by a March 5, 1997, application for a license amendment from Energy Fuels Nuclear, Inc. (EFN) for authorization to receive and process uranium material at EFN's White Mesa uranium mill, located near Blanding, Utah. A non-proprietary version of this amendment application also was submitted.

You stated that the submitted information should be considered exempt from mandatory public disclosure for the following reasons:

- The information is currently held, and is of the type of information that is normally held, in confidence by EFN.
- A competitor's knowledge of the information and associated data could significantly harm EFN's competitive business position.

We have reviewed your application and the material in accordance with the requirements of 10 CFR 2.790 and, on the basis of your statements, have determined that the submitted information sought to be withheld contains proprietary commercial information. Therefore, the version of the submitted information marked as proprietary will be withheld from public disclosure pursuant to 10 CFR 2.790(b)(5) and section 103(b) of the Atomic Energy Act of 1954, as amended.

Withholding from public inspection shall not affect the right, if any, of persons properly and directly concerned to inspect the documents. If the need arises, we may send copies of this information to our consultants working in this area. We will, of course, ensure that the consultants have signed the appropriate agreements for handling proprietary information.

If the basis for withholding this information from public inspection should change in the future such that the information could then be made available for public inspection, you should promptly notify the NRC. You also should understand that the NRC may have cause to review this determination in the

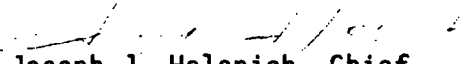
R. Munson

- 2 -

future, for example, if the scope of a Freedom of Information Act request includes your information. In all review situations, if the NRC makes a determination adverse to the above, you will be notified in advance of any public disclosure.

If you have any questions regarding this letter, please contact the NRC Project Manager for the White Mesa mill, Mr. James Park, at (301) 415-6699.

Sincerely,

  
Joseph J. Holonich, Chief  
Uranium Recovery Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 40-8681  
License No. SUA-1358

cc: W.Sinclair, UT

R. Munson

- 2 -

future, for example, if the scope of a Freedom of Information Act request includes your information. In all review situations, if the NRC makes a determination adverse to the above, you will be notified in advance of any public disclosure.

If you have any questions regarding this letter, please contact the NRC Project Manager for the White Mesa mill, Mr. James Park, at (301) 415-6699.

Sincerely,

(Original signed by)

Joseph J. Holonich, Chief  
Uranium Recovery Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 40-8681  
License No. SUA-1358

cc: W.Sinclair, UT

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OFC	URB	C	URB		OGC	C	URB	K
NAME	JPark <i>JRP</i>		DGillen		MSiemien <i>MPS</i>		JHolonich	
DATE	3/31/97		3/ /97		3/31/97		3/2/97	

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**ATTACHMENT 4**



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

April 2, 1997

Energy Fuels Nuclear, Inc.  
ATTN: Ms. Michelle Rehmann,  
Environmental Manager  
1515 Arapahoe Street, Suite 900  
Denver, Colorado 80202

SUBJECT: AMENDMENT 1 TO SOURCE MATERIAL LICENSE SUA-1358, ENERGY FUELS  
NUCLEAR, INC.'S WHITE MESA URANIUM MILL, BLANDING, UTAH

Dear Ms. Rehmann:

The U.S. Nuclear Regulatory Commission staff has completed its review of Energy Fuels Nuclear, Inc.'s (EFN's) request to amend NRC Source Material License SUA-1358 for the White Mesa mill, submitted by letter dated March 5, 1997. EFN requested that SUA-1358 be amended to allow receipt and processing of uranium-bearing material.

The details of the amendment request are discussed in the NRC staff's Technical Evaluation Report (TER). The TER documents the basis for the NRC staff's evaluation of the amendment request and is provided as Enclosure 1. The NRC staff reviewed EFN's request in accordance with 10 CFR Part 40, Appendix A, requirements and NRC staff guidance "Final Position and Guidance on the Use of Uranium Mill Feed Material Other Than Natural Ores" (60 FR 49296; September 22, 1995). Based on its review, the NRC staff has found the proposed amendment to be acceptable.

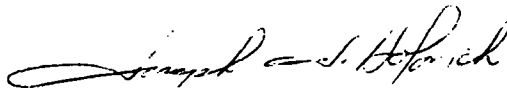
Therefore, pursuant to Title 10 of the Code of Federal Regulations, Part 40, Source Material License SUA-1358 is hereby amended by adding License Condition No. 10.8. All other conditions of this license shall remain the same. The enclosed license is being reissued to incorporate the above modification (Enclosure 2). An environmental review was not performed since this administrative action is categorically excluded under 10 CFR 51.22(c)(11).

M. Rehmann

- 2 -

If you have any questions regarding this letter or the enclosures, please contact the NRC Project Manager for the White Mesa mill, Mr. James Park, at (301) 415-6699.

Sincerely,



Joseph J. Holonich, Chief  
Uranium Recovery Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 40-8681  
SUA-1358, Amendment No. 1  
Case Closed: L51501

Enclosures: As stated

cc: W. Sinclair, UT

M. Rehmann

- 2 -

If you have any questions regarding this letter or the enclosures, please contact the NRC Project Manager for the White Mesa mill, Mr. James Park, at (301) 415-6699.

Sincerely,

(Original signed by)

Joseph J. Holonich, Chief  
Uranium Recovery Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 40-8681  
SUA-1358, Amendment No. 1  
Case Closed: L51501

Enclosures: As stated

cc: W. Sinclair, UT

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OFC	URB	E	URB	URB	D		
NAME	JPark <i>JPP</i>		DGillet	JHolonich			
DATE	4/2/97		1/1/97	4/3/97			

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TECHNICAL EVALUATION REPORT  
FOR REQUEST TO RECEIVE AND PROCESS ALTERNATE FEED MATERIAL

DOCKET NO. 40-8681

LICENSE NO. SUA-1358

LICENSEE: Energy Fuels Nuclear, Inc.

FACILITY: White Mesa Uranium Mill

PROJECT MANAGER: James Park

SUMMARY AND CONCLUSIONS:

The U.S. Nuclear Regulatory Commission staff has reviewed Energy Fuels Nuclear, Inc.'s (EFN's) request to receive and process uranium-bearing material, as submitted by EFN's amendment request of March 5, 1997. Based on its review, the NRC staff considers the amendment request acceptable.

DESCRIPTION OF LICENSEE'S AMENDMENT REQUEST:

By its submittal dated March 5, 1997, EFN requested that NRC Source Material License SUA-1358 be amended to allow receipt and processing of alternate feed material (i.e., material other than natural ore) at its White Mesa uranium mill located near Blanding, Utah. This uranium-bearing material would be shipped by the material owner to the White Mesa mill in overpacked 55-gallon drums aboard exclusive use vehicles. The material is a moist solid (up to 50 percent moisture) which contains significant concentrations of uranium.

EFN will add the uranium-bearing material to the mill circuit by either of two methods: (1) dumping the contents of a drum(s) into a small batch tank to be slurried before pumping to a storage tank; or (2) processing through the grizzly into the semi-autogenous grinding (SAG) mill, then pumping to a storage tank. Following pH adjustments in the storage tank, the slurried material will be introduced into the leach circuit. Water spray systems will be utilized in both situations to reduce the potential for dust dispersion and airborne contamination. In addition, no changes to the present mill circuit are required to process this material.

EFN will provide personal protective equipment, including respiratory protection, to individuals engaged in processing the material. The efficiency of airborne contamination control measures during the material handling operations will be assessed in the immediate vicinity of the mix tank and next to the grizzly enclosure. Airborne particulate samples and breathing zone samples will be collected in those areas during initial material processing activities and analyzed for gross alpha. Sampling results will be used to establish health and safety guidelines to be implemented throughout the processing operations.

Additional environmental air samples will be collected at nearby locations to the material processing activities and analyzed to ensure that the established contamination control measures are adequate and effective.

Trucks used to transport the material to the mill site will be radiometrically scanned upon arrival to ensure that leakage has not occurred and that radiation levels are within appropriate limits. Trucks will again be scanned prior to their release from the site restricted area.

#### TECHNICAL EVALUATION:

The NRC staff has reviewed EFN's request in accordance with 10 CFR Part 40, Appendix A, requirements and NRC staff guidance "Final Position and Guidance on the Use of Uranium Mill Feed Material Other Than Natural Ores" (60 FR 49296; September 22, 1995). This guidance (referred to hereinafter as the alternate feed guidance) requires that the staff make the following determinations in its reviews of licensee requests to process material other than natural uranium ores.

1. Whether the feed material meets the definition of "ore:"
2. Whether the feed material contains hazardous waste; and
3. Whether the ore is being processed primarily for its source-material content.

#### Determination of whether the feed material is "ore"

For the tailings and wastes from the proposed processing to qualify as 11e.(2) byproduct material, the feed material must qualify as "ore." In the alternate feed guidance, ore is defined as

"... a natural or native matter that may be mined and treated for the extraction of any of its constituents or any other matter from which source material is extracted in a licensed uranium or thorium mill."

EFN is proposing to extract source material from the uranium-bearing material. Therefore, the material meets the definition, because it is a "matter from which source material is extracted in a licensed uranium or thorium mill."

#### Determination of whether the feed material contains hazardous waste

Under the alternate feed guidance, proposed feed material which contains a listed hazardous waste will not be approved by the NRC staff for processing at a licensed mill. Feed materials which exhibit only a characteristic of hazardous waste (i.e., ignitability, corrosivity, reactivity, or toxicity) would not be regulated as hazardous waste and could therefore be approved by the staff for recycling and extraction of source material. However, this does not apply to residues from water treatment. Therefore, NRC staff acceptance of such residues as feed material would depend on their not containing any hazardous or characteristic hazardous waste.

The uranium-bearing material's owner has determined that the material does not contain a listed hazardous waste. However, the material does exhibit two

characteristics of hazardous waste: corrosivity (due to a pH in excess of 12.5) and toxicity (due to selenium concentrations above the Toxicity Characteristic Leaching Procedure (TCLP) regulatory threshold). The material's owner has addressed these findings with the State Department of Environmental Protection (DEP) in the state in which the material is located. The State DEP, which has been granted final authorization from the U.S. Environmental Protection Agency for the State-administered Resource Conservation and Recovery Act (RCRA) program, concurred in the material owner's determination. Copies of the correspondence between the material owner and the State DEP were provided with the amendment application; the NRC staff has reviewed this correspondence and finds the uranium-bearing material, while exhibiting characteristics of hazardous waste, does not contain a listed hazardous waste.

The NRC staff has determined also that the uranium-bearing material is not a residue from water treatment.

Therefore, the NRC staff considers the uranium-bearing material acceptable for recycling and extraction of source material.

#### Determination of whether the feed material is being processed primarily for its source-material content

To show that potential alternate feed material is being processed primarily for its source-material content, a licensee must either (1) demonstrate that the material would be approved for disposal in the tailings impoundment under the "Final Revised Guidance on Disposal of Non-Atomic Energy Act of 1954, Section 11e.(2) Byproduct Material in Tailings Impoundments;" or (2) certify, under oath or affirmation, that the material is being processed primarily for the recovery of uranium and for no other primary purpose and provide justification with documentation.

The licensee has provided a signed affirmation that the uranium-bearing material is being processed primarily for the recovery of uranium and for no other primary purpose. EFN states that the high uranium content of the material justifies processing to extract uranium. The NRC staff has reviewed the analytical data provided by EFN and finds that the concentration of uranium in the material is well above that seen in natural ore. Therefore, the NRC staff considers EFN's justification to be acceptable.

#### Conclusions concerning alternate feed material designation

Based on the information provided by the licensee, the NRC staff finds that the uranium-bearing material is alternate feed material because: (1) it meets the definition of "ore," (2) it does not contain hazardous waste, and (3) it is being processed primarily for its source-material content.

#### Other considerations

The NRC staff has also concluded that the processing of this material will not result in (1) a significant change or increase in the types or amounts of effluents that may be released offsite; (2) a significant increase in

individual or cumulative occupational radiation exposure; (3) a significant construction impact; or (4) a significant increase in the potential for or consequences from radiological accidents. This conclusion is based on the following information:

- a. Processing of this material will not result in the currently-approved annual yellowcake production limit of 4380 tons being exceeded.
- b. No physical changes to the mill circuit are required to process this material.
- c. Processing this material will not require EFN to enlarge its tailings disposal facilities.
- d. Trucks transporting the material to the mill site will be surveyed and decontaminated, as necessary, in accordance with EFN's procedures, before leaving the site.
- e. Employees involved in handling the material will be provided with personal protective equipment, including respiratory protection. Airborne particulate and breathing zone sampling results will be used to establish health and safety guidelines to be implemented throughout the processing operations.

#### RECOMMENDED LICENSE CHANGE:

Pursuant to Title 10 of the Code of Federal Regulations, Part 40, Source Material License SUA-1358 is amended by the addition of License Condition No. 10.8 as follows:

10.8 The licensee is authorized to receive and process source material, in accordance with the amendment request dated March 5, 1997.

#### ENVIRONMENTAL IMPACT EVALUATION:

An environmental review was not performed since this action is categorically excluded under 10 CFR 51.22(c)(11).



**MATERIALS LICENSE**

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, U.S.C., and Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below, to use such material for the purposes(s) and at the place(s) designated below, to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of 10 CFR applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee

1. Energy Fuels Nuclear, Inc.	3. License Number	SUA-1358, Amendment No. 1
2. 6425 S. Highway 191 P.O. Box 789 Blanding, Utah 84511	4. Expiration Date	March 31, 2007
	5. Docket or Reference No.	40-8681
6. Byproduct, Source, and/or Special Nuclear Material	7. Chemical and/or Physical Form	8. Maximum Amount that Licensee May Possess at Any One Time Under This License
Natural Uranium	Any	Unlimited

**SECTION 9: Administrative Conditions**

- 9.1 The authorized place of use shall be the licensee's White Mesa uranium milling facility, located in San Juan County, Utah.
- 9.2 All written notices and reports to the NRC required under this license, with the exception of incident and event notifications under 10 CFR 20.2202 and 10 CFR 40.60 requiring telephone notification, shall be addressed to the Chief, Uranium Recovery Branch, Division of Waste Management, Office of Nuclear Material Safety and Safeguards.  
  
Incident and event notifications that require telephone notification shall be made to the NRC Operations Center at (301) 816-5100.
- 9.3 The licensee shall conduct operations in accordance with statements, representations, and conditions contained in the license renewal application submitted by letter dated August 23, 1991, as revised by submittals dated January 13, and April 7, 1992, November 22, 1994, July 27, 1995, December 13, 1996, and January 30, 1997, which are hereby incorporated by reference, and May 10, 1994, for the Standby Trust Agreement, except where superseded by license conditions below.  
  
Whenever the word "will" is used in the above referenced documents, it shall denote a requirement.
- 9.4 A. The licensee may, without prior NRC approval, and subject to the conditions specified in Part B of this condition:

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number

SUA-1358, Amendment No. 1

Docket or Reference Number

40-8681

April 2, 1997

- (1) Make changes in the facility or process, as presented in the application.
  - (2) Make changes in the procedures presented in the application.
  - (3) Conduct tests or experiments not presented in the application.
- B. The licensee shall file an application for an amendment to the license, unless the following conditions are satisfied.
- (1) The change, test, or experiment does not conflict with any requirement specifically stated in this license, or impair the licensee's ability to meet all applicable NRC regulations.
  - (2) There is no degradation in the essential safety or environmental commitments in the license application, or provided by the approved reclamation plan.
  - (3) The change, test, or experiment are consistent with the conclusions of actions analyzed and selected in this EA.
- C. The licensee's determinations concerning Part B of this condition, shall be made by a "Safety and Environmental Review Panel (SERP)." The SERP shall consist of a minimum of three individuals. One member of the SERP shall have expertise in management and shall be responsible for managerial and financial approval changes; one member shall have expertise in operations and/or construction and shall have responsibility for implementing any operational changes; and, one member shall be the corporate radiation safety officer (CRSO) or equivalent, with the responsibility of assuring changes conform to radiation safety and environmental requirements. Additional members may be included in the SERP as appropriate, to address technical aspects such as health physics, groundwater hydrology, surface-water hydrology, specific earth sciences, and other technical disciplines. Temporary members or permanent members, other than the three above-specified individuals, may be consultants.
- D. The licensee shall maintain records of any changes made pursuant to this condition until license termination. These records shall include written safety and environmental evaluations, made by the SERP, that provide the basis for determining changes are in compliance with the requirements referred to in Part B of this condition. The licensee shall furnish, in an annual report to NRC, a description of such changes, tests, or experiments, including a summary of the safety and environmental evaluation of each. In addition, the licensee shall annually submit to the NRC changed pages to the Operations Plan and Reclamation Plan of the approved license application to reflect changes made under this condition.

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number

SUA 1358, Amendment No. 1

Docket or Reference Number

40-8681

April 2, 1997

The licensee shall submit to the NRC by April 30, 1997, for review, the standard operating procedures (SOPs) needed to implement this license condition. The licensee shall not implement any provision of this license condition until NRC has found the proposed SOPs acceptable.

- 9.5 The licensee shall maintain an NRC-approved financial surety arrangement, consistent with 10 CFR 40, Appendix A, Criteria 9 and 10, adequate to cover the estimated costs, if accomplished by a third party, for decommissioning and decontamination of the mill and mill site, for reclamation of any tailings or waste disposal areas, ground-water restoration as warranted and for the long-term surveillance fee. Within three months of NRC approval of a revised reclamation/decommissioning plan, the licensee shall submit, for NRC review and approval, a proposed revision to the financial surety arrangement if estimated costs in the newly approved plan exceed the amount covered in the existing financial surety. The revised surety shall then be in effect within 3 months of written NRC approval.

Annual updates to the surety amount, required by 10 CFR 40, Appendix A, Criteria 9 and 10, shall be submitted to the NRC at least 3 months prior to the anniversary date which is designated as June 4 of each year. If the NRC has not approved a proposed revision to the surety coverage 30 days prior to the expiration date of the existing surety arrangement, the licensee shall extend the existing surety arrangement for 1 year. Along with each proposed revision or annual update, the licensee shall submit supporting documentation showing a breakdown of the costs and the basis for the cost estimates with adjustments for inflation, maintenance of a minimum 15 percent contingency fee, changes in engineering plans, activities performed and any other conditions affecting estimated costs for site closure. The basis for the cost estimate is the NRC approved reclamation/decommissioning plan or NRC approved revisions to the plan. The previously provided guidance entitled "Recommended Outline for Site Specific Reclamation and Stabilization Cost Estimates" outlines the minimum considerations used by the NRC in the review of site closure estimates. Reclamation/decommissioning plans and annual updates should follow this outline.

The currently approved surety instrument, Irrevocable Letter of Credit No. S00017012, issued by The Bank of New York in favor of the NRC, as amended, May 10, 1994, to include a Standby Trust Agreement, shall be continuously maintained by UMETCO in an amount not less than \$10,915,467 for the purpose of complying with 10 CFR 40, Appendix A, Criteria 9 and 10, until a replacement is authorized by the NRC.

- 9.6 Standard operating procedures shall be established and followed for all operational process activities involving radioactive materials that are handled, processed, or stored. SOPs for operational activities shall enumerate pertinent radiation safety practices to be followed. Additionally, written procedures shall be established for non-operational activities to include in-plant and environmental monitoring, bioassay

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number

SUA-1358, Amendment No. 1

Docket or Reference Number

40-8681

April 2, 1997

analyses, and instrument calibrations. An up-to-date copy of each written procedure shall be kept in the mill area to which it applies.

All written procedures for both operational and non-operational activities shall be reviewed and approved in writing by the radiation safety officer (RSO) before implementation and whenever a change in procedure is proposed to ensure that proper radiation protection principles are being applied. In addition, the RSO shall perform a documented review of all existing operating procedures at least annually.

- 9.7 Before engaging in any activity not previously assessed by the NRC, the licensee shall administer a cultural resource inventory. All disturbances associated with the proposed development will be completed in compliance with the National Historic Preservation Act (as amended) and its implementing regulations (36 CFR 800), and the Archaeological Resources Protection Act (as amended) and its implementing regulations (43 CFR 7).

In order to ensure that no unapproved disturbance of cultural resources occurs, any work resulting in the discovery of previously unknown cultural artifacts shall cease. The artifacts shall be inventoried and evaluated in accordance with 36 CFR Part 800, and no disturbance shall occur until the licensee has received authorization from the NRC to proceed.

The licensee shall avoid by project design, where feasible, the archeological sites designated "contributing" in the report submitted by letter dated July 28, 1988. When it is not feasible to avoid a site designated "contributing" in the report, the licensee shall institute a data recovery program for that site based on the research design submitted by letter from C. E. Baker of Energy Fuels Nuclear to Mr. Melvin T. Smith, Utah State Historic Preservation Officer (SHPO), dated April 13, 1981.

The licensee shall recover through archeological excavation all "contributing" sites listed in the report which are located in or within 100 feet of borrow areas, stockpile areas, construction areas, or the perimeter of the reclaimed tailings impoundment. Data recovery fieldwork at each site meeting these criteria shall be completed prior to the start of any project related disturbance within 100 feet of the site, but analysis and report preparation need not be complete.

Additionally, the licensee shall conduct such testing as is required to enable the Commission to determine if those sites designated as "Undetermined" in the report and located within 100 feet of present or known future construction areas are of such significance to warrant their redesignation as "contributing." In all cases, such testing shall be completed before any aspect of the undertaking affects a site.

Archeological contractors shall be approved in writing by the Commission. The Commission will approve an archeological contractor who meets the minimum standards for a principal investigator set forth in 36 CFR Part 66, Appendix C, and whose qualifications are found acceptable by the SHPO.

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number

SUA-1358, Amendment No. 1

Docket or Reference Number

40-8681

April 2, 1997

- 9.8 The licensee is hereby authorized to possess byproduct material in the form of uranium waste tailings and other uranium byproduct waste generated by the licensee's milling operations authorized by this license. Mill tailings shall not be transferred from the site without specific prior approval of the NRC in the form of a license amendment. The licensee shall maintain a permanent record of all transfers made under the provisions of this condition.
- 9.9 The licensee is hereby exempted from the requirements of Section 20.1902 (e) of 10 CFR Part 20 for areas within the mill, provided that all entrances to the mill are conspicuously posted in accordance with Section 20.1902 (e) and with the words, "Any area within this mill may contain radioactive material."
- 9.10 Release of equipment or packages from the restricted area shall be in accordance with "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," dated May 1987, or suitable alternative procedures approved by the NRC prior to any such release.

**SECTION 10: Operational Controls, Limits, and Restrictions**

- 10.1 The mill production rate shall not exceed 4380 tons of yellowcake per year.
- 10.2 All liquid effluents from mill process buildings, with the exception of sanitary wastes, shall be returned to the mill circuit or discharged to the tailings impoundment.
- 10.3 Freeboard limits for Cells 1-I, 3, and 4A, and tonnage limits for Cell 3, shall be as stated in Section 3.0 to Appendix c of the approved license application.
- 10.4 Disposal of material and equipment generated at the mill site shall be conducted as described in the licensee's submittals dated December 12, 1994 and May 23, 1995, with the following addition:
- A. The maximum lift thickness for materials placed over tailings shall be less than 4-feet thick. Subsequent lifts shall be less than 2-feet thick. Each lift shall be compacted by tracking of heavy equipment, such as a Cat D-6, at least 4 times prior to placement of subsequent lifts.
- 10.5 In accordance with the licensee's submittal dated May 20, 1993, the licensee is hereby authorized to dispose of byproduct material generated at licensed in situ leach facilities, subject to the following conditions:
- A. Disposal of waste is limited to 5000 cubic yards from a single source.

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- B. All contaminated equipment shall be dismantled, crushed, or sectioned to minimize void spaces. Barrels containing waste other than soil or sludges shall be emptied into the disposal area and the barrels crushed. Barrels containing soil or sludges shall be verified to be full prior to disposal. Barrels not completely full shall be filled with tailings or soil.
- C. All waste shall be buried in Cell No. 3 unless prior written approval is obtained from the NRC for alternate burial locations.
- D. All disposal activities shall be documented. The documentation shall include descriptions of the waste and the disposal locations, as well as all actions required by this condition. An annual summary of the amounts of waste disposed of from off-site generators shall be sent to the NRC.

- 10.6 The licensee is authorized to receive and process source materials from the Allied Signal Corporation's Metropolis, Illinois, facility in accordance with the amendment request dated June 15, 1993.
- 10.7 The licensee is authorized to receive and process source material from Allied Signal, Inc. of Metropolis, Illinois, in accordance with the amendment request dated September 20, 1996, and amended by letters dated October 30, and November 11, 1996.
- 10.8 The licensee is authorized to receive and process source material, in accordance with the amendment request dated March 5, 1997.  
[Applicable Amendments: 1]

**SECTION 11: Monitoring, Recording, and Bookkeeping Requirements**

- 11.1 The results of sampling, analyses, surveys and monitoring, the results of calibration of equipment, reports on audits and inspections, all meetings and training courses required by this license and any subsequent reviews, investigations, and corrective actions, shall be documented. Unless otherwise specified in the NRC regulations all such documentation shall be maintained for a period of at least five (5) years.
- 11.2 The licensee shall implement the effluent and environmental monitoring program specified in Section 5.5 of the renewal application as revised with the following modifications or additions:
  - A. Stack sampling shall include a determination of flow rate.
  - B. Surface water samples shall also be analyzed semiannually for total and dissolved U-nat, Ra-226, and Th-230, with the exception of the Westwater Creek, which shall be sampled annually for water sediments and analyzed as above. A sediment sample shall not be taken in place of a water sample unless a water sample was not available.

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- C. Groundwater sampling shall be conducted in accordance with the requirements in License Condition 11.3.
- D. The licensee shall utilize lower limits of detection in accordance with Section 5 of Regulatory Guide 4.14 (Revision 1), for analysis of effluent and environmental samples.
- E. The inspections performed semiannually of the critical orifice assembly committed to in the submittal dated March 15, 1986, shall be documented. The critical orifice assembly shall be calibrated at least every 2 years against a positive displacement Roots meter to obtain the required calibration curve.

11.3

The licensee shall implement a groundwater detection monitoring program to ensure compliance to 10 CFR Part 40, Appendix A. The detection monitoring program shall be in accordance with the report entitled, "Points of Compliance, White Mesa Uranium Mill," submitted by letter dated October 5, 1994, as modified by the following:

- A. The leak detection system for all ponds will be checked weekly. If liquid is present, it shall be analyzed for chloride, sulfate, selenium, and pH. The samples will be statistically analyzed to determine if significant linear trends exist, and the results will be submitted to NRC for review.
- B. If a significant linear trend is indicated, the licensee will submit a proposed corrective action for review and approval to NRC. The corrective action shall include a discussion on delineation of the areal extent and concentration of hazardous constituents.
- C. The licensee shall sample monitoring wells WMMW-5, -11, -12, -14, -15, and -17, on a quarterly basis. Samples shall be analyzed for chloride, potassium, nickel, and uranium, and the results of such sampling shall be included with the environmental monitoring reports submitted in accordance with 10 CFR 40.65.

11.4

During extended periods of mill standby, eight-hour annual sampling for U-nat, Ra-226, Th-230 and Pb-210 may be eliminated if routine airborne sampling show levels below 10 percent of the appropriate 10 CFR Part 20 limits.

During periods of standby, sampling frequencies for area airborne uranium sampling within the mill may be reduced to quarterly, provided measured levels remain below 10 percent of the derived air concentration (DAC). If these levels exceed 10 percent of the DAC, the sampling frequency should follow the recommendations in Regulatory Guide 8.30.

11.5

Calibration of in-plant air and radiation monitoring equipment shall be performed as specified in the license renewal application, under Section 3.0 of the "Radiation Protection Procedures Manual," with the exception that

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in-plant air sampling equipment shall be calibrated at least quarterly and air sampling equipment checks shall be documented.

- 11.6 The licensee shall perform an annual ALARA audit of the radiation safety program in accordance with Regulatory Guide 8.31.

**SECTION 12: Reporting Requirements**

- 12.1 The licensee shall submit to NRC for review, by June 30, 1997, a detailed reclamation plan for the authorized tailings disposal area which includes the following:
- A. A post-operations interim stabilization plan which details methods to prevent wind and water erosion and recharge of the tailings area.
  - B. A plan to determine the best methodology to dewater and/or consolidate the tailings cells prior to placement of the final reclamation cover.
  - C. Plan and cross-sectional views of a final reclamation cover which details the location and elevation of tailings. The plan shall include details on cover thickness, physical characteristics of cover materials, proposed testing of cover materials (specifications and quality assurance), the estimated volumes of cover materials and their availability and location.
  - D. Detailed plans for placement of rock or vegetative cover on the final reclaimed tailings pile and mill site area.
  - E. A proposed implementation schedule for items A through D above which defines the sequence of events and expected time ranges.
  - F. An analysis to show that the proposed type and thickness of soil cover is adequate to provide attenuation of radon and is adequate to assure long-term stability, as well as an analysis and proposal on methodology and time required to restore ground water in conformance to regulatory requirements.
  - G. The licensee shall include a detailed cost analysis of each phase of the reclamation plan to include contractor costs, projected costs of inflation based upon the schedule proposed in item E, a proposed contingency cost, and the costs of long-term maintenance and monitoring.



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Docket or Reference Number

40-8681

April 3, 1997

12.2 The licensee shall submit a detailed decommissioning plan to the NRC at least twelve (12) months prior to planned final shutdown of mill operations.

FOR THE NUCLEAR REGULATORY COMMISSION

Date \_\_\_\_\_

Joseph J. Holonich, Chief  
Uranium Recovery Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

**ATTACHMENT 5**



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

April 8, 1997

Energy Fuels Nuclear, Inc.  
ATTN: Ms. Michelle Rehmman,  
Environmental Manager  
1515 Arapahoe Street, Suite 900  
Denver, Colorado 80202

SUBJECT: REISSUED AMENDMENT 1 TO SOURCE MATERIAL LICENSE SUA-1358, ENERGY FUELS NUCLEAR, INC.'S WHITE MESA URANIUM MILL, BLANDING, UTAH

Dear Ms. Rehmman:

By letter dated April 2, 1997, the U.S. Nuclear Regulatory Commission staff notified Energy Fuels Nuclear, Inc. (EFN) that the NRC staff had approved EFN's request, submitted by letter dated March 5, 1997, to amend NRC Source Material License SUA-1358 for the White Mesa mill. As an attachment to the April 2, 1997, letter, the NRC staff enclosed the amended license; however, in doing so, the NRC staff inadvertently neglected to sign the license. Therefore, please find enclosed a reissued Amendment No. 1 to SUA-1358, signed and dated.

If you have any questions regarding this letter or the enclosure, please contact me at (301) 415-6699.

Sincerely,

A handwritten signature in cursive script that reads "James R. Park".

James R. Park, Project Manager  
Uranium Recovery Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 40-8681  
SUA-1358, Amendment No. 1

Enclosure: As stated

cc: W. Sinclair, UT

April 8, 1997

Energy Fuels Nuclear, Inc.  
ATTN: Ms. Michelle Rehmann,  
Environmental Manager  
1515 Arapahoe Street, Suite 900  
Denver, Colorado 80202

SUBJECT: REISSUED AMENDMENT 1 TO SOURCE MATERIAL LICENSE SUA-1358, ENERGY  
FUELS NUCLEAR, INC.'S WHITE MESA URANIUM MILL, BLANDING, UTAH

Dear Ms. Rehmann:

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If you have any questions regarding this letter or the enclosure, please contact me at (301) 415-6699.

Sincerely,

(Original signed by)

James R. Park, Project Manager  
Uranium Recovery Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 40-8681  
SUA-1358, Amendment No. 1

Enclosure: As stated

cc: W. Sinclair, UT

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OFFICIAL RECORD COPY

**MATERIALS LICENSE**

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee		
1. Energy Fuels Nuclear, Inc.		3. License Number
		SUA-1358, Amendment No. 1
2. 6425 S. Highway 191 P.O. Box 789 Blanding, Utah 84511		4. Expiration Date
		March 31, 2007
		5. Docket or Reference No.
		40-8681
6. Byproduct, Source, and/or Special Nuclear Material	7. Chemical and/or Physical Form	8. Maximum Amount that Licensee May Possess at Any One Time Under This License
Natural Uranium	Any	Unlimited

**SECTION 9: Administrative Conditions**

- 9.1 The authorized place of use shall be the licensee's White Mesa uranium milling facility, located in San Juan County, Utah.
- 9.2 All written notices and reports to the NRC required under this license, with the exception of incident and event notifications under 10 CFR 20.2202 and 10 CFR 20.60 requiring telephone notification, shall be addressed to the Chief, Uranium Recovery Branch, Division of Waste Management, Office of Nuclear Material Safety and Safeguards.

Incident and event notifications that require telephone notification shall be made to the NRC Operations Center at (301) 816-5100.

- 9.3 The licensee shall conduct operations in accordance with statements, representations, and conditions contained in the license renewal application submitted by letter dated August 23, 1991, as revised by submittals dated January 13, and April 7, 1992, November 22, 1994, July 27, 1995, December 13, 1996, and January 30, 1997, which are hereby incorporated by reference, and May 10, 1994, for the Standby Trust Agreement, except where superseded by license conditions below.

Whenever the word "will" is used in the above referenced documents, it shall denote a requirement.

- 9.4 A. The licensee may, without prior NRC approval, and subject to the conditions specified in Part B of this condition:

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- (1) Make changes in the facility or process, as presented in the application.
  - (2) Make changes in the procedures presented in the application.
  - (3) Conduct tests or experiments not presented in the application.
- B. The licensee shall file an application for an amendment to the license, unless the following conditions are satisfied.
- (1) The change, test, or experiment does not conflict with any requirement specifically stated in this license, or impair the licensee's ability to meet all applicable NRC regulations.
  - (2) There is no degradation in the essential safety or environmental commitments in the license application, or provided by the approved reclamation plan.
  - (3) The change, test, or experiment are consistent with the conclusions of actions analyzed and selected in this EA.
- C. The licensee's determinations concerning Part B of this condition, shall be made by a "Safety and Environmental Review Panel (SERP)." The SERP shall consist of a minimum of three individuals. One member of the SERP shall have expertise in management and shall be responsible for managerial and financial approval changes; one member shall have expertise in operations and/or construction and shall have responsibility for implementing any operational changes; and, one member shall be the corporate radiation safety officer (CRSO) or equivalent, with the responsibility of assuring changes conform to radiation safety and environmental requirements. Additional members may be included in the SERP as appropriate, to address technical aspects such as health physics, groundwater hydrology, surface-water hydrology, specific earth sciences, and other technical disciplines. Temporary members or permanent members, other than the three above-specified individuals, may be consultants.
- D. The licensee shall maintain records of any changes made pursuant to this condition until license termination. These records shall include written safety and environmental evaluations, made by the SERP, that provide the basis for determining changes are in compliance with the requirements referred to in Part B of this condition. The licensee shall furnish, in an annual report to NRC, a description of such changes, tests, or experiments, including a summary of the safety and environmental evaluation of each. In addition, the licensee shall annually submit to the NRC changed pages to the Operations Plan and Reclamation Plan of the approved license application to reflect changes made under this condition.

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The licensee shall submit to the NRC by April 30, 1997, for review, the standard operating procedures (SOPs) needed to implement this license condition. The licensee shall not implement any provision of this license condition until NRC has found the proposed SOPs acceptable.

- 9.5 The licensee shall maintain an NRC-approved financial surety arrangement, consistent with 10 CFR 40, Appendix A, Criteria 9 and 10, adequate to cover the estimated costs, if accomplished by a third party, for decommissioning and decontamination of the mill and mill site, for reclamation of any tailings or waste disposal areas, ground-water restoration as warranted and for the long-term surveillance fee. Within three months of NRC approval of a revised reclamation/decommissioning plan, the licensee shall submit, for NRC review and approval, a proposed revision to the financial surety arrangement if estimated costs in the newly approved plan exceed the amount covered in the existing financial surety. The revised surety shall then be in effect within 3 months of written NRC approval.

Annual updates to the surety amount, required by 10 CFR 40, Appendix A, Criteria 9 and 10, shall be submitted to the NRC at least 3 months prior to the anniversary date which is designated as June 4 of each year. If the NRC has not approved a proposed revision to the surety coverage 30 days prior to the expiration date of the existing surety arrangement, the licensee shall extend the existing surety arrangement for 1 year. Along with each proposed revision or annual update, the licensee shall submit supporting documentation showing a breakdown of the costs and the basis for the cost estimates with adjustments for inflation, maintenance of a minimum 15 percent contingency fee, changes in engineering plans, activities performed and any other conditions affecting estimated costs for site closure. The basis for the cost estimate is the NRC approved reclamation/decommissioning plan or NRC approved revisions to the plan. The previously provided guidance entitled "Recommended Outline for Site Specific Reclamation and Stabilization Cost Estimates" outlines the minimum considerations used by the NRC in the review of site closure estimates. Reclamation/decommissioning plans and annual updates should follow this outline.

The currently approved surety instrument, Irrevocable Letter of Credit No. S00017012, issued by The Bank of New York in favor of the NRC, as amended, May 10, 1994, to include a Standby Trust Agreement, shall be continuously maintained by UMETCO in an amount not less than \$10,915,467 for the purpose of complying with 10 CFR 40, Appendix A, Criteria 9 and 10, until a replacement is authorized by the NRC.

- 9.6 Standard operating procedures shall be established and followed for all operational process activities involving radioactive materials that are handled, processed, or stored. SOPs for operational activities shall enumerate pertinent radiation safety practices to be followed. Additionally, written procedures shall be established for non-operational activities to include in-plant and environmental monitoring, bioassay

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analyses, and instrument calibrations. An up-to-date copy of each written procedure shall be kept in the mill area to which it applies.

All written procedures for both operational and non-operational activities shall be reviewed and approved in writing by the radiation safety officer (RSO) before implementation and whenever a change in procedure is proposed to ensure that proper radiation protection principles are being applied. In addition, the RSO shall perform a documented review of all existing operating procedures at least annually.

9.7

Before engaging in any activity not previously assessed by the NRC, the licensee shall administer a cultural resource inventory. All disturbances associated with the proposed development will be completed in compliance with the National Historic Preservation Act (as amended) and its implementing regulations (36 CFR 800), and the Archaeological Resources Protection Act (as amended) and its implementing regulations (43 CFR 7).

In order to ensure that no unapproved disturbance of cultural resources occurs, any work resulting in the discovery of previously unknown cultural artifacts shall cease. The artifacts shall be inventoried and evaluated in accordance with 36 CFR Part 800, and no disturbance shall occur until the licensee has received authorization from the NRC to proceed.

The licensee shall avoid by project design, where feasible, the archeological sites designated "contributing" in the report submitted by letter dated July 28, 1988. When it is not feasible to avoid a site designated "contributing" in the report, the licensee shall institute a data recovery program for that site based on the research design submitted by letter from C. E. Baker of Energy Fuels Nuclear to Mr. Melvin T. Smith, Utah State Historic Preservation Officer (SHPO), dated April 13, 1981.

The licensee shall recover through archeological excavation all "contributing" sites listed in the report which are located in or within 100 feet of borrow areas, stockpile areas, construction areas, or the perimeter of the reclaimed tailings impoundment. Data recovery fieldwork at each site meeting these criteria shall be completed prior to the start of any project related disturbance within 100 feet of the site, but analysis and report preparation need not be complete.

Additionally, the licensee shall conduct such testing as is required to enable the Commission to determine if those sites designated as "Undetermined" in the report and located within 100 feet of present or known future construction areas are of such significance to warrant their redesignation as "contributing." In all cases, such testing shall be completed before any aspect of the undertaking affects a site.

Archeological contractors shall be approved in writing by the Commission. The Commission will approve an archeological contractor who meets the minimum standards for a principal investigator set forth in 36 CFR Part 66, Appendix C, and whose qualifications are found acceptable by the SHPO.



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- 9.8 The licensee is hereby authorized to possess byproduct material in the form of uranium waste tailings and other uranium byproduct waste generated by the licensee's milling operations authorized by this license. Mill tailings shall not be transferred from the site without specific prior approval of the NRC in the form of a license amendment. The licensee shall maintain a permanent record of all transfers made under the provisions of this condition.
- 9.9 The licensee is hereby exempted from the requirements of Section 20.1902 (e) of 10 CFR Part 20 for areas within the mill, provided that all entrances to the mill are conspicuously posted in accordance with Section 20.1902 (e) and with the words, "Any area within this mill may contain radioactive material."
- 9.10 Release of equipment or packages from the restricted area shall be in accordance with "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," dated May 1987, or suitable alternative procedures approved by the NRC prior to any such release.

**SECTION 10: Operational Controls, Limits, and Restrictions**

- 10.1 The mill production rate shall not exceed 4380 tons of yellowcake per year.
- 10.2 All liquid effluents from mill process buildings, with the exception of sanitary wastes, shall be returned to the mill circuit or discharged to the tailings impoundment.
- 10.3 Freeboard limits for Cells 1-I, 3, and 4A and tonnage limits for Cell 3, shall be as stated in Section 3.0 to Appendix E of the approved license application.
- 10.4 Disposal of material and equipment generated at the mill site shall be conducted as described in the licensee's submittals dated December 12, 1994 and May 23, 1995, with the following addition:
- A. The maximum lift thickness for materials placed over tailings shall be less than 4-feet thick. Subsequent lifts shall be less than 2-feet thick. Each lift shall be compacted by tracking of heavy equipment, such as a Cat D-6, at least 4 times prior to placement of subsequent lifts.
- 10.5 In accordance with the licensee's submittal dated May 20, 1993, the licensee is hereby authorized to dispose of byproduct material generated at licensed in situ leach facilities, subject to the following conditions:
- A. Disposal of waste is limited to 5000 cubic yards from a single source.

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- B. All contaminated equipment shall be dismantled, crushed, or sectioned to minimize void spaces. Barrels containing waste other than soil or sludges shall be emptied into the disposal area and the barrels crushed. Barrels containing soil or sludges shall be verified to be full prior to disposal. Barrels not completely full shall be filled with tailings or soil.
- C. All waste shall be buried in Cell No. 3 unless prior written approval is obtained from the NRC for alternate burial locations.
- D. All disposal activities shall be documented. The documentation shall include descriptions of the waste and the disposal locations, as well as all actions required by this condition. An annual summary of the amounts of waste disposed of from off-site generators shall be sent to the NRC.

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[Applicable Amendments: 1]

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11.1 The results of sampling, analyses, surveys and monitoring, the results of calibration of equipment, reports on audits and inspections, all meetings and training courses required by this license and any subsequent reviews, investigations, and corrective actions, shall be documented. Unless otherwise specified in the NRC regulations all such documentation shall be maintained for a period of at least five (5) years.

11.2 The licensee shall implement the effluent and environmental monitoring program specified in Section 5.5 of the renewal application as revised with the following modifications or additions:

- A. Stack sampling shall include a determination of flow rate.
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- E. The inspections performed semiannually of the critical orifice assembly committed to in the submittal dated March 15, 1986, shall be documented. The critical orifice assembly shall be calibrated at least every 2 years against a positive displacement Roots meter to obtain the required calibration curve.

11.3

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- B. A plan to determine the best methodology to dewater and/or consolidate the tailings cells prior to placement of the final reclamation cover.
- C. Plan and cross-sectional views of a final reclamation cover which details the location and elevation of tailings. The plan shall include details on cover thickness, physical characteristics of cover materials, proposed testing of cover materials (specifications and quality assurance), the estimated volumes of cover materials and their availability and location.
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- E. A proposed implementation schedule for items A through D above which defines the sequence of events and expected time ranges.
- F. An analysis to show that the proposed type and thickness of soil cover is adequate to provide attenuation of radon and is adequate to assure long-term stability, as well as an analysis and proposal on methodology and time required to restore ground water in conformance to regulatory requirements.
- G. The licensee shall include a detailed cost analysis of each phase of the reclamation plan to include contractor costs, projected costs of inflation based upon the schedule proposed in item E, a proposed contingency cost, and the costs of long-term maintenance and monitoring.

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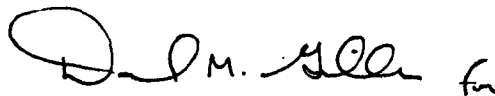
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April 8, 1997

12.2 The licensee shall submit a detailed decommissioning plan to the NRC at least twelve (12) months prior to planned final shutdown of mill operations.

FOR THE NUCLEAR REGULATORY COMMISSION



Date April 8, 1997

Joseph J. Holonich, Chief  
Uranium Recovery Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards