

August 22, 2002

MEMORANDUM TO: Docket File 40-8681

FROM: William von Till, Project Manager  
Fuel Cycle Facilities Branch  
Division of Fuel Cycle Safety and Safeguards

SUBJECT: ENVIRONMENTAL ASSESSMENT FOR INTERNATIONAL URANIUM (USA) CORPORATION'S WHITE MESA URANIUM MILL SITE, SAN JUAN COUNTY, UTAH: IN CONSIDERATION OF AN AMENDMENT TO SOURCE MATERIAL LICENSE SUA-1358 FOR THE RECEIPT AND PROCESSING OF THE MAYWOOD ALTERNATE FEED

This Environmental Assessment (EA) is being performed to evaluate the environmental impacts of the proposed amendment to International Uranium (USA) Corporation (IUSA) License SUA-1358 for the White Mesa Uranium and Tailings Mill to receive and process material from the Maywood facility located in Maywood, New Jersey. IUSA submitted a license amendment application by letters dated June 15, 2001, June 22, 2001, and August 3, 2001, and supplemented by letters dated, November 19, 2001, December 6, 2001, December 10, 2001, March 11, 2002, and July 1, 2002, to amend its license to allow its White Mesa Uranium Mill near Blanding, Utah, to receive and process up to 600,000 cubic yards (840,000 tons) of alternate feed material from the Maywood site located in Maywood, New Jersey.

A draft EA was sent to the Utah Department of Environmental Quality (DEQ) by letter dated September 21, 2001, with a copy sent to the Ute Mountain Utes in White Mesa, Utah. This document was placed into the NRC's data management system ADAMS and made publically available. Since the time the Draft Environmental Assessment was submitted for comment, the NRC staff issued a request for additional information by letter dated November 30, 2001, and IUSA responded by letters dated February 15, 2002, March 11, 2002, and July 1, 2002. Comments were received by the Utah DEQ, Ute Mountain Utes, and various groups and members of the public. The attached EA addresses these comments. The February 15, 2002, letter from IUSA includes additional information on a well called the "Jones Well" for which NRC staff needed more information. The March 11, 2002, letter from IUSA provides additional information regarding the temporary storage of alternate feed materials on the ore pad regarding dust control, potential groundwater concerns, and surety cost issues. The NRC staff needed additional information regarding potential seepage of material while stored on the ore pad and IUSA adequately addressed those issues in their July 1, 2002, letter.

Based on this EA, performed in accordance with the National Environmental Policy Act of 1969, and the procedures and criteria in 10 CFR, Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," the Commission has determined that there will not be a significant effect on the quality of the human environment resulting from the granting of IUSA's amendment request.

License SUA-1358

Attachment: Environmental Assessment

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License SUA-1358

Attachment: Environmental Assessment

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ENVIRONMENTAL ASSESSMENT  
FOR  
INTERNATIONAL URANIUM (USA) CORPORATION'S URANIUM MILL SITE  
WHITE MESA, SAN JUAN COUNTY, UTAH

IN CONSIDERATION OF AN AMENDMENT TO  
SOURCE MATERIAL LICENSE SUA-1358 FOR THE  
RECEIPT AND PROCESSING OF THE  
MAYWOOD ALTERNATE FEED

PREPARED BY

THE U.S. NUCLEAR REGULATORY COMMISSION  
DIVISION OF FUEL CYCLE SAFETY AND SAFEGUARDS  
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

**ENVIRONMENTAL ASSESSMENT  
FOR THE  
MAYWOOD ALTERNATE FEED REQUEST  
INTERNATIONAL URANIUM CORPORATION'S URANIUM MILL SITE  
WHITE MESA, SAN JUAN COUNTY**

**1.0 INTRODUCTION**

**1.1 Background and Need for Proposed Action**

This Environmental Assessment (EA) is being performed to evaluate the environmental impacts of the proposal for the White Mesa Uranium and Tailings Mill to receive and process material from the Maywood facility located in Maywood, New Jersey. The mill site is located in San Juan County, Utah, approximately 8 kilometers (km) (5 miles) south of Blanding, Utah. International Uranium (USA) Corporation (IUSA) submitted a license amendment application by letters dated June 15, 2001, June 22, 2001, and August 3, 2001, and supplemented by letter dated, November 19, 2001, December 6, 2001, December 10, 2001, March 11, 2002, and July 1, 2002, to amend its U.S. Nuclear Regulatory Commission (NRC) Source Material License SUA-1358, to allow its White Mesa Uranium Mill near Blanding, Utah, to receive and process up to 600,000 cubic yards (840,000 tons) of alternate feed material from the Maywood site located in Maywood, New Jersey. The radiological portion of the Maywood site is being remediated under the Formerly Utilized Sites Remedial Action Program (FUSRAP) by the U.S. Army Corps of Engineers. The materials are by-products from the processing of thorium from monazite sands and lanthanum from thorium byproducts. IUSA is requesting that the material be received and processed for its source material content. By-products from the extraction of source material will be disposed in lined tailings cells with a groundwater detection monitoring program. A separate Technical Evaluation Report (TER) will be completed by the NRC using the formal guidance, "Final Position and Guidance on the Use of Uranium Mill Feed Material Other Than Natural Ores." The NRC has approved similar amendment requests in the past for separate alternate feed materials under this license.

The IUSA site is licensed by the NRC under Materials License SUA-1358 to possess byproduct material in the form of uranium waste tailings and other uranium byproduct waste generated by the licensee's milling operations, as well as other source material from multiple locations.

A draft EA was sent to the Utah Department of Environmental Quality (DEQ) by letter dated September 21, 2001, with a copy sent to the Ute Mountain Utes in White Mesa, Utah. This document was placed into the NRC's data management system ADAMS and made publically available. Since the time the Draft Environmental Assessment was submitted for comment, the NRC staff issued a request for additional information by letter dated November 30, 2001, and IUSA responded by letters dated February 15, 2002, and March 11, 2002, and July 1, 2002. The February 15, 2002, letter from IUSA includes additional information on a well called the "Jones Well" in which NRC staff needed more information. The March 11, 2002, letter from IUSA provides additional information regarding the temporary storage of alternate feed materials on the ore pad regarding dust control, potential groundwater concerns, and surety

cost issues. The NRC staff needed additional information in regards to potential seepage of material while stored on the ore pad and IUSA adequately addressed those issues in their July 1, 2002, letter.

In addition IUSA submitted, by letters dated December 6, 2001, and December 10, 2001, information that was missing from the original submittal relating to Attachment 2 of their submittal and other background information regarding the Maywood site.

## **1.2 Previous National Environmental Policy Act (NEPA) Actions**

A Final Environmental Statement (FES) was prepared by the NRC for the license application in May 1979, an Environmental Assessment (EA) was prepared by NRC in September 1985 for license renewal, an EA was prepared by NRC in February 1997 for license renewal, and an EA was prepared for the reclamation plan in February 2000. In addition, an EA was prepared, by letter dated November 30, 2001, for the receipt and processing of alternate feed material from the Molycorp site located in Mountain Pass, California.

## **1.3 Maywood Site Materials**

The radiological portion of the Maywood site is being remediated by the U.S. Army Corps of Engineers. This site began operations in 1895 and over the years processed monazite sands for thorium, lanthanum from thorium byproducts, and other rare earth elements. Uranium was not extracted and remains in the process residues. The FUSRAP material is currently located on site and is also being cleaned up at off-site properties. Material on the site is licensed by the NRC under STC-1333 for the Stepan Chemical Company. This license covers 19,000 cubic yards of buried tailings. The Maywood material has been classified as byproduct material under Section 11e.(2) of the Atomic Energy Act of 1954, as amended (NRC, 2001).

The average uranium content, based on 4000 samples, ranges from non-detectable to 0.06 weight percent, with an average grade of 0.0018 percent uranium. However, IUSA is proposing to only receive material that contains higher than 0.01 percent uranium. The thorium content of the material ranges from non-detectable to 3,800 pCi/g with an average of 970 pCi/g. The thorium content is relatively low due to thorium extraction at the Maywood site.

## **1.4 Review Scope**

In accordance with 10 CFR Part 51, this EA serves to: (1) present information and analysis for determining whether to issue a Finding of No Significant Impact (FONSI) or to prepare an Environmental Impact Statement (EIS); (2) fulfill the NRC's compliance with NEPA when no EIS is necessary; and (3) facilitate preparation of an EIS when one is necessary. Should the NRC issue a finding of no significant impact, no EIS would be prepared and the license amendment would be granted.

## **2.0 SITE CHARACTERISTICS OF THE WHITE MESA MILL AREA**

The area surrounding the White Mesa facility is in an arid climate with an annual precipitation of 30 centimeters (cm) (12 inches) and a mean temperature of 9 degrees centigrade (50 degrees

Fahrenheit). Runoff in the project area is directed by the general surface topography either westward into Westwater Canyon, eastward into Corral Creek, or to the south into an unnamed branch of Cottonwood Wash. The San Juan River, a major tributary to the Colorado River, is located approximately 29 km (18 miles) south of the site.

The population density of San Juan County is approximately 0.6 persons per square kilometer (1.6 persons per square mile). The town of Blanding is the largest population center near the facility with a population of 3162. Approximately 5.6 km (3.5 miles) southeast of the site is the White Mesa Reservation, a community of approximately 320 Ute Mountain Indians. The nearest resident to the mill is located approximately 5 km (3 miles) to the northeast of the mill, which is in the prevailing wind direction.

Approximately 60% of San Juan County is federally-owned land administered by the U.S. Bureau of Land Management (BLM), the U.S. National Park Service (NPS), and the U.S. Forest Service. Primary land uses include livestock grazing, wildlife range, recreation, and exploration for minerals, oil, and gas. A quarter of the county is Native American land owned by either the Navajo Nation or the Ute Tribe. The land within 8 km (5 miles) of the site is predominantly owned by residents of Blanding. The White Mesa mill site encompasses approximately 202 hectares (ha) (500 acres).

Groundwater beneath the site mainly occurs in three strata: the Dakota Sandstone, the Burro Canyon formation, and the Entrada/Navajo Sandstone. The Burro Canyon formation hosts perched groundwater over the Brushy Basin Member of the Morrison formation. The Dakota Sandstone in this area is not considered to be an aquifer by the Utah DEQ (Utah DEQ, 10/31/01). The Entrada/Navajo Sandstones form one of the most permeable aquifers in the region. The aquifer is separated from the Burro Canyon formation by the Morrison formation and Summerville formation. Recharge to the aquifers occurs by infiltration along the flanks of the Abajo, Henry, and La Sal Mountains, and along the flanks of the structural folds. Groundwater in the perched aquifer (Burro Canyon Formation) is monitored by the mill in the groundwater detection monitoring program. Water in this zone flows south to southwest.

Seventy-six groundwater applications, within an 8 kilometer (5 mile) radius of the site, are on file with the Utah State Engineer's office. The majority of applications are by private individuals and for wells drawing small, intermittent quantities of water, less than eight gallons per minute (gpm) (0.02 cubic feet per second), from the Burro Canyon formation. For the most part, these wells are located upgradient (north) of the facility. Stockwatering and irrigation are listed as the primary uses. Two water wells are completed in the Entrada/Navajo sandstone located 4.5 miles (7.25 km) southeast of the site on the Ute Mountain Ute Reservation. These wells are used as domestic water supply wells and are completed approximately 365 meters (1200 foot) below the ground surface.

In the vicinity of the site, the U.S. Fish and Wildlife Service provided the following list on July 9, 2002, of endangered (E), threatened (T), and candidate (C) species that may occur in the area around the site:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Navajo Sedge	Carex specuicola	T
Bonytail	Gila elegans	E

Colorado Pikeminnow	<i>Ptychocheilus lucius</i>	E
Humpback Chub	<i>Gila cypha</i>	E
Razorback Sucker	<i>Xyrauchen texanus</i>	E
Bald Eagle	<i>Haliaeetus leucocephalus</i>	T
California Condor	<i>Gymnogyps californianus</i>	E
Gunnison Sage Grouse	<i>Centrocercus minimus</i>	C
Mexican Spotted Owl	<i>Strix occidentalis lucida</i>	T
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	E
Western Yellow-billed Cuckoo	<i>Coccyzus americanus occidentalis</i>	C
Black-footed Ferret	<i>Mustela nigripes</i>	E

In addition, the following species may occur within the project area that are managed under Conservation Agreements/Strategies:

<u>Common Name</u>	<u>Scientific Name</u>
Colorado River Cutthroat Trout	<i>Oncorhynchus clarki pleuriticus</i>
Gunnison Sage Grouse	<i>Centrocercus minimus</i>

While the ranges of the bald eagle, peregrine falcon, and willow flycatcher encompass the project area, their likelihood of utilizing the site is extremely low. The black-footed ferret has not been seen in Utah since 1952 and is not expected to be seen any longer in the area. NRC staff contacted wildlife biologists from the Bureau of Land Management and the Utah Wildlife Service to gather local information on the presence of these additional species surrounding the mill. The California Condor has only rarely been spotted in the area of Moab, Utah, (70 miles north) and around Lake Powell (approximately 50 miles south). The Mexican Spotted Owl is only found in the mountains in Utah and is not expected to be on the Mesa. The Navajo Sedge has not been observed in the area surrounding Blanding and is typically found in areas of moisture. The Southwestern Willow Flycatcher, Western Yellow-billed Cuckoo, and Gunnison Sage Grouse are also not expected to be found in the immediate area around the mill site.

No populations of fish are present on the project site, nor are any known to exist in the immediate area of the site. Four species of fish designated as endangered or threatened occur in the San Juan River 29 km (18 miles) south of the site. There are no discharges of mill effluents to surface waters; therefore, no significant impacts are expected for the San Juan River or fish due to operations at the mill.

Since this action will not effect any additional potential habitat for listed species and will utilize existing mill structures, we have determined that this action will have no effect to endangered or threatened species and critical habitat. The NRC asked the U.S. Fish and Wildlife Service for concurrence on the decision of no effect by letter dated July 25, 2002. Fish and Wildlife Service concurred with this decision by letter dated August 5, 2002.

### **3.0 OPERATIONS**

The White Mesa uranium mill was developed in the late 1970's by Energy Fuels Nuclear, Inc. (EFN) as an outlet for the many small mines that are located in the Colorado Plateau. After about two and one-half years, the mill ceased ore processing and entered a total shutdown phase. In 1984, a majority ownership interest was acquired by Union Carbide Corporation's (UCC) Metals Division, which later became Umetco Minerals Corporation (Umetco), a wholly-owned subsidiary of UCC. In May of 1997, IUSA purchased the assets of the EFN and is the current owner and operator of the facility. The mill has gone through operation and shut down periods throughout the 1980's and 1990's. The current license specifies a maximum production rate of 4380 tons of yellowcake per year. The facility is currently in operation and since early 1997, the mill has processed 58,403 tons from several additional alternate feed stocks.

The tailings facilities currently consist of four lined cells with leak detection systems (LDS) and a groundwater detection monitoring program consisting of six monitoring wells. These wells are sampled quarterly for chloride, potassium, nickel, and uranium. These constituents are indicator parameters to detect potential groundwater impact. Currently, there is no indication of groundwater impact from the tailing cells based on the groundwater sampling. Environmental monitoring consists of groundwater and surface water sampling, gamma radiation measurements, soil, and vegetation sampling.

### **4.0 ENVIRONMENTAL EFFECTS**

#### **4.1 Transportation Considerations**

IUSA does not have a contract to receive Maywood alternate feed material at this time and therefore, the exact mode of transporting the materials to the mill has not been determined. Transportation may be similar to that of other alternate feed materials shipped to the mill. This would consist of inter-modal containers shipped by rail then by truck. If the maximum volume requested, 600,000 cubic yards (840,000 tons), were shipped to the mill, IUSA estimates that 7500 rail cars over seven years by rail and 46-86 truckloads per week would occur over a seven year period. It is more likely that 206,000 cubic yards would be shipped which would require 46 truckloads per week. The NRC does not expect there to be a significant impact from the transportation of these materials due to exclusive-use containers, the small increase in truck traffic (4 to 7.4 percent), and the transportation of the material in lined, covered containers. Based on this information, a very minor increase in truck traffic from this action is anticipated and therefore, environmental impacts from this increase are expected to be negligible.

#### **4.2 Handling and Processing at the Mill Site**

The material will be added to the Mill circuit in a similar manner to that used for normal processing of conventional ore, either alone or in combination with other approved alternate feed materials. The material will either be dumped into the ore receiving hopper and fed to the semiautogenous grinding mill, or run through an existing trommel, before being pumped to the pulp storage tanks. The leaching process may begin in pulp storage tanks with the addition of sulfuric acid.



### **4.3 Control of Airborne Contamination**

The NRC does not anticipate any unusual or extraordinary airborne contamination dispersion when processing this material. The contamination potential is expected to be comparable to the processing of conventional ores which has been evaluated under previous NEPA actions.

Environmental monitoring will continue and has been evaluated under previous NEPA actions. This includes monitoring of surface and groundwater, airborne particulates, radon, soils, and vegetation, according to the existing License Conditions.

IUSA will continue to conduct a Dust Suppression program in accordance with the License Renewal Application for the White Mesa Mill, sections 2.0 and 4.0 (Umetco, 1991), and the September 11, 1997, Utah Division of Air Quality Approval Order for White Mesa Mill (Air Quality Permit Conditions).

### **4.4 Groundwater Effects**

Material would be handled on the ore pad in a similar manner to conventional ores and other approved alternate feed materials. Potential environmental effects to groundwater have already been evaluated for operations at the mill in previous NEPA documents. Material from Maywood does not contain any additional chemicals that would pose an increase in threat to the groundwater resources above conventional ore. Tailings from the Maywood material processing will be disposed in the lined tailings cells along with other process tailings. A groundwater detection monitoring program is implemented to determine if any leakage from the tailings cells has occurred. In addition, if groundwater contamination were to occur, the NRC would require that IUSA conduct corrective action to restore groundwater to the groundwater standards in its license per 10 CFR Part 40, Appendix A, Criterion 5.

Due to comments from the Ute Mountain Utes and members of the public on the draft Environmental Assessment regarding potential impacts to groundwater, by letter dated November 30, 2001, NRC staff requested that IUSA provide additional information regarding the potential for groundwater impacts to occur while the Maywood material was temporarily placed on the ore pad at the mill. IUSA adequately addressed these issues in their July 1, 2002, submittal. IUSA conducted multiple infiltration and permeability tests on the shallow soil at the ore pad and demonstrated that infiltration of seepage from the Maywood material while on the ore pad would be very limited. Due to the dry climate, low permeability and highly compacted nature of the ore pad surface, and the limited duration of storage, significant impacts to the groundwater resource from the Maywood material is not anticipated. The NRC staff will evaluate the need for additional controls on alternate feed materials on a case by case basis. For example, with the Molycorp material, approved in a previous amendment, IUSA committed to placing the material on a bermed concrete pad due to the high moisture content and lead content of that material. The Maywood material does not have those concerns and is similar in nature to previous alternate feed materials such as Ashland and Linde which has processed at IUSA.

#### **4.5 Endangered, Threatened, and Candidate Species and Critical Habitat**

This action does not include any additional disruption of potential habitat around the mill site and will not result in any discharge to surface waters; therefore, no effect to the identified endangered, threatened, or candidate species in the area is anticipated. Maywood material would be delivered to an existing ore pad and then fed into the mill and processed with existing mill structures and the waste disposed of in existing tailings cells. In addition, IUSA manages a “wildlife pond” a few hundred yards from the ore pad area to minimize wildlife migrating to the tailings ponds. This pond will also minimize any contact that wildlife would have with Maywood material while temporarily stored on the ore pad. Potential impact to wildlife from mill operations was evaluated in the 1979 FES and is beyond the scope of this EA. Staff concludes that no effect to endangered or threatened species or critical habitat is expected as a result of the Maywood action. Concurrence from the U.S. Fish and Wildlife Service on the no effect determination was received by letter dated August 5, 2002.

#### **4.6 Cumulative Impacts**

NRC staff has found no other activities in the area that could result in cumulative impacts.

### **5.0 ALTERNATIVES**

The action that the NRC is considering is approval of an amendment request to a source material license issued pursuant to 10 CFR Part 40. The alternatives available to the NRC are:

1. Approve the license amendment request as submitted; or
2. Amend the license with such additional conditions as are considered necessary or appropriate to protect public health and safety and the environment; or
3. Deny the request.

Based on its review, the NRC staff has concluded that the environmental impacts associated with the proposed action do not warrant either the limiting of IUSA’s future operations or the denial of the license amendment. The NRC staff has concluded that there are no significant environmental impacts associated with the proposed action. Alternatives with equal or greater impacts need not be evaluated. Therefore, the staff considers that Alternative 1 is the appropriate alternative for selection.

### **6.0 FINDING OF NO SIGNIFICANT IMPACT**

Based on the foregoing evaluation of the environmental impacts of the IUSA amendment request, the Commission has determined that there will not be a significant effect on the quality of the human environment resulting from the granting of IUSA’s request and will, therefore, publish a FONSI in the Federal Register. The following statements support the FONSI and summarize the conclusions resulting from the EA.

1. An acceptable environmental and effluent monitoring program is in place to monitor effluent releases and to detect whether applicable regulatory limits are exceeded. Radiological effluents from site operations have been and are expected to continue to remain below the regulatory limits. A groundwater monitoring program is in place to detect potential seepage of contaminants from the tailings cells. The Entrada/Navajo Sandstone Aquifer is separated by low permeability formations from the tailings cells further decreasing a potential impact to groundwater resources. The potential for seepage to occur while the material is temporarily stored on the ore pad is minimal due to the dry climate, low permeability and highly compacted nature of the ore pad surface, and the limited duration of storage. An existing dust suppression program will be implemented at the Mill to reduce the potential for airborne contamination. No disruption of potential habitat to endangered species will occur with this action, therefore, no significant impact to endangered or threatened species and critical habitat is anticipated.
2. Present and potential environmental impacts from the receipt and processing of the Maywood material were assessed. No significant impacts have been identified as a result of this action; therefore, the staff has determined that the risk factors for health and environmental hazards are insignificant.

## **6.1 Environmental Justice**

Because the staff has determined that there will be no significant impacts associated with this action, there can be no disproportionately high and adverse effects and impacts on minority and low-income populations. Consequently, further evaluation of Environmental Justice concerns, as outlined in Executive Order 12898 and NRC's Office of Nuclear Material Safety and Safeguards Policy and Procedures Letter 1-50, Revision 1, is not warranted.

## **7.0 STATE, TRIBAL, AND FISH AND WILDLIFE CONSULTATION AND PUBLIC COMMENTS**

A draft EA was sent to the Utah Department of Environmental Quality (DEQ) by letter dated September 21, 2001, with a copy sent to the Ute Mountain Utes in White Mesa, Utah. This document was placed into the NRC's data management system ADAMS and made publically available. The Utah DEQ responded by letter dated October 31, 2001, and the Ute Mountain Utes provided comments by letter post marked November 13, 2002.

### **7.1 Public Comments**

Eight other parties provided comment to the draft EA. These parties included environmental groups, resource groups, members of the public, and their representatives.

These commenters had similar issues to the DEQ and the Utes. Some of the comments did not focus on the draft EA and potential environmental impacts from this action and, therefore, they are beyond the scope of this EA.

Some members of the public commented that an EIS not an EA should be completed. The purpose of the EA was to determine if an EIS was necessary. The NRC concluded that based on the finding of no significant impact from the EA, that an EIS was not necessary. This is consistent with 10 CFR Part 51. A Final Environmental Statement for mill operations was completed in 1979.

Other comments focused on issues relating to the Ute Mountain Ute Indians and environmental justice issues, although these comments were not sent by the Indians themselves. The Ute Mountain Utes were sent a draft EA, by letter dated September 21, 2001, when the Draft EA was sent to the Utah DEQ and the NRC has had a continuing open communication with the Utes. Comments from the Utes are addressed in section 7.3.

Regarding comments on the Maywood material potentially being classified as a hazardous waste, the NRC will not approve the receipt and processing of the Maywood material if it is classified as a hazardous waste when it comes to the Mill. The NRC has classified the Maywood material byproduct material under Section 11e.(2) of the Atomic Energy Act of 1954, as amended (NRC, 2001). Under 40 CFR Part 264.4, "byproduct" material as defined under the Atomic Energy Act of 1954, as amended, is excluded by definition as a solid or hazardous waste under the Resource Conservation and Recovery Act (RCRA).

In response to a concern about wildlife becoming exposed at the Mill, no disruption in habitat is anticipated to occur with this action. Therefore, no significant impact to wildlife or endangered species is predicted. Potential environmental impacts for general mill operations have been considered in previous environmental evaluations. In addition, IUSA has implemented a program at the Mill to reduce wildlife coming in contact with tailings water. This consists of creating several ponds away from the tailings ponds for wildlife to congregate and setting up cannons and fake Eagles to scare birds away from the tailings ponds. The wildlife ponds should also provide an alternate habitat that will discourage species from congregating near the ore pad where the Maywood material would be temporarily stored.

Some commenters stated that the mill shouldn't receive any ore other than natural ore. This issue previously has been assessed by hearings which were subsequently appealed to the Commission. The result of those proceedings was that the mill can receive alternate feed materials (see, International Uranium (USA) Inc. White Mesa Uranium Mill, CLI-00-1, 51 NRC 9, (2000)).

Other commenters voiced concerns over the impact on groundwater resources. In NRC's evaluation, there is no increase in the potential impact to groundwater from that of milling natural ore. The tailings cells are lined and a groundwater detection monitoring program is in place to detect the presence of any potential seepage from the tailings cells. The small concentrations of organic chemicals in the Maywood material do not present any additional potential for significant impacts over the chemicals already used in the milling operation such as sulfuric acid and kerosene. The tailings cells were designed to prevent groundwater contamination from tailings and chemicals used in the milling process. The potential impact to groundwater from the milling operation was comprehensively evaluated in the FES in 1979. Accordingly, IUSA has adequately addressed NRC concerns over the potential seepage of Maywood material while the material is temporarily stored on the ore pad. Due to the dry climate, low permeability and highly compacted nature of the ore pad surface, and the limited duration of storage; significant impacts to the groundwater resource from the Maywood material are not anticipated.

Comments were received regarding the transportation of the feed to the mill. Transportation considerations are addressed in section 4.1. Based on the small increase of trucks through Moab, the NRC does not consider these additional trucks to be a significant impact (4 to 7 percent increase at the most).

Some commenters voiced concerns over thorium concentrations. An NRC health physicist reviewed information pertaining to the Maywood material and did not find thorium or any other radiological concerns over that of natural ore. Radiological safety procedures and environmental monitoring are implemented at the mill to assure that radiation levels from mill activities are safe. Other commenters stated that it is illegal for the mill to receive materials with thorium. Although this is outside the scope of this assessment, the mill is licensed to receive materials containing uranium and thorium, as long as it is, in fact, processed to extract either uranium or thorium, the resulting tailings will be 11e.(2) byproduct material (see International Uranium (USA) Inc. White Mesa Uranium Mill, CAI-00-1 (2000) and International Uranium (USA) Inc. White Mesa Uranium Mill, CAI-01-18 (2001)).

## **7.2 Utah DEQ Comments**

DEQ commented on potential hazardous waste issues related to the Maywood material. As mentioned earlier, the NRC staff has determined that the Maywood material is classified as “byproduct” material and therefore, will be excluded by definition as a solid and hazardous waste under RCRA (40 CFR Part 261.4). The NRC staff has evaluated health, safety, and environmental aspects of chemicals in the Maywood material and find that no significant impacts will occur. Since the Maywood material is classified by the NRC as “byproduct” material and therefore excluded from RCRA, speculative accumulation of hazardous waste does not apply.

DEQ also commented on the issue of available tailings capacity. The NRC is aware of tailings space constraints at the mill and will place the following condition in the license:

Prior to the licensee receiving materials from the Maywood site, the licensee must make a determination that adequate tailings space is available for the tailings produced from the processing of this material. This determination shall be made based on a Safety Environmental Review Panel (SERP) approved internal procedure. Design changes to the cells or the reclamation plan require the licensee to submit an amendment request for NRC review and approval.

In addition, the NRC sent a Geotechnical Engineer to the mill during a September 2001 site inspection specifically to assess the licensee’s implementation of determination of tailings capacity prior to receiving various alternate feed materials. These procedures also apply to other alternate feeds being received by the mill.

## **7.3 Ute Mountain Ute Tribe Comments**

A letter from the Ute Mountain Utes was received by the NRC post marked November 13, 2001, with comments on the Draft EA. A population of Utes live close to the mill and the NRC values their comments. The first comment asked whether any additional airborne threats would be

expected with the Maywood material. The NRC does not expect any additional airborne risk in addition to natural ore. In addition, multiple air monitoring stations have been set up between the Mill and the White Mesa Ute tribe to address the Ute's concerns prior to this Maywood request. As mentioned earlier in the EA, a dust suppression program is being implemented at the Mill to prevent airborne contamination from the alternate feed materials on the ore pad. The other comments relate to groundwater and potential hazardous waste issue that were addressed above.

#### **7.4 U.S. Fish and Wildlife Service Consultation**

The NRC asked the U.S. Fish and Wildlife Service for concurrence on the "no effect" decision by letter dated July 25, 2002. Fish and Wildlife Service concurred with this decision by letter dated August 5, 2002.

#### **8.0 REFERENCES**

International Uranium (USA) Corporation (IUSA), "Reclamation Plan, White Mesa Mill, Blanding, Utah, Revision 2.0," May 1999.

IUSA, "Groundwater Information Report White Mesa Mill, Blanding, Utah," submitted to Utah Department of Environmental Quality (UDEQ) Divisions of Water Quality (copy to NRC), May 28, 1999.

U.S. Fish and Wildlife Service, "Concurrence on No Effect To Endangered and Threatened Species and Critical Habitat," letter from Henry Maddux, Utah Field Supervisor, to William von Till, NRC, August 5, 2002.

U.S. Nuclear Regulatory Commission (NRC), "Final Environmental Statement related to operation of White Mesa Uranium Project, Energy Fuels Nuclear, Inc.," NUREG-0556, May 1979.

NRC, "Environmental Assessment for the Renewal of Source Material License No. SUA-1358, Energy Fuels Nuclear, Inc., White Mesa Uranium Mill, San Juan County, Utah," February 27, 1997.

NRC, "Environmental Assessment Prepared by the Uranium Recovery Field Office in Consideration of the Renewal of Source Material License No. SUA-1358, for the Umetco Minerals Corporation, White Mesa Uranium Mill," September 26, 1985.

NRC, "Environmental Assessment," for the reclamation of the White Mesa Uranium Mill, February 10, 2001.

NRC, "Interim Position and Guidance on the Use of Uranium Mill Feed Material Other Than Natural Ores," NRC Regulatory Issue Summary 2000-23, November 30, 2000.

NRC, "Disposal of FUSRAP Material at Envirocare," letter from Martin J. Virgilio, NRC, to Jonathan P. Carter, Esq., Envirocare, September 20, 2001.

NRC, "Consultation Request on Listed Species," letter from William von Till, NRC, to Utah Field Supervisor, U.S. Fish and Wildlife Service, July 25, 2002.

Umetco Minerals Corporation, 1991, "1991 White Mesa Mill License Renewal," 4 vols., August 1991.

Utah Department of Transportation. Phone conversation with Ms. Vicki Hanshew of the Program Development Division with William von Till of NRC regarding traffic statistics on Highway 191 and through Moab, Utah. December 20, 2000.