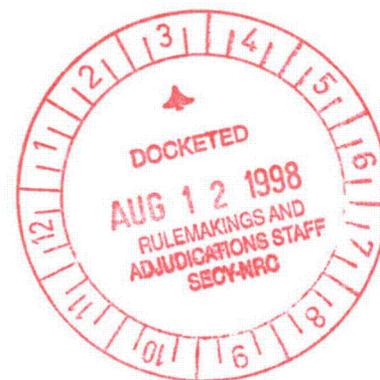


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Attorneys for International
Uranium (USA) Corporation

BEFORE THE UNITED STATES NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF)	DOCKET NO.40-8681-MLA-4
INTERNATIONAL URANIUM (USA))	ASLBP No. 98-748-03-MLA
CORPORATION'S AMENDMENT TO)	AMENDED OPPOSITION OF INTERNA-
NRC SOURCE MATERIAL LICENSE)	TIONAL URANIUM (USA)
SUA-1358)	CORPORATION TO STATE OF UTAH'S
)	REQUEST FOR A STAY

I. INTRODUCTION

International Uranium (USA) Corporation ("IUSA") operates, in accordance with Source Material License No. SUA-1358 issued by the United States Nuclear Regulatory Commission ("NRC"), a uranium recovery facility called the White Mesa Mill (the "Mill") in Blanding, Utah. NRC granted IUSA's license amendment to process the Ashland 2 material on June 23, 1998. The State of Utah (the "State" or "Utah") filed a Request for Hearing and Petition for Leave to Intervene on or about July 23, 1998.^{1/} IUSA filed its response to the State's Request for Hearing on August 3, 1998. Subsequently, on August 7, 1998, the State filed a Motion for Stay, Request for Prior Hearing, and Request for Temporary Stay.

II. ARGUMENT

As set forth below, the State's Motion for Stay must be denied because it is not timely. Additionally, the State's Request does not satisfy the four part standard governing the issuance of stay as set forth at 10 C.F.R. §§ 2.1263 and 2.788.

^{1/} On or about the same date, Envirocare of Utah, Inc., also filed a Request for Hearing on IUSA's License Amendment to process the Ashland 2 material.

SECY-041

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U.S. NUCLEAR REGULATORY COMMISSION
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IUSA responds to the State of Utah's Motion for Stay as follows:

A. Utah's Motion for Stay is Untimely

The State's attempts to creatively interpret the clear regulations in section 2.1263 for filing a stay motion are unavailing. First, the State is incorrect in referencing Babcock and Wilcox, 36 N.R.C. 355 (1992) as supporting their position that the IUSA license amendment is not effective until completion of testing on each material shipment. The Babcock quotation regarding effectiveness of a licensing action refers only to the requirement that a stay request cannot be made prior to an NRC staff "final decision" on a license amendment. See Long Island Lighting Co., 33 N.R.C. 461, 468 (1991) (cited in Babcock). In this case, the NRC staff's final decision occurred when the license amendment was issued, since the license amendment does not require NRC staff to approve each material shipment.

Second, "changed circumstances" only allows renewal of a timely stay motion in cases where the stay was initially denied for lack of a showing of irreparable harm but a subsequent unforeseen circumstance occurs that will result in immediate irreparable harm. See Hydro Resources, Inc., 1998 NRC LEXIS 26, at *9 (Jun. 5, 1998) (noting that stay requests must be timely filed pursuant to section 2.1263, but declining to construe the regulation to prevent renewal of the timely stay request in front of the Presiding Officer if the harm became irreparable and immediate); Kerr-McGee Chem. Corp., 31 N.R.C. 263, 269 (1990). The cases clearly contemplate a situation where the motion for stay is filed in a timely fashion and no irreparable harm occurs upon license amendment issuance, but occurs later based upon the applicant's actions pursuant to the license amendment. In such situations, the initial timely request for a stay is not a "nullity" as the State claims, but instead is a required predicate to any request for stay relief.

The State relies on Hydro Resources to support its claim that a motion for stay is premature in the absence of immediate harm. Hydro Resources, however, does not so hold, and the State's reliance on a lack of "immediate" irreparable harm to justify its failure to timely file a request for stay is misplaced. The movant must show that "irreparable harm" will result if the stay is not granted; the irreparable harm need not be imminent at the time of the stay request. See 10 C.F.R. § 2.1263.

Immediacy *is* required for interlocutory review of denial of a stay. In Hydro Resources, the Commission rejected a request for interlocutory review of a Presiding Officer's denial of a stay. The Commission indicated, however, that it might allow interlocutory review when a timely motion is denied but harm subsequently becomes "immediate." Thus, the State's alleged justification for failure to timely file their stay request is no justification at all, since it is based on a mischaracterization of the relevant law.

The State also mischaracterizes the extent of the Presiding Officer's discretion. The Presiding Officer cannot ignore the clear regulations in section 2.1263 regarding the timeliness of stay motions even if he has a "rational foundation." In Public Serv. Co. of New Hampshire, 30 N.R.C. 331 (1989), and Long Island Lighting Co., 23 N.R.C. 135 (1986), cited by the State, the "rational foundation" standard is used by the Appeals Board in reviewing rulings by the Licensing Board ("Board") that were based on factual determinations or otherwise clearly within the Board's discretion. Neither case involved a stay, which has a strict time limit; moreover, in neither case did the Board allow the submission of a motion that was untimely according to the applicable regulations.

Whether or not it is within the Presiding Officer's discretion, there is no reason to allow the State's untimely motion in this case. The State concedes it was aware of issuance of the license

amendment, and was able to articulate alleged irreparable harm in its July 23 petition.^{2f} The time limitations set forth in the regulations are intended to provide certainty upon which licensees may rely. IUSA's license amendment, with its conditions, was effective upon issuance; no further NRC action was required and IUSA was free to act upon the license. IUSA's license, and virtually all amendments, are subject to numerous conditions to be performed by IUSA in order to be in compliance with its license. All of these are the responsibility of IUSA and do not require any action by NRC staff.

B. Utah's Motion for Stay Does Not Satisfy the Standard Set Forth At 10 C.F.R. § 2.788.

In determining whether to grant or deny an application for a stay under 10 C.F.R. § 2.788, four factors must be considered: i) the moving party must make a strong showing that it is likely to prevail on the merits; ii) whether irreparable injury will result if the stay is not granted; iii) whether granting the stay will harm other parties; and iv) whether the stay serves the public interest. Even if the State's Motion for Stay was timely, the State fails to satisfy the criteria for issuance of a stay.

1. The State is Unlikely To Prevail On the Merits.

a. Standing

As we have discussed extensively in IUSA's prior pleadings, Utah fails to satisfy even the criteria for standing and thus cannot carry its burden of proving that it is likely to prevail on the merits.

^{2f} The State's claim that it was unaware of the pendency of the shipment of the Ashland 2 materials is not true. See Rehmann Affidavit at Paragraph 4.

b. Processing Primarily For Source Material

The State claims that IUSA failed to demonstrate that the Ashland 2 material is being processed primarily for its source material content, alleging that IUSA failed to satisfy either the co-disposal test or the licensee certification. As discussed at length in IUSA's Opposition to Utah's Request for a Hearing, this is not true. In fact, NRC determined that IUSA satisfied both of these tests.

c. The Ashland 2 Material Does Not Contain Hazardous Waste.

IUSA has provided NRC with all pertinent sampling and analysis data generated in connection with the Ashland 2 materials and NRC has determined, based upon that data, that the Ashland 2 material does not contain listed hazardous waste. Moreover, ICF Kaiser, who is remediating the Ashland Site under contract to USACE, is re-testing the material both before and after excavation. If testing upon excavation reveals any material containing listed hazardous waste, such material will not be shipped to the White Mesa Mill. Confirmatory testing will be done at the White Mesa facility. IUSA further responds to this claim below.

2. The State Will Not Suffer Irreparable Harm As a Result of IUSA's License Amendment.

The State asserts that IUSA's license amendment will cause Utah to suffer immediate irreparable injury in three ways: i) IUSA will avoid "stricter" regulations for disposal facilities in Utah; ii) IUSA will receive and store the Ashland 2 material without having demonstrated groundwater protection; and iii) IUSA may receive hazardous waste. The State will *not* suffer immediate irreparable injury by virtue of IUSA's receipt and processing of the Ashland 2 material allowed by IUSA's license amendment.

First, the "stricter" standards the State refers to apply only to commercial transfer, storage,

treatment or disposal of low level radioactive *waste*. They do not and were never intended to apply to *ore*. Moreover, as IUSA has discussed in its prior pleadings, the standards Utah refers to are *not* more protective of human health and the environment than the Part 40 standards governing disposal of 11e.(2) byproduct materials such as the Ashland 2 materials.

Second, IUSA's facility is highly protective of human health and the environment. IUSA is currently in compliance with an air emissions permit, issued pursuant to 40 C.F.R. Part 61, Subpart W, which regulates radon emissions from its tailings cell. In addition, USA's 11e.(2) tailings cell has a double liner (synthetic and clay), a leak detection system, and groundwater monitoring. IUSA does not have a groundwater discharge permit because IUSA's facility is not subject to State jurisdiction in this regard. In any case, even if IUSA was subject to State jurisdiction in this regard, IUSA's tailings cell does not discharge to groundwater and hence a groundwater discharge permit is not necessary and would not provide any additional protection. Since the facility started its operations in 1980, there have been no groundwater discharges from the White Mesa Mill.^{3/}

Third, NRC technical staff has determined that the Ashland 2 materials do not contain any RCRA listed hazardous wastes. The State alleges that the Ashland 2 soils may be listed hazardous wastes because they are not "free of hazardous constituents." This is speculation and erroneous. Wastes containing hazardous constituents are not *listed hazardous wastes* under RCRA unless the waste originates from a listed source. EPA guidance addresses soils containing hazardous constituents of unknown origin:

To determine whether a waste is listed under RCRA, it is often necessary to know the source. However, at many CERCLA sites no information exists on the source of the wastes . . . When this documentation is not available, the lead agency may assume that the wastes are not listed RCRA hazardous wastes unless further analysis

^{3/} See Rehmann Affidavit at Paragraph 6.

or information becomes available which allows the lead agency to determine that the wastes are listed RCRA hazardous wastes.^{4/}

NRC Staff has reviewed the extensive materials testing data provided to date by USACE and IUSA and provisions for testing yet to be performed on the Ashland 2 material and found these a satisfactory basis for determining that the Ashland 2 material does not contain listed hazardous wastes. In particular, the CERCLA remedial investigation ("RI") conducted by the Department of Energy identifies several hazardous constituents at the site (including organics) but concludes that "[N]o wastes defined as hazardous by [RCRA] were located."^{5/} Moreover, in connection with completing a Radioactive Waste Profile Record associated with an earlier proposal to dispose of Ashland 2 material at the Utah Envirocare facility, Bechtel National, Inc., similarly concluded that the material did not contain "any amount of listed waste."^{6/}

Under the EPA guidances cited at footnote 4, these investigations provide sufficient basis for the conclusion that the materials to be processed by IUSA are not listed hazardous wastes. As additional safeguards, ICF Kaiser has performed a pre-excavation characterization of the material and Kaiser and IUSA will perform post-excavation testing of the material prior to processing by IUSA.^{7/} These tests serve to corroborate the conclusion of the RI and Bechtel investigation that these materials are not listed hazardous wastes.^{8/}

^{4/} 53 Fed. Reg. 51394, 51444 (Dec. 21, 1988). See also, 61 Fed. Reg. 18805 (April 29, 1996) ("if information is not available or inconclusive, facility owner/operators may generally assume that the material contaminating the media were not hazardous wastes"); and 63 Fed. Reg. 28619 (May 26, 1998) ("As discussed in the April 29, 1996 proposal, [EPA] continues to believe that, if information is not available or inconclusive, it is generally reasonable to assume that contaminated soils do not contain untreated hazardous wastes placed after the effective dates of applicable land disposal prohibitions.").

^{5/} RI Report at iii.

^{6/} Radioactive Waste Profile Record (EC-0230), Soil/Building ETC.

^{7/} Such testing is consistent with what NRC has required of other 11e.(2) facilities and with what the State requires of the Envirocare facility.

^{8/} See Rehmann Affidavit at paragraphs 9-12.

Testing of the Ashland 2 materials has revealed that some of this material does contain hazardous waste *constituents*. However, because the Ashland 2 material is 11e.(2) material, and 11e.(2) material includes, by definition, all "tailings or wastes produced by the extraction or concentration of uranium . . . ," Utah, as a non-agreement state, is without legal authority to regulate the disposal of 11e.(2) material containing these constituents. In fact, hazardous constituents routinely are present in 11e.(2) byproduct material and are disposed of with the 11e.(2) material in 11e.(2) disposal cells. This common scenario is discussed in a letter to "All NRC Uranium Recovery Licensees" from the Division of Low-Level Waste Management and Decommissioning, NRC (the "Lohaus letter"). The Lohaus letter states

Source, special nuclear, and byproduct material are specifically excluded from regulation under the Resource Conservation and Recovery Act (RCRA). . . *All tailings and wastes included in this definition, such as process fluids and nonradioactive ore residues, are thus byproduct material. These byproduct material wastes generated by uranium recovery licensees are not mixed wastes and are not subject to EPA regulation under RCRA.*^{9/}

Thus, hazardous constituents commonly are present in 11e.(2) materials but this does not impact the regulatory status of the 11e.(2) material or subject that material to the jurisdiction of a non-agreement state.

Even putting aside the regulatory status of this material, Utah will suffer no harm by the disposal of 11e.(2) materials containing hazardous constituents. Section 275 of the Uranium Mill Tailings Radiation Control Act of 1978, as amended, mandates that 11e.(2) disposal cells comport with standards that "shall provide for the protection of human health and the environment *consistent with the standards required under subtitle C of the Solid Waste Disposal Act, as amended.*"^{10/}

^{9/} "Whether or Not Uranium Mill Tailings Material Is A Mixed Waste," March 15, 1989.

^{10/} 42 U.S.C. § 2014 (emphasis added); "Subtitle C of the Solid Waste Disposal Act" refers to that section of RCRA governing disposal of hazardous wastes.

Consequently, an NRC-licensed 11e.(2) disposal cell is statutorily mandated to provide the same level of environmental protection as a hazardous waste disposal facility and Criteria 5 and 13 of Appendix A of Part 40 incorporate ground water protection requirements for EPA's entire RCRA hazardous constituents list. It is disingenuous of Utah to suggest otherwise.

In summary, processing of the Ashland 2 materials clearly satisfies all three requirements of the Commission's guidance on processing of alternate feed materials and can thus be undertaken without posing any significant threat to health and safety of the citizens of Utah. Processing the Ashland 2 materials will not result in incremental impacts beyond those contemplated by the Mill's license. Thus, the State has failed to demonstrate any irreparable harm if a stay is not granted, and the Presiding Officer should accordingly deny the State's Motion for Stay.

3. IUSA and Others Will Suffer Substantial Harm If a Stay is Granted.

Granting Utah's requested stay will cause substantial and undue harm to IUSA's interests. IUSA has already expended considerable time and expense in negotiating with USACE and ICF-Kaiser for the delivery and processing of the Ashland 2 materials and obtaining NRC approval for the license amendment. If the stay is granted and IUSA cannot begin processing the Ashland 2 material, IUSA will have to temporarily shut down and lay-off personnel or pay salaries for personnel to stand by. Additionally, IUSA will be deprived of the revenue expected from the sale of the extracted uranium. ICF Kaiser has more than 30 personnel at the Ashland 2 Site, operating 2-ten hour shifts, six days per week. Kaiser's site operations costs are \$16,000-18,000 per day. Costs for storage of materials stopped in transit escalate daily from \$8,000 per day. In addition, Kaiser has informed IUSA that Kaiser must complete the Ashland 2 project by September 30, 1998, or it will be denied the Ashland 1 contract, worth \$20-25 million to Kaiser.¹¹¹

¹¹¹ See Rehmann Affidavit at Paragraph 7.

4. Public Interest Supports the Denial of a Stay.

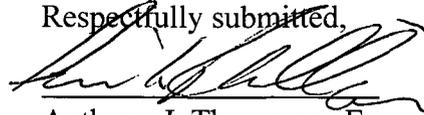
The public's interest would also be served by the denial of a stay. Pursuant to its legally mandated function, the NRC staff has conducted a careful and lengthy review and has determined that IUSA's application for a license amendment allowing the processing of the Ashland 2 materials meets all applicable standards, including both tests for determining whether an ore is being processed "primarily" for its source material content pursuant to the Commission's guidance for processing of alternate feed. Consequently, NRC Staff amended IUSA's source materials license to permit such processing. The USACE has also concurred with that assessment and thus has agreed to transfer the Ashland 2 materials to IUSA. Any additional review, as requested by the State, is likely to result only in needless waste of public resources on issues that have already been carefully addressed.

In addition, we note that processing of the Ashland 2 materials actually will promote public health and safety -- a fact that the State appears to have overlooked. Processing of alternate feed materials extracts additional uranium from such materials, recovering a valuable energy resource and reducing the radiological component of the tailings to be disposed, making them safer for disposal. Such an activity certainly is preferable to allowing direct disposal of a larger quantity of more highly radioactive material. In either case, the Ashland 2 material ultimately must be disposed of in an 11e.(2) byproduct material cell.

III. CONCLUSION

For all of the reasons set forth above, IUSA respectfully submits that State of Utah's Motion for Stay and Request for Temporary Stay should be **DENIED**.

Respectfully submitted,



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**INTERNATIONAL
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August 11, 1998

Administrative Judge
Peter B. Bloch
Presiding Officer
Atomic Safety and Licensing Board
Third Floor, Two White Flint North
11545 Rockville Pike
Rockville, MD 20852

Dear Judge Bloch:

Re: In the matter of International Uranium (USA) Corporation (Source Material License Amendment) Docket No. 40-8681-MLA-4

I enclose a copy of my Affidavit in support of the Amended Opposition of International Uranium (USA) Corporation to State of Utah's Request For A Stay.

Sincerely yours,

Michelle R. Rehmann
Environmental Manager

MRR/tay
Enclosures

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges: Peter B. Bloch, Presiding Officer
Richard F. Cole, Special Assistant

In the Matter of:)	Docket No. 40-8681-MLA-4
)	
INTERNATIONAL URANIUM)	
(USA) CORPORATION)	
(Source Material License Amendment))	August 11, 1998

INTERNATIONAL URANIUM)
(USA) CORPORATION)
) s.s.
DENVER, COLORADO)

AFFIDAVIT OF MICHELLE R. REHMANN

I, MICHELLE R. REHMANN, being first duly sworn upon oath, depose and state as follows:

1. I am the corporate Environmental Manager for International Uranium (USA) Corporation ("IUSA"), having been hired to that position upon the transfer of the assets of Energy Fuels Nuclear, Inc. on May 9, 1997. I held the same position with the predecessor company, Energy Fuels Nuclear, Inc., commencing in 1994.

2. I earned a Bachelor's degree in hydrology from the University of Arizona College of Engineering and Mines in 1989.

3. Among my responsibilities is management of environmental licensing and compliance activities, including application for amendments to the Company's NRC license for the White Mesa Uranium Mill.

4. IUSA submitted a license amendment application to the NRC on May 8, 1998, regarding the acceptance of the Ashland 2 Materials for processing at the White Mesa Mill as alternate feed materials. IUSA sent a copy of the May 8 license amendment application to the DEQ on May 8 (Exhibit 1). In the cover letter to the NRC, IUSA advised the NRC that "the contractor ICF Kaiser, will begin excavation in early June, 1998; start shipping the material; and be completed by September 30, 1998." IUSA met with the Utah Department of Environmental Quality on May 22 to discuss the content, of the amendment request that IUSA had submitted to the NRC on May 8, 1998 to accept the Ashland 2 alternate feed ore. After I sent by facsimile a copy of the NRC license amendment which allows IUSA to process the Ashland 2 materials, on or about June 23, 1998, Mr. Sinclair of the Utah Department of Environmental Quality contacted me by telephone to ask the status of our contract with the U.S. Army Corps of Engineers. I advised him that a contract was undergoing completion, and that the project would then proceed. I further stated that I am not authorized to divulge details regarding IUSA's contracts to outside parties. Mr. Sinclair stated at that time that he would contact the Corps directly to obtain details of the contract. The Corps has advised me that the Buffalo District of the Corps has contacted Dane Finerfrock of the UDEQ on two separate occasions, and has recently also attempted to reach Mr. Sinclair. However, the Corps has advised me that UDEQ has not initiated any contacts with the Buffalo District. On July 10, the USACE posted a press release on <http://www.ncb.usace.army.mil> stating that the material

transportation would begin "after July 18th. (Exhibit 2)" The DEQ has been involved in the issue of the transportation of the Ashland 2 Materials since as early as June 15, 1998. On July 21, 1998, the DEQ gave its approval to the manner of transloading of the materials at the East Carbon, Utah, facility of ECDC Environmental, L.C., a subcontractor of ICF Kaiser, thereby giving the State's approval for the commencement of shipment to and transloading in Utah. Attached to this Affidavit as Exhibits 3 and 4 are a fax dated July 14, 1998, from David Ardito of ECDC to me enclosing a copy of a letter from Darin Olson of ECDC to William J. Sinclair, Director of the Division of Radiation Control of Utah, and a letter dated July 21, 1998 from Mr. Sinclair to Mr. Olson, respectively.

5. The tailings cells at IUSA's White Mesa Mill are lined with both synthetic and clay liners, and contain leak detection collection systems and monitoring wells screened in the nearest groundwater to the cells. The tailings cells are located within the unsaturated Dakota Sandstone, which overlies the Burro Canyon Formation.

Data on groundwater quality have been collected at the White Mesa Mill from a total of 23 wells drilled since 1979. The Mill's groundwater monitoring program is engineered to provide timely detection of potential releases to the Entrada/Navajo sandstone, by monitoring in wells above this hydrogeologic unit in a small, discontinuous zone of water perched atop a confining unit, approximately 110-150 feet below the tailings cells. Although the perched zone used for early detection monitoring transmits insufficient water to be an aquifer, this perched zone, rather than the Entrada/Navajo aquifer, is used for very early detection of any potential releases from the tailings disposal cells at the Mill. In other words, any release detected in this zone is separated from the Entrada/Navajo aquifer by approximately 1,200 feet of very low-

permeability, bentonitic mudstone and claystone (the Brushy Basin Member). Nearly 19 years of data collected every quarter from wells completed in this zone have shown that:

(a) There have been no increasing trends in concentrations of constituents that would indicate seepage from the existing disposal cells;

(b) The usable aquifer is under artesian pressure and, therefore, has an upward pressure gradient which would preclude downward migration of constituents into the aquifer; and

(c) The facility has operated for a period of nearly 19 years without impacts to groundwater.

Continued monitoring at the site will be performed to verify that past, current and future operations will not impact groundwater.

6. If at any time the monitoring indicated a potential release, based on monitoring of conservative (that is, highly mobile) parameters used as indicator parameters, then IUSA would, in accordance with NRC requirements, expand the list of monitoring parameters. However, it is not necessary to monitor for an expanded list when continuous monitoring of parameters which are highly mobile, which are known to exist in the tailings, and which are not present in high levels in the existing groundwater, shows that the mill is producing no change to the existing water quality. The relatively benign tailings from processing the Ashland 2 materials will pose no greater hazard to the well-protected groundwater system at the Mill than does the existing operation.

7. IUSA and others will be economically damaged if the stay is issued. The Ashland material represents approximately two months of processing activity at the White Mesa Mill. Immediate loss of the ore materials will result in two months of unused capacity at the Mill with the following economic impact.

Layoff of approximately 50 to 55 hourly employees, or IUC will incur the cost of maintaining the employees during the two months of idle time. Cost of \$200,000 per month in terms of lost wages to employees (Utah citizens) or additional cost to IUC.

The Mill is currently processing the Cabot ore material and is not scheduled to begin processing conventional uranium/vanadium ores until early 1999. The Ashland ore is required to fill the gap between the current processing activities and the conventional ore run. Loss of the Ashland ore will result in the above detailed downtime or the necessity of starting the conventional ore processing sooner. Earlier startup of the conventional ore processing will result in a shorter overall Mill run (due to less mine production and vendor ore) and the resultant inefficiencies in recovery.

ICF Kaiser Engineers ("ICFKE") has a 30-plus member staff currently under full operation at the Ashland 2 site. The personnel are all fully trained, equipped to operate on two 10-hour shifts, six days per week. A fleet of 420 intermodal containers and 125 rail cars have been mobilized and rented. Cost per day are as follows:

- a. Site: \$16,000-\$18,000/day site operations costs - labor, equipment, utilities, etc.

- b. Shipping/transportation: Demurrage is \$65/car, incrementally increasing to \$8,125/day from days 1 to 28
- c. Follow-on project: Ashland 2 must be complete by September 30, 1998 or ICF Kaiser will not be granted the Ashland 1 contract for \$20-25M.

8. The instant amendment to IUSA's license causes no harm to public health or the environment and poses no potential impacts beyond the potential impacts posed by pre-existing mill activities. Processing of the Ashland 2 material is no different from the processing of other alternate feed materials, for which the NRC staff, having determined such processing would have no environmental or health and safety impacts, have previously issued license amendments. Processing of the material and subsequent placement of the resultant tailings in the Mill's tailings impoundments will not produce any change in the tailings.

9. The license amendment requirement for post excavation testing and additional testing for hazardous waste constituents upon receipt at White Mesa is employed exactly to ensure that no listed hazardous waste could ever get to the ore being processed and hence into the tailings impoundment. The Utah groundwater permit for the Low-Level Radioactive Waste and 11e.(2) Waste Disposal Facility operated by Envirocare has an almost identical requirement.

10. Previous investigators have determined that the Ashland 2 materials do not contain and are not listed hazardous wastes.

a. The DOE conducted a full remedial investigation ("RI"), in accordance with CERCLA rules, which included assessment of the potential presence of hazardous waste.

b. Bechtel reviewed DOE's report, and performed RCRA review of records and other information, to confirm that DOE was correct in stating in the RI report that the materials on site do not contain listed hazardous waste. The Bechtel review was provided with the material characterization data provided by ICF Kaiser Engineers ("ICFKE") to confirm that any detections of organics had been considered and were consistent with the conclusions in the RI; namely, that the materials are not and do not contain listed hazardous wastes.

c. IUSA certified, in our submittal to the NRC, that the material does not contain or is not listed hazardous waste.

d. The DOE completed a waste profile form provided by Envirocare in 1996, indicating that the material was not a listed hazardous waste; rather, it was classified by the DOE on the profile form as 11e.(2) byproduct. The material was also noted on the form as not being either a mixed or low-level waste. A note on the form indicates "no organics detected". This is the form that ICFKE advised IUSA had been accepted, at the time, to ship the material to Envirocare (Exhibit 5).

e. ICFKE, referring to the above described earlier investigations conducted by the DOE and their contractor Bechtel, stated in Sampling and Analysis Plan ("SAP") that the material is not a RCRA hazardous waste.

11. ICFKE agreed to IUSA's contract condition which requires that no listed hazardous waste may be delivered to IUSA, and that if IUSA, based on our on-site sampling, determines that any of the material is a listed hazardous waste, it must be taken off our site by ICFKE, at their own expense.

12. Nevertheless, ICFKE and IUSA will conduct confirmatory sampling, to ensure that the materials are not significantly different from the characterization presented in the RI.

a. ICFKE is performing three types of excavation sampling: (1) pre-excavation characterization, consisting of 15 samples of unexcavated materials, analyzed for a full suite of parameters (check list of parameters); (2) visual inspection and organic vapor analysis of material as it is excavated, to determine whether any materials appear to contain organic constituents; and (3) testing of excavated materials at one sample per 500 CY for volatile and semivolatile organics.

b. IUSA will conduct sampling of the material as it is delivered to the mill, at a rate of one sample per 100 CY, up to the first 1,000 CY; then, one sample per 500 CY, up to the entire material volume delivered. IUSA's on-site confirmatory sampling program is substantively the same as would be applied for any 11e.(2) site in taking this material.

i. In developing the submittal to the NRC in which IUSA commits to confirmatory on-site sampling. IUSA proposed to perform sampling at a frequency approximately equivalent to that conducted by Envirocare, for receipt of 11e.(2) byproduct material.

ii. All of the above characterization measures, from use of the existing data to characterize the materials, to sampling of the materials prior to and during excavation, and on-site sampling upon arrival at the material management facility, would be applied by Envirocare just as they are being applied by IUSA, had Envirocare been the successful bidder.

13. As stated in letters from the City of Blanding, San Juan County, citizens of Blanding, mill employees, and Native American mill employees attached here to as Exhibits 6, 7 and 8, continued operation of the mill as the largest private employer is vital to the economy of the area and these people. Recycling of alternate feed ores such as that being implemented under this license amendment, recovers a valuable resource and diminishes the quantity and radiological component of the Ashland 2 material that must be disposed.

14. The White Mesa Mill is in full compliance with all applicable federal laws and regulations. The NRC conducted an inspection June 9-11, 1998 and in the Inspection Report of July 9th, 1998 found operations were being conducted in full compliance with license conditions. No violations were issued.

FURTHER AFFIANT SAYETH NOT.

I swear under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

DATED this 11 day of August 1998.



Michelle R. Rehmann

EXHIBIT 1



INTERNATIONAL
URANIUM (USA)
CORPORATION

Ashland 2

Independence Plaza, Suite 950 • 1050 Seventeenth Street • Denver, CO 80265 • 303 628 7798 (main) • 303 359 4125 fax

May 8, 1998

Via Overnight Mail

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: Amendment Request to Process an Alternate Feed at White Mesa Uranium Mill
Source Material License SUA-1358

Dear Mr. Holonich:

International Uranium (USA) Corporation ("IUSA") hereby submits the enclosed request to amend Source Material License SUA-1358 to authorize receipt and processing of a uranium-bearing material resulting from the processing of natural ore for the extraction of uranium. For ease of reference, this material is referred to herein as the "Uranium Material". The Uranium Material is being removed by ICF Kaiser, under a contract with the U.S. Army Corps of Engineers ("USACE", or the "Corps") from a site being managed under the Formerly Utilized Sites Remedial Action Program ("FUSRAP") in Tonawanda, New York, known as Ashland 2.

The volume of the Uranium Material to be removed and shipped from Ashland 2 will range from approximately 24,000 to approximately 25,000 dry tons. Average uranium content is difficult to estimate, although site history and available data suggest that recoverable uranium is present. Analytical data provided to IUSA indicate uranium content ranging from nondetectable to approximately 1.0 percent, or greater. IUSA analysis of three surface samples indicated concentrations ranging from <0.001 to 0.06 percent. Eighteen core samples showed uranium contents above 0.05 percent.

In addition to recovery of the uranium content of the Uranium Material, vanadium may also be recovered using the secondary vanadium recovery circuit of the Mill that is used when vanadium/uranium feedstock is processed. However, insufficient ore grade data are available to estimate the potential recovery of vanadium or other metal materials. This Uranium Material will be processed either together with or separately from, and in the same manner as our

conventional ores. and will contribute significant economic benefits to IUSA. as detailed in Section 1.3 of the application. Because we have asked that this application be expedited. in order to facilitate NRC's review, we have decided to include in the regulatory considerations section of our application more detail than in past submissions.

The processing of the Uranium Material will not increase the mill's production to exceed the License Condition No. 10.1 limit of 4,380 tons of U₃O₈ 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 impacts beyond those originally evaluated.

The disposal of the 11e.(2) byproducts resulting from processing the Ashland 2 material will not change the characteristics of the Mill tailings from the characteristics associated with normal milling operations. In fact, processing of the Ashland 2 material, which is an 11e.(2) byproduct material, to recover the uranium it still contains, is expected to make the resulting 11e.(2) tailings less contaminated, as radioactive uranium will be removed from the Uranium Material.

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

INTRODUCTION

- 1.0 **Material Composition and Volume**
 - 1.1 **Radiochemical Data**
 - 1.2 **Hazardous Constituent Data**
 - 1.3 **Regulatory Considerations**
- 2.0 **Transportation Considerations**
- 3.0 **Process**
- 4.0 **Safety Measures**
 - 4.1 **Radiation Safety**
 - 4.2 **Control of Airborne Contamination**
 - 4.3 **Vehicle Scan**
- 5.0 **Other Information**
 - 5.1 **Added Advantage of Recycling**
 - 5.2 **Reprocessing of 11e.(2) Byproduct Materials under UMTRCA**

CERTIFICATION

- Attachment 1** **Ashland 2 Material Description, Process History, Flow Diagram, and Analytical Data.**
- Attachment 2** **White Mesa Mill Equipment Release/Radiological Survey Procedure**

Attachment 3

U.S. Army Corps of Engineers Value Engineering Proposal for Ashland 1
and Ashland 2

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).
- Energy Fuels Nuclear ("EFN") request to the NRC for the amendment to process uranium-bearing potassium diuranate ($K_2U_2O_7$) 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.
- 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.
- EFN request to the NRC for the amendment to process uranium-bearing material owned by the Cabot Corporation.
- EFN request to the NRC for the amendment to process uranium-bearing material owned by the U.S. Department of Energy.

We believe that use of these guidance materials, supported by our discussions with the NRC concerning these amendment requests, has allowed us to prepare a complete, concise submittal. Therefore, IUSA requests that the NRC please attempt to reply to this request within 30 days of this transmittal date. The established schedule calls for removal actions for Ashland 2 to take place during the summer of 1998. The contractor, ICF Kaiser, will begin excavation in early June, 1998; start shipping the Material; and be completed by September 30, 1998. Removal actions at the two other FUSRAP locations near Ashland 2, Ashland 1 and Seaway, will follow in early 1999. Early review will allow material from the Ashland 2 site to be transported to IUSA in lieu of other locations. I can be reached at (303) 389.4131

Sincerely,



Michelle R. Rehmann
Environmental Manager

Mr. Joseph J. Hovvitch

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May 5 1988

MRR/tay
Attachments

cc James Park
Earl E. Hoellen
Harold R. Roberts
David C. Frydenlund
William N. Deal

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AUG-11-98 17:16 From: INT URANIUM CORP

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

May 8, 1998

**Prepared by:
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**Submitted to:
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List of Attachments

Attachment 1	Ashland 2 Material Description, Process History, Flow Diagram, and Analytical Data
Attachment 2	Energy Fuels Nuclear, Inc. White Mesa Mill Equipment Release/Radiological Survey Procedure
Attachment 3	U.S. Corps of Engineers Value Engineering Proposal for Ashland 1 and Ashland 2

INTRODUCTION

International Uranium (USA) Corporation ("IUSA") 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 IUSA processes at IUSA's licensed uranium mill, primarily for the source material content. All wastes 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 IUSA to process a specific alternate feed, and to dispose of the associated 11e.(2) byproduct material in accordance with the Mill operating procedures.

Yellowcake produced from the processing of this material will not cause the currently-approved yellowcake production limit of 4,380 tons per year to be exceeded. In addition, and as a result, radiological doses to members of the public in the vicinity of the mill will not be elevated above levels previously assessed and approved.

1.0 MATERIAL COMPOSITION AND VOLUME

IUSA is requesting an amendment to Source Material License SUA-1358 to authorize receipt and processing of certain uranium-containing byproducts resulting from the processing of natural ore for the extraction of uranium. For ease of reference, this byproduct material is referred to herein as the "Uranium Material". The Uranium Material is located at a site being managed under the Formerly Utilized Sites Remedial Action ("FUSRAP") Program in Tonawanda, New York, known as Ashland 2. The Uranium Material is not a residue from a water treatment process.

The Uranium Material will be transported by ICF Kaiser, under contract to the U.S. Army Corps of Engineers ("USACE", or the "Corps"), as part of the FUSRAP Program, from Ashland 2 to the White Mesa Mill.

Ashland 2 is one of three sites located on the Linde Property near one another in Tonawanda, New York: Ashland 1, Ashland 2, and Seaway. The regional setting of Linde, Ashland 1, Ashland 2, and Seaway is shown in Figure 1-2 of Attachment 1. Figure 1-3 shows the locations of Linde, Ashland 1, Ashland 2, and Seaway.

From 1942 to 1946, portions of the Linde Property in Tonawanda, New York were used to separate uranium from imported pitchblende and domestic ore, under contract with the Manhattan Engineering District ("MED").

Figure 1-8 shows the process used for domestic ores; the process was modified somewhat for African ores, as is footnoted on Figure 1-8.

Residues from uranium ore processing at the Linde facility were disposed of (in trenches) and/or stored at the Ashland 2 property. Uranium ores processed at Linde included domestic ores and African ores, containing uranium in equilibrium with all of the daughter products in the decay chain.

In addition to these maps, Attachment 1 includes the following items describing Ashland 2 materials, process history, flow diagrams, and analytical data:

1. A complete history of uranium processing at the Linde property is provided on page 2 of the Proposed Plan for the Ashland 1 Ashland 2 Sites-Tonawanda, New York (U.S. Army Corps of Engineers, November 1997).
2. Portions of the Radiological Survey of the Ashland Oil Company (Former Haist Property), Tonawanda, New York (U.S. Department of Energy, May 1978) describe uranium concentrations in core samples and approximate distributions of tailings stored on the Linde property.
3. A portion of the Preliminary Assessment Site Investigation and HRS Scoring for Ashland 2, Tonawanda, NY (U.S. DOE, June 1987), which describes the content of the residues, including 8,000 tons of residues containing approximately 0.54% uranium, that were deposited on the Linde property between 1944-1946.
4. A Portion of the Preliminary Assessment and Site Investigation for Linde Air Products (U.S. DOE, September 1987) describes Linde operations and processes.

Over the years, leaching has spread contamination from the Uranium Material to adjacent soils, increasing the volume to be removed. The Corps estimates that the volume of the Uranium Material is approximately 24,000 to 25,000 tons (dry basis). Physically, the Uranium Material is a moist material consisting of byproducts from uranium processing operations (i.e., "tailings"), mixed with site soils.

1.1 Radiochemical Data

Process history demonstrates that the Uranium Material results from the processing of natural, mined uranium-bearing ores. It is currently being managed, and would be disposed of (if not reprocessed) as 11e.(2) byproduct material.

Average uranium content is difficult to estimate, although site history and available data suggest that recoverable uranium is present. Analytical data provided to IUSA indicate uranium content ranging from nondetectable to approximately 1.0 percent, or greater. IUSA analysis of three surface samples indicated concentrations ranging from <0.001 to 0.06 percent.

1.2 Hazardous Constituent Data

NRC guidance suggests that if a proposed feed material consists of hazardous waste, listed under subpart D Section 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 on whether the feed material contains hazardous waste.

The Corps, based on its analysis of the Uranium Material and process knowledge, believes that the Uranium Material contains no RCRA listed wastes. Process history and analytical data are described in Attachment 1.

ICF Kaiser, the contractor for the Corps, has indicated that to date, no listed hazardous wastes have been discovered at Ashland 2. Upon excavation, additional chemical testing will be accomplished to verify existing data, prior to any shipment. Any material that such testing would indicate contains listed hazardous waste constituents will not be included in the Uranium Material. ICF Kaiser has prepared a draft Sampling and Analysis Plan ("SAP") for this confirmatory sampling program. The SAP is currently under review by the Corps. ICF Kaiser will at NRC's request provide NRC with a copy of the final SAP.

The Uranium Material contains metals and other parameters which already are present in the mill tailings disposed of in the Cell 3 impoundments. Generally, the composition of the Uranium Material is very similar to the composition of the materials currently present in the White Mesa Mill's tailings impoundments, because the Uranium Material resulted from the processing of uranium-bearing ores for the extraction of uranium, and should not have an adverse impact on the overall Cell 3 tailings composition. Furthermore, the amount of tailings (a maximum of approximately 25,000 tons) produced by processing the material is not significant in comparison to the total amount of tailings currently in the cell (approximately 1.4 million tons). Additionally IUSA is required to conduct regular monitoring of the impoundment leak detection systems and of the groundwater in the vicinity of the impoundments to detect leakage if it should occur.

1.3 Regulatory Considerations

Uranium Material Qualifies as "Ore"

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 established the following definition of ore:

"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."

The Uranium Material is a matter from which source material will be extracted in a licensed uranium mill, and therefore qualifies as "ore" under this definition.

Uranium Material Not Subject to RCRA

As described under 1.2 above, the Uranium Material is not subject to regulation as a listed hazardous waste as defined in the Resource Conservation and Recovery Act, as amended, 42 U.S.C. Section 6901-6991 and its implementing regulations, or comparable State laws or regulations governing the regulation of listed hazardous wastes. In fact, the Department of Energy, as predecessor to the Corps in managing the FUSRAP sites, has consistently classified the FUSRAP materials, including the Uranium Material at Ashland 2, as 11e.(2) byproduct material. If Ashland 2 material were to be shipped to a waste disposal facility, IUSA understands that it would be accepted and disposed of as 11e.(2) byproduct material.

Justification of Certification Under Certification Test

In the Licensee Certification and Justification test set out in the NRC's *Final Position and Guidance on the Use of Uranium Mill Feed Material Other Than Natural Ores*, the licensee must certify under oath or affirmation that the feed material is to be processed primarily for the recovery of uranium and for no other primary purpose. IUSA makes this certification below.

Under this *Guidance*, the licensee must also justify, with reasonable documentation, the certification. The justification can be based on financial considerations, the high uranium content of the feed material, or other grounds.

Uranium Content

As stated above, average uranium content is difficult to estimate, although site history and available data suggest that recoverable uranium is present. For example, analytical data provided to IUSA indicate uranium content ranging from nondetectable to approximately 1.0 percent, or greater. IUSA analysis of three surface samples indicated concentrations ranging from <0.001 to

0.06 percent. Historic reports indicate that residues were both spread over and buried at the property. One report containing core data listed eighteen core samples that contained uranium above 0.05 percent.

The site history indicates that 8,000 tons of process residues containing on average approximately 0.54 percent U_3O_8 from processing at the Ashland 1 property, were spread out over roughly two thirds of that property. Some of these residues contained as much as 5.57 percent vanadium (V_2O_5). The majority of the residues, and associated contaminated soils, were transferred to Ashland 2 and Seaway. It is not clear how much of these residues remain on the Ashland 2 property; however all that do remain will be included in the Uranium Materials. Additional radioactive residues were removed from Ashland 1 and were also deposited in an area of the Ashland 2 Property.

Based on the information available, IUSA estimates that the average grade of U_3O_8 contained in the Uranium Material could be approximately 0.05 percent, but that this number could be increased or decreased depending on the extent to which pockets of higher grade materials exist on the site. However, IUSA believes that, based on the history of the site, there is significant potential that the average grade of the materials could be substantially greater than 0.05 percent U_3O_8 . For example, if one half of the Ashland 1 residues described above remain on the Ashland 2 site, the average grade of the total Uranium Materials could be in the range of 0.10 to 0.12 percent U_3O_8 .

These grades of 0.05 percent to 0.12 percent U_3O_8 are on the low end of the scale to justify hardrock mining and conventional milling today, although these grades of ore have been mined under conventional methods in the past and are currently being mined by *in situ* methods today. However, there are no mining or transportation costs payable by IUSA in connection with these ores, and therefore, these grades can justify conventional milling on their own merits in certain circumstances. When the additional *Financial Considerations* referred to below are taken into account, IUSA has concluded that milling the Uranium Material for its source material content provides a net benefit to IUSA, without taking into consideration the recycling fee referred to below under *Other Considerations*.

Financial Considerations

For a number of reasons, IUSA believes that the ability to process the Uranium Materials in the same fashion as conventional uranium ores either alone or commingled with such ores during the same mill run provides a number of production and production scheduling benefits to IUSA that have the effect of significantly reducing the incremental cost to IUSA of processing the Uranium Materials.

The White Mesa Mill has a nominal capacity of 2,000 dry tons of conventional ore per day. The mill cannot operate at less than its nominal capacity, without making certain capital modifications to the mill. This equates to approximately 680,000 tons per operating year, or 57,000 tons per month. This far exceeds the mine production from IUSA's currently operating mines, which is approximately 10,000 tons per month, and significantly exceeds the historic

daily production available for processing at the mill from all sources. As a result, the mill has almost always been run in campaigns, where sufficient ores are stockpiled to justify a minimum length mill run (which should generally be at least eight months of continuous operations); the mill is run until the stockpile together with ores that have been delivered to the mill during the mill run have been milled; and then the mill is put on standby until a sufficient amount of ores are again stockpiled to justify the next mill run, and so on.

There are several economic costs associated with this type of operation. First, several millions of dollars of valuable ore can be stockpiled for months, before offsetting revenues are realized. This has the effect of increasing the real cost of mining, as the cost to mine this ore must be financed during the period. Secondly, the longer the period of time that ore is sitting on the pad waiting to be milled, the higher is the risk that commodity prices will decrease during that time period, with the result that the yellowcake or vanadium will have to be sold at a lower price than expected. This risk can be partially offset to the extent that the resulting commodities are sold forward at or prior to the time that the ore is mined. However, IUSA, like most producers, does not sell all of its production forward in this manner. Thirdly, it is difficult to maintain a trained workforce at the mill during the downtime. As a result, there is a cost, both direct, in the form of training, and indirect, in the form of decreased operating efficiencies and recovery percentages over the initial months of each mill run, associated with training new operators for each mill run. This is one reason why it is important that each mill run be at least eight months or so, to minimize this type of start up inefficiency during each mill run. And of course, the longer the continuous mill run the better.

By making certain capital modifications to the mill, IUSA has the ability to decrease the nominal capacity of the mill, to allow for a lower throughput per day. This has the benefit of reducing the amount of time necessary to stockpile ore, as the number of tons required to be stockpiled between each mill run would be less. However, reducing the nominal throughput of the mill has the unfortunate effect of increasing the milling cost per ton, as certain cost components such as labor and utilities cannot be reduced proportionately. Therefore there are economic limits inherent in reducing the nominal capacity of the mill. As a result, the more ore that can be fed to the mill the better. A greater, faster, supply of ore will result in longer mill runs at higher nominal capacities and lower milling costs.

The ability to process the Uranium Materials along with conventional ores, or separately, in the same mill run, will provide IUSA with the ability to commence its mill run earlier in 1998 than otherwise would be the case. IUSA currently expects that, depending on various circumstances, the mill run could commence approximately two and one half months earlier as a result of processing the Uranium Material. IUSA views the Uranium Material the same as if it were low-grade conventional ore. The resulting ability to thereby increase IUSA's stockpile of ore by the addition of the Uranium Material and the ability to process such ores during the same mill run and in the same manner as conventional ores, is expected to provide the following benefits to IUSA:

- (a) the financial cost of stockpiling ore (i.e., the interest cost of the ore on the pad) is expected to be reduced by approximately two and one-half months;

- (b) IUSA would expect to be able to produce more U_3O_8 and V_2O_5 in 1998, which can be applied to reduce advance royalties payable in 1998, which advance royalties cannot be recouped from production in subsequent years;
- (c) By reducing the time between the mining of ore and the production and sale of U_3O_8 and V_2O_5 , IUSA is able to reduce the risk that the prices at which the commodities are sold will have fallen, thereby reducing the resulting risk of the possibility of production at a loss. Only a portion of IUSA's U_3O_8 is sold forward; the remainder must be sold on the spot market. At this time most of IUSA's V_2O_5 must be sold on the spot market;
- (d) An earlier conventional ore mill run should make it easier for IUSA to attract purchased conventional ore from independent third party miners, because the interest cost to such miners of having mined the ore without having received full payment for the value of the ore should be less, and hence the cost of mining would be less. IUSA's purchased ore program is an important part of its business;
- (e) The price of V_2O_5 is currently close to a seven-year high, and the ability to produce vanadium earlier reduces the risk that IUSA will miss this high in the market;
- (f) Having the ability to commingle Uranium Materials with, or to process the Uranium Material during the same mill run as, conventional ores should provide some ability to use Uranium Materials to smooth out variability in the production and delivery of conventional ores to the mill; and
- (g) The ability to start a conventional mill run earlier this year may reduce the risk of losing trained mill operators due to the possibilities of downtime between IUSA's current alternate feed run and its next conventional ore run. Or, alternatively, an earlier mill run may reduce the cost of retaining qualified personnel on staff during downtime, due to the possible shortening of the downtime period.

Finally, if circumstances at the Mill change such that ore supplies from IUSA's mines and other sources increases over the amounts currently expected, and the conventional mill run can therefore be started earlier than currently expected, then the ability to process the Uranium Material during the same mill run will either allow the Mill to be run at a higher nominal throughput than otherwise would be the case, resulting in lower costs of processing each ton of ore during the mill run and a more accelerated output of yellowcake and vanadium, or allowing for a longer mill run than would otherwise be the case, thereby allowing for lower average operating costs per ton due to the spreading out of startup and shutdown costs over a larger number of tons of ore milled during the mill run.

For these reasons, IUSA has determined that the ability to process the Uranium Material for uranium in the same manner and during the same mill run as our conventional ores has significant financial and commercial benefits to our uranium milling business, even at low grades

of uranium contained in the Uranium Materials. And of course, these benefits have the effect of reducing the incremental cost of processing the Uranium Material. To the extent that the Uranium Material contains higher grades of uranium, this added uranium recovery will add to the financial benefits to IUSA of processing the Uranium Material.

In addition to the foregoing, the Uranium Materials may contain some vanadium. If the Uranium Material is processed in separate batches during the mill run, it may be possible to recover this vanadium if it can be isolated in batches of 1.0 percent or higher. Historic data suggest that vanadium-bearing residues of over 5.0 percent may still be included in the Uranium Material. If these pockets of vanadium can be identified, then they can be run through the mill on a batch basis geared toward maximizing the co-product recovery of vanadium along with the uranium. If, however, these vanadium grades are commingled within the Uranium Material, they may still add to the recovery of vanadium at the mill if commingled with other vanadium-bearing ores. It is difficult to quantify what if any recovery of vanadium is possible, but there is definitely the potential for the recovery of some valuable vanadium at little incremental processing cost.

Other Considerations

In addition to the fact that IUSA will retain all uranium and vanadium produced from the Uranium Materials, and will realize the financial and commercial benefits described above, IUSA will receive a recycling fee for recycling the Uranium Materials to remove uranium and thereby reduce the radioactive component of the materials. However, recycling of the Uranium Materials for uranium and the disposal of the resulting tailings in the mill's tailings impoundments as 11e.(2) byproduct material is not the primary purpose of processing the Uranium Materials. The primary purpose of processing the Uranium Materials is for the recovery of source material in a manner that is economic to the operation of the mill in its processing of ores for their uranium content. By processing the Uranium Materials for uranium in the same fashion and during the same mill run as other conventional ores, the mill is able to enjoy significant financial economies and commercial benefits. The ability to also collect a recycling fee is merely good business practice, in light of market and commercial considerations.

2.0 TRANSPORTATION CONSIDERATIONS

The Uranium Material will be shipped by train and exclusive-use trucks from the Ashland 2 site to the White Mesa Mill in intermodal containers. The sealed containers will be loaded on railcars and transported cross-country to the final rail destination (expected to be either near Grand Junction, Colorado; Cisco, Utah; or Green River, Utah), where they will be transferred to trucks for the final leg of the journey to the White Mesa Mill. It is expected that four containers will be shipped per rail car, for a total of approximately 290 to 300 cars. ICF Kaiser expects that 60 truck loads per week will be used to transport from the rail transfer site to White Mesa Mill.

The Uranium Material will be shipped as LSA (low specific activity) Radioactive Hazard Class 7 Hazardous Material as defined by DOT regulations. ICF Kaiser will arrange with a materials handling contractor for the proper labeling, placarding, manifesting and transport of each

shipment of the Uranium Material. Each shipment will be "exclusive use" (i.e., the only material in each container will be the Uranium Material).

For the following reasons, it is not expected that transportation impacts associated with the movement of the Uranium Material by train and truck from New York to the White Mesa Mill will be significant:

- The material will be shipped as "low specific activity" material in exclusive-use containers (i.e., no other material will be in the containers with the Uranium Material). The containers will be appropriately labeled, placarded, and manifested, and shipments will be tracked by the shipping company from the Ashland 2 site until they reach the White Mesa Mill.
- On average during 1996, 370 trucks per day traveled the stretch of State Road 191 between Monticello, UT and Blanding, UT (1997 NRC personal communication with the State of Utah Department of Transportation). An additional 60 trucks per week traveling this route to the mill represents an increased traffic load of only 2 percent. Shipments are expected to take place over the course of a limited time period (three to four months).
- The containers and trucks involved in transporting the material to the mill site will be surveyed and decontaminated, as necessary, prior to leaving the Ashland 2 site for the White Mesa Mill and again prior to leaving the mill site for the return trip.

3.0 PROCESS

The Uranium Material will be added to the mill circuit in a manner similar to that used for the normal processing of conventional ore either alone, or commingled with conventional ores. The Uranium Material will be dumped into the ore receiving hopper and fed to the SAG mill before being pumped to Pulp Storage. The leaching process will begin in Pulp Storage with the addition of sulfuric acid.

The solution will be advanced through the remainder of the mill circuitry with no anticipated modifications to either the circuit or recovery process. Since no physical changes to the mill circuit of any significance will be necessary to process this Material, no construction impacts of any significance beyond those previously assessed will be involved.

Tailings produced by the processing of this material will be disposed of on-site in an existing lined tailings impoundment (Cell 3). The addition of these tailings (a maximum of approximately 25,000 dry tons) to Cell 3 will increase the total amount of tailings in the cell by approximately one to two percent, raising Cell 3 to a total of approximately 69 percent of cell capacity; therefore, no new impoundments are necessary. The design of the existing impoundments previously has been approved by the NRC, and IUSA is required by its NRC license to conduct regular monitoring of the impoundment liners and of the groundwater around the impoundments to detect leakage if it should occur.

4.0 SAFETY MEASURES

Mill employees involved in handling the material will be provided with personal protective equipment, including respiratory protection, as required. Airborne particulate and breathing zone sampling results will be used to establish health and safety guidelines to be implemented throughout the processing operations.

The Uranium Material will be delivered to the mill in closed containers via truck. The Uranium Material will be introduced into the mill circuit in the same manner as conventional ore. The material will proceed through the leach circuit, CCD circuit, and into the solvent extraction circuit in normal process fashion as detailed in Section 3.0 above. Since there are no major process changes to the mill circuit, and since the extraction process sequence is very similar to processing conventional uranium solutions, it is anticipated that no extraordinary safety hazards will be encountered.

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, if required. 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 neutral material. 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.

4.1 Control of Airborne Contamination

IUSA 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 successive extraction process circuitry from grinding, leaching, and 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 Uranium Material were uranium ore. The material is a moist solid or in a slurry form once it has been introduced into the SAG mill. Normal dust control measures will be utilized prior to the SAG mill.

The efficiency of airborne contamination control measures during the material handling operations will be assessed while the ore is in stockpiles. 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 as required, 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 have been prevented.

4.2 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).

4.3 Vehicle Scan

After the cargo has been offloaded at the mill site, a radiation survey of the vehicle and intermodal bin will be performed consistent with standard mill procedures (Attachment 2). 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, U.S. NRC, May, 1987. 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 2.0 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.

5.0 OTHER INFORMATION

5.1 Added Advantage of Recycling

The Value Engineering Study Team of the U.S. Army Corps of Engineers has proposed that the Corps use recycling and mineral recovery technologies at a uranium mill to reduce radioactive material disposal costs (See Attachment 3). The Corps notes that the White Mesa Mill has the technology necessary to recycle materials for extraction of uranium, vanadium, rare earth minerals, and other metals, and to provide for disposal of treated waste in the Mill's fully lined and NRC-compliant existing tailings impoundments.

The Corps has found that recycling will add value to the FUSRAP program, and lists the following advantages of recycling, over disposal:

1. Conforms to Congressional and regulatory mandates which encourage use of recycling.
2. Reduces radioactivity of the material to be disposed of.
3. Recycles uranium and other minerals.
4. Reduces cost of disposal of byproduct from recycling operation.
5. Treatment and disposal are performed at one location, and by-product from recycling is disposed of in an NRC-compliant disposal system, meeting 10 CFR 40 design criteria.
6. 11e.(2) by-product is disposed of in existing tailings impoundment which is consistent with 10 CFR 40 Appendix B intent for nonproliferation of small sites.
7. Actual cost savings for treatment and disposal versus cost of direct disposal only could be greater than projected, depending upon quantities of recoverable uranium or other minerals.
8. This technology has been demonstrated on multiple waste streams, and has potential applicability to other FUSRAP sites.

5.2 Reprocessing of 11e.(2) Byproduct Materials Under UMTRCA

From a legal point of view, there is no reason why IUSA should not be able to accept and process the Uranium Materials as alternate feeds since UMTRCA itself allows such remilling of 11e.(2) byproduct material:

“[T]he Secretary [of Energy] shall request expressions of interest from private parties regarding the remilling of the residual radioactive materials at the [inactive] site and upon receipt of any expression of interest, the Secretary shall evaluate among other things the mineral concentration of the residual radioactive materials at each designated site to determine whether . . . recovery of such minerals is practicable. The Secretary, with the concurrence of the Commission, may permit the recovery of such minerals. . . .”

While this provision applies only to inactive (Title I) sites, 11e.(2) byproduct material present at active (Title II) sites may be reprocessed under section 83 of the Atomic Energy Act. That section regulates transfer of custody of mill tailings and lands necessary for their disposal to DOE or states upon termination of licenses and provides in part:

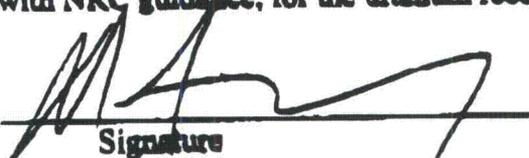
“If the Commission determines by order that use of the surface or subsurface estates, or both, of the land transferred to the United States or to a State under subparagraph (A) would not endanger the public health, safety, welfare, or environment, the Commission . . . shall permit the use of the surface or subsurface estates . . .”

**Certification of International Uranium (USA) Corporation
(the "Licensee")**

I, David C. Frydenlund, the undersigned, for and on behalf of the Licensee, do hereby certify as follows:

1. The Licensee intends to enter into a contract with ICF Kaiser Engineers, Inc., 9300 Lee Highway, Fairfax, VA 22031-1207, on behalf of the United States Corps. Of Engineers (the "Material Supplier") under which the Licensee will process certain alternate feed material (the "Material") at the White Mesa Uranium Mill for the recovery of uranium. As demonstrated in the foregoing amendment application, based on the uranium content and financial considerations surrounding the Material and the processing transaction, the Licensee hereby certifies and affirms that the Material is being processed primarily for the recovery of uranium and for no other primary purpose.

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


Signature

May 9, 1998
Date

David C. Frydenlund
Vice President and General Counsel
International Uranium (USA) Corporation

EXHIBIT 2



**US Army Corps
of Engineers**
Buffalo District

News Release

FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM

Release #9829 Arleen K. Kreusch
July 10, 1998 716-879-4438

Excavation Beginning on FUSRAP Ashland 2 Site

TONAWANDA -- Excavation of soil containing low levels of radioactive material began today at the Ashland 2 Site in Tonawanda. This site is managed by the U. S. Army Corps of Engineers (USACE) – Buffalo District under the Formerly Utilized Sites Remedial Action Program. “We are extremely happy to begin work on this important project. We feel the plan we have developed and are implementing will ensure the protection of human health and the environment and meet the needs of the community,” said David Conboy USACE Project Engineer.

The site will be remediated in accordance with a Record of Decision signed in April, 1998. Soils exceeding the site-specific guideline will be excavated and loaded for shipment to International Uranium Corporation’s White Mesa Mill, located near Blanding, Utah. The cleanup guideline was developed to ensure that the site could be safely utilized in the future.

This excavation effort is part of the site’s overall innovative uranium recycling and soil cleanup program. The Corps’ prime contractor, ICF Kaiser, has a subcontract with the International Uranium Corporation, a Utah based mining corporation. The International Uranium Corporation will extract uranium from the contaminated soil for recycling and future reuse. Recycling this alternative source material is environmentally innovative, and significantly reduces overall cleanup costs at the site while lowering the radioactivity of the material ultimately disposed.

The excavation operation will be completed by the end of September and railcars are scheduled to begin transporting material after July 18th. Surveillance activities and environmental monitoring will continually be in effect throughout the remediation. Attention is focused daily on ensuring the protection of the public and site workers during this operation.

[Return to FUSRAP News Release Page](#)

EXHIBIT 3

FAX

ECDC ENVIRONMENTAL L.C.
115 Cloverdale Circle
Tinton Falls, NJ 07724

Date 7/14/98
Number of pages including cover sheet 2

To: Michelle Behmann

From: David A. Ardito

Phone _____
Fax Phone 303-389-4125
CC: _____

e-mail Ecdema@aol.com
Phone (732)380-6654
Fax Phone (732)380-6470

- Urgent
- For your review
- Reply ASAP
- Please comment

Letter sent to DEQ

I was sent a copy before it was signed
via internet.



July 10, 1998

Mr. William J. Sinclair Director
Division of Radiation Control
168 North 1950 West
P.O. Box 14485-0
Salt Lake City, UT 84114-4850

Dear Mr. Sinclair:

On June 15, 1998, ECDC Environmental sent a letter requesting the position of Utah's DEQ, Division of Radiation Control on allowing ECDC to transload soils at their East Carbon, Utah facility. The soil would be generated from the excavation and remediation of the Ashland II FUSRAP Site in Tonawanda, NY. The Division's June 29 letter stated a 4b license was required for a bulk transload operation.

Currently, ECDC is considering an option which involves the movement of intermodal containers by rail from Tonawanda to ECDC. ECDC will then move the containers from the rail equipment to truck and chassis for transport to the White Mesa Mill near Blanding, Utah for processing.

ECDC has had numerous phone conversations with Dane Finnerfrock. Dane has informed ECDC that the State does not have a concern with the option mentioned above and a license is not required. It is also our understanding this type of movement has recently been done with similar material at a Cisco rail site in southeastern Utah.

Please confirm the States position on ECDC proceeding with this container movement operation.

Thank you,

Sincerely,

Darin Olson
ECDC Environmental, L.C.

EXHIBIT 4



**DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF RADIATION CONTROL**

Michael G. Lippert
Director
Dianne E. Nielsen, Ph.D.
Executive Director
William J. Sinclair
Secretary

168 South 1400 West
P.O. Box 164200
Salt Lake City, Utah 84114-0200
(801) 536-4300
(801) 536-4307 Fax
(801) 536-6114 T.D. 8.
www.deq.state.ut.us Web

July 21, 1998

Darin Olson
RCDC Environmental, L.C.
1111 West Highway 123
East Carbon, UT 84520

Dear Mr. Olson:

Thank you for your letter of July 10, 1998, concerning transloading of soils at the East Carbon facility for eventual transfer to the White Mesa Mill in Blanding, Utah. The proposal as stated in your letter indicates that contaminated soils at the Ashland II IURAP site will be loaded into intermodal containers at Tonawanda, New York for rail transport to the RCDC facility. Upon arrival at your permitted solid waste facility, the intermodal containers will be removed from the rail carrier to a truck and chassis for transport to the White Mesa Mill.

Under such a circumstance, where no other handling of the waste occurs except as described above and the waste is transferred as part of your permitted solid waste facility operations, no additional approval is required by the Division of Radiation Control. If you have any other questions, do not hesitate to contact me.

UTAH RADIATION CONTROL BOARD

William J. Sinclair
Executive Secretary

c: **Fred Nelson, Utah Attorney General's Office**
Dianne E. Nielsen, Ph.D., Executive Director, URMQ
Dennis Downs, DFQ/DSHW

EXHIBIT 5



**INTERNATIONAL
URANIUM (USA)
CORPORATION**

Independence Plaza, Suite 950 • 1050 Seventeenth Street • Denver, CO 80265 • 303 628 7798 (main) • 303 389 4125 (fax)

June 8, 1998

VIA OVERNIGHT MAIL

**Jim Park, Project Manager
U.S. Nuclear Regulatory Commission
Uranium Recovery Branch
Office of Nuclear Materials
Safety and Safeguards
Mail Stop T7J9
Two White Flint North
11545 Rockville Pike
Rockville, MD 20852-2738**

**Re: Amendment Request to Process an
Alternate Feed at White Mesa Uranium Mill
Source Material License SUA-1358
Ashland 2 Materials
Ashland 2 Amendment Request**

Dear Jim:

As follow-up to our discussion today, enclosed please find a clean copy of the profile for Ashland materials, listing the Tonawanda site materials as 11e.(2).

Sincerely yours,

**Michelle R. Rehmann
Environmental Manager**

**MRR/tay
Enclosures (1)**



C. RADIOLOGICAL EVALUATION.

1. **WASTE STREAM INFORMATION.** For each radioactive isotope associated with the waste, please list the following information. Envirocare's license assumes daughter products to be present in equilibrium, these are not required to be listed below and do not require measuring. (Use additional copies of this form if necessary).

Isotopes	Concentration Range (pCi/g)	Weighted Average (pCi/g)	Isotopes	Concentration Range (pCi/g)	Weighted Average (pCi/g)
a. <u>Tb-232</u>	<u>ND to <1.54</u>	<u>1.8</u>	g. _____	_____	_____
b. <u>Ra-226</u>	<u>ND to 7.4</u>	<u>1.9</u>	h. _____	_____	_____
c. <u>U-238</u>	<u>0.22 to <2973</u>	<u>1490</u>	i. _____	_____	_____
d. <u>U-235</u>	<u>ND to <118.8</u>	<u>109</u>	j. _____	_____	_____
e. <u>U-234</u>	<u>ND to 1992</u>	<u>1800</u>	k. _____	_____	_____
f. <u>Tb-230</u>	<u>ND to 170.6</u>	<u>160.3</u>	l. _____	_____	_____

ND - Analyte not detected.

2. Y Is the radioactivity contained in the waste material Low-Level Radioactive Waste as defined in the Low-Level Radioactive Waste Policy Amendments Act of 1983 or in DOE Order 5820.2A, Chapter III? (Please Circle) If yes, check "LLRW" block on line 3 of page 1.

3. Y **LICENSED MATERIAL:** Is the waste material listed or included on an active Nuclear Regulatory Commission or Agreement State license? (Please circle)

(If Yes) TYPE OF LICENSE: Source _____ Special Nuclear Material _____ By-Product _____ NORM _____ NARM _____

LICENSING AGENCY: _____

D. CHEMICAL AND HAZARDOUS CHARACTERISTICS

1. **DESCRIPTION AND HISTORY OF WASTE**

SEE ATTACHMENT 1

Please attach a description of the waste to this profile. Include the following as applicable: The process by which the waste was generated. Available process knowledge of the waste. The basis of hazardous waste determinations. A list of the chemicals and materials used in or commingled with the waste; a list of any and all applicable EPA Hazardous Waste Numbers, current or former; and, a list of any and all applicable land-disposal prohibition or hazardous-waste exclusions, extensions, exemptions, effective dates, variances or delistings. Attach the most recent or applicable analytical results of the waste's hazardous-waste characteristics, constituents and applicable hazardous-waste treatment standards. Attach any applicable analytical results involving the composition of the waste. Attach any product information or Material Safety Data Sheets associated with the waste. If a category on this Waste Profile Record does not apply, describe why it does not.

Please describe the history, and include the following:

- Y N Was this waste mixed, treated, neutralized, solidified, commingled, dried, or otherwise processed upon generation or at any time thereafter?
- Y N Has this waste been transported or otherwise removed from the location or site where it was originally generated?
- Y N Was this waste derived from (or is the waste a residue of) the treatment, storage, and/or disposal of hazardous waste defined by 41 CFR 361?
- Y N Has this material been treated at any time to meet any applicable treatment standard?

2. **LIST ALL KNOWN AND POSSIBLE CHEMICAL COMPONENTS OR HAZARDOUS WASTE CHARACTERISTICS**

	(Y)	(N)		(Y)	(N)		(Y)	(N)
a. Listed HW	_____	<u>X</u>	h. "Derived-From" HW	_____	<u>X</u>	g. Toxic	_____	<u>X</u>
d. Cyanides	_____	<u>X</u>	e. Sulfides	_____	<u>X</u>	f. Dioxins	_____	<u>X</u>
j. Pesticides	_____	<u>X</u>	k. Herbicides	_____	<u>X</u>	i. PCBs	_____	<u>X</u>
l. Explosives	_____	<u>X</u>	m. Pyrophorics	_____	<u>X</u>	n. Solvents	_____	<u>X</u>
o. Organics	_____	<u>X</u>	p. Phenolics	_____	<u>X</u>	q. Infectious	_____	<u>X</u>
r. Ignitable	_____	<u>X</u>	s. Corrosive	_____	<u>X</u>	t. Reactive	_____	<u>X</u>
u. Antimony	_____	<u>X</u>	v. Beryllium	_____	<u>X</u>	w. Copper	_____	<u>X</u>
x. Nickel	_____	<u>X</u>	y. Thallium	_____	<u>X</u>	z. Vanadium	_____	<u>X</u>
aa. Alcohols	_____	<u>X</u>	ab. Arsenic	_____	<u>X</u>	ac. Barium	_____	<u>X</u>
ad. Cadmium	_____	<u>X</u>	ad. Chromium	_____	<u>X</u>	ae. Lead	_____	<u>X</u>
ae. Mercury	_____	<u>X</u>	af. Selenium	_____	<u>X</u>	ag. Silver	_____	<u>X</u>
ah. Benzene	_____	<u>X</u>	ag. Nitrate	_____	<u>X</u>	aj. Nitro	_____	<u>X</u>
ak. Fluoride	_____	<u>X</u>	ah. Oil	_____	<u>X</u>	am. Fuel	_____	<u>X</u>
an. Chelating Agents	_____	<u>X</u>						

(m). Other-Known or Possible Materials or Chemicals SEE ATTACHMENT 1

Generator Initials: _____
Co-Operators Initials: _____

COPY

3. ANALYTICAL RESULTS FOR TOXICITY CHARACTERISTIC. (Please transcribe results on the blank spaces provided. Attach additional sheets if needed, indicate range or worst-case results).

Metals (circle one): Total (mg/kg) or TCLP (mg/l)		Organics (circle one): Total (mg/kg) or TCLP (mg/l)	
Lead	ND - 2.3	Mercury	ND - 0.026
Barium	ND - 0.741	Zinc	ND - 25.4
Cadmium	ND - 0.078		
Chromium	ND - 0.549		
Copper	ND - 1.4		

ND - Analyte not detected.

4. ANALYTICAL RESULTS FOR REQUIRED PARAMETERS: (Please transcribe results on the blank spaces provided. Attach additional sheets if needed).

Soil pH 5.5 - 8.5 Paint Filter No Free Liquid Not detected Cyanide Not detected Sulfide Not detected
 Liquids Test (Pass/Fail) Released mg/kg Released mg/kg

5. IGNITABILITY (40 CFR 261.21(a)(2),(4).)

Flash Point \geq NA °F °C Is the waste a RCRA oxidizer? Y N

6. CHEMICAL COMPOSITION (List all known chemical components and circle the applicable concentration dimensions. Use attachments to complete, if necessary.)

Chemical Component	Concentration	Chemical Component	Concentration
See attached data sheets.	% mg/kg	_____	% mg/kg
_____	% mg/kg	_____	% mg/kg
_____	% mg/kg		
_____	% mg/kg	Halogenated Organic (HOC) Compounds (Sum of the list of HOCs.)	None Detected mg/kg

7. TREATMENT STANDARDS. (FOR MIXED WASTE ONLY). Describe the waste's applicable treatment standards. Include the EPA Hazardous Waste Numbers and information with respect to the waste's subcategory (e.g. low mercury subcategory), treatability group (e.g. non-wastewaters), treatment standards and concentration or technology (e.g. 5.7 mg/l selenium in extract or INCIN (incineration)), and any applicable exemptions, exclusions, variances, extensions, allowances, etc. The following format is suggested. If additional space is needed, provide an attachment to this profile record.

EPA HW Number	Subcategory	Treatability Group	Treatment Standard(s) and Concentrations or Technology	Any Exemptions, Variances, Extensions or Exclusions (List 40 CFR references)
<u>N/A</u>	_____	_____	_____	[Y/N] _____
_____	_____	_____	_____	[Y/N] _____

E. REQUIRED CHEMICAL LABORATORY ANALYSIS. Generator must submit results of analyses of samples of the waste. Results are required from a qualified laboratory for the following analytical parameters unless nonapplicability of the analysis for the waste can be stated and justified in attached statements. Attach all analytical results and QA/QC documentation. (CAUTION: PRIOR TO ARRANGING FOR LABORATORY ANALYSES, CHECK WITH ENVROCARE AND LABORATORY REGARDING UTAH LABORATORY CERTIFICATIONS.)

FOR ALL WASTE TYPES: CHEMICAL ANALYSIS: Soil pH (9045), Paint Filter Liquids Test (9095), Recovery (cyanide and sulfide).

1. MINIMUM ADDITIONAL ANALYTICAL REQUIRED FOR:

- a. Non-RCRA Waste (Non Mixed Waste, i.e. LLRW, NORM): TCLP including the 32 organics, 8 metals, and copper (Cu) and zinc (Zn).
- b. Mixed Waste: Results to show why the waste is hazardous, and the following analytical results:

- (1) TOX (Total Organic Halides SW-846 9020/9022) or volatile & semi-volatile organics (8240+8270, reduced if TOX > 200 mg/kg)
- (2) Applicable concentration-based treatment standards
- (3) Total and Amenable Cyanide, SW-846 9010 or 9012, reduced if reactive cyanide > 20 mg/kg

Generator Initials: [Signature]
 Co-Operator Initials: [Signature]



2. **REQUIRED RADIOLOGICAL ANALYSES.** Please obtain sufficient samples to adequately determine a range and weighted average of activity in the waste. Have a sufficient number of samples analyzed by gamma spectral analysis for all natural and man-made isotopes such that they support the range and weighted average information for the waste stream that will be recorded in item D.1. If Uranium, Plutonium, Thorium, or other non-gamma emitting nuclides are present in the material, have at least (1) sample evaluated by radiochemistry to determine the concentration of these additional constituents in the material.

3. **PRE-SHIPMENT SAMPLES OF WASTE TO ENVIROCARE**

Once permission has been obtained from Envirocare, please send 5 representative samples of the waste to Envirocare. A completed EC-2000 form must be included with the sample containers. These samples will be used to establish the waste's incoming shipment acceptance parameter tolerances and may be analyzed for additional parameters. Send about two pounds (one liter) for each sample in an airtight clean glass container via United Parcel Post (UPS) or Federal Express to:

Envirocare of Utah, Inc., Attn: Sample Control, Tooele County, Interstate-80, Exit 49, Clive, Utah 84029
(For Federal Express Use Zip Code 84083). Phone: (801) 521-9619.

4. **LABORATORY CERTIFICATION INFORMATION.** Please indicate below which of the following categories applies to your laboratory data.

a. Note analytical data that is to represent mixed waste must be Utah certified or from the USEPA. All radiological data used to support the data in item C.1. must be from a Utah-certified laboratory.

UTAH CERTIFIED. The laboratory holds a current certification for the applicable chemical or radiologic parameters from the Utah Department of Health insofar as such official certifications are given.

GENERATOR'S STATE CERTIFICATION. The laboratory holds a current certification for the applicable chemical parameters from the generator's State insofar as such official certifications are given, or

GENERATOR'S STATE LABORATORY REQUIREMENTS. The laboratory meets the requirements of the generator's State or cognizant agency for chemical laboratories, or:

If using a non-Utah certified laboratory, briefly describe the generator state's requirements for chemical analytical laboratories to defend the determination that the laboratory used meets those requirements, especially in terms of whether the requirements are parameter specific, method specific, or involve CLP or other QA data packages. Note: When process or product knowledge of this waste is applied, additional analytical results may not be necessary to complete Section B, D.2, D.3, or D.6 of this form.

b. For analytical work done by Utah-certified laboratories, please provide a copy of the laboratory's current certification letter for each parameter analyzed and each method used for analyses required by this form.

c. For analytical work done by laboratories which are not Utah-Certified, please provide the following information:

State or Other Agency Contact Person Generator's State Telephone Number

Lab Contact Person Laboratory's State Telephone Number

F. **CERTIFICATION**

GENERATOR'S CERTIFICATION OF REPRESENTATIVE SAMPLES, ANALYTICAL RESULTS FROM QUALIFIED LABORATORIES, USE OF APPROVED ANALYTICAL AND SAMPLING METHODS, AND ARRANGEMENTS FOR TREATMENT OR NON-PROHIBITED DISPOSAL: I certify that samples representative of the waste described in this profile were or shall be obtained using state- and EPA-approved sampling methods. I also certify that where necessary those representative samples were or shall be provided to Envirocare and to qualified laboratories for the analytical results reported herein. I further certify that the waste described in this record is not prohibited from land disposal in 40 CFR 168 (unless prior arrangements are made for treatment at Envirocare) and that all applicable treatment standards are clearly indicated on this form. I also certify that the information provided on this form is complete, true and correct and is accurately supported and documented by any laboratory testing as required by Envirocare of Utah, Inc. I certify that the results of any said testing have been submitted to Envirocare of Utah, Inc.

Generator's Signature [Signature] Title Asst. Dir. ESCO Date 8/14/96
Co-Operator's Signature [Signature] Title Program Mgr Date 8/14/96

PLEASE SEE ATTACHMENT 2.
(Sign for the above certifications).

EXHIBIT 6

International Uranium (USA) Corporation

Native American Employee Statement

As Native American uranium mill workers, we feel we must speak out against recent actions of the State of Utah Department of Environmental Quality and the Navajo Utah Commission. Because we work at International Uranium (USA) Corporation's White Mesa Mill, we have experience and understanding of the science and technology of the uranium milling process. We know that the processing of "alternate feeds" at the mill, which has been approved by the Nuclear Regulatory Commission, is safe for us and our families and won't interfere with our heritage. We know the safety procedures and precautionary measures because we help implement them every day. We also know the White Mesa Mill's safety and environmental record. There have been no problems.

We feel that recent efforts by the State and the Navajo Utah Commission to block alternate feeds processing are based on politics and/or misinformation. How can the State DEQ and the Commission talk about "environmental justice" as they attempt to put us out of work? We were not asked how we felt before these actions were taken. How can people who have not asked us our opinion say that they are speaking for us?

It is important to us that we keep our jobs and that we continue to process valuable materials at the mill without unneeded interference from outside parties who seem to be acting politically or emotionally, not scientifically or knowledgeably.

Name WILSON G. Bennett
Signature W G Bennett 25 yrs

Name Tully Laneman Jr
Signature Tully Laneman Jr

Name ROY ATEITY
Signature Roy Ateity 5 yrs

Name TOMMY STASH JR
Signature Tommy Stash Jr

Name DEBERT BLACKHOSE
Signature Debert Blackhose

Name Henry Tully
Signature Henry Tully 9 yrs

Name Dwight K. Black Hawk
Signature Dwight K. Black Hawk

Name Dan Nakaj
Signature Dan Nakaj

Name Julius Begaye
Signature Julius Begaye

Name Leslie Cunningham
Signature Leslie Cunningham

Name Haylen Poyer
Signature Haylen Poyer

Name Harri Sand
Signature Harri Sand

Name Wilbert Eddio
Signature Wilbert Eddio

Name MARC LAUREN
Signature MARC LAUREN

Name Severn Black
Signature Severn Black

Name GENEVIEVE MARK
Signature GENEVIEVE MARK

Name TERENCE BENALLY 1yr
Signature Terence Benally

Name TSOSIE PRICE 8yrs
Signature TSOSIE PRICE

Name Randall Jim
Signature Randall Jim

Name LEON ATCHY
Signature LEON ATCHY

Name HENRY BEGAY
Signature HENRY BEGAY

Name JOHNNY STASH
Signature JOHNNY STASH 24 yrs

Name PHILLIP RENTZ
Signature PHILLIP RENTZ

Name CHAS P. SIMPSON
Signature CHAS P. SIMPSON 19 yrs

Name HARRY T. MAZIE
Signature HARRY T. MAZIE 30 yrs

Name Henry Sampson Jr.
Signature Henry Sampson Jr. 20 yrs

Name Stan Jones
Signature Stan Jones

Name Melvin E. Jim
Signature Melvin E. Jim

Name Lynne Benn
Signature Lynne Benn

Name Alvin Ben
Signature Alvin Ben

Name Huskie Benally
Signature Huskie Benally

Name Larson King Benn
Signature Larson King Benn

Name Albert E. Willy
Signature Albert E. Willy

Name _____
Signature _____

Name Jackson Jody
Signature Jackson Jody

Name _____
Signature _____

Name James T. 18194510
Signature James T. 18194510

Name _____
Signature _____

EXHIBIT 7

To: Melvin R. Brown
Speaker of the House of Representatives
Salt Lake City, UT 84114

xc: Governor Michael Leavitt
Joseph J. Holonich, NRC
Dianne Nielson
US Army Corps of Engineers
Senator Robert Bennett
Senator Orrin Hatch
Congressman James V. Hansen
Congressman Chris Cannon
Congressman Merrill Cook

From: Employees of IUC and Citizens of Blanding
Date: July 22, 1998
Re.: "Sham" Recycling

This communication is a response to your letter of today's date to Mr. Joseph J. Holonich, Chief of the Uranium Recovery Branch of the Nuclear Regulatory Commission in Washington, D.C. Please be advised that what you are describing as a "sham" recycling process at the White Mesa Uranium Mill is grounded in faulty information. You are encouraged to become more informed on this issue by actually visiting with the mill and its management, rather than depending on biased reports that derive from personal agendas that pervert and stretch the truth. If you are genuinely concerned about what is going on, please seek objectivity and a balanced perspective, rather than being swayed by only one point of view.

Those of us who live and work in this environment have more at stake and more to lose than anyone else, should we be a part of a compromised ecosystem. Self interest requires that we be concerned for the health and welfare of ourselves and our families. We are confident that what is occurring at the White Mesa Uranium Mill is a responsible and environmentally sensitive process that is actually improving our environment rather than negatively impacting it.

There is a strong opinion held locally that the decision to bury the uranium tailings in Monticello was a less environmentally sound solution than the recycling of that byproduct would have been. Time will eventually reveal that solution to have been temporary. We feel that re-processing the uranium waste creates a permanent solution to the problem and renews a resource. What we are involved with is real and not a "sham." Please bring an objective team of competent professionals to evaluate us and our process before passing judgment.

We the undersigned citizens of San Juan County affix our signatures to this petition to emphasize our support of the resolution unanimously concurred in by the Blanding City Council in their public meeting held on July 22, 1998, in support of the uranium recycling process at the White Mesa Mill.

[Handwritten signatures in the first column, including names like Robert Turk, Mike, Steve, and others.]

[Handwritten signatures in the second column, including names like John, Mary, and others.]

[Handwritten signatures in the third column, including names like Patricia Bartlett, and others.]

EXHIBIT 8



San Juan County Commission

Ty Lewis - Chairman
 Mark Maryboy - Commissioner
 Bill Redd - Commissioner
 Rick M. Bailey - Administrative Assistant

July 23, 1998

The Honorable Robert F. Bennett
 United States Senator
 241 Dirksen Office Building
 Washington, D.C. 20510

Dear Senator Bennett:

You have recently received information regarding the International Uranium Corporation's White Mesa Mill located near Blanding. This information, in our opinion, contains many incorrect attempts to discredit the company and its operations.

The mill is one of the county's largest employers, paying a wage significantly higher than most other employers. The company hires a large number of minorities, including Native Americans. Several of these employees spent a considerable time with the county commission this past week, expressing their concerns for their employment.

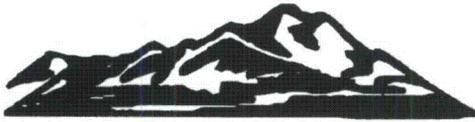
The Nuclear Regulatory Commission (NRC) has granted an amendment to the mill's operating license and has inspected the facility on a semi-annual basis. We believe that the operation is safe and that the White Mesa Mill is a good neighbor and a business in our County.

There appears to be a great deal of politics in this issue to protect the business interests of another company located in the north part of the State. We would ask that you look at this issue without the politics and view objectively the practices of this company.

Very truly,

Bill Redd
 Bill Redd, Commissioner
 San Juan County Commission

Attachments:



CITY OF BLANDING

"Base Camp to Adventure"

50 West 100 South Blanding, Utah 84511 (801) 678-2791 / Fax (801) 678-3312 / E-Mail - blandingcity@sima.com

July 23, 1998

Joseph J. Holonich, Chief
Uranium Recovery Branch
Division of Waste Management
Nuclear Regulatory Commission
Mail Stop T719
Washington D.C. 20555-0001

Via Fax # (301) 415-5397

Re: White Mesa Mill Processing of Alternative Fee Ores

Dear Mr. Holinich:

We only learned yesterday of a movement to block the processing of alternative feed ores at the White Mesa Mill (a major employer of Blanding citizens) just south of Blanding. We were not only shocked but dismayed at the lack of understanding regarding the issues at hand.

It has been less than a year ago that similar sentiments were made in the name of "public safety" in an effort to stop the processing of these alternative feed ores. The Wasatch front papers jumped on the band wagon and the environmental activities sounded alarms. Without jumping to conclusions our little City corresponded with Utah's Department of Environmental Quality who educated us again on the issues assuring the City that politicians and activists were over reacting and that the danger to public safety was non-existent.

Having learned that alternative ores are a safe source of feed for the mill we encouraged the International Uranium Corporation to aggressively pursue these sources since it aids in providing a more viable and consistent source of economic development and stability to the community. They did pursue these sources and it has had a stabilizing influence (consistent operations and layoffs few and far between).

This latest effort to enforce additional fees and restrictions seems to be nothing more than political based bureaucracy thrashed out in an effort to protect selective pocket books.

Please know that we have full confidence in the Nuclear Regulatory Commissions ability to provide the necessary regulatory standards to ensure public safety and environmental compliance. We fully support the alternative feed operations as well as those others approved by your commission.

Having just received a grant of \$875,000 from the federal government to aid in economic development in the City of Blanding, it certainly would seem counter productive to restrict our largest employer only to satisfy governmental ego's and political posturing.

Please let us know if we can do anything further to ensure the continued and safe viability of the White Mesa Mill. It is so important to so many of us here in Southeast Utah.

Respectfully,
City of Blanding


Calvin Balch
Mayor

xc: Dr. Dianne R. Nielson
Rep. Merrill Cook
Dr. Shirley A. Jackson
Harold R. Roberts

Rep. Christopher B. Cannon
Governor Michael O. Leavitt
Bruce Howard
Melvin R. Brown

Senator Orrin G. Hatch
Rep. James Hansen
Kip Huston
City Council

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges: Peter B. Bloch, Presiding Officer
Richard F. Cole, Special Assistant



IN THE MATTER OF:

INTERNATIONAL URANIUM
CORPORATION
(Source Material License Amendment)

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* Docket No. 40-8681-MLA-4
* ASLBP No. 98-748-03-MLA
*
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CERTIFICATE OF SERVICE

I hereby certify that I caused true and complete copies of the foregoing Amended Opposition of International Uranium (USA) Corporation to State of Utah's Request for a Stay in the above-captioned matter to be served, via facsimile and by First Class United States Mail, on this 11th day of August, 1998 to:

Mr. Joseph Holonich
Uranium Recovery Branch
Division of Waste Management
Office of Nuclear Material
Safety and Safeguards
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, Md 20852

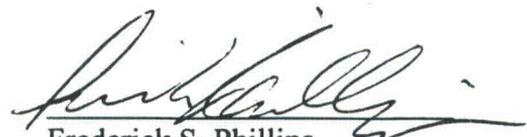
Office of Rulemakings and Adjudications
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Mr. John C. Hoyle
Office of the Secretary
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Administrative Judge Peter B. Bloch
Presiding Officer
Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Fred G. Nelson, Assistant Attorney General
Attorney for State of Utah
Utah Attorney General's Office
160 East 30 South, 5th Floor
P.O. Box 140873
Salt Lake City, Utah 84114-0873

Administrative Judge Richard F. Cole
Special Assistant
Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, DC 20555



Frederick S. Phillips

630299-01 / DOCSDC1