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#### UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

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# ATOMIC SAFETY AND LICENSING BOARD PANELOFFIC SET AND RULDMANDES AND ADJUDICA SET AND

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

IN THE MATTER OF:	*	X
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INTERNATIONAL URANIUM (USA)	*	Docket No. 40-8681-MLA- <b># 5</b>
CORPORATION	*	ASLBP No. 98-748-03-MLA
	*	
(Source Material License Amendment)	*	December 16, 1998
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#### INTERNATIONAL URANIUM (USA) CORPORATION'S OPPOSITION TO THE PETITION OF NAVAJO UTAH COMMISSION SEEKING LEAVE TO INTERVENE

### I. INTRODUCTION

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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. The Mill processes uranium-bearing materials to extract the uranium therefrom. The residuals from this process, or "tailings," are defined as "11e.(2) byproduct material," and are disposed of in an NRC-licensed "cell" or impoundment at the Mill. IUSA's Mill is regulated by the NRC, pursuant to the Atomic Energy Act of 1954, as amended, and the Uranium Mill Tailings Radiation Control Act of 1978, ("UMTRCA"), as amended, as effectuated by NRC regulations set forth at 10 C.F.R. Part 40, including Appendix A and applicable guidance documents.

SECY-EHD-006

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U.S. NUCLEAR REGULATORY COMMISSION RULEMAKINGS & ADJUDICATIONS STAFF OFFICE OF THE SECRETARY OF THE COMMISSION £

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On October 15, 1998, IUSA submitted to NRC a request for a license amendment specifically allowing IUSA to process uranium-bearing materials from the Ashland 1 Formerly Utilized Sites Remedial Action Program ("FUSRAP") site ("Ashland 1") in Tonawanda, New York. Notice of IUSA's application was published in the Federal Register on November 3, 1998. 63 Fed. Reg. 59340. Sometime on or about December 6, 1998,<sup>1</sup> the Navajo Utah Commission ("Petitioner"), submitted, pursuant to 10 CFR Part 2, Subpart L, a letter requesting a hearing on IUSA's application (the "Petition").

#### II. ARGUMENT

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As detailed below, Petitioner lacks standing to intervene in this matter as it has failed to allege any concrete and particularized injury attributable to the subject proposed license amendment. Moreover, many of the facts alleged by Petitioner and material to its request are not a result of the proposed license amendment and it has failed to raise concerns germane to the proposed license amendment. Finally, Petitioner, as an organization, has failed to demonstrate injury to itself or to establish standing in a representative capacity. For these reasons, and those set forth below, IUSA respectfully requests that the Petition be denied.

<sup>&</sup>lt;sup>1</sup> Petitioner's letter is dated November 21, 1998 and is addressed to the Secretary, with attention to the Rulemakings and Adjudications Staff, of NRC. The document bears a notation indicating that it was copied to IUSA and the Executive Director for Operations at NRC. As discussed further <u>infra</u>., the document was not accompanied by a certificate of service nor by any other indication of when and by what means it was conveyed. No copy was provided to counsel for IUSA Corporation. Personnel at IUSA are uncertain as to when and how the document arrived at IUSA.

#### A. The Elements of Standing

Under 10 C.F.R. § 2.1205 of the Nuclear Regulatory Commission's ("NRC's")

regulations, interested persons may request a hearing on the grant of an amendment to a source

or byproduct materials license under the informal hearing procedures set forth at 10 C.F.R. Part

2, Subpart L. NRC's Rules of Practice provide that, in ruling on a request for a hearing, the

Presiding Officer:

shall determine that the specified areas of concern are germane to the subject matter of the proceeding and that the petition is timely. The presiding officer also shall determine that the requester meets the judicial standards for standing and shall consider, among other factors --.

The nature of the requester's right under the [Atomic Energy Act] to be made a party to the proceeding;

The nature and extent of the requestor's property, financial, or other interest in the proceeding; and

The possible effect of any order that may be entered in the proceeding upon the requestor's interest.

10 C.F.R. § 2.1205(h) (emphasis added).

Standing is not a mere legal technicality, it is in fact, an essential element in determining whether there is any legitimate role for a court or an agency adjudicatory body in dealing with a particular grievance. Westinghouse Electric Corporation, 39 NRC 322, 331–32 (1994). Judicial concepts of standing should be applied by adjudicatory boards in determining whether a petitioner is entitled to intervene. Portland General Electric Co., 3 NRC 804 (1976); see also, Niagra Mohawk Power Corp., 18 NRC 213, 215 (1983) (contemporaneous judicial concepts should be used to determine whether petitioner has standing to intervene). Thus, the propriety of intervention involves both "constitutional limitations" on an adjudicatory body's jurisdiction and

"prudential limitations" on its exercise. <u>Coalition of Arizona/New Mexico Counties for Stable</u> <u>Economic Growth v. Department of Interior</u>, 1997 U.S. Dist. LEXIS 4212, \*6 (10<sup>th</sup> Cir. 1997), citing, <u>Warth v. Seldin</u>, 422 U.S. 490, 498 (1975).

The "irreducible constitutional minimum" standing test requires a potential litigant to demonstrate that: 1) it has suffered actual or threatened injury, 2) that is caused by, or fairly traceable to, an act that the litigant challenges in the instant litigation, and 3) that is likely to be redressed by a favorable decision." <u>See Lujan v. Defenders of Wildlife</u>, 504 U.S. 555, 560-61 (1992); <u>Florida Audubon Society v. Bentsen</u>, 94 F.3d 658, 663 (D.C. Cir. 1996) (en banc) (citations omitted); <u>Georgia Institute of Technology</u>, 42 NRC 111, 115 (1995); <u>Envirocare of Utah, Inc.</u>, 35 NRC 167, 174-175 (1992). These three elements are commonly referred to as injury in fact, causation, and redressability. <u>See Coalition of Arizona/New Mexico Counties</u> for Stable Economic Growth v. Department of Interior, 1997 U.S. Dist. LEXIS at \*6.

Beyond the constitutional standing test set forth above, prudential limitations are also imposed on a potential intervenor's standing. Prudential considerations include a party's inability to assert a generalized grievance and a party's inability to assert the rights of third parties. <u>See Warth v. Seldin</u>, 422 U.S. at 499. Specifically, prudential standing requirements require a showing that the injury is arguably within the "zone of interests" protected by statutes governing the proceeding. <u>Assoc. of Data Processing Serv. Orgs., Inc. v. Camp</u>, 397 U.S. 150 (1970); <u>Metropolitan Edison Co.</u>, 18 NRC 327, 332 (1983); <u>Gulf States Utilities Co.</u>, 40 NRC 43, 47 (1994).

With regard to injury in fact, the alleged injury, which may be either actual or threatened, must be both concrete and particularized, not conjectural or hypothetical. As a result, standing

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should be denied when the threat of injury is too speculative. <u>Sequoyah Fuels Corp. and General</u> <u>Atomics</u>, 40 NRC 64, 72 (1994). To show the required injury in fact based on an assertion of future harm, NRC has held that that future harm "must be threatened, certainly impending, and real and immediate." <u>Babcock & Wilcox</u>, 1993 NRC LEXIS 6, \*\*7-8 (1993). A "generalized grievance" shared in substantially equal measure by all or a large class of citizens will not result in a distinct and palpable harm sufficient to support standing. <u>Metropolian Edison Co.</u>, 18 NRC 327, 333 (1983).

An organization can establish standing by demonstrating injury to itself as an entity or injury to its members. Coalition of Arizona/New Mexico Counties for Stable Economic Growth v. Department of Interior, 1997 U.S. Dist. LEXIS at \*8-9. In order to establish organizational standing, an organization must allege: (1) that the action will cause an injury in fact to either (a) the organization's interests or (b) the interests of its members; and (2) that the injury is within the zone of interests of the statute at issue. Yankee Atomic Electric Co., 39 NRC 95, 102 n. 10 (1994). An organization may meet the injury in fact test for standing by either: (1) demonstrating an effect upon its organizational interest or (2) alleging that its members, or any of them, are suffering immediate and threatened injury as a result of the challenged action of the sort that would make out a justifiable case had the members themselves brought suit. Houston Lighting and Power Co., 9 NRC 644, 646 (1979). If injury to a member is the basis for the assertion of standing, it must be remembered that the mere interest in a problem without a showing that a member will be affected is insufficient to give an organization standing. Allied General Nuclear Services, 3 NRC 420 (1976). "[I]t is clear that an organization may establish its standing through the interest of its members; but to do so, it must identify specifically the name and address of at least one affected member who wishes to be represented by the organization."

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<u>Detroit Edison Company</u>, 8 NRC 575, 583 (1978), <u>see also, Sequoyah Fuels Corp. and General</u> <u>Atomics</u>, 40 NRC 64, 72 (1994) (an organization seeking to obtain standing in a representative capacity must demonstrate that a member has in fact authorized such representation).

As demonstrated below, Petitioner has not shown that it has suffered or is likely to suffer any particular harm from IUSA's proposed license amendment, alleging, as it does, only generalized grievances about what it perceives to be environmental harm and personal injury inflicted by the nuclear industry generally. Where, as here, Petitioner fails to make a sufficient showing of an injury-in-fact, causation, and redressability and fails to raise claims germane to the matter at issue, a hearing request should be denied. Finally, Petitioner, as an organization, has failed to demonstrate injury to itself or to establish standing in a representative capacity.

### B. Petitioner Has Failed to Demonstrate Standing to Intervene in Its Own Right

As discussed above, an organization can establish standing to sue in its own right under the same standard applicable to individuals: first, it must establish injury in fact. It is well established that an organization's injury must be more than a "mere interest in a problem." <u>Sierra v. Morton</u>, 405 U.S. 727, 739 (1972). Again, the injury must be concrete, particularized, and actual or imminent. <u>Lujan v. Defenders of Wildlife</u>, 504 U.S. at 560; <u>Babcock & Wilcox</u>, 1993 NRC LEXIS at 7-8. It cannot be conjectural or hypothetical. <u>Sequoyah Fuels Corp. and General Atomics</u>, 40 NRC at 72. In attempting to establish standing as an organization, Petitioner cites to its purpose: "[the Commission] has the authority to review all matters effecting the community in the seven chapter areas of Utah, making appropriate recommendations to, and requests of, the Navajo Nation." Petition at 1. Despite Petitioner's reliance on this statement as a basis to assert organizational standing, the statement does nothing more than demonstrate "a mere interest" in "all matters affecting the community in the seven chapter areas of Utah." Thus, Petitioner fails to establish a concrete and particularized injury to the organization or the organization's purpose.

Further, in support of its request, Petitioner claims that: "exposure to nuclear waste poses an extreme hazard to human health and the human environment." Petition at 1. Petitioner makes no attempt to discuss what threats to human health and human environment, if any, might be occasioned by the NRC action at issue: IUSA's proposed license amendment. Likewise, it makes no allegation suggesting how or if activities conducted pursuant to IUSA's proposed license amendment may contribute to the "cumulative amounts of radiation" that "must be taken into account." <u>Id.</u> at 2. In fact, to the extent that activities pursuant to the proposed license amendment may contribute to any cumulative impacts resulting from nuclear industry activities generally, such contribution would be no more than that which would result from processing conventional feeds under the Mill's existing license.<sup>2</sup> Moreover, Petitioner's concerns regarding the safety of nuclear waste<sup>3</sup> are nothing more than generalized grievances that do not result in a distinct harm sufficient to support standing. <u>See Metropolitan Edison</u> Co., 18 NRC at 333.

Petitioner asserts that the transportation of waste through the State of Utah presents a <u>risk</u> to the citizens of the State of Utah but offers no indication of how or why it is directly and

 $<sup>^2</sup>$  <u>See</u> License Amendment Application, (attached hereto as Exhibit B) at 6, 12-13. We note that the Mill was sited under the oversight and with approval of NRC; the license was granted by NRC based on a finding that proposed process activities would provide adequate protection for health, safety and the environment. The Mill has had no adverse impact to the public health or environment offsite since operation began in 1980.

<sup>&</sup>lt;sup>3</sup> Specifically, Petitioner states that "there is a growing FEAR of nuclear waste and the prospects of a nuclear waste dump in our community." Petition at 3.

negatively affected. Petition at 1. A mere assertion of risk is not enough to establish injury in fact, as injury in fact based on an assertion of future harm requires that the future harm "be threatened, certainly impending, and real and immediate." <u>Babcock & Wilcox</u>, 1993 NRC LEXIS at \*\*7-8 (1993). Petitioner fails to show how transportation of the FUSRAP material alone creates a future harm that is certainly impending and real and immediate. In addition, as set forth in the attached Affidavit of Harold R. Roberts, IUSA's Executive Vice President,<sup>4</sup> the volume of truck traffic associated with processing the Ashland 1 materials is actually less than that which would be expected if the Mill were operating at design capacity processing conventional feed materials.<sup>5</sup> Moreover, Petitioner ignores the fact that trucks transporting the uranium bearing materials from Ashland 1 will arrive from north of Blanding and the Ute and Navajo reservations are south of Blanding.

Petitioner asserts that "the public . . . [has] not been fully advised of the dangers of this hazardous material. There has been little environmental information given to us and the citizens by NRC or [IUC] . . .." Petition at 1. Petitioner ignores the record established by NRC and IUSA supporting the decision of the NRC Staff to grant the proposed license amendment at issue. The record has been made publicly available as indicated by the Federal Register Notice of November 3, 1998, and Petitioner has had an opportunity to examine the public record and to explain why the materials might pose a risk to them or the environment. See In the Matter of

<sup>&</sup>lt;sup>4</sup> Affidavit of Harold R. Roberts, (attached hereto as Exhibit A).

<sup>&</sup>lt;sup>5</sup> The Environmental Assessment ("EA") prepared in support of the Mill's original license application stated that IUSA expected, on average, more than 70 trucks per day to transport materials to the Mill. Truck traffic to the Mill during the hauling of the Ashland 1 materials is expected to average fewer than 9 trucks per day. On average during 1996, 370 trucks per day traveled State Road 191 between Monticello, UT and Blanding, UT (1997 NRC personal communication with the State of Utah Department of Transportation). Notably, no one, including Petitioner, previously raised any complaint in connection with Mill truck-traffic.

International Uranium (USA) Corporation, 46 NRC 55 (1997). Moreover, this generalized statement, without more, does not provide a sufficient basis upon which standing can be based.<sup>6</sup> See Lujan v. Defenders of Wildlife, 504 U.S. at 560.

Petitioner cites Executive Order 12898 which addresses environmental justice. Petitioner claims that "Utahns," in particular, the Navajo residents of Utah, have suffered "a legacy of death and illness as a result of the participation in and exposure to the nation's nuclear programs." Petition at 2. While IUSA is sympathetic to Petitioner's claim, the Petition fails to make any showing of how Petitioner is treated unfairly in violation of the Executive Order or how the death and illness the people of Utah have suffered in the past is germane to the license amendment at issue in the case at bar.<sup>7</sup> Moreover, as evidenced by the petition attached as Exhibit C, Petitioner does not represent the environmental justice interests of all Navajo residing in the area of the Mill.

Petitioner states that "[t]he hauling and dumping of additional nuclear waste at the White Mesa Mill would be highly detrimental to us. Cumulative amounts of radiation must be taken

<sup>&</sup>lt;sup>6</sup> Petitioner also complains that "public hearings or meetings have not been held on the Navajo Reservation to inform our people of the intent of [IUSA] and [NRC] to enter into another amended agreement allowing the processing of such material form . . . Ashland 1. . ." and that "we have not yet had the opportunity to meet with NRC or the State regarding the present license amendment process." Petition at 1-2, 3. Here again, Petitioner ignores the fact that IUSA and NRC followed NRC procedures with regard to the issuance of the license amendment set forth at 10 C.F.R. Part 40, and Appendix A to that part. Pursuant to the regulations, no public hearing or meeting is required prior to the issuance of the license amendment.

<sup>&</sup>lt;sup>7</sup> Petitioner also complains that "many of our people have died and have become ill over the years due to radiation exposure . . . [o]ur people have been exposed to radiation from working in uranium mines, and having been exposed to fallout from atmospheric nuclear weapons testing conducted in Nevada." Petition at 2. Clearly, IUSA is not responsible for the death and illness due to radiation exposure and has not engaged in atmospheric nuclear weapons testing. Thus, these claims lack causation and cannot be the basis for standing in the instant proceeding.

into account, for our own and other's concerns, before adding yet another source of radiation in the form of radioactive material brought in from Tonawanda, New York." Petition at 2. As this court has stated previously: "[s]ince the disposal of tailings is already authorized under an existing license, the question of possible injury to the petitioners is whether the tailings from the milling authorized by this amendment will be more hazardous than tailings already authorized under the license." <u>In the Matter of International Uranium (USA) Corporation</u>, 46 NRC 55 (1997). Petitioner has not provided, and cannot provide, any information, beyond conjecture, that the tailings from the Ashland 1 material present an increased health or safety hazard. In fact, the processing of the Ashland 1 materials at the Mill will be similar to the processing of any other uranium-bearing feed materials and poses no greater risk of contamination to groundwater or any other environmental media than that posed by Mill activities conducted pursuant to IUSA's source materials license and previous amendments thereto over nearly twenty years.<sup>8</sup>

Finally, Petitioner claims that the White Mesa Mill is accepting Ashland 1 materials "primarily for storage and disposal purposes." Petition at 3. Petitioner's views on the economic viability of processing the Ashland 1 materials are unfounded and do not evidence any injury suffered by Petitioner. IUSA is not a nuclear waste dump, but a uranium mill, licensed to process various uranium-bearing feeds and to dispose, in an NRC-regulated, on-site containment cell, the tailings therefrom. Consistent with NRC's alternate feed guidance, the license amendment at issue allows IUSA to receive and process 11(e). 2 byproduct material from the Ashland 1 site as alternate feed. Petitioner's unsupported statements are insufficient to obtain standing.

<sup>&</sup>lt;sup>3</sup> See Affidavit of Harold R. Roberts, (attached hereto as Exhibit A). See also fn. 2, supra.

# C. Petitioner has Failed to Demonstrate Standing to Intervene on Behalf of Its Members

As discussed above, an organization's standing to sue "on behalf of its members" requires that the organization meet the injury in fact test by either alleging that its members, or any of them, are suffering immediate and threatened injury as a result of the challenged action of the sort that would make out a justifiable case had the members themselves brought suit. <u>Houston Lighting and Power Co.</u>, 9 NRC at 646. Importantly, to establish standing through the interest of its members, the organization must identify specifically the name and address of at least one affected member who wishes to be represented by the organization. <u>Detroit Edison</u> <u>Company</u>, 8 NRC at 583, see also, <u>Sequoyah Fuels Corp. and General Atomics</u>, 40 NRC at 72 (1994) (an organization seeking to obtain standing in a representative capacity must demonstrate that a member has in fact authorized such representation). Here, Petitioner fails to allege particular injuries to members of its organization. Moreover, Petitioner fails to identify specifically the name and address of even one affected member who wishes to be represented by the organization. Therefore, Petitioner lacks standing to intervene on behalf of its members.

#### III. CONCLUSION

For the aforementioned reasons, IUSA respectfully submits that the Navajo Utah Commission lacks standing to participate in a hearing on the subject license amendment and that the Petition should be denied.

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Respectfully submitted this 16th day of December 1998.

#### SHAW PITTMAN POTTS & TROWBRIDGE

Parid C. Zashway By:

Anthony J. Thompson Frederick S. Phillips David C. Lashway 2300 N Street, N.W. Washington, DC 20037 (202) 663-8000

COUNSEL TO INTERNATIONAL (USA) URANIUM COPORATION

# EXHIBIT A AFFIDAVIT OF ROBERTS

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Dec-03-98 04:53pm From-SKAW PITTMAN

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	<ul> <li>Docket No. 40-8681-MLA-4</li> </ul>			
CORPORATION	<ul> <li>ASLBP No. 98-748-03-MLA</li> </ul>			
(Source Material License Amendment)	<ul> <li>DECEMBER 3, 1998</li> </ul>			
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#### AFFIDAVIT OF HAROLD R. ROBERTS

I, Harold R. Roberts, do solemnly state as follows:

1. I am the Executive Vice President of for International Uranium (USA) Corporation ("IUSA"). I have held this position or a similar position in management or engineering for 18 years in this company or its predecessor and have been employed by IUSA for 1 ½ years. I am in charge of the daily operation of IUSA's White Mesa Mill in Blanding, Utah (the "Mill").

2. The Ashland 2 alternate feed materials have been trucked to the Mill since August 1998. On average, fewer than 15 trucks per day have arrived at the Mill during this time.

3. The Environmental Assessment ("EA") filed in support of the Mill's original license application estimated that more than 70 trucks per day would be arriving at the Mill.

4. Transport of all Ashland 2 materials to the Mill is expected to be completed by or before February 1, 1999.

5. To the best of my knowledge, there have been no releases to the environment of any substance from the Mill, except as authorized by the Mill's license and related permits, at any time during the Mill's operating life.

6. To the best of my knowledge, there have been no releases of any substance to groundwater from the Mill. As there is no hydrologic communication between the San Juan River and groundwater beneath the Mill, any release to groundwater from the Mill would not impact the San Juan River.

Further Atliant Sayeth Not.

I declare, under penalty of perjury, that the foregoing is true and correct.

Harold R. Roberts

dated: this 3d day of December, 1998, at Blanding, Utah.

Document #: 685287 v.L

EXHIBIT B LICENSE AMENDMENT APPLICATION

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

October 15, 1998

Prepared by: International Uranium (USA) Corporation 1050 17<sup>th</sup> Street, Suite 950 Denver, CO 80265

Contact: Michelle R. Rehmann, Environmental Manager Phone: (303) 389.4131

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

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Amendment Request Ashland 1 1 icense SUA-1358 October 15, 1998 Page 1

# 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 waste associated with this processing is, therefore, 11e.(2) byproduct material; or, as stated in the alternate feed analysis noticed in Federal Register Volume 57, No. 93:

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

This application to amend NRC Source Material License SUA-1358 requests an amendment to allow IUSA to process a specific alternate feed, and to dispose of the associated 11e.(2) byproduct material in accordance with the Mill operating procedures. IUSA has already received NRC approval to process uranium material from the same process source in our license amendment of June 23, 1998 for Ashland 2.

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<sup>9</sup> 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 1. The Uranium Material is not a residue from a water treatment process.

The Uranium Material will be transported by the U.S. Army Corps of Engineers' ("USACE", or the "Corps") remediation prime contractor, as part of the FUSRAP Program, from Ashland 1 to the White Mesa Mill.

Ashland 1 is one of three sites located near the Linde Property 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 specific locations of the Linde, Ashland 1, Ashland 2, and Seaway properties.

Amendment Request Ashland 1 License SU:A-1358 October 15, 1998 Page 2

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"). Figures D-1 through D-4, of the United States Department of Energy ("USDOE") Preliminary Site Assessment in Attachment 1, show the processes used for domestic and foreign ores. The 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.

Residues from uranium ore processing at the Linde facility were disposed of and/or stored at the Ashland 1, Ashland 2 and Seaway properties. The majority of Linde facility residues were disposed on the Ashland<sup>4</sup>1 property between 1944 and 1946. In 1974, the subsequent owner of the Ashland 1 property excavated a portion of the Linde residues and soils, and relocated them to the Ashland 2 property. NRC has already approved an amendment to IUSA's license for processing of the portion of the Linde residues and soil moved to Ashland 2.

A small area of Seaway, known as Seaway Area D, has elevated radionuclides at or near surface soils. This area was included in the characterization of Ashland 1 and in the Ashland 1 scope of remedial excavation. Excavated soils from this area will be included in the Uranium Materials shipped to the White Mesa Mill. Figure 2 of the Proposed Plan for the Ashland 1 and 2 Sites in Attachment 1, shows the location of Seaway Area D relative to the Ashland 1 Site.

The Seaway property includes a 93 acre sanitary landfill, which has received solid wastes since the 1930's. Table 1-10 from the RI report identifies the wastes disposed at Seaway over its history. No hazardous wastes were disposed on the Seaway property. As Indicated in Figure 2. Linde residues were disposed in areas A, B, C, and D on Seaway. During the RI field study, uranium residues were located in contact with sanitary wastes in areas A and C. No sanitary wastes were observed in area D, which is nearly 1000 meters east of the primary disposal areas at Seaway. Only residues from area D, which is contiguous with Ashland 1 and appears to contain residues that spilled over from Ashland 1 during soil moving operations for construction of containment walls and drainage, will be included in the Uranium material shipped to the Mill.

Attachment 1 includes the following items describing Ashland 1 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 <u>Proposed Plan for the Ashland 1 Ashland 2 Sites-Tonawanda, New York</u> (U.S. Army Corps of Engineers, November 1997).
- 2. Portions of the <u>Radiological Survey of the Ashland Oil Company (Former Haist</u> <u>Property), Tonawanda. New York</u> (U.S. Department of Energy, May 1978) describe uranium concentrations in core samples and approximate distributions of tailings stored on the Linde property.

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3. Table 4-26 from the Remedial Investigation (RI) Report for the Tonawanda Site (USDOE, February, 1993) identifies the organic contaminants detected on the Ashland 1 property.

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- 4. A portion of the <u>Record of Decision for the Ashland 1 and Ashland 2 Sites. Tonawanda.</u> <u>New York</u> (USACE, April. 1998), which describes the site history, scope of remedial action, and summary of site characteristics for the Ashland 1 and 2 sites.
- 5. A Portion of the <u>Preliminary Assessment and Site Investigation for Linde Air Products</u> (U.S. DOE, September 1987) describes Linde operations and processes.
- 6. Portions of the NY State Department of Environmental Conservation Phase I Site Investigation, Ashland Petroleum Company, Engineering Science, January, 1986
- 7. Portions of the NY State Department of Environmental Conservation Phase II Site Investigation, Ashland Petroleum Company, Engineering Science, October, 1989

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 25,000 to 30,000 cubic yards ("CY"). Physically, the Uranium Material is a moist material consisting of byproducts from uranium processing operations (ie., "tailings"), mixed with site soils (RI Report USDOE, February, 1993).

#### 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. In the transcript of the public meeting on ROD for the Ashland 1 and Ashland 2 sites. USACE site manager, Col. Conrad, indicates that the USACE expects to dispose the Uranium Material as 11e.(2) byproduct. IUSA has previously provided NRC a copy of this ROD and public meeting transcript, prior to our letter of June 8, 1998 regarding the Ashland 2 amendment request. We have included copies of the pertinent pages of the transcript in Attachment 1 of this amendment request. In addition, Attachment 1 also includes a letter and Radioactive Waste Profile Record dated August 19, 1996, from Bechtel, the previous contractor at the Tonawanda site under USDOE, to Envirocare of Utah in which Bechtel states that the uranium material from the Tonawanda site (Ashland 1, Ashland 2, Seaway and Linde) is 11e.(2) byproduct material, and that the material contains no listed hazardous waste.

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 non-detectable to approximately 0.4 weight percent, or greater. A summary of radionuclide concentrations in Ashland 1 soil, from Table 4-24 of the Tonawanda Site Remedial Investigation Report, is provided in Attachment 1. The ICF Kaiser Record of Decision for the Ashland 1 and 2 sites indicates that soils will be excavated which exceed the derived cleanup

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guideline of 40 pCi/g Th-230. Based on the RI Table 4-24, the average uranium concentration in soils to be excavated per this guideline has been estimated by IUSA to be approximately 0.06 weight percent, which, using the same method of calculation, is expected to be greater than the average uranium concentration of the Ashland 2 materials.

## 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 listed hazardous waste.

The USDOE, based on site history, RI site characterization data, and field observations, has indicated that the Uranium Material contains no RCRA listed hazardous wastes. The USACE, based on its analysis of the Uranium Material and process knowledge, believes that the Uranium Material contains no RCRA listed hazardous wastes. Process history and analytical data are described in Attachment 1.

IUSA has also engaged an independent consultant, experienced in refinery and chemical processing, who has reviewed the site history and the chemical analyses available to date from the RI. The consultant has confirmed that the contaminants identified at Ashland 1 are unlikely to have come from listed sources. A review and evaluation of the analytes detected in the RI at Ashland 1, and rationale supporting the RI determination that the Uranium Materials do not contain listed hazardous waste, is provided in Attachment 4.

To supplement the RI contamination data, the USACE contractor will perform three levels of sampling on soils from the Ashland 1 excavation area. The sampling will be similar to the sampling performed by ICF Kaiser Engineers ("ICFKE"), the USACE contractor at the Ashland 2 site, as described in the IUSA letter to ICFKE, July 23, 1998 regarding Ashland 2 Confirmatory Sampling, and the IUSA letter to Don Verbica, State of Utah DEQ, September 4, 1998 regarding ICFKE sampling methodologies at Ashland 2, copies of which letters are attached provided in Attachment 5.

As described in the above letters, the three levels of sampling will be as follows. First, prior to development of their site Excavation and Restoration Plan, the USACE contractor will perform pre-excavation sampling ("profile sampling") within the area determined in the USDOE RI report to contain radiological contamination. The primary purpose of the profile sampling is to confirm the extent of radiological contamination and the boundaries of the remedial excavation.

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However, samples from within the radiologically contaminated area will also be analyzed according to methods outlined in EPA Guidance SW846 for total Volatile Organic Compounds ("VOCs") and Semivolatile Organic Compounds ("SVOCs"), as well as hazardous characteristics including TCLP. The USACE contractor will use the profile sampling results, together with knowledge of process history and other factors, to determine whether listed hazardous wastes are present within the zone of excavation. This data will be provided to IUSA as part of the material profile that will be required by IUSA's subcontract with the USACE prime contractor.

Second, upon excavation of the radiologically contaminated material, the USACE contractor will perform additional chemical testing to verify existing organic contaminant data, prior to any shipment. IUSA will require that the USACE contractor obtain one random sample per 500 CY of stockpiled excavated material that will also be tested for total VOCs and SVOCs. Each random sample from the stockpiles will be a composite of material collected from six locations that are geostatistically representative for that pile.

As a precautionary measure, the excavated material will undergo a third type of sampling. Any stockpile that shows visible indications of organic contamination, such as staining or chemical odor, or which indicates the presence of organics when scanned by a photoionization detector ("PID") will be sampled in the most visibly contaminated part of the pile, and tested for VOCs and SVOCs.

Any material that is determined to contain listed hazardous wastes, during any of the three sampling sets, will not be included in the Uranium Material to be shipped to the White Mesa Mill. IUSA will require contractually that, prior to excavation and transport of Uranium Material to the White Mesa Mill, the USACE contractor prepare and implement a Sampling and Analysis Plan ("SAP") for this confirmatory sampling program, and make the SAP and resulting analytical data available to the NRC at the NRC's request.

In addition, upon receipt at the White Mesa Mill, IUSA will perform random sampling of Uranium Material prior to processing. IUSA will collect one sample per 100 CY for the first 1,000 CY of Uranium Material delivered to the Mill, and one sample per 500 CY for the remaining Uranium Material. If IUSA determines, based on analytical results and knowledge of process history, that material has been received at the Mill which contains listed hazardous waste, it will not be processed and will be returned to the USACE contractor. IUSA is preparing a Sampling and Analysis Plan ("SAP") for random sampling of the Ashland 1 Uranium Material shipments, and will provide a copy of this document at NRC's request.

The Uranium Material contains metals and other constituents that already are present in the mill tailings disposed of in the Cell 3 impoundment. 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.

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Furthermore, the amount of tailings that would potentially be generated is comparable to the volume that would be generated from processing an equivalent volume of conventional orc. The Mill anticipates processing approximately 80,000 tons of conventional ore in 1999. The USACE, as described above, may be expected to excavate and ship approximately 30,000 CY of Uranium Material from Ashland 1 in 1999. This additional volume is well within the maximum annual throughput rate and tailings generation rate for the Mill of 680,000 tons per year. 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

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#### 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 Section 1.2 above, the Uranium Material to be processed at the Mill will not be 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 USDOE, as predecessor to the Corps in managing the FUSRAP sites, has consistently classified the FUSRAP materials, including the Uranium Material at Ashland 1, as 11e.(2) byproduct material. If the Uranium 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.

The State of New York Department of Environmental Conservation in 1998 approved the USACE November, 1997 Record of Decision, which determined that the Tonawanda site is a radionuclide contaminated site under UMTRCA. A copy of this letter (NYSDEC April 13, 1998) is provided in Attachment 1. If the site contained listed hazardous wastes, NYDEC's RCRA hazardous waste authority, or dual jurisdiction over mixed waste, would have been applied at that time.

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The site history of the Ashland 1 property, as outlined in the Introduction to the RI report, indicates that no wastes were disposed on the Ashland 1 property after the conclusion of the MED disposal of uranium process filter cake. Discussions between IUSA and Ashland Oil's environmental contractor, Fluor Daniel GTI, have indicated that Ashland's sole use of the Ashland 1 property was for the construction and operation of two asphalt blending tanks. The asphalt process is not a listed process under RCRA. Hence any contamination at Ashland 1 associated with the spills from the asphalt process are not listed hazardous wastes.

Further, the discussion with Fluor Daniel GTI indicated that Ashland Oil did not use Ashland 1 for process waste disposal either before or after the period when they built and operated the two tanks. Wastewater treatment effluents, some of which are listed hazardous wastes, were managed in an impoundment within the refinery operating area, not on Ashland 1. Other refinery waste streams were transported to a landfill area on the Ashland 2 property. As far as can be determined, the only process wastes disposed at the Ashland 1 property were derived from the Linde MED uranium operations.

According to the site history provided in the RI, the Seaway property was used only for disposal of sanitary wastes. The waste disposal records summarized in the RI confirm that no hazardous wastes or hazardous chemicals were received or disposed at Seaway.

NYSDEC and USDOE/Bechtel were aware of the foregoing site history when they made their determination in the RI report that no hazardous wastes were present at the Tonawanda site properties. In addition, in September, 1998 representatives of NYSDEC's Division of Solid Waste and Hazardous Materials, while visiting the ongoing remedial excavation at the nearby Ashland 2 property, advised USACE that once remediation activities begin, NYDEC relies upon the generator (USACE or their contractor) to make a determination regarding potential hazardous waste listing of site media and waste materials. NYSDEC further explained that since the Tonawanda site properties were categorized as inactive sites under their hazardous waste program, when they were transferred to the UMTRCA program as radioactive sites, NYSDEC has no plans to collect any further data, or subject the site wastes from any of the Tonawanda properties to any further regulatory evaluation.

Based on the site history, the determinations by Bechtel in the RI, the position of the NYSDEC relative to the Tonawanda site, and the analysis of IUSA's independent expert consultant, IUSA has concluded that Uranium Materials from Ashland 1 are not listed hazardous wastes subject to RCRA. The sampling and analysis to be performed on site and at the White Mesa Mill will serve as a double check on this conclusion.

#### 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. [USA makes this certification below.

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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 of the Uranium Material 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 non-detectable to approximately 0.4 percent, or greater. Historic reports indicate that residues were both spread over and buried at the property.

The site history indicates that 8,000 tons of process residues, from processing at the Linde property, containing an average of approximately 0.54 percent  $U_3O_8$  were spread out over roughly two thirds of the Ashland 1 property from 1944 to 1946. Some of these residues also contained as much as 5.57 percent vanadium ( $V_2O_5$ ). In 1960, the Ashland 1 property was acquired by Ashland Oil Company, which operated a refinery (previously owned by Frontier Oil) on a property adjacent to the Ashland 1 property. Ashland Oil excavated some of the uranium process residues on the Ashland 1 property in 1974, during construction of a bermed area for two petroleum product storage tanks and a drainage ditch on Ashland 1. Records vary as to the quantity of residues excavated. A portion of the residues was used for construction of the bermed area, and some of the residue was removed and disposed at the nearby Ashland 2 property. No other wastes were known to be disposed of at Ashland 1 during Ashland Oil's use of the property. The storage tanks were removed in 1989.

Over time, the radionuclides from the disposed process residues migrated into the surrounding soils. ICF Kaiser estimates that approximately 25,000 to 30,000 tons of soil containing the uranium and thorium from the disposed residues remain, and will be excavated from Ashland 1. These residues and contaminated soil comprise the Uranium Material to be shipped to the White Mesa Mill.

Based on the USDOE site characterization information, IUSA estimates that the average grade of  $U_3O_8$  contained in the Uranium Material should be approximately 0.06 percent which, using the same method of calculation, is higher than the estimated average grade of 0.05 percent for the Ashland 2 material. This number could be increased or decreased depending on the extent to which pockets of higher-grade materials exist on the site. 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 0.06 percent  $U_3O_8$ . In fact, ICF Kaiser has indicated that during the excavation of residues from the same Linde operation disposed at the Ashland 2 site, radionuclide concentrations encountered during the excavation were approximately twice the level indicated in the USDOE site characterization information. If the same relationship applies to Linde residues disposed at Ashland 1, the Uranium Material could contain an average of approximately 0.12 per cent uranium.

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This grade of approximately 0.06 percent uranium is 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, in fact, are being mined today and stockpiled at the White Mesa Mill for processing at the next mill run. This grade of ore is also currently being mined by in situ methods today. IUSA would incur no mining or transportation costs 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.

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#### Financial Considerations

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For a number of reasons, IUSA believes that the ability to process the Uranium Materials in the same fashion as conventional uranium ores, provides a number of production and production scheduling benefits to IUSA that would significantly reduce 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 6,000 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, has 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 must 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. Second, the longer the period of time that ore sits 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. In addition, IUSA purchases ore from independent miners at prices related to the prevailing commodity prices at the time of delivery to the Mill, thereby increasing this commodity price risk to IUSA. Third, 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. In fact, even with a trained workforce, uranium and vanadium recovery

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percentages are lower during short mill runs due to the nature of the operation of the mill. These decreases in recovery percentages can be very significant. This is one reason why it is important that each mill run be at least eight months or so, to minimize these types of start up inefficiencies and recovery losses during each mill run. And of course, the longer the continuous mill run the better.

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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, and a longer mill run, all other things being equal. This has the benefit of reducing the amount of time necessary to stockpile ore, since the number of tons required to be stockpiled between each mill run would be less, as well as the benefit of reducing the impact of start up inefficiencies and costs, and reduced recovery percentages. 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 one will result in longer mill runs at higher nominal capacities and lower milling costs.

IUSA views the Uranium Material the same as if it were low-grade conventional ore. IUSA currently expects that the ability to process the Uranium Material during a conventional ore run will provide IUSA with the ability to extend the length of its mill run in 1999 by up to  $2\frac{1}{2}$  months or, depending on production scheduling and availability of other ores in late 1998 and in 1999, and other circumstances, could result in commencing that mill run by up to  $2\frac{1}{2}$  months earlier than would otherwise be the case, in addition to extending the length of the mill run by that amount of time.

IUSA's purchased ore program is an important part of its business. With the Mill expected to be running longer and more continuously, IUSA expects that more small miners will be more inclined to make the capital investment in their mines for longer term production. Having the ability to process the Uranium Material during the same mill run as conventional ores should also provide some ability to use Uranium Material to smooth out variability in the production and delivery of conventional ore to the Mill.

Finally, if circumstances at the Mill change such that ore supplies from IUSA's mines and other sources increase over the amounts currently expected, and the conventional mill run can therefore be extended, 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

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significant financial and commercial benefits to our uranium milling business, even at the relatively low grades of uranium contained in the Uranium Material. 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. 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 Material, and will realize the financial and commercial benefits described above, IUSA will receive a recycling fee for recycling the Uranium Material to remove uranium and thereby reduce the radioactive component of the materials. IUSA is providing a recycling service that is considered to be a benefit to the generator of the Uranium Material. In order to provide this recycling service, the Uranium Material must be processed at the Mill for the recovery of uranium. In fact, under the terms of the contract to be negotiated between IUSA and the Corps' remediation contractor, it is expected that, as with the contract for the Ashland 2 material, the remediation contractor will receive a rebate of all or a portion of the recycling fee if the amount of uranium recovered from the Uranium Material exceeds certain agreed-upon levels.

#### Satisfaction of Co-Disposal Test

In addition, the USDOE, which managed the FUSRAP sites prior to the USACE, determined previously that the Uranium Material meets the definition of 11e.(2) byproduct material under the AEA (DOE, 1995; 1996b). Therefore, the material could be disposed of directly in the White Mesa Mill tailings impoundments. As such, the material meets the co-disposal test in the NRC staff's guidance, and because it does, it can be concluded that IUSA will be processing the Uranium Material primarily for its source material content.

#### 2.0 TRANSPORTATION CONSIDERATIONS

The Uranium Material will be shipped by train and exclusive-use trucks from the Ashland 1 site to the White Mesa Mill in intermodal containers. The covered 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; Green River, Utah; or Price, Utah), where they will be transferred to trucks for the final leg of the journey to the White Mesa Mill. It is expected that

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four containers will be shipped per rail car, for a total of approximately 200 to 350 cars. The USACE contractor expects that an average of 60 truckloads 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. The USACE contractor will arrange with 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 1 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 average of 60 additional 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 1 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. 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 may 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 (approximately 25,000 to 30,000 dry tons) to Cell 3 will increase the total amount of tailings in the cell by approximately

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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 has previously 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 will 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.

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The efficiency of airborne contamination control measures during the material handling operations will be assessed while the ore is in stockpile. 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 has 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 <u>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.</u>

#### 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

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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 that 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 1) 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 ...." 001000111

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# 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 the prime contractor for the FUSRAP Ashland 1 Site remediation, on behalf of the United States Army 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, financial considerations, and other 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

<u>October 15, 1998</u>

Date

David C. Frydenlund Vice President and General Counsel International Uranium (USA) Corporation EXHIBIT C NATIVE AMERICAN EMPLOYEE STATEMENT

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#### 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.

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INTERNATIONAL URANIUM (USA)	*	Docket No. 40-8681-MLA-4
CORPORATION	*	ASLBP No. 98-748-03-MLA
	*	
(Source Material License Amendment)	*	December 16, 1998
(,	*	
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#### **CERTIFICATE OF SERVICE**

I hereby certify that I caused true and complete copies of the foregoing International Uranium (USA) Corporation's Opposition to the Petition of Navajo Utah Commission Seeking Leave to Intervene in the above-captioned matter to be served, via facsimile, certified mail, and e-mail on this 16th day of December, 1998 to:

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

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Office of Rulemakings and Adjudications U.S. Nuclear Regulatory Commission 11555 Rockville Pike Rockville, MD 20852 Mitzi A. Young, Esq. U.S. Nuclear Regulatory Commission Office of the General Counsel 11555 Rockville Pike Rockville, MD 20852

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Commissioner Shirley Ann Jackson U.S. Nuclear Regulatory Commission 11555 Rockville Pike Rockville, MD 20852

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Mr. Ken Sleight Pack Creek Ranch P.O. Box 1270 Moab, Utah 84532 (Fax and Certified Mail)

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