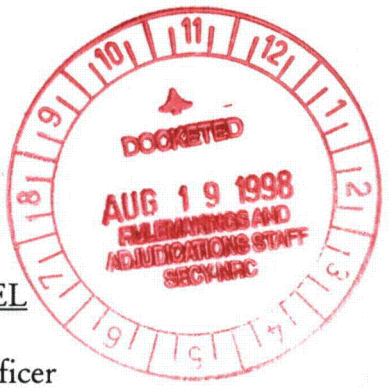


UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

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

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| In the Matter of: | |
| INTERNATIONAL URANIUM (USA) CORPORATION (source material license amendment) | Docket No. 40-8681-MLA-4<br>ASLBP No. 98-748-03-MLA<br>August 18, 1998 |

## STATE OF UTAH'S AMENDMENT TO ITS REQUEST FOR A HEARING AND PETITION FOR LEAVE TO INTERVENE

In response to the State of Utah's Request for a Hearing and Petition for Leave to Intervene ("Petition") and International Uranium (USA) Corporation's ("IUC's") opposition thereto ("Opposition to Petition"), the Presiding Officer issued a Memorandum and Order on August 5, 1998, authorizing the State of Utah to amend its Petition. The Presiding Officer allowed Utah to amend its Petition "because of the importance in determining whether or not the State of Utah has shown injury in fact." Order at 1.

## PROCEDURAL HISTORY

On May 8, 1998, IUC submitted a letter to NRC for an amendment to its Source Material License No. SUA-1358 that would allow IUC to receive and process material from the Ashland 2 Formerly Utilized Sites Remedial Action Program ("FUSRAP") site, near Tonawanda, New York.

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U.S. NUCLEAR REGULATORY COMMISSION
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The NRC approved IUC's license amendment request in an undated letter from Joseph J. Holonich of the NRC Staff to IUC. The basis for the NRC Staff approving the amendment was attached to Mr. Holonich's letter in an undated NRC Staff Technical Evaluation Report ("TER").

On June 23, 1998, IUC faxed a copy of the undated Holonich letter and TER to William J. Sinclair, Director, Division of the Radiation Control, Utah Department of Environmental Quality. *See* Exhibit 1 to Utah's Petition.

On July 23, 1998, the State of Utah filed a Request for Hearing and Petition for Leave to Intervene,[1] and on August 4, 1998, IUC filed its Opposition to the State's Hearing Request.

On August 5, 1998, the Presiding Officer issued a Memorandum and Order (Authorizing the State of Utah to Amend its Petition).

On August 6, 1998, on information and belief that shipments of the Ashland 2 materials were en-route to White Mesa, the State filed a Motion for Stay, Request for Prior Hearing, and Request for Temporary Stay ("Motion for Stay"). On August 7, 1998, IUC filed an Opposition to the State's Request for a Stay. Also on August 7, 1998, the Presiding Officer convened a telephone conference at 2 p.m. EDT allowing all sides to argue the appropriateness of the State's Motion for a Stay. On August 10, 1998, the State filed a Response on the Timeliness of its Motion for a Stay and Request

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[1] On the same date Envirocare of Utah, Inc. filed a Request for Hearing. On August 3, 1998, IUC filed an Opposition to Envirocare's Request for Hearing.

for a Temporary Stay. On August 11, 1998, the State filed a Supplement to its Motion for a Stay and Request for a Temporary Stay After Review of Information Provided by the Licensee ("Supplement to Motion for a Stay"). Also on August 11, 1998, IUC filed an Amended Opposition to Utah's Request for a Temporary Stay. On August 12, 1998, the State filed a Request for a Ruling on Claimed Proprietary or Confidential Information Used By the State to Supplement its Motion for a Stay and Request for a Temporary Stay. On August 13, 1998, the Presiding Officer issued a Memorandum and Order denying the State's Motion for Stay.

## ARGUMENT

Contrary to IUC's Opposition to the State's Petition, and as discussed below, the State has standing in this matter because it will suffer injury-in-fact and it has raised concerns that are germane to the subject matter of IUC's license amendment.

## I. STANDING REQUIREMENTS

Section 189a(1) of the Atomic Energy Act (the "AEA"), 42 U.S.C § 2239(a), provides that "[i]n any proceeding under this Act, for ... amending of any license . . . , the commission shall grant a hearing upon the request of any person whose interest may be affected by the proceeding, and shall admit any such person as a party to such proceeding." In addition, the requestor must describe in detail (1) the requestor's interest in the proceedings; (2) how those interests may be affected by the results of the

proceeding; (3) the requestor's areas of concern about the subject licensing action; and (4) the timeliness of the hearing request. 10 CFR § 2.1205(e).

In determining whether the Petitioner meets the judicial standard for standing, the Presiding Officer shall consider, among other factors:

> (1) The nature of the requestor's right under the [Atomic Energy] Act to be made a party to the proceeding;
>
> (2) The nature and extent of the requestor's property, financial, or other interest in the proceeding; and
>
> (3) The possible effect of any order that may be entered in the proceeding upon the requestor's interest.

10 CFR § 2.1205(h). In addition, the Presiding Officer shall determine the germaneness and timeliness of the petition. Id.

In determining whether a petitioner has met the above-referenced standards and is entitled to a hearing, the Commission looks to judicial concepts of standing and requires: (1) a petitioner's injury to arguably fall within the zone of interests sought to be protected by the Atomic Energy Act; (2) the petitioner to allege injury-in-fact; (3) the injury to be fairly traceable to the challenged action; and (4) the injury to be redressable by the Commission. *See* Petition at 8-9 and cases cited therein. Moreover, while the petitioner has the burden of establishing standing, the Presiding Officer is to "construe the petition in favor of the petitioner." Georgia Institute of Technology (Georgia Tech Research Reactor), CLI-95-12, 42 NRC 111, 115 (1995); Atlas Corporation (Moab, Utah facility), LBP-97-9, 45 NRC 414, 416 (1997).

## II. THE STATE HAS A RIGHT TO BE MADE A PARTY TO THE PROCEEDING

The State's interests[2] may be affected by the IUC license amendment and thus, under Section 189a of the Atomic Energy Act, 42 USC § 2339(a), the State may be admitted as a party to this proceeding. As discussed in the State's Petition, at 9-13, the State under the doctrine of *parens patriae*, has a quasi-sovereign right to protect the interests of its citizens. The State also has the right to protect its proprietary and sovereign interest in its lands, waters, wildlife and other natural resources. Finally, the State has the right to protect its interests as trustee for all the surface and groundwater in the State, including groundwater resources under the White Mesa Mill.

## III. THE LICENSE AMENDMENT WILL CREATE INJURY-IN-FACT TO THE STATE'S INTERESTS.

In Opposition to the State's Petition, the licensee alleges that the State has failed to show it "has suffered, or likely will suffer, injury-in-fact from the license amendment." Opposition to Petition at 5. The State asserts that its Petition, taken as a whole, and as more fully discussed below, demonstrates injury-in-fact.

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[2] *See* Section III below.

### A. Because the Ashland 2 Material May Contain Listed Hazardous Wastes, Excavation, Storage, Processing, and Disposal of the Material Could Violate Hazardous Waste Laws and NRC Guidance and Injure the State.

In its Petition, the State raised concerns about the hazardous waste content of the Ashland 2 material and circumvention of Utah's right to regulate hazardous waste. Petition at 16. In addition, the State raised the specter of NRC violating its final guidance on alternate feed materials if the Ashland 2 materials contain listed hazardous waste.

A recent Licensing Board decision stated: "If [an] intervenor can show that there is a law preventing particular material from being stored pursuant to the amendment, then there may also be a presumption of injury sufficient to establish standing." In the Matter of Energy Fuels Nuclear, Inc. (White Mesa Mill), LBP 97-10, 45 NRC 429, 431 (1997) (setting out standing requirements for petitioners challenging a license amendment at White Mesa Mill).

The State of Utah has been delegated the Resource Conservation and Recovery Act ("RCRA") program by the U.S. Environmental Protection Agency and, as such, Utah regulates the transportation, storage and disposal of hazardous waste in the State. The licensee presumes the Ashland 2 material does not contain hazardous waste and argues that "Utah is without jurisdiction to regulate disposal of 11e.(2) material, whether or not it is processed prior to disposal, and thus cannot complain of injury to its regulatory authority." Opposition to Petition at 9. The State has shown in its

pleadings relating to its Motion for a Stay that there is a likelihood that the Ashland 2 material contains hazardous waste. *See e.g.,* Supplement to Motion for a Stay. Moreover, in order to demonstrate standing, the State does not have to prove the merits of its case (*i.e.*, that hazardous waste is present in the Ashland 2 materials). As stated by the United States Supreme Court: "*Standing in no way depends on the merits* of the plaintiff's contention that particular conduct is illegal." Warth v. Seldin, 422 U.S.490, 500 (1975) (emphasis added). In fact, "trial and reviewing courts must accept as true all material allegations of the [petition]." Id. at 501. *See also* In the Matter of Georgia Institute of Technology, (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 286 (1995).

Actions taken pursuant to the IUC license amendment may violate RCRA. Transportation, storage and disposal of hazardous waste is subject to 40 CFR Parts 263 (transportation) and 264 (storage and disposal). Thus, if the U.S. Army Corps' contractor, ICF Kaiser, excavates hazardous waste at the site,[3] and transports it to White Mesa without the proper RCRA handling, labeling, and manifesting, the waste shipments will be in violation of RCRA. 40 CFR Part 263. Furthermore, RCRA imposes storage requirements when the waste arrives at White Mesa. 40 CFR Part 264. Moreover, RCRA has laws in place dealing with the recycling of product containing hazardous waste, and RCRA may also impose storage requirements prior to

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[3] *See* 40 CFR § 261.3(a)(2)(iv) (mixture rule).

reclamation. 40 CFR Parts 261 and 264. Finally, RCRA hazardous waste may only be disposed of in a licensed RCRA disposal facility, which includes the waste meeting the land disposal restrictions on the concentrations of hazardous waste. 40 CFR Parts 264 (disposal) and 268 (land disposal restrictions). If hazardous waste is mixed with radioactive waste, the waste is also regulated under RCRA. 40 CFR Part 261 (identification and listing of hazardous waste). The White Mesa Mill does not have a permit from the State of Utah to store RCRA hazardous waste and is not a RCRA-permitted hazardous waste disposal facility. Thus, the Ashland 2 waste en-route to White Mesa may already be in violation of RCRA handling, manifesting and storage laws, as enforced by the State of Utah. Furthermore, processing the Ashland 2 materials and disposing of the process waste may also be in violation of RCRA. In these circumstances, there should be a presumption of injury sufficient to establish the State's standing. Moreover, as the regulator of hazardous waste, the State will suffer injury in fact to its regulatory authority.

If the Ashland 2 waste contains listed hazardous waste, it is also in violation of NRC guidance on alternate feed materials. The guidance states:

> If the proposed feed material contains hazardous waste, listed under Subpart D §§ 261.30-33 of 40 CFR (or comparable RCRA authorized State regulations), it would be subject to EPA (or State) regulation under RCRA. To avoid the complexities of NRC/EPA dual regulation, such feed material will not be approved for processing at a licensed mill.

Final Position and Guidance on the Use of Uranium Mill Feed Material Other Than

Natural Ores, (Alternate Feed Guidance) 60 Fed. Reg. 49,296 (1995). Thus, if the Ashland 2 materials contain listed hazardous waste, the Staff's Alternate Feed Guidance prohibits such processing. As such, there should also be a presumption of injury-in-fact to the State because of the violation of the foregoing prohibition.

**B. Because the Ashland 2 Material May Have a Different Composition than Materials Currently Received, Processed, and Disposed of at the White Mesa Mill, the State of Utah Will Suffer Injury-in-Fact from IUC's License Amendment.**

The Ashland 2 material is an alternate feed material, potentially including listed hazardous wastes, that has a significantly different composition than traditional ores mined and milled at IUC's facility. In its Petition, the State alleged that if the licensee were to proceed in processing material authorized under the amendment, it would substantially diminish the State's ability to ensure protection of its environment, natural resources, and citizens. Petition at 12. The State further alleged that its interests were, *inter alia,* protecting the integrity of its wildlife and natural resources, including ground and surface water, from contamination caused as a result of any releases from IUC's tailings. Petition at 13. In addition, the State alleged that if the primary purpose of obtaining the Ashland 2 material was for disposal rather than reprocessing, then the White Mesa facility is unsuitable because it would be circumventing the disposal requirements of 10 CFR Part 61. Petition at 11.

IUC argues that because the State has failed to bring action on other alternate feed license amendments, the State cannot show injury-in-fact based on the current

license amendment. Opposition to Petition at 12-13. Whether the State has or has not raised concerns about the White Mesa Mill processing other alternate feed material is immaterial to whether Utah will suffer injury from this license amendment. IUC further argues that the impoundment at White Mesa facility is comparable to that at Envirocare -- a low level radioactive waste facility located in Utah -- and that the State is merely concerned with protecting Envirocare's economic interest. Opposition to Petition at 14-15. Whether the State will suffer injury because of the Ashland 2 materials being stored at White Mesa or disposed of in the White Mesa tailings impoundment must be based on the conditions at White Mesa -- not those existing at Envirocare. Furthermore, IUC's assertion that the State's underlying concern is to protect Envirocare's economic interest is baseless.

The Ashland 2 material represents a substantial threat to Utah's interests, including the State's natural resources and protection of the environment, based upon the construction of the White Mesa tailings impoundment and the current regulation and monitoring at IUC's mill. In the Matter of Energy Fuels Nuclear, Inc. (White Mesa Mill), LBP-97-10, 45 NRC 429, 431 (1997), sets out how a "petitioner [can] show a plausible way in which activities licensed by [a] challenged amendment would injure them." The Presiding Officer stated, "If a petitioner alleges a way in which it fears that [a] particular material would fail to be properly confined and would escape into the groundwater, then a requirement for standing would appear to be met." Here, the

State alleges that the Ashland 2 material has a different composition than traditional ores mined and milled at IUC. Moreover, the State alleges that the Ashland 2 material may have been commingled with oil refinery contamination, including listed hazardous wastes. As such, storage, processing, and disposal of the material could lead to new waste streams that could contaminate the "waters of the state."[4]

Unlike NRC regulation, the definition of groundwater under State law is not contingent upon the yield of the aquifer. *Cf* "Waters of the state" as defined in Utah Code Ann § 19-5-102(18) with "aquifer" as defined in 10 CFR Part 40, Appendix A. Thus, for purposes of standing, if the leachate from the White Mesa tailings impoundment has the potential to reach the perched aquifer under the impoundment -- regardless of the aquifer's yield -- the State would suffer injury-in-fact. Affidavit of Loren Morton, attached hereto as Exhibit 1, at ¶ 7. And there is ample reason to believe that such an injury will occur.

The State will suffer injury from the Ashland 2 materials disposed of at White

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[4] As defined in Utah Code Ann. § 19-5-102(18), "waters of the state"

(a) means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion of the state; and

(b) does not include bodies of water confined to and retained within the limits of private property, and which do not develop into or constitute a nuisance, a public health hazard, or a menace to fish or wildlife.

Mesa because the White Mesa tailings cells have the potential to discharge to groundwater. As more particularly described in the supporting Affidavit of Loren Morton, there are several bases for refuting IUC's statement that its tailings impoundment does not discharge to groundwater. Opposition to Petition at 11, 22. First, in a hydrogeologic evaluation of the White Mesa Mill, prepared in 1994, infiltration modeling results for the White Mesa impoundment predict an annual seepage discharge rate of between 0.45 to 5.95 inches per year for closed cell conditions. Morton Affidavit at ¶ 8. Second, the 1994 hydrogeologic evaluation incorrectly assumed that White Mesa has closed cells. However, the open cell conditions at White Mesa create a higher potential annual seepage discharge rate than predicted for closed cell conditions. Morton Affidavit at ¶ 9. Third, because the 1994 hydrogeologic evaluation used unrepresentative infiltration modeling assumptions, it artificially lowered the rate of seepage discharge for the White Mesa tailings disposal cells. Morton Affidavit at ¶ 10. Fourth, based on U.S. Environmental Protection Agency infiltration simulations, there may be as much as 89 gallons per acre per day of undetected seepage discharge from tailings impoundments similar to those at White Mesa. Morton Affidavit at ¶ 11. Finally, there is potential for seepage discharge at White Mesa due to obsolete technology. Morton Affidavit at ¶ 12.

In addition to the plausible injury discussed above, there is also reasonable doubt about the source and content of the Ashland 2 materials to establish injury in

fact to the State's interests. In the case, In the Matter of Hydro Resources, Inc. ("HRI"), LBP-98-9, 47 NRC 261 (1998), the Presiding Officer admitted several parties to a Subpart L proceeding that dealt with HRI's source materials license. The license would allow HRI to perform "in situ leach" uranium mining at various sites in New Mexico. However, "[s]ome of the license conditions imposed by the Staff indicate information the Staff must still be provided before the requested license activities may be authorized." Id. at 274. Thus, the Presiding Officer made the following statements in admitting the parties:

> Petitioners are not confident that the Crownpoint water supply will be adequately protected, as the design of the project is far from complete. Petitioners are not required to rely on the good faith will of HRI, the future decisions of the Staff of the [NRC], or the Staff of the Environmental Protection Agency. Petitioners who demonstrate that they rely on water supplies adjacent to the in situ leach mining project have a right to a hearing. They may challenge this project based on reasonably specific operating plans, which are not yet developed. Because knowledge of the relevant rock formations is still rudimentary and plans are incomplete, there are enough reasonable doubts to establish "injury in fact."

Id. at 275.

Similar to the license in Hydro Resources, IUC's license amendment contains several conditions, *e.g.* post excavation and confirmatory testing for hazardous wastes, that must be completed prior to shipment, receipt, storage, processing, and disposal of the Ashland 2 material. Neither IUC nor NRC Staff have credible evidence of the completion of these conditions. Furthermore, the State requests the Presiding Officer to disregard a letter from Michelle Rehmann, IUC, to Bruce Howard, ICF Kaiser,

bearing the date July 23, 1998, that was faxed to the State on August 13, 1998 because this letter is not in evidence and, in any event, goes to the merits of the case. On its face, the seven page letter was not copied to any other person or entity, including the NRC Staff; was not referenced in any pleading, including an Affidavit by Ms. Rehmann in support of IUC's Amended Opposition to State of Utah's Request for a Stay, dated August 11, 1998[5]; and was not raised by IUC in discussing hazardous waste sampling in the August 7 telephone conference. Furthermore, the State has received no sampling data or results from either ICF Kaiser or IUC.[6] In addition, the State finds it highly irregular, and not in conformity with 10 CFR Part 2 procedures that the July 23, 1998 letter was faxed to the Presiding Office unaccompanied by any pleading.

Thus, similar to the incomplete operating plans in Hydro Resources, the State has yet to receive any credible information that demonstrates a completed, adequate hazardous waste testing plan. Furthermore, there appears to have been no contact with any RCRA regulatory agency, in New York or elsewhere, to determine the source and process from which the refinery waste originated. These reasonable doubts, coupled with the State's role as trustee of ground and surface waters, suffice to establish "injury in fact" in accordance with the standards set forth in Hydro Resources.

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[5] Paragraphs 9 through 12 of Ms. Rehmann's Affidavit specifically address testing and sampling of hazardous waste.

[6] On Monday, August 17, 1998, the State received some soil sample results directly from the U.S. Army Corps of Engineers.

IUC argues that should the Presiding Officer find that the State has established standing, NRC's licensing determinations are entitled to deference. Opposition to Petition at 15. The State has made a significant showing that the deficiencies in the Staff's Technical Evaluation Report and inadequate license conditions may create injury to the State. *See* Supplement to Motion for a Stay, which is fully incorporated herewith. In any event, whatever deference may be given to the NRC Staff's decision goes to the merits of the case -- not to a determination of standing.

In sum, the State has demonstrated plausible mechanisms by which the Ashland 2 materials may contaminate the groundwater under the White Mesa mill. Accordingly, Utah, as trustee of groundwater, has established "injury in fact" to its interest.

## IV. CONTRARY TO IUC'S STATEMENTS, UTAH'S CONCERNS ARE GERMANE TO THE SUBJECT MATTER OF IUC'S LICENSE AMENDMENT.

The State of Utah has sufficiently demonstrated that its concerns are germane to the subject matter of the proceeding as required by 10 CFR § 2.1205(d). As IUC correctly quoted in its Opposition at 14, "The only issues that may be raised must relate to the specific actions proposed to be taken under the license amendment." Energy Fuels, 45 NRC at 431.[7] IUC argues or implies that the State has not objected

[7] In its Opposition to the Petition, IUC refers to another IUC amendment dealing with performance-based licensing and states that the period for requesting a

to NRC granting the White Mesa Mill a license to operate, to renewing the license, or to amending the license to allow processing alternate feed stock. Opposition at 13. *See also* note 8, *supra*. First, this is not a correct statement. The State objected to a license amendment by the White Mesa Mill that for the first time would allow it to process alternate feed. *See* In the Matter of Umetco Minerals Corp. (White Mesa Mill), LBP-92-20, 36 NRC 112 (1992). Second, because the State has not challenged all other amendments allowing the White Mesa Mill to process alternative feed material, does not create a presumption in this case that the State has not suffered injury in fact or raised issues germane to this proceeding. *See* Opposition at 13-14.

The State has raised concerns about the composition of the Ashland 2 material, the potential for leakage at the White Mesa tailings impoundment, and the possibility of violation of hazardous waste laws and NRC guidance on alternate feed materials. As stated in Babcock and Wilcox Co. (Pennsylvania Nuclear Services Operations, Parks Township, Pennsylvania), LBP-94-12, 39 NRC 215, 217 (1994), "[a]t this stage of the proceeding requestors need only identify the areas of concerns they wish to raise. They need only provide *minimal* information to ensure that the areas of concern are germane to the proceeding." Id. *(emphasis added).* Moreover,

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hearing on that application has expired. Opposition to Petition at 2, fn. 1 and 16. Any legal conclusions relating to the performance-based license amendment are irrelevant to the current proceeding and should be stricken from the record.

> under the formal procedures of Subpart G, an intervention petitioner must explain the basis for any contention it seeks to litigate and demonstrate that a genuine dispute exists with the applicant on a material issue. 10 CFR § 2.714(b)(2). In this informal Subpart L proceeding, however, there is no such requirement. The test is simple – persons or organizations with standing to intervene need only identify their "areas of concern germane to the proceeding" to have these areas addressed in hearing.

Id. Furthermore, as the Presiding Officer recently recognized in Hydro Resources, "[i]t is not necessary to determine the merits of a concern in order to determine that it is germane." 47 NRC at 280. Here, IUC attempts to dismiss the State's concerns by arguing the merits of the case and by attempting to create a presumption that, because of lack of previous litigation, the State has not suffered injury or raised germane issues. The State has set forth its concerns and identified why the Ashland 2 material poses a harm different from the operation of the White Mesa Mill generally. In doing so, the State has made more than the minimal required showing, and, as such, no other information or argument is needed to show the State's areas of concern are germane to the subject matter of this proceeding.

## V. THE PRESIDING OFFICER SHOULD FIND PERSUASIVE THAT NRC HAS PREVIOUSLY ALLOWED THE STATE TO INTERVENE IN SIMILAR PROCEEDINGS.

Although a petitioner does not gain automatic standing simply because of standing in previous cases, the fact that the State has previously obtained standing in challenging alternate feed material at the White Mesa Mill should be persuasive that the

State has standing in this case too.[8] First, in finding that the State had standing to participate in a hearing on a license amendment at the White Mesa Mill (when the mill was being operated by Umetco Minerals Corp.), the Presiding Officer stated,

> No serious question can be raised on the State's standing in this proceeding. Its petition cites issues of jurisdiction over the materials involved, the proper characteristics of such material, the purpose for which the materials have been received, the failure to place proper conditions on the license amendment, and questions concerning governmental responsibility for the ultimate custody of the materials. These matters setting forth possible injuries in fact are within the zone of interests protected by statute and meet the standards for standing in Commission proceedings.

In the Matter of Umetco Minerals Corp. (White Mesa Mill), LBP-92-20, 36 NRC 112, 115 (1992). In Umetco, the State's Request for Hearing generally described the following injuries and/or concerns: (1) insufficient information to determine whether Umetco is engaged in reprocessing or waste disposal; (2) possible State jurisdiction if the material was low level radioactive waste; (3) improper reliance by NRC on licensee's certification; (4) insufficient conditions on the license amendment to rule out RCRA regulated constituents; and (5) no assurance that the DOE would take title to the material. The facts, injuries, and concerns in this proceeding are strikingly similar to those the State raised in Umetco. Thus, having obtained standing in a similar license amendment at the White Mesa Mill should be persuasive that the State has

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[8] In its Opposition to Petition at 13, IUC references the date on which the White Mesa Mill was granted an operating license, license renewals, and the date on which it began processing conventional ores and alternate feed materials. IUC concludes that the State had not objected to "these license renewals," incorrectly implying that the State had not challenged any previous license amendment. Id.

demonstrated standing in this case too. *See also* In the Matter of Private Fuel Storage, L.L.C., LBP-98-7 (1998) (finding that State had standing to intervene when describing potential injuries to citizens, wildlife, environment, and natural resources).

## VI. Conclusion

For the reasons stated above, the State has demonstrated that it has standing to intervene in the proceeding because it has shown injury-in-fact to its interests and has raised issues that are germane to the IUC license amendment.

DATED this 18th day of August, 1998.

Respectfully submitted,

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Denise Chancellor, Assistant Attorney General
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## CERTIFICATE OF SERVICE

I hereby certify that copies of STATE OF UTAH'S AMENDMENT TO ITS REQUEST FOR A HEARING AND PETITION FOR LEAVE TO INTERVENE were served on the persons listed below by fax, unless otherwise noted, on August 18, 1998, and by first class mail, on August 19, 1998:

Attn: Docketing & Service Branch
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Washington, D.C. 20555
*(original and two copies)*

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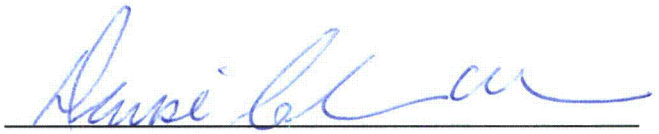

Denise Chancellor
Assistant Attorney General, State of Utah

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 18, 1998 |

STATE OF UTAH )
) ss.
COUNTY OF SALT LAKE )

**AFFIDAVIT OF LOREN MORTON**

I, LOREN MORTON, being first duly sworn upon oath, depose and state as follows:

1. I am the Senior Hydogeologist for the Division of Radiation Control, Utah Department of Environmental Quality, and have held this position since 1994.

2. My duties include oversight of groundwater hydrology matters at low-level radioactive waste, uranium mill tailings disposal operations, and other

radioactive waste disposal facilities. I also review engineering plans and specifications for licensees and permittees of radioactive waste disposal operations to determine compliance with State groundwater protection criteria and rules. I perform infiltration, groundwater flow and contaminant transport modeling to evaluate the long-term performance of engineering designs proposed for radioactive waste disposal facilities. I also conduct compliance inspections for groundwater protection at radioactive waste disposal operations. I review and evaluate groundwater quality and related compliance monitoring data from radioactive waste disposal facilities to determine compliance with State groundwater protection requirements. Additionally, I review literature on groundwater flow and contaminant transport, participate in on-going groundwater hydrology training, review design and construction of liner systems, as well as evaluate episodes of leakage from lined impoundments.

3. I began working as an environmental scientist (hydrogeologist) in 1984 for the Utah Division of Water Quality, where, on behalf of the State, I regulated mine waste and wastewater disposal, including uranium mining projects; underground injection operations including solution mining; municipal, commercial, and industrial wastewater disposal projects; and low-level radioactive waste.

4. I earned a B. S. and an M. S. in geology from Brigham Young University in 1981 and 1984 respectively.

5. I am familiar with the International Uranium (USA) Corporation ("IUSA") White Mesa Mill and its disposal impoundments. In preparation of this Affidavit, I reviewed the following documents:

(a) Brown, K.W., J.C. Thomas, R.L. Lytton, P. Jayawickrama, and S.C. Bahrt, August, 1987, Quantification of Leak Rates Through Holes in Landfill Liners," Texas A&M University, prepared for U.S. EPA Hazardous Waste Engineering Research Laboratory, EPA/600/2-87/062, 56 pp. with five appendices.

(b) GeoServices Incorporated, April, 1987, "Background Document on Bottom-Liner Performance in Double-Lined Landfills and Surface Impoundments," prepared for U.S. EPA Office of Solid Waste, EPA/530-SW-87-013, 198 pp. with 3 appendices.

(c) Titan Environmental, July, 1994, "Hydrogeologic Evaluation of White Mesa Uranium Mill, Prepared for Energy Fuels Nuclear, Inc. One Tabor Center, Suite 2500 1200 Seventeenth Street Denver Colorado," unpublished consultants report, 49 pp. with references and seven appendices.

6. Based on my experience, training, expertise, familiarity with the White Mesa IUSA facility, as well as my review of the professional literature referred to in ¶ 5, my professional opinion that there is potential for the White Mesa tailings

cells to discharge to the waters of the state (*i.e.* groundwater) is described in the following paragraphs.

7. The uppermost or perched aquifer found beneath the IUSA tailings pile at the White Mesa facility is not hydraulically isolated from the land surface, and thus has the potential of receiving tailings contaminants via seepage discharge from the IUSA tailings facility. This same perched aquifer discharges to the land surface in the form of nearby springs and seeps. Titan Environmental, p. 21. Groundwater found both in this perched aquifer and deeper aquifers beneath the tailing facility, as well as nearby surface waters that could also be potentially impacted, all constitute "waters of the state." A facility that discharges a pollutant into the waters of the state, or places any waste in a location where there is probable cause to believe it will cause said pollution, is subject to the Utah Water Quality Act and State regulations promulgated thereunder. *See* Utah Code Ann § 19-5-107.

8. An infiltration modeling report provided to the State by IUSA's predecessor Energy Fuels Nuclear indicates that the completed or closed tailings disposal cells at the White Mesa mill will discharge tailings seepage to the environment (Titan Environmental, Appendix C, Table 4 and related HELP model test case results). In this report, IUSA completed six different test case simulations of infiltration through tailings disposal Cells 3 and 4 at the White Mesa facility. Four of these six test cases predicted an annual seepage discharge rate of between 0.45 to 5.95 inches per year.

While the two remaining test cases predicted no discharge from Cell 4, these predictions were found invalid after discovery that they did not achieve steady-state infiltration conditions, and hence do not represent long-term performance of Cell 4. I conclude, that given sufficient time once a seepage effluent is released from the tailings cells, such discharge has the potential to adversely impact water quality both in the perched aquifer and any connected surface waters.

9. The IUSA infiltration analysis described in the July, 1994 Titan Environmental report assumed that the tailings in Cells 3 and 4 had been closed and covered with a multi-layered system of earthen materials. Id. Appendix C, Figure 2, and related HELP model test case results. In these simulations the infiltration model assumed the only water applied to the tailings piles was precipitation, and that there was no static water head within the piles. In contrast, the operation of IUSA's tailings disposal cells demands that there be a standing head of water in each disposal cell. As a result of this driving head, I conclude that the annual seepage discharge rate from the active or open disposal cell will be higher than that predicted for the closed disposal cell condition.

10. The IUSA infiltration analysis assumed tailings facilities were underlain by a flexible membrane/clay composite liner system, i.e., a flexible membrane liner (FML) underlain by and in intimate contact with a lower clay soil liner. July, 1994 Titan Environmental, Appendix C, HELP model test case results,

Layer 7. However, engineering design descriptions provided elsewhere in the infiltration modeling report indicate that there is no intimate contact between the FML and the underlying clay liner. Instead a geotextile fabric, filter fabric, or a six inch layer of crushed rock and sand has been constructed between these two layers. Id., pp. 36 - 38, and Figures 3.1 and 3.2. Thus the use of a composite liner assumption in the July, 1994 infiltration analysis is unrepresentative and unwarranted. Based on my previous experience with the HELP model, I conclude this IUSA bias will artificially lower the rate of seepage discharge predicted by the IUSA HELP model test cases for the White Mesa tailings disposal cells.

11. The United States Environmental Protection Agency (EPA) has completed infiltration simulations of several engineering containment designs for landfills and surface impoundments, including one similar to that built at the White Mesa facility, where a FML is underlain by a granular media, and thereunder by a compacted soil liner. GeoServices Inc., pp. 2-15 and 5-1 through 5-12. These computer simulations show that a containment design similar to the one at the White Mesa facility can result in an undetected seepage discharge to the environment of as much 89 gallons per acre per day. Id., pp. 5-3 and 5-4. My review of the IUSA impoundment design shows the leak detection system under the tailings cells consists, for the most part, of such a design. Titan Environmental, Figures 3.1 and 3.2. Consequently, it

appears to me that there is a significant potential for undetected seepage discharge from the IUSA tailings cells to groundwater, and thus, to "waters of the state."

12. The IUSA tailings cells in question were constructed prior to 1980. Titan Environmental, p. 1. More recent EPA research has found that FML leaks detected in waste impoundments constructed during this era were many times caused by flawed seams; rips, punctures, and tears that occur during installation of the FML; failures that result from subsidence or shear failure of the soil after installation; inadequate quality control of installation; inadequate training of installation crews; local deformation of the FML due to poor liner subbase preparation; and physical, chemical and biological weathering of the FML material. Brown, et.al., pp. 1-2.

(a) My review of available information indicates that at least part of the IUSA tailings facility has been constructed with the FML liner immediately underlain by a layer of crushed rock and sand. Titan Environmental, p. 38, Figure 3.2. No information has been provided to the State on construction specifications, techniques, or quality assurance/quality control measures used; thus, the potential exists for angular material in this bedding to have punctured the FML.

(b) Significant improvements have been made both in waste impoundment engineering design, and FML materials, construction, and quality assurance/quality control testing since construction of the IUSA tailings facility. As a result, I conclude the potential for seepage discharge from the existing IUSA tailings

facility is greater than if the facility were to be constructed today with contemporary materials and engineering design practices.

FURTHER AFFIANT SAYETH NOT.

DATED this August 18, 1998.

Loren Morton

Voluntarily signed and sworn to before me this 18th day of August, 1998, by the signer, whose identity is personally known to me or was proven to me on satisfactory evidence.

NOTARY PUBLIC

Residing at: SLC Utah
My Commission expires: 5/15/01

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My Commission Expires
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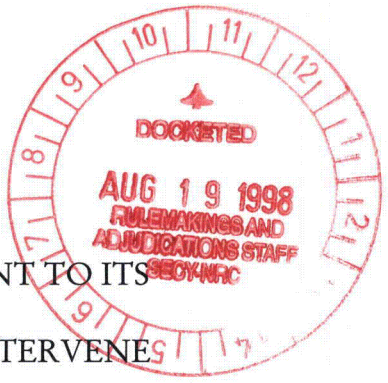
STATE OF UTAH




AMENDED CERTIFICATE OF SERVICE

I hereby certify that copies of STATE OF UTAH'S AMENDMENT TO ITS REQUEST FOR A HEARING AND PETITION FOR LEAVE TO INTERVENE were served on the persons listed below by fax* and electronic transmission, unless otherwise noted, on August 18, 1998, and by first class mail, on August 19, 1998:

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Dated: August 19, 1998