



INTERNATIONAL  
URANIUM (USA)  
CORPORATION

40-8681

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June 20, 1997

VIA OVERNIGHT MAIL

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

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

Dear Mr. Holonich:

In response to a request by NRC Staff, International Uranium (USA) Corporation ("IUC") hereby transmits a letter from the Material Owner describing the average composition of the uranium material, together with associated average composition data, as a supplement to the request to amend Source Material License SUA-1358 dated April 13, 1997 (see Attachment A). We also transmit, as Attachment B, the following documentation regarding the regulatory classification of the uranium material:

- Letter from the Material Owner explaining that the material is classified as source material, and managed under an NRC license. The letter also explains that source material is excluded from regulation as hazardous waste under the applicable State Code.
- The Material Owner's Source Material license.
- State Code citation with exclusion of "Source, special nuclear or byproduct material" from regulation as hazardous waste.

The enclosed letter and data are transmitted as two versions:

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

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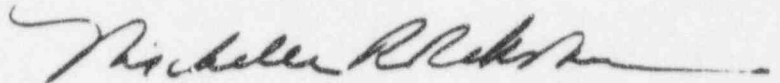


Joseph J Holonich  
June 20, 1997  
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IUC requests that the information identified as "confidential" contained in this amendment request be maintained by the NRC as confidential until March 31, 2000. IUC also reserves the right to reevaluate this proposed release date as circumstances change over the course of the proposed three year period.

We hope this information meets your needs for reviewing these elements of the amendment application. I can be reached at (303) 389.4131.

Sincerely,



Michelle R. Rehmann  
Environmental Manager

MRR/tay  
Attachments

cc: Ronald E. Berg  
William N. Deal  
David C. Frydenlund  
Earl E. Hoellen  
James Park (NRC)  
Harold R. Roberts

ATTACHMENT A

Subject: Average Composition of [ ] Residues

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In discussions with outsiders about the composition of our residues, we are often asked for complete analyses. Although we have many analyses of Ta and Nb, we do not have many total analyses. However, in 1990 we submitted ten 55-gallon drums of material from bins 2,4,7,8 to Metallurg for them to evaluate for furnace concentration in Germany. In thorough German fashion, they made total analyses of the material and gave us the results.

I compiled the results of their analyses which were expressed as the elements, and calculated the average values and the standard deviation, then converted the values to normal fluorides. Lo and behold, I came out with 100% accountability! The data and results are shown in Table 1. The only discrepancy is that the calculated fluoride is 31%, whereas their average fluoride is 39%. This can be explained by assuming that some of the compounds are present as oxyfluorides rather than fluorides. This is most likely true of Nb, Ta and Zr and possibly Al.

Note that they report an average of 5.57%  $Ta_2O_5$ , whereas we used 2.48% in the AFE. My leaching studies averaged 3.82%, which I think is closer to the real value. Also, note that the uranium was analyzed at 0.19% and the thorium at 0.43%. We normally quote the uranium at 0.3% and the thorium at 0.4%.

We have another potential source of good analytical data at the Bureau of Mines from thirteen samples from all bins, but they won't send us the results until we sign the CREADA. Until then, I recommend we use the last column in Table 1 as the "official analyses" of the residues.

*R. C. Hard*

Robert A. Hard, Consultant

TABLE I

TABLE I											Average Values Represented as Fluorides			
Percent by Weight in Dry Sledge											Average	Std.Dev.		
Sample No.	1	2	3	4	5	6	7	8	9	10				
Ta(water sol)	2.62%	3.28%	2.51%	1.06%	4.15%	2.63%	1.75%	2.11%	1.00%	0.69%	2.12%	1.02%	TaF5	3.23%
Cb(water sol)	1.93%	1.86%	2.03%	0.74%	2.55%	1.92%	2.47%	2.53%	0.80%	0.71%	1.75%	0.70%	CbF5	3.55%
Ta(water in)	1.50%	1.02%	0.69%	1.59%	0.17%	0.64%	0.43%	1.50%	1.08%	0.11%	0.94%	0.58%	TaF5	1.43%
Cb(water in)	1.87%	0.84%	0.47%	1.91%	0.17%	0.63%	0.43%	1.26%	2.17%	0.09%	0.98%	0.73%	CbF5	1.99%
Ca	17.90%	12.30%	12.70%	12.80%	13.30%	13.20%	17.40%	21.70%	19.60%	13.30%	15.44%	3.73%	CaF2	33.11%
Al	9.60%	10.30%	11.20%	10.09%	13.30%	11.10%	6.50%	5.70%	4.90%	9.10%	9.19%	2.55%	AlF3	31.02%
Fe	1.10%	1.60%	1.30%	1.30%	1.70%	4.60%	1.70%	0.90%	0.80%	0.30%	1.53%	1.11%	FeF3	3.09%
Ti	0.70%	0.30%	0.30%	0.30%	0.30%	0.70%	0.30%	0.80%	0.60%	0.10%	0.68%	0.21%	TiF4	1.13%
P	39.61%	39.61%	61.50%	29.64%	42.38%	44.10%	30.21%	25.11%	34.10%	44.00%	36.92%	4.70%	F	
BO4	0.60%	1.30%	0.60%	0.40%	0.30%	0.20%	0.30%	0.30%	0.60%	0.30%	0.54%	0.32%	BO4	0.32%
C	5.20%	1.70%	1.70%	1.30%	1.60%	0.60%	1.30%	1.20%	5.50%	1.30%	2.07%	1.67%	C	1.67%
Cr	1.60%	0.90%	0.70%	0.10%	0.10%	0.30%	0.50%	1.20%	1.68%	0.10%	0.71%	0.56%	CrF3	1.49%
Pb	0.66%	0.30%	0.20%	0.08%	0.01%	0.02%	0.03%	0.30%	0.07%	0.01%	0.10%	0.10%	PbF2	0.11%
Mg	1.20%	1.20%	1.20%	2.20%	2.10%	2.30%	2.10%	1.30%	1.30%	2.30%	1.72%	0.49%	MgF2	4.44%
Ba	4.00%	2.10%	2.10%	0.70%	0.30%	1.00%	2.00%	1.70%	4.30%	0.40%	1.86%	1.32%	BaF2	2.20%
Zr	2.00%	2.10%	2.20%	7.60%	5.40%	6.40%	5.30%	2.70%	2.10%	5.40%	4.06%	1.91%	ZrF4	7.45%
Sr	3.80%	11.60%	11.30%	3.30%	0.50%	0.50%	0.30%	2.40%	3.30%	0.60%	3.68%	4.06%	SrF2	6.03%
Th	0.20%	0.30%	0.30%	0.70%	0.30%	0.70%	0.50%	0.30%	0.30%	0.50%	0.43%	0.17%	ThF4	0.59%
U	0.10%	0.30%	0.30%	0.20%	0.20%	0.20%	0.10%	0.20%	0.10%	0.20%	0.19%	0.07%	UF4	0.25%
Mn													Total as Fluorides	190.11%
Total Ta2O5	6.33%	7.83%	5.85%	4.82%	7.66%	5.94%	3.97%	6.56%	4.88%	1.46%	5.57%	1.82%		4.67%
Total Cb2O5	5.43%	3.86%	3.58%	3.79%	3.89%	3.65%	4.15%	5.41%	4.25%	1.14%	3.90%	1.12%		5.54%
Fluorobis														
Ta2O5	30.63%	41.91%	43.10%	21.98%	52.78%	44.18%	44.12%	32.08%	20.50%	47.39%	37.89%	10.36%		
Cb2O5	35.52%	48.17%	56.70%	19.53%	63.56%	52.65%	59.58%	46.66%	18.84%	62.86%	46.53%	15.93%		
Average Ta2O5														

ATTACHMENT B



[ ]

June 19, 1997

Ms. Michelle Rehmann  
International Uranium Corporation, USA  
Independence Plaza, Suite 950  
1050 17th Street  
Denver, CO 80265

RE: REGULATORY CLASSIFICATION OF [ ] MATERIALS BEING  
PROPOSED FOR USE AS AN ALTERNATE FEEDSTOCK AT THE  
WHITE MESA MILL

Dear Ms. Rehmann:

Based on our discussion, and your explanation of the NRC request for additional information concerning the regulatory status of the materials being proposed for use as an alternate feedstock at the White Mesa Mill, [ ] is providing the following discussion of the management system for the aforementioned materials.

Based on the fact that the materials in question contain naturally occurring Uranium and Thorium at a concentration greater than 0.05%, they are classified as Source Materials under the Atomic Energy Act of 1954 and are managed under NRC License [ ] (See Attachment I) which was renewed on December 31, 1996 and expires on December 31, 2001.

The materials are currently stored in seven (7) vaults which are constructed with concrete walls and floors. The roofs are formed using preformed concrete T beams and are covered with insulation and rubber membrane roofing materials.

The protection of workers from potential radiation exposure is a vital element in our radiation safety program and access to the bins is strictly controlled through locked entry gates and a log book.

In order to insure that there are no adverse environmental impacts, and that the integrity of the bins is being maintained, a series of monitoring wells which surround the bins are sampled on a quarterly basis as discussed in the materials submitted for the License renewal application.

[ ]  
In addition to the above items, an ore inventory, which tracks the source material volume, is calculated annually as required under the License.

At present [ ] has submitted a Letter of Credit and executed a Standby Trust Agreement in favor of the NRC in order to insure funding for decommissioning the [ ] facility as required under the Site Decommissioning Funding Plan.

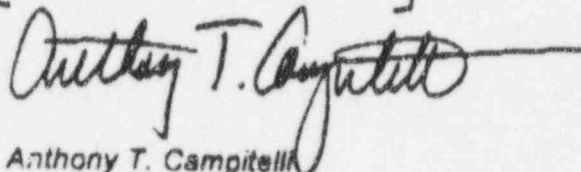
Further discussion of the regulatory status of the [ ] materials concerned the issue of hazardous waste and the status of these materials under the hazardous waste regulations of the Pa Department of Environmental Protection. Attachment II to this letter is a copy of a page from Title 25, Chapter 261 of the Pennsylvania Code. Title 25 is the body of regulations which govern environmental protection in the state and Chapter 261 addresses the criteria for the identification and listing of hazardous waste.

Pa Code 25 § 261.4, Exclusions, lists those solid wastes which are specifically excluded as hazardous waste under the regulations. Subsection (a) (4) under this citation excludes "Source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954.." from regulation as hazardous waste. As noted above, the materials in question are regulated as source material under an appropriate NRC License.

I believe that this information is adequate in explaining the regulatory status of the materials being proposed as alternate feedstock for the White Mesa Mill.

Should you have any questions, or require additional information, please contact me at your convenience.

Yours truly,

[ ]  


Anthony T. Campitelli  
Manager, Environmental Affairs

attachments