

40-8989

**ENVIROCARE** OF UTAH, INC.  
*THE SAFE ALTERNATIVE*

December 1, 1998

**VIA FACSIMILE AND OVERNIGHT MAIL**

Mr. Joseph J. Holonich, Chief  
Uranium Recovery Branch  
Division of Waste Management  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
2 White Flint North, Mail Stop T-719  
11545 Rockville Pike  
Rockville, MD 20852

Re: International Uranium (USA) Corporation's Amendment Request to Process an  
Alternate Feed at White Mesa Uranium Mill (Source Material License SUA-1358)

Dear Mr. Holonich:

I am writing on behalf of Envirocare of Utah, Inc. ("Envirocare"), relative to a letter dated October 15, 1998 from International Uranium (USA) Corporation ("IUSA") to the U.S. Nuclear Regulatory Commission ("NRC") requesting an amendment to IUSA's Source Material License No. SUA-1358. By its license amendment request, IUSA seeks authorization to receive and "process" uranium-bearing material from the Ashland 1 Formerly Utilized Sites Remedial Action Program ("FUSRAP") site near Tonowanda, New York. The cleanup of this FUSRAP site is the responsibility of the Army Corps of Engineers. On November 3, 1998, the NRC published a "Notice of Receipt" of IUSA's License Amendment Application. 63 Fed. Reg. 59340.

Envirocare is licensed by the NRC to dispose of 11e.(2) by-product material at its disposal facility in Clive, Utah which was specifically designed and constructed for this purpose. Envirocare offers competitive prices in the market for the disposal of 11e.(2) material and has disposed of large quantities of such material, including FUSRAP waste. Envirocare is concerned that IUSA is planning to accept 11e.(2) material for disposal at its uranium mill tailings impoundments which were never intended for use as disposal facilities for large quantities of off-site material. As set forth below, this practice contravenes NRC policy. Envirocare hereby submits the following comments to the NRC's Federal Register Notice.

On September 15, 1995 the NRC published a uranium mill licensing guidance entitled "Final Position and Guidance on the Use of Uranium Mill Feed Material Other

9812090025 981201  
PDR ADOCK 04008989  
C PDR

46 WEST BROADWAY • SUITE 240 • SALT LAKE CITY, UTAH 84101 • TELEPHONE (801) 532-1330

Than Natural Ores," 60 Fed. Reg. 49296 ("the Guidance"). In order to receive NRC approval to process alternate feed materials at a licensed uranium mill, the Guidance requires the licensee to demonstrate that the feed material (1) satisfies the definition of "ore" as articulated in the Guidance, (2) does not contain a listed hazardous waste, and (3) is being processed primarily for its source-material content. By its request of October 15, 1998 IUSA seeks authorization to process at its White Mesa mill alternate feed material from the Ashland 1 site. However, IUSA's license amendment request does not address and satisfy the Guidance requirements. Putting aside the issues of whether this material is "ore" or whether it contains hazardous waste, IUSA's request fails to demonstrate that it will process the Ashland 1 feed material primarily for its source-material content. Thus, IUSA's request should be denied.

The Guidance provides that "[f]or the tailings and waste from the proposed processing to qualify as 11e.(2) byproduct material, the ore must be processed primarily for its source-material content." 60 Fed. Reg. 49297. This is a legal requirement based on the Atomic Energy Act, in order for the government to eventually take title to the tailings. The NRC must demand that the applicant submit credible evidence that the legal requirement is met in order to prevent an illegal situation in which "wastes that would have to be disposed of as radioactive or mixed waste would be proposed for processing at a uranium mill primarily to be able to dispose of it in the tailings pile as 11e.(2) byproduct material." *Id.* Indeed, as discussed below, the NRC Guidance was written to prevent exactly the situation presented by IUSA's license amendment request in this matter.

To determine whether the proposed processing is primarily for the source-material content, the Guidance provides two tests: the "co-disposal test" and "licensee certification and justification test." IUSA is unable to satisfy either test.

#### *The Co-Disposal Test*

To satisfy the co-disposal test, the Guidance requires that the licensee demonstrate that "the feed material would be approved for disposal in the tailings impoundment under the Final Revised Guidance of Non-Atomic Energy Act of 1954, Section 11e.(2) Byproduct Material in the Tailings Impoundments." *Id.* If the material would be approved for direct disposal under that guidance, the NRC can assume that the licensee will process the proposed material primarily for its source-material content.

The Final Revised Guidance on Disposal of Non-Atomic Energy Act of 1954, Section 11e.(2) Byproduct Material in Tailings Impoundments requires that in reviewing licensee requests for the disposal of wastes with radiological characteristics comparable to 11e.(2) byproduct material, the NRC must consider several factors, including whether the disposition of the material would be approved by the "Regional Low-Level Waste Compact" in the originating and disposal states and whether the Department of Energy ("DOE") or the disposal state concur with the NRC's "findings" and commit to take title to the tailings impoundment after closure. 60 Fed. Reg.

49296.<sup>1</sup> Moreover, that guidance requires a license amendment to be "supported with a staff analysis addressing the issues discussed in th[e] guidance." *Id.* (Emphasis added.) IUSA has not addressed these requirements and no "staff analysis" has been prepared by the NRC.

Further, the NRC's guidance provides that "radioactive material not regulated under the AEA shall not be authorized for disposal in an 11e.(2) byproduct material impoundment." *Id.* at 49296. The NRC's approval of a prior license amendment request by IUSA for similar material from the Ashland 2 site indicated that that material was not regulated under the AEA. Although Envirocare disagrees with the NRC's analysis, the material that is the subject of this license amendment request, likewise, is "radioactive material not regulated under the AEA" and is not legally appropriate for direct disposal in IUSA's mill tailings impoundment under the NRC's guidance and regulations.

IUSA's request for a license amendment simply states – without any analysis or discussion of how IUSA has complied with the guidance requirements– that the Ashland 1 material meets the co-disposal test because the DOE has previously determined that the material meets the definition of 11e.(2) byproduct material under the Atomic Energy Act. (IUSA Amendment Request at p. 11.) Clearly, this statement alone does not satisfy the requirements of the co-disposal test. Moreover, no information or analysis of DOE's determination in this regard is available.

Significantly, the definition of 11e.(2) by-product material in Section 11 of the Atomic Energy Act relates only to its use in Sections 83 and 84 of the Act. Definitions do not create substantive law. They are merely devices to decide the content of other substantive provisions. If DOE were administering the FUSRAP program, arguably, it might be able to call the subject material 11e.(2) for the purpose of carrying out DOE functions under the Act – even though no DOE assigned provision of the Act uses the term "11e.(2) by-product material." However, under Title I of the Uranium Mill Tailings Radiation Control Act, this kind of material is "residual radioactive" material, and is not properly considered 11e.(2). Since this material is from the Army Corps of Engineers, more likely it should be treated as naturally occurring radioactive material ("NORM").

IUSA has not demonstrated that it has complied with the Guidance's requirement that, "the feed material would be approved for disposal in the tailings impoundment under the 'Final Revised Guidance on Disposal of Non-Atomic Energy Act of 1954, Section 11e.(2) Byproduct Material in Tailings Impoundments'" and its enumerated mandates. Finally, because the guidance itself requires the NRC to prepare a "staff analysis" and specifically address the issues discussed, the NRC cannot satisfy its guidance by relying solely on IUSA's representations.

---

<sup>1</sup> This requirement is due to the ultimate liability of DOE and/or the disposal state for this material.

### *Financial Justification Test*

Since IUSA has not satisfied the co-disposal test, IUSA must satisfy the "certification and justification test" which requires IUSA to (1) certify under oath "that the feed material is to be processed primarily for the recovery of uranium, and for no other primary purpose," and (2) justify the certification, with reasonable documentation, based on "financial considerations, the high uranium content of the feed material, or other grounds." 60 Fed. Reg. 49297. (Emphasis added.) Although IUSA has certified under oath that the Ashland 1 feed material is to be processed primarily for the recovery of uranium, other facts strongly suggest that disposal and not the recovery of uranium is the primary purpose behind IUSA's license amendment request.

In fact, IUSA represents that it will receive a substantial payment from the Army Corps of Engineers' prime contractor to accept the Ashland 1 material. This payment greatly exceeds the value of the uranium contained within the material.

IUSA attempts to support its claim that it is processing the Ashland 1 material for the "primary purpose" of "the recovery of uranium" by explaining that the payment it will receive is a "recycling fee" for extracting the uranium. In reality, this payment is a "disposal fee" that is to be paid to IUSA for the disposal of the Ashland 1 material, and it constitutes prima facie evidence that IUSA wants to perform "sham recycling." Further, according to the license amendment request, IUSA plans to retain all uranium produced from the material; it will not be returned to the generator. Certainly, from the Corps' perspective the primary reason this material would be shipped to IUSA is "disposal."

Envirocare believes that this is a clear case of a company seeking to do exactly what the NRC's Guidance is intended to avoid - "processing [of waste] at a uranium mill primarily to be able to dispose of it in the tailings pile as 11e.(2) byproduct material." *Id.*

Significantly, Earl Hoellen, President of IUSA, recently testified before the Senate Armed Services Committee that, processing and disposal of DOE materials as an alternate feed can be accomplished at the Mill at a cost that is substantially lower than other disposal options. Our experience has shown that doing so can result in cost savings anywhere from 20 to 80 percent compared to the historical costs of direct disposal.  
...we will take all you have got for \$100 a yard. Just send it on down, dump your trucks, we will take it right now...

(Oral Testimony of Earl Hoellen, Senate Armed Services Committee, September 3, 1998. Emphasis added.)

IUSA's license amendment request does not discuss in any detail the fee it will receive for the Ashland 1 waste. However, based on IUSA's prior experience with the Ashland 2 FUSRAP waste from the same site, Envirocare believes that IUSA will receive a fee of approximately \$100 per cubic yard for the 25,000 to 30,000 cubic yards of the Ashland 1 waste that IUSA estimates would be shipped to its mill. Thus, Envirocare believes that the total fee IUSA hopes to receive for accepting this material is approximately \$2.5 to \$3.0 million.

IUSA estimates that the Ashland 1 material contains an average of approximately .06 percent uranium. Even accepting IUSA's figures as accurate, IUSA admits that this percentage "is on the low end of the scale to justify hardrock mining and conventional milling today." (IUSA's Amendment Request at p. 9.) Moreover, Earl Hoellen recently testified under oath that from a variable cost perspective, it does not make economic sense to process uranium until the material contains an average of .15 to .2 percent uranium. (Deposition of Earl Hoellen, *Waste Control Specialists v. Envirocare of Texas*, at 147:20-148:25. Attached hereto as Ex. A.)

Assuming for the sake of argument that the 25,000 to 30,000 cubic yards of Ashland 1 waste has an average content of .06 percent uranium as asserted by IUSA, at a current uranium exchange value of approximately \$10.00 per pound, and assuming that IUSA recovers 100 percent of the available uranium and incurs absolutely no costs for the milling and extraction of the uranium, the total value of the uranium in the Ashland 1 waste is no more than about \$500,000. Thus, the fee IUSA will receive to dispose of this material is approximately \$2.0 to 2.5 million more than the value of the uranium in the material using the most beneficial analysis possible to IUSA.

More realistically, however, because the average uranium content of this material is closer to .04 percent, and because IUSA can not recover 100 percent of the uranium nor mill the material at no cost, it is likely that IUSA would make little or no profit on extracting uranium from this material. Thus, the real benefit to IUSA for receiving this material is the "fee" that will be paid on behalf on the Corps.

Based on these economic considerations alone, it is abundantly clear that, contrary to both IUSA's representations and the NRC's Guidance, the Ashland 1 material is being proposed to be processed by IUSA for the purpose of allowing IUSA to dispose of the material and not "primarily for the recovery of uranium." 60 Fed. Reg. 49297.

IUSA suggests that "financial considerations" support its assertion that milling the Ashland 1 material for its source-material content "provides a net benefit to IUSA." (IUSA Amendment Request, at p. 9.) The Guidance, however, requires IUSA to justify "with reasonable documentation" its certification. 60 Fed. Reg. 49297. Such

justification has not been provided. Indeed, IUSA's claim in this regard is based wholly on speculation and unfounded assertions. The NRC must ensure that the processing of the Ashland 1 material is "primarily for the recovery of uranium and no other primary purpose." *Id.* Accordingly, the NRC should require IUSA to provide detailed information as to its receipt of a disposal fee and detailed calculations with supporting documentation to substantiate its claim that it satisfies the terms of the Guidance.

The NRC's failure to require detailed characterization data, cost and fee data and supporting documentation and perform a meticulous review of such information will send a clear message that the NRC staff's administration of a Commission approved policy (the Guidance) is itself a sham.

In sum, IUSA's request for an amendment to its Source Material License SUA-1358 does not satisfy the terms of the NRC's Final Position and Guidance on the Use of Uranium Mill Feed Material Other Than Natural Ores. IUSA has not satisfied the requirement that the material is being processed primarily for its source-material content. Accordingly, IUSA's license amendment request should be rejected by the NRC.

Please do not hesitate to contact me if you have any questions. Thank you.

Very truly yours,

  
Kenneth Alkema

Enclosures

cc: Chairman Shirley Jackson w/enclosures  
Commissioner Ed McGaffigan w/enclosures  
Karen Cyr, General Counsel w/enclosures  
Carl Paperiello, Director ONMSS w/enclosures  
Diane Nielsen, Director DEQ, State of Utah w/enclosures  
James R. Park, Uranium Recovery Branch

Hoellen

Page 145

1 A. -- if this is true, this is the amount of  
2 uranium that one would extract. The value of that  
3 uranium at the market price today is 533 per cubic yard,  
4 et cetera. And then they go about it and talk about the  
5 value that's being paid overall.

6 From that perspective, I won't quarrel with  
7 what they're saying in that regard.

8 Q. All right. Let me go a little further. And I  
9 appreciate your answer. Look on the third page there  
10 that has the little chart in the middle of it.

11 A. Uh-huh.

12 Q. Right below that, he says, "Of the data  
13 presented in the table above, as I have mentioned, the  
14 best estimate of material destined for the White Mesa  
15 Uranium Mill is provided in the second row. This  
16 material has an average U238 weight percent of 0.017."

17 Do you disagree with that?

18 A. Yes.

19 Q. Okay. Do you know what -- what would be a  
20 closer figure than the 0.017?

21 A. Yes. Again, as we've indicated, based on  
22 our information, it was 0.05. And, in fact -- and  
23 I think -- I think it appears in -- it might appear  
24 in here.

25 I know that somewhere -- I don't know if it

Page 146

1 was in Utah's petition or -- and I don't think it was  
2 in here.

3 But somewhere along the line, I know that  
4 there was data presented where -- what was it? It was  
5 the initials -- there was a misinterpretation of the  
6 initials, ND -- in any event, Envirocare read the data  
7 and made an assumption that -- that this meant zero as  
8 opposed to it was not determined; therefore, factored it  
9 in, lowering the average grade overall. And I do not  
10 remember where that was.

11 Q. I tell you what -- what that was, it's the  
12 difference between what ND means. It's -- it's used  
13 two different ways. Nondetermined is one and another  
14 one was --

15 MR. MINTON: What was the other one?

16 MR. THOMPSON: Not detectable.

17 MR. MINTON: That's right, not detectable. Is  
18 that right? Which is the proper --

19 MR. THOMPSON: It doesn't make any difference  
20 really.

21 MR. MINTON: Okay.

22 MR. THOMPSON: I mean, you don't -- you don't  
23 get an average out of the sample that you don't have  
24 anything --

25 MR. MINTON: Right.

Patterson Reporting &amp; Video

EXHIBIT

A

1 MR. THOMPSON -- when you're taking random  
2 samples like that. Statistically that's the point we  
3 were making. It wouldn't hold up, this analysis under  
4 statistically.

5 MR. MINTON: Right.

6 Q. (BY MR. MINTON) This -- the bottom paragraph  
7 on page 3, which is talking about the price of  
8 yellowcake --

9 A. Uh-huh, yes.

10 Q. -- do you know what the price for that is,  
11 say, today? I mean, approximately, or last week,  
12 anytime that -- the last time you --

13 A. The current quoted uranium exchange value this  
14 past Monday, I believe, was also 10.50 per pound.

15 Q. I'm sorry, I was listening to my cocounsel  
16 when you gave me that figure and I apologize.

17 A. I believe -- I believe the uranium exchange  
18 weekly price just published this past Monday was also  
19 10.50 per pound.

20 Q. Okay. At 0.05; does that make it -- I use the  
21 word economically viable, where you would be doing it  
22 for the primary purpose of getting the ore out under  
23 the limited definition we're giving that. Do you  
24 understand me?

25 A. Well, what you're saying is is the value -- is

Page 148

1 the market price applied to the value of the uranium  
2 extracted per ton of ore in excess of the amount of  
3 money required to process that ton of ore strictly from  
4 a variable cost perspective --

5 Q. Yes, sir.

6 A. -- and the answer is no.

7 Q. Okay. So it's -- 0.05 won't get it either,  
8 what will, in your judgment? What --

9 MR. CARTER: 0.05 percent.

10 THE DEPONENT: which is, basically, one pound  
11 per ton. So out of a ton of ore -- out of a ton of  
12 material processed, you're getting ten bucks.

13 Q. (BY MR. MINTON) Right. And that won't get  
14 you there?

15 A. Right.

16 Q. What -- what percentage would it get there?

17 This is just me curious. Maybe nobody will ever read  
18 this part, but I'm just curious as to what you -- you,  
19 obviously, are an expert in this area, what -- from the  
20 finances, where would you get there, at what percentage?

21 A. I would say -- I would say, again, from the  
22 perspective of strictly variable cost aspects, it would  
23 be somewhere along the lines of .15 to .2, somewhere  
24 in there --

25 Q. Okay. All right.

Page 145 - Page 148