



40-8681

**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

December 05, 1997

International Uranium (USA) Corporation  
ATTN: Ms. Michelle Rehmann,  
Environmental Manager  
Independence Plaza, Suite 950  
1050 Seventeenth Street  
Denver, Colorado 80265

**SUBJECT: NEED FOR ADDITIONAL INFORMATION TO COMPLETE THE REVIEW OF THE  
WHITE MESA RECLAMATION PLAN**

Dear Ms. Rehmann:

By letter dated February 28, 1997, International Uranium (USA) Corporation (IUSA) submitted a plan for the reclamation of the tailings impoundment at the White Mesa site. The U.S. Nuclear Regulatory Commission staff, working with its contractor, the Center for Nuclear Waste Regulatory Analyses (CNWRA), is in the process of reviewing the reclamation plan. A request for additional information (RAI) was forwarded to IUSA from the NRC staff by letter dated August 19, 1997. Please find enclosed an additional RAI, which was discussed with IUSA and its contractors in a telephone conference call on November 12, 1997.

By telephone call on October 9, 1997, NRC accepted IUSA's request that it be granted an additional 60 days to compose responses to the initial RAI. NRC is expecting to receive IUSA's responses to both RAIs by December 19, 1997.

The purpose of this letter is to inform you that, if NRC does not receive IUSA's response to its RAIs by December 31, 1997, it will be forced to terminate the review of the White Mesa reclamation plan. Submittal of the necessary information by December 31, 1997, is essential, because the CNWRA contract under which this work is being completed will terminate on March 31, 1998. Current funding at the CNWRA to complete the evaluation of the reclamation plan will be available only through this March timeframe. Although the staff will continue to use the CNWRA, the new work does not include resources to complete the review of reclamation plans covered by the current contract. This is because the new funding for the CNWRA is already committed to work on reclamation plans and submittals from other licensees.

Therefore, unless the necessary response to the RAIs is received by December 31, 1997, NRC will deny IUSA's application for the reclamation plan under the provisions of 10 CFR 2.108. In addition, because there would not be an NRC-accepted reclamation plan for the White Mesa site, NRC would require that IUSA provide, by January 31, 1998, a justification for continued operation (JCO), including a discussion as to why IUSA believes that the site complies with all the applicable requirements found in 10 CFR Part 40, Appendix A. Based on the information provided in the JCO, NRC would decide if operation at the site is justified, given the lack of a final reclamation plan.

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M. Rehmann

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If you have any questions concerning this letter or the enclosure, please contact Mr. James Park, the NRC Project Manager for the White Mesa site. Mr. Park can be reached at (301) 415-6699.

Sincerely,

Original Signed By

Joseph J. Holonich, Chief  
Uranium Recovery Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 40-8681  
License No. SUA-1358

Enclosure: As stated

cc: H. Roberts, IUSA

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**REQUEST FOR ADDITIONAL INFORMATION**  
**Detailed Site Reclamation Plan for IUSA's White Mesa Uranium Mill**

International Uranium (USA) Corporation (IUSA) should provide the following to address additional NRC staff-identified deficiencies in "Reclamation Plan: White Mesa Mill, Blanding, Utah" (Rev. 1.0; dated February 1997), as submitted by letter dated February 28, 1997:

1. Technical justification that the frequencies of quality control (QC) tests proposed in the reclamation plan are adequate for controlling the quality of construction of the final disposal cell.

The NRC "Staff Technical Position (STP) on Testing and Inspection Plans During Construction of DOE's Remedial Action at Inactive Uranium Mill Tailing Sites" (NRC, 1989) provides recommended frequencies for QC tests for various parameters during the construction of tailings disposal cells. NRC has found the frequencies recommended in the STP acceptable for maintaining the quality of the construction activities for both Title I and Title II sites. In some cases, the staff recommends in the STP conducting the QC tests more frequently than IUSA has proposed in the reclamation plan.

The recommended test frequencies for specific QC tests are provided in the following table.

Test	Recommendations for Testing Frequency
Field Density and Moisture Tests	Minimum of one test per 1,000 yd <sup>3</sup> of contaminated material.  Minimum of one test per 500 yd <sup>3</sup> of other compacted material including seepage barrier and/or radon barrier earth cover.  Minimum of two tests for each day that an appreciable amount of fill is placed (in excess of 150 yd <sup>3</sup> ).  Minimum of one test per lift and at least one test for every full shift of compaction operations.
Compaction Tests	One point Proctor test at a frequency of one test for every five field density tests.  Approximately one laboratory compaction curve based on complete Proctor tests for every 10 or 15 field tests, depending on the variability of materials.

Test	Recommendations for Testing Frequency
Gradation and Classification Tests	<p>Minimum of one test per 1,000 yd<sup>3</sup> of radon/seepage barrier material, and one test per 2,000 yd<sup>3</sup> of other engineered soil fill material.</p> <p>For all materials other than random fill and contaminated materials, at least one gradation test should be run for each day of significant material placement (in excess of 150 yd<sup>3</sup>).</p>
Atterberg Limit Tests	At least one test for each day of significant cohesive cover or liner material placement (in excess of 150 yd <sup>3</sup> ).
Rock Durability Tests	For any type of riprap where the volume is greater than 30,000 yd <sup>3</sup> , a test series should be performed for each additional 10,000 yd <sup>3</sup> of riprap delivered.

IUSA should adopt the frequencies recommended in the STP, or alternately, present a technical justification that the frequencies of QC tests proposed in the reclamation plan are adequate for controlling the quality of construction of the final disposal cell.

**REFERENCE:** NRC, 1989, "Staff Technical Position on Testing and Inspection Plans During Construction of DOE's Remedial Action at Inactive Uranium Mill Tailing Sites," Revision 2, January 1989.

2. Additional Information addressing details of disposal cell construction. This information should include:
  - Methods, procedures, and requirements for excavating, hauling, stockpiling, and placing contaminated and non-contaminated materials and other disposal cell materials; and
  - Material placement and compaction procedures (e.g., lift height, compactive effort) to achieve the desired moisture content, placement density and permeability.