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VIA FACSIMILE AND OVERNIGHT DELIVERY

Mr. Thomas H. Essig, Chief
Uranium Recovery and Low-Level Waste Branch
Division of Waste Management
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
2 White Flint North
11545 Rockville Pike
Rockville, MD 20852-2738

Re: Licensee Observations Regarding Comments from the Utah Department of Environmental Quality Division of Radiation Control Dated November 29, 1999 on the Environmental Assessment for the White Mesa Uranium Mill Reclamation Plan

Dear Mr. Essig:

On November 29, 1999, the Utah Department of Environmental Quality ("UDEQ") Division of Radiation Control ("DRC") submitted comments to your office on the Draft Environmental Assessment ("EA") for the White Mesa Uranium Mill ("The Mill") Reclamation Plan. International Uranium (USA) Corporation ("IUSA") wishes to submit the following observations and points of clarification regarding UDEQ's comments. For ease of reference, IUSA's observations are ordered and numbered to correspond to UDEQ's comments. A copy of UDEQ's comments is also attached.

1. FUSRAP MATERIAL COMPOSITION

UDEQ objects to the NRC making the statement in the EA that FUSRAP materials accepted at the Mill have similar chemical, physical and radiological composition to conventional mill tailings. This description of the composition of FUSRAP materials is important in the context of determining design parameters for tailings cell closure design. The statement in question is accurate. We also understand that NRC has come to the same conclusion, as evidenced by the fact that NRC has made similar statements in other environmental assessments relating to the processing of such materials at the Mill. Appeals relating to other issues relative to FUSRAP recycling efforts at the Mill have no

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relevance and would not change the facts regarding the chemical, physical, and radiological composition of the materials. Therefore, IUSA believes that NRC's statement regarding such composition is appropriate and should remain in the EA.

2. CELL 1 USE AS AN EVAPORATIVE CELL

UDEQ requests that Cell 1 be described as containing process wastes instead of as "evaporative". In accordance with Mill design and operations, Cell 1 is an evaporative cell, which is also used to *temporarily* store solutions which are reused in the process circuits of the Mill. As a nondischarging facility, the Mill must evaporate all of the liquids utilized during processing. As the NRC is aware, this evaporation takes place in two areas:

- Cell 1, which is used for solutions only; and
- Cell 3, in which tailings and solutions exist.

The original engineering design submitted to the NRC (and available in public documents to the UDEQ) indicated a net water gain into the cells would occur during mill operations. To minimize the net water gain, solutions are recycled from the active tailings cells to the maximum extent possible. Solutions from Cells 1 and 3 are brought back to the CCD circuit where metallurgical benefit can be realized. Also, to minimize net water gain, a specified evaporative surface area must be maintained at all times.

The entire surface area of Cell 1, together with the liquid surface area of Cell 3, must be sufficient to meet this specified evaporative area in order to achieve evaporation of the total liquid effluent, with recycling of fluids as described above. Therefore, it is clear that Cell 1 is indeed an evaporative cell. This is because Cell 1 is not designed to permanently contain process waste or tailings, but rather to temporarily store recyclable solutions and to provide capacity for evaporation. This, in the milling industry, is by definition an "evaporation cell". Designation of Cell 1 as an evaporation cell for purposes of the Reclamation Plan is important because Cell 1 will not be reclaimed in the same manner as cells containing tailings. The definition of this cell should remain as stated by the NRC in the EA.

3. GROUNDWATER CONTAMINATION WHICH IS NOT DOCUMENTED AS ATTRIBUTABLE TO SITE OPERATIONS

UDEQ comments that it believes reclamation should include remediation of groundwater contamination in areas that could potentially be affected by tailings impoundments. We believe that NRC has properly addressed this issue in the third paragraph of Section 4.0 of the EA where it states:

Based on the groundwater detection monitoring program, no groundwater contamination from the tailings cells has occurred. Therefore, no

groundwater corrective action measures are considered in the reclamation plan. If groundwater contamination occurs at some time in the future from site activities, it will be addressed by the NRC under 10 CFR Part 40 Appendix A.

We agree with NRC that nearly 20 years of groundwater monitoring data collected at the Mill and reported in semi-annual reports to the NRC have demonstrated that groundwater is not affected by Mill operations. It would not be reasonable for the NRC to require groundwater remediation without documented contamination attributable to site operations, and IUSA does not agree that it is necessary to state such a requirement absent documented evidence of the need for groundwater remediation. As NRC and UDEQ are aware, IUSA is currently conducting a vigorous examination of the potential source of chloroform found in one cross-gradient well (well MW-4). Groundwater quality experts reviewing this matter on behalf of IUSA have already concluded, however, that the chloroform found in MW-4 could not have come from the tailings impoundments. Therefore, again, although it is important to IUSA to determine the cause of the chloroform present in MW-4 and to evaluate the appropriate course of action based on the cause of this chloroform presence, IUSA agrees that NRC has properly identified the scope of reclamation activities in the EA, with the potential for groundwater remediation being addressed separately.

4. INDICATOR PARAMETERS USED FOR GROUNDWATER MONITORING

UDEQ comments that selected indicator parameters including an anion, a cation, a metal, and a radionuclide, are not regarded by UDEQ to be good indicator parameters to detect potential groundwater impact. These are the parameters approved by NRC in the Mill's 1997 Point of Compliance program as indicator parameters for the Mill. It is therefore totally appropriate for NRC to conclude in the EA that these parameters are good parameters to detect potential groundwater impacts. IUSA would also note that UDEQ, although provided with copies of the POC proposal, made no such comment about these parameters at the time. In the opinion of IUSA and the groundwater quality experts involved in selection of these parameters, the selected parameters are indeed good indicator parameters for detection of potential groundwater impact. These parameters were selected based on consideration of site-specific factors such as the naturally high concentration of certain constituents (which would rule them out as reliable indicator parameters), as detailed in the POC report.

UDEQ also suggests that the recent detection of chloroform in MW-4 supports the view that the POC indicator parameters are not good parameters to detect potential groundwater impacts. As stated above, groundwater quality experts reviewing this matter on behalf of IUSA have already presented their conclusions that the chloroform could not have come from the tailings impoundments. Therefore, we disagree with UDEQ's claim that the value of these parameters as indicator parameters is diminished by the fact that

chloroform from an unknown source area was detected at one cross-gradient well. There is simply no relationship between the usefulness of the indicator parameters for detection of potential releases from the tailings cells and the presence of a single organic, which did not come from the tailings cells, in a cross gradient well.

5. TRAVEL TIMES AND MONITORING DATA DEMONSTRATE THAT NO GROUNDWATER CONTAMINATION HAS OCCURRED

UDEQ claims, in this comment, that because the natural hydrogeology of the Mill site significantly retards potential infiltration of any potential tailing cell liquids to groundwater, it is not valid for NRC to state that no groundwater contamination from the tailings cells has occurred. IUSA agrees with NRC's statement in the EA. Monitoring has not detected any groundwater contamination from the tailings cells, and if any such contaminant occurs in the future, it will be addressed by the NRC under 10 CFR Part 40 Appendix A. This conclusion should not be affected by the fact that natural hydrogeology at the Mill site would significantly retard any infiltration of potential tailings cell liquids to groundwater.

IUSA would like to point out that, with regard to the studies cited by UDEQ, only one set of calculations is relevant to potential travel times from Mill tailings cells under actual operational conditions, and those are the calculations performed by Knight Piésold (specifically to help address UDEQ questions) in 1998. The 1992 calculations describing travel times ranging from 29 to 57 years performed by Umetco were based on unrealistic assumptions regarding the hypothetical, assumed presence of nonexistent fractures, and those performed by Titan were developed to assess potential for infiltration under special conditions assuming full saturation. IUSA's approach in modeling potential flows has been to model actual conditions and not to elevate the hypothetical to reality. Therefore, hypothetical flow rates based on imaginary fractures are not considered in modeling actual conditions, because no significant fractures or joints have been documented in the subsurface at the Mill in the approximately 45 wells and borings at the site. Thus, as neither of these sets of calculation were performed to specifically assess travel times to groundwater based on actual site conditions, IUSA commissioned an independent analysis of tailings cell construction and QA/QC, as well as calculation of travel times, by Knight Piésold.

IUSA agrees with Utah's statement that under normal operating conditions, it is expected that it would take approximately 1,300 years for tailings cell liquid to reach the monitoring wells in the perched zone, if the tailings cells are leaking. However, in spite of our confidence that the Mill is well-sited hydrogeologically and that the engineered and natural systems at the Mill are highly protective of all groundwater below the Mill, including the perched zone of poor-quality groundwater, IUSA conducts NRC-approved POC groundwater monitoring, which has demonstrated that, in almost 20 years, the Mill tailings impoundments have resulted in no releases to groundwater.

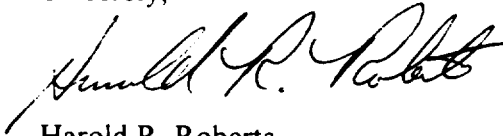
It is also important to note that IUSA disagrees with UDEQ's suggestion that "groundwater contamination has been recently documented" at the Mill site. This statement, immediately following UDEQ's comments regarding potential travel times for potential tailings cell releases may be interpreted to suggest that the chloroform contamination in MW-4 is somehow related to the tailings cells. As stated above, and as UDEQ is aware, groundwater quality experts reviewing this matter on behalf of IUSA have already presented their conclusions that the chloroform could not have come from the tailings impoundments. UDEQ's references to the contrary are not based on fact, and they inaccurately suggest that the tailings cells are the source of the chloroform contamination. There is no evidence to suggest that this is the case, and the data prove otherwise.

6. GROUNDWATER DISCHARGE PERMIT AND UDEQ INTEREST IN A RECLAMATION AND POST-CLOSURE MONITORING PLAN

UDEQ asks that NRC acknowledge in the EA that the tailings impoundments at the Mill will be regulated by a State Groundwater Discharge Permit, which will also include a Reclamation and Post-Closure Plan. These issues are currently under negotiation between IUSA and UDEQ, and IUSA has not agreed to any particular form of Groundwater Discharge Permit, nor to a State Reclamation and Post-Closure Plan. In fact, IUSA has notified UDEQ that reclamation and post-closure issues are under NRC and not State jurisdiction. It would, therefore, be inappropriate at this time to reference any State Groundwater Discharge Permit and/or State Reclamation and Post-Closure Plan in the current EA for the NRC-approved Reclamation Plan.

If you have any questions or concerns, please call me at (303) 389-4160.

Sincerely,



Harold R. Roberts
Executive Vice President

cc: William von Till, U.S. NRC
William J. Sinclair, UDEQ
David C. Frydenlund
Michelle R. Rehmann