

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:)

INTERNATIONAL URANIUM)
(USA) CORPORATION)

1050 Seventeenth Street)

Suite 950)

Denver, CO 80265)
_____)

Docket No. 40-8681-MLA-1

ASLBP No. 98-743-03-MLA

Re: Source Material License Amendment

AFFIDAVIT OF MICHELLE R. REHMANN

I, MICHELLE R. REHMANN, being first duly sworn upon oath, depose and state as follows:

1. I am the corporate Environmental Manager for International Uranium (USA) Corporation ("IUSA"), having been hired to that position upon the transfer of the assets of Energy Fuels Nuclear, Inc. on May 9, 1997. I held the same position with the predecessor company, Energy Fuels Nuclear, Inc., commencing in 1994.

2. I earned a B.S. in hydrology from the University of Arizona, College of Engineering and Mines in 1989.

3. Among my responsibilities with IUSA is management of environmental licensing and compliance activities, including application for amendments to the Company's NRC license for the White Mesa Uranium Mill (the "Mill").

4. In addition to my corporate responsibilities with IUSA, I engage in professional activities relevant to application of hydrologic principles to facilities involved in management of radioactive waste:

- (a) Serve as an invited lecturer on hydrologic aspects of radioactive waste management for the Hydrology Proseminar Course at the University of Arizona, College of Engineering and Mines, Department of Hydrology and Water Resources
- (b) Organize and present sessions on the hydrologic, hydrogeologic, and geochemical aspects of radioactive waste management for Waste Management Symposia, Inc.
- (c) Serve as a Director of Waste Management Symposia, Inc., and the American Nuclear Society, and an Executive Committee Member of the Fuel Cycle and Waste Management Division of the American Nuclear Society.

5. The speculations contained in the affidavit of Loren Morton dated August 18, 1998, regarding hypothetical potential for the Mill tailings cells to impact ground water, are based on incomplete information about the tailings cell construction, operation, and hydrologic

modeling. Morton also misinterprets relevant information, in particular the infiltration modeling analyses detailed in the Hydrogeologic Evaluation of the White Mesa Uranium Mill issued by Titan Engineering ("1994 Titan Report").

6. Hydrogeologic features and setting were key siting criteria evaluated in selection of the Mill location. The tailings cells at the Mill are constructed within the unsaturated Dakota Sandstone. Directly below the Dakota Sandstone is the Burro Canyon Formation, another sandstone unit, at depths of approximately 90 to 150 feet beneath the cells. The Burro Canyon Formation hosts a thin, perched zone of groundwater. Saturation in this zone ceases or is marginal along the western and southern section of the Mill property. Underlying this perched zone of groundwater is an aquitard, which isolates the perched water in the Burro Canyon formation from the regional aquifer, the Entrada/Navajo Sandstones. The total thickness of the aquitard, consisting of mudstones, claystones, and shales, is on the order of 800 to 1,200 feet.

7. IUSA has and continues to rely on the judgment of professional engineers registered in the State of Utah to ensure that its tailings impoundments are designed, constructed, monitored, and maintained in accordance with NRC regulations for such facilities. Construction of the Tailings Cell #2 commenced in 1979 and was completed in 1980. Cells #1, 3, and 4a were constructed in 1981, 1983, and 1989, respectively. To date, Cell #4 has not been used for tailings disposal and will not be used for Ashland 2 tailings. Cell #3 will be used for Ashland 2 tailings. Cell #3 has not experienced any leakage or release throughout its operations.

8. The tailings cells at the Mill are lined, and contain leak detection systems and monitoring wells screened in the nearest groundwater to the cells. Data on groundwater quality

have been collected at the Mill from a total of 23 wells drilled since 1979. The Mill's groundwater monitoring program is engineered to provide a timely detection of potential releases to the Entrada/Navajo Sandstones, by monitoring in wells completed above this hydrogeologic unit, in the perched groundwater. Although the perched zone used for early detection monitoring transmits insufficient water to be defined as an aquifer, this perched zone, rather than the Entrada/Navajo aquifer, is used for very early detection of any potential releases from the tailings disposal cells at the Mill. In other words, any release detected in this zone is separated from the Entrada/Navajo aquifer by approximately 1,200 feet of very low permeability rock. Over 18 years of data collected quarterly from the wells installed in this zone and reported to the NRC in semi-annual reports, which are available in the NRC Public Document Room, have shown that:

- (a) There have been no increasing trends in concentrations of constituents that would indicate seepage from the existing disposal cells;
- (b) The facility has operated for a period of nearly 19 years without impacts to groundwater.

Continued monitoring at the Mill will be performed to verify that past, current, and future operations will not impact groundwater.

9. The tailings impoundments at the Mill have shown no evidence of leakage. The data supporting this are available in the semi-annual effluent reports filed by IUSA with the NRC. IUSA has also provided the Utah Department of Environmental Quality with copies of several recent semi-annual effluent reports that contain, among other data for the site, the results

of quarterly groundwater monitoring. These data show that the groundwater monitored in the perched zone has not been affected by the Mill impoundments.

10. If at any time the monitoring indicated a potential release, based on monitoring of conservative (that is, highly mobile) parameters used as indicator parameters, then IUSA would expand the list of monitoring parameters in accordance with NRC requirements. However, it is not necessary to monitor for an expanded list when continuous monitoring of parameters which are highly mobile, are known to exist in the tailings, and are not present in high levels in the existing groundwater, shows that the Mill is not causing any change in the existing water quality. The relatively benign tailings from processing of the Ashland 2 materials will pose no greater hazard to the well-protected groundwater system at the Mill than does the existing operation.

11. As demonstrated by the 1994 Titan Report, there is no cause to believe that the Mill will discharge any pollutant into the perched zone. And even if leakage were to occur, it would take a pollutant at least 150 years to reach the perched zone. Given that the groundwater flow direction in the perched zone is to the southwest, there is also no reason to believe that even after those 150 years the pollutants would discharge to canyons to the west of the Mill where contact springs have been observed. This is due to the fact that the groundwater in the perched zone flows in a south to southwesterly direction, whereas the perched zone seeps into the Canyon in the westerly direction from the Mill. Nevertheless, the fact that such seepage can be observed is clear evidence of the competence of the rock strata underlying the formation in which the perched groundwater occurs, and the fact that this underlying unit prevents downward migration of groundwater to the regional aquifer

12. The current amendment to IUSA's license does not pose any greater potential harm to groundwater than those posed by preexisting milling activities which to date have had no impact, and are expected to have none. Processing of the Ashland 2 materials and subsequent placement of the resulting tailings in the Mill's tailings impoundments will result in less than one (1) percent increase in volume of the tailings impoundment.

13. The U.S. Army Corps of Engineers ("USACE") remediation contractor, ICF Kaiser Engineers ("ICFKE"), has agreed to IUSA's contract condition which requires that no listed hazardous waste may be delivered to IUSA, and that if IUSA, based on our on-site sampling, determines that any of the material contains a listed hazardous waste, such material must be removed from the Mill by ICFKE, at its own expense.

14. In addition, ICFKE and IUSA are conducting confirmatory sampling to ensure that the Ashland 2 materials are not significantly different from the characterization presented in the RI.

(a) ICFKE is performing three types of excavation sampling: (1) pre-excavation characterization, consisting of 15 samples of unexcavated materials, has been conducted for a full suite of parameters with the addition of "total" analyses (as opposed to TCLP analyses only) for volatile organic compounds ("VOCs") and semi-volatile organic compounds ("SVOCs"), using standard grab sampling techniques for such analyses; (2) visual inspection and organic vapor analysis of material as it is excavated to determine whether any materials appear to contain organic constituents; and (3) testing of excavated materials at one sample per 500 CY for VOC and SVOC.

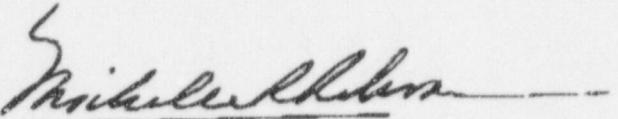
(b) IUSA is conducting sampling of the material, in accordance with our Sampling and Analysis Plan ("SAP") as it is delivered to the Mill, at a rate of one sample per 100 CY, up to the first 1,000 CY; then, one sample per 500 CY, up to the entire material volume delivered. We understand that IUSA's on-site confirmatory sampling program for VOCs and SVOCs is substantially the same as would be applied for any 11e.(2) railings site in taking this material.

15. The Mill is in full compliance with all applicable federal laws and regulations. The NRC conducted an inspection on June 9-11, 1998, and in its inspection report dated July 9, 1998, confirmed that the operations were being conducted in full compliance with license conditions. No violations were discovered.

FURTHER AFFIANT SAYETH NOT.

I swear under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

DATED this 24 day of August 1998.


Michelle R. Rehmann

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED
USNRC

'98 AUG 25 P5:20

ATOMIC SAFETY AND LICENSING BOARD PANEL

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

IN THE MATTER OF:

INTERNATIONAL URANIUM
CORPORATION
(Source Material License Amendment)

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* Docket No. 40-8681-MLA-4
* ASLBP No. 98-748-03-MLA
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CERTIFICATE OF SERVICE

I hereby certify that I caused true and complete copies of the foregoing IUSA's Response to State of Utah's Amended Request for Hearing and Petition for Leave to Intervene in the above-captioned matter to be served, via facsimile and by Certified Mail, Return Receipt Requested, on this 25th day of August, 1998 to:

Mitzi A. Young, Esq.
U.S. Nuclear Regulatory Commission
Office of the General Counsel
11555 Rockville Pike
Rockville, MD 20852

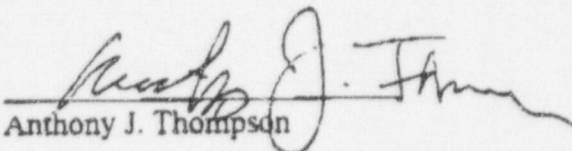
Mr. John C. Hoyle
Office of the Secretary
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Anthony J. Thompson

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