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UNC MINING AND MILLING



Division of United Nuclear Corporation
A **UNC RESOURCES** Company

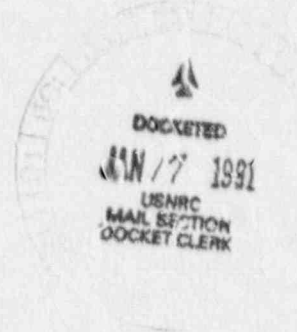
New Mexico Operations
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RETURN ORIGINAL TO PDR, HQ.

UNC/ASHQ-91-406M
January 14, 1991

Mr. Ramon Hall, Director
U. S. Nuclear Regulatory Commission
Uranium Recovery Field Office
P. O. Box 25325
Denver, CO 80225



Dear Mr. Hall:

United Nuclear Corporation hereby requests that our license SUA-1475 be amended to allow the company to dispose of certain by-product materials, described in more detail below, in our Church Rock tailings facility. Said materials were produced at a sister facility located in Mulberry, Florida. The facility, Uranium Recovery Corp. (URC), currently holds a radioactive materials license from the Florida Department of Health & Rehabilitative Services (License No. 1059-1). Florida is an Agreement State Licensor pursuant to the Atomic Energy Act.

The URC facility, which operated in the early 1970's and 80's, extracted uranium from "ore" which came from the phosphate fertilizer industry. The uranium extraction process utilized at Mulberry was very similar to the solvent extraction portion of the process found at a conventional uranium mill and produced a by-product waste which was disposed of in a small 1/2 acre pond.

Your staff may well be familiar with the operation of this type of facility as many of the phosphogypsum operations have similar uranium extraction processes located at their plants. Each of these operations also have radioactive materials licenses from the Florida DHRS and typically dispose of their by-product wastes in the gypsum pile along with the other wastes they produce.

The Mulberry facility is unique in that URC operated independently of the fertilizer plant. Pregnant uranium-laden liquor was trucked from the fertilizer plant to URC for processing. The barren liquor was transported back to the fertilizer plant for disposal after the uranium was removed. However, a small waste retention pond was utilized at the Mulberry plant.

The facility is presently undergoing decommissioning. Most of the by-product waste generated at Mulberry such as equipment and foundations have been decontaminated or otherwise disposed of. However, there remain approximately 91 cubic yards of uranium contaminated soil excavated from the waste pond yet to be disposed of. Originally we hoped to dispose of this material at one of the gypsum piles in the area. However, the required approvals are unlikely to be obtained in sufficient time to allow us to complete decommissioning in a timely manner.

DESIGNATED ORIGINAL

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In researching alternative disposal techniques we have determined that this soil is very compatible with our tailings at Church Rock. We believe that a viable disposal alternative is to deposit this material in the Church Rock tailings facility.

Radiologic analysis of composite samples indicate that the waste contains the following concentrations of regulated material;


U-238	389.0 pCi/g
U-235	3.0 "
Th-230	2.0 "
Ra-228	0.8 "
Ra-226	46.2 "
Po-210	1.8 "
Pb-210	4.3 "

We believe that because of the similarity of this soil to our tailings material and the similarity of the uranium extraction process employed at the URC facility to the milling process, disposal of this soil at Church Rock will have no detrimental environmental impact. We propose to dispose of it in the south cell of our tailings impoundment prior to commencing this year's regrading and cover placement activities. All of the material would thus become covered along with the slimes tailings with at least 7 feet of coarse tailings as described in our tailings reclamation plan. As such the addition of this material would not result in any increase in radon emanation.

Further, the Uranium Mill Tailings Radiation Control Act supports a finding that the NRC has the appropriate jurisdiction to grant our request. That is, we believe that NRC has the authority to license the disposal of by-product produced from the URC facility inasmuch as it is clearly a uranium extraction facility. The "ore" processed in this case simply happens to be a bleedstream from the fertilizer industry.

Your consideration and approval at your earliest convenience would be greatly appreciated as we are scheduling shutdown of the URC facility by March 1, 1991. In addition, we must schedule disposal of this waste so as to not impact the work schedule for placement of the cover of the south cell at the Church Rock site.

Sincerely,



Juan R. Velasquez
President

JPV:jlt

encl: license application fee