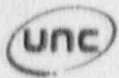


UNITED NUCLEAR CORPORATION

Vol I & II



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40-8907

0400890701700

December 4, 1990
UNC/ASHQ-90-394M

RETURN ORIGINAL TO PDR, HQ.

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



Re: URFO:DLJ
Docket No. 40-8907
040089071700
Response to Comments

Dear Mr. Hall:

United Nuclear Corporation submits the enclosed document in response to Comments No. 7 & 8 contained in your letter of June 29, 1990 and comments No. 9(b) and (c) contained in your letter of August 16, 1990. Included in our response are answers to several additional concerns raised during our meetings.

You will recall that we have previously voiced significant concern regarding the impact of NRC's comments upon our reclamation plan for the Church Rock site, particularly as it relates to the tailings cover design and the reconfiguration of Pipeline Arroyo. Most significantly, we are very concerned that NRC has changed its position regarding certain technical issues previously agreed to in preparing our original design.

As discussed at our most recent meeting, United Nuclear proceeded with design of the original reclamation plan, and later with construction of the soil cover in accordance with that plan, based on specific representations made by NRC to us and our engineering consultants that our design was acceptable to NRC. In addition, after submitting our plan in 1987, we received a significant amount of pressure from NRC to begin implementation of the plan. Specifically, NRC threatened to serve an administrative order requiring United Nuclear to commence construction of the tailings cover if we did not agree to such action voluntarily, and unilaterally issued a license amendment requiring us to proceed with reclamation.

Our position consistently was that we could not commit to commencing any program until such time as we had assurances from all agencies involved, including the EPA, that the plan was acceptable to all. It has always been our intent, as we often expressed to all the regulatory agencies involved, to implement an integrated plan that addresses not only tailings stabilization but also groundwater protection. As such we requested approval of a complete package because

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UNC/ASHQ-90-394M

December 4, 1990

Page 2

we have been concerned that if we agreed to any part of a plan without complete concurrence by all parties to all of the plan that we could be subjected to the type of arbitrary changes proposed by your recent comments.

This has been a consistent theme we have clearly stated with regard to all of our tailing reclamation and seepage remediation planning. United Nuclear's reluctance to initiate reclamation activity was because of the interrelationship of the various components of the plan. We expressed significant concern that subsequent changes to the plan could negatively impact the reclamation activities, thereby creating duplicate work, wasted effort and the waste of money. Only after being threatened with an administrative order and being assured by the former Director and his staff that any future design changes would be in the nature of "fine tuning" and would not significantly impact reclamation did we agree to commence. To date we have spent over \$3.5 million implementing the tailings reclamation plan approved by NRC, only to discover that the agency has now changed its mind. We were coerced into the unwanted position of commencing construction without final technical approval, which we were assured would not involve any major changes.

NRC directed us to proceed with reclamation construction based upon the plan as submitted, and we did so. There is at this point no sound basis, legally or technologically, for the belated major changes in the reclamation plan that NRC has recently suggested. However, in an effort to accommodate NRC's request, we are willing to make some changes in the reclamation program which could provide comparable protection without sacrificing the work that has already been performed. These measures are described in detail in the enclosed document prepared by Canonic Environmental Services, Inc.

Restating our understanding of NRC's comments, NRC has expressed concern that United Nuclear's plan does not provide adequate erosion protection to ensure long term stability of the site. These concerns are addressed to three aspects of the facility fundamental to the design; i.e., the tailings cover, the embankment sideslopes, and Pipeline Arroyo.

Regarding the tailings cover, NRC expresses the belief that surface water runoff erosional forces are sufficiently large, despite gentle slopes already designed and constructed, so as to require either the placement of a 6 inch rock mulch over the entire area or to change the design so that the surface of the cover is essentially flat. Further, NRC believes that United Nuclear's construction of cover slopes that keep flow to less than 3 feet per second over the surface is no longer adequate to keep erosional forces of runoff from releasing tailings to the environment during the 1000 year design life. This change in position comes after United Nuclear was assured on several occasions by agency personnel and NRC's consultant that if the design kept flows to less than 3 fps the design would be approved.

Regarding the embankment slopes, NRC expresses the belief that the proposed runoff diversion ditches will not adequately protect the sideslopes from erosion. NRC, as a result, now requires

that the sideslopes be riprapped with a rock mulch layer to protect them from erosion, or alternatively, that the slopes be flattened sufficiently to protect the embankment.

Regarding the Pipeline Arroyo, NRC has changed its position that the most appropriate manner by which to protect the tailings from being released as a result of erosion of the arroyo was to incise the nickpoint and excavate the arroyo so as to pass the PMF and control the erosional forces of smaller events. NRC now believes that it is best to not incise the nickpoint at all, but rather leave it untouched and design controls around it. Alternatively, if the arroyo is to be excavated and the nickpoint incised, PMF riprap must be placed in the arroyo to armor it against erosion.

As stated at our meetings, United Nuclear and its consultants disagree with NRC's present view that the originally proposed design is inadequate. We believe that the design to which NRC previously agreed and on which we have commenced construction, is quite appropriate to protect the tailings from release to the environment, consistent with the requirements of 10CFR40 Appendix A. We further believe that the NRC's proposals are extremely conservative in nature for this site and that the minimal reduction in risk to public health, safety and the environment that might result can not be rationally justified considering the significant additional cost. We estimate the cost to implement the NRC's proposal to be in excess of \$11.8 million, nearly double the current estimated cost of reclamation. This would impose an intolerable economic burden on the Company, and violates NRC's cost consideration requirements in 10CFR40.

We are, of course, sensitive to NRC's concerns, even if we do not agree with them. Therefore, in our response to NRC's comments, and without prejudice to our claim that NRC's request that we perform additional or different work is legally and technologically unsound, we have endeavored to address NRC's concerns by proposing certain modifications to our design. These modifications are proposed to specifically account for and mitigate NRC's concern regarding protection from erosive forces. They are coupled with the desire to balance the cost vs the benefit consistent with applicable regulations and incorporate the information developed to date from three years of onsite construction.

At the heart of NRC's concerns is the ability of United Nuclear to continue to demonstrate that its reclamation plan design provides the required assurances that tailings are protected from surface water erosional forces to ensure that releases to the environment do not occur in 1000 years to the extent practicable. There are, of course, a large range of engineering solutions that can be applied to such a task, each with its attendant cost. Of critical importance, however, is whether the added costs result in a concomitant reduction of risk to public health and the environment.

In recognition of the concerns of the NRC and after extensive engineering evaluation of the NRC's proposals and taking into consideration the specific characteristics of the site, we believe

a more reasonable alternative can be developed that will satisfy the NRC's concerns and meet the requirements of 10CFR40 Appendix A. We propose to modify our plan in the following manner. Details of proposed design modifications are contained in the attached document.

A. Tailings Cover

United Nuclear proposes to construct a 6 inch rock/soil matrix cover made of 3 inches of rock overlain by 3 inches of soil to be rolled into the rock. The rock/soil matrix cover would be placed over a 1.5 foot soil cover constructed to reduce radon emanation from tailings to below 20 pCi/m²/sec. This concept was recently approved by NRC for use at the Anaconda Bluewater site.

The combination 6 inch rock/soil matrix and 1.5 foot soil cover represents a reduction in the original cover design of 4 foot. Justification for this reduction is based on data obtained during the construction undertaken in the past two years and is discussed in detail in the attached document. Briefly, however, you will recall that our original cover design conservatively overestimated the amount of cover required to control radon releases to acceptable levels. Our submittal contemplated a potential reduction of cover based on field measurements as construction of the interim cover proceeded.

B. Embankment Sideslopes

United Nuclear proposes deleting the runoff diversion ditches and replacing them with a 6 inch rock mulch similar to that suggested by NRC in its comments, in conjunction with the construction of a protective bench between the embankment toe and the Pipeline Arroyo channel.

C. Pipeline Arroyo

United Nuclear proposes to eliminate the excavation of Pipeline Arroyo entirely and not incise the nickpoint. Instead, United Nuclear would construct a buried rock jetty wall from the nickpoint outcrop in the arroyo east to the tailings embankment, thus preserving the geomorphic stability of the nickpoint while protecting against erosion around the nickpoint.

United Nuclear believes that these proposed modifications adequately resolve NRC's remaining concerns. It should be clear however, that United Nuclear and its consultants continue to believe that the original tailings reclamation plan previously submitted to the Commission fully meets the requirements set forth in 10CFR40 Appendix A. Should NRC find that the proposed modifications to United Nuclear's original plan are not acceptable, United Nuclear Corporation hereby requests pursuant to Section 84(c), 42USC2114 of the Atomic Energy Act, that NRC make a finding that either United Nuclear Corporation's original proposed reclamation plan or the proposed design modification "achieve a level of stabilization and containment... and a level of protection for public health, safety and the environment from radiological and non-

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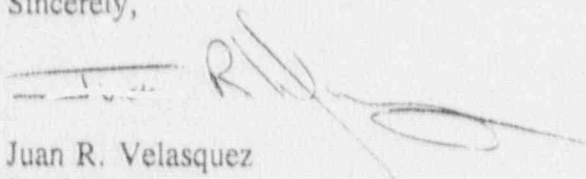
Page 5

radiological hazards associated with the [Church Rock] site which is equivalent to the extent practicable to the level which would be achieved by the standards...[of 10CFR40, Appendix A and the standards promulgated by the Environmental Protection Agency in 40CFR192, subpart D and E]". In particular, Criterion 6 of Appendix A requires that the tailings disposal design provide reasonable assurance of control of radiological hazards to be effective for 1000 years, to the extent reasonably achievable, and in any case for at least 200 years.

United Nuclear and its engineering design consultant, Canonie Environmental Services, Inc., strongly believe that the reclamation plan as originally designed meets the 1000 year design criteria to the extent reasonably achievable as defined in the Uranium Mill Tailings Radiation Control Act and NRC's regulations and certainly meets the design criteria of 200 years. United Nuclear's original reclamation plan was designed to, and does, fully comply with NRC's requirements. It is designed to protect tailings from release to the environment for the design life to 1000 years to the extent practicable and is protective of human health and the environment considering the site specific constraints unique to Church Rock, the state of technology and the economics of improvements in relation to benefits to the public health and safety and other societal and socio-economic considerations.

Should you have any questions please do not hesitate to contact me.

Sincerely,



Juan R. Velasquez
President

JRV:jkt

cc: Ed Morales, UNC Mining & Milling
P. X. McClain, UNC, Inc.
Richard H. Lange, UNC, Inc.
Steve Barringer, Holland & Hart Law Firm
Ridgway M. Hall, Jr., Crowell & Mooring Law Firm