



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Administration
DIVISION OF PLANNING
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July 16, 1992

Mr. Robert M. Bernero
Director
Office of Nuclear Material
Safety and Safeguards
United States Nuclear
Regulatory Commission
Washington, DC 20555

Dear Mr. Bernero:

Reference: Docket No. 70-820

Thank you for your letter of June 25 concerning delicensing of the United Nuclear Corporation's site in Charlestown. The meeting with your staff on May 6 and your letter clarify the action that NRC proposes, and the rationale for this action. Nevertheless, both state and local governments and the Narragansett Indian Tribe continue to object to the proposed delicensing. This objection is based on both substantive and procedural grounds.

The principal source of information on substantive problems is the draft "Environmental Evaluation Report Related to the Termination of NPC Materials License SNM-777 for UNC Recovery Systems, Wood River Junction, Rhode Island" (Docket No. 70-820), referred to herein as the EER report, and supporting technical data presented in Appendices A through K of that report. These problems resulted in the recommendations listed in my letter of February 24, 1992. The information and findings underling these recommendations are summarized here, in order to be sure that our position is clear:

1) Future groundwater use--

The EER report indicates that there is a significant, though undelineated, area of groundwater contamination at the site. The Rhode Island Department of Environmental Management's draft classification of groundwater indicates that the groundwater in the vicinity of the site is classified GAA, the most valuable of the state's

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groundwater resources. The area of the contaminated groundwater at the site and in the associated plume are classified GAA-non-attainment. This means that the groundwater falls within the general classification of GAA; and as such, should achieve Environmental Protection Agency drinking water standards.

The site lies within the Lower Wood Groundwater Reservoir, believed to be the highest yielding aquifer in the state. The sediments through which the UNC plume flows consist of highly transmissive sand and gravel (US Geological Survey Open File Report 84-725, 1985). Not only is the aquifer in the immediate vicinity of the site capable of supplying enough water for future development, but it is the only source of water for development in the immediate vicinity.

Existing contamination will preclude the use of the aquifer in a wide area around the site and the plume area for drinking water until complete remediation is achieved. Pumping of water for any use from wells which include the contaminated area within their zones of contribution would change flow patterns and rates and may cause movement of remaining, undetected pockets of contamination and contamination of wells outside the known contamination plume.

It is therefore incorrect to state that there is no impact to a water resource or a drinking water source, as NRC did in its environmental evaluation report. Specifically, we disagree with NRC's determination that no radiological hazardous waste exists at the site and that the site can be considered an unrestricted area.

2) Monitoring--

Review of the data presented indicates that five monitoring wells sampled in November 1990 exceed the criteria for gross Beta for radioactivity. The Rhode Island Department of Health regulations for drinking water supplies indicate that concentrations below 50 picocuries per liter will not exceed the 4 m/rem/yr standard. The five wells referenced above, in addition to a well sampled in September 1990 (77-B), exceed the standard. Since this represents the most recent data available to us for the site, it is clear that continued

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monitoring is necessary to evaluate the impacted portion of the aquifer in order to ascertain when conditions will be restored to a drinkable quality. The position that monitoring should not continue is directly contrary to RIDEM's and EPA's standard procedures at remediation sites.

In addition, there exists the possibility that release of additional contamination could raise the levels in wells, possibly above NRC standards. Groundwater quality monitoring must be continued in order to identify such trends and problems as they occur.

While modelling is useful in predicting future conditions, continued monitoring is necessary to confirm such predictions. The EER report supports our position on this matter, stating "Both Kipp (USGS Water Resources Research) and Doctor Warner (Professor of geological engineering retained by the NRC) indicated that continued groundwater monitoring would be necessary to assess the accuracy of the modeled clean-out time forecasts and to provide confirmation of the flushing of the contaminant plume. (See EER, page 15.)

3) Sediments--

The information provided on soil and sediment contamination is inadequate to determine potential environmental impacts on-site and downstream. In the Pawcatuck River, contaminants will collect in locations where there is deposition of sediments induced by flora baffling, as in wetlands, and in poorly flushed areas.

Bioaccumulation in bottom dwelling biota and aquatic organisms should be investigated in these areas. An Ecological Risk Assessment would be a very advantageous method of obtaining these data and evaluating these conditions.

Our procedural concerns are raised by the separation of a single contaminated liquid into two components, each subject to regulation by a different federal agency. This artificial exercise exemplifies bureaucracy at its worst. Our position, drawn largely from the May 6 meeting and your letter of June 25, can be summarized as follows:

- 1) The solution that escaped from the lagoons had both radioactive and chemical components. The fact that these may now present significantly different threats to humans, and that one may now or at some time in the

future be acceptable while the other is not, does not change their single origin, resulting from operation of the UNC facility under an NRC license.

- 2) Characterization of the site as suitable for "unrestricted use" may at some time be accurate for radioactive contamination, but not for chemical contamination. As applied to this site, this term will inevitably be misunderstood and abused.
- 3) Neither state nor local government should be required to use their severely limited resources to undertake the long-term monitoring, analyses, or other actions made necessary by UNC when operating under its NRC license. It is not clear that EPA or any other federal agency will commit to overseeing a remedy for nitrate contamination created while NRC was exercising regulatory control over the site. We believe that this is clearly the responsibility of the licensing agency and license holder.
- 4) Delicensing of the UNC facility and designation of the site as suitable for "unrestricted use" by an agency of the United States government, will lead to private development. The town of Charlestown grew by 35 percent over the 1980-1990 decade, while the nearby town of Richmond grew by 33 percent, indicating the strong growth potential of this 1,114-acre site. Any development that occurs will depend solely on groundwater that is contaminated, or that may be threatened by contamination; no public systems or alternative sources are available.

Our ultimate responsibility is to assure that the public health and the natural resources of the state are rigorously protected. Many questions remain regarding the potential consequences of delicensing the UNC site. The United Nuclear Corporation must continue to be held responsible for continued monitoring and for the remediation of groundwater contamination as necessary. Therefore, we cannot agree to delicensing of the UNC facility unless the United Nuclear Corporation is willing to agree to the following conditions:

- 1) The site risk is reevaluated using the current Risk Assessment methodology prior to delicensing and the findings submitted to RIDEM, EPA, and other appropriate agencies for review.

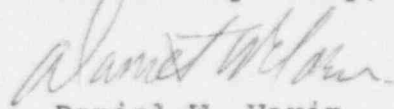
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- 2) An Ecological Risk Assessment is conducted in conjunction with the Risk Assessment. Environmental impacts such as bioaccumulation in bottom dwelling biota and aquatic organisms in the Wood/Pawcatuck Rivers should be included in the assessment.
- 3) The aquifer use prediction for year 2005 (see the EER, page 19), based on a 1978 conversation with state and local officials, be replaced by a current assessment of the potential use of this resource, that incorporates information from the State Guide Plan, comprehensive community plans required by Chapter 45-22.2 of the Rhode Island General Laws, and estimates by knowledgeable and identifiable persons.
- 4) The areal extent of the aquifer which is not suitable for use (for drinking water and other purposes) due to contamination be determined based upon assumed pumping rates and hydrogeological characteristics. This area must be clearly delineated by UNC with RIDEM's and EPA's concurrence. Prohibition of any usage of the delineated area until contamination is fully remediated should be guaranteed by deed restriction or other legal mechanism.
- 5) The monitoring program must include the following elements: preparation of a monitoring plan to be provided to RIDEM and EPA for their review and approval; inspection of existing monitoring wells by RIDEM to determine that they are operational; a requirement that future long-term monitoring be conducted at least annually for all contaminants used or detected at the site; and long-term monitoring of the discharge area into the Pawcatuck River.
- 6) An irrevocable letter-of-credit or other financial guarantee be posted by UNC to guarantee that these recommendations are implemented in a satisfactory manner. The amount should be based upon the cost incurred to continue monitoring and for future remediation at the site, if warranted.

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Therefore, I strongly urge that this site and facility not be delicensed until the recommendations made herein and in my letter of February 24, 1992, are carried out. This is a state process recommendation made under Executive Order 12372, requiring accommodation or explanation.

Yours very truly,



Daniel W. Varin
Associate Director

DWV:cac

cc: Honorable Jack Reed
Kevin Brubaker, Governor's Office
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