



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

November 1, 1996

Richard F. Clement, Jr., President
Hydro Resources, Inc.
2929 Coors Blvd., NW
Suite 101
Albuquerque, NM 87120

SUBJECT: PRIMARY AND SECONDARY GROUNDWATER RESTORATION GOALS

Dear Mr. Clement:

This letter is in response to your letter, dated October 18, 1996, regarding Hydro Resources, Inc.'s (HRI) proposal on primary and secondary groundwater restoration goals for its Crownpoint, NM in situ leach mining project, and to follow-up on the subsequent teleconference between the U.S. Nuclear Regulatory Commission (NRC) staff and HRI on October 22, 1996. The purpose of this letter is to clarify the NRC staff's position with respect to primary and secondary restoration goals, and to request HRI's acknowledgement and acceptance of this approach in writing.

To date, NRC and HRI have been unable to reach agreement on the specifics of establishing primary and secondary groundwater restoration goals for the Crownpoint project. These discussions have been ongoing since August 29, 1996, when the NRC staff requested additional clarification and information from HRI on this issue. Since this time frame, HRI has taken several varying positions in response to NRC's request, resulting in additional staff analyses of each proposals. The ensuing discussions between the staff and HRI have been inconclusive, and have resulted in substantial delays in completing the Environmental Impact Statement (EIS).

This issue involving groundwater restoration goals is indicative of the types of problems that the NRC staff is encountering with completing its review of the EIS in a timely manner. Specifically, several other requests by NRC for clarification, or additional information, have resulted in numerous iterations of interactions between the staff and HRI in order to resolve particular issues - most of which was due to incomplete, or inadequate technical submittals. This type of repetitive discourse has had a significantly adverse effect on the overall efficiency of the staff's review.

Based on the staff's and HRI's inability to resolve the groundwater restoration issue, and in order to meet the December 1996 completion time frame for the EIS, the staff is providing the enclosed guidance for primary and secondary groundwater restoration goals for the Crownpoint project. Also enclosed is the staff's recommendation and rationale for including conductivity in HRI's list of baseline parameters to be sampled, but to exclude it from the list of parameters with established restoration goals.

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As previously mentioned, the NRC requests that HRI respond to this letter in writing by November 8, 1996. If HRI chooses to pursue a different approach to groundwater restoration than that suggested by NRC, the staff will require additional time to adequately evaluate and respond to the applicant's proposal. This will delay completing the EIS by December 1996.

If you have any questions concerning this subject, please contact Mr. Robert Carlson of my staff at (301) 415-8165.

Sincerely,

Original Signed By:]

Joseph J. Holonich, Chief
Uranium Recovery Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

Enclosure: As stated

cc: P. Wilmont, HRI
M. Pelizza, HRI
B. Saulsbury, ORNL

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NRC STAFF EVALUATION OF GROUNDWATER RESTORATION GOALS AND CONDUCTIVITY FOR THE
HYDRO RESOURCES, INC. (HRI) CROWNPOINT, NM PROJECT

1. Primary and Secondary Groundwater Restoration Goals

For the proposed HRI Crownpoint, NM in situ leach (ISL) mining project, the primary goal for restoration shall be to return the groundwater quality, on a production unit wellfield average, to premining baseline conditions.

In the instance(s) where primary restoration goals cannot be achieved, a secondary goal for groundwater restoration shall be compliance with applicable federal standards, on a parameter by parameter basis (ie., except for barium and fluoride, where HRI has proposed using the more stringent state standard for these parameters). In the case of the overall total dissolved solids (TDS) parameter, 500 mg/l is the federal standard that will be established as a secondary restoration goal. However, TDS reflects the total sum of all dissolved constituents, some of which have no established state or federal standards (eg., bicarbonate, carbonate, calcium, magnesium, sodium, and potassium). For these constituents, baseline conditions will remain as the secondary goal for groundwater restoration.

Consistent with the provisions of other NRC ISL licenses, if HRI is unable to restore the aforementioned constituents to either primary or secondary goals, it may submit a license amendment to NRC requesting relief from its restoration requirements on a parameter-by-parameter basis. Specifically, HRI would have to show how its restoration approach failed to restore the groundwater to primary or secondary goals. Then HRI would have to demonstrate that allowing a particular constituent to exceed baseline concentrations would not pose a threat to public health and safety. Notwithstanding, HRI is still required to comply with the overall TDS standard of baseline or 500 mg/l as a primary and secondary restoration goal, respectively.

For uranium, the secondary restoration goal will be set at 0.44 mg/l (300 pCi/ml). This concentration was obtained from 10 CFR Part 20, Appendix B, Table 2, and is suitable for unrestricted release of natural uranium into water.

2. Conductivity

The NRC staff recommends that conductivity be included in the list of baseline parameters to be sampled, but eliminated from the list of parameters with established restoration goals. Conductivity should be included in baseline sampling because it will be needed to establish upper control limits. Conductivity is considered a general measure of dissolved constituents, but does not have a primary or secondary drinking water standard. Therefore, both the primary and secondary goal of conductivity would be baseline. This means that for conductivity to achieve its secondary goal, TDS concentrations would have to be returned to baseline as well. Since the TDS measurement is a more accurate gauge of the concentration of dissolved solids than is the conductivity measurement, then TDS is a better assessment of water quality. Sole use of the TDS parameter for restoration goals eliminates the confusion of a duplicative parameter for which no health based standards have been established.

Enclosure