

# HRI, INC.

(A Subsidiary of Uranium Resources, Inc.)

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Mark S. Polizza  
Vice President  
Health, Safety and Environmental Affairs

August 30, 1996

40-8968

Mr. Bob Carlson  
High Level Waste & Uranium Recovery  
Projects Branch  
Division of Waste Management  
U.S. Nuclear Regulatory Commission  
NMSS (T-7-J9)  
Washington, D.C. 20555-0001

RE: Responses to Telephone Requests - August 29, 1996  
HRI Crownpoint Project

Dear Mr. Carlson:

Pursuant to the telephone conversation today with you and other NRC staff, HRI transmits the following:

1. Definition of Annual Bleed and Project Bleed

Annual Bleed is the bleed volume on a yearly basis assuming 40 gpm on a continued basis. Therefore, given Assumption #1 for each mine site, the bleed equals:

$$\begin{aligned} &= 40 \text{ gal/min} \times 1440 \text{ min/day} \times 365 \text{ days/year} \\ &= 21,024 \text{ gal/year} \end{aligned}$$

Project Bleed is the bleed for the anticipated mine life as follows:

Churchrock Project Bleed = 7 years X 21,024 gal/year = 147,168 gallons  
Crownpoint Project Bleed = 15 years X 21,024 gal/year = 315,360 gallons  
Unit 1 Project Bleed = 17 years X 21,024 gal/year = 357,408 gallons

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Letter to Mr. Bob Carlson

August 30, 1996

Page 2 of 2

2. A revised version of Attachment Q2/59-3 is attached. Notations on the revised include:

- a. flow rates to land application
- b. contingencies for Assumption #1 and Assumption #2

Three copies of Attachment Q2/59-3 are attached. Please insert these revisions in Q2 binder.

3. Baseline water quality in mine workings.

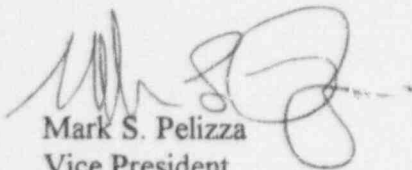
Please see Q1/29.

4. Density of baseline wells.

Q2/94 is revised to account for one (1) baseline well per one (1) acre in each wellfield.

Please feel free to contact me with questions pertaining to this matter.

Sincerely,



Mark S. Pelizza

Vice President

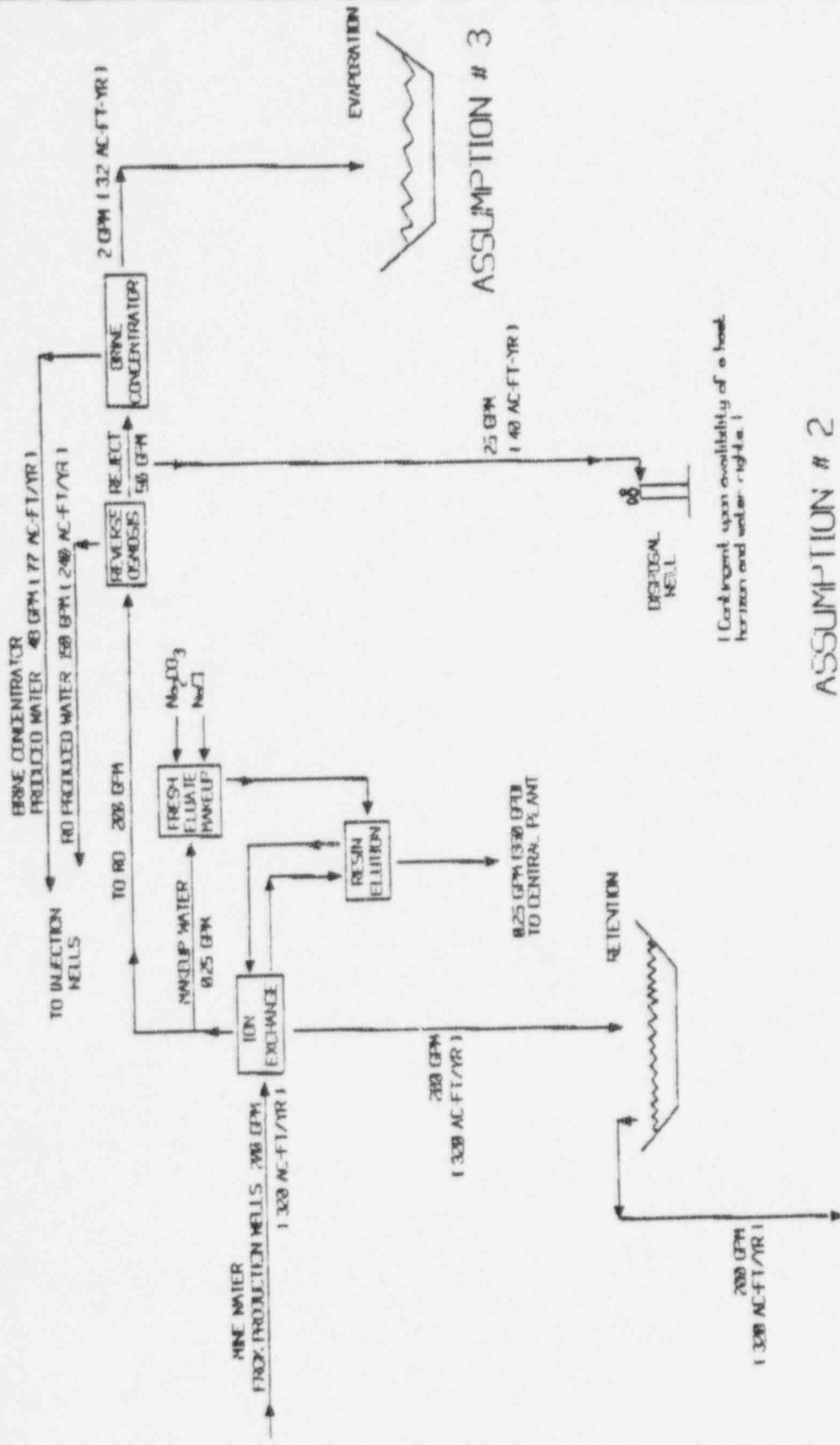
Health, Safety and Environmental Affairs

MSP/dlg

Encl.

Revised Attachment

Q2/59-3



LAND APPLICATION

(Contingent upon availability of Land Application permit and water rights)

ASSUMPTION # 1

FIGURE 5-2

HRL, INC

CHURCH-ROCK PROJECT  
RESTORATION FLOW SHEET

JULY 86

REVISED AUG. 29, 1986

Revised Attachment

Q2/94

**CLARIFICATION AND ADDITIONAL INFORMATION REQUEST  
HYDRO RESOURCES, INC. IN-SITU LEACH URANIUM MINE  
CROWNPOINT, NEW MEXICO**

**Q2/94. Discussion:** NRC's Guidance Directive LLWM 92-01, "Standardized In-Situ Facility License Conditions" provides recommended license conditions, based on typical application documents and interpretations of regulatory guides. The NRC Staff is directed to follow these recommended conditions in all new in-situ leach licenses. The NRC staff has reviewed HRI's application materials and concluded that the applicant has not provided information or responses to the following commitments from the LLWM 92-01 Guidance Directive.

1. Prior to lixiviant injection in each mining unit, baseline water-quality data shall be established in each mining unit at (1) all mining unit perimeter monitor wells; (2) all upper and lower aquifer monitor wells; and (3) at least one production/injection well per acre in each well field.
2. Prior to lixiviant injection in each mining unit, upper control limits and ground-water restoration criteria should be established.
3. Flow rates on each injection and recovery well and injection manifold pressures on the entire system shall be measured and recorded daily. During well-field operations, injection pressures shall not exceed the integrity test pressure at the well heads. (Injection pressure can be monitored for all wells with one measurement at the injection manifold. No injection well will experience pressure significantly greater than that exhibited at the manifold.)
4. The applicant shall perform and document pond freeboard and checks of the leak detection system. The applicant shall propose the level or volume of fluid that when exceeded in the leak detection system standpipes, shall be analyzed for selected chemical constituents. The applicant will propose action levels for these chemical constituents which when they are exceeded, will confirm that the pond is leaking. The selected chemical constituents should be easy to analyze for and be reflective of the *in situ* mining process. The NRC staff proposes that the applicant should propose at least one additive parameter and at least one mobile ionic species. Likely additive parameters which reflect ISL solutions are alkalinity or specific conductance, while appropriate ionic species would include chloride, sodium, and sulfate.
5. In the event that evaporation pond standpipe water analyses indicate that a pond is leaking, the NRC shall be notified by telephone within 48 hours of verification. Standpipe water quality samples shall be analyzed for leak parameters once every 7 days during the leak period and once every 7 days for at least 14 days following repairs. A written report shall be filed with the NRC within 30 days from first notifying the NRC that a leak exists. This report shall include analytical data and describe the mitigative action and the results of that action.
6. A log of all significant solution spills will be maintained and the NRC will be notified by telephone within 48 hours of any failure which may have a radiological impact on the environment. The notification will be followed, within 7 days, by submittal of a written report detailing the conditions leading to the failure or potential failure, corrective actions taken, and results achieved. This requirement is in addition to the requirements of 10 CFR Part 20.
7. At least 90 days prior to termination of uranium recovery in a mining unit, the applicant shall submit to the NRC in the form of a license amendment, a plan for ground-water restoration and post-restoration monitoring.
8. The applicant shall submit a detailed decommissioning plan to the NRC for review and approval at least 12 months prior to planned final shutdown of mining operations.

The NRC recommends that these conclusions be included in the application.

**Action Needed:** The applicant should revise the application documents to include the above standardize licensing commitments or provide information and data to demonstrate if any or all commitments are inappropriate for the applicant's proposed operations.

**Response:**

HRI, Inc. agrees to all Standardized In-Situ Facility License Conditions stated. Specifically, we commit to the following conditions:

1. Prior to lixiviant injection in each mining unit, baseline water-quality data shall be established in each mining unit at (1) all mining unit perimeter monitor wells; (2) all upper and lower aquifer monitor wells; and (3) at least one production/injection well 1 per acre in each well field.
2. Prior to lixiviant injection in each mining unit, upper control limits and ground-water restoration criteria should be established.
3. Flow rates on each injection and recovery well and injection manifold pressures on the entire system shall be measured and recorded daily. During well-field operations, injection pressures shall not exceed the integrity test pressure at the well heads. (Injection pressure can be monitored for all wells with one measurement at the injection manifold. No injection well will experience pressure significantly greater than that exhibited at the manifold.)
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