

# New Developments in ISL Uranium Recovery Regulation:

## Hydro Resources, Inc.'s Crownpoint Uranium Project

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# PRESENTATION OUTLINE

- Hydro Resources, Inc.'s (HRI) Nuclear Regulatory Commission (NRC) Licensing Proceeding
  - Background and Procedural History
  - Licensing Board Determinations
  - Issues Appealed
  - Argument
  - Commission Decisions

# BACKGROUND AND PROCEDURAL HISTORY

- 1987: HRI Submits License Application for the Crownpoint Uranium Project (CUP)
- Four Proposed Uranium Recovery Sites:
  - Church Rock Section 8
  - Church Rock Section 17
  - Unit One
  - Crownpoint

# BACKGROUND AND PROCEDURAL HISTORY

- 1994: NRC Staff Issues Draft Environmental Impact Statement (DEIS)
- 1996: Eastern Navajo Dine Against Uranium Mining, Southwest Research and Information Center and Others (Intervenors) Request NRC Hearing
- 1997: NRC Staff Issues Final Environmental Impact Statement (FEIS) and Determines No Significant Impacts Posed by HRI's Proposed CUP

# BACKGROUND AND PROCEDURAL HISTORY

- 1997: Intervenors Granted NRC Subpart L “Informal” Hearing on CUP
- Hearing Request Areas of Concern for All Proposed Uranium Recovery Sites:
  - Groundwater Protection and Restoration
  - Financial Assurance
  - Historic Preservation
  - Air Emissions
  - Environmental Justice
  - FEIS Adequacy
  - Financial and Technical Qualifications

# BACKGROUND AND PROCEDURAL HISTORY

- NRC Hearing Bifurcated to Be Litigated By Site
- 1998-1999: Church Rock Section 8 Litigation Commences
- Licensing Board Determines That HRI License Application is Adequate

# BACKGROUND AND PROCEDURAL HISTORY

- Intervenors Appeal to Commission
- 5/2000: Commission Determines that HRI Must Submit Groundwater Restoration Action Plans (RAPs) and Financial Assurance Cost Estimates Prior to Commencing Uranium Recovery (CLI-00-08)
- 2000-2001: HRI Submits RAPs for All Sites and Receives NRC Staff Approval
- 2001: Intervenors Challenge RAP for Church Rock Section 8
- 11/01: Oral Hearing At NRC With Licensing Board Regarding RAPs

# LICENSING BOARD DETERMINATIONS

- 1/04: Licensing Board Issues Decision Upholding HRI Church Rock Section 8 RAP With Three Exceptions (LBP-04-03):
  - RAP Cannot Assume Availability of *Major* Site Equipment During Restoration
  - RAP Cannot Assume the Performance of Multiple, Unrelated Tasks (i.e., Wearing Multiple Hats) by Site Employees During Groundwater Restoration
  - RAP Must Account for Use of “Tremie Line” Method of Well-Plugging



# ISSUES APPEALED

- 2/04: HRI Appeals LBP-04-03 to the Commission and Requests Review
- 5/04: Commission Grants HRI's Request for Review
- 7/04: HRI Submits Initial Brief to Commission
- Issues for Review:
  - RAP Cannot Assume Availability of *Major* Site Equipment During Restoration
  - RAP Cannot Assume the Performance of Multiple, Unrelated Tasks (i.e., Wearing Multiple Hats) by Site Employees During Restoration

# ARGUMENT

- ISSUE #1: RAP Cannot Assume Availability of *Major* Site Equipment During Restoration
- SUMMARY OF ARGUMENT:
  - Standard Industry Practice and NRC ISL Standard Review Plan Allows for the Availability of *Major* Site Equipment
  - Licensing Board Decision Does Not Define What is *Major* Site Equipment (i.e., All Pumps, All Pipes, RO's, IX Columns, Brine Concentrators, etc.)
  - NRC Regulations Requiring Mandatory Annual Surety Updates Allow for Adjustment of Financial Assurance to Reflect Maintenance, Repair or Replacement of Site Equipment

# ARGUMENT

- ARGUMENT #1: Standard Industry Practice and NRC ISL Standard Review Plan Addresses for the Availability of *Major* Site Equipment
  - Standard Industry Life-Cycle Cost Estimates on Site Equipment Provides for Adequate Assessments and Repair or Replacement of *Major* Site Equipment as Necessary
  - Mandatory Fifteen Percent (15%) Contingency Included in Cost Estimates Provides Additional Safeguard

# ARGUMENT

- ARGUMENT #2: Licensing Board Decision Does Not Define What is *Major* Site Equipment
  - ISL Uranium Recovery Facilities Have Numerous *Types* of Equipment That Could Be Deemed Major:
    - Well-Field Pipes
    - Brine Concentrators
    - Reverse Osmosis Mechanisms
    - Front-End Loaders
    - IX Columns

# ARGUMENT

- ISL Uranium Recovery Licensees Do Not Account for Dismantling Entire Well-Field and Reconstructing for Decommissioning
  - Cost-Prohibitive to Force Licensees to Re-Purchase All Site Equipment for Decommissioning
  - Not All Site Equipment Requires Replacement, Only Maintenance and Repair

# ARGUMENT

- ARGUMENT #3: NRC Regulations Requiring Mandatory Annual Surety Updates Allow for Adjustment of Financial Assurance to Reflect Maintenance, Repair or Replacement of Site Equipment
  - NRC Regulations at 10 CFR Part 40, Appendix A, Criterion 9 Require Mandatory Surety Updates on an Annual Basis
  - Surety Updates Require Cost Adjustments (Up or Down) in the Event of:
    - Change in Technology or Processes
    - Change in Engineering Practices
    - Change in Total Costs for Licensed/Approved Actions
    - Change in Environmental Parameters for Restoration
    - Inflation
  - Following NRC Regulations for Surety Updates As An Adequate Safeguard for Decommissioning is Standard Industry Practice and Generally Approved by NRC Staff

# ARGUMENT

- ISSUE #2: RAP Cannot Assume the Performance of Multiple, Unrelated Tasks (i.e., Wearing Multiple Hats) by Site Employees During Restoration
- SUMMARY OF ARGUMENT:
  - Standard Industry Practice Assumes the Performance of Multiple, Unrelated Tasks by Site Employees
  - HRI's Proposed Labor Categories and Cost Estimates Are Sufficient to Perform Groundwater Restoration
  - NRC Regulations Requiring Mandatory Annual Surety Updates Provide Adequate Safeguards for Potential Increases in Labor Requirements

# ARGUMENT

- ARGUMENT #1: Standard Industry Practice Assumes the Performance of Multiple, Unrelated Tasks by Site Employees
  - ISL Uranium Recovery is Largely Automated and Few Site Employees Are Required
  - Multiple Tasks Can Be Performed by Experienced Qualified Professionals



# ARGUMENT

- ARGUMENT #2: HRI's Proposed Labor Categories and Cost Estimates Are Sufficient to Perform Groundwater Restoration
  - HRI Modeled Its Proposed Labor Categories and Costs on Existing or Completed, NRC/Agreement State-Approved Projects
  - HRI Included Required Fifteen Percent Contingency for An Additional Safeguard

# ARGUMENT

- ARGUMENT #3: NRC Regulations Requiring Mandatory Annual Surety Updates Provide Adequate Safeguards for Potential Increases in Labor Requirements
  - Appendix A, Criterion 9 Mandatory Annual Surety Updates Allow for Assessment of Labor Costs and Potential Need for More or Less Manpower at the Site
  - Surety Updates Require Cost Adjustments in the Event of:
    - Change in Technology or Processes
    - Change in Engineering Practices
    - Change in Total Costs for Licensed/Approved Actions
    - Change in Environmental Parameters for Restoration
    - Inflation

# COMMISSION DECISION

- 12/04: Commission Issues CLI-04-33 and Finds For HRI On Both Appealed Issues As Follows:
- ISSUE #1: RAP Cannot Assume Availability of *Major* Site Equipment During Restoration
  - Commission Determines:
    - That HRI RAP Properly Presents Financial Assurance Cost Estimates for Availability of Site Equipment
    - That Site Equipment Must Be Assessed Based on Whether Maintenance, Repair or Replacement is Required
    - That NRC Annual Surety Updates and Fifteen Percent Contingency Are An Adequate Safeguard to Ensure Funds Are Available for This Assessment

# COMMISSION DECISION

- ISSUE #2: RAP Cannot Assume the Performance of Multiple, Unrelated Tasks (i.e., Wearing Multiple Hats) by Site Employees During Restoration
  - Commission Determines:
    - That Standard Industry Practice of Assuming the Performance of Multiple, Unrelated Tasks by Site Employees is Appropriate
    - That HRI's RAP Presents the Proper Approach
    - That NRC Annual Surety Updates Are An Adequate Safeguard for Assessing the Potential Need for Increases in Labor Costs for Financial Assurance Cost Estimates

# OUTSTANDING ISSUES

- Three Remaining Uranium Recovery Sites Must Be Litigated:

- Church Rock Section 17
- Unit One
- Crownpoint

# OUTSTANDING ISSUES

- Scope of Issues Have Been Refined:
  - Groundwater
    - SDWA/AEA Regarding Operating in Drinking Water Sources
    - Fluvial Aquifer Characteristics in ISL Mining
    - Performance-Based Licensing Approach for ISL Mining
    - Excursion Controls
    - Restoration Costs Estimates
  - Cultural and Historic Resources
    - Phased Approach to Section 106 Resource Identification Per Performance-Based License Approach
  - Air Emissions
    - Only Church Rock Section 17 to Be Litigated
  - Environmental Impact Statement Adequacy
    - Same Arguments for Church Rock Section 8 to Preserve Appeal