

Western Nuclear, Inc.’s Split
Rock Site: An “Alternative”
Approach Under 10 CFR Part
40, Appendix A

Prepared by Western Nuclear, Inc. for NRC Sidebar Conference

Thompson & Pugsley, PLLC



INTRODUCTION

- ▶ In 2005–2006, Western Nuclear, Inc. (WNI) Received Approval from:
 - NRC Staff for Alternate Concentration Limits (ACL) for a Groundwater Plume Migrating From the Previously Reclaimed Tailings Impoundment;
 - NRC Staff for Groundwater Modeling Demonstrating the Viability of Its Proposed Long–Term Surveillance and Monitoring (LTSM) Site Boundary (LTSB);
 - NRC Staff AND The Commission on Proposed Use of “Durable” Institutional Controls and The Manner In Which They Were Obtained

UNDERSTANDING APPENDIX A: INTRODUCTION

- ▶ **WNI's Entire Package of Approvals Utilizes a Combination of Commonly-Used and Site-Specific Mechanisms to Satisfy NRC and DOE Requirements for Site Closure;**
- ▶ **Some of These Mechanisms Are Not Explicitly Mentioned in Appendix A's Language:**
 - Institutional Controls;
 - Groundwater Modeling on Legacy Contamination
- ▶ **However, Taken as a "Package," WNI's Approach Was Found Acceptable Under UMTRCA and Appendix A's Express Provisions for "Alternatives" to NRC/EPA Regulatory Requirements and Protective of Public Health and the Environment**

UNDERSTANDING APPENDIX A: ALTERNATIVES

- ▶ 10 CFR Part 40, Appendix A Preamble States:
 - “Licensees or applicants may propose alternatives to the specific requirements in this appendix. The alternative proposals may take into account local or regional conditions, including geology, topography, hydrology, and mete[o]rology. The Commission may find that the proposed alternatives meet the Commission's requirements if the alternatives will achieve a level of stabilization and containment of the sites concerned, and a level of protection for public health, safety, and the environment from radiological and nonradiological hazards associated with the sites, which is equivalent to, to the extent practicable, or more stringent than the level which would be achieved by the requirements of this appendix and the standards promulgated by the Environmental Protection Agency in 40 CFR part 192, subparts D and E.

UNDERSTANDING APPENDIX A: ALTERNATIVES

- ▶ **Alternatives to Appendix A Criteria May Be One or a Combination of Mechanisms or Approaches/Interpretations As Long As They Are at Least as Protective as Its Criteria and 40 CFR Part 192;**
- ▶ **Unique or Otherwise Unused Mechanisms or Approaches/Interpretations Were Approved by NRC Staff and, in Some Cases, the Commission**

UNDERSTANDING WNI'S APPENDIX A "ALTERNATIVE"

- ▶ WNI Proposed a Package Including Alternatives to Appendix A Criteria (Some Elements of Which Fit Appendix A and Some That Did Not):
 - Site ACLs (Adequately Protective and Within the Definition of Criterion 5 at Point of Compliance);
 - Site ACLs (Adequately Protective But Outside the Definition of Criterion 5 Due to "Legacy Contamination" (Nitrates));
 - Groundwater Model: Incorporates the Two Items Above and Defines the LTSB;
 - Institutional Controls: Restrictive Covenants on Domestic Water Usage, Etc. (Not Included in Appendix A)

UNDERSTANDING WNI'S APPENDIX A "ALTERNATIVE"

- ▶ Appendix A Alternatives Cannot Be Looked At in a Vacuum:
 - Depending on How the Alternative is Presented to NRC Determines How to Evaluate It:
 - A Single Item Can Be an Alternative or a Simple Appendix A Requirement;
 - A Combination of Items, Some of Which Are Expressly Noted in Appendix A and Some of Which Are Not, Can Be Evaluated Separately or Together

UNDERSTANDING WNI'S APPENDIX A "ALTERNATIVE"

- ▶ WNI's Final ACL Package, Including Groundwater Model and Institutional Controls, Can Be Considered One "Alternative" or a Combination of "Alternatives":
 - Each Item is Inextricably Linked to the Others:
 - ACLs Linked to Groundwater Model, Legacy Contamination (Nitrates), and LTSB;
 - LTSB and Groundwater Model Define Groundwater Monitoring Program Under Proposed LTSB;
 - Each Element Linked to Criterion 10 Costing Contribution