Status of Waste Isolation Pilot Plant Repository Reconfiguration
Planned Change Request

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Overview

• Introduction
• Geotechnical Issues
• Proposed Design
• Performance Assessment
• Regulatory Changes
Introduction

• DOE plans to submit a Planned Change Request to the U.S. Environmental Protection Agency and a Permit Modification Request to the New Mexico Environmental Department to change the location of Panels 9 and 10

• EPA Planned Change Request
  • Geotechnical analysis
  • Description of change
  • Design schematics
  • Results of a Performance Assessment
Geotechnical Issues

• Access drifts were initially mined 6 to 30 years ago
• Mined access drifts and rooms in Panels 1 through 8 expected to only stay open for five years
• Original design includes waste disposal on floors and in walls of transportation and ventilation access drifts once Panels 1 through 8 are filled
• Access drifts - currently 14 to 25 ft - will need to be widened to the width of a disposal room (33 ft) to accommodate RH disposal equipment
Geotechnical Issues

• Analyses were conducted to evaluate operational feasibility and safety aspects of original design
  • The surrounding rock in the older drifts is highly fractured
  • High convergence rates and roof beam separation have been observed when drifts are widened
  • Widening drifts for RH disposal presents geotechnical issues
• Based on these facts and operational requirements it may not be possible to continue to safely support some of the areas upon widening
Note: For illustrative purposes only.
Proposed Design

- The new waste disposal Panels 9A and 10A will be located to the south of Panels 4 and 5
- Proposed design will have an open central area with panel closures installed at openings of each panel
Performance Assessment

• The impact of the proposed repository reconfiguration on long-term repository performance has been evaluated with a PA that represents the relocation of Panels 9 and 10.

• The PA (PC3R) evaluated the effects of relocating Panels 9 and 10 and the panel closure redesign.
Integration with Regulatory Agencies

• DOE plans to submit the changes (to EPA and NMED) and for their review and approval process in parallel

• DOE will be conducting meetings
  • Regulatory agency briefings
  • Stakeholder input
Regulatory Changes and Processes

- Current Hazardous Waste Facility Permit limits waste disposal to Panels 1 through 8
- Regulatory approval to relocate Panels 9 and 10 must be requested and obtained from the U.S. Environmental Protection Agency (EPA) and the New Mexico Environment Department (NMED)
Summary

• Geotechnical concerns identified with disposing of waste in access drifts (Panels 9 and 10)

• DOE has prepared the regulatory documentation to request a change to move the location of Panels 9 and 10 to south of Panels 4 and 5

• Documentation will be provided separately to each regulatory agency but in parallel