

Panel Closure Redesign Planned Change Request

Review of Planned Change Request
Submittal to the Environmental
Protection Agency
December 2012





Topics

- Current Regulatory Status
- Option D and Concerns with Option D design
- Proposed new design: Run-of-Mine Panel Closure (ROMPC)
- Panel Closure System Planned Change Request History
- Conclusion



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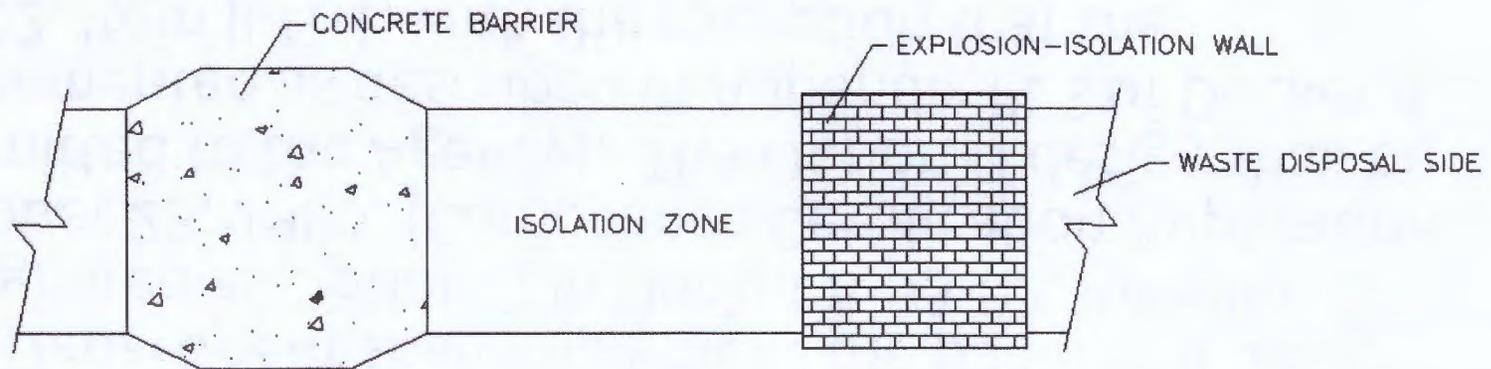
Current Regulatory Status

- *Condition 1: § 194.14(b), Disposal system design, panel closure system.*

The Department shall implement the panel seal design designated as Option D in Docket A-93-02, Item II-G-1 October 29, 1996, (Compliance Certification Application submitted to the Agency). The Option D design shall be implemented as described in Appendix PCS of Docket A-93-02, Item II-G-1, with the exception that the Department shall use Salado mass concrete (consistent with that proposed for the shaft seal system, and as described in Appendix SEAL of Docket A-93-02, Item II-G-1) instead of fresh water concrete.

Option D

- **Option D:** enlarged concrete barrier with Disturbed Rock Zone (DRZ) removed and a larger isolation wall. Concrete barrier fabricated from Salado Mass Concrete (SMC).



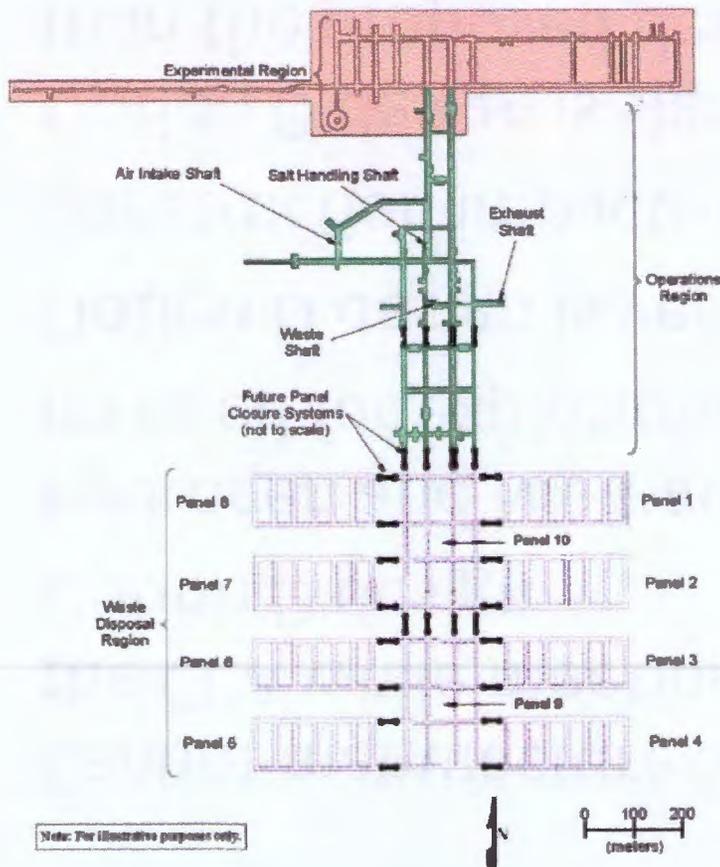
OPTION D. EXPLOSION ISOLATION WALL AND CONCRETE BARRIER WITH DRZ REMOVED



Concerns with Option D

- Cannot manufacture SMC to the specifications in the CCA while meeting the requirements of the Option D design
- Hydrogen and Methane monitoring data shows no need for explosion/isolation wall
- Option D design is very complex to construct
- Construction impacts disposal operations
- Option D design is significantly more expensive than the proposed design

Current Repository Status



Current Status

- Panels 1, 2 & 5: Block Wall Already Installed
- Panels 3 & 4: Substantial Barriers and Bulkheads Installed
 - Hydrogen and Methane monitoring



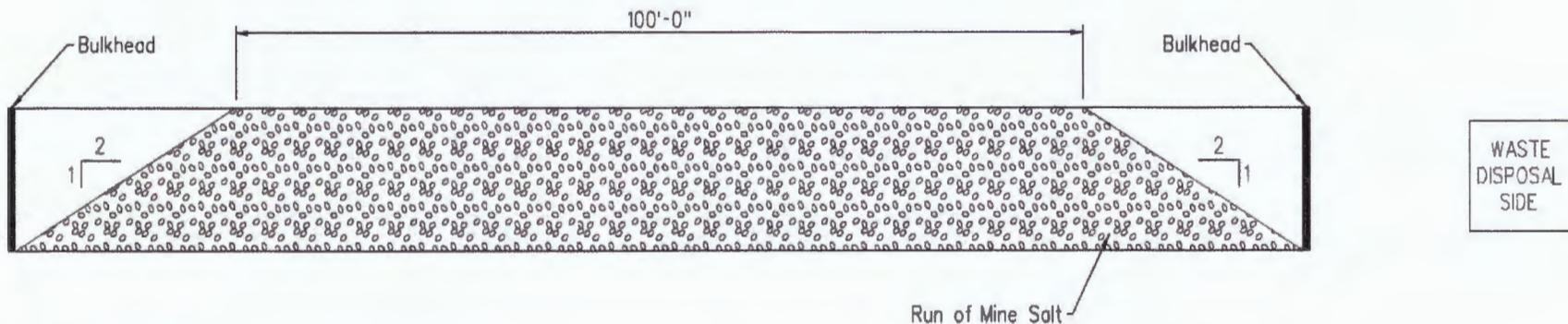
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Proposed New Design Run-of-Mine (ROM) Panel Closure

- One ventilation bulkhead at each end
 - Panels with existing block walls will have only one ventilation bulkhead at the entrance to the panel
- 100 foot backfill of Run-of-Mine (ROM) salt between bulkheads





Panel Closure System PCR History

- September 28, 2011 DOE submitted Panel Closure PCR to EPA
- EPA submitted letter to DOE requesting additional information December 22, 2011.
- DOE provided response to the EPA letter on April 17, 2012.
- Five DOE/EPA technical meetings on PCS details held (October 2011, February, April, October, and November, 2012).
- Revised Panel Closure PA report submitted to EPA on November 5, 2012.



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Conclusion

By moving to the new design:

- Enhance constructability due to simpler design and will meet operational performance requirements
- Increase worker safety during construction
- Reduce impact on disposal operations
- Similar long-term performance as Option D
- Less expensive to construct