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United States Nuclear Regulatory Commission
Protecting People and the Environment

NRC's Review of the Hanford WMA-C Draft Waste Incidental to Reprocessing (WIR) Evaluation

June 18, 2018

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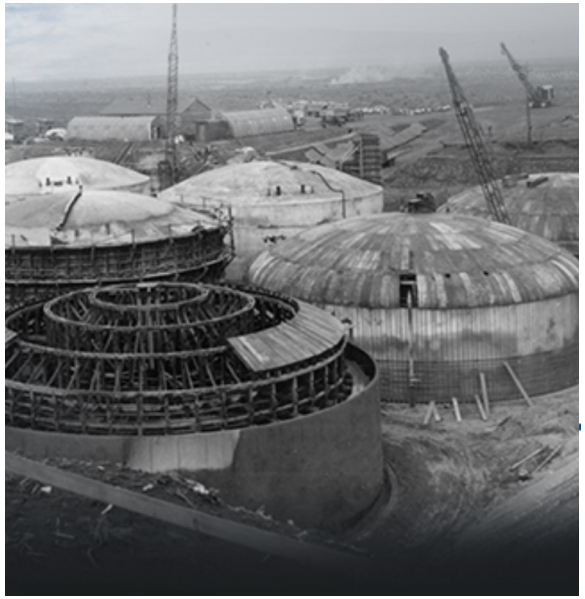
Overview

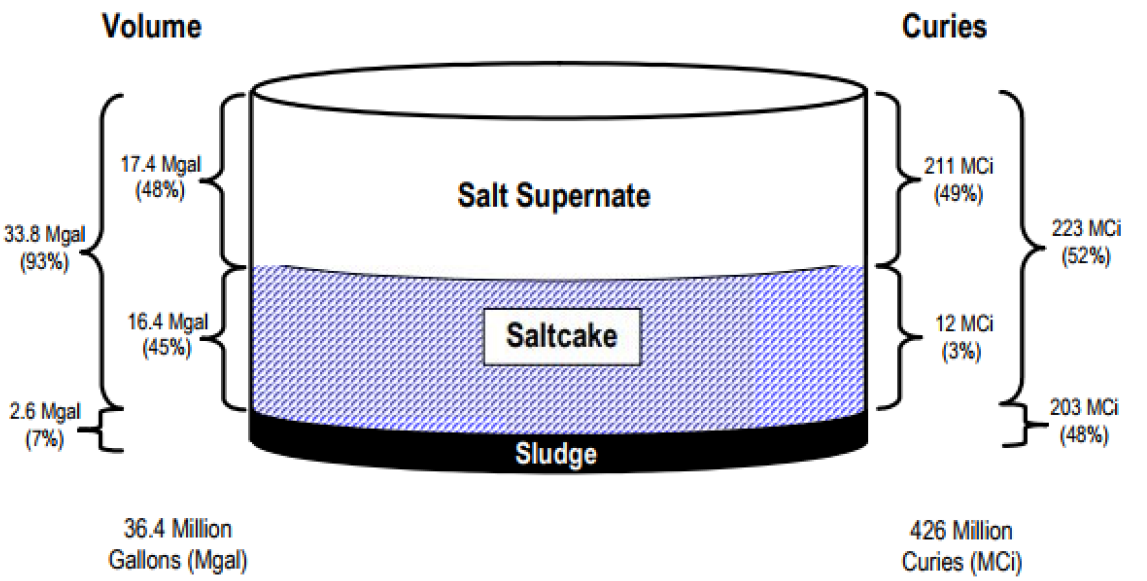
- NRC's role at Hanford
- Criteria
- Products
- Schedule

What is WIR? (theory)

WIR is waste that would be high-level waste (HLW) based on its reprocessing origin, but can be managed as low-level waste because of the lower level of risk it poses. Lower risk can result from:

- Separation and, in some cases, further decontamination of low-level fraction of waste
- Residuals of a higher-activity fraction, left in place and further stabilized





NRC's Role at Hanford

Waste Incidental to Reprocessing (WIR)

- Review of Waste Management Area C (WMA-C) waste determination
- Interagency agreement at Hanford (consultation only)
- NRC will not have a monitoring role at Hanford

NRC's Role at Hanford

- DOE submits its draft WIR Evaluation to NRC for review. Consultation typically includes:

- Scoping meetings or technical exchanges
- Requests for Additional Information
- NRC Technical Evaluation Report (TER)

Consultation

NRC's Role at Hanford - Contacts

- Project Management (lead) – Lloyd Desotell Lloyd.Desotell@nrc.gov x5969
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Criteria for Determining Reprocessing Waste is WIR (i.e., not HLW)

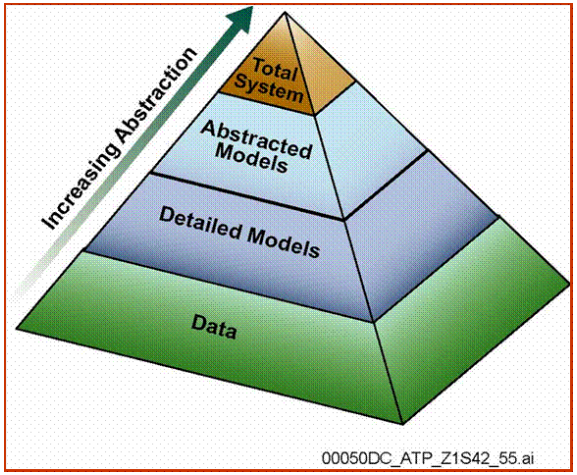
- Three sets of similar criteria:
  - **Hanford – DOE Manual 435.1-1**
  - West Valley – NRC West Valley Policy Statement
  - SRS and INL – National Defense Authorization Act for 2005 (NDAA), Section 3116
- The criteria are generally consistent:
  - All require removing key radionuclides to the maximum extent practical (or "technically and economically practical")
  - All require disposal to meet the performance objectives of (or comparable to) 10 CFR Part 61 (DOE Manual 435.1-1 also has alternative requirements for waste identified as TRU)

Performance Objectives of 10 CFR Part 61, Subpart C

- §61.41 Protection of the general population from releases of radioactivity (dose limit & ALARA)
- § 61.42 Protection of individuals from inadvertent intrusion
- § 61.43 Protection of individuals during operations
- § 61.44 Stability of the disposal site after closure

What is Reviewed

- Staff conducts completeness review of documents submitted
- Staff review the draft WIR evaluation document.
- Staff review the supporting documents (first level).
- Staff review secondary and lower level documents as needed.
- Staff review the performance assessment model, incorporated assumptions, supporting calculations, and model support.
- Staff may develop an independent model to develop risk insights.



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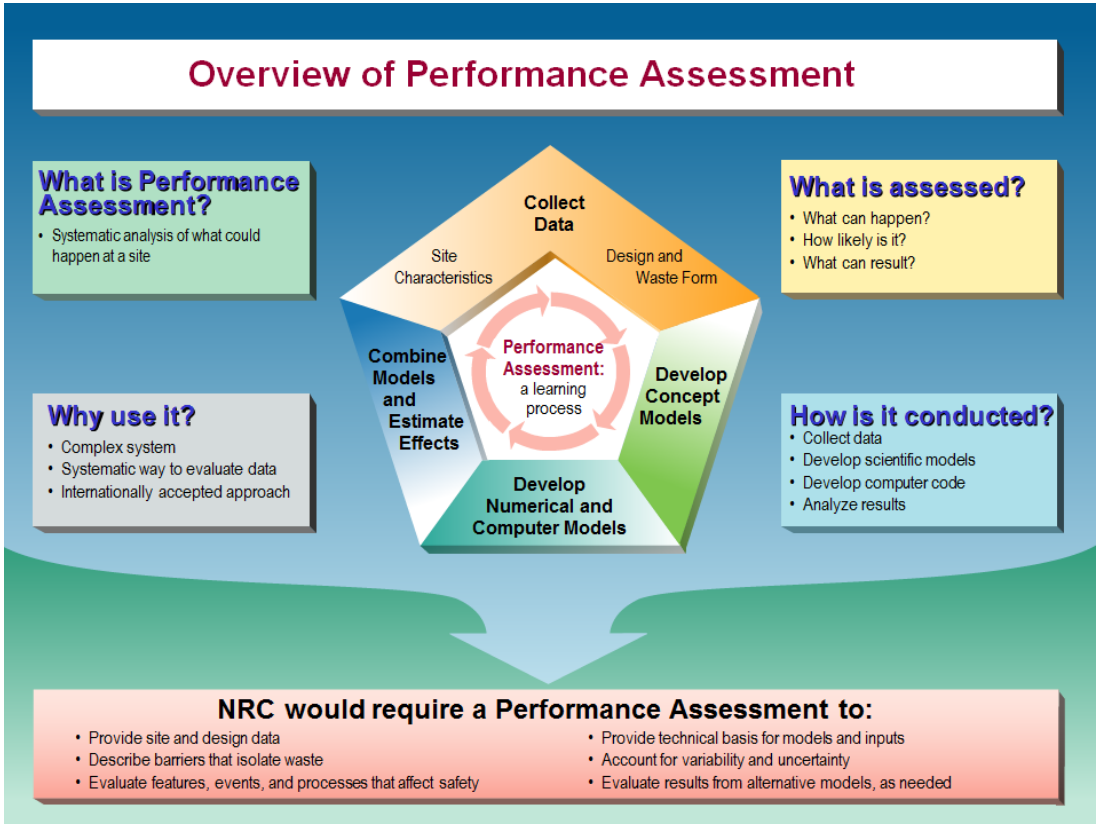

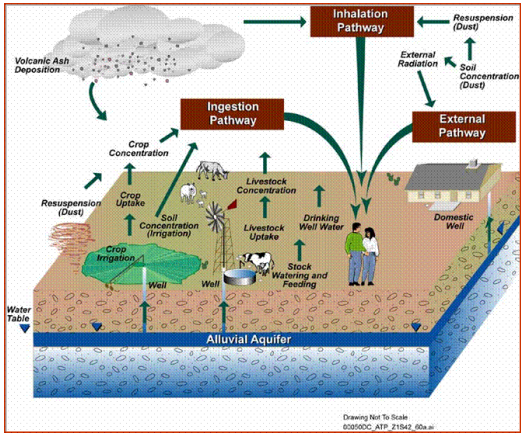

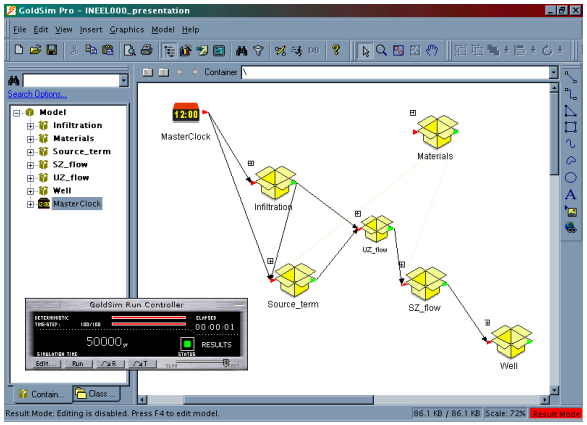

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How is it Reviewed

NUREG-1854

NRC Staff Guidance for Activities Related to U.S. Department of Energy Waste Determinations

Draft Final Report for Interim Use

U.S. Nuclear Regulatory Commission
Office of Federal and State Materials and Environmental Management Programs
Washington, DC 20555-0001

- Staff uses NUREG-1854 to guide the review.
- NUREG-1854 provides areas of review and review procedures.
- ML072360184, 228 pages

How is it Reviewed

- NRC's review is open and transparent.
- Documents are publically available.
- Basis for requests for additional information is provided.
- A report (technical evaluation report) is developed to document the results of the review.
- Documents can be accessed through ADAMS, enter docket number PROJ0736 in the search box.

Other Considerations for the Review

- DOE indicated although the entire draft WIR evaluation is subject to consultation, DOE requested emphasis on criteria 2 (performance objectives) over criteria 1 (removal of key radionuclides).
- DOE requested that NRC determine if DOE demonstrated a reasonable expectation of compliance with the performance objectives for 1,000 years.
- Model results to 10,000 years provided to support risk-informed decision-making.

Schedule

- Receive draft WIR evaluation – **June 4, 2018**
- NRC transmits completeness review letter – July 19, 2018
  - Note: If all the documents necessary to conduct the review are not provided, adjustments to the schedule may be needed
- NRC completes detailed technical review – September 4, 2018
- NRC issues RAIs to DOE – **October 2, 2018**
- DOE transmits RAI responses to NRC – **November 1, 2018**
  - Note: If DOE requires additional time to address RAI responses, the schedule will need to be adjusted
- NRC completes review of RAI responses – January 7, 2019
- NRC completes TER – March 1, 2019
- Teleconference with DOE to discuss findings – March 6, 2019
- NRC transmits TER to DOE – **March 11, 2019**

Concluding Remarks

- NRC is an independent federal agency whose decision is based solely on the merits of the materials provided.
- NRC strives to provide a clear and technically-sound basis for findings.

Thank you for your time and attention