



Idaho Cleanup Project Calcine Disposition Project Draft CSSF 3116 Basis Document

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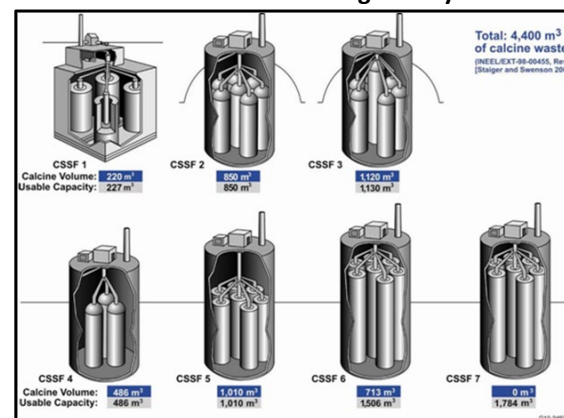
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History of Calcination at INTEC

- Liquid tank waste calcined at two INTEC Facilities
 - Waste Calcining Facility (1963-1981)
 - New Waste Calcining Facility (1983-2000)
- Calcined Solids Storage Facilities (CSSF) aka, “Bin Sets”
 - Designed as the final storage location for 4,400 m³ calcine
 - Six Bin Sets contain calcine waste
 - Bin Set 7 remains empty, in reserve



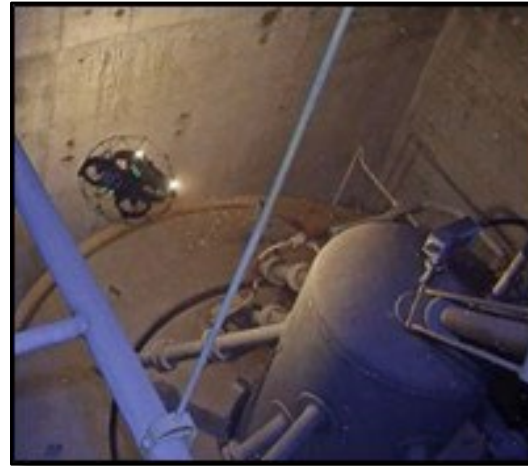
New Waste Calcining Facility



Calcined Solids Storage Facilities
“Bin Sets”

History of Calcination at INTEC

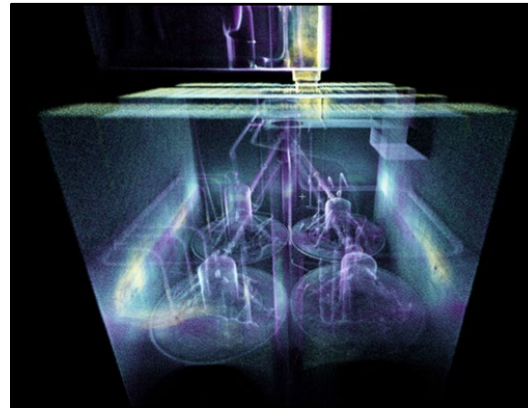
- 1995 Idaho Settlement Agreement: Retrieve and disposition calcine outside the State of Idaho
- Retrieval technology development
 - First of a kind technology (Elios 3 Drone)
 - Full-scale retrieval mockup
 - Protective of humans and environment
- Following retrieval
 - Closure activities commence



Elios 3 Drone Flight Bin Set 1



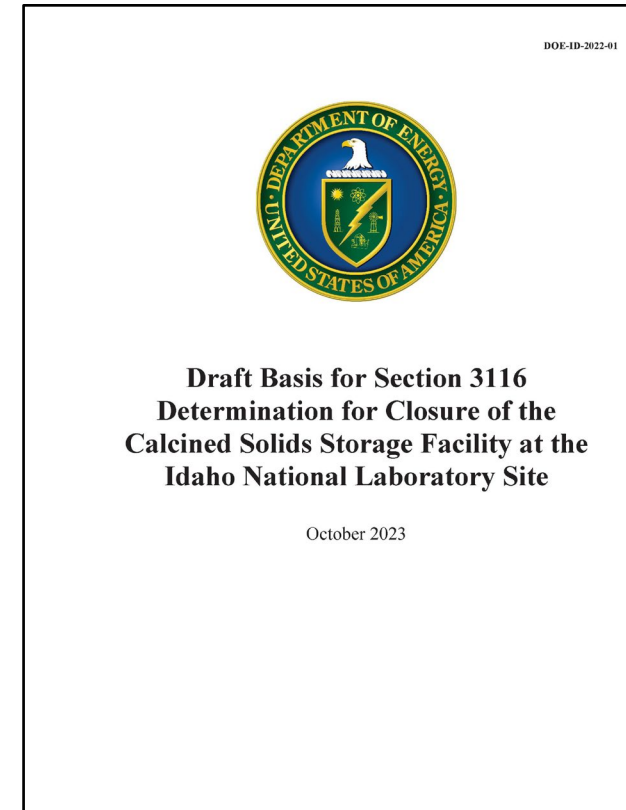
Full-scale Mock-up



LiDAR Data from Elios 3 Drone

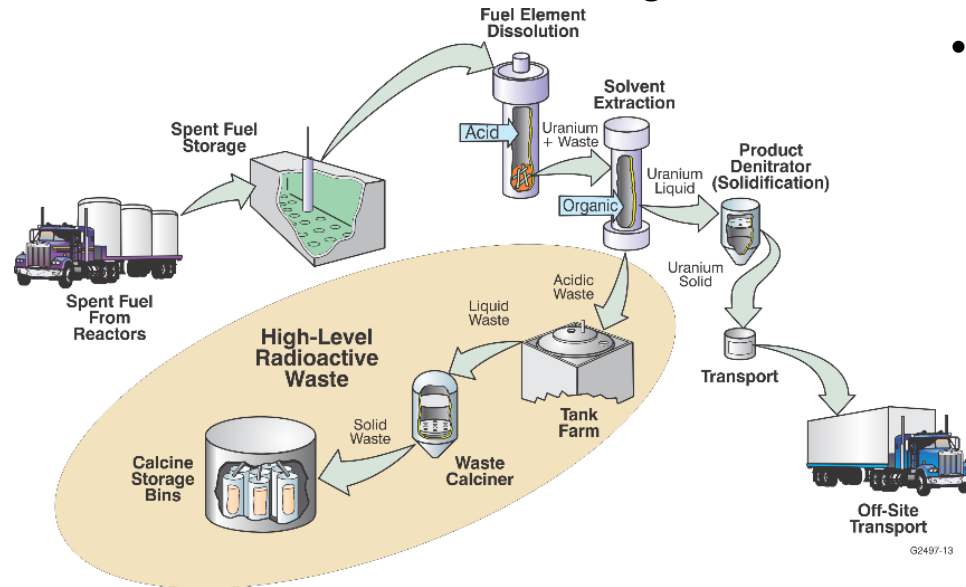
Draft CSSF 3116 Basis Document

- DOE released ***Draft Basis for Section 3116 Determination for Closure of the INTEC Calcined Solids Storage Facility at the INL Site***
- Provides technical analysis to demonstrate Bin Sets closure will meet certain criteria
 - Section 3116 of the “Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005” (NDAA Section 3116)



NDAA Section 3116

- Authorizes the Secretary of Energy, in consultation with the U.S. Nuclear Regulatory Commission (NRC), to reclassify certain waste -- high-level radioactive waste (HLW) to low-level waste (LLW) if criteria are met
- Provides for NRC monitoring after Final 3116 Determination



Spent Fuel Processing and Disposition

- Applies to:
 - INTEC Tank Farm Facility (3116 Determination 2006)
 - INTEC CSSF (i.e., the “Bin Sets”)

NDA Section 3116 Criteria

- Criterion (1)
 - Waste does not require permanent isolation in a deep geological repository for spent fuel or high-level radioactive waste
- Criterion (2)
 - Waste has had highly radioactive radionuclides removed to the maximum extent practical
- Criterion (3)(A)
 - Stabilized waste at closure will meet Class C concentration limits in 10 CFR 61.55 and will be disposed of:
 - (i) in compliance with the performance objectives set out in Subpart C of Part 61 of 10 CFR; and
 - (ii) pursuant to a State-approved closure plan or State-issued permit, or
- Criterion (3)(B)
 - Stabilized waste at closure exceeds Class C concentration limits in 10 CFR 61.55 and will be disposed of:
 - (i) in compliance with the performance objectives set out in Subpart C of Part 61 of 10 CFR;
 - (ii) pursuant to a State-approved closure plan or State-issued permit; and
 - (iii) pursuant to plans developed by the Secretary in consultation with NRC

3116 Technical Analysis

- Evaluates in situ closure of Bin Sets
 - Includes Bin Sets and any integral or support equipment and residual calcine
- Concludes in situ closure will meet NDAA Section 3116 criteria
- 3116 addresses closure of the Bin Sets after completion of calcine retrieval
 - Assumes a base-case volume of 2 in. (depth) of residual calcine remaining in the bins

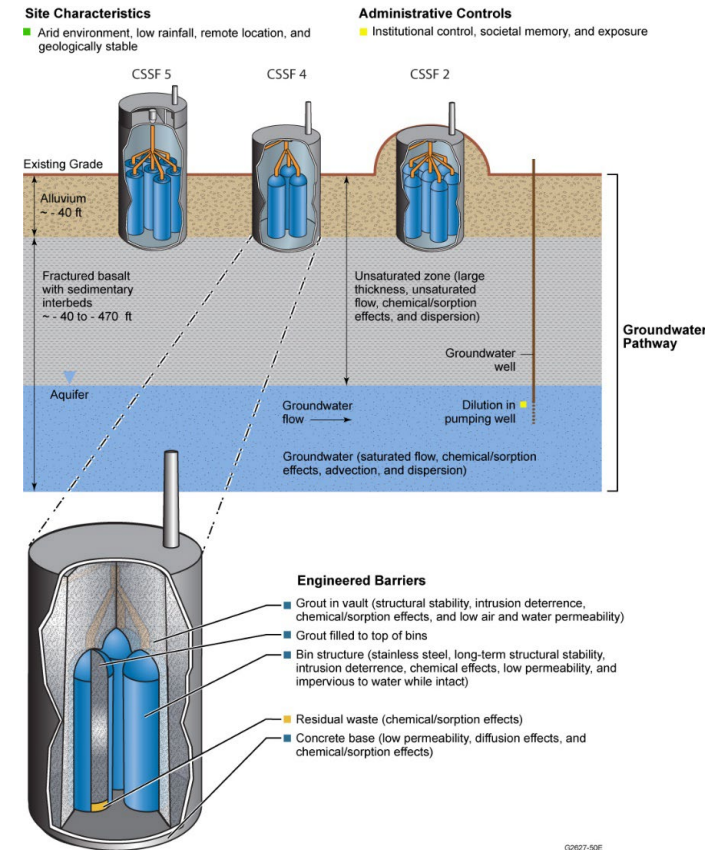


Illustration of the safety concepts and functions incorporated into the conceptual model for in situ closure of the Bin Sets

3116 Review Process

- DOE consultation with NRC is an open, public process
 - Consideration is given to NRC and public comments
- 45-day comment period
 - State, Tribal Nations, other stakeholders, and the public
 - Communication channels established and communicated for receiving comments

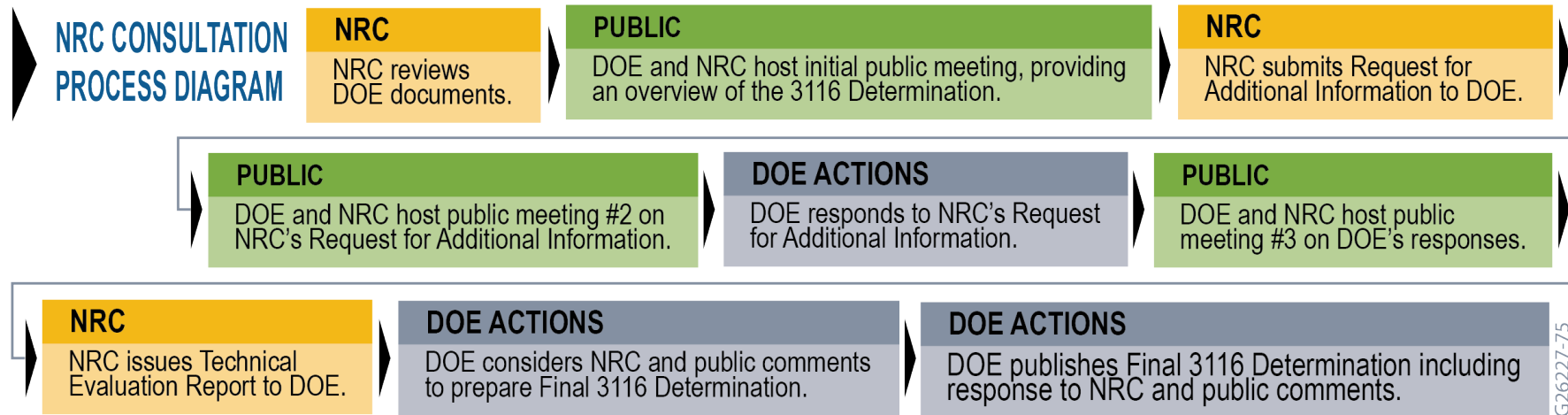


NRC's Consultation Role

- NRC reviews DOE's draft waste determination
 - Evaluates DOE compliance with the performance objectives in 10 CFR Part 61, Subpart C
- NRC and DOE technical review meetings
 - Open to public observation



NRC's Consultation Process



3116 Information and Resources

- DOE-ID web page:
[DOE-ID Public Involvement Opportunities - Department of Energy Idaho Operations Office \(id.energy.gov\)](https://id.energy.gov)
- IEC web page:
[CSSF 3116 Basis Document Review - Idaho Environmental Coalition \(idaho-environmental.com\)](https://idaho-environmental.com)
- Comments may be submitted to:
DraftCSSFBasisDocument@icp.doe.gov



Calcine Bin Sets



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