

Humboldt Bay Power Plant Unit 3 Lessons Learned Decommissioning Surveys and Experiences

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Humboldt Bay Power Plant Unit 3



Site History

- Single Nuclear Unit along with the Humboldt Bay Generating Station (HBGS)
- 1976 - HBPP, Unit 3, was shut down for refueling (upgraded seismic design basis)
- 1980 - decided uneconomical to restart the unit



Site History



- 1984 - submitted a license amendment request (LAR) to possess fuel for up to 30 years, and to decommission using SAFSTOR
- 1998 - Post-Shutdown Decommissioning Activities Report (PSDAR) submitted to the NRC
- 2008 - all spent fuel had been removed from the spent fuel pool and transferred to the 10 CFR 72 licensed ISFSI
- 2013 - License Termination Plan (Rev. 0) submitted to the NRC

Unique Radionuclides of Concern

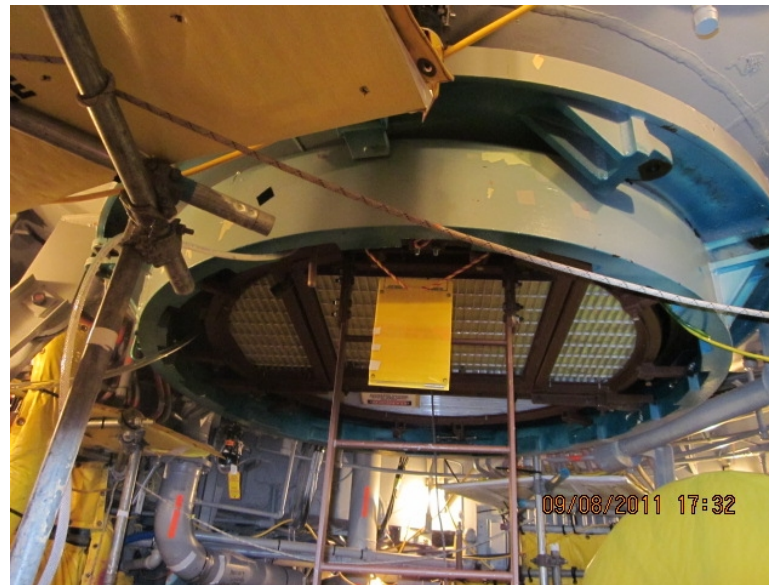
- 1963 - 1969, Stainless steel-clad fuel experienced gross cladding failures
 - Alpha contamination (transuranics) in numerous plant systems
- 1969, transition to zircaloy assemblies
- Over SAFSTOR period beta and gamma emitting radionuclides decayed,
 - Alpha became a more dominant factor to dose
- The primary contaminants of concern are Fe-55, Co-60, Cs-134, Cs-137, Ni-63, Pu-238/241, and Am-241



Small Footprint



Side of vessel



Under-reactor access

- Confined Spaces
- Dismantlement Challenges

Unique Survey Situations



Caisson removal, slurry wall



Partial site release of flooded areas

Conclusions

- Radionuclides of Concern
 - Challenges can arise from failed fuel and decay of beta/gamma radionuclides
 - Health Physics programs need to be adjusted accordingly
- Small Footprints
 - Specialized training/planning for confined spaces
- Unique Survey Situations
 - Traditional decommissioning approaches may not apply
 - Additional strategies/conservatisms may be prudent
 - Open communication with regulators

Conclusions



Speaker Contact Information



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