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Final Status Survey Report Reviews

June 18, 2025
Presubmittal Public Meeting for Nuclear Ship Savannah



Final Status Survey Report (FSSR)



The results of the final status survey (FSS) conducted by a licensee to demonstrate the radiological status of its facility. The FSSR is submitted to the NRC for review and approval.



NUREG-1757, VOLUME 2, REVISION 2

Consolidated Decommissioning Guidance Characterization, Survey, and Determination of Radiological Criteria



Purpose of the NRC Staff

The purpose of the NRC staff review is to verify that the results of the FSS demonstrate that the site, area, or building meets the radiological criteria for license termination.

Section 4.5.1.1.3 Information to be submitted

Section 4.5.1.2.1 Minimal Technical Review

Section 4.5.1.2.2 Detailed Technical Review

Section 4.5.1.2.4 Detailed Review Topics

Section 4.5.1.3 Evaluation Criteria

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- Chapter 5 of the Nuclear Ship (NS) Savannah License Termination Plan (LTP) which notes the references for the FSS plans.
- Review summary of variations from LTP and survey plans/justification for changes
- Review summary of significant events/investigations performed/judgmental sampling
- Random verification of transcribed values of datum from laboratory reports
- Review confirmatory survey data to verify agreement with FSS

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- Review inspection reports for the FSS period to verify no findings regarding survey conduct
- Instruments
 - Can measure all Radionuclides of Concern (ROC)/Surrogates
 - •Gross or Surrogate DCGL determination
 - Calibration/efficiency determination
 - •MDCs 10%-50% of Derived Concentration Guideline Level (DCGL)
- Verification of survey planning
 - basis for # of measurements
 - •scan Minimum Detectable Concentrations (MDC) determination
 - survey unit size

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- RAIs needed to resolve concerns
- Review issues identified by interveners and stakeholders and allegations to ensure resolution
- For summary at license termination:
 - Develop a spreadsheet to note maximum and average levels of residual contamination and potential dose from each survey unit (also allows check against Environmental Protection Agency's Memorandum of Understanding criteria)
- Safety Evaluation Report to document what staff evaluate/did during review and whether the FSSR adequately demonstrates compliance with 10 CFR 20, Subpart E.

Special Attention



- Scanning coverage and exceedance of investigation levels
- Biased sampling/exceedances of the DCGL_W
 - (bounded/investigated, location, DCGL_{EMC}, etc.)
 - Impact to adjacent survey units
 - Verify DCGL_{EMC} determination
- How the Sum of the Fractions is determined, including:
 - all ROCs considered
 - operational vs base-line DCGL values used
 - insignificant contributors considered
 - surrogate DCGLs determined correctly
 - background/reference materials
 - negative values
 - non-conservative biases present in data

Special Attention



- Verify statistical tests outcomes, if needed
- Does FSS data verify the survey plan (e.g., compare relative shift based on FSS data vs relative shift used for planning FSS)
- QA/QC: verify insignificant contributors and surrogate ratios are appropriate, review duplicate and replicate evaluations to see if in agreement
- Verify all appropriate media considered (small structures, piping, water components etc.) for demonstration of compliance



Thank You



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