



Overview of Staff Observations in Reviewing Radwaste Systems in DC and COL Applications for New Nuclear Power Plants

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Outline

- **Technical and Regulatory Topics on Radwaste Systems**
- **Focus on DC and FSAR Chapter 11 Topics**
 - Radwaste processing and radiation monitoring equipment
 - Radioactive liquid and gaseous effluent source terms
 - Dose assessments and definition of offsite receptors
 - COL information items & ITAACs
- **Resolution of Requests for Additional Information (RAI)**
 - RAI Process
 - Closure of RAIs



Issues with Regulations & Guidance

- Applications with incomplete information, such as:
 - referrals to NRC regulations and Regulatory Guides
 - conceptual designs under Part 52.47(a)(24) & (25)
 - treatment of guidance in RGs & SRP
 - endorsements of industry standards and guidance
 - treatment of SSC with respect to Part 20.1406
 - considerations of TMI action plan items
 - commitments in meeting RG 1.97, Rev. 3 vs Rev. 4



Issues with System Designs

- Applications with incomplete information, such as:
 - descriptions of design features and system interfaces
 - performance characteristics of adsorption and filtration media
 - performance characteristics of process and effluent radiation monitoring equipment
 - descriptions and locations of liquid effluent release points
 - endorsements of industry standards and guidance (ANSI/HPS N13.1-1999 and ANS 42.18-2004)
 - descriptions of systems and components with respect to Part 20.1406
 - descriptions of initial and startup tests
 - commitments and descriptions of ITAACs



Issues with COL Information Items

- Applications with incomplete information, such as:
 - confirming performance of adsorption and filtration media
 - confirming performance of process and effluent radiation monitoring systems
 - commitments to operational programs before fuel load (ODCM, SREC, REMP, & PCP)
 - commitments in complying with Section II.D of App. I to Part 50 on ALARA cost-benefits
 - addressing operational aspects of Part 20.1406
 - QA/QC commitments on procurement, fabrication, and installation of LWMS, GWMS, SWMS, and PRMS
 - commitments to system ITAACs



Issues with Dose Assessment

- Applications with incomplete information, such as:
 - basis for liquid and gaseous effluent source terms
 - rad source term development approach & models
 - assumptions and parameters used in dose assessments
 - dose receptor locations and exposure pathway assumptions
 - FSAR dose model assumptions vs those of ESP & ER
 - basis for revised X/Q and D/Q parameters
 - compliance with Part 20.1301(e) (external rad and effluents)



Issues with RAI Process

- Applications with inconsistent information, such as:
 - resolved RAI responses not included in DCD/FSAR updates
 - resolution of an RAI voiding the closure of a prior RAI
 - technical information presented in RAI responses but not included in proposed revisions of DCD/FSAR
 - RAI responses with internally inconsistent tech. and reg. details
 - RAI responses ignoring ramifications on related technical and regulatory matters
 - RAI responses overtaken by external matters, rather the staff's initial technical and regulatory concerns



Thank you for your attention

Will entertain questions at the end of this session

**Follow-up questions
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