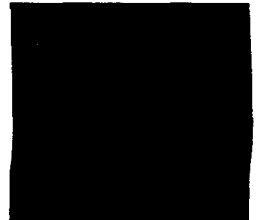


Spent Fuel Transportation Risk Assessment at SNL

Overview

- What is it (outcome)?
 - A NUREG that analyzes the risks of transporting SNF, including risks from routine transportation and transportation accidents. The risks from very severe, extra-regulatory accidents are also analyzed. Canistered fuel transportation is considered. The document revisits and finalizes NUREG/CR-6672. A draft of the NUREG will be reviewed by staff, then externally peer-reviewed and reviewed by the public.
- Why is it being done?
 - Background: role, mission, issues & considerations
 - NRC's safety & outreach responsibilities
 - Potential shipments
 - Continuing review [FEIS (NUREG-0170), "Modal Study" (NUREG/CR-4829), "Reexamination..." (NUREG/CR-6672)]
 - Safety not at issue
 - Purpose: how will it be used?
 - Solicit and respond to public comment
 - Refine explanation of level of safety in spent fuel transportation
 - Answer NUREG/CR-6672 and PPS-related questions
 - Provide updated benchmark for environmental assessments
 - Objective?
 - Further quantify consequences and probabilities of severe accidents
- How is it being done (methodology)?
 - Draft NUREG: Computer modeling and analysis, following basic NUREG/CR-6672 approach
 - Final NUREG: Revised Draft NUREG based on response to staff, peer review and public comments
- What might it say (results preview)?
 - Part I Comparison
 - Previous studies indicated...
 - This study estimates that...
 - Progressive reduction in estimated risk as analytical fidelity increases
 - Part II Conclusions based on findings
 - Lowers previous (already low) estimates of risk
 - Reconfirms NRC's finding that SNF transport risks are acceptably low
 - Apparently no releases from SNF shipments with inner welded canister
 - Release of material during SNF shipment is, say, less than a 1 in 10,000,000 event
- Who is it for?
 - Public, media, industry, States, NRC and other federal agencies



Project Status and Schedule

- **Draft NUREG Report (MD 3.7/NUREG-0650) Graded structure/content**
 - Public summary [All public]
 - Main body text [states, general science public, science media]
 - Appendices [industry, other Federal Agencies]
 - Electronic and printed versions (latter to include NRC (visualization) Brochure on CD, along with color graphics and movies)
- **Technical (SNL – Doug Ammerman, Carlos Lopez, Ruth Weiner)**
 - New rail event trees and updated truck event trees
 - RADTRAN.6: includes elevated releases, improved uncertainty analysis, loss-of-shielding and economic analyses
 - Structural and thermal analyses of accidents involving licensed casks (HI STORM and NAC), including both canistered and uncanistered fuel
 - Source term includes rod-to-cask model, contribution of fuel pellet rim to releases
 - More precise structural and thermal analyses providing better estimate of release fractions
 - Updated population data
 - Updated traffic accident data for both truck and rail
- **Policy/Sensitive**
 - Continued public apprehension, disapproval of SNF shipments by certain states/NGOs
 - Support, or supplant, NUREG-0170?
 - Retain or curtail comparisons with previous studies? Estimated LCFs (collective dose) or Unit Risk Factors?
 - Parallel or sequential Peer/Public reviews?
- **Programmatic**
 - Completion of analyses
 - Sandia report writing clarity
- **Next scheduled SFST interactions:**
 - Pre-meeting with management (9/16/09); Presentation to the staff (9/17/09 a.m.); Post-meeting with key reviewers (9/17/09 p.m.)
- **Key milestone plan**

<ul style="list-style-type: none"> – Visualization Brochure nearly complete – Thermal analysis of casks 10/31/2009 – Source term estimation 10/2/2009 – Structural analysis of casks 10/22/2009 – Consequence analysis 11/13/2009 	<ul style="list-style-type: none"> First draft NUREG to NRC 12/18/09 NRC comments to SNL 2/12/2010 Peer review (ORNL) 3/8 – 7/20/2010 Publish Draft & Public comment 9/1 – 11/2/2010 Final draft NUREG to NRC 1/11/2011
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