

release

Assessment Activities in RES

- Aircraft attacks on reactors and spent fuel pools
- Explosive attacks on reactors and spent fuel pools
- Radiological dispersal devices
- Cyberterrorism
- Insider threats
- Force-on-force modeling

Information in this record was deleted
in accordance with the Freedom of Information
Act, exemptions b1, b5
FOIA-2004-0226

Revisions Ex 2 h5

This page release

H/4

Revised

Assessment of NPP Vulnerabilities to Aircraft Attacks

- Characterize the generic vulnerabilities of NPP reactors and spent fuel pools to aircraft attacks
 - Likelihood of damage to SSCs
 - Likelihood and magnitude of offsite radiological consequences
- Identify viable mitigation strategies
- Develop analysis tools for identifying and characterizing vulnerabilities

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Cross-Threat Products of Aircraft Assessment

- Structural and Fire Analysis Results
 - Effects of explosives and impacts on typical walls and structures germane to many threat types
- Systems Analysis Tools
 - A fault tree containing detailed location-based failure information for two demonstration plants
 - Allows threats from any source to be assessed once affected locations are identified

Cross-Threat Products (continued)

- Event Progression (MELCOR) Simulation Results
 - Results likely apply to similar scenarios caused by other threat types
 - MELCOR models specifically developed to represent events and phenomena that are unique to malevolent scenarios
 - Scenarios where large areas of buildings are compromised
 - Air oxidation and release; rubble bed filtering, etc.
 - Mitigation
 - Emphasis on best estimate modeling with uncertainty considerations

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Cross-Threat Products (continued)

Full use will be made of the analyses of source term and consequence estimates conducted for aircraft threats when performing the vulnerability assessments for other threats.

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Purpose of Pilot Plant Assessments

- Integrate structural, fire, fragility, systems, and consequence analyses to gain a risk perspective on the vulnerability of NPP reactors and spent fuel pools to a broad range of terrorist attacks
- Identify potential mitigation strategies for reducing the consequences of terrorist attacks

Consequence Code Enhancements and RDDs

- Phased improvements to MACCS for use in vulnerability assessments
- Food pathway modifications to MACCS
- Modifications to MACCS' economic model
- Integrated assessment techniques tailored to assessing different types of RDD threats
- Validated models for realistic RDD emergency response planning

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Cyberterrorism

- Develop the
- Applicable to other licensed facilities and activities

Ex 2

Portions Ex 2