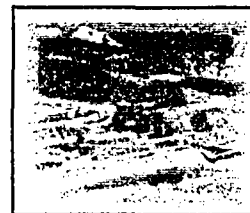
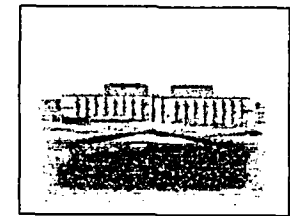
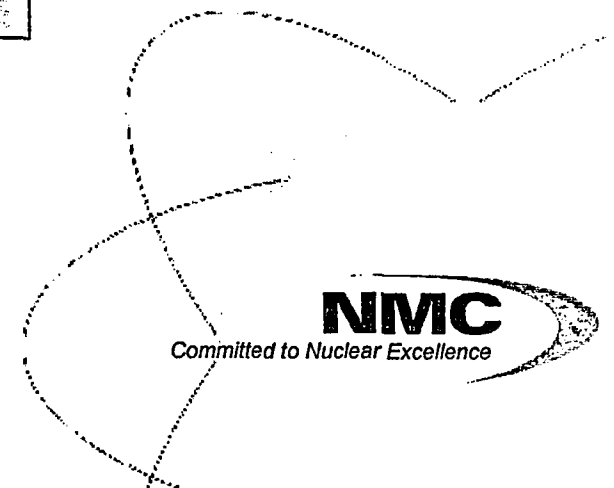


NMHC

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**Alternative Source Term -
Full Scope
March 6, 2006**

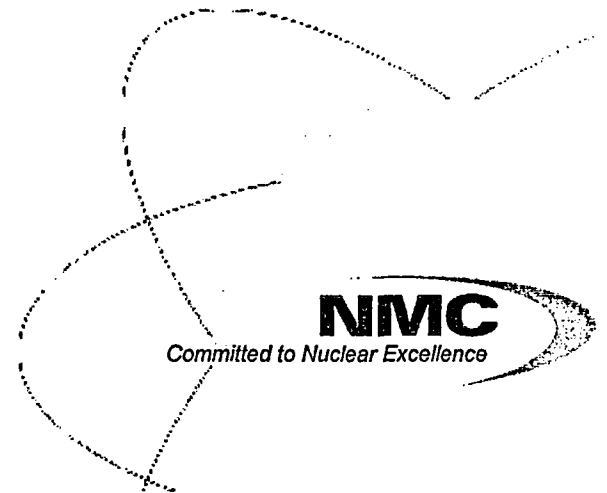


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Purpose

- Facilitate AST review
 - Support RFO in March 2007
 - Implement AST in January 2007
- Discuss technical background related to Monticello AST



Project Team

Manager of Projects:

Pat Burke

Nuclear Licensing Manager:

Gabor Salamon

Project Engineer:

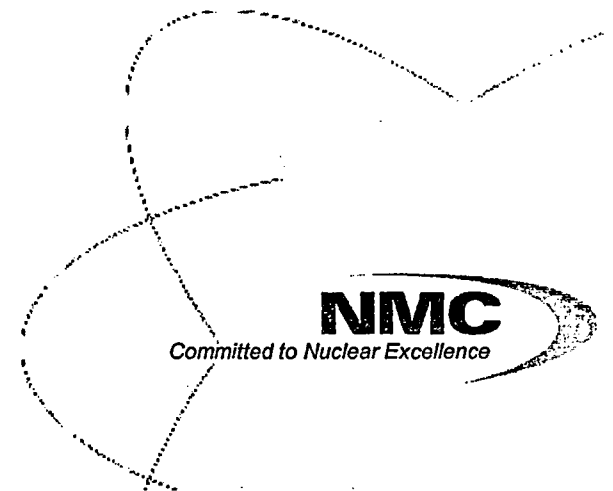
Melissa Limbeck

Nuclear Licensing Engineer:

Rick Loeffler

Engineering Support:

Kathryn Shriver



Agenda

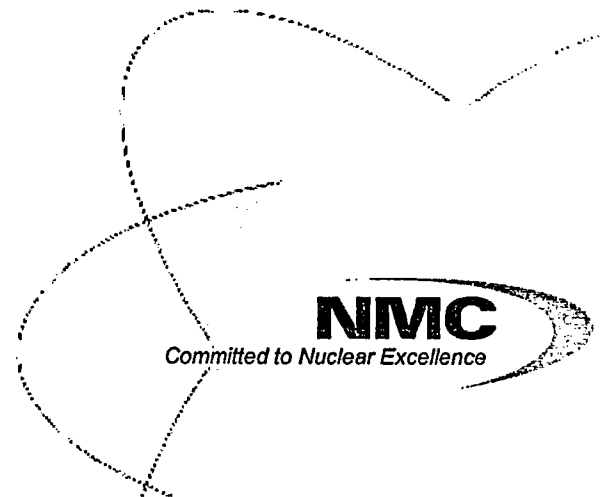
- Full-Scope AST Accident Analysis
- Control Room Configuration
- Technical Specification Changes

Accident Analysis – Source Term

- Consistent with RG 1.183
 - Compliance Matrix included in license amendment request
- Core inventory calculation revision
- Full scope core inventory using ORIGEN 2.1

Accident Analysis – Dispersion Factors

- Calculation previously submitted with AST FHA
- Additional dispersion factors for new receptor location identified during GL 2003-01 test
- Changes to meteorological data and release height identified in AST-FHA
- Assumptions
- Results



Accident Analysis – LOCA

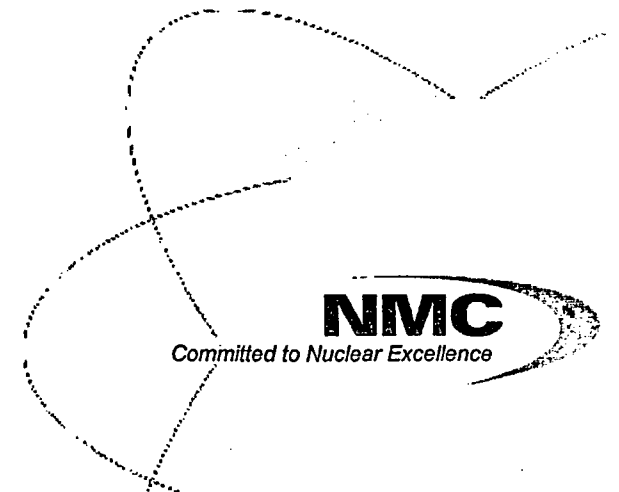
- Assumptions
- Results
- Standby Liquid Control (SBLC) model
- Steam line deposition model
- TSC design considerations, schedule

Accident Analysis – LOCA

- MSIV Leakage / 10CFR50 Appendix J Exemption
 - Add separate TS requirements for Main Steam Pathway (including MSIVs) leakage
 - Exemption to Appendix J, Option B requirements for Main Steam Pathway leakage

Accident Analysis – MSLBA

- Assumptions
- Conservatively modeled as 2 hour ground level release
- Results



Accident Analysis – CRDA

- Assumptions
- SJAE operating case – assumes offgas treatment system (compressed gas storage) is bypassed
- Isolated condenser case (includes provision for MVP trip)
- Results

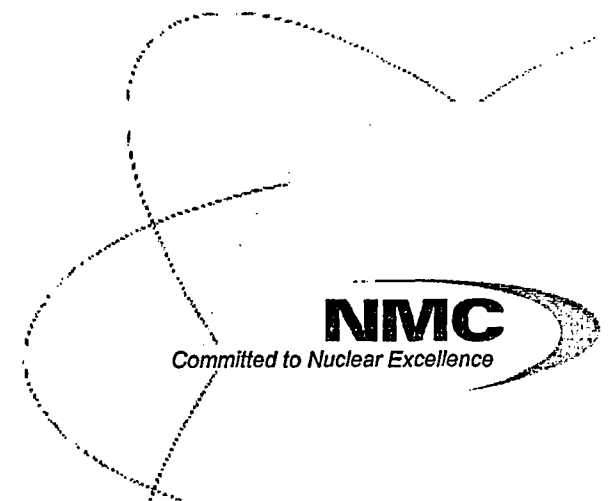
Accident Analysis – FHA

Assumptions

- Changes from previously submitted FHA (revised source term and dispersion factor)
- Will supersede previously submitted FHA when approved
 - No impact on FHA currently under review
- Results

Control Room Configuration

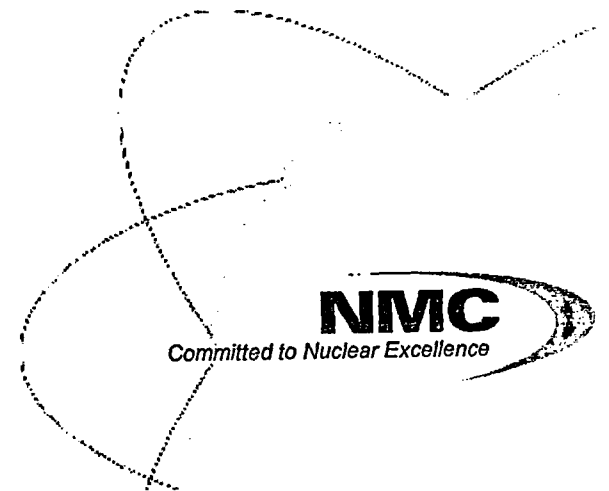
- Relationship to AST analysis assumptions
- Analysis assumptions confirmed by tracer-gas testing in June 2003



Technical Specification Changes

- Control Room Habitability instrumentation
- MVP isolation instrumentation
- SBLC requirements
- Reactor coolant chemistry (iodine)
- Control Room Habitability requirements
- Primary Containment Isolation Valves
- ITS pages submitted as supplement

Thank You



Accident Dose Summary

Table 2.2-4 LOCA CR Operator Dose		
Source	TEDE	Regulatory Limit* (TEDE)
Internal (Inhalation) Dose	2.74 rem	---
External (Shine) Dose	0.66 rem	---
Total Dose:	3.40 rem	5 rem

*Per RG 1.183 and 10 CFR 50.67

Table 2.2-5 LOCA Doses at EAB and LPZ Locations		
Location	TEDE	Regulatory Limit** (TEDE)
EAB Dose*	1.31 rem	25 rem
LPZ Dose	1.72 rem	25 rem

* The EAB dose represents the maximum 2-hour TEDE over the accident period

**Per RG 1.183 and 10 CFR 50.67

Table 2.3-2 MSLBA CR Operator Doses		
Source Term Case	TEDE	Regulatory Limit* (TEDE)
Dose with maximum equilibrium radioiodine	0.33 rem	5 rem
Dose with pre-accident radioiodine spiking	3.25 rem	5 rem

* Per RG 1.183 and 10 CFR 50.67

Table 2.3-3 MSLBA Doses at EAB and LPZ Locations (Doses with maximum equilibrium radioiodine)		
Location	TEDE	Regulatory Limit* (TEDE)
EAB Dose	0.11 rem	2.5 rem
LPZ Dose	0.02 rem	2.5 rem

*Per RG 1.183

Table 2.3-4 MSLBA Doses at EAB and LPZ Locations (Doses with pre-accident radioiodine spiking)		
Location	TEDE	Regulatory Limit* (TEDE)
EAB Dose	1.05 rem	25 rem
LPZ Dose	0.20 rem	25 rem

*Per RG1.183 and 10 CFR 50.67

Table 2.4-3 CRDA CR Operator Dose		
Location	TEDE	Regulatory Limit* (TEDE)
CR Operator Dose (SJAE Operation)	1.70 rem	5 rem
CR Operator Dose (MVP Isolation)	0.56 rem	5 rem

*Per RG 1.183 and 10 CFR 50.67

Table 2.4-4 CRDA Doses at EAB and LPZ Locations		
Location	TEDE	Regulatory Limit* (TEDE)
EAB Dose (SJAE Operation)	1.73 rem	6.3 rem
EAB Dose (MVP Isolation)	0.18 rem	6.3 rem
LPZ Dose (SJAE Operation)	0.79 rem	6.3 rem
LPZ Dose (MVP Isolation)	0.08 rem	6.3 rem

*Per RG 1.183

Table 2.5-3 FHA CR Operator Dose		
Location	TEDE	Regulatory Limit* (TEDE)
CR Operator Dose	4.29 rem	5 rem

* Per RG 1.183 and 10 CFR 50.67

Table 2.5-4 FHA Offsite Dose		
Location	TEDE	Regulatory Limit* (TEDE)
EAB Dose	1.61 rem	6.3 rem
LPZ Dose	0.31 rem	6.3 rem

* Per RG 1.183