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DATE OF MEETING

8-15-00

The attached document(s), which was/were handed out in this meeting, is/are to be placed in the public domain as soon as possible. The minutes of the meeting will be issued in the near future. Following are administrative details regarding this meeting:

Docket Number(s) 50-382

Plant/Facility Name Waterford Steam Electric Str., Unit 3

TAC Number(s) (if available) MA 7999

Reference Meeting Notice dated 8-4-00 (ML003737996)

Purpose of Meeting (copy from meeting notice) To discuss Control Room habitability, specifically, the dose calcs. performed by the licensee to meet 10CFR 50, App. A GDC 19, Control Room.

NAME OF PERSON WHO ISSUED MEETING NOTICE

Jeffrey F. Harold

TITLE

Project Manager

OFFICE

PD IV - 1

DIVISION

NRR / DLPM

BRANCH

Distribution of this form and attachments:

Docket File/Central File

PUBLIC

N. Kalyanam.

DFOI

Docket No. 50-382



## **Proposed Changes to Containment Building Penetration Tech Spec**

Waterford, Unit 3 NPF-38

Presentation to NRC  
Rockville, Md.  
August 15, 2000



## **Agenda**

- **Introduction**
- **Objective**
- **Background**
- **Scope of Request**
- **Impact on FHA Analyses**
- **Control Room In-leakage**
- **Conclusions**



## **Objective**

- Obtain the Technical Specification amendment for Containment Building penetration requirements.
  - Submitted as NPF-38-226 January 12, 2000.
  - Response to RAI on June 15, 2000
  - Had requested approval by August 2000.



## **Background**

- TS 3.9.4 requires hatch, one door of each airlock, and each 'direct access' penetration be closed during fuel movement and core alterations
- Requirement based on mitigation of Fuel Handling Accident consequences



## Scope of Request

- Revise TS 3.9.4 to permit the containment hatch, airlocks, and penetrations to be open - but capable of being closed - during fuel handling and core alteration activities.
- Revise TS SR to be consistent with the new LCO.



## Impact on FHA Analyses

Receptor Location	Thyroid (Rem)	Whole Body (Rem)	Skin (Rem)
<b>EAB</b>			
New Design Basis	53.70	0.176	
Dose Limit	75	6.25	N/A
<b>LPZ</b>			
New Design Basis	6.05	0.02	
Dose Limit	75	6.25	N/A
<b>Control Room</b>			
New Design Basis	0.032	0.015	0.623
Dose Limit	30	5	30



## **Conservatism in CR Dose Analysis**

- 105% of 108% licensed power
- Conservative burnup (up to 70 GWD/MTU)
- Instantaneous release
- Licensing basis atmospheric dispersion factors
- Peaking factor of 1.8 vs 1.65 (in RG)



## **Impact on FHA Analyses**

- No current CR dose analysis of FHA in containment
- UFSAR 15.7.3.4 describes FHA in FHB
  - FHB filtration mitigates dose impact
  - Analyzed for 105% of licensed power
  - Peaking factor of 1.65
- UFSAR 15.7.3.4.6 notes FHA CR dose bounded by LOCA



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## **Control Room In-leakage**

- W3 analyses assume 13 cfm in-leakage.
- W3/EOI has been following and participating in the industry CR in-leakage issue resolution.
- W3 has a robust CR habitability design.
- Design assessment and testing provide reasonable assurance that actual in-leakage is very low.



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## **Assessment of the Vulnerability of Control Room Envelope to Unfiltered In-leakage**

- Ductwork and HVAC equipment are within the CRE boundary
- Testing of normal intake isolation valves demonstrates that any in-leakage would be filtered.
- Routine TS SR testing of the positive pressure CRE provide continued assurance of boundary integrity.
  - Testing demonstrates pressure of 0.125 in.w.g.
  - Low flow rate required for pressurization
- W3 design utilizes separate air intakes which allows the operator to select the least radioactive air intake if no isolation has occurred.



## *Entergy* **Conclusions**

- These requested changes should be found acceptable based on:
  - Resulting doses provide adequate margin to the acceptance criteria of 10CFR50 Appendix A, GDC-19 and 10CFR100.
  - The increase in CR operator dose is negligible.
  - Defense-in-depth for radiological barriers are maintained.
  - There is reasonable assurance that actual CR in-leakage is low substantiating the conclusion of adequate operator protection.
  - The change provides operational flexibility and reduces unnecessary wear on safety related equipment.