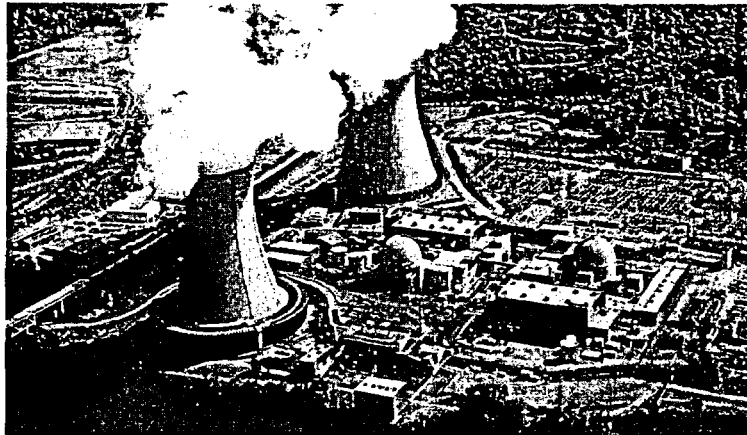


## *Containment Conversion Meeting*

*August 5, 2003*



**FENOC**  
FirstEnergy Nuclear Operating Company

### *Agenda*

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- Introductions
- Objectives
- Background
- Plans to Modify MAAP Code
- Potential Impact on Containment Design Pressure
- Modified MAAP Submittals
- Potential Impact on License Amendment Requests
- Staff Comments & Discussion
- Conclusions

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## ***Objectives***

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- Advise Staff on Going Forward Plans on:
  - Revised Containment Analysis
  - Containment Conversion
  - Best Estimate LOCA Analysis
  - Large Power Uprate
  - Schedules
- Obtain Staff Feedback on Plans

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Florida Nuclear Operating Company

## ***Background***

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- Westinghouse Submitted MAAP5 Topical March 2001
- BV Atmospheric Containment Conversion License Amendment Request (LAR) Submitted June 2001
  - Dependent on MAAP5 Topical
- Containment Conversion Assumed in Best Estimate LOCA LAR and Large Power Uprate Efforts

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### ***Modified MAAP Code***

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- MAAP5 Topical Report Withdrawn
- Revising MAAP to Align with Previously NRC Approved Methods
  - Removed Forced Convection and Entrainment
  - Incorporating Tagami/Uchida Heat Transfer
  - Treatment of LOCA Blowdown Consistent with GOTHIC (Aerosols)

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Full-Order Nuclear Core Simulation

### ***Modified MAAP Code - continued***

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- Single Node Model with Tagami/Uchida Heat Transfer used for Calculating:
  - Peak Pressure
  - EQ Temperatures
  - Liner Temperatures
- Multi Node Model with Conservative Heat Transfer used for Calculating:
  - LBLOCA NPSH
  - SBLOCA Sump Water Level

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Full-Order Nuclear Core Simulation

### ***Modified MAAP Code - continued***

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- Benchmarking Modified MAAP against GOTHIC
- Benefits of Modified MAAP
  - Improved Accounting of Water Holdup for NPSH, Water Inventory and Debris Transport Calculations
  - Supports Timely Submittal
  - Provides Common Platform for PRA & Containment Applications

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### ***Potential Impact on Containment Design Pressure***

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- Evaluating Changes that Effect Containment Peak Pressure
  - Initial Containment Pressure Condition
  - MSLB Mass & Energy Releases
  - Heat Sinks
- May Require Increasing Design Pressure

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## ***Modified MAAP Submittals***

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- Current Containment Conversion LAR
  - Partial Withdrawal of non Alternate Source Term/Control Room Habitability Portion
- Docket Details of Meeting

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Probing Nuclear Containment

## ***Modified MAAP Submittals - continued***

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- Pre-application Submittal - Fall 2003
  - Revised MAAP Methodology Description
  - Revised MAAP Benchmarks to International Standard Problems and Other Approved Applications
  - Revised Input Parameters Including Revised Mass & Energy Releases for MSLB
  - Key Containment Analysis Results

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### ***Potential Impact on License Amendment Requests (LARs)***

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- Revised Containment Conversion LAR
  - Expect to Submit June 2004
  - Stand Alone, No Topical Report
- Best Estimate LOCA Analysis LAR
  - Withdraw & Resubmit After Revised Containment Conversion LAR is Submitted
- Planned Large Power Uprate LAR
  - Expect to Submit 1st Quarter 2004
- Implementation in 2006



### ***NRC Staff Comments & Discussion***

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- Containment Analysis Methods
- Staff Review Approach

