



**RIC 2013
Issues Related to Gas
Accumulation and Management**

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Overview

- Purpose and status of TI-177
- Gas management and accumulation issues
- Future inspections associated to gas accumulation

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Temporary Instruction (TI) 2515/177

- Focused on gas management and accumulation of:
 - Emergency core cooling systems
 - Decay heat removal systems
 - Containment spray systems
- Inspection completion date was December 31, 2012

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Inspection Issues

- Quality of design reviews
 - RHR flashing due to shutdown-LOCA
 - Unidentified gas susceptible locations
 - Air-entraining vortices
 - Normally voided sections of piping not evaluated
- Void removal issues
 - Quality of dynamic venting procedures
 - Improper fill and vent activities
 - Improperly installed vents

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Inspection Issues (cont.)

- Reliance on software that has not been benchmarked for void transport
- Gas monitoring deficiencies
 - As-found void size were not quantified or qualified
 - Inaccessible gas susceptible locations not monitored/evaluated
 - Acceptance criteria were deficient or non-existing
- Other regulatory issues

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Future Inspections

- Engineering inspections such as:
 - Component Design Basis Inspections
 - Heat Sink Performance
 - Evaluation of Changes, Test, or Experiments and Permanent Plant Modifications
- Routine inspection activities performed by Resident Inspectors

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Questions?
