Summary

- NRC’s objectives related to buried piping
  - Maintenance of intended safety function
    - Releases remain below regulatory limits
  - Current regulations and industry activities are adequate with regard to these objectives
- NRC is monitoring and responding to events related to buried piping
- NRC is working to understand and assess licensee implementation of the Buried Piping Integrity Initiative and the Underground Piping and Tanks Integrity Initiative

Background

- The Groundwater Protection Initiative led to enhanced groundwater monitoring and communication practices
- Several leaks from buried piping in 2008 and 2009 resulted in groundwater contamination
- September 3, 2009, Chairman Jaczko tasked the staff with providing a summary of activities related to buried pipe
- Industry establishes the Buried Piping Integrity Initiative, November, 2009
- December 3, 2009, SECY 09-0174 (ML093160004)
  - Look at regulations, codes and standards and industry activities
Background

• Leaks at Vermont Yankee in 2010 from underground piping (in a concrete vault) generated significant stakeholder interest
  - Definitions:
    - Buried - In intimate contact with soil or concrete; can be cathodically protected
    - Underground - Shells grade in a vault or chase; in contact with air.
• May 18, 2010, Buried Piping Action Plan (ML101480739)
• September 14, 2010, Buried Piping Action Plan update (ML102590171)
• Letter to industry August 18, 2010 (ML102300270)

Buried Piping Action Plan

• Data collection
  - Historical rate of incidence
  - Affected systems
  - System classifications
• Program assessment
  - Buried Piping Integrity Initiative and Underground Piping and Tanks Integrity Initiative
  - Temporary instruction for NRC inspection of initiative activities
• Codes and standards
• Regulatory activities
  - Website
  - License renewal
  - Identify additional needs

Codes and Standards

• ASME Code
  - Met with ASME, Section XI management August 6, 2010
  - In November Section XI established a committee to address leaks from buried piping
    - Consideration of enhanced inspection requirements
    - Consideration of extension of scope to non-safety-related piping that contains tritium
• NACE International (formerly National Association of Corrosion Engineers)
  - Task group to develop standards for nuclear buried piping
  - First task group meeting September, 2010
NRC Actions

- Inspection
  - Temporary Instruction for inspection of buried piping activities
  - Implementation by June 2011
  - Temporary Inspection instructions may exist through 2015
  - Seeking to understand details:
    - Risk ranking processes
    - Inspection techniques and processes
- License renewal
  - Revised buried piping aging management program

Industry Activities

- Buried Piping Integrity Initiative, November 2009
  - Initiative requirements:
    - Write program and procedures
    - Ranking
    - Inspection Plan
    - Inspection
    - Asset Management plan
- Underground Piping and Tanks Integrity Initiative, September 2010
  - Similar requirements with added scope

Performance

- Seeking to establish a pre-2010 incidence rate for leaks as a performance baseline
- Monitoring operating experience
- Evaluating need for commitments for initiative
Conclusions

• NRC’s objectives related to buried piping
  • Maintenance of intended function
  • Releases remain below regulatory limits

• Current regulations and industry activities are compatible with these objectives

• NRC is monitoring current events related to buried piping

• NRC is performing action plan activities, including monitoring industry initiatives