

Buried and Underground Piping

Bob Hardies
Senior Level Advisor, NRR

Summary

- NRC's objectives related to buried piping
 - Maintenance of intended nuclear operations 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

Buried Piping Action Plan

- Revision 3 with updated completion dates to be issued presently
- No new action items

Ongoing Action Plan Items

- Gather leak and tritium release data
- Meet with industry
- Evaluate guided wave
- Maintain NRC Public Website Buried Piping Page
 - <http://www.nrc.gov/reactors/operating/ops-experience/buried-piping-activities.html>
- Participate in ASME and NACE activities
- Evaluate the need for regulatory changes

Ongoing Action Plan Items

- High pressure piping is given appropriate inspection priority and ASME Section XI IWA-5244 tests are being performed as required
- Stay abreast of ongoing industry research
- Evaluate need to change ROP
- Evaluate the need for regulatory changes



Codes and Standards

- ASME Code
 - Section XI established a committee to address leaks from buried piping
 - Consideration of enhanced inspection requirements
 - Consideration of extension of scope to nonsafety-related piping that contains tritium
 - Task Group on Buried Components Inspection and Testing
- NACE International (formerly National Association of Corrosion Engineers)
 - Task groups to develop standards for nuclear buried piping

NRC Action

- License renewal
 - Revised buried piping aging management program
 - GALL XI.M41, “Buried and Underground Piping and Tanks
 - Internal surfaces

- Inspection
 - Temporary Instruction for inspection of buried piping activities
 - ML11119A167
 - Implementation by December, 2011
 - Temporary Inspection instructions exists through 2014
 - Seeking to understand commitment to minimizing leaks
 - Revision to reflect initiative and schedule changes to be issued

Staff Requirements SECY-11-0019

- Approved SECY 11-00179
 - If the staff finds that the voluntary initiatives are not conducted in a *committed and enduring fashion*, the staff should present information to this effect to the Commission which can and, if necessary, will revisit this matter.



Staff Requirements

SECY-11-0076

- SECY-11-0076 - Improving the Public Radiation Safety Cornerstone of the Reactor Oversight Process
- “The Commission has approved the staff’s commitment to work with internal and external stakeholders on potential enhancements to the performance indicator program, but has not approved changes to the radiological effluent performance indicator or other modifications to the reactor oversight process (ROP) related to groundwater contamination control...”



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