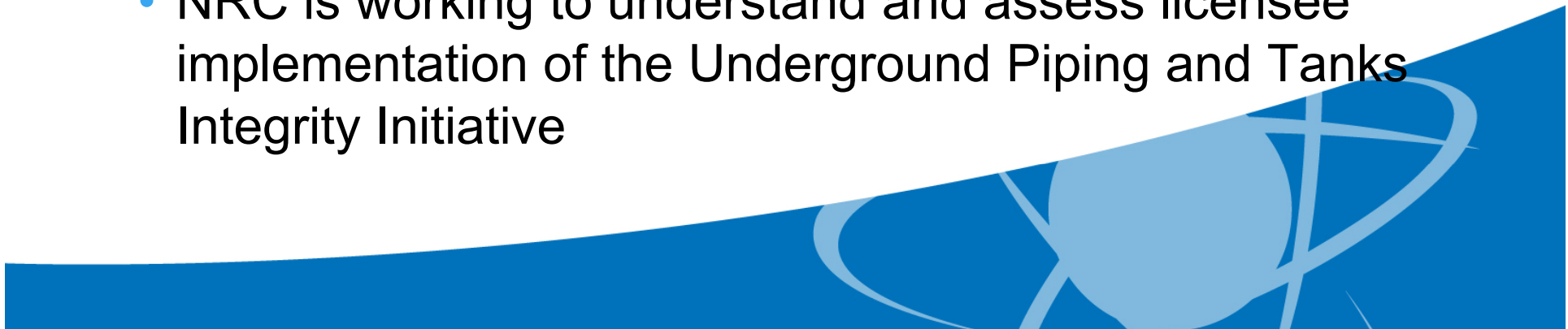


Buried and Underground Piping and Tanks

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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 Underground Piping and Tanks Integrity Initiative



Buried Piping Action Plan



- Revision 3 Updated April, 17, 2013
- 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



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
 - Closed with no 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
 - Internal corrosion and coatings ISGs under development
- Inspection
 - Temporary Instruction for inspection of buried piping activities
 - Temporary Inspection instructions exists through 2014
 - Seeking to understand commitment to minimizing leaks
 - Revision 8/8/2013 to reflect initiative and schedule changes

TI 182



- The objective of the TI is to assess whether licensees are following the industry initiatives in a committed and enduring fashion
- Phase I is essentially complete.
 - All licensees participating in the Underground Piping and Tanks Integrity Initiative



TI 182 Preliminary Results



- Phase II less than ~20% percent complete
- Some observations:
 - Relatively low turnover in buried piping system responsible individual
 - System health reports useful



TI 182 Preliminary Results



- Some observations:
 - All plants inspected so far
 - risk ranking software or programs assessed to match objectives of the initiatives
 - have completed their risk ranking in a manner that is characterized as appropriate



TI 182 Preliminary Results



- Some observations:
 - ~2/3 have cathodic protection
 - Licensees with CP have generally either consistently maintained it, are actively refurbishing or improving it, or have plans to replace or upgrade the system.
 - ~1/3 never have had cathodic protection installed.



TI 182 Preliminary Results



- Some plants have no high risk piping or tanks



TI 182 Preliminary Results



- Some observations:
 - All plants inspected are performing the ASME Code pressure testing, or are performing approved alternatives.
 - The overall conclusion at this point in time is that licensees seem to be implementing the initiatives in a committed and effective fashion.



HDPE Pipe

- ASME still working on code cases
 - Probably several years before completed and implemented in NRC Regulatory Guide
- NRC will entertain relief requests
- NRC intends to develop guidance for relief requests
 - Expect to schedule public meeting in November

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