NUCLEAR ENERGY INSTITUTE

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March 7, 2011

Mr. Eric J. Leeds
Director, Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Underground Piping and Tanks Integrity Initiative

Project Number: 689

Dear Mr. Leeds:

The NEI Nuclear Strategic Issues Advisory Committee (NSIAC) approved the Underground Piping and Tanks Integrity Initiative in September, 2010. This Initiative expanded the scope of the Buried Piping Integrity Initiative which had been approved in November 2009. Please note that this Initiative results in an enhanced inspection program for these components. The document that guides the implementation of this program, NEI 09-14, *Guideline for the Management of Buried Piping Integrity*, was recently revised to reflect the new Initiative. A copy of Revision 1 of the document is attached for your information. Revision 1 includes the following changes:

- The text of the revised Initiative
- Clarification of the intent through "shall" statements
- Guidance on the program scope
- A section on definitions
- Enhancements to the process for justifying deviations
- Expectations for communication of operating experience and deviations

One of the requirements in NEI 09-14 is the preparation of semi-annual reports to NSIAC on implementation status, operating experience related to buried piping, and developments in NDE technology. The January 2011 report on these matters was presented to NSIAC during its meeting earlier this month. A copy of the NSIAC report is attached for your information. You will note that

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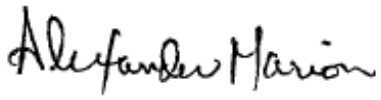
as of the time we completed the implementation survey, all 104 plants were on schedule for implementation of the indentified program milestones.

We will continue to keep you and your staff informed of the status of industry activities associated with this important program. If you have any questions, please contact me at 202.739.8080; axm@nei.org or Jim Riley at 202.739.8137; jhr@nei.org.

Sincerely,



Alexander Marion

Attachments

c: Mr. Jack Grobe, NRR, NRC
Ms. Michele G. Evans, NRR/DCI, NRC
Mr. Robert O. Hardies, NRR/DCI, NRC

Report to NSIAC - Summary

Status of Implementation of Buried Piping Integrity Initiative Milestones

- Procedures and oversight by June 30, 2010
  - 104 plants complete
- Risk ranking by December 31, 2010
  - 47 plants complete
  - 57 plants on schedule
- Inspection plans by June 30, 2011
  - 1 plant complete
  - 103 plants on schedule
- Inspection start by June 30, 2012
  - 6 plants complete
  - 98 plants on schedule
- Complete condition assessment of piping containing radioactive material by June 30, 2013
  - 2 plants complete
  - 102 plants on schedule
- Complete asset management plan by December 31, 2013
  - 104 plants on schedule
- No plants have identified any deviations to the Buried Piping Integrity Initiative

Industry Buried Piping Leakage Trends (source INPO EPIX data base)

- Less than 10 leaks per year reported from 2000 to 2008
- 67 leaks reported in 2009
- 28 leaks reported in 2010 as of July
- The spike in reported leaks in 2009 and 2010 is a direct result of a request to the CNOs to report all leaks from buried piping beginning in 2009
- Of the 130 buried piping leaks reported from 2000 to the present:
  - 10% were in safety-related systems
  - 13% were in systems containing radioactive materials
  - 10% were in systems containing environmentally sensitive fluids
  - 57% were in low priority systems categorized as "run to failure" under the applicable program
  - 10% were in other systems

- The number of leaks in safety related systems and in piping containing radioactive materials in 2009 and 2010 was about 11%. This percentage is much lower that reported from 2000 to 2010. This difference may be due to the tendency to report only more important leaks prior to 2009.

NDE Technology Development

- Currently available technology
  - Direct excavation
  - Guided wave UT (screening only)
  - Internal "PIGs" and robotic vehicles if piping ID is accessible
- EPRI identifying and investigating other commercially available technologies

Overall Observations

- All plants have met the first Initiative milestone and there are no deviations to Initiative elements
  - Positive impact on program and processes is evident
  - OE and inspection results indicate that plants are implementing the Initiative expectations
- Too early to assess the impact of the Initiative on piping integrity
- Communication among ground water protection staff, NDE, and buried piping staff is important, expected, and improving
- Improvement is needed in the following areas:
  - New inspection technologies as alternatives to direct inspection by excavation
  - Better source identification of water samples with low tritium levels below reporting threshold
  - Improved operation and maintenance of installed cathodic protection systems