

Buried Pipe Products and Services for the Buried Piping Integrity Initiative

Background

Buried piping aging is an ongoing challenge in operating plants. The Nuclear Energy Institute (NEI) Nuclear Strategic Issues Advisory Committee (NSIAC) letter (NEI APC-09-53 Buried Piping Integrity Initiative) highlights the importance of maintaining the reliability of aging buried piping systems and how maintenance impacts license renewal. Specifically, the letter outlines milestones of the NEI Buried Piping Integrity (BPI) Initiative, which include the following:

- Developing a BPI program, including procedures and oversight
- Performing risk-ranking of buried pipe
- Developing an inspection plan
- Conducting inspections and performing condition assessments
- Planning and implementing necessary repairs and replacements
- Site walkdowns including surveys

Westinghouse has established buried piping products and services to assist customers in proactively resolving the NEI NSIAC letter actions through implementation of comprehensive, cost-effective solutions.

Description

Westinghouse employs a global team of subject matter experts that provide engineering services, including nondestructive evaluation (NDE), project management, cost evaluations, risk evaluation, asset and aging management, leakage assessments, and comprehensive repair and replacement strategies.

With this expertise and experience, Westinghouse has established comprehensive buried piping products and services to assist customers in maintaining the integrity of buried piping and resolving the NEI NSIAC letter requirements. Offered services include risk-ranking and compilation of pipe conditions, followed by



Buried pipe installation



Buried pipe installation

development and execution of an inspection plan, leveraging the depth and breadth of Westinghouse's extensive NDE experience. This program consists of elements offered to its license renewal customers, whereby Westinghouse performs an overall asset management evaluation and provides repair/replacement recommendations, including prioritization, feasibility and scoping studies. Westinghouse also provides predictive models to assist its customers in implementing a well-planned repair and replacement strategy in a timely manner. Utilizing its maintenance and construction partners, Westinghouse provides engineering, procurement and construction services for repair/replacement of buried piping. Services include, as applicable, site survey, engineering, licensing (including license renewal implementation of buried piping aging management programs), project management, material procurement, quality assurance and quality control, manufacturing, excavation and removal, installation, NDE and preservice testing.

Benefits

Westinghouse can offer solutions for every aspect of the NEI NSIAC initiative, making it a single, manageable source for near- and long-term buried

pipe solutions. Based on its comprehensive buried piping products and services, Westinghouse can quickly develop solutions tailored to specific plant needs in order to help avoid forced outages and emergent repairs, and reduce the potential for environmental impact.

Westinghouse also provides services for requirements that may be related to buried pipe integrity but are not specifically addressed by the NEI NSIAC initiative. For example, buried pipe solutions may also impact plant licensing and renewal, probable risk assessment (PRA) and fire protection. This allows a utility to address all concerns with a single supplier.

Experience

Westinghouse's global team experiences include:

- Regulatory and operability requirements
- American Society of Mechanical Engineers (ASME) code development
- New inspection technologies
- Maintenance rule and license renewal impacts
- New plant and Combined Operating License (COL) applicant impacts – inspections, tests, analyses, acceptance criteria, new design rules and new inspection programs