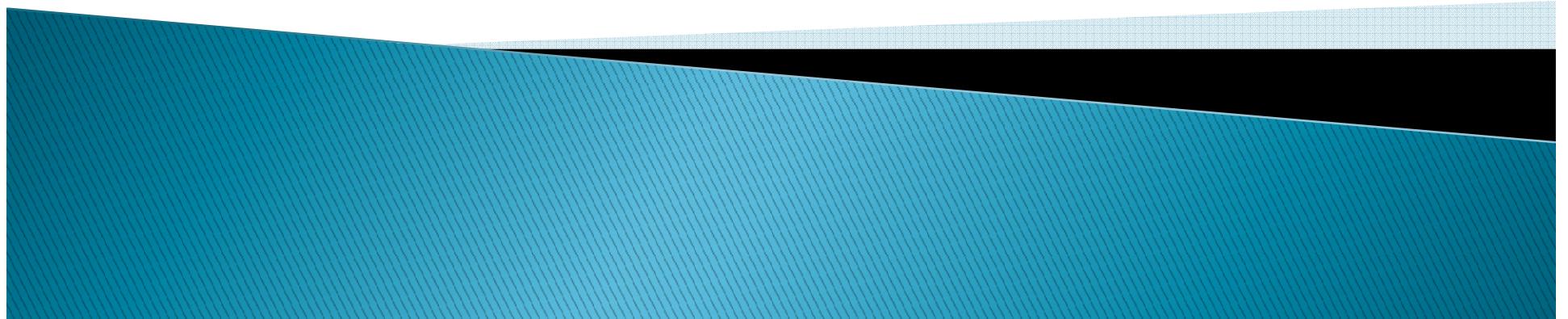


EPRI's Buried Pipe Integrity Group (BPIG)

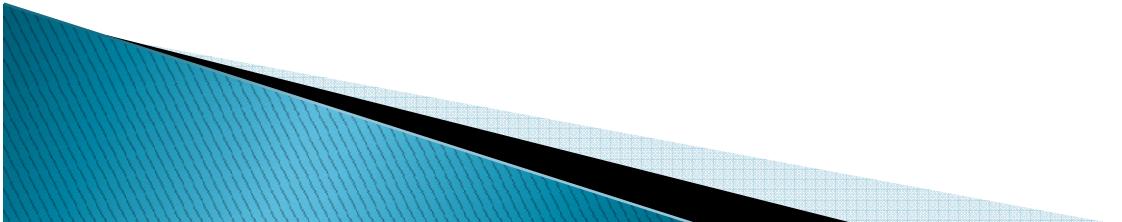
**David Smith
Duke Energy**

**Industry/NEI/NRC Meeting
October 22, 2009
White Flint, MD**



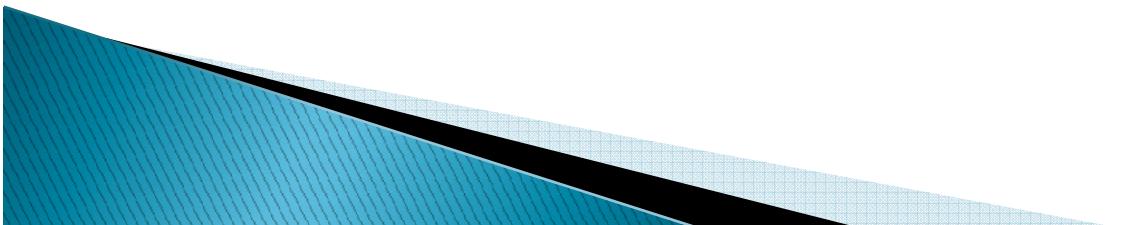
Introduction

- ▶ In 2007, EPRI held two meetings with its membership to discuss industry needs with respect to balance-of-plant piping
- ▶ A strategic meeting was held in May 2007. Attended by highly experienced utility piping personnel, consultants and EPRI staff to identify areas that may need additional attention
 - The #1 identified issue was integrity of buried pipe
- ▶ A much larger follow-up meeting (utilities only) was held in October 2007 to exchange plant experiences and issues with buried pipe and to identify specific areas of future activity
 - There was unanimous agreement on the need to form a Buried Pipe Integrity Group



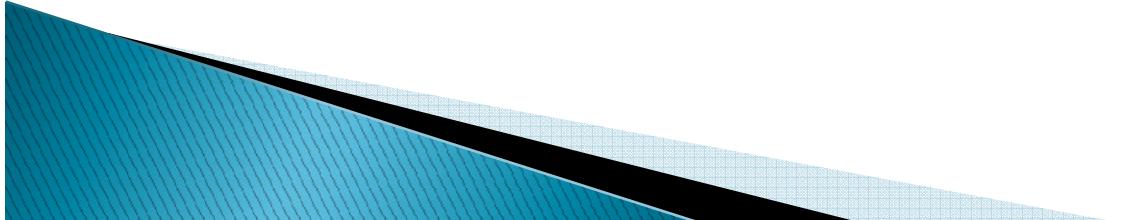
Formation of BPIG

- ▶ BPIG was formed and funded by EPRI in early 2008
 - Membership is open to utilities only
 - Vendor participation in “Open Door” sessions
- ▶ A kick-off meeting was held in Feb 2008
 - Well attended
 - Experience sharing
 - Technical presentations
 - Identification of future activities
- ▶ A second well-attended meeting was held in July 2008
- ▶ BPIG became a supplementally funded group in 2009
 - 2009 membership includes 25 US utilities and represents ~125 nuclear plants in the US, Canada, and Europe
 - 2010 membership to include all US Nuclear Utilities



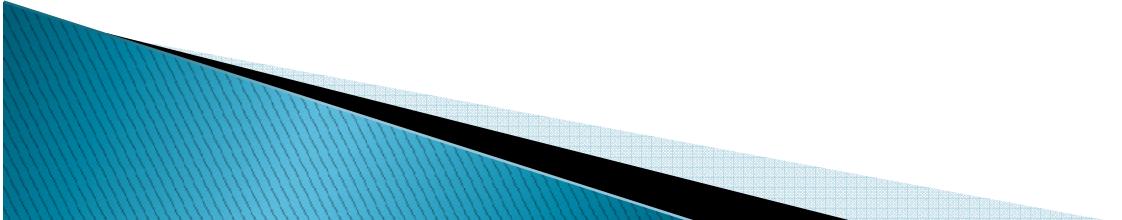
Objectives of BPIG

- ▶ Provide a forum for plant owners to discuss buried pipe issues and exchange experiences
- ▶ Provide a forum to obtain a consensus on industry issues
- ▶ Sponsor related R&D
- ▶ Interface with Vendor Support
- ▶ Provide technical support on buried pipe issues, as well as support for related products
- ▶ Provide buried pipe related training



2009 BPIG Activities

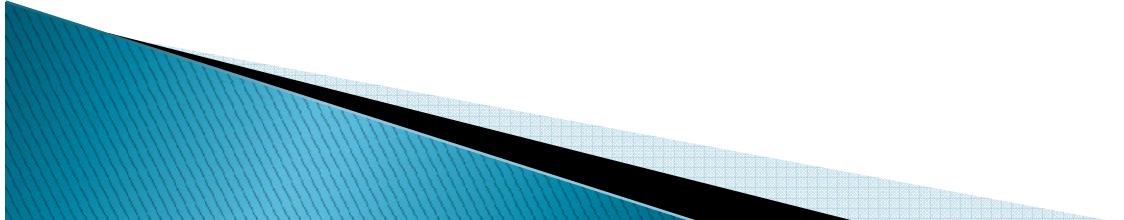
- ▶ **2 well-attended meetings to date in 2009**
 - 2 ½ days each
 - 1 day of an “Open Door” meeting with vendor technical presentations; typical topics
 - Cathodic protection
 - Direct assessments
 - Prestressed concrete cylinder pipe (PCCP)
 - Coatings
 - Wrap repairs
 - Risk ranking
 - Guided wave inspections
 - 1 ½ days of “Closed Door” utility only meetings
 - Experience sharing, R&D updates, administrative matters, etc



2009 BPIG Activities (cont'd)

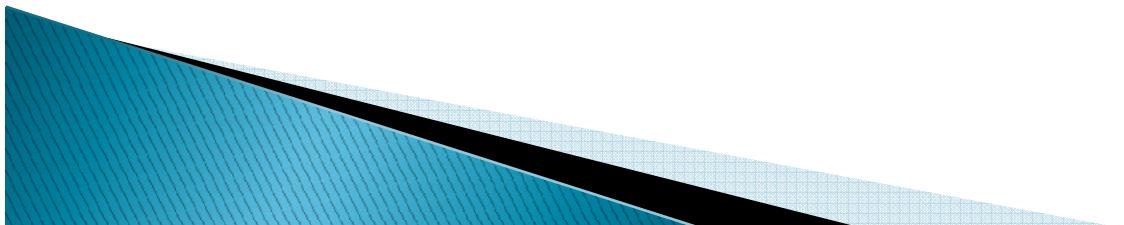
▶ Other services

- Web site
- Training
- Technical support
- Maintenance & updates of related products, including
 - Recommendations document
 - BPWORKS
- New projects of high-priority interest to members, including:
 - Lessons Learned from past utility experiences
 - Development of Intermediate Diameter Examination Tooling



2009 Training

- ▶ **Training for Buried Pipe Program Owners**
 - June 2–4, 2009 (20 attendees)
 - Sept 9–11, 2009, Chicago (21 attendees)
 - November 10–12, 2009, Dallas
- ▶ **BPWORKS: Risk Ranking of Buried Pipe**
 - February 9, 2009 (36 attendees)
 - June 1, 2009 (10 attendees)
 - Sept 8, 2009, Chicago (18 attendees)
 - November 9, 2009, Dallas
- ▶ **Cathodic Protection**
 - September 29–30, 2009, Rosebush, MI (6 attendees)
- ▶ **Guided Wave**
 - December 8–10, 2009, EPRI Charlotte, NC



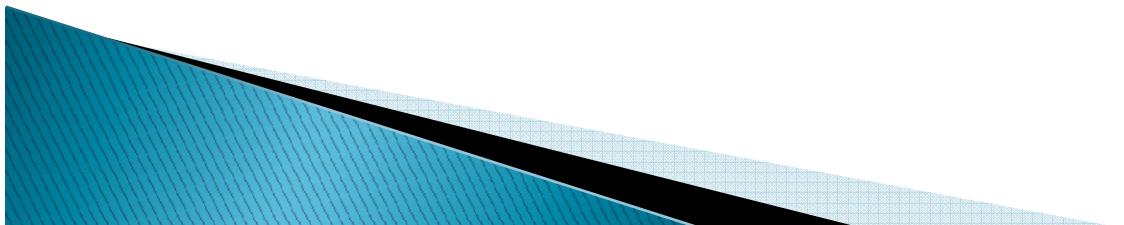
BPIG Program Owner Training

Module Subject

1. Welcome & Objectives
2. Introduction
3. An Overview of Degradation in Buried Pipe
4. An Overview of the EPRI/BPIG Recommended Program
5. Responsibilities & Interfaces for the Program Owner
6. Procedures, Performance Indicators & Documentation
7. Pre-Outage, Outage and Post-Outage Tasks
8. Identifying & Locating Buried Pipe
9. Excluding Low Consequence Systems from the Program
10. Risk Ranking of High Consequence Systems
11. Soil Analysis
12. Leak Detection
13. Excavating & Shoring
14. Corrosion Control through Coatings & Cathodic Protection
15. CP Monitoring & Surveys

Module Subject

16. Coating Surveys
17. Selection of Inspection Locations
18. Selection of Inspection Methods
19. Cleaning
20. In-Line Inspections
21. An Overview of Guided Wave OD Inspections
22. Inspection and Evaluation of Buried Pipe Coatings
23. CP System Maintenance & Enhancements
24. Fitness-for-Service
25. Repairs
26. Assessment & Repairs of PCCP
27. Coating Selection & Application
28. Use of Resistant Materials
29. System Operation
30. Backfill



BPIG Future Plans

- ▶ 2010 Meetings
 - 2 planned meetings (February/July)
- ▶ 2010 Training
 - Buried Pipe Program Owners
 - BPWORKS
 - Cathodic Protection
 - Guided Wave
- ▶ Major Research or Projects
 - Revision of the program recommendations document
 - Development of a plant experiences database
 - Addition of Concrete Pipe information to the recommendation document, BPWORKS, and program manager training
 - BPWORKS Enhancements
 - Addition of APDM Open Database
 - Dynamic Segmentation Feature

