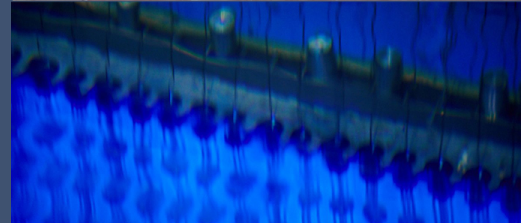


March 2020

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# Buried Piping Innovation

## Problem Summary



# Problem Overview



The underground piping systems in the following slides have been in service for more than 40 years.



Limited inspections to date have revealed degradation due to corrosion and aging. Limited data exists to make decisions on next steps.



**Problem Statement: determine how to extend the service life of mostly un-inspected, aged pipe to 2064**

# System 1: Common Service Water (Bruce A)



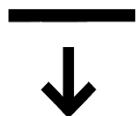
Length: 3800 ft



Material: Carbon Steel



Size: 8'' to 30'' | Sch. 40



Max. Depth: 17 ft

Avg. Depth: 6-10 ft

## Current Plan:

- Install Electrical Insulation
- Install Inspection Ports
- Perform Internal Inspection
- Repair or replace pipe as needed



Age: > 40 years

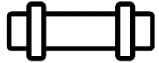


State: filled with water

# System 2: Common Service Water (Bruce B)



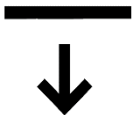
Length: 1350 ft



Material: Carbon Steel



Size: 24" to 30" | Sch. 40



Max. Depth: 35 ft

Avg. Depth: 7-17 ft

## Current Plan:

- Install Electrical Insulation
- Install Inspection Ports
- Perform Internal Inspection
- Repair or replace pipe as needed



Age: > 40 years

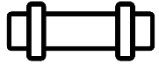


State: filled with water

# System 3: Emergency Water System (Bruce B)



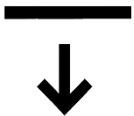
Length: 4200 ft



Material: Carbon Steel



Size: 2", 10" - 30" | Sch. 40



Max. Depth: 24 ft

Avg. Depth: 6-8 ft

## Current Plan:

- Piping replacement, above ground



Age: > 40 years

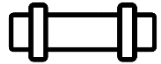


State: empty pipe, possibly wet

# System 4: Low Pressure Service Water (Bruce A&B)



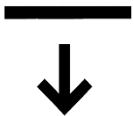
Length: 450 ft



Material: Carbon Steel



Size: 3'' to 54'' | Sch. 40



Depth: 15 ft (constant)

## Current Plan:

- Install Electrical Insulation
- Perform inspection (using built-in access points)
- Perform rehabilitation and cathodic protection as required.



Age: > 40 years



State: filled with water

# What we are looking for:



## Buried Piping Inspection Solutions:

- Inspection Techniques
- Inspection Tools
- Practices for Temporary Modifications



## Buried Piping Protection Solutions:

- Cathodic Protection
- Electrical Insulation
- Internal Liner/Coating Technology
- Other methods to protect or rapidly replace pipe

# Key Contacts

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