Underground Piping and Tank Integrity Initiative Update

Mark Richter

Senior Project Manager-NEI

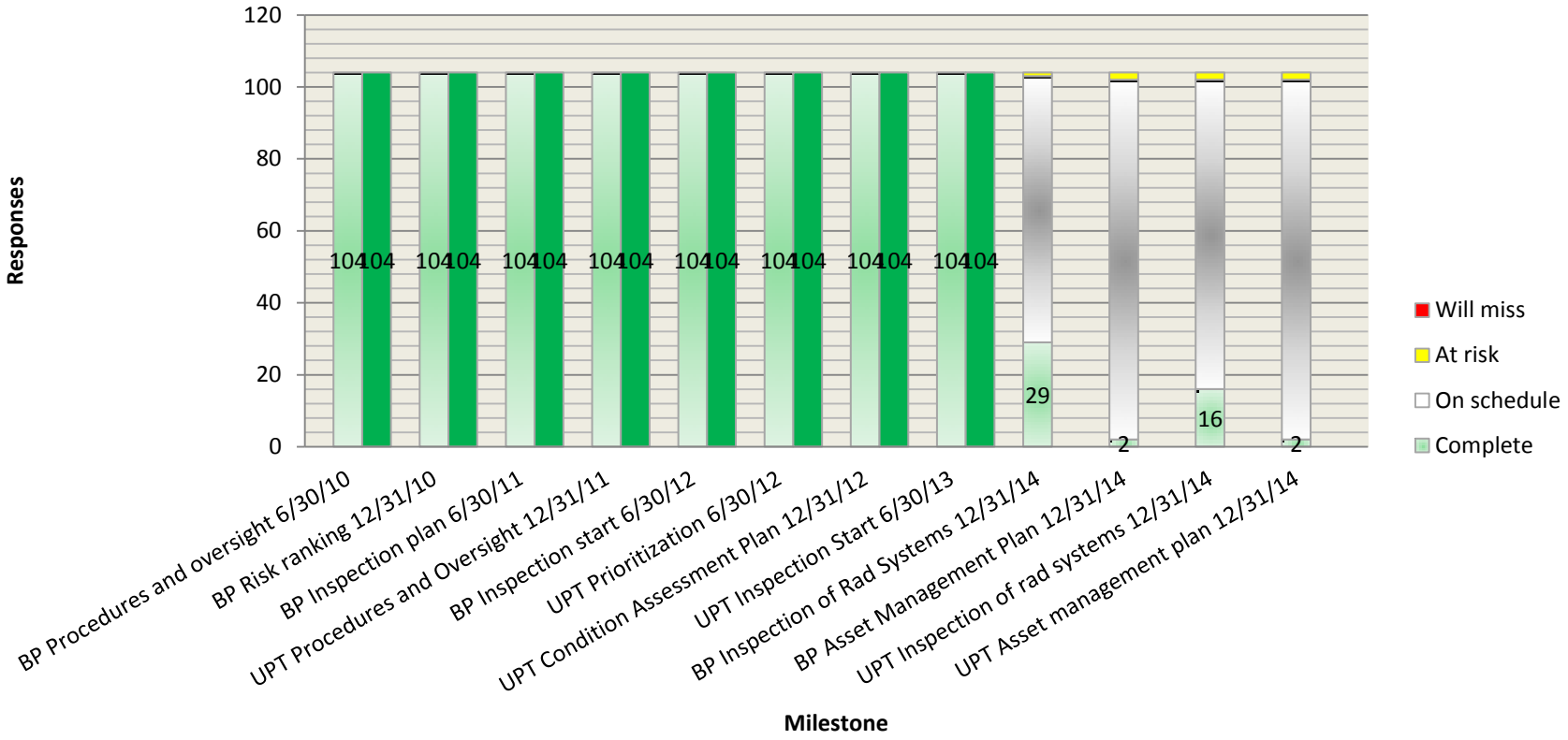
USNRC/Industry Public Meeting: Underground Piping and Tanks Initiative Update
January 21, 2015 • Rockville, MD

Overview

- Initiative Implementation Status
- Updates from INPO, EPRI, and ASME
- Buried Pipe Integrity Task Force Update

Implementation Status

Status as of June 2014
(left bar in each pair is status from 6 months ago)



Implementation Status

- Plants have completed the first eight milestones.
- Positive trends are indicated on each of the remaining milestones for survey responses received to date.
  - A few plants have yet to respond to the survey (responses in progress.)
  - Five units permanently ceased operations for decommissioning.
  - Complete survey results expected by the February, 2015 BPIG meeting.

Implementation Status

- Interim guidance for management of underground assets for future plants that enter the decommissioning transition process is complete.
- One deviation for inspection completion milestone. Conservative analysis supports closure by August 31, 2015.
- BPITF continues to meet with NRC staff.
- The Asset Management Plans capture future inspections and related activities.

INPO Update

Institute of Nuclear Power Operations

INPO Perspectives

NRC Buried and Underground Piping Meeting

January 21, 2015

Joe Sears

Manager, Nuclear Asset Protection

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Key Topics

- INPO's NEI 09-14 role
- Industry Performance
  - Plant evaluations
  - Operating experience
    - ICES reporting
- Questions

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NEI 09-14 INPO's Role

- Evaluate programs.
- Communicate issues to the industry.
- Compile and report operating experience.

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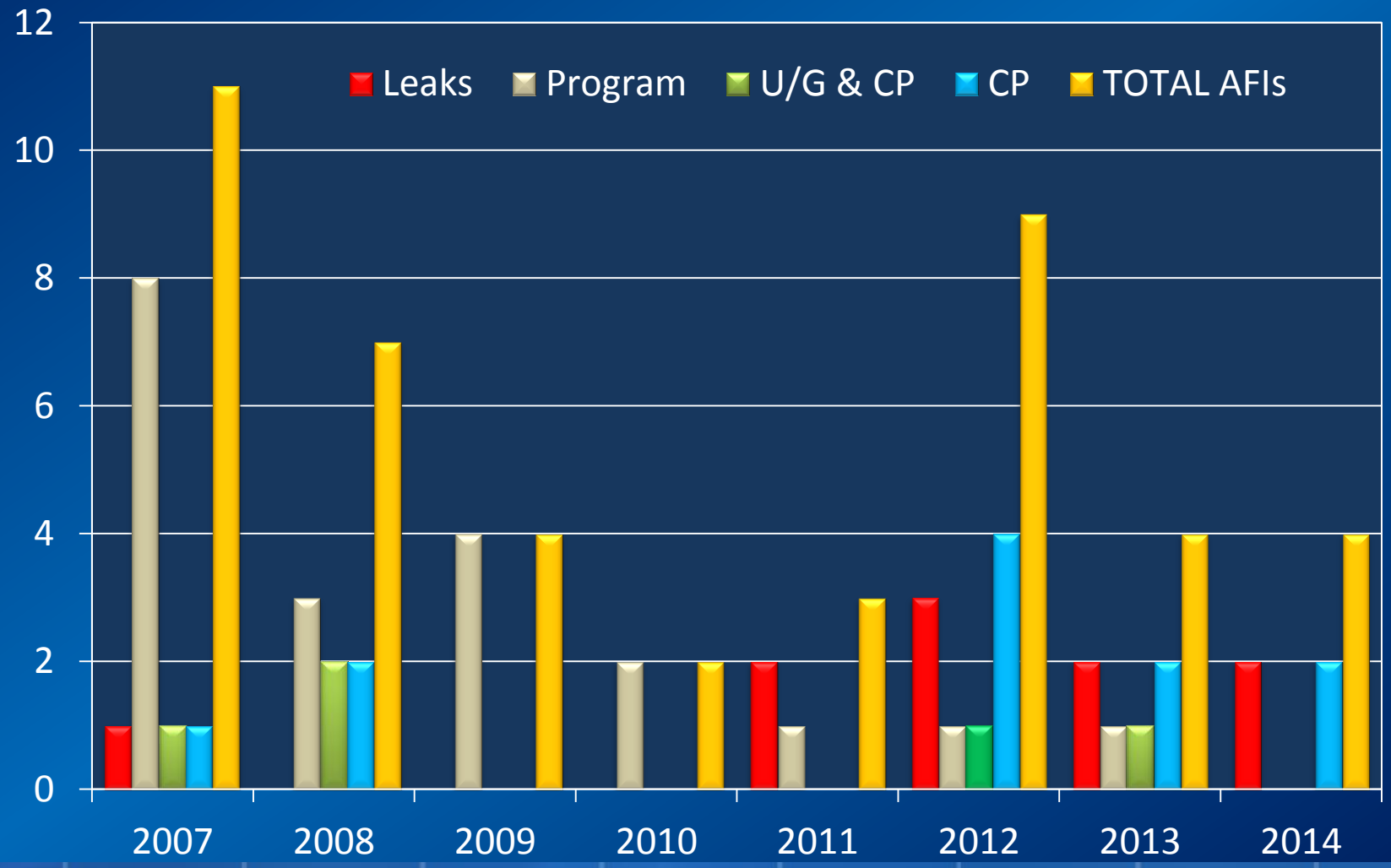
Areas for Improvement



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2014 Summary

	Areas for Improvement	Performance Deficiencies
Underground Piping and Tanks	2	1
Cathodic Protection	2	4

- Program implementation remains effective
- Improvement needed:
  - Cathodic protection not properly maintained
  - Cathodic protection equipment work prioritization and completion
  - Cathodic protection site knowledge weaknesses
  - Leaks occurring and the source is not determined

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Good Underground Piping Program Attributes

- Comprehensive asset management plan
- ICES reporting quality improvement
- Zero leak tolerance – especially in piping containing radioactive fluids
- Cathodic protection installed and maintained
- Failure causes identified
- Effective station and corporate oversight
- Effective use of corrective action program

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2015 Evaluation Focus Area

- Asset Management Plan Review
  - Does it meet the intent of NEI 09-14?
  - Does it meet the needs of the station?
  - Has it been reviewed by an appropriate level of management?
  - Is it maintained based on changing station priorities?

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Key Topics

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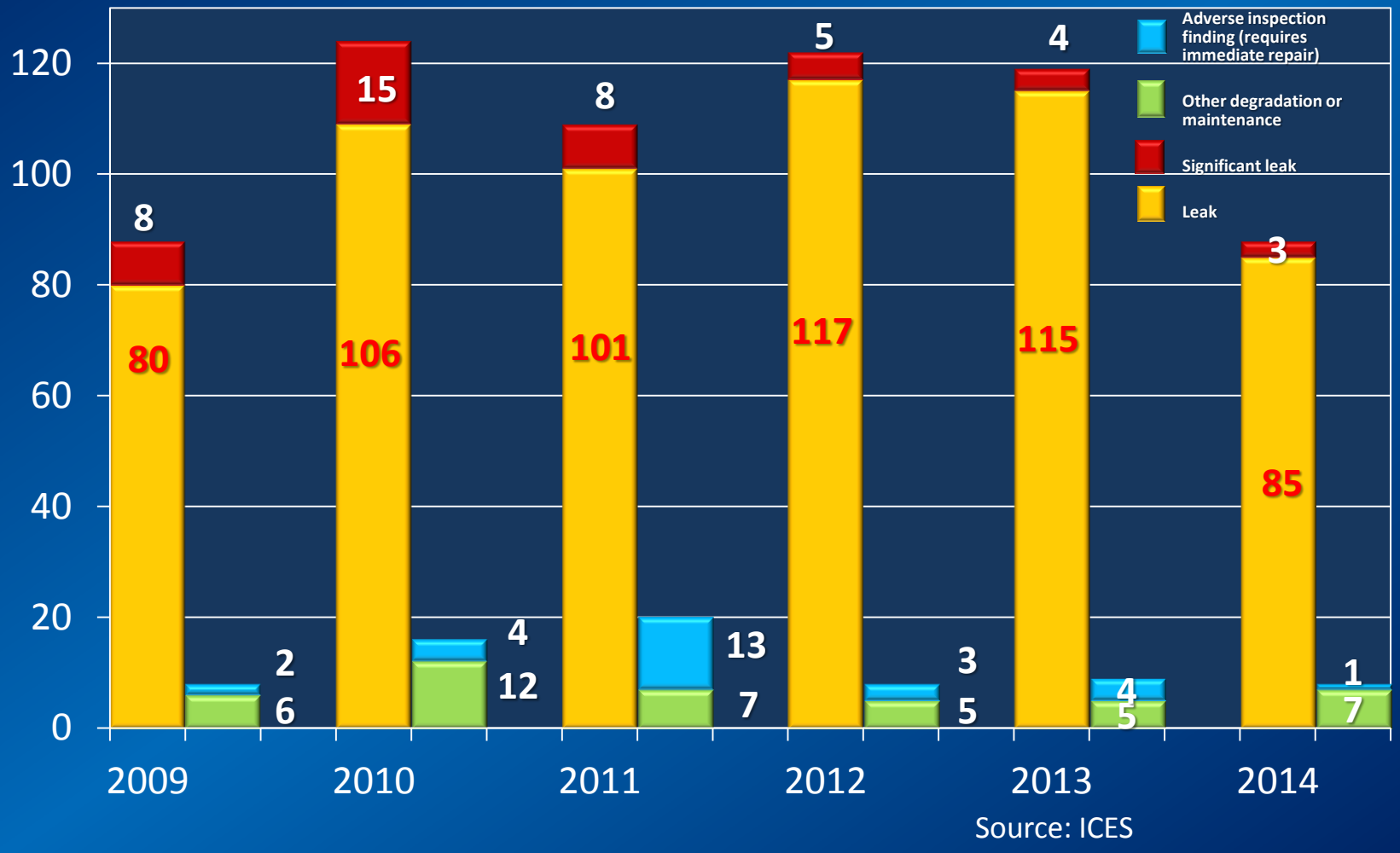
2014 Number of Reported Events by Year and Failure Mode



Source: ICES

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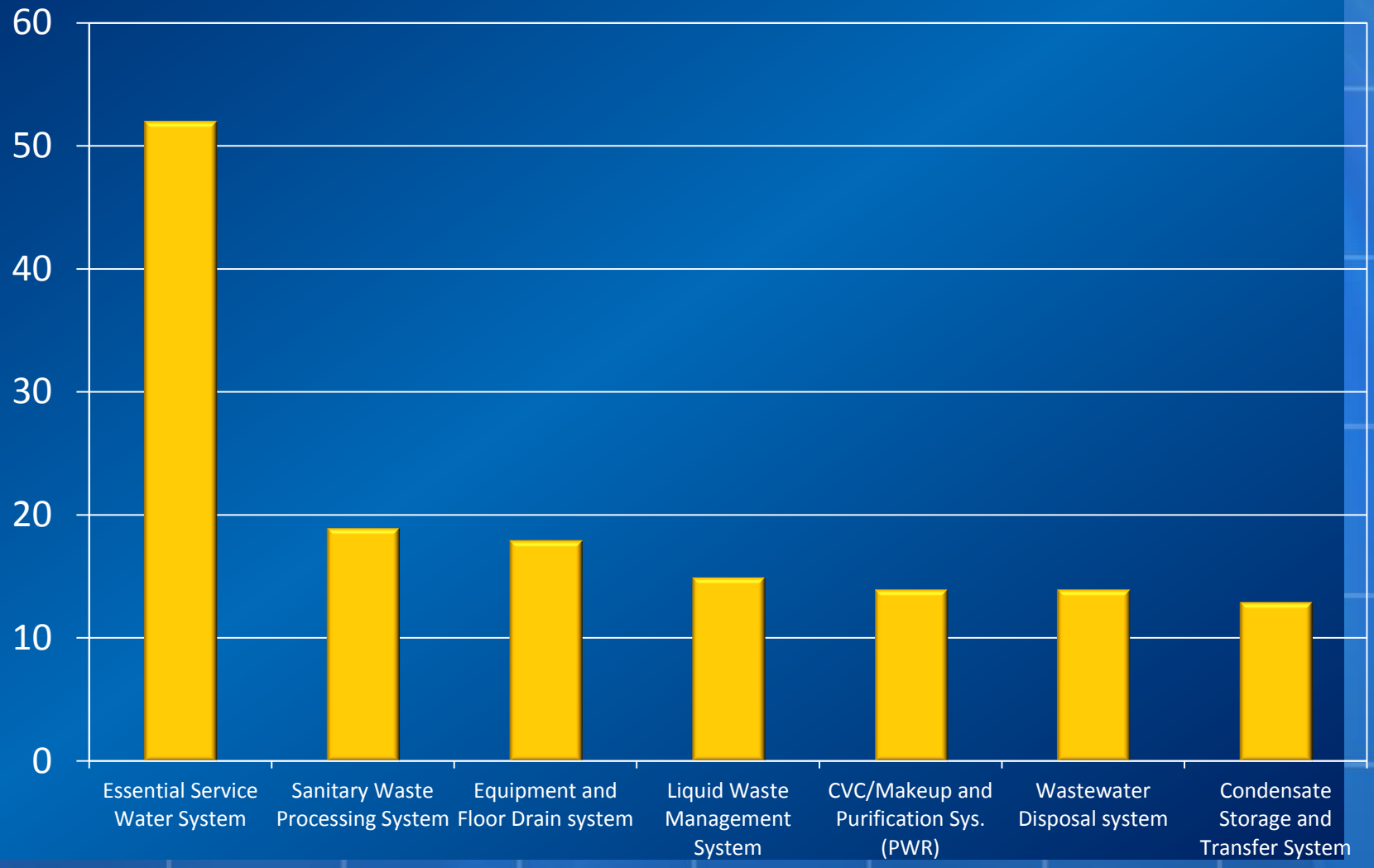
Most Commonly Affected Systems Relative to NEI 09-14

Source: ICES 2008 -2014



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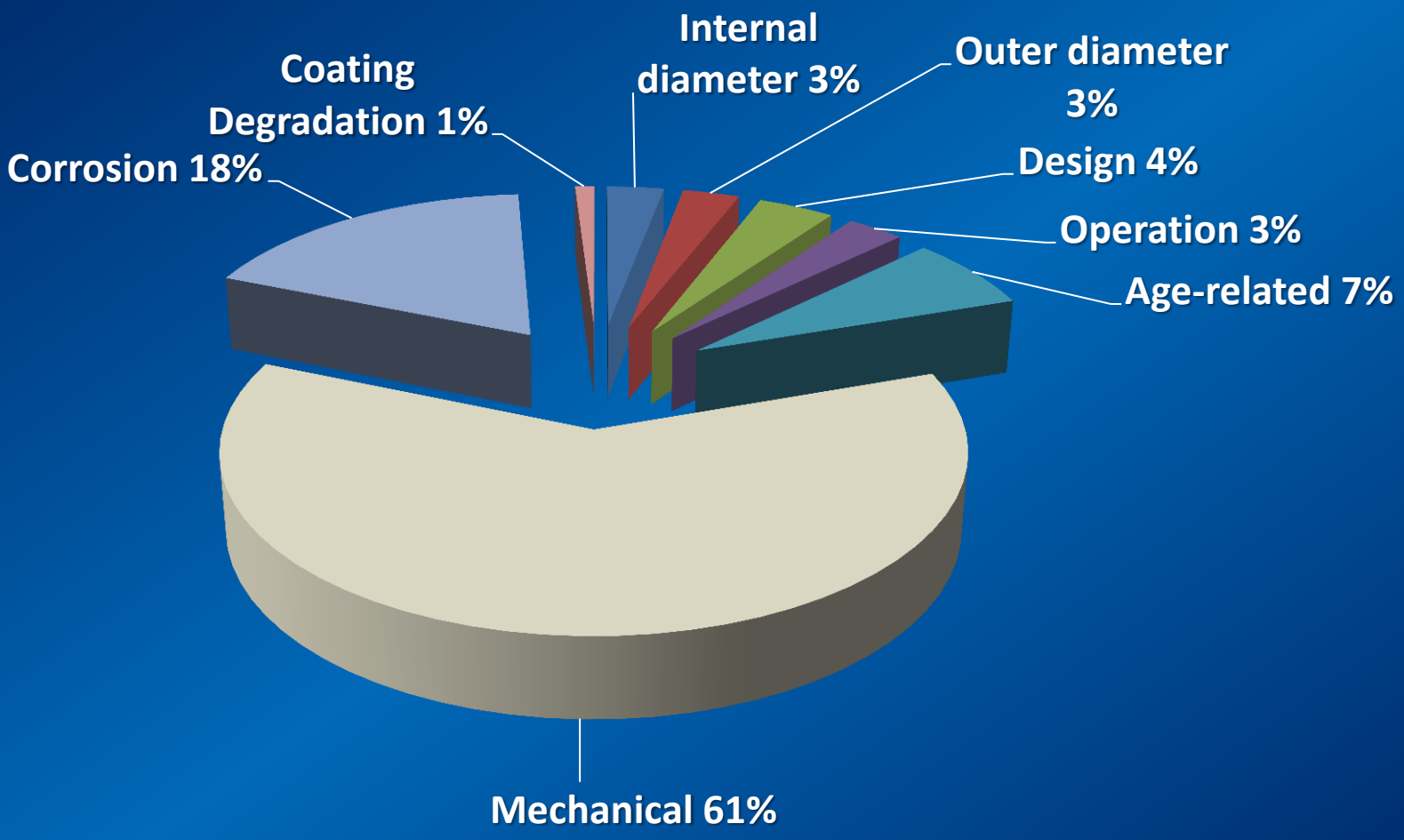
Updated UPTI Failure Cause Codes



Source: 2014 ICES Data

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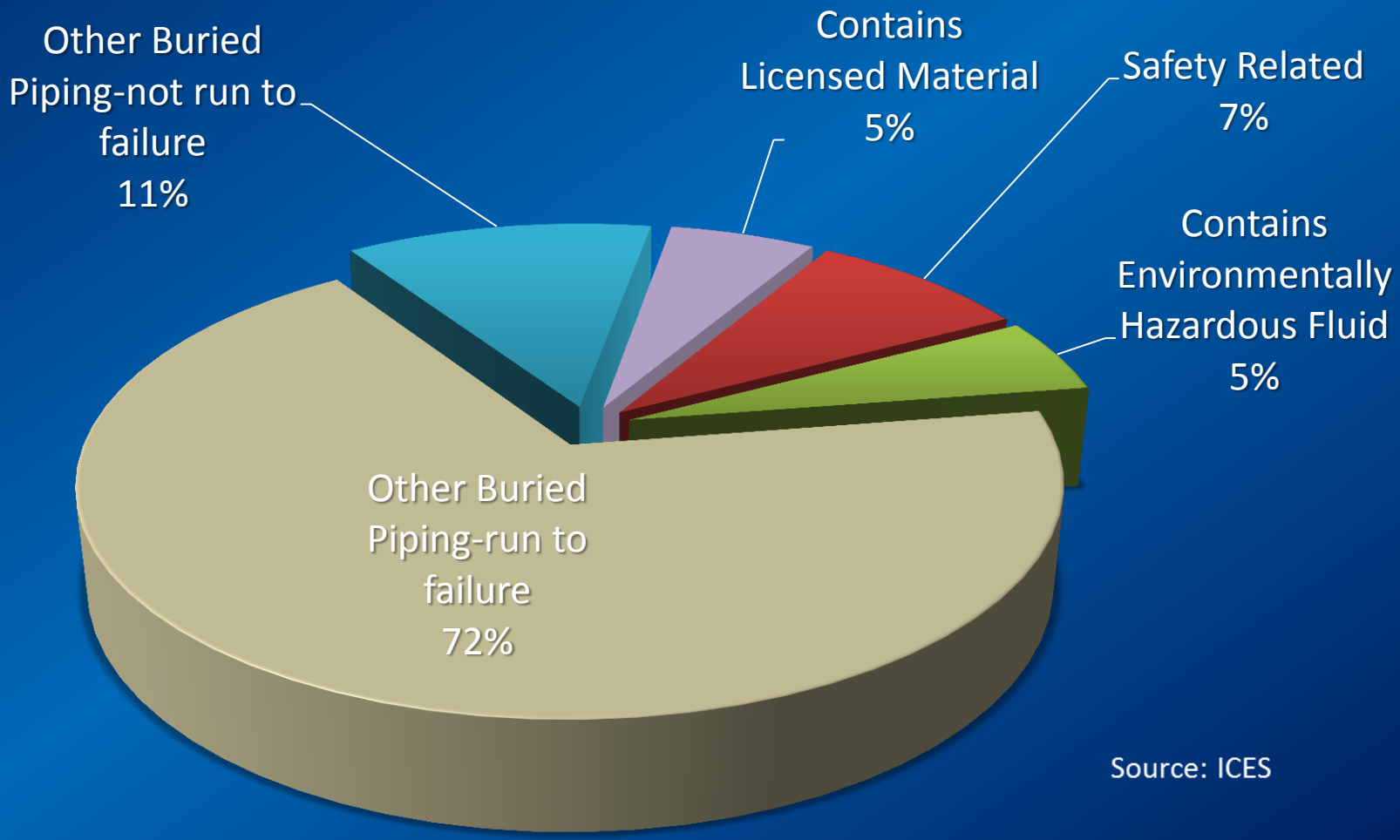
Buried Pipe Events Classification



Source: ICES

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ICES Reporting

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Buried Tanks Reporting Requirements

- NEI 09-14 Rev. 3, Appendix A, licensees will enter operating experience into INPO's ICES database when events occur. Entries shall be made in a timeframe consistent with ICES timing requirements.

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Buried Tanks Reporting Requirements

- The ICES database has been revised to facilitate entry of operating experience for underground tanks.
- Retroactive to January 1, 2012, the requirements of NEI 09-14, Revision 3 pertaining to the recording of operating experience of underground tanks shall be met.

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Buried Tanks Reporting

- Two reported leaks in ICES for the period 2012 – 2014.
  - One condensate storage tank bottom 2014
  - One outdoor radwaste sample tank 2012
  - Has a record search to identify all historical tank leaks within scope been performed and reported in ICES?

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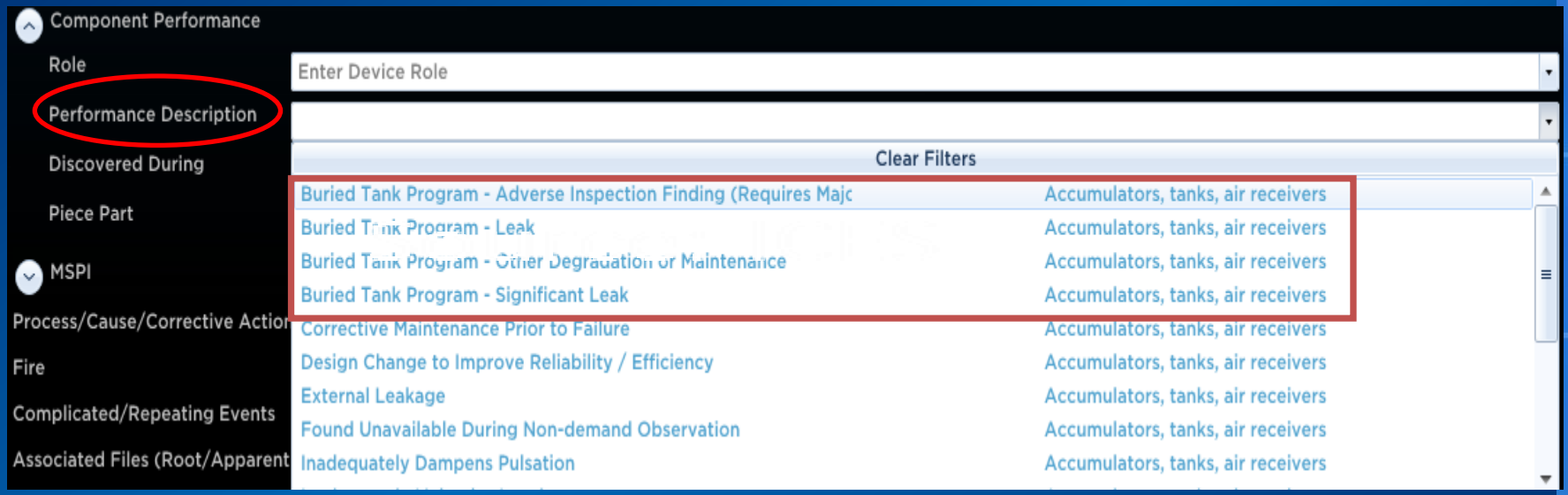
Buried Tanks Reporting

- 

Source: ICES

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Questions

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EPRI Update

ASME Update

BPITF Status

- BPITF mission success:
  - Plant underground pipe and tank integrity programs are established.
  - Asset Management Plan drives ongoing program activities.
- Continue to provide oversight and guidance to the plants through 2015 as part of the transition from a milestone based initiative to programmatic management of underground assets.

BPITF 2015 Actions

- Complete final revision of NEI 09-14 to capture interim guidance, future responsibilities, and other changes.
- Prepare a white paper documenting accomplishments and leak performance for the NSIAC.