
NRC Generic Letter 2008-01

Pump Road Map Project

A status of the joint owners group program to define the industry technical activities needed to better understand pump performance with pump suction void conditions

June 2010

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Pump Road Map Project Background

- **Owners' Group program to address GL**
 - Assessed available gas transport / pump performance test data
 - Transport phenomenological testing program
 - Simplified Equation
- Ongoing implementation of plant improvements
- Ongoing evolution of technical understanding
- Program element needed to consolidate knowledge and provide bridge to end state
 - PWROG / BWROG Road Map Program

Pump Road Map Project Objectives

NEED FOR FURTHER ACTION RECOMMENDATIONS

Determine if further action recommendations should be developed to support future operability evaluations (based on “simplified equation” results)

TECHNICAL ASSESSMENT OF INDUSTRY CRITERIA

Conduct a technical assessment of the industry “interim” pump suction criteria to provide general input and to identify gaps (weakness in current criteria) and opportunities for improvement (i.e. larger void fraction)

PRIORITIZED ACTION RECOMMENDATIONS

Develop a set of prioritized, collaborative action recommendations to fill gaps and realize opportunities

Pump Road Map Project Objectives

- **NEED FOR FURTHER ACTION RECOMMENDATIONS**
 - **Plant survey and Expert / Stakeholder panel input**
 - **Possible Outcomes**
 - **Plant assessments using Simplified Equation generally indicate confidence that criteria will be met in the future for all applicable systems**
 - **Plant assessments using Simplified Equations disclose some specific situations that may have issues**
 - **Simplified Equation does not apply**

Pump Road Map Project Objectives

- **TECHNICAL ASSESSMENT OF INDUSTRY VOID CRITERIA**
 - **Expert / Stakeholder panel input**
 - **Possible Outcomes**
 - **Pump suction void criteria (APC) are reasonable**
 - **Criteria are reasonable but improvements would make them more robust**
 - **Criteria are reasonable but have significant gaps**

Pump Road Map Project Objectives

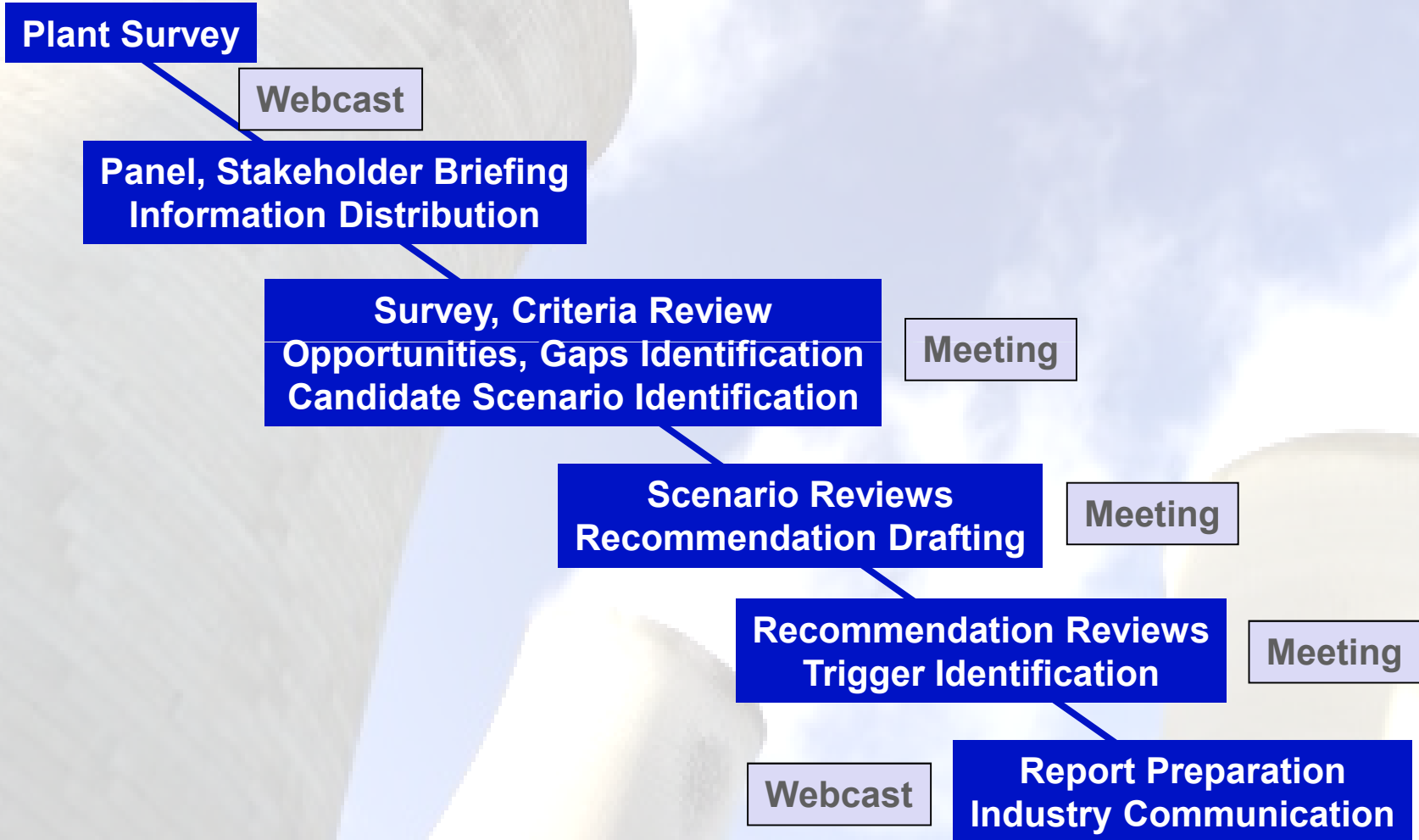
- **PRIORITIZED ACTION RECOMMENDATIONS**

- **Expert / Stakeholder panel input**

- **Possible Outcomes**

- **Industry program is adequate – Needs of the utilities are met for typical OPERABILITY assessments for identified suction line voids**
- **There are opportunities (needs) for improvements using existing technology or data**
- **There are opportunities (needs) for improvements using new technology or data (e.g. pump testing, modifications, etc.)**

Project Progression



Project Status

- **Industry Coordination**
 - **BWROG and PWROG coordination**
 - **Generic use of the Simplified Equation for Road Map program survey**
 - **Licensing use agreement for Simplified Equation to be finalized**
 - **Agreement for “command and control”, responsibilities, program funding to be finalized**
 - **Industry survey to be developed**
 - **Support from NEI and EPRI (Program lead)**

Project Status

- **Industry Survey**
 - **Development and Distribution**
 - **Draft survey has been distributed to PWROG and BWROG core teams**
 - **Final survey to be distributed to BWROG and PWROG participants by mid June 2010**
 - **Expectation – high utility participation**
 - **Survey compiles data necessary for Simplified Equation evaluation and cataloging of pump systems and applications for initial expert panel review**

Project Status

- **Industry discussion via webcast**
 - **Pre-job briefing for industry contacts**
- **Stakeholder and expert panel briefing**
 - **Survey data to be collected and consolidated for panel member distribution - July 2010**
- **Stakeholder and expert panel review meeting**
 - **Preliminary survey results**
 - **Review of “interim” industry pump criteria**
 - **Identification of gaps and opportunities**
 - **Tentative meeting date – August 25 - 26, 2010**

Project Status

- **Balance of Program**
 - Program planning underway for Road Map effort completion
 - Target completion date for final Road Map report – December, 2010
 - Target date assumes no “off-ramps” identified based on initial survey and criteria review

Pump Road Map Project

The background of the slide features three large, white, cylindrical structures, likely cooling towers or chimneys, set against a bright blue sky with scattered white clouds. The structures are positioned at different heights and angles, creating a sense of depth and scale.

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- Discussion