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Office Of Nuclear Energy
Sensors and Instrumentation
Annual Review Meeting

Computer-Based Procedures

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Project Overview

Goals and Objectives

- Define design requirements for computer-based procedures (CBPs) to ensure improvement.
- Evaluate how to streamline and distill the information in the paper-based procedure and to utilize the advantages of dynamic presentation to:
  - Increase efficiency,
  - Improve the ease of use, and
  - Reduce opportunities for errors.
  - Incorporate HU Tools into the normal flow of the procedure.

Collaboration Partners

- The South Texas Project, Duke Energy, Arizona Public Service (APS), The Southern Company, and The Pacific Gas and Electric Company

Schedule

- FY2012-FY2015

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Accomplishments

FY14 Milestones

- Complete report on results of the computer based procedures validation study with nuclear power plant personnel (M3LW-14IN0603092).
- Complete report documenting the requirements for field-based computer based procedures technologies (M4LW-14IN06030932).

Accomplishments

- February, 2014: Evaluation study at APS Palo Verde Nuclear Generating Station's I&C Laboratory.
- April – June, 2014: Pilot Field Validation Study at Duke Energy's Catawba Nuclear Station.
- June, 2014: Conducted Requirements Benchmark Study.
- September, 2014 – January, 2015: Field Validation Study at Palo Verde.

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Technology Impact

- **Increases the economic competitiveness of nuclear power plants (existing and future plants) by enhancing both safety and efficiency of procedure-guided activities in the field.**
- **Improving procedure use performance by replacing paper-based procedures with computer-based procedure systems.**
  - Nearly all activities that involve human interaction with the systems of a nuclear power plant are guided by procedures.
  - The nuclear industry is constantly trying to find ways to decrease the human error rate, especially the human errors associated with procedure use.

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Conclusion

- ***The Computer-Based Procedure project provides***
  - *An innovative solution to create efficiencies and improve human performance in the nuclear industry*
  - *Automated task and decision support tools*