

Vogtle Electric Generating Plant Units 1 & 2 Pre-Submittal Meeting:
Online Monitoring Implementation based on AMS Topical Report

AMS-TR-0720R2-A

September 2022

OPEN SESSION

Overview

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Purpose

Southern Nuclear Operating Company (SNC) proposes to use an online monitoring (OLM) methodology as the technical basis to switch from time-based surveillance frequency for channel calibrations to a condition-based calibration frequency based on OLM results.

Discuss the following:

- An overview of the LAR contents
- SNC schedule for LAR submittal
- Requested LAR review schedule



Background

OLM has been developed and validated for condition monitoring applications in a variety of process and power industries and used to optimize maintenance of transmitters used as sensor input to control and protection systems

OLM consists of collecting transmitter data throughout an operating cycle (including startup, shutdown, or other process cycles), analysis of data to detect transmitter drift or degradation in dynamic performance, and identification of transmitters that warrant a calibration check

OLM methodology used at Vogtle Electric Generating Plant since October 2018 as part of an on-going project with Analysis and Measurement Services Company (AMS) and SNC

OLM methodology used by SNC has been used for more than twenty years at the Sizewell B nuclear power plant

Background

OLM is a proven methodology based on:

- Experience with OLM implementation in nuclear facilities
- Comparison between OLM results and manual calibrations
- Assessment of transmitter failure modes that can be detected by OLM
- Alignment with industry standards and guidelines

NRC determined that the AMS OLM methodology outlined can be used to provide reasonable assurance that required TS instrument calibration requirements for transmitters will be maintained because it:

- Is effective at identifying instrument calibration drift during plant operation
- Provides an acceptable means of identifying when manual transmitter calibration using traditional calibration methods are needed
- Will maintain an acceptable level of performance that is traceable to calibration prime standards

License Amendment Request Overview

- NRC approved AMS Topical Report AMS-TR-0720R2-A, “Online Monitoring Technology to Extend Calibration Intervals of Nuclear Plant Pressure Transmitters” in August 2021
- This TR was approved for use by licensees to support plant-specific technical specification changes to:
 - Switch from time-based calibration frequency of pressure, level, and flow transmitters to a condition-based calibration frequency based on OLM results and
 - Assess dynamic failure modes of pressure sensing systems using the noise analysis technique



License Amendment Request Overview-OLM Technical Evaluations

- **OLM Implementation Process Development**

- SNC is developing the OLM implementation process for Vogtle Electric Generating Plant Units 1 & 2 in accordance with OLM implementation methodology described in AMS-TR-0720R2-A



Comments and Discussion





Southern
Nuclear