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10CFR50.4

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

SUBJECT:
Perry Nuclear Power Plant
Docket No. 50-440, License No. NPF-58
Special Report: Inoperable Hydrogen Analyzer

In accordance with the provisions of Perry Nuclear Power Plant Operations Requirements Manual 6.2.21, the enclosed Special Report is being submitted to notify the Nuclear Regulatory Commission of an inoperable channel of hydrogen analyzer and monitoring instrumentation. The report documents the hydrogen analyzer and monitoring equipment that has been out-of-service for greater than 30 days.

There are no regulatory commitments contained in this letter. If there are any questions or if additional information is required, please contact Mr. Glen Burnham, Manager – Regulatory Compliance, at (440) 280-7538.

Sincerely,

A handwritten signature in blue ink, appearing to read "Rod L Penfield".

Rod L Penfield
Vice President

Enclosure: Inoperable Hydrogen Analyzer

cc: NRC Project Manager
NRC Regional Administrator
NRC Resident Inspector

Special Report

Inoperable Hydrogen Analyzer

The primary purpose of the Perry Nuclear Power Plant (PNPP) hydrogen analyzer and monitoring system is to monitor the Containment and Drywell volumes for the presence of hydrogen gas following a postulated Loss of Coolant Accident (LOCA). The information is displayed and monitored by the control room operators during accident scenarios. The hydrogen analyzer and monitoring system is part of the Combustible Gas Control System, which includes the hydrogen recombiners and the hydrogen ignitors. PNPP has two redundant hydrogen analyzer and monitoring systems to monitor and record the hydrogen concentration in one of four areas in containment and the drywell that are manually selected by the operator.

One hydrogen analyzer and monitoring system channel has been inoperable for greater than the allowed outage time permitted by the PNPP Operations Requirements Manual (ORM). The hydrogen analyzer and monitoring system is a non-Technical Specification (TS) system. In accordance with ORM 6.2.21 Action C, if the required channel is not restored within 30 days, a special report is required to be submitted.

On October 1, 2020, it was discovered that components in the 'A' hydrogen analyzer, which are required to be environmentally qualified (EQ), have not been replaced prior to the end of their qualified life. These components were incorrectly designated as non-EQ and the EQ Maintenance Plan did not call for their replacement. The 'A' hydrogen analyzer was subsequently declared inoperable.

While the 'A' hydrogen analyzer has been declared inoperable at no time has PNPP lost the ability to monitor the hydrogen concentration in containment due to the redundancy of the system. Using the 'B' hydrogen analyzer and associated monitoring systems all required validations have been maintained.

PNPP is currently in the process of procuring the replacement components to restore the 'A' hydrogen analyzer to service. PNPP has encountered challenges in obtaining some of the required relays which has delayed the timeline to conduct the necessary repairs and eventual return to service. However, the anticipated return to service date for the equipment is dependent upon receiving the required parts and conducting the installation. The required parts are currently scheduled to arrive on site on or about November 20, 2020. Once the required parts are received the work will be scheduled and is anticipated to be completed by the end of December 2020.