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Vice President

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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 Post Accident Monitoring Instrumentation

In accordance with the provisions of Perry Nuclear Power Plant Technical Specification 3.3.3.1, the enclosed Special Report is being submitted to notify the Nuclear Regulatory Commission of an inoperable channel of post accident monitoring instrumentation. The report documents post accident 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. Nicola Conicella, Manager – Regulatory Compliance, at (440) 280-5415.

Sincerely,

David Hamilton
Vice President

Enclosure: Inoperable Post Accident Monitoring Instrumentation

cc: NRC Project Manager
NRC Regional Administrator
NRC Resident Inspector

Special Report

Inoperable Post Accident Monitoring Instrumentation

The primary purpose of the Perry Nuclear Power Plant (PNPP) post accident monitoring instrumentation is to display plant variables required to be monitored by the control room operators during accident scenarios. The primary containment/drywell area gross gamma radiation monitors, which comprise a portion of the post accident radiation monitoring system instruments, are provided to monitor for potential significant radiation releases, and to aid in the assessment of releases for determining site emergency action levels. PNPP has two multi-channel area radiation monitors, each consisting of one high range containment detector and one high range drywell detector.

One drywell channel of the primary containment/drywell area gross gamma radiation monitors has been inoperable for greater than the allowed outage time permitted by Technical Specifications (TS). In accordance with TS 3.3.3.1 Action B.1, if the required channel is not restored within 30 days, a special report is required to be submitted within an additional 14 days detailing root cause determination of the inoperable channel and proposed restorative actions. Action B.1 was entered on April 26, 2018. Accordingly, this special report is submitted in accordance with TS 3.3.3.1 Action B.1.

On March 27, 2018, at 0147 hours, alarms on the Division 2 drywell radiation monitor panel indicated equipment failure. The Division 2 drywell post accident radiation monitor was subsequently declared inoperable.

The equipment failure was determined to be on the high voltage signal which resulted in a locked in alarm on the post accident monitoring control room panel. During troubleshooting activities the failure was identified to be in the containment cable.

The containment area post accident monitors will provide radiation monitoring of the containment atmosphere while one channel of the drywell area gross gamma radiation monitor is inoperable. In addition the Division 1 drywell post accident radiation monitor remains operable. In the event of an accident, these instruments will provide information necessary to assess plant conditions. Conventional methods of sampling and analysis of reactor water through normal sampling points or the post accident sample system are also available to provide other indications of fission barrier loss, in the event of an accident. Emergency planning will consider the status of the monitoring equipment, and develop contingencies to ensure emergency coordinators are aware of available alternate monitoring methods should the remaining drywell detector become unavailable.

Parts are being pursued for subsequent repairs. There is a possibility that there is an additional fault existing on the drywell cabling. During the current operating cycle, the

PNPP's staff will develop a plan for restoring the inoperable drywell radiation monitor. If repairs would require a drywell entry, these activities would require an outage of sufficient length to accomplish, or they will be accomplished during the next refueling outage, scheduled for March of 2019.