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March 31, 1994  
PY-CEI/NRR-1775L

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D. C. 20555

Perry Nuclear Power Plant  
Docket No. 50-440  
Supplement to the Response to Generic  
Letter 91-11: Resolution of Generic  
Issues 48 and 49 (TAC M82449)

Gentlemen:

This letter is provided to supplement a previous response to Generic Letter 91-11 for the Perry Nuclear Power Plant (PNPP), Unit 1. Generic Letter 91-11 requested information from each licensee in order to contribute to closure of Generic Issues 48, "LCOs for Class 1E Vital Instrument Buses," and 49, "Interlocks and LCOs for Class 1E Tie Breakers." A response to this Generic Letter was submitted to the NRC in a letter dated January 27, 1991 (PY-CEI/NRR-1435L). This supplemental letter clarifies the design of the vital instrument buses as defined in Enclosure 1 to the Generic Letter as part of the close out for Generic Issue 48. The resolution of Generic Issue 49 for PNPP remains as previously stated in PY-CEI/NRR-1435L.

Enclosure 1 to Generic Letter 91-11 defined "vital instrument buses" as "the AC buses that provide power for the instruments and control of the engineered safety features (ESF) systems and reactor protection system (RPS) and are designed to provide continuous power during postulated events including loss of normal offsite power". As stated in the original response to the Generic Letter, Divisions 1 and 2 each have one instrument bus whose design provides continuous power during postulated events including the loss of normal offsite power. These are the EV-1-A (Division 1) and EV-1-B (Division 2) buses. These buses provide power to the Average Power Range Monitors (APRMs), Local Power Range Monitors (LPRMs) and flow instruments used in the RPS for power-flow RPS signals. However, no credit is taken in any accident analysis for having continuous power supplied to the instruments powered by these buses. In addition, a loss of power to the APRMs would generate a scram signal in the RPS and an APRM permissive signal in the Redundant Reactivity Control System (RRCS) logic; therefore there is no need for inverter power to these instruments to assure proper response to a loss of offsite power event. Also, since these instruments do not provide any input into ESF logic, the inverter powered buses are not required to assure proper ESF response.

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Additionally, the alternate power supply to these buses is provided by Class 1E power backed by diesel generators ensuring a reliable source of power. As such, and even though current Technical Specification LCOs 3.8.3.1 and 3.8.3.2 require these buses to be energized from their respective inverters and give restrictions on allowable outage times when the buses are not powered from the inverters or when the buses are inoperable, there is no need per the PNPP safety analyses and the ESF, RPS and RRCS logic for these buses to maintain continuous inverter-backed power during a loss of offsite power event.

In a related issue, by letter dated February 7, 1994 (PY-CEI/NRR-1669L) the results of the review performed for PNPP in accordance with NEDO-31558, "Position on NRC Regulatory Guide 1.97, Revision 3, Requirements for Post-Accident Neutron Monitoring Systems" was documented. The NEDO proposed alternate criteria for neutron flux monitoring instrumentation in lieu of the Category 1 criteria stated in the Regulatory Guide. The NRC staff has recently completed review of this submittal and concluded in a letter dated February 23, 1994 (PY-NRR/CEI-0685L) that the PNPP post-accident neutron flux monitoring instrumentation meets the criteria of NEDO-31558 as an acceptable alternative to the guidance in Regulatory Guide (RG) 1.97. The NRC staff also indicated that it was acceptable to remove neutron flux from PNPP's RG 1.97 Type A variable list, i.e., the APRMs (which are normally powered from the inverters discussed above), are not instruments providing primary information needed to permit the operator to take specific manually controlled actions following design basis events.

Attachment 1 to letter PY-CEI/NRR-1669L (pages 5 and 6) specifically discussed the power supplies to the APRMs. The conclusion of the NEDO-31558 review was that although availability of the APRMs post-accident would enhance operator actions, the function was not essential to assure plant safety. It follows that if the complete loss of APRM function post-accident will not compromise plant safety, then powering the APRMs from the diesel-backed buses rather than from an inverter-backed bus is acceptable. As a result, the letter indicated that a Technical Specification change was being considered to remove the Technical Specification restrictions cited above which require inverter-supplied power to these buses. This flexibility has already been included in the submittal for implementing the improved technical specifications at PNPP, dated December 16, 1993 (PY-CEI/NRR-1732L). Although this would appear counter to the direction given by Generic Letter 91-11, it is consistent with the PNPP safety analyses and design.

If you have questions or require additional information, please contact Henry Hegrat - Regulatory Affairs at (216) 280-5606.

Very truly yours,



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cc: NRC Project Manager  
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