



# THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

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MURRAY R. EDELMAN  
VICE PRESIDENT  
NUCLEAR

February 27, 1986  
PY-CEI/OIE-0178L

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FILE 100

Mr. James G. Keppler  
Regional Administrator, Region III  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Perry Nuclear Power Plant  
Docket Nos. 50-440; 50-441  
Preoperational Test Exceptions  
to be Completed After Fuel Load

Dear Mr. Keppler:

Attached is information requested by your staff to facilitate your preparation of Attachment 1 to the Perry Unit One Operating License.

This letter provides a single complete itemization of the preoperational testing activities that are to be completed after fuel load along with completion milestones, justification and related Technical Specification exceptions if appropriate. The letter updates our previous letters dated February 19, 1986 (PY-CEI/NRR-0436L) and February 24, 1986 (PY-CEI/OIE-0174L) by dropping from the listing those activities completed, and combining all the exceptions/justifications in one location.

If you have any questions, please feel free to call.

Very truly yours,

Murray R. Edelman  
Vice President  
Nuclear Group

MRE:njc

Attachments

- |                      |             |
|----------------------|-------------|
| cc: J. Silberg, Esq. | H. Denton   |
| John Stefano (2)     | D. Eisenhut |
| J. Grobe             | R. Bernero  |
| C. Norelius          | W. Butler   |
| R. Warnick           | G. Lainas   |
| R. Knop              |             |

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LIQUID RADWASTE SYSTEM (G50)

Technical Specification Exception:  
3.11.1.3

Completion Milestone: Initial criticality

The liquid radwaste system has been preoperationally tested and is currently operational with four test exceptions. Demonstration that the chemical waste evaporators can maintain the proper conductivity of the distillate and the specific gravity of the concentrate is not completed. In the interim, distillate conductivity can be maintained by demineralization of the distillate before returning it to plant systems. Resolution of this test exception will be completed prior to initial criticality. The lack of validation of the evaporators until initial criticality has no adverse impact on startup testing and/or safe operation of the plant, because insignificant amounts of radioactive wastes are expected to be generated during plant operation prior to initial criticality.

SOLID RADWASTE DISPOSAL SYSTEM (G51)

Technical Specification Exception:  
3.11.3

Completion Milestone: Initial criticality

Due to a design change to the solid radwaste system to incorporate a mobile facility as described in our August 30, 1985, letter, testing of the redesigned solid radwaste system to work in conjunction with the NUS mobile facility has not been completed. The remaining testing involves de-watering, transfer capability and logic testing of the additional pneumatic valves. This testing will not impact our ability to handle radwaste due the small amount of solid radwaste that will be produced prior to initial criticality. This small amount can easily be accommodated with the existing on-site storage capability. Completion of this testing prior to initial criticality will have no adverse impact on startup testing and/or safe operation of the plant.

EMERGENCY SERVICE WATER SYSTEM (P45)

Technical Specification Exception:  
None Required

Completion Milestone: Initial criticality

The emergency service water (ESW) system serves as a seismic backup water supply to hose stations in the fire protection system. The ESW system has been satisfactorily tested for its primary functions. However, in its backup fire protection water supply configuration it delivers an average of 72% of design flow. This small decreased capacity in a backup system does not represent concern for the interim period until initial criticality while system orificing is adjusted to assure complete design flow conformance. Since the normal fire protection water supply is fully tested and operational, and the backup water supply is functional completion of this item prior to initial criticality has no adverse impact on startup testing and/or safe operation of the plant.

COMBUSTIBLE GAS CONTROL SYSTEM (M51)

Technical Specification Exception:  
None Required

Completion Milestone: Initial criticality

Preoperational testing has been completed and the system is operational with the exception that modifications to the compressor suction and associated differential pressure taps and transmitters require that retest and recalibration of system instrumentation be performed. The system is necessary for control of hydrogen that results primarily from the potential post-accident zirconium-water reaction with the fuel cladding, a condition that cannot exist prior to initial criticality. Completion of this testing prior to initial criticality will have no adverse impact on startup testing and/or safe operation of the plant.

SAFETY RELATED INSTRUMENT AIR SYSTEM (P57)

Technical Specification Exception:  
None Required

Completion Milestone: Prior to non-nuclear heatup

Preoperational testing of the safety-related instrument air system has not been completed due to unavailability of parts for repair of leaking relief valves. These valves are located in the non-safety portion of the piping, upstream of the automatic depressurization system (ADS) accumulators. The primary function of this system is to supply air to the ADS accumulators. Lack of this system prior to the initial non-nuclear heatup will not present a problem since ADS will not be needed at the very low pressures (<100 psig) the plant will experience prior to non-nuclear heatup. Completion of this preoperational test prior to initial non-nuclear heatup will have no adverse affect on startup testing and/or safe operation of the plant.

REACTOR RECIRCULATION SYSTEM (B33)

Technical Specification Exception:  
3.4.1.2 & 3.4.1.3

Completion Milestone: Prior to nuclear heatup

Preoperational testing of the reactor recirculation system has been completed and the system is operational with the exception of the verification that the recirculation pump flow, as measured by the "elbow tap" differential pressure transmitters, agrees with the expected flow based on the pump head curve. Minor problems in system electronics contributed to this test exception. These electronic problems have since been located and corrected. The instrumentation is now expected to perform as designed; however, validation of the system must wait until the recirculation pumps can be operated in fast speed. The next scheduled availability to run recirculation pumps in fast speed is during the non-nuclear heatup. Completion of this testing prior to nuclear heatup (i.e., during non-nuclear heatup) will have no adverse impact on startup testing and/or safe operation of the plant.

LEAK DETECTION SYSTEM (E31)

Technical Specification Exception:  
3.4.3.1

Completion Milestone: Prior to nuclear heatup

Preoperational testing has been completed and the system is operational with the exception of the drywell floor drain sump, the upper drywell cooler condensate and the refueling bellows flowrate monitors. A combination of parts unavailability and required engineering evaluation is responsible for the postponement of the remaining testing. These monitors serve to provide indication of unidentified leakage in the drywell. This function will be met for the interim period by direct local observation of the sump level and drywell environment. No automatic functions are involved. Completion of this testing prior to nuclear heatup will have no adverse impact on startup testing and/or safe operation of the plant.

OFFGAS SYSTEM (N64)

Technical Specification Exception:  
None Required

Completion Milestone: Prior to nuclear heatup

Completion of calibration and testing of offgas system equipment, including the measurement of process hydrogen concentration, proper drying function of dessicant drying equipment, and the establishment of proper charcoal adsorber delay time for the gaseous effluent remains outstanding. This equipment is necessary to support operation of the steam jet air ejectors (SJAE). Since the SJAE cannot be placed in service prior to nuclear heatup, this test exception does not affect operation until that time. Completion of this testing prior to nuclear heatup will have no adverse impact on startup testing and/or safe operation of the plant.

REFUELING EQUIPMENT SYSTEM (F15)

Technical Specification Exception:  
None Required

Completion Milestone: Prior to exceeding 5% power

Preoperational testing of the refueling equipment system has been completed and the system is operational with the exception that the travel safety computer program for the refueling bridge has not been programmed to avoid the backwall in Zone V of the upper pool. The purpose of this program is to prevent damage to spent fuel during fuel handling operations. No operation of the refueling bridge in Zone V will be performed with spent fuel prior to satisfactory completion of testing. The travel safety computer is fully operational in all other travel zones. A precaution is being added to the fuel handling procedure regarding operation in Zone V. Modifications to the travel safety computer, to avoid the backwall in Zone V, will be completed prior to exceeding 5% power. Completion of this testing prior to 5% power will have no adverse impact on startup testing and/or safe operation of the plant.

STANDBY DIESEL GENERATOR FUEL OIL SYSTEM (R43)      Technical Specification Exception:  
None Required

Completion Milestone: Prior to completion of the initial test program  
(warranty run)

The standby diesel generator fuel oil system has been preoperationally tested and is operational with the exception of the diesel fuel oil storage tank level transmitters. Calibration of these transmitters is awaiting receipt of repair parts. The function of these transmitters is to provide information to assure required long term fuel quantities are available. This function will be completely met by other means including manual sounding and a temporary non-safety level alarm. An approved procedure, describing the manual sounding, will be available prior to fuel load and will remain in effect until the final level transmitters are calibrated. Completion of this testing prior to completion of the initial test program (warranty run) will have no adverse impact on startup testing and/or safe operation of the plant.

TRAVERSING INCORE PROBE SYSTEM                      Technical Specification Exception:  
PREOPERATIONAL TEST (C51D)                      None Required

Completion Milestone: Prior to exceeding 5% power

The Traversing Incore Probe System (TIP) function is for calibration of the Local Power Range Monitors (LPRM) and for monitoring APLHGR, LHGR, MCPR and MFLPD. The TIP system will be installed prior to fuel load and the pre-operational testing will be completed prior to entry into Test Condition #1 (approximately 5% power). This system has no function in mitigating the consequences of an accident and is not required for calibration of the APRM/LPRM's until 15% of rated thermal power. Since the Source Range Monitors and Intermediate Range Monitors provide the necessary nuclear instrumentation for initial fuel load and low power physics testing, completion of the preoperational testing after fuel load will not affect safe operation of the plant.

POST ACCIDENT HIGH RANGE RADIATION  
MONITORING PREOPERATIONAL TEST (D19)

Technical Specification Exception:  
3.3.7.5

Completion Milestone: Prior to exceeding 5% power

The post accident high range radiation monitors are required to provide the capability of reading substantially higher than normal radiation levels in containment and effluent paths that could result from a postulated accident which severely damages the core. Prior to fuel load, the high range radiation monitoring system (D19) will be completely installed and energized. Pre-operational testing will be completed and the system operational prior to 5% rated thermal power. Verification of the Safety Parameter Display System signals associated with the D19 system will also be completed at that time. Prior to achieving 5% power, there will be no significant fission product inventory or decay heat. Even if an accident occurred prior to 5% power operation there would not be sufficient fission products released to the reactor coolant to cause containment or effluent high range radiation levels. The D17 monitors as required by Perry Technical Specifications will be installed, tested and operational prior to fuel load. Based on availability of adequate monitoring instrumentation insufficient fission product release and low likelihood of an accident, completion of this item after fuel load will have no adverse impact on the safe operation of the plant.

#### HVAC-FINAL PLANT PREOPERATIONAL TESTING

Charcoal Filters -

Completion Milestone: Initial criticality

Technical Specification Exception:  
3.11.2.5

HVAC Balancing -

Completion Milestone: Prior to exceeding 5% power

Technical Specification  
Exception: None Required

Prior to fuel load, the plant HVAC systems will be installed and available to provide sufficient ventilation and cooling. Initial testing will be performed on all plant HVAC systems prior to fuel load. Final integrated system verification and all flow balancing to demonstrate flow from areas of low radiation to higher radiation areas will be completed prior to 5% power. Prior to fuel load, the preoperational testing, including final testing of the charcoal filters, will be complete for the Annulus Exhaust Gas Treatment and the Control Room Emergency Recirculation Systems. Final testing of the charcoal filters for other ventilation exhaust treatment systems will be completed prior to initial criticality. These systems will be preoperationally tested and the charcoal loaded into the filters just prior to fuel load to avoid contamination due to construction cleanup activities. Due to the lack of significant fission product inventory and the operational availability of the ventilation exhaust treatment systems, completion of the final balancing prior to 5% power and filter testing prior to initial criticality will have no adverse impact on the safe operation of the plant.

HVAC SYSTEM ADDITIONAL TESTING

Technical Specification Exception:  
None Required

Completion Milestone: Prior to exceeding 5% power

The initial preoperational tests for the Containment Vessel Cooling (M11) and the Fuel Handling Area Ventilation (M40) systems were completed and results approved. The systems are completely installed and operating. As a result of test exceptions and component modifications, additional testing is required and final testing will be performed prior to 5% power. The M40 system will have charcoal loaded just prior to fuel load to avoid contamination and filter testing will be completed prior to achieving initial criticality. Since M11 provides adequate containment cooling and there will be no handling of irradiated fuel in the fuel handling building, completion of these final testing activities after fuel load can be accomplished without adverse effect on the safe operation of the plant.

EMERGENCY RESPONSE FACILITIES VENTILATION  
SYSTEM TESTING

Technical Specification Exception:  
None Required

Completion Milestone: Initial criticality

The ventilation systems for the Technical Support Center (TSC) and Emergency Operations Facility (EOF) are designed to protect personnel responding to a plant emergency from the effects of a postulated large release of fission products. These systems are completely installed and will be available prior to fuel load. Testing of the TSC and EOF ventilation (M52 & M53) will be completed prior to initial criticality. Since there will be no significant fission product inventory and a very low likelihood of a postulated accident, completion of this item after fuel load can be accomplished without adversely affecting emergency capability or safe operation of the plant.

GUARDHOUSE VENTILATION SYSTEM TESTING

Technical Specification Exception:  
None Required

Completion Milestone: Prior to completing the warranty run

The guardhouse ventilation system has been in service and operating for several months. Final component testing will be completed prior to completing the warranty run. Completion of this testing after fuel load is a result of other priority ventilation system activities. Since adequate cooling exists, deferral of the component testing will have no adverse affect on safe operation of the plant.