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SCHWENCER,A. Licensing Branch 2

SUBJECT: Forwards responses to SER open items for resolution of items.Info will be included in next FSAR amend.

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[illegible] items for resolution of [illegible] next [illegible] meeting.

[illegible] correspondence

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NIAGARA MOHAWK

NIAGARA MOHAWK POWER CORPORATION/300 ERIE BOULEVARD WEST, SYRACUSE, N.Y. 13202/TELEPHONE (315) 474-1511

September 13, 1984
(NMP2L 0158)

Mr. A. Schwencer, Chief
Licensing Branch No. 2
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Re: Nine Mile Point Unit 2
Docket No. 50-410

Dear Mr. Schwencer:

Enclosed for your use and information are the Nine Mile Point Unit 2 responses to the Nuclear Regulatory Commission's Safety Evaluation Report open items. This information has been previously discussed with your staff and is submitted to aid your review of the Unit 2 license application for the resolution of these open items. This information includes Safety Evaluation Report open items 640.1, 640.2, 640.6, 640.8, 640.9, 640.13, 640.16, 640.17, 640.19, 640.20, 640.21, 640.31, 640.33, 640.34, 640.35.

The enclosed will be included in the next Final Safety Analysis Report Amendment.

Very truly yours,

C. V. Mangan
Vice President
Nuclear Engineering & Licensing

NLR:ja
Enclosure
xc: Project File (2)

B001

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)

Niagara Mohawk Power Corporation) Docket No. 50-410

(Nine Mile Point Unit 2))

AFFIDAVIT

C.V. Mangan, being duly sworn, states that he is Vice President of Niagara Mohawk Power Corporation; that he is authorized on the part of said Corporation to sign and file with the Nuclear Regulatory Commission the documents attached hereto; and that all such documents are true and correct to the best of his knowledge, information and belief.

C.V. Mangan

Subscribed and sworn to before me, a Notary Public in and the the State of Maryland and County of Montgomery, this 13 day of September 1984.

Ruth Edwards
Notary Public in and for
Montgomery County, Maryland

My Commission expires:

7/1/86

QUESTION F640.1 (14.2.1)

Provide a schedule for submitting the two-pump trip coastdown curves (Figure 14.2-138-1) or replace the figure with a statement indicating the curves will be provided in GE test instructions which will be available for NRC review prior to (date).

RESPONSE

A revised Figure 14.2-239-1 is provided which indicates that the two pump trip coastdown curves will be provided in GE test instructions. These instructions will be available for NRC review prior to the fourth quarter of 1985.

QUESTION F640.2 (14.2.2.8)

Section 14.2.2.8 refers to Table 14.2-147 which is not in the FSAR. This discrepancy should be resolved.

RESPONSE

See Table 14.2-403.

QUESTION F640.06 (14.2.7, 1.8)

Delete the reference to Regulatory Guide 1.80 in FSAR Subsection 14.2.7 and substitute a statement of conformance to Regulatory Guide 1.68.3 (Preoperational Testing of Instrument and Control Air Systems) as in FSAR Section 1.8.

RESPONSE

See revised Section 14.2.7., AND TABLE 14.2-43

TABLE 14.2-43

SERVICE AND INSTRUMENT AIR SYSTEM

System 19

Preoperational Test (N2-POT-19)

Test Objectives

1. To demonstrate the reliable operation of the service and instrument air systems and components.

2. To ensure the system is properly designed and constructed.

3. To evaluate the service and instrument air systems operating procedures.

Safety Precaution

Follow all NMPC safety rules and proper procedures during testing.

Prerequisites

1. All applicable preliminary tests are completed and approved.

2. All applicable motor control centers to supply electric power to motors, control circuits, and instrumentation are available.

3. All valve lineups are completed.

Test Procedure

1. The test procedure will verify that the instrument and service air system is capable of supplying the plant's compressed air requirements during normal operation.

2. The autostart feature of the compressors will be demonstrated.

3. The air compressor trip modes will be verified for various transients, simulated during testing.

4. Air compressor capacity and load time will be verified.

TABLE 14.2-43 (Cont)

5. The test will ensure that the effluent dryers and associated instrumentation operate according to design.

6. System control instrumentation, alarms, interlocks, and annunciators will be demonstrated for correct response.

7. A loss-of-air-supply test (Regulatory Guide 1.68.3) will be conducted on those portions of the Instrument Air System which interface with safety-related systems to verify that the air-controlled components supplied directly from the instrument air system will respond as designed.

8. The test procedure will verify there are no crossties between the service air and instrument air systems which will degrade system operation.

Acceptance Criteria

1. The air compressors operate according to design specifications outlined in Equipment Specification No. NMP2-P261C.

2. The trip and autostart modes for the air compressors function as outlined in applicable SWEC logic diagrams.

3. System control instrumentation, alarms, annunciators, and interlocks will operate according to design as illustrated in applicable SWEC logic diagrams.

4. The system meets its design functions as described in Section 9.3.1.

5. All air operated safety related components respond as designed to a loss of air pressure.

QUESTION F640.08 (14.2.7)

To meet the regulatory position stated in Regulatory Guide 1.108 (Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Plants):

1. Delete your current exception to Regulatory Guide 1.108 in FSAR Subsection 14.2.7 and commit to conducting all diesel generator preoperational tests with the diesel generators installed in-plant, or provide expanded technical justification to provide assurance that vendor testing will accomplish the same test objectives as in-situ testing.

2. Delete your current exception to Regulatory Guide 1.108 (position c.2.a(3)) in FSAR Section 1.8 and commit to testing the diesel generator for two hours at a load equivalent to the 2 hour rating, not the 2000-hour rating as listed in FSAR Section 1.8.

3. Modify Preoperational Test Abstract Number 14.2-47 (Diesel Generator Mechanical System) to include testing to ensure the satisfactory operability of all check valves in the flow path of cooling water for the diesel generators from the intake to the discharge (see I&E Bulletin No. 83-03: Check Valve Failures in Raw Water Cooling Systems of Diesel Generators).

4. Modify Preoperational Test Abstract Number 14.2-97 (Emergency A-C Distribution Load Carrying Capability System) and/or Number 14.2-98 (Loss of Power/ECCS Functional Test) to demonstrate proper diesel generator operation during load shedding, including a test of the loss of the largest single load and complete loss of load, and verify that the voltage requirements are met and that the overspeed limits are not exceeded. Your testing should, in addition, provide assurance that any time delays in the diesel generator's restart circuitry will not cause the supply of compressed air used to initially rotate the engine to be consumed in the presence of a safety injection signal (see I&E Information Notice Number 83-17, March 31, 1983).

RESPONSE

1. See response to Question F430.17.

2. See Section 1.8.

3. See revised test abstract in Table 14.2-36.

4. See revised test abstract in Table 14.2-125.

TABLE 14.2-125

STANDBY DIESEL GENERATOR MECHANICAL

System 100

Preoperational Test (N2-POT-100A)

Test Objectives

1. To demonstrate the reliable operation of the standby diesel generator system and components.

2. To ensure the system is properly designed and constructed.

3. To evaluate the standby diesel generator system operating procedures.

Safety Precaution

Follow all NMPC safety rules and proper procedures during testing.

Prerequisites

1. All applicable preliminary tests are completed and approved.

2. All applicable motor control centers to supply electric power to motors, control circuits, and instrumentation are available.

3. All valve lineups are completed.

4. Service water system is operable and available to support testing.

Test Procedure

1. The engine-driven and motor-driven circulating water pumps are verified to function as designed and verified that the jacket water system can maintain engine temperature within design limits.

2. The diesel generator lubrication oil system is tested to demonstrate its ability to deliver lubrication oil to required engine components and maintain the oil temperature within design limits.

3. Proper diesel generator operation will be verified for a loss of offsite power and LOCA conditions.

4. The test will demonstrate proper operation of the diesel generators during load shedding, including loss of largest single load and complete loss of load, with verification of voltage requirements and overspeed limits.

5. The ability to synchronize the diesel generator, while under load, with offsite power sources will be demonstrated.

6. The reliability of the diesel generators will be demonstrated by means of 69 consecutive starts.

7. All applicable alarms and annunciators will be verified for proper operation.

8. Full load carrying capability will be demonstrated during a 24 hour test run, 22 hours of which will be at the load equivalent of the continuous rating and two hours at the two hour rating of the diesel generator.

9. Functional capability of the diesel generators at full load temperature conditions will be demonstrated by running automatic start and load sequencing tests immediately following the 24 hour run.

10. A simultaneous start of diesel generator units 101 and 103 will be performed.

Acceptance Criteria

1. Each diesel generator starts, accelerates to rated speed, voltage, and frequency, and starts loading sequence within 10 sec of receipt of the start signal.

2. Diesel generator voltage requirements are maintained, and overspeed limits are not exceeded during a loss of the largest single load and a complete loss of load.

3. With the generator connected to the emergency load, it can be synchronized and the load transferred to the offsite power source.

4. Diesel generator reliability has been proven by means of 69/N consecutive tests with no failures (where N is equal to the number of diesel generators of the same size and design).

5. The engine jacket water system functions as designed to maintain engine temperatures within design limits in both standby and operating conditions.

6. The diesel generator lubrication oil system functions as designed to lubricate engine bearings and other moving parts with the generator in operation and maintains oil temperature within design limits when engine is in a

TABLE 14.2-125 (Cont)

7.	All alarms and annunciators function as designed in accordance with Sections 8.3.1.1.2, 9.5.7.3, and 9.5.5.3.	8

QUESTION F640.09 (14.2.7)

Certain exceptions to Regulatory Guide 1.140 (Design, Testing, and Maintenance Criteria for Normal Ventilation Exhaust System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants) listed in FSAR Section 1.8 need to be deleted or modified as described below to be acceptable.

1. Modify exception to paragraph C.2.f to delineate how the ductwork leak tests performed using the methods of the Associated Air Balance Council differ from the requirements given in Section 6 of ANSI N510:1975, and provide technical justification for any testing that does not address those differences.

2. Modify the exception to paragraph C.3.i to provide assurance that the data provided in the AMCA certification ratings will most closely represent the manner in which the fan will be installed in the appropriate system.

3. The exception to paragraph C.3.1 states that Class B leakage rates shall be determined for one damper of each type instead of every damper. Delete this exception or provide expanded technical justification for not conducting leakage rate measurements for all dampers.

RESPONSE

See revised Section 1.8, Table 1.8-1, Regulatory Guide 1.140. | 7

TABLE 14.2-72

RADWASTE BUILDING VENTILATION

System 56

Preoperational Test (N2-POT-56)

Test Objectives

1. To demonstrate the reliable operation of the radwaste building ventilation system and components.

2. To ensure the system is properly designed and constructed.

Safety Precaution

Follow all NMPC safety rules and proper procedures during testing.

Prerequisites

1. All applicable preliminary tests are completed and approved.

2. All applicable motor control centers to supply electric power to motors, control circuits, and instrumentation are available.

3. All valve lineups are completed.

Test Procedure

1. The test ensures all controls, interlocks, and fans are checked for proper operation in accordance with specifications.

2. The thermostatically controlled unit heaters are verified for proper operation.

3. The equipment exhaust subsystem fans and filter trains are checked for proper operation.

4. All alarms and annunciators are verified by simulated signals or parameter variation.

5. An in-place DOP penetration test per Reg. Guide 1.140 will be performed on the HEPA filters to confirm a satisfactory particulate removal efficiency.

TABLE 14.2-72 (Cont)

6. Supply and exhaust system air flows are tested for proper balance and their ability to maintain the radwaste building in a slightly negative pressure condition.

Acceptance Criteria

1. All controls, trips, and interlocks function as designed according to SWEC design drawings.

2. Environmental conditions are consistent with personnel comfort and optimum equipment performance by maintaining building temperatures within design limits according to Table 9.4-1.

3. System air flows are balanced in a way to maintain building pressures within design limits in accordance with Table 9.4-1.

4. All alarms and annunciators function as designed in accordance with SWEC design drawings.

5. The efficiency of the HEPA filters, as demonstrated by the DOP penetration test, will be within design requirements.

TABLE 1.8-1 (Cont)

Regulatory Guide 1.140, Revision 1 (October 1979)

Design, Testing, and Maintenance Criteria for Normal Ventilation Exhaust System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants

Position

This regulatory guide is not applicable to Unit 2 because absorption is not provided as part of the normal ventilation exhaust air filtration system. However, HEPA filters are provided in the Radwaste Ventilation System; therefore, DOP testing will be performed (Section 14.2, Table 14.2-72).

QUESTION F640.13 (14.2.12)

For compliance with Regulatory Guide 1.68, Appendix A.1.h, provide or reference preoperational test abstract descriptions in FSAR Subsection 14.2.12 that ensure that the emergency ventilation systems are capable of maintaining all Engineered Safety Features (ESF) equipment within their design temperature range with the equipment operating in a manner that will produce the maximum heat load in the compartment. If it is not practical to produce maximum heat loads in a compartment, describe the methods that will be used to develop acceptance criteria that verify design heat removal capability of emergency ventilation systems.

(Note that it is not apparent that post-accident design heat loads will be produced in ESF equipment rooms during the scheduled test phase; therefore, simply assuring that area temperatures remain within design limits during this period will not demonstrate the design heat removal capability of these systems. It will be necessary to include measurement of air and cooling water temperatures and flows, and the extrapolations used to verify that the ventilation systems can remove the postulated post-accident heat loads.)

RESPONSE

The preoperational test abstracts for the ventilation system are shown in Tables 14.2-68 through 14.2-74. However, during the startup test program when final ventilation system balancing is performed, it will be verified that the temperatures in ESF equipment rooms can be maintained within design specifications during normal operation and abnormal conditions.

QUESTION F640.16 (14.2.12)

For compliance with Regulatory Guide 1.68, Appendix A.1.h.(3), expand the Preoperational Test Abstract Number 14.2-48 (Residual Heat Removal System) test objective to include verification that the paths for the air-flow test of containment spray nozzles overlap the water-flow test paths of the pumps in order to demonstrate that there is no blockage in the flow paths.

RESPONSE

See revised preoperational test abstract in Table 14.2-49.

TABLE 14.2-49

RESIDUAL HEAT REMOVAL SYSTEM

System 31

Preoperational Test (N2-POT-31)

Test Objectives

1. To demonstrate the reliable operation of the residual heat removal system and components in all modes except steam condensing.

2. To ensure the system is properly designed and constructed.

3. To evaluate the residual heat removal system operating procedures.

Safety Precaution

Follow all NMPC safety rules and proper procedures during testing.

Prerequisites

1. All applicable preliminary tests are completed and approved.

2. All applicable motor control centers to supply electric power to motors, control circuits, and instrumentation are available.

3. Installation and calibration check of all instrumentation is completed.

4. Capability of hooding 50 percent of suppression pool suction strainer.

Test Procedure

1. All valve, sensor, logic, and set point tests are performed to confirm operability.

2. Water leg pumps are checked to verify their ability to fill and pressurize the RHR system piping.

TABLE 14.2-49 (Cont)

3. Tests of each RHR operation mode (low pressure coolant injection, containment spray cooling, shutdown cooling, suppression pool cooling) are performed to demonstrate satisfactory operability.

4. Air-flow tests will be conducted using test paths that overlap the water flow test paths of the pumps to verify that there is no blockage in the flow paths.

Acceptance Criteria

All applicable parameters meet design specifications, i.e., flows, temperatures, and pressures, in accordance with GE Test Specification 22A2271BA, Appendix B, Section 5.5.

QUESTION F640.17 (14.2.12)

For compliance with Regulatory Guide 1.68, Appendix A.1.h.(1)(c), modify Preoperational Test Abstract Number 14.2-48 (Residual Heat Removal System) to state that all five modes of operation will be tested.

RESPONSE

See revised preoperational test abstract Table 14.2-49 for the residual heat removal system in Section 14.2. It includes all modes of RHR operation, excluding the steam condensing mode. This mode will be tested during the power ascension test when reactor steam is available.

QUESTION F640.19 (14.2.12)

For compliance with Regulatory Guide 1.68, Appendix A.1.1, expand Preoperational Test Abstract Number 14.2-81 (Liquid Radwaste Handling System) and Number 14.2-104 (Solid Radwaste Handling System) to ensure that any radiation detectors and monitors which are part of those systems are tested with spiked samples of typical media, or with sources.

RESPONSE

See revised Tables 14.2-58 and 14.2-59.

QUESTION F640.20 (14.2.12)

Preoperational Test Abstract Number 14.2-87 (Plant Communications System) references FSAR Subsection 9.5.2 for acceptance criteria. Modify the preoperational test abstract or FSAR Subsection 9.5.2 to provide a description of the testing to be performed to meet the requirements of 10CFR50, Appendix E.IV.E., IE Bulletin No. 80-15, and Generic Letter 82-33.

RESPONSE

See revised Table 14.2-103.

QUESTION F640.21 (14.2.12)

To comply with Regulatory Guide 1.68, Appendix A.1.c, modify Preoperational Test Abstract Number 14.2-89 (Reactor Protection System) to include or reference testing that will:

1. Account for delay times of process-to-sensor hardware (e.g., instrument lines, hydraulic snubbers).

2. Provide assurance that the response time of each primary sensor is acceptable.

3. Provide assurance that the total reactor protection system response time is consistent with your accident analysis assumptions:

   NOTE: Item 2 can be accomplished by measuring the response time of each sensor during the preoperational test, stating that the response time of each sensor will be measured by the manufacturer within two years prior to fuel loading, or describing the manufacturer's certification process in sufficient detail for use to conclude that the sensor response times are in accordance with design.

RESPONSE

See revised test abstract for the reactor protection system in Table 14.2-123.

TABLE 14.2-123

REACTOR PROTECTION SYSTEM

System 97

Preoperational Test (N2-POT-97)

Test Objectives

1. To demonstrate the reliable operation of the reactor protection system and components.

2. To ensure the system is properly designed and constructed.

3. To evaluate the reactor protection system operating procedures.

Safety Precaution

Follow all NMPC safety rules and proper procedures during testing.

Prerequisites

1. All applicable preliminary tests are completed and approved.

2. All applicable motor control centers to supply electric power to motors, control circuits, and instrumentation are available.

3. The following control rod drive hydraulic system components are installed and operable: backup scram valves, scram pilot valves, the discharge volume isolation pilot valves, the scram valves, and discharge header drain and vent valves, and scram valve position lights.

4. The RPS power supplies (UPSs and MG sets) and the electrical protection circuitry are operable.

Test Procedure

1. All valve, sensor, and logic tests are performed to demonstrate system operability.

2. RPS motor-generator set performance test is performed to verify proper operation.

TABLE 14.2-123 (Cont)

3. The sensor to actuator relay test is performed to verify system interconnections and proper actuation of relay logic associated with system sensors.

4. Response time testing will be performed for all RPS equipment required to be tested by Technical Specifications. The test will include response times either calculated or physical tests from the process sensor through the final actuating device.

5. The mode switch is checked in each of its modes of operation to verify that all functions are operating properly.

6. The scram trip system is tested to demonstrate its operability.

7. All annunciator and computer alarms are checked.

8. The trip system power independence and fail-safe feature is verified.

Acceptance Criteria

1. All applicable parameters meet design specifications in accordance with GE Test Specification 22A2271BA, Appendix B, Section 21.6.

2. Response times shall be within parameters specified in technical specifications.

QUESTION F640.31 (14.2.12)

Startup Test Abstract Number 14.2-135 (Turbine Trip and Generator Load Rejection) states that either a turbine trip or a generator trip will be accomplished at TC-6 (approx. 100% power). In accordance with Regulatory Guide 1.68, Appendix A.5.j.j, either perform both a turbine trip and generator trip at 100% power or provide technical justification for omitting one of these tests. If one trip will not be performed, test data from previous trips and precalculated transient analyses should be extrapolated to verify adequacy of reactor dynamic response.

RESPONSE

See revised Table 14.2-231

I.G.1 TRAINING DURING LOW-POWER TESTING

Q640.33

FSAR Cross Reference

Sections 13.2, 14.2

NUREG-0737 Position

The objective is to increase the capability of the shift crews to operate facilities in a safe and competent manner by assuring that training for plant changes and off-normal events is conducted. Near-term operating license facilities will be required to develop and implement intensified training exercises during the low-power testing programs. This may involve the repetition of startup tests on different shifts for training purposes. Based on experiences from the near-term operating license facilities, requirements may be applied to other new facilities or incorporated into the plant drill requirement (Task I.A.2.5). Review comprehensiveness of test programs.

The NRR will require new operating licensees to conduct a set of low-power tests to accomplish the requirement. The set of tests will be determined on a case-by-case basis for the first few plants. Then NRR will develop acceptance criteria for low-power test programs to provide hands-on training for plant evaluation and off-normal events for each operating shift. It is not expected that all tests will be required to be conducted by each operating shift. Observation by one shift of training of another shift may be acceptable.

The NRR will develop criteria in conjunction with initial near-term operating license reviews.

Licensees will 1) define training plan prior to loading fuel, and 2) conduct training prior to full-power operation.

Nine Mile Point Unit 2 Position

The conduct of the initial startup and test program including preoperational testing and startup testing is described in Chapter 14. Personnel training is described in Section 13.2. The training described includes the use of a plant-specific simulator and meets the intent of this TMI action item.

Operator training by exposure to operational and testing evolutions is inherent in the integrated testing program being performed at Unit 2.

Integrated ECCS testing, typical cold and hot functional tests and startup tests including loss of power with or without simulated LOCAs will be possible on the Unit 2 plant specific simulator.

The simulator training program will provide all shift personnel with experience in evolutions scheduled, not just those in which they participate during the plant testing phases. These evolutions can be repeated to allow various aspects and responses to be emphasized and test procedures to be critiqued. Documentation of operations personnel participation in these training evolutions is required as part of the operator training program.

5.w		Containment Penetration Coolers. Provide a test description or, on those penetrations where coolers are not used, include a test description for a containment penetration concrete temperature survey to assure that penetrations will not subject concrete to temperatures over 200°F.
5.i.i	15.3	Demonstrate that the dynamic response of the plant is in accordance with design for limiting closure of reactor coolant system flow control valves. The method for initiating control valve closure should result in the fastest credible coastdown in flow.
5.g.g	15.8	ATWS Test

RESPONSE

The test program testing abstracts are being modified in response to Question 640.10. Tests will be described to distinguish which are subject to Chapter 17 test control. The following response outlines how abstracts comply with Regulatory Guide 1.68, Appendix A:

Regulatory Guide Section	
1.b(1)	The rod block monitor subsystem is tested in the rod block monitoring preoperational test (FSAR Table 14.2-118).
1.d(3) 1.d(4)	The relief valves and safety valves are tested as follows: Safety/relief mode has been factory tested offsite. Set point verification for open/closure will be verified for the SRVs in the relief mode during the main steam system preoperational testing (FSAR Table 14.2-25).

1.e(3) The MSIVs are tested during the main steam system preoperational testing (FSAR Table 14.2-25).

1.e(6) The turbine bypass valves are tested as follows:

Controls are verified as part of the EHC system preoperational testing (FSAR Table 14.2-44).

Capacity/response time testing is performed during the power test program (FSAR Table 14.2-231).

1.h The main steam flow restrictors themselves will not be tested. Associated instrumentation is tested as part of the main steam system preoperational testing (FSAR Table 14.2-25).

1.h(8) The ECCS discharge line fill systems are tested as part of each ECCS system preoperational testing (FSAR Tables 14.2-49, 50, 51).

1.h(10) The ultimate heat sink, Lake Ontario, will not be tested. All safety-related components of the service water system necessary to transfer lake water into or out of the plant will be tested as a portion of the service water system preoperational testing.

1.i(10) The containment and suppression pool vacuum breakers will be tested as part of the containment isolation system preoperational testing (FSAR Table 14.2-109).

1.j(7) ECCS leak detection systems will be tested as follows:

Leak detection systems as described in FSAR Section 7.6.1.3 will be tested in the leak detection system preoperational testing (FSAR Table 14.2-112).

Leak detection associated with each ECCS system will be tested as a portion of each system preoperational testing.

1.j(12) A failed fuel detection system is not provided as an independent system. Instrumentation to detect failed fuel is tested within appropriate system preoperational testing.

1.j(13) Source range monitors are tested as part of the neutron monitoring preoperational testing (FSAR Table 14.2-117).

1.j(21) Reactor mode switch and associated functions are tested as part of the reactor protection system preoperational testing (FSAR Table 14.2-123).

1.j(23) The hydrogen and oxygen analyzer system is tested as part of the containment monitoring system preoperational testing (FSAR Table 14.2-108).

1.L(5) Condenser off gas isolation - instrumentation and logic associated with this feature is tested as part of process radiation monitoring system preoperational testing (FSAR Table 14.2-106).

1.L(7) Liquid radwaste effluent isolation - instrumentation and logic associated with this feature is tested as part of process radiation monitoring system preoperational testing (FSAR Table 14.2-106).

1.n(3) Ventilation chilled water system - will be tested during the normal switchgear building HVAC system preoperational testing (FSAR Table 14.2-70).

1.m(3) Leak tests of sectionalizing devices and drains, gasket leak tests or bellows in refueling canal will be tested as part of the fuel handlng and vessel service preoperational testing (FSAR Table 14.2-57).

1.m(4) Dynamic and static load testing of cranes, hoists and associated fuel storage and handling systems except the polar crane will be performed in the fuel handling and vessel servicing equipment system preoperational testing (FSAR Table 14.2-57).

1.m(5) Appropriate tests for fuel transfer devices will be performed in the fuel handling and vessel servicing equipment system preoperational testing (FSAR Table 14.2-57).

1.o(1) Polar crane and hoist dynamic and static load tests will be performed as part of the polar crane preoperational testing (FSAR Table 14.2-110).

2.a A shutdown margin calculation will be performed as part of the startup test program for a partially loaded core (FSAR Table 14.2-203).

2.c Final test of reactor protection system is not planned as system design features are verified during the reactor protection system preoperational testing and cold functional testing (FSAR Table 14.2-123).

2.d Final reactor leak rate tests during pressurizations of the RPV leak rates within the containment are monitored to be within technical specification limits.

5.g Rod block monitor testing is performed during the rod block monitoring preoperational testing (FSAR Table 14.2-118).

5.k High pressure coolant spray tests are not scheduled to be performed during startup testing. HPCS to RPV injection tests will be conducted during the preoperational testing program (FSAR Table 14.2-51).

5.s Startup test abstracts for the feedwater system will be modified to verify performance of the control system at test conditions 2, 3, 4, 5 and 6. The hotwell level control system performance is tested during the preoperational testing program (FSAR Tables 14.2-28 and 14.2-222).

5.w A sample of containment penetration concrete temperatures will be verified by survey to assure that the penetrations will not be subject to temperatures over 200°F.

5.i.i Startup testing of the recirculation system will demonstrate response of the plant in accordance with design limits specified by General Electric (FSAR Tables 14.2-233, 14.2-234, 14.2-235, 14.2-236, 14.2-237).

5.g.g The operability of equipment provided for ATWS is tested during preoperational testing of systems within which the equipment is provided (FSAR Tables 14.2-47, 14.2-54, 14.2-123, 14.2-48).

TABLE 14.2-51

HIGH-PRESSURE CORE SPRAY SYSTEM

System 33

Preoperational Test (N2-POT-33)

Test Objectives

1. To demonstrate the reliable operation of the high-pressure core spray system and components.
2. To ensure the system is properly designed and constructed.
3. To evaluate the high-pressure core spray system operating procedures.

Safety Precaution

Follow all NMPC safety rules and proper procedures during testing.

Prerequisites

1. All applicable preliminary tests are completed and approved.
2. All applicable motor control centers to supply electric power to motors, control circuits, and instrumentation are available.
3. All sensors, pressure switches, gauges, instruments, and protective relays are calibrated and tested for accurate performance.
4. All prestart-up requirements of equipment instruction manuals are met.
5. HPCS diesel generator is operable.

Test Procedure

1. All motor and air operated valves and relief valves are checked to demonstrate proper functioning.
2. All alarms, set-points, logic, and interlock elements are verified for accurate performance, both individually and in conjunction with other elements.
3. All pump and motor performances are verified according to manufacturer's instructions.
4. System performance characteristics are obtained and verified to meet design requirements.
5. System initiation on low water level and high drywell pressure for normal auxiliary and emergency DG power is checked to verify ability of system pump to start, to open the injection valve, and deliver rated flow to the vessel in the required time interval.
6. The operability of the water leg pump, including the ability of the pump to fill and pressurize the HPCS system piping will be verified.

System 33 (con't.)

Acceptance Criteria

All applicable parameters meet design specifications, i.e., flows, temperatures, and pressures, as per G. E. Test Specification 22A2271BA; Appendix B; Section 13.5.

TABLE 14.2-57

FUEL HANDLING & REACTOR SERVICE EQUIPMENT SYSTEM

System 39

Preoperational Test (N2-POT-39)

Test Objectives

1. To demonstrate the reliable operation of the fuel handling and reactor service equipment system and components.
2. To ensure the system is properly designed and constructed.
3. To evaluate the fuel handling and reactor service equipment system operating procedures.

Safety Precaution

Follow all NMPC safety rules and proper procedures during testing.

Prerequisites

1. All applicable preliminary tests are completed and approved.
2. All applicable motor control centers to supply electric power to motors, control circuits, and instrumentation are available.

Test Procedure

1. All interlocks and logic associated with the refueling platform and service platform are verified.
2. All refueling equipment, including service tools and platform equipment, is tested for proper operation.
3. All in-vessel servicing equipment, such as peripheral orifice servicing, control rod assembly servicing, instrument servicing, and in-vessel fuel bundle servicing, is checked for correct installation and operability.
4. All reactor vessel servicing equipment is checked for proper assembly and operation.
5. All fuel service equipment is checked for proper installation and operation.
6. All under reactor vessel servicing equipment, including control rod drive servicing equipment and in-core instrumentation servicing equipment, is tested for correct installation and operation.
7. Dynamic and static load testing of cranes, hoists and associated fuel storage and handling systems will be performed.
8. The results of the "static head pressure test of reactor head cavity, fuel pool and reactor internals storage pools" will be reviewed to verify integrity of sectionalizing devices, drains and gasket leak tests.

Acceptance Criteria

All applicable parameters meet design specifications as per G. E. Test Specification 22A2271BA; Appendix B; Section 11.5.

TABLE 14.2-70

NORMAL SWITCHGEAR
BUILDING VENTILATION SYSTEM

System 54

Preoperational Test (N2-POT-54)

Test Objectives

1. To demonstrate the reliable operation of the Normal Switchgear Building ventilation system and components.
2. To ensure the system is properly designed and constructed.
3. To evaluate the Normal Switchgear Building ventilation system operating procedures.

Safety Precaution

Follow all NMPC safety rules and proper procedures during testing.

Prerequisites

1. All applicable preliminary tests are completed and approved.
2. All applicable motor control centers to supply electric power to motors, control circuits, and instrumentation are available.

Test Procedure

1. Ventilation equipment penthouse ventilation is verified for proper operation of logic controls.
2. The L.F. MG penthouse ventilation is verified for proper operation of logic controls.
3. The Battery Room exhaust is verified.
4. The normal switchgear supply and exhaust ventilation logic controls are verified for proper performance.
5. Unit heater controls are verified for the Normal Switchgear Building.
6. Proper operation of the Ventilation Chilled Water System will be verified as part of this preop.
7. A system performance test for the normal switchgear ventilation system is conducted to ensure that all temperatures, pressures, and hydrogen concentrations meet design specifications.

Acceptance Criteria

1. All instruments, controls, protective devices, interlocks, and mechanical equipment are properly installed as shown on elementary and logic diagrams.

System 54 (con't.)

2. System will maintain building temperatures between 65°F and 104°F as per FSAR Table 9.4-1.

3. System maintains less than 2% hydrogen in Battery Rooms as per IEEE Standard 484, 1975.

4. System maintains Battery Room pressure slightly lower than general area pressure as per FSAR Section 9.4.1.2.7.

QUESTION F640.35 (14.2.5)

To help facilitate approval of future changes to the Nine Mile Point Unit 2 Initial Test Program:

1. For portions of any preoperational tests (including review and approval of test results) which are intended to be conducted after fuel loading: a) list each test, b) state what portions of each test will be delayed until after fuel loading, c) provide technical justification for delaying these portions, and d) state when each test will be completed.

2. List and provide technical justification for any tests or portions of tests described in FSAR Chapter 14 which you believe should be exempted from the license condition requiring prior NRC notification of major test changes to tests intended to verify the proper design, construction, or performance of systems, structures, or components important to safety (fulfill General Design Criteria (GDC) functions and/or are subject to 10CFR50, Appendix B Quality Assurance requirements).

RESPONSE

All preoperational tests are scheduled to be performed prior to fuel loading.