U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 85-34

Docket No. 50-410

License No. CRRP-112 Priority - Category B

Licensee: Niagara Mohawk Power Corporation
300 Erie Boulevard, West
Syracuse, New York 13202

Facility Name: Nine Mile Point Unit 2

Inspection At: Scriba, New York

Inspection Conducted: October 21 - 25, 1985

Inspectors: A. G. Krasopoulos, Reactor Engineer — 11/20/85 date

Also participating and contributing to the report were:

D. Kubicki, Chemical Engineering Branch, NRR
A. Coppola, Mechanical Systems Specialist, BNL
K. Parkinson, Electrical Systems Specialist, BNL

Approved by: C. J. Anderson, Chief
Plant Systems Section, DRS — 11/21/85 date

Inspection Summary: Inspection on October 21-25, 1985 (Inspection Report No. 50-410/85-34)

Areas Inspected: Special announced team inspection to assess the applicant's capability to safely shut down the plant in the event of a design basis fire and inspection of the emergency lighting system provided for safe shutdown purposes.

The inspection involved 138 inspector hours on-site by a team consisting of 4 inspectors.

Results: No violations were identified. Seven items remained unresolved at the end of this inspection.

DETAILS

1.0 Persons Contacted

1.1 Niagara Mohawk Power Corporation (NMPC)

*R. Abbott, Station Superintendent
G. Afflerback, Startup Manager
C. Beckham, QA Projects
*J. Buckley, Operations QA
*J. Corcoran, Supervisor Fire Protection
*L. Fenton, Audit Group Leader
*W. Hansen, Manager Nuclear Engineering
M. Kammer, Fire Protection Engineer
*C. Keller, QA Engineer
*D. King, QA Supervisor
*T. Lempges, Vice President Nuclear Generation
*G. Loveland, Project Engineer
*R. Matlock, Deputy Project Director
G. Moyer, Station Shift Superintendent
*P. McNally, Assistant Supervisor Fire Protection
*T. Perkins, General Superintendent
*D. Quamme, Project Director
*N. Rademacher, Licensing Engineer
*M. Ray, Manager Special Projects
*R. Raymond, Supervisor Fire Protection
*R. Schulman, Assistant Construction Engineer

1.2 Stone and Webster Engineering Corp.

*C. Bishop, Deputy Project Director
B. Charlson, Project Director
R. Das, Electrical Engineer
E. Dehart, Site Engineering
*J. Gallagher, Site Licensing Engineer
D. Godard, Area Manager
*A. Gwal, Lead Electrical Engineer
S. Hobner, Assistant Superintendent of Engineering
*M. Lipsett, Site Engineering Group
T. Ortner, Power Engineer
*H. Pinkston, Controls Engineer
*D. Sutton, Fire Protection Coordinator
C. Terry, Projects QA Manager
M. Zaccaria, Electrical Design

1.3 Compis Services (CS) and others

*D. Becker, Audit Coordinator (CS)
*P. Eddy, Sr., Site Representative, New York Public Service Commission
*S. Savar, Electrical Engineer (CS)
*E. York, Assistant Audit Coordinator (CS)

1.4 U.S. Nuclear Regulatory Commission (NCR)

*R. Gramm, Senior Resident Inspector

*Denotes those present at the exit interview.

2.0 Purpose

This inspection was performed to verify the applicant's ability to safely shut down the plant in the event of a fire, and to verify the adequacy of the plant's emergency lighting system and oil collection system provided for the reactor coolant pumps.

3.0 Background

By letter dated October 15, 1981 (D. Eisenhut to G. Rhode), the Commission informed the licensee of the practice to perform fire protection reviews using the provisions of Appendix R to 10 CFR 50. Accordingly the Commission requested the licensee to include a comparison of their fire protection program to the requirements of Appendix R and specifically identify and justify deviations from these requirements. The licensee responded to this request by committing to include a comparison of the Nine Mile Point 2 Fire Protection Program to the requirements of 10 CFR 50 Appendix R as part of the overall fire protection program submittal. This comparison is contained in the licensee's Final Safety Analysis Report (FSAR), Appendix 9B, "Appendix R Review Safe Shutdown Evaluation". This submittal outlines the methodology used to address the provisions of Sections III G and III L of Appendix R which deals with the fire protection of safe shutdown and remote shutdown capability.

These commitments, documented in the FSAR, were used by the team as the basis for this inspection, and in particular, the commitments to provide safe shutdown capability in accordance with the requirements of Appendix R, Section III G alternative or dedicated shutdown capability in accordance with Section III L, an emergency lighting system, in accordance with Section III J, and an oil collection system for the reactor coolant pumps in accordance with Section III O.

The requirements of the above mentioned sections of Appendix R are as follows:

Section III G of Appendix R requires that fire protection should be provided for structures, systems and components important to safe shutdown. These features should be capable of limiting fire damage so that:

a.) one train of systems necessary to achieve and maintain hot shutdown conditions from either the control room or emergency control station(s) is free of fire damage; and

b.) systems necessary to achieve and maintain cold shutdown from either the control room or emergency control stations can be repaired within 72 hours.

To meet the above guidelines, one of the following means of ensuring that one of the redundant trains is free of fire damage should be provided:

- Separation by a fire barrier having a three hour rating;
- Separation by a horizontal distance of at least 20 feet with no intervening combustibles and with fire detection and automatic fire suppression installed in the fire area;
- Enclosure of one train in a fire barrier having a one hour rating in addition to having fire detection and automatic suppression installed in the fire area.

If the protection required by Section III G is not provided or the systems of concern are subject to damage from fire suppression activities, Section III L requires that an alternate or dedicated shutdown capability be provided, which is independent of the area of concern.

In addition, Section III J requires that an emergency lighting system is in place for areas vital to safe shutdown and emergency response in the event of a fire. The emergency lighting should be fixed, self-contained units, with individual 8-hour minimum, battery power and should be installed in areas that must be manned during safe shutdown operations and for access/egress thereto.

Section III O requires that the reactor coolant pumps in non-inerted containment, shall be equipped with an oil collection system so designed that failure will not lead to fire during normal or design basis accident conditions.

4.0 Correspondence

All correspondence on the subject, between the applicant and the NRC and internal NRC documents were reviewed by the inspection team in preparation for the site visit. Attachment 1 to this report is a listing of correspondence reviewed.

5.0 Post Fire Safe Shutdown Capability

The applicant's FSAR Appendix 9B describes the post-fire safe shutdown capability of Nine Mile Point Unit 2. The document lists the systems required for safe shutdown and describes methods to achieve and maintain safe shutdown using these systems.

5.1 Systems Required for Safe Shutdown

Systems and functions required for safe shutdown as listed in Appendix 9B of the applicant's FSAR are as follows:

Automatic Depressurization System (ADS)
High Pressure Core Spray (HPCS)
Low Pressure Core Spray (LPCS)
Reactor Core Isolation Cooling (RCIC)

Residual Heat Removal (RHR)
Service Water (SW)
Diesel Generator Support System
HVAC Systems
Onsite Power Systems
Control Systems for ESF Systems
Control Systems Required for Safe Shutdown
Other Control Systems Required for Safety

The applicant has issued a licensing document change notice (LDCN-NMPC-333), which changes the FSAR Section 9B4 to reflect the way in which the ADS and LPCS systems are used. They are used in conjunction with the HPCS and RCIC system for decay heat removal. If these systems were to be used for inventory control (ie. - without HPCS or RCIC), core uncovery is possible. The applicant has ascertained that either RCIC or HPCS is always available for safe shutdown, and therefore, ADS and LPCS are only used for decay heat removal.

The options available for a safe shutdown in the event of a design basis fire with concurrent loss of offsite power are:

1. If the high pressure core spray (HPCS) system is available, reactor water level can be maintained, as required, using HPCS. Reactor overpressurization can be relieved by the main steam safety relief valves (SRVs). Suppression pool cooling can be accomplished by the residual heat removal (RHR) system. To achieve cold shutdown from this point, it will be necessary to manually depressurize the reactor vessel using the safety relief valves (ADS) so that the shutdown cooling mode of RHR can be initiated.

2. If HPCS is not available, the reactor water level can be maintained using RCIC. Reactor pressure will be controlled by the ADS valves, which are also used to transfer decay heat to the suppression pool.

   Suppression pool cooling can be accomplished by RHR. Once the reactor is depressurized sufficiently, the shutdown cooling mode of RHR can be initiated to achieve a cold shutdown.

   Two redundant trains of RHR are available to achieve a safe shutdown under each of these two options. Each train is powered from a separate emergency diesel generator (2EGS*EG1-Division I and 2EGS*EG3-Division II). Either train by itself can be relied upon to shut down the plant. The HPCS system is powered from a separate diesel generator (2EGS*EG2-Division III). The RCIC is a steam driven pump and requires only DC power for controls.

   The applicant's safe shutdown analysis states that systems needed for hot and cold shutdown are redundant and that one train of systems needed for safe shutdown would be free of fire

damage because of separation, fire barriers and/or alternative shutdown capability. The safe shutdown analysis included components, cabling and support equipment needed to achieve hot and cold shutdown.

For hot shutdown, at least one train of the following systems would be available following a fire in any plant area: high pressure core spray system (HPCS), reactor core isolation cooling system (RCIC), main steam safety/relief valves (MS/SRVs), and the residual heat removal system (RHR) in the suppression pool cooling mode. The RHR system would be used for long term decay heat removal and provides the capability to achieve cold shutdown with 72 hours after a fire. The support systems for post-fire safe shutdown include the diesel generators, service water system, and the necessary HVAC systems.

The applicant performed an essential cabling study as a part of the shutdown analysis in order to ensure that at least one train of the above equipment and essential instrumentation is available in the event of a fire in areas which might affect these components. The applicant utilized a computer to verify cable separation. Safe shutdown equipment and cabling were identified and traced through each fire area from the components to the power source. Additional equipment and cabling considered as associated either because of a shared common power source or common enclosure, or whose fire induced spurious operation could affect shutdown, were also identified. For the identified associated circuits, the applicant has provided power lockout, circuit isolation and/or procedures to ensure that circuit failures would not prevent safe shutdown. For example, in order to prevent fire induced spurious signals from causing a LOCA from sources such as the RHR suction line, the applicant has stated that power will be locked out to one of the two RHR suction line valves during power operation. Similarly, the operator will trip the power supply breakers for other valves whose controls are not provided at the remote shutdown panel, thereby preventing their fire induced spurious actuation.

With regard to high impedance faults resulting from damage to two or more cables connected to power sources required for hot shutdown equipment, the applicant has stated that the cabling for redundant divisions (I and II) are located in separate fire areas, and therefore a fire in any one area will result in loss of only one of the redundant shutdown equipment power sources.

5.2 Alternative Shutdown Capability

The design objective of the remote shutdown panels is to provide a central point to control and monitor plant shutdown independent of the control room and relay room in the event of a fire in these

areas. All other areas of the plant will meet the separation of Appendix R, Section III.G or an approved deviation. There are two redundant remote shutdown panels, one each for train A and B. One panel is located in the east area, El. 261' and one in the west area, El. 261'. Both panels are used for post-fire alternate shutdown, outside of the control room.

The design of each remote shutdown panel provides electrical isolation from the control room and relay room for the instrumentation indications and control functions for the shutdown systems. The reactor core isolation cooling (RCIC) system, safety relief valves, residual heat removal (RHR) system and the service water system can be controlled from the remote shutdown panels to achieve and maintain hot shutdown should a fire disable the control room or relay room. In order to assure the availability of these remote shutdown panels in the event of control room or relay room fire, transfer switches are provided at each remote shutdown panel to transfer the shutdown capability to the remote shutdown panel. Redundant fuses, where required, are provided in the circuit for controls and instruments at the remote panels to assure their availability following transfer from the control room. Support systems functions are initiated either at the remote shutdown panel or at local locations.

The applicant has stated that repairs are not required to achieve cold shutdown within 72 hours. Reactivity control will be accomplished by a manual scram before the operators leave the control room. The RCIC system will provide reactor coolant makeup and the RHR system and safety relief valves will be used for reactor decay heat removal. Reactor vessel water level, reactor vessel pressure, suppression pool water level and temperature, RCIC pump turbine speed, RHR system flow and condensate storage tank level are among the instrumentation indications available at the remote shutdown panels independent of the control room and relay room to provide direct reading of process variables. The remote shutdown panels also include instrumentation and control of support functions needed for shutdown equipment.

6.0 Inspection Methodology

The inspection team examined the applicant's capability for separating and protecting equipment, cabling and associated circuits necessary to achieve and maintain hot and cold shutdown conditions. The team inspected randomly selected fire areas which the applicant had identified as being in conformance with BTP 9.5-1 and 10 CFR 50 Appendix R.

The following functional requirements were reviewed for achieving and maintaining hot and cold shutdown:

- Reactivity control
- Pressure control

- Reactor coolant makeup
- Decay heat removal
- Support systems
- Process monitoring

The inspection team also examined the applicant's capability to achieve and maintain hot shutdown and the capability to bring the plant to cold shutdown condition in the event of a fire in areas where remote shutdown capability is provided. The examination included a review of the drawings for the remote shutdown capability and review of the procedures for achieving the remote shutdown. Drawings were reviewed to verify electrical independence from the areas of concern. Procedures were reviewed for general content and feasibility.

Also inspected were fire detection and suppression systems and the degree of physical separation between redundant trains of Safe Shutdown Systems (SSSs). The team review included an evaluation of the susceptibility of the SSSs for damage from fire suppression activities or from the rupture or inadvertent operation of fire suppression systems.

The inspection team examined the applicant's fire protection features provided to maintain one train or equipment needed for safe shutdown free of fire damage. Included in the scope of this effort were fire area boundaries, such as walls, floors and ceilings, and fire protection of openings, such as, fire doors, fire dampers and penetration seals.

The team also reviewed the applicant's emergency lighting system for areas of the plant required for safe shutdown.

7.0 Inspection of Protection Provided to Safe Shutdown Systems

7.1 Protection in Various Fire Areas

The plant is divided into fire areas which are described in Table 9.B.6-1 of the FSAR.

The team inspected the following areas because these areas contain safe shutdown equipment:

Fire Area/Fire Sub-area	Description
North Aux Bldg/FA1	LPCS Room, North Auxiliary Bay, El 175 Ft. RHS Pump Room A, North Auxiliary Bay, El 175 Ft. RHS Heat Exchanger Room A, North Auxiliary Bay, El 175 Ft.
Reactor Bldg/FA2	Reactor Building, RCIC Pump Room, El 175 Ft.

South Aux Bldg/FA3	RHS Pump Room B, South Auxiliary Bay, E1 175 Ft. RHS Pump Room C, South Auxiliary Bay, E1 175 Ft. RHS Heat Exchanger Room B, South Auxiliary Bay, E1 175 Ft.
Reactor Bldg/FA4	Reactor Building, HPCS Room, E1 175 Ft.
FA7	Electrical Tunnel, 35°
FA8	Electrical Tunnel, 140°
FA9	Electrical Tunnel, 230°
Control Bldg/FA21	Control Building, HPCS Cable Routing Area, E1 244 Ft. Control Building, HPCS Switchgear Room, E1 261 Ft.
Diesel Gen Bldg/FA28	Division I, Diesel Generator Room Division I, Diesel Generator Control Room
FA30	Division III, HPCS Diesel Generator Room Division III, HPCS Diesel Generator Control Room
North Auxiliary Bay/FA5	North Auxiliary Bay, E1 198 Ft.
FA11	North Auxiliary Bay Electrical Room, E1 240 Ft.
FA37	Auxiliary Bay, North Access Area B, E1 215 Ft.
South Auxiliary Bay/FA6	South Auxiliary Bay, E1 198 Ft.
FA12	South Auxiliary Bay, Electrical Room, E1 240 Ft.
FA41	Auxiliary Bay, South Access Area B, E1 215 Ft.
Control Building/FA16	Control Building Cable Chase, West, E1 214 Ft. Control Building Routing Area, E1 214 Ft. Control Building Cable Chase,

	West, El 237 Ft. Control Building Cable Chase, West, El 261 Ft. Control Building Cable Chase, West, El 288 Ft. Control Building Cable Chase, West, El 306 Ft.
FA17	Control Building General Area, El 214 Ft. Control Building, Division I Cable Routing Area, El 237 Ft. Control Building, Division I Standby Switchgear Room, El 261 Ft. Control Building Corridor, El 261 Ft. Control Building, Division I Battery Room, El 261 Ft.
FA18	Control Building Cable Chase, East, El 214 Ft. Control Building Cable Chase, East, El 237 Ft. Control Building Cable Chase, East, El 261 Ft. Control Building Cable Chase, East, El 288 Ft. Control Building Cable Chase, East, El 306 Ft.
FA19	Control Building, Division II Cable Routing Area, El 237 Ft. Control Building, Division II, Standby Switchgear Room, El 261 Ft. Control Building, Division II Battery Room, El 261 Ft.
FA43	Control Building Remote Shutdown Room, East
FA44	Control Building Remote Shutdown Room, West
FA22	Control Building, Division I, Cable Routing Area, El 244 Ft. Control Building, Division I, HVAC Room, El 261 Ft.

	FA23	Control Building, Division II, Cable Routing Area, E1 244 Ft. Control Building, Division II, HVAC Room, E1 261 Ft.
	FA24	Control Building, PGCC Relay Room, E1 288 Ft.
	FA25	Control Building, Division I, HVAC Room, E1 288 Ft.
	FA26	Control Building, Main Plant Control Room, E1 306 Ft.
	FA27	Control Building, Division II, HVAC Room E1 306 Ft.
	FA76	Control Building Corridor/Instrument Shop, E1 306 Ft.
Tunnels	FA34	Main Steam Tunnel
	FA55	Pipe Tunnel Electrical Tunnel Vent Room, E1 237 Ft. Radwaste Tunnel
Service Water Pump Area		
	FA60	Service Water Pump Room B
	FA61	Service Water Pump Room A
Intake Area	FA71	Intake Area
Reactor Building/FSA34		Reactor Building General Area, North, E1 175 Ft. Reactor Building General Area, North, E1 215 Ft. Reactor Buidling General Area, North, E1 240 Ft. Reactor Building General Area, North, E1 261 Ft. Reactor Building General Area, North, E1 288 Ft. Reactor Building General Area, North, E1 306 Ft. Reactor Building General Area, Northwest, E1 328 Ft. Reactor Building Genral Area, Northeast, E1 328 Ft. Reactor Building General Area

FSA35	Reactor Building General Area, South, El 175 Ft. Reactor Building General Area, South El 215 Ft. Reactor Building General Area, South, El 240 Ft. Reactor Building General Area, South, El 261 Ft. Reactor Building General Area, South, El 288 Ft. Reactor Building General Area, South, El 306 Ft. Reactor Building General Area, Southeast, El 328 Ft.
Other Areas	Lube Oil Reservoir Room Electric Fire Pump Room Diesel Fire Pump Room Clean and Dirty Oil Storage Room

The scope of the review was to ascertain compliance with Sections III G and III L of Appendix R and to assess the adequacy of the fire protection in these areas.

No unacceptable conditions were identified except as follows:

Suppression in the 20 ft. zone

In the FSAR, the applicant committed to separate redundant shutdown related systems by at least 20 feet; to install fire detectors throughout the area; and to install automatic sprinklers throughout the 20 feet separation zone. The team observed that automatic suppression was not provided completely throughout the 20 foot separation zone. The applicant reaffirmed the commitment to install automatic suppression (sprinklers) throughout this zone. In addition, where an open hatchway exists in this zone, the applicant committed to install a water curtain sprinkler system around the hatchway to prevent fire spread. Pending implementation of this commitment this item will remain unresolved. (50-410/85-34-01)

Fire Proofing of Structural Steel

The team observed that structural steel members forming part of fire walls has not hitherto been fire proofed.

Branch Technical Position (BTP) 9.5-1 Section C.5.B(2)(a) stipulates that structural steel members forming part of a fire wall should be fire proofed. In lieu of fire proofing the steel members, NRC has issued guidance to applicants and licensees, stating that an engineering analysis may be performed to show that a postulated fire within the fire area will not degrade the fire barriers.

The applicant explained that construction in this area is incomplete and reaffirmed the commitment to fire proof all structural steel members forming part of a fire barrier. Further where the amount of combustibles, within a fire area do not warrant fire proofing the applicant committed to provide an analysis and identify the deviation in Appendix 9B of the FSAR. This is an unresolved item pending completion of construction efforts in this area. (50-410/85-34-02)

Fire Seal in Construction Joints

In the FSAR the applicant committed to protect all openings in fire barriers with doors, dampers or penetration seals which have a fire rating commensurate with the rating of the barrier. The team observed that certain shake spaces, i.e. "construction joints", located in fire barriers, were not protected with a fire-rated penetration seal. The licensee reaffirmed the commitment to install fire-rated seals at these shake spaces. Pending implementation of this commitment, this issue will remain unresolved. (50-410/85-34-03)

Fire Detectors in Safety-Related Areas

In the FSAR, the applicant committed to provide fire detection in all safety related areas. The team observed that in some locations, fire detectors had not yet been installed. The applicant indicated that fire detectors will be installed in all areas containing safety-related systems or components. The applicant also committed in a future FSAR Amendment to identify any areas with safety related systems where fire detectors have not been provided. Pending implementation of the applicant's commitments, this issue will remain unresolved. (50-410/85-34-04)

Fire Dampers - DG Fuel Oil Day Tank

In the FSAR the applicant committed to protect all openings in fire barriers with doors, dampers or penetration seals, which have a fire rating commensurate with the rating of the barrier. The team observed that an HVAC duct penetrates the fire rated enclosure around the diesel generator (DG) fuel oil day tank and that fire dampers were not provided at these openings. In lieu of dampers the applicant committed to completely enclose this duct, where it passes through the day tank enclosure, with a 3-HR fire wrap. Pending implementation of this commitment, this issue will remain open. (50-410/85-34-05)

NFPA Code Deviations

In the FSAR the applicant committed to conform with the applicable provisions of the National Fire Protection Association (NFPA) fire codes in the design and installation of fire protection systems. The applicant had previously identified and justified certain deviations from these codes.

During this inspection the team observed several deviations from these codes which were not previously identified and justified. The applicant committed to identify and justify all remaining NFPA code deviations in a future FSAR amendment. Pending evaluation of this amendment by NRC this item will remain unresolved. (50-410/85-34-06)

7.2 Safe Shutdown Procedures

7.2.1 Procedure Review

The team reviewed the following draft safe shutdown procedures:

-- Procedure No. N2-IOP-101A - "Plant Start-Up"
-- Procedure No. N2-IOP-78 - "Remote Shutdown System"

The purpose of the review was to verify the adequacy of the procedures to achieve the safe shutdown goals established for both hot standby and cold shutdown. Procedure No. N2-IOP-101A was examined to ascertain the positioning of valves and breakers to prevent spurious actuation of valves at High/Low pressure interfaces such as RHR suction.

Procedure No. N2-IOP-101A was reviewed in order to ascertain the capability to place the plant in hot shutdown and continue cooldown to cold shutdown conditions using the systems available as outlined in Section 5.2 above. This procedure is used not only to satisfy Appendix R requirements which include total control room damage, but also for evacuations which involve partial or no damage to the control room capability.

7.3 Protection for Associated Circuits

Appendix R, Section III G, requires that protection be provided for associated circuits that could prevent operation or cause maloperation of redundant trains of systems necessary for safe shutdown. The circuits of concern are generally associated with safe shutdown circuits in one of three ways:

- Common bus concern
- Spurious signals concern
- Common enclosure concern

The above mentioned concerns were evaluated by the team. Power, control, and instrumentation circuits were examined for potential problems.

7.3.1 Common Bus Concern

The common bus concern may be found in circuits, either safety related or non-safety related, where there is a common power source with shutdown equipment and the power source is not electrically protected from the circuit of concern.

The team examined, on a sampling basis, 4160V, 600V, 120 VAC and 125V DC bus protective relay coordination. The team also examined on a sampling basis, the protection for specific instrumentation, controls, and power circuits, including the coordination of fuses and circuit breakers. The licensee plans to perform relay setting during refueling outages (12-18 months).

No unacceptable conditions were identified.

7.3.2 Spurious Signal Concern

The spurious signal concern is made up of 2 items:

- False motor control, and instrument indications can occur such as those encountered during 1975 Browns Ferry fire. These could be caused by fire initiated grounds, short or open circuits.

- Spurious operation of safety-related or nonsafety-related components can occur that would adversely affect shutdown capability (e.g., RHR/RCS isolation valves).

The team examined, on a sampling basis, the following areas to ascertain that no spurious signal concern exists:

- Current transformer secondaries
- High/low pressure interfaces
- General fire instigated spurious signals

No unacceptable conditions were identified.

7.3.3 Common Enclosure Concern

The common enclosure concern may be found when redundant circuits are routed together in a raceway or enclosure and they are not electrically protected or when fire can destroy both circuits due to inadequate fire barriers.

A number of circuits, selected on a sampling basis, were examined for this concern.

No unacceptable conditions were identified.

7.4 General Fire Protection Features

The team examined the general fire protection features in the plant provided to maintain one train of safe shutdown equipment free of fire damage. Included in the scope of this effort were fire area boundaries, including walls, floors and ceilings, and fire protection of openings such as fire doors, fire dampers, penetration seals, fire protection systems, and other fire protection features.

No unacceptable conditions were identified except as indicated in Section 7.1 of this report.

8.0 Emergency Lighting

Appendix R, Section III J requires that emergency lighting units with at least an 8-hour battery power supply shall be provided in all areas needed for operation of safe shutdown equipment and in access and egress routes thereto. The applicant committed to provide such lighting in the FSAR Appendix 9B. The team observed that the emergency lighting installation has not progressed to the point that the system can be inspected to determine its adequacy.

This is an unresolved item pending the installation of all emergency lighting systems by the applicant and a review of the systems by NRC. (50-410/85-34-07)

9.0 Oil Collection System for Reactor Coolant Pumps

Appendix R, Section III O requires that the reactor coolant pumps shall be equipped with an oil collection system if the containment is not inerted during normal operations. The Nine Mile Point 2 containment is inerted during normal operations and therefore an oil collection system is not required.

10.0 Unresolved Items

Unresolved items are matters for which more information is required in order to ascertain whether they are acceptable, violations, or deviations. Unresolved items are discussed in Sections 7.1 and 8.0.

11.0 Conclusion

The seven items that remained unresolved at the end of the inspection resulted from the fact that construction is not yet completed.

Except as noted in this report, no other unacceptable conditions were identified.

The applicant committed to resolve all of the findings contained in this report and complete all necessary modifications prior to fuel load. Further, the applicant committed to inform NRC Region I when this work is complete so that it can be inspected in a timely manner.

12.0 Exit Interview

The inspection team met with the applicant representatives, denoted in Section 1, at the conclusion of the inspection on October 25, 1985. The team leader summarized the scope and findings of the inspection at that time.

The team leader also discussed with the applicant the contents of the inspection report and ascertained that it would not contain any proprietary information. The applicant agreed that the inspection report may be placed in the Public Document Room without prior applicant review for proprietary information (10 CFR 2.790).

At no time during this inspection was written material provided to the applicant by the team.

ATTACHMENT 1

CORRESPONDENCE LIST

1. NMP2 letter No. 0336 to A. Schwencer, dated 2/7/85, Non-Class 1E Devices.
2. NMP2 letter No. 0341 to R. Starostecki, dated 2/12/85, High Pressure Core Spray Diesel Control Panel Wiring.
3. NMP2 letter No. 0348 to R. Starostecki, dated 2/25/85, Emergency Diesel Generator Panel Wiring.
4. NMP2 letter No. 0344 to R. Starostecki, dated 2/21/85, Category I Cable Separation.
5. NMP2 letter No. 0395 to A. Schwencer, dated 4/30/85, Cable Separation.
6. NMP2 letter No. 0441 to A. Schwencer, dated 5/17/85, Electrical System Independence.
7. NMP2 letter No. 7461 to R. Starostecki, dated 9/23/83, Kerite Cables.
8. NMP2 letter No. 0320 to R. Starostecki, dated 1/9/85, High Pressure Core Spray Diesel Generator Wiring.
9. NMP2 letter No. 0273 to A. Schwencer, dated 12/3/84, Physical Independence of Electrical Systems.
10. NMP2 letter No. 0152 to A. Schwencer, dated 9/13/84, SER Open Items.
11. NMP2 letter No. 0122 to R. Starostecki, dated 8/9/84, PGCC Separation.
12. Region I letter to Applicant, dated 8/9/84, QA Program for NMP 1 and 2.

ATTACHMENT 2
ECN*LIST FOR APPENDIX R WORK

EGP-009, EGS-003, EJS-007, EJS-008, ENS-017, HVC-037, HVP-018, HVR-042, HVY-025

IAS-080, ISC-020, SFC-023, SFC-028, SWP-092, HVR-041, HVC-033, DER-026, RHS-068

IAS-088, EGP-010, EJS-009, ENS-018, FWS-027, MSS-043, WCS-047, CEC-433, CEC-417

CEC-402

The above ECN's is a list provided by the applicant as "work remaining" to complete Appendix R related items.

*ECN = Engineering change notice
order to perform work.