U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-220/85-17

Docket No. 50-220

License No. DPR-63 Priority -- Category C

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

Facility Name: Nine Mile Point Nuclear Station, Unit 1

Inspection At: Scriba, New York

Inspection Conducted: October 1 to 7, 1985

Inspectors: S.D. Hudson, Senior Resident Inspector
C.S. Marschall, Resident Inspector

Approved: R A Gramm 11/5/85
R. A. Gramm, Acting Chief, Reactor Projects Section No. 2C, DRP — Date

Inspection Summary:

Inspection on October 1 to 7, 1985 (Report No. 50-220/85-17)

Areas Inspected: Special inspection by the resident inspectors (25 hours). Areas inspected included: 10 CFR 21 evaluations and compliance with reporting requirements for cable separation deficiencies.

Results: No violations were issued. The licensee has agreed that similar discrepancies between as-built and design conditions of the plant will be reported in the future.

DETAILS

1. Persons Contacted

H. Barrett, Assistant Operations Supervisor
R. Pasternak, Lead Licensing Engineer
R. Randall, Supervisor, Technical Support
T. Roman, Station Superintendent

2. Purpose

The purpose of this inspection was to examine the program by which the licensee performs evaluations of basic component defects as required by 10 CFR 21 and to review the circumstances regarding the reportability of several specific cable separation deficiencies.

3. 10 CFR 21 Evaluations

The inspector reviewed Engineering Procedure EP-210, "Notification under 10 CFR 21," Revision 6 and Quality Assurance Procedures QAP-15.01, "Control of Nonconforming Items," Revision 0 and QAP 16.03, "Corrective Action Requests," Revision 0 and determined that these procedures meet the requirements of 10 CFR 21. Since July 1985, non-conforming items or programmatic weaknesses identified by the Quality Assurance (Q.A.) Department receive a initial evaluation by the Q.A. Department for reportability. Those items that are determined to be potentially reportable are forwarded to the Nuclear Engineering Department for further evaluation. Nuclear Engineering is responsible for the evaluation of all other defects in basic components or failure to comply with applicable regulations.

Based on a review of each of the 21 evaluations performed this year and discussions with licensee personnel, the inspector determined that the licensee had correctly concluded that none of the items involved a substantial safety hazard and therefore were not reportable. However, in several cases, evaluations were incomplete. Preliminary evaluation 85-02 did not adequately describe the deficiency in a similar plant's core spray system. Therefore, it was difficult to determine that it was not a problem at Nine Mile Point, Unit 1, without further information provided by the licensee. Preliminary evaluation 85-09 involved an on-site inspection of the reactor building ventilation system as part of the evaluation. However, this inspection was not documented in the written evaluation. This evaluation will be supplemented to include this information. A good practice of the licensee's program included distribution of all evaluations (or a summary) to a responsible corporate officer and senior station management regardless of whether they were determined to be reportable. This allows for a second opinion to determine if the deviation has been properly evaluated.

4. Cable Separation Deficiencies

On September 23, the licensee reported to the resident inspector three cable routing deficiencies that had been identified by a contractor on September 11th. Each had been evaluated by the licensee and determined not to be a substantial safety hazard and therefore not reportable under 10 CFR 21. The three deficiencies are listed below.

The reserve power supply cable to the Division II 4160VAC bus (PB 103) is located in the same cable tray as the supply cable from the Division I 4160VAC bus (PB 102) to the safety related 600 VAC bus (PB 16). The two cables run together for approximately 30 feet. This configuration could cause the potential loss of power to all core spray injection valves due to the loss of a single cable tray. This condition was analyzed by the licensee in 10 CFR 21 evaluation no. 85-16.

The control cables for all four redundant core spray pumps and the four normally open suction valves for each loop is located in the same cable tray in the auxiliary control room resulting in the potential for the loss of the core spray system. For this deficiency, the automatic actuation of the core spray system would be operable if the failure of the cable tray caused open circuits for all four core spray pumps. If all cables shorted to ground, all core spray pumps would be inoperable. This is less likely since each cable is provided with an individual control power fuse. The ability to inject water into vessel from the containment spray raw water system would be available to mitigate this event. This condition was evaluated by the licensee in 10 CFR 21 evaluation no. 85-17.

The control cables for the two Division I containment spray raw water pumps and the control cables for the Division II containment spray raw water heat exchanger discharge valves (which are normally open) are located in the same cable tray. If this cable tray were lost causing an open circuit in the cables, an additional pair of containment spray pumps would be available to remove heat from the torus following a loss of coolant accident. The containment spray function would not be lost, unless a failure caused selective open circuits in the control cables for the pump and short circuits in the control cables for the valves. Individual fuses provided in each circuit further reduce the probability of this event. This condition was addressed in 10 CFR 21 evaluation no. 85-18.

Although the most potentially significant condition involved the possible loss of all core spray injection valves due to the loss of a single cable tray, none of the cable separation errors resulted in the actual loss of a safety related system or function. The inspector reviewed each of the three evaluations and verified that they did not represent a significant safety hazard.

On September 11, 1985, at the meeting to discuss the safety significance of these discrepancies, the licensee also evaluated the reportability of

these items per the requirements of 10 CFR 50.72 and 50.73. At that time it was decided that the items were not reportable. Subsequent discussions on September 12 and 13, between the Station Superintendent and representatives of the licensee's licensing, operations and technical services departments confirmed the previous decision and concluded that a voluntary Licensee Event Report should be submitted and the Resident Inspectors and Office of Nuclear Reactor Regulation Project Manager should be informed. This occurred on September 23.

On September 24 and 25, during a telephone call between station management and NRC, Region I, a review of the licensee's justification for continued operations was performed. It addressed failure of the cable tray due to fire, missiles, heavy loads, earthquakes, or cable failure. It concluded that although the cable separation criteria was not met, there was no credible single failure that could result in the loss of the cable tray containing the cables for the redundant safety-related components. The licensee stated that the cables would be rerouted to provide the required separation as soon as the necessary design and procurement activities were completed but no later than the completion of the 1986 refueling outage.

The NRC informed the licensee that the condition should have been promptly reported via the Emergency Notification System. 10 CFR 50.72.b.1.ii.B required that the NRC be informed within one hour of "Any event or condition during operation that results in the condition of the nuclear power plant, including its principal safety barriers, being seriously degraded; or results in the nuclear power plant being: (B) In a condition that is outside the design basis of the plant...." The Final Safety Analysis Report, Chapter IX, Section 3.1 states that reactor protection and engineered safeguards equipment cables are routed to provide sufficient isolation between similar, functionally duplicated devices so as to prevent damage in the event of fire or any design basis accident. Therefore, this condition should have been reported to the NRC even though the licensee's analysis concluded that a significant safety hazard did not exist. The licensee stated that the intent of the 10 CFR 50.72 regulation was not clear to them since implementing guidance suggests that "engineering judgement" should be considered to determine if an item is reportable.

On October 4, 1985, the resident inspectors and two licensee representatives held a conference call with senior members of the Event Analysis Branch of NRC's Office of Inspection and Enforcement. Both members of the Event Analysis Branch agreed that this area of the regulation was subject to interpretation. However, both stated this type of event should have been reported. The licensee acknowledged their comments and stated that this would cause a change in the policy for reporting items of this nature.

No violation will be issued by NRC, Region I for this failure to report, based on the following reasons: the licensee had analyzed each condition and believed it was not reportable. After a delay of several days, the

licensee did report these conditions to the resident inspectors. The licensee has also agreed to report events of this type in the future. Shortly after this inspection, on October 15, 1985, the licensee discovered and promptly reported a similar error in a design condition that could potentially affect the operability of the Emergency Condenser Isolation Valves. This is indicative of the licensee's responsiveness to this issue. However, future events will be evaluated on their own merits and enforcement action will be taken, as necessary.

5. Exit Interview

The inspector met with senior station and corporate management to discuss the inspection findings.

Based on NRC, Region I review of this report it was determined that this report does not contain information subject to 10 CFR 2.790 restrictions.