

DCS

May 21, 1992

Docket No. 50-220  
License No. DPR-63  
EA 92-048

Mr. B. Ralph Sylvia  
Executive Vice President - Nuclear  
Niagara Mohawk Power Corporation  
Nine Mile Point  
Post Office Box 63, Lake Road  
Lycoming, New York 13093

Dear Mr. Sylvia:

**SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTIES - \$200,000 (NRC INSPECTION REPORT NO. 50-220/92-80; and COMBINED INSPECTION REPORT NOS. 50-220/92-02; 50-410/92-02)**

This letter refers to the two NRC inspections, including an Augmented Inspection Team (AIT) inspection, conducted between January 26 and March 4, 1992, at Nine Mile Point, Units 1 and 2, Scriba, New York. The inspection reports were sent to you on March 17, 1992 (No. 50-220/92-80), and March 20, 1992 (Nos. 50-220/92-02; 50-410/92-02), respectively. The inspections were conducted to review two occurrences at the facility, namely: (1) an event involving the inadvertent isolation of the Unit 1 cooling water systems from Lake Ontario, the ultimate heat sink, for a short duration (six minutes); and (2) operating Unit 1 for an indeterminate period of time (at least one month) outside of the Technical Specification (TS) Limiting Condition for Operation (LCO) for protective instrumentation, in that two of the four channels used to initiate a reactor scram following a turbine trip/generator load reject were not operable. As a result of these inspections, violations of NRC requirements were identified. On April 8, 1992, an enforcement conference was held with you and members of your staff to discuss these occurrences, the apparent violations, their causes and your corrective actions.

The violations are described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalties (Notice). Violation I concerns the failure of plant personnel to follow established work control processes and procedures during the performance of maintenance activities related to the screen house gates on February 10, 1992. These failures resulted in

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station personnel not properly coordinating their response to the discovery of an electrical jumper not described in facility design documents. That jumper had bypassed the mechanical tension overload protection switch from the electric drive motor which operates the D gate. The subsequent removal of the jumper and operation of the screen house gate, resulted in the isolation of the facilities service water and emergency service water systems from the ultimate heat sink.

The NRC is concerned that after the discovery of the jumper: (1) the maintenance personnel did not document on the work request either this condition, or the fact that a deficiency event report (DER) was generated to resolve this concern, thereby depriving control room operators of this critical information; (2) maintenance supervision, one day later, revised the original work request to remove the jumper in the gate circuitry to the original design, without a review and approval by the maintenance supervisor, or the station shift supervisor (SSS), as required; (3) although the station shift supervisor was subsequently informed that the jumper was removed, he immediately ordered its reinstallation through the emergency temporary modification process, and none of the decisions regarding removal or reinstallation of the jumper were documented in the work request; and (4) on February 21, 1992, with the unit shut down and depressurized, the SSS made the decision to test one of the screen house gates under differential pressure with the jumper removed from its control circuitry. After the screen house bay was subsequently placed in a reverse flow configuration, and the gate was fully closed, the gate would not reopen resulting in the isolation of the unit from the lake and rapid decrease of water level in the bay. The gate was reopened after six minutes, and the bay water level was returned to normal.

Although the temperature of the reactor building closed loop cooling system, which is cooled by the service water system, increased only slightly (two degrees Fahrenheit) during the event, the actions by the maintenance and operations personnel in the preparation, implementation, and documentation of the work request were clearly deficient. Further, the communications between the two departments were also inadequate in that: (1) maintenance personnel did not fully explain the details of the work and testing to operations staff, and bypassed the control room coordinator, on February 21, 1992, going directly to the on-duty SSS who authorized the work without being fully aware of the impact of the work request on the plant's operation; and (2) the on-shift operations staff did not clearly communicate a concern regarding the operation of the gate under reverse flow conditions, to the SSS who approved the testing.

This event demonstrated a significant breakdown in the control of an activity at the facility which resulted in the plant being placed in a seriously degraded condition for a short period. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (Enforcement Policy), the violation associated with this event has been classified at Severity Level III.



Violation II.A involved the failure of the Unit 1 control room operators to take certain required actions when the plant was being operated outside the TS LCO. Specifically, on January 10 and January 22, 1992, while lowering reactor power to approximately 70% of rated power to conduct normal plant evolutions, an annunciator on the main control room panel alarmed indicating that certain scram functions were being automatically bypassed. These scram functions, which are only permitted to be bypassed by TS when reactor power is less than 45% of rated power, included the turbine stop valve closure reactor trip and the generator load rejection reactor trip. Although the alarm did clear in each case, after reactor power was increased, the operators nonetheless did not take action to reduce actual power to less than 45% or to drive control rods into the core, as required by TS 3.6.2.a.(1).

Violation II.B involved the failure to take adequate corrective action in response to the January 10, 1992, scram bypass annunciator at Unit 1. Although a work request was generated to calibrate the pressure switches, the control room operators apparently did not recognize the TS implications (i.e., that these switches affect the TS required instrumentation for the reactor scram signals), and therefore, the operability determination that was required for these components was not done. In addition, the pressure switches were subsequently found to be within calibration and the work request was closed, and a deficiency event report (DER) was not generated to allow further investigation and possible corrective actions, even though the cause of the alarm was still undetermined. Had a more thorough troubleshooting effort been put forth at that time, the inoperable instrument channel may have been identified sooner.

The cause of this event was traced to a partially closed instrument root valve (common to two of the four pressure switches), in conjunction with a leaking drain valve downstream of the root valve, which resulted in two of the four instrument channels sensing lower pressure than existed, and therefore, being inoperable. During your staff's investigation of this event, a review of the computer alarm printouts indicated that this condition also existed during a reactor startup on December 9, 1991.

While the NRC is concerned with the decision of the operations staff to increase reactor power under these conditions, and not insert control rods as required by the TS LCO, the NRC is also concerned with the failure to identify and effectively correct the condition earlier. Furthermore, although a DER was subsequently generated following the January 22 event, it indicated, in the reportability section, that there were no associated TS LCO affected.

Finally, the NRC is concerned with the lack of configuration control of the associated root valve which had not been included in station drawings or valve lineup procedures. This may have resulted in an earlier identification of the mispositioned root valve. Also, there was an opportunity to identify the position of these valves during the implementation of a 1990



restart commitment, which required verification of the position of all instrument root valves for safety related systems. However, your response to that commitment was narrowly focused and did not include all reactor protection system (RPS) related root valves.

Although two of the four channels were operable and other RPS trips were available to shut down the reactor in the event of a turbine trip or load reject, the operators' and operations management personnel's failure to adhere to the TS LCO and the associated action statement, is a significant regulatory concern in light of the missed opportunities to identify and correct the condition. Therefore, Violations II.A and B have been classified in the aggregate as a Severity Level III problem in accordance with the revised "General Statement of Policy and Procedures for NRC Enforcement Actions," 10 CFR Part 2, Appendix C, (Enforcement Policy).

The NRC recognizes that actions were taken to correct the violations and prevent recurrence. With respect to the first violation, these actions included, but were not limited to: (1) the acting plant manager issuing a stop work order that essentially stopped all activities, except for the surveillance testing and other actions required by the unit's license; (2) a recall and review of all work packages from the field; (3) investigating the circumstances leading to the event, the plant response, and personnel action before, during, and after the transient, as well as the root cause of the event; (4) performing a Shutdown Safety Review on currently scheduled work updated on an on-going basis; (5) conducting a review of the operation shift organization structure, tagging procedures, and work control procedures, to determine any needed enhancements; and (6) developing a work control monitoring program to review in-plant work activities.

With respect to Violations II.A and B, the corrective actions included: (1) adding the turbine first stage pressure detector root valve to the applicable valve line-up and station prints; (2) reviewing annunciators indicating bypassing of Reactor Protection System (RPS) functions for proper operator response, and making revisions, as required; (3) verifying the position of all root valves that affect TS instrumentation, and revising appropriate valve lineup procedures as necessary; (4) requiring that the senior reactor operators review Limiting Safety System Settings, including those that enable and disable RPS circuitry; (5) repairing or replacing the leaking instrument drain valve; and (6) training plant personnel on plant conditions which require issuance of a Deviation Event Report and a work request.

Notwithstanding those corrective actions, and to emphasize the importance of (1) proper control of equipment at the facility to assure that systems designed to mitigate serious safety events are able to perform their safety function and are operated in accordance with the Technical Specifications; and (2) adequate communications between engineering, maintenance and operations departments, I have been authorized, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Nuclear Reactor Regulation, Regional Operations and Research, to issue the enclosed Notices of Violation and Proposed



Imposition of Civil Penalties (Notice) in the cumulative amount of \$200,000 for the violations set forth in the enclosed Notice.

The base civil penalty amount for a Severity Level III violation or problem is \$50,000. The escalation and mitigation factors set forth in the enforcement policy were considered. With respect to Violation I, the civil penalty was escalated by 50 percent. No adjustment was warranted for identification because the isolation of the ultimate heat sink was considered to be a self-identifying event, and the procedural violations were identified by the NRC during the AIT. Your corrective actions, subsequent to the event, were considered prompt and comprehensive, and therefore, 50 percent mitigation of the base civil penalty on this factor is warranted. The base civil penalty was increased by 100 percent for poor past performance in the area of procedural compliance, as evidenced by five Severity Level IV violations at Unit 1 and seven Severity Level IV violations at Unit 2, in this area, in the past two years. In addition, similar findings concerning inadequate work requests and the failure to follow procedures were identified by your Quality Assurance Department's audits and surveillances during the same time period. The other factors were considered and no further adjustments were made.

With respect to Violations II.A and B, the escalation and mitigation factors set forth in the enforcement policy were considered and the civil penalty was escalated by 150 percent. The base civil penalty was escalated 50 percent for the identification factor. Although the mispositioned instrument root valve was subsequently identified by your staff, the failure to adhere to the technical specifications was identified by the NRC. Once you were put on notice of the violations, your long term corrective actions were acceptable. However, mitigation was not warranted as those actions were required to bring the plant into compliance with established safety regulations. No escalation or mitigation was deemed warranted based on your overall past performance since you received a Category 2 rating in the operations and maintenance/surveillance areas during the last SALP period, which noted problems relative to evaluation of personnel performance, self-assessment, and problem identification. A 100 percent increase was deemed appropriate based on the duration of the violation, in light of the opportunities to identify this violation earlier, which included the January 10, 1992, and January 1992, occurrences. The other factors were considered and further adjustments were made.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. After reviewing your response to this Notice, including your proposed corrective actions and the results of future inspections, the NRC will determine whether further NRC enforcement action is necessary to ensure compliance with NRC regulatory requirements.



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In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,

Thomas T. Martin  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed Imposition  
of Civil Penalties

cc w/encl:

J. Firlit, Vice President - Nuclear Generation  
C. Terry, Vice President - Nuclear Engineering  
J. Perry, Vice President - Quality Assurance  
S. Wilczek, Jr., Vice President - Nuclear Support  
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