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ComEd

July 30, 1998

United States Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Subject: Reply to Notice of Violation
NRC Inspection Report 50-456(457)/98008
Braidwood Nuclear Power Station Units 1 and 2
NRC Docket Numbers 50-456 and 50-457

Reference: G. E. Grant letter to O. D. Kingsley dated July 6, 1998, transmitting
Notice of Violation from Inspection Report 50-456(457)/98008

Results from a seven week inspection conducted April 21, 1998 – June 8, 1998, were documented in Inspection Report #98008 which was transmitted with the Reference letter. Two Severity Level IV Violations associated with the failure of personnel to follow Fire Protection procedures and the failure to take effective corrective actions with respect to non-EQ parts being installed in harsh environments were identified during the inspection period. These violations were documented in a Notice of Violation also transmitted with the Reference letter. ComEd's response to these violations is included in the attachment to this letter.

Braidwood Station has been closely monitoring contractor activities as the start of the upcoming Unit One Steam Generator Replacement outage draws near. Efforts have been placed on communicating station expectations to contractors during initial training provided to them. In addition, personnel were provided a "pocketbook" which contains important details regarding roles and responsibilities and where to obtain additional information regarding key program / process areas. The station anticipates improvements in human performance with this communication tool.

The Reference letter specifically requested information on actions the station plans to take or have taken to ensure that our corrective actions process is effective. Braidwood considers the elements of the corrective action program in place to be generally effective. However, to further strengthen the process, future root cause determinations will be evaluated by a Corrective Action Review Board (CARB) which will convene prior to the Plant Operation Review Committee (PORC). The purpose of the CARB is to focus on the corrective actions proposed in order to ensure both appropriateness of the corrective actions and likelihood of preventing recurrence.

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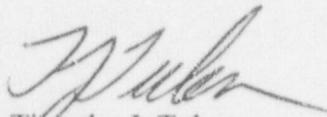
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The following commitment was made in the attachment to this letter:

- Environmental Qualification (EQ) "Refresher Training" will be provided to appropriate Station personnel involved in EQ activities to enhance worker's knowledge.

If your staff has any questions or comments concerning this letter, please refer them to Terrence Simpkin, Braidwood Regulatory Assurance Supervisor, at (815) 458-2801, extension 2980.



Timothy J. Tulon
Site Vice President
Braidwood Nuclear Generating Station

Attachment

cc: C. J. Paperiello, Acting NRC Regional Administrator, Region III
S. Bailey, Project Manager, NRR
C.J. Phillips, Senior Resident Inspector
F. Niziolek, Division of Engineering, Office of Nuclear Safety, IDNS

ATTACHMENT 1

REPLY TO NOTICE OF VIOLATION

(50-456;457/98008-02)

1. 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," requires, in part, that measures be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition.

Contrary to the above, as of April 19, 1998, the licensee's corrective action measures for a violation cited in Inspection Report 50-456/97012 were not effective in preventing the repetitive unauthorized use of non-environmentally qualified components in safety-related motor control centers, a significant condition adverse to quality. On April 9, 1998, following NRC questioning, the licensee identified additional non-environmentally qualified safety-related components installed in a motor control center that would be subject to a harsh environment following an accident.

REASON FOR THE VIOLATION

During a follow up review of a NRC Open Item associated with a non-environmentally qualified (EQ) breaker found in a harsh environment (#97012-06), it was determined that the site did not expand the scope of their review extensively enough to ensure programmatic problems did not exist with respect to other EQ part applications. An assumption was made following the initial concern that the identified problem was an isolated case because of the manner in which a stores item number had been specified for the particular replacement component by an individual not normally responsible for that activity. This assumption was determined to be in error for two Motor Control Centers (MCC's), when a search of historical records was conducted using the Station's Electronic Work Control System (EWCS). This search revealed eight examples where non-qualified parts were potentially installed in harsh environments for these two MCCs.

CORRECTIVE ACTIONS TAKEN AND RESULTS ACHIEVED

An Operability Determination was promptly prepared which concluded that, based on the parts replaced and the plant equipment affected, the components were capable of performing their intended safety functions.

ATTACHMENT 1

REPLY TO NOTICE OF VIOLATION (50-456;457/98908-02)

The eight specific examples where non-EQ parts were installed in EQ applications (which included five Thermal Overload Relays, a Ring Tongue Terminal, a Circuit Breaker, and an Elapsed Time Indicator) were evaluated. It was determined that the parts installed were acceptable for use in Safety Related / EQ applications. A decision was made, however, to replace seven of the identified items with qualified Part 21 replacements. The Ring Tongue Terminal was determined to be fully qualified and therefore no part replacement is necessary. Action Requests have been generated to enter the replacement work into the station's work control process for the other components.

As a result of the EQ concerns identified with the two Motor Control Centers (one per unit), an extensive search was performed to assess whether similar concerns existed for other EQ applications. From the total population of work packages involving EQ equipment, which exceeded 16,000 work packages, a sample size of approximately 300 work packages was reviewed (the sampling was consistent with the industry accepted Military Specification 105). No additional concerns were identified from this review.

Tailgate discussions were held with personnel in Engineering, Maintenance (including Work Analysts), Quality Control, and Materials Management to review the details associated with this concern. The sessions focused on EQ awareness and information on the difference between safety related, commercial grade, dedicated parts, and Part 21 classifications for part procurement activities.

ACTIONS TAKEN (TO BE TAKEN) TO PREVENT RECURRENCE

A new procedure, NSWP-WM-10, "Preparation of Maintenance Work Packages," Revision 0, was recently implemented at Braidwood Station. This procedure contains improved guidance for work planners for work package preparation, including the consideration for EQ applications.

EQ "Refresher Training" will be provided to appropriate Station personnel involved in EQ activities to enhance worker's knowledge. This will focus on practical knowledge information as it relates to specific maintenance and work analyst functions.

ATTACHMENT 1

REPLY TO NOTICE OF VIOLATION
(50-456;457/98008-02)

DATE WHEN FULL COMPLIANCE WAS ACHIEVED

Full compliance was achieved following the completion of the Operability Determination which concluded that the eight non-EQ components installed in EQ applications were capable of performing their intended safety functions.

ATTACHMENT 1

REPLY TO NOTICE OF VIOLATION (50-456:457/98008-03)

2. Technical Specification 6.8.1.g requires that written procedures be established, implemented, and maintained for activities associated with implementation of the Fire Protection Program. Control of welding machines and hot work are included in the Fire Protection Program.

Braidwood Administrative Procedure 1100-15, "Fire Prevention When Welding, Cutting, Grinding or Performing Open Flame Work (Hot Work)," Revision 8, Step C.2.8, states, "Ensure welding machines are de-energized, cylinder valves are isolated, and hoses are depressurized when the assigned workers are not in the immediate area, or when these items are not in use (i.e., during breaks, lunch, end of day, etc.)."

Contrary to the above:

- a. On April 24, 1998, the licensee failed to implement specific fire protection program requirements in that a welding machine was left unattended and energized in the fuel handling building.
- b. On May 1, 1998, the licensee failed to implement specific fire protection program requirements in that an oxygen hose and an acetylene hose were left unattended and pressurized.

REASON FOR THE VIOLATION

NRC inspection report #98008 identified two instances where Steam Generator Replacement Project (SGRP) contractor personnel failed to comply with the requirements stated in BWAP 1100-15. In the first instance a welding machine was left running in the fuel building. The foreman and the members of the crew had previously been trained on the requirements stated in BWAP 1100-15 and were aware of the requirement to shut off the welding machine when they were not present. No individual was specifically assigned the task to de-energize the welding machine when the crew left the work area. As a result, when the crew left the area no one de-energized the welding machine.

In the second instance the crew went on break leaving the hoses for a cutting torch pressurized. The crew member using the cutting torch had another member of the crew close the valves on the gas bottles located outside the Fuel Building trackway. He did not recall the procedural requirement to depressurize the hoses.

ATTACHMENT 1

REPLY TO NOTICE OF VIOLATION
(50-456;457/98008-03)

CORRECTIVE ACTIONS TAKEN AND RESULTS ACHIEVED

In the first instance, the Fire Marshal's office was notified of the energized welding machine. The Fire Marshal sent one of his assistants out to the fuel building where he de-energized the welding machine.

In the second instance, SGRP contractor supervision sent a crew member back out to the work area to depressurize the hoses from the cutting torch.

CORRECTIVE ACTIONS TAKEN TO PREVENT RECURRENCE

In response to the specific instances, a tailgate session was held with the SGRP craftsman to review the requirements of BWAP 1100-15 and reinforce management's expectations for compliance with the procedure requirements. Currently, the SGRP contractor supervision assigns a member of the crew to ensure welding machines are properly turned off, cutting torch hoses are depressurized and the valves at the bottles are isolated closed when the crew leaves the work area.

Tailgate discussions were also conducted with personnel from the station's Mechanical Maintenance Department and supervisory personnel representing other contractor work groups to discuss the circumstances associated with the identified procedure compliance deficiencies.

Supervisory and Nuclear Oversight personnel have been conducting periodic spot checks on welding activities. No additional problems have been identified.

DATE WHEN FULL COMPLIANCE WAS ACHIEVED:

Full compliance with BWAP 1100-15 was achieved on April 24, 1998, when the welding machine was de-energized and on May 1, 1998, when the hoses on the cutting torch were properly isolated and depressurized.