UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

SEP 15 1992

DCD/DCB (R105)

Docket No. 50-237
License No. DPR-19

MHB Technical Associates
ATTN: Mr. Richard Hubbard
Vice President
1723 Hamilton Avenue, Suite K
San Jose, CA, 95125

References: 1) Letter from MHB Technical Associates to NRC Region III dated February 18, 1992, Concerning NRC Inspection Report 50-237/91036(DRP)

2) Letter from NRC Region III to MHB Technical Associates dated March 13, 1992, Providing Interim Response

3) Letter from MHB Technical Associates to NRC Region III dated September 3, 1992, Concerning Final Response to MHB's Letter of February 18, 1992

Dear Mr. Hubbard:

In Reference 2 we advised you that we would provide our complete response to your comments once we had completed our review. This letter provides our response.

Our Inspection Report (50-237/91036), and its cover letter, should have more clearly reflected that some of the issues discussed in the report were still being pursued. At the time of your letter, we were continuing inspection effort to address the issues in the unresolved item mentioned in the inspection report. The issues requiring more review were (1) Commonwealth Edison Company's (the licensee's) completion of a 10 CFR Part 21 review, and subsequent NRC review, (2) NRC review of the licensee's corrective actions program, and (3) NRC review of the licensee's calculational controls program. These issues encompassed two of your comments. We also performed a more intensive review of the other weaknesses identified in the inspection report to determine if violations of quality assurance requirements existed. The results of our further review were discussed in Inspection Report 50-237/92009(DRP); 50-249/92009(DRP) (Enclosure 2).

The three issues mentioned above were left as an unresolved item because more information was needed in order to determine whether or not they were violations. Therefore, it would have been premature to issue violations with Inspection Report 50-237/91036. However, as previously stated, clearer wording should have been used in Inspection Report 50-237/91036 and its cover letter to indicate that the NRC was not finished with its review.

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Inspection Report 50-237/92009(DRP); 50-249/92009(DRP) stated that portions of the unresolved item involved apparent violations of NRC requirements. Those concerns, and others, were discussed with the licensee in an enforcement conference held June 4, 1992. Following the enforcement conference, NRC evaluated the safety significance and characterization of the apparent violations, including those referenced in your letter. The results of our deliberations are contained in our letter to the licensee transmitting a Notice of Violation dated September 2, 1992. A copy of that letter is also enclosed (Enclosure 3).

The remainder of your comments were again reviewed to determine if we had overlooked any issue. We found that they all were addressed, as documented in Enclosure 1 to this letter. Finally we reviewed the issues raised by your comments as contributors to the low pressure coolant injection (LPCI) system inoperability. Our final determination was that, even if these issues had not occurred, the reactor recirculation valve VOTES trace would have been misinterpreted, resulting in the LPCI inoperability. The root cause of the LPCI inoperability was vendor-supplied training inadequacies on the motor-operated-valve (MOV) testing system being used, due to the emergent nature of MOV testing methodology. This resulted in misinterpretation of the reactor recirculation valve's unusual diagnostic test data. Therefore, none of the issues discussed in your letter were considered to be contributors to the LPCI inoperability.

If you have additional questions, please do not hesitate to call.

Sincerely,

Brent Clayton, Chief
Reactor Projects Branch 1

Enclosures:
1. Detailed Discussion of MHB Technical Associates Comments
2. Inspection Report 50-237/92009(DRP); 50-249/92009(DRP)
3. Cover Letter Transmitting a Notice of Violation

See Attached Distribution

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cc w/enclosures:
C. Reed, Senior Vice President
D. Galle, Vice President, BWR Operations
T. Kovach, Nuclear Licensing Manager
C. Schroeder, Station Manager
R. Radtke, Regulatory Assurance Supervisor
DCD/DBC (RIDS)
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J. McCaffrey, Chief, Public Utilities Division
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Licensing Project Manager, NRR
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Enclosure 1

Detailed Discussion of MHB Technical Associates Comments

(a) Failure of the licensee to maintain records documenting station and corporate personnel qualification to NOD-MA.1 requirements.

As discussed in Inspection Report 237(249)/92009, section 10.A, records documenting station personnel qualification to NOD-MA.1 requirements were available, and satisfied the requirements of the Commonwealth Edison quality assurance program. Similar records were not available for corporate personnel, as identified in the licensee's internal audit.

Criterion II "Quality Assurance Program" to 10 CFR Part 50, Appendix B, requires that the quality assurance program provide for indoctrination and training of personnel performing activities affecting quality, as necessary to assure that suitable proficiency is achieved and maintained. The failure of the corporate office to maintain records of motor-operated valve training to assure that suitable proficiency was achieved and maintained was in violation of Criterion II requirements. However the violation met the requirements specified in Section V.G.1 of the 1991 Enforcement Policy, in that it was identified by the licensee, was of minor safety significance because the personnel were adequately trained, was isolated, and actions were taken to correct the violation. Therefore, the violation was not cited.

(b) Use of a non-safety-related consulting service to perform safety-related work.

As discussed in Inspection Reports 237/91036 and 237(249)/92009, the contract to procure engineering services of a motor operated valve industry expert was let as a non-safety-related contract. Criterion IV "Procurement Document Control" to 10 CFR Part 50, Appendix B, requires in part that measures be established to assure applicable requirements necessary to assure adequate quality are suitably included or referenced in documents for procurement of services. The procurement of engineering services via a non-safety-related contract failed to assure that the applicable requirements necessary to assure quality were included in the procurement document, and was in violation of the requirements of Criterion IV.

The inspectors concluded that the actual procurement of the contract as non-safety-related did not affect the quality of the engineering services in regard to the reactor recirculation valve. This was because the contractor involved was a recognized industry expert and the contract was treated in accordance with the contractor's approved Quality Assurance Program. Therefore, the violation met the requirements specified in Section V.A of the 1991 Enforcement Policy, in that the violation was of minor safety significance, was isolated, and the contract was reissued as safety-related prior to the end of the inspection. Therefore, the violation was not cited.

(c) Neither the work package nor the testing procedure delineated any quantitative or qualitative acceptance criteria related to the VOTES diagnostic, the as-found or as-left torque switch settings, or the valve thrust windows.

As part of the review documented in Inspection Report 237(24)/92009, the inspectors looked into how motor-operated-valve torque switch settings were set. The inspectors determined that no value for torque switch settings is normally provided, rather the torque switches were adjusted to obtain a desired thrust value. This desired thrust value was obtained as output from the VOTES traces, which used calculated target thrust values, obtained from the corporate engineering office. The work package contained target thrust values to be used, along with a letter from the corporate engineering office stating that use of thrust values outside the target values required corporate approval. Additionally, the test package contained qualitative testing criteria that the valve was to be stroked to the full open and full closed positions.

Therefore, the inspectors concluded that quantitative acceptance criteria, in the form of target thrust values, and qualitative acceptance criteria, in the form of valve stroking, were contained in the work package, and that Inspection Report 237/91036 overstated the lack of acceptance criteria. Criterion V "Instructions, Procedures, and Drawings" to 10 CFR Part 50, Appendix B, requires in part that instructions, procedures, or drawings include appropriate quantitative or qualitative acceptance criteria. This requirement was met in this case, and no violation occurred.

(d) The MOV coordinator's concerns about selecting the zero point on the valve and use of industry expert services were not documented.

As discussed in Inspection Report 237(249)/92009, the test engineer failed to follow the requirements of a Dresden administrative procedure which could have been interpreted to require documentation of the valve anomalies and the use of a consultant in determining the final thrust values to be used.

Criterion V "Instructions, Procedures, and Drawings" to 10 CFR Part 50, Appendix B, requires in part that activities affecting quality be documented in instructions, procedures, or drawings, and accomplished in accordance with these instructions, procedures, or drawings. The administrative procedure required that the engineer document any discrepancies encountered during the VOTES test. Although the engineer had trouble reading the VOTES trace, and enlisted the aid of an outside consultant, this was not documented as required by the procedure. This was in violation of the requirements of Criterion V.

The failure to document the problems encountered during the VOTES test occurred in December 1990, a time when Commonwealth Edison recognized that there was a problem with adherence to administrative procedures, because of previous NRC violations, and was taking steps to correct them. For this reason, and because the actual failure was of minor safety significance, this item met the requirements of Section V.G.2 of the 1991 Enforcement Policy, and no violation was cited.

(e) Failure to document reanalysis of VOTES tests by the corporate Nuclear Engineering Department and failure to communicate to the station that discrepancies were identified and how they were resolved.

As discussed in Inspection Report 237(249)/92009, several deficiencies were identified in the method that the corporate Nuclear Engineering department handled nonconforming conditions on the motor operated valve program. This item, and the following one, were considered for escalated enforcement and were discussed in an enforcement conference with the licensee on June 4, 1992.

Following the enforcement conference, NRC deliberated on the safety significance of the items and determined that the root cause of the violations was the lack of a procedure addressing the motor-operated valve program. Therefore the NRC determined that the requirements of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings" were not met, and a violation was issued accordingly. This conclusion was documented in a letter to the licensee dated September 2, 1992, which transmitted a Notice of Violation (Enclosure 2).

(f) NED failed to document torque switch adjustment calculations for safety-related valves.

As stated above, this issue was considered for escalated enforcement and was discussed with the licensee in the June 4, 1992, enforcement conference. Following the conference, NRC determined that the root cause of the failure to document the adjustment calculations was again a procedural deficiency. Therefore, this item was included in the violation of 10 CFR Part 50, Appendix B, Criterion V described above.

Finally, your letter stated that these violations contributed to the inoperability of the low pressure coolant injection (LPCI) system for seven months. Our final determination was that, even if the minor violations had not occurred, the reactor recirculation valve VOTES trace would have been misinterpreted, resulting in the LPCI inoperability. The root cause of the LPCI inoperability was vendor-supplied training inadequacies on the motor-operated-valve (MOV) testing system being used, due to the emergent nature of MOV testing technology. This resulted in misinterpretation of the reactor recirculation valve's unusual diagnostic test data. Therefore, none of the issues discussed in your letter were considered to be contributors to the LPCI inoperability.