APPENDIX A

Nutherm International Incorporated
Docket No: 99900779/88-01

NOTICE OF NONCONFORMANCE

Based on the results of an NRC inspection conducted on October 3-7, 1988, it appears that certain of your activities were not conducted in accordance with NRC requirements.

1. Criterion V, "Instructions, Procedures, and Drawings," of Appendix B to 10 CFR Part 50 states: "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished."

   Contrary to the above, the following examples were noted where Nutherm International Incorporated (NI) either failed to prescribe a specific activity or accomplish it according to the procedures (88-01-01):

   a. A review of test procedures applicable to NI Job Number 2925 found non-specific acceptance criteria which could result in misinterpretation of test data acceptability.

      An example of this was found in Test Procedure TP-11 6.28, Rev. 1, "Function Test-Siemens RL-800 Power Circuit Breaker." This procedure requires overcurrent testing of this circuit breaker and refers to the manufacturer's time-current curves as the basis for determining acceptable trip times. These curves, a copy of which was attached to the working copy of the procedure used by the lab technician, are difficult to read and are subject to significant judgement so far as the limits are concerned. In discussing this procedure with the lab technician, the lab supervisor, the QA manager, and the engineering manager, it was evident that the extrapolation of the acceptance criteria is subject to misinterpretation. Acceptance criteria should be clearly delineated so that NI QA program controls can be properly implemented if testing reveals out of specification conditions.

   b. Engineering Test Procedure, TP-9.7.10.43, "Baseline Testing of Differential Pressure Indicating Switches," requires in Step 6.7 that "as the pressure is increased in subsequent steps, record the pressure at which the contacts change state and setpoint, where applicable." The data sheet providing Step 6.7 was inappropriate for the circumstances in that it required recording "Set and Act" without explanation. It was noted that the technician performing the test,

the Laboratory manager, the cognizant engineer and an NRC inspector each had a different interpretation of the meaning of "Set and Act." Also, the procedure was inappropriate in that it did not specify which pressure was to be recorded, either source pressure or the pressure of the instrument being tested.

c. The test result record for TP-9.7.10.43 does not require an acceptance or rejection signature to signify that the test results are either accepted or rejected.

d. The pressure test was not accomplished in accordance with Procedure, TP-9.7.10.43, in that Step 4.2 required the use of a pressure monitoring device appropriate for the range of the device being tested. The device being tested was a Meriam 0-3 psi Differential Pressure Indicating Switch with an accuracy of 2 percent. The pressure monitoring device for the instrument being tested was a U.S. Gauge, 0-30 psi instrument with an accuracy of 1 percent, five times less accurate and uncalibrated below 3 psi, and inappropriate for the application.

2. Criterion III, "Design Control," of Appendix B to 10 CFR 50 states, in part: "Measures shall also be established for the selection and review for suitability of application of material, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems and components."

Contrary to the above, NI's program for upgrading or dedicating commercial grade circuit breakers for use in safety-related applications does not, in all cases, adequately evaluate material or design changes and the effect of any such changes on environmental or seismic qualification. NI's practice of using reports of previous qualification tests to qualify new production items is not valid because it does not account for material and design changes that may have been instituted since the qualification test was performed (88-01-02).