UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

October 2, 1986

Docket No. 50-410

NOTE TO: Jim McKnight, Document Control

FROM: Mary Haughey, Project Manager for
Nine Mile Point, Unit 2
BWR Project Directorate No. 3
Division of BWR Licensing

SUBJECT: DRAFT INFORMATION PROVIDED TO NIAGARA MOHAWK POWER CORPORATION ON NINE MILE POINT, UNIT 2

The enclosed information was provided to Niagara Mohawk on October 2, 1986 to assist them in responding to NRC concerns on Nine Mile Point, Unit 2.

By copy of this note the enclosed information should be placed in the PDR and the LPDR.

Mary Haughey

Mary Haughey, Project Manager
BWR Project Directorate No. 3
Division of BWR Licensing

cc: PDR
LPDR

Noted: E. Adensam
E. Adensam

EICSB REQUEST FOR ADDITIONAL INFORMATION
CONTROL ROOM AMBIENT TEMPERATURE EFFECTS ON
SAFETY RELATED ELECTRONIC EQUIPMENT

Plant operational history of various nuclear power reactors has shown there is a significant potential problem involving the failure of safety related electronic components housed within cabinets located in the control room environment due to excessive temperature effects. Such failures could lead to the malfunctioning of control systems, inoperability of instrumentation channels associated with protection systems, inadvertent actuations and/or failures of safety systems and erroneous indications and alarms to plant operators. Even though redundant control room cooling systems typically exist, it is believed that the loss of all control room cooling may be more likely to occur than previously thought as indicated by IE Information Notice No. 85-89, "Potential Loss of Solid-State Instrumentation Following Failure of Control Room Cooling." It appears from various events that control room temperatures can rise quickly (in a matter of minutes) upon loss of control room HVAC. Operational experience has shown that even though design specifications show that equipment is qualified to handle temperatures up to 120°F, an ambient control room temperature of 90°F (technical specification allowed higher temperature) can result in erratic behavior of electronic equipment housed within various enclosures. Cases have been cited where temperatures at the location of cabinet top racks have reached 125°F even though the control room ambient was 72°F and the HVAC was functioning. IE Information Notice No. 85-89 was issued to alert licensees/applicants of potential problems related to excessive temperature effects within cabinets.

Based on the above concerns associated with plant operational history at various operating nuclear plants, the applicant is requested to supply information to the staff which describes what consideration (correlation) was given to the possible temperature effects on safety related electronic equipment housed within the various control room cabinets/enclosures as related to the Technical Specification ambient temperature limit of 104°F and what measures have been taken to preclude similar problems from occurring at the Nine Mile Point 2 facility as have occurred at some operating reactors.